Mapping Table Supplement
to the
Federal Aviation Administration Integrated Capability Maturity Model® (FAA-iCMM®), Version 2.0

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This work has been developed in part by adapting portions of the following documents.

Systems Engineering Capability EIA/IS 731, EIA Interim Standard, Electronic Industries Association, 1998

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The President's Quality Award Program 2000, published by United States Office of Personnel Management (public domain material)

The Malcolm Baldrige National Quality Award Program 2000, published by United States Department of Commerce, National Institute of Standards and Technology (public domain material)

CMMI^{SM} for Systems Engineering/Software Engineering/Integrated Product and Process Development, Version 1.02 (CMMI^{SM}-SE/SW/IPPD, V1.02)
Continuous Representation, CMU/SEI-2000-TR-031, ESC-TR-2000-096.

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Capability Maturity Model® for Software, Version 1.1
Technical Report, CMU/SEI-93-TR-024/025, ESC-TR-93-177/178, 2/93

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Systems Engineering Capability Maturity Model®, Version 1.1
Maturity Model, SECMM-95-01, CMU/SEI-95-MM-003, 11/95

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Software Acquisition Capability Maturity Model (SA-CMM®), Version 1.01
Technical Report, CMU/SEI-96-TR-020, ESC-TR-96-020, 12/96

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The following documents are referenced in this mapping document. Since they are copyright protected, only paragraph numbers and titles are provided. Interested readers should obtain copies of these documents for additional information on the details.

ISO 9001:2000(E), Quality management systems – Requirements, International Organization for Standardization, Third edition, 2000-12-15.

IEEE/EIA 12207.0-1996 Industry Implementation of International Standard ISO/IEC 12207: 1995, Standard for Information Technology – Software life cycle processes, Institute of Electrical and Electronics Engineers, Inc., March 1998.

ISO/IEC CD 15288 CD3: System Engineering – System Life Cycle Processes, International Organization for Standardization and International Electrotechnical Commission, January 2001.

ISO/IEC TR 15504:1998(E) Information technology – Software process assessment, Part 5: An assessment model and indicator guidance; Part 7: Guidelines for software process improvement, International Organization for Standardization and International Electrotechnical Commission, 1998.

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The "standards bearers" of the FAA-iCMM v2.0 project team brought this final mapping document together. However, it extends and builds on initial inputs provided by other members of the FAA-iCMM v2.0 author team.

We also include in this document mapping tables from the FAA-iCMM v1.0 in order to provide full traceability back to those seminal source models.

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Mapping Table Supplement to the FAA-iCMM Version 2.0

Table of Contents

Acknowledgments……...……..i

Section 1: Introduction……1

Section 2: FAA-iCMM Version 2.0 Process Area Map……5

Table 1: FAA-iCMM v2.0 Process Areas and Their Major Sources

Section 3: FAA-iCMM Version 2.0 Source Coverage Maps……..…13

FAA-iCMM v1.0 to FAA-iCMM v2.0
ISO 9001:2000 to FAA-iCMM v2.0
EIA/IS 731 to FAA-iCMM v2.0
CMMI-SE/SW/IPPD and CMMI-A to FAA-iCMM V2.0
PQA/MBNQA Criteria to FAA-iCMM v2.0
ISO/IEC TR 15504 to FAA-iCMM v2.0
ISO/IEC 12207 to FAA iCMM V2.0
ISO/IEC CD 15288 CD3 to FAA-iCMM v2.0

Section 4: FAA-iCMM Version 2.0 Practice-Level Maps……..92

Table GP: FAA-iCMM v2.0 Sources of Capability Levels and Generic Practices
Table PA 00: FAA-iCMM v2.0 Sources of Integrated Enterprise Management Practices
Table PA 01: FAA-iCMM v2.0 Sources of Needs Practices
Table PA 02: FAA-iCMM v2.0 Sources of Requirements Practices
Table PA 03: FAA-iCMM v2.0 Sources of Design Practices
Table PA 04: FAA-iCMM v2.0 Sources of Alternatives Analysis Practices
Table PA 05: FAA-iCMM v2.0 Sources of Outsourcing Practices
Table PA 06: FAA-iCMM v2.0 Sources of Design Implementation Practices
Table PA 07: FAA-iCMM v2.0 Sources of Integration Practices
Table PA 08: FAA-iCMM v2.0 Sources of Evaluation Practices
Table PA 09: FAA-iCMM v2.0 Sources of Deployment, Transition, and Disposal Practices
Table PA 10: FAA-iCMM v2.0 Sources of Operation and Support Practices
Table PA 11: FAA-iCMM v2.0 Sources of Project Management Practices
Table PA 12: FAA-iCMM v2.0 Sources of Supplier Agreement Management Practices
Table PA 13: FAA-iCMM v2.0 Sources of Risk Management Practices
Table PA 14: FAA-iCMM v2.0 Sources of Integrated Teaming Practices
Table PA 15: FAA-iCMM v2.0 Sources of Quality Assurance and Management Practices
Table PA 16: FAA-iCMM v2.0 Sources of Configuration Management Practices
Table PA 17: FAA-iCMM v2.0 Sources of Information Management Practices
Table PA 18: FAA-iCMM v2.0 Sources of Measurement and Analysis Practices
Table PA 20: FAA-iCMM v2.0 Sources of Process Definition Practices
Table PA 21: FAA-iCMM v2.0 Sources of Process Improvement Practices
Table PA 22: FAA-iCMM v2.0 Sources of Training Practices
Table PA 23: FAA-iCMM v2.0 Sources of Innovation Practices

Mapping Table Supplement to the FAA-iCMM Version 2.0

Table of Contents (continued)

Section 5: FAA-iCMM Version 1.0 Process Area Map…….261

Table 2: FAA-iCMM v1.0 Process Areas and their Major Sources

Section 6: FAA-iCMM Version 1.0 Practice-Level Maps…….263

Table PA 01: FAA-iCMM v1.0 Sources of Needs Practices
Table PA 02: FAA-iCMM v1.0 Sources of Requirements Practices
Table PA 03: FAA-iCMM v1.0 Sources of Architecture Practices
Table PA 04: FAA-iCMM v1.0 Sources of Alternatives Practices
Table PA 05: FAA-iCMM v1.0 Sources of Outsourcing Practices
Table PA 06: FAA-iCMM v1.0 Sources of Software Development and Maintenance Practices
Table PA 07: FAA-iCMM v1.0 Sources of Integration Practices
Table PA 08: FAA-iCMM v1.0 Sources of System Test and Evaluation Practices
Table PA 09: FAA-iCMM v1.0 Sources of Transition Practices
Table PA 10: FAA-iCMM v1.0 Sources of Product Evolution Practices
Table PA 11: FAA-iCMM v1.0 Sources of Project Management Practices
Table PA 12: FAA-iCMM v1.0 Sources of Contract Management Practices
Table PA 13: FAA-iCMM v1.0 Sources of Risk Management Practices
Table PA 14: FAA-iCMM v1.0 Sources of Coordination Practices
Table PA 15: FAA-iCMM v1.0 Sources of Quality Assurance and Management Practices
Table PA 16: FAA-iCMM v1.0 Sources of Configuration Management Practices
Table PA 17: FAA-iCMM v1.0 Sources of Peer Review Practices
Table PA 18: FAA-iCMM v1.0 Sources of Measurement Practices
Table PA 19: FAA-iCMM v1.0 Sources of Prevention Practices
Table PA 20: FAA-iCMM v1.0 Sources of Organization Process Definition Practices
Table PA 21: FAA-iCMM v1.0 Sources of Organization Process Improvement Practices
Table PA 22: FAA-iCMM v1.0 Sources of Training Practices
Table PA 23: FAA-iCMM v1.0 Sources of Innovation Practices

Section 7: References……..310

Section 1: Introduction

Purpose of this Document	The purpose of this document is to provide traceability to sources that were used in the development of the process areas, base practices, additional practice guidance, capability levels, and generic practices of the FAA-integrated Capability Maturity Model (FAA-iCMM) (iCMM). This traceability is provided by means of mapping tables. These tables demonstrate how the iCMM integrates its source models, and they illustrate how using one single model, the iCMM, can help an organization pursue process improvement effectively and efficiently by using a single integrated model that captures the guidance and principles of a multitude of current standards and reference models.
Basic Organization	This document is organized into seven sections: Section 1: Introduction Section 2: FAA-iCMM Version 2.0 Process Area Map Section 3: FAA-iCMM Version 2.0 Source Coverage Maps Section 4: FAA-iCMM Version 2.0 Practice-Level Maps Section 5: FAA-iCMM Version 1.0 Process Area Map Section 6: FAA-iCMM Version 1.0 Practice-Level Maps Section 7: References
Section 1: Introduction	Section 1 introduces the document and explains the organization and content of each of its sections.
Section 2: FAA-iCMM Version 2.0 Process Area Map	Section 2 provides a high-level mapping of iCMM v2.0 process areas to each of the eight major source models at the process level (called variously clauses/subclauses, focus areas, process areas, processes, or categories/ items depending on the source document). In some cases, some practices within these source processes are mapped to practices in other iCMM process areas, but only the *major* sources for iCMM process areas are identified in this table. This high-level mapping table appears in Appendix D of the FAA-iCMM version 2.0, and is reproduced here to provide the framework for more detailed tables that follow in Section 4.

Section 2: FAA-iCMM Version 2.0 Process Area Map (continued)

Part 1 of this table maps the FAA-iCMM v2.0 process areas to:

- FAA-iCMM v1.0 process areas [FAA-iCMM 97] and [HFE],
- ISO 9001: 2000 [ISO 9001] clauses and/or subclauses
- EIA/IS 731 [EIA/IS 731] focus areas
- CMMI-SE/SW/IPPD/A [CMMI-SE/SW/IPPD] and [CMMI-SE/SW/A] process areas
- Malcolm Baldrige National Quality Award [MBNQA]/ President's Quality Award [PQA] categories and/or items

Part 2 of this table maps the FAA-iCMM v2.0 process areas to:

- ISO/IEC TR 15504 [ISO/IEC TR 15504] processes
- IEEE/EIA (ISO/IEC) 12207 [IEEE/EIA 12207] processes
- ISO/IEC CD 15288 [ISO/IEC CD 15288] processes
- Other Sources, if applicable, including [IPD-CMM], [EIA-632], [SA-CMM 99], [PSM], [P-CMM], and others listed

Section 3: FAA-iCMM Version 2.0 Source Coverage Maps

Section 3 comprises eight tables, one for each of the major source standards or documents (indicated above) that is integrated into the iCMM version 2.0. These tables are at the practice level (called variously subclauses, specific practices, base practices, items, tasks, or activities depending on the source model). The first column of each of these tables identifies the practice-level component in the source document, and the second column indicates what practice(s) in the iCMM include, or cover, or pertain to that component. In some cases, mapping at the goal level is also included. Note that in several cases, iCMM generic practices as well as base practices cover source model components, and these are included in the mappings.

These tables are particularly useful for those using or familiar with any of the source documents. For example, an organization transitioning from iCMM v1.0 to iCMM v2.0 can easily identify where each iCMM v1.0 practice is covered in iCMM v2.0; an organization familiar with ISO 9001 can identify where and how that standard is covered in the iCMM; an organization using EIA/IS 731 or any of the CMMI models can understand how those practices are integrated into the iCMM; users of ISO/IEC TR 15504 or ISO/IEC 12207 have access to similar information.

Note that four of the source standards and documents are copyright protected by the International Organization for Standardization, and thus only the paragraph numbers and titles are provided in these cases. Interested readers should obtain copies of these documents for additional information on the details.

Section 4: FAA-iCMM Version 2.0 Practice-Level Maps	Section 4 provides practice-level mappings for each practice, in each process area of the iCMM v2.0. Each of these 23 process area mapping tables follows the same format as the table in section 2, i.e., part 1 of each table maps across the first 5 sources, and part 2 maps across the next 3 sources and also includes any other sources as applicable. Goal mappings are also included, as applicable. There is also a table that maps iCMM v2.0 capability levels and generic practices to the 4 source models that contain this concept: iCMM v1.0, CMMI-SE/SW/IPPD, EIA/IS 731, and ISO/IEC TR 15504.
Section 5: FAA-iCMM Version 1.0 Process Area Map	Both section 5 and section 6 elaborate on sources of iCMM v1.0. Since iCMM v1.0 is a major basis for iCMM v2.0, these sections continue iCMM v2.0 traceability back to the 3 original CMMs that were integrated into iCMM v1.0. Section 5 provides high-level mappings of FAA-iCMM v1.0 [FAA-iCMM 97] process areas to their major sources, at the process level (called process areas or key process areas depending on the source model). In some cases, some practices within these source processes are mapped to practices in other iCMM process areas, but only the *major* sources for iCMM v1.0 process areas are identified in this table. This high-level mapping table appears in Appendix D of the FAA-iCMM version 2.0, and is reproduced here to provide the framework for more detailed tables that follow in Section 6. The source models for iCMM v1.0 are: • Systems Engineering CMM [SE CMM] • Software Acquisition CMM [SA-CMM 97] • CMM for Software [SW-CMM 93]
Section 6: FAA-iCMM Version 1.0 Practice-Level Maps	Section 6 provides practice level mappings for each practice, in each process area of the iCMM v1.0. Each of these 23 process area mapping tables follows the same format as the table in section 5, mapping across the 3 source CMMs identified above. In addition, all practices and activities in each source model are included in the process area maps, with an indication of where source practices are covered if not integrated into the specific process area that is the focus of the table. For example, a source practice may be covered in another process area, or by a generic practice, and if this is the case this information is provided.

Section 7: References	Lastly, section 7 provides the references that are mentioned in the mapping tables.

Table 1: FAA-iCMM v2.0 Process Areas and their Major Sources - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD*/A** Process Area*	*MBNQA/PQA Category/item*
PA 00 Integrated Enterprise Management	PA 10 Product Evolution	5.1 Management commitment 5.3 Quality policy 5.4.1 Quality objectives 5.5.3 Internal communication 5.6 Management review 6.1 Provision of resources	-	*Organizational Environment for Integration Organizational Process Performance	1.1 Organizational Leadership 1.2 Public/Organization Responsibility and Citizenship 2.1 Strategy Development 2.2 Strategy Deployment 7. Business Results
PA 01 Needs	PA 01 Needs PA 24 Human Factors Engineering	5.2 Customer Focus 7.2.1 Determination of requirements related to the product 7.2.3 Customer communication 8.2.1 Customer satisfaction	1.1 Define Stakeholder and System Level Requirements	Requirements Development	3.1 Customer and Market Knowledge 3.2 Customer Satisfaction and Relationships 6.1 Product and Service Processes
PA 02 Requirements	PA 02 Requirements PA 24 Human Factors Engineering	7.2.1 Determination of requirements related to the product 7.2.2 Review of requirements related to the product 7.3.2 Design and development inputs 5.2 Customer Focus	1.1 Define Stakeholder and System Level Requirements 1.2 Define Technical Problem	Requirements Development Requirements Management	3.1 Customer and Market Knowledge 6.1 Product and Service Processes
PA 03 Design	PA 03 Architecture	7.3.3 Design and development outputs	1.3 Define Solution	Technical Solution	6.1 Product and Service Processes
PA 04 Alternatives Analysis	PA 04 Alternatives	-	1.4 Assess and Select	Decision Analysis and Resolution	6.2 Support Processes 2. Strategic Planning
PA 05 Outsourcing	PA 05 Outsourcing	7.4.1 Purchasing process	2.4 Coordinate with Suppliers	Supplier Agreement Management **Supplier Selection and Monitoring **Integrated Supplier Management	6.3 Supplier and Partnering Processes

Table 1: FAA-iCMM v2.0 Process Areas and their Major Sources - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD*/A** Process Area*	*MBNQA/PQA Category/item*
PA 06 Design Implementation	PA 06 Software Development and Maintenance	7.3.3 Design and development outputs	-	Technical Solution	6.1 Product and Service Processes
PA 07 Integration	PA 07 Integration	-	1.5 Integrate System	Product Integration	6.1 Product and Service Processes
PA 08 Evaluation	PA 08 System Test and Evaluation PA 17 Peer Review	7.3.4 Design and development review 7.3.5 Design and development verification 7.3.6 Design and development validation 7.4.3 Verification of purchased product 8.2.4 Monitoring and measurement of product 8.3 Control of nonconforming product	1.6 Verify System 1.7 Validate System	Verification Validation	6.1 Product and Service Processes
PA 09 Deployment, Transition, and Disposal	PA 09 Transition	7.5 Production and service provision 7.5.1 Control of product and service provision 7.5.5 Preservation of product	-	Supplier Agreement Management Product Integration ** Supplier Selection and Monitoring	6.1 Product and Service Processes
PA 10 Operation and Support	-	7.5.1 Control of production and service provision 8.5.2 Corrective action 8.5.3 Preventive action	-	-	3.2 Customer Satisfaction and Relationships 6.1 Product and Service Processes
PA 11 Project Management	PA 11 Project Management	7.1 Planning of product realization 7.3.1 Design and development planning 8.5.2 Corrective action	2.1 Plan and Organize 2.2 Monitor and Control	Project Planning Project Monitoring and Control *Integrated Project Management Quantitative Project Management	6.1 Product and Service Processes

Table 1: FAA-iCMM v2.0 Process Areas and their Major Sources - Part 1

FAA-iCMM v2.0 Process Area	***FAA-iCMM v1.0 Process Area***	***ISO 9001:2000 Subclause***	***EIA/IS 731 Focus Area***	***CMMI-SE/SW/IPPD*/A** Process Area***	***MBNQA/PQA Category/item***
PA 12 Supplier Agreement Management	PA 12 Contract Management	7.4.1 Purchasing process 7.4.3 Verification of purchased product	2.4 Coordinate with Suppliers	Supplier Agreement Management **Supplier Selection and Monitoring **Integrated Supplier Management **Quantitative Supplier Management	6.3 Supplier and Partnering Processes 7. Business Results
PA 13 Risk Management	PA 13 Risk Management	8.5.3 Preventive action	2.5 Manage Risk	Risk Management	6.2 Support processes 1.2 Organization Responsibility and Citizenship
PA 14 Integrated Teaming	PA 14 Coordination	-	2.3 Integrate Disciplines	*Integrated Teaming *Organizational Environment for Integration * Integrated Project Management	5.1a Work Systems and Job Design
PA 15 Quality Assurance & Management	PA 15 Quality Assurance & Management PA 19 Prevention	4.1 General requirements 7.5.4 Customer property 7.5.2 Validation of processes for production and service provision 8.2.2 Internal audit 8.2.3 Monitoring and measurement of processes 8.2.4 Monitoring and measurement of product 8.4 Analysis of Data 8.5.2 Corrective Action 8.5.3 Preventive action	2.8 Ensure Quality	Process and Product Quality Assurance Causal Analysis and Resolution ** Quantitative Supplier Management	6.2 Support Processes
PA 16 Configuration Management	PA 16 Configuration Management	4.2.3 Control of documents 4.2.4 Control of records 7.5.3 Identification and traceability 7.5.4 Customer property	2.7 Manage Configurations	Configuration Management	6.2 Support Processes

Table 1: FAA-iCMM v2.0 Process Areas and their Major Sources - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD*/A** Process Area*	*MBNQA/PQA Category/item*
PA 17 Information Management	-	4.2.3 Control of documents 4.2.4 Control of records 7.5.4 Customer property	2.6 Manage Data	-	6.2 Support Processes
PA 18 Measurement and Analysis	PA 18 Measurement	7.6 Control of monitoring and measuring devices 8.2.3 Monitoring and measurement of processes 8.2.4 Monitoring and measurement of product 8.4 Analysis of data	2.2 Monitor and Control	Measurement and Analysis Organizational Process Performance Quantitative Project Management Causal Analysis and Resolution	4.1 Measurement of Organizational Performance 4.2 Analysis of Organizational Performance 6.2 Support Processes 7. Business Results (all items)
PA 19 (reserved)					
PA 20 Process Definition	PA 20 Organization Process Definition	4.1 General requirements 4.2.1 General 4.2.2 Quality Manual 8.5.1 Continual improvement	3.1 Define and Improve the Systems Engineering Process	Organizational Process Focus Organizational Process Definition	6. Process Management (all items)
PA 21 Process Improvement	PA 21 Organization Process Improvement	4.1 General requirements 4.2.1 General 8.5.1 Continual improvement	3.1 Define and Improve the Systems Engineering Process	Organizational Process Focus	6. Process Management (all items)
PA 22 Training	PA 22 Training	6.2.2 Competence, awareness, and training	3.2 Manage Competency	Organizational Training	5.2 Employee Education, Training, and Development 6.2 Support Processes
PA 23 Innovation	PA 23 Innovation PA 10 Product Evolution	6.3 Infrastructure 6.4 Work Environment	3.3 Manage Technology 3.4 Manage Systems Engineering Support Environment	Organizational Innovation and Deployment *Organizational Environment for Integration	6.1 Product and Service Processes 6.2 Support Processes 5.3a Work Environment
Areas* not *covered in FAA-iCMM v2.0	None	None	None	None	5.1a Work systems and Job Design – those aspects pertaining to organizational recruitment and employee performance management

* For CMMI, these process areas are specific to the Integrated Product and Process Development (IPPD) extensions to the CMMI-SE/SW model. Note that the IPPD version of Integrated Project Management was used in this mapping.
** For CMMI, these process areas are specific to the draft Acquisition (A) extensions to the CMMI-SE/SW model.

Table 1: FAA-iCMM v2.0 Process Areas and their Major Sources - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type*)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 00 Integrated Enterprise Management	ORG.1 Organizational alignment (new) CUS.2 Supply	5.2 Supply	5.1.2 Supply 5.2.1 Enterprise Environment Management 5.2.2 Investment Management	IPD-CMM (v0.98) PA18 Shared Vision PA19 Organizational Leadership
PA 01 Needs	ENG.1 Development (basic) ENG.2 System and software maintenance (basic) CUS.3 Requirements elicitation (new) CUS.4.2 Customer support (ext component) ENG1.1 System requirements analysis and design (component)	5.1 Acquisition	5.4.1 Stakeholder Requirements Definition	
PA 02 Requirements	ENG.1 Development (basic) ENG.2 System and software maintenance (basic) CUS.3 Requirements elicitation (new) ENG1.1 System requirements analysis and design (component) ENG.1.2 Software requiremts analysis (comp)	5.1 Acquisition 5.2 Supply 5.3 Development 5.5 Maintenance	5.4.2 Requirements Analysis 5.4.10 Maintenance	
PA 03 Design	ENG.1 Development (basic) ENG.2 System and software maintenance (basic) ENG1.1 System requirements analysis and design (component) ENG.1.3 Software design (component)	5.3 Development 5.5 Maintenance	5.4.3 Architectural Design	EIA-632 4.3.2 Solution Definition IEEE Std 1220-1998 6.5 Synthesis
PA 04 Alternatives Analysis	-	-	5.3.4 Decision Making	EIA-632 4.5.1 Systems Analysis Process
PA 05 Outsourcing	CUS.1 Acquisition (basic) CUS.1.1 Acquisition preparation (component) CUS.1.2 Supplier selection (component)	5.1 Acquisition	5.1.1 Acquisition	

Table 1: FAA-iCMM v2.0 Process Areas and their Major Sources - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type*)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 06 Design Implementation	ENG.1 Development (basic) ENG.2 System and software maintenance (basic) ENG.1.4 Software construction (component)	5.3 Development 5.5 Maintenance	5.4.4 Implementation	EIA-632 Product Realization
PA 07 Integration	ENG.1 Development (basic) ENG.2 System and software maintenance (basic) ENG.1.7 System integration & testing (comp) ENG.1.5 Software integration (component)	5.3 Development	5.4.5 Integration	EIA-632 System Design, Product Realization, Application Key Concepts
PA 08 Evaluation	ENG.1 Development (basic) ENG.2 System and software maintenance (basic) CUS.1.4 Customer acceptance (component) ENG.1.6 Software testing (component) ENG.1.7 System integration and testing (component) SUP.4 Verification (basic) SUP.5 Validation (basic) SUP.6 Joint review (basic)	5.1 Acquisition 5.2 Supply 5.3 Development 5.4 Operation 5.5 Maintenance 6.4 Verification 6.5 Validation 6.6 Joint review	5.4.6 Verification 5.4.8 Validation	EIA-632
PA 09 Deployment, Transition, and Disposal	ENG.1 Development (basic) ENG.2 System and software maintenance (basic) CUS.2 Supply (basic)	5.2 Supply 5.3 Development 5.5 Maintenance	5.4.4 Implementation 5.4.7 Transition 5.4.11 Disposal	EIA-632 Implementation, Transition to Use
PA 10 Operation and Support	CUS.4 Operation (extended) CUS.4.1 Operational use (ext. component) CUS.4.2 Customer support (ext. component) SUP.8 Problem resolution (basic)	5.4 Operation	5.4.9 Operation 5.4.10 Maintenance	

Table 1: FAA-iCMM v2.0 Process Areas and their Major Sources - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type*)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 11 Project Management	CUS.2 Supply (basic) (+ all relevant PAs) MAN.1 Management (basic) MAN.2 Project management (new) SUP.6 Joint Review	5.2 Supply (+ all relevant PAs) 6.6 Joint review 7.1 Management	5.1.2 Supply 5.3.1 Project Planning 5.3.2 Project Assessment 5.3.3 Project Control	SA-CMM v1.02 Acquisition Risk Management
PA 12 Supplier Agreement Management	CUS.1 Acquisition (basic) CUS.1.3 Supplier monitoring (component) CUS.1.4 Customer acceptance process	5.1 Acquisition 5.2 Supply 6.3 Quality Assurance	5.1.1 Acquisition 5.1.2 Supply (to negotiate agreement)	SA-CMM v1.02 Contract Tracking and Oversight Contract Performance
PA 13 Risk Management	MAN.4 Risk management (new)	-	5.3.5 Risk Management	
PA 14 Integrated Teaming	ORG.1 Organizational Alignment (new) ORG.3 Human resource management (ext)	-	5.2.4 Resource Management	
PA 15 Quality Assurance & Management	SUP.3 Quality assurance (basic) MAN.3 Quality management (new) SUP.7 Audit (basic) SUP.8 Problem resolution (basic)	6.3 Quality Assurance 6.7 Audit 6. 8 Problem resolution	-	
PA 16 Configuration Management	SUP.2 Configuration management (basic)	6.2 Configuration Management	5.3.6 Configuration Management	
PA 17 Information Management	SUP.1 Documentation (extended) (documentation developed in relevant PA) ORG.6 Reuse (new)	5.5 Maintenance 6.1 Documentation (documentation produced in relevant PA)	5.3.7 Information Management 5.2.4 Resource Management	MBNQA 2001 4.2 Information Management
PA 18 Measurement and Analysis	ORG.5 Measurement (new)	7.3 Improvement	5.2.3 System Life Cycle Processes Management	[PSM] ISO/TR10017:1999(E) – Guidance on Statistical Techniques for ISO 9001:1994
PA 19 (reserved)				
PA 20 Process Definition	ORG.2 Improvement process (basic) ORG.2.1 Process establishment (component) ORG.6 Reuse (new)	7.3 Improvement	5.2.3 System Life Cycle Processes Management	

Table 1: FAA-iCMM v2.0 Process Areas and their Major Sources - Part 2

FAA-iCMM v2.0 Process Area	***ISO/IEC TR 15504 Processes (with process type*)***	***IEEE/EIA (ISO/IEC) 12207 Software life cycle processes***	***ISO/IEC CD 15288 System Life Cycle Processes***	***Other Sources***
PA 21 Process Improvement	ORG.2 Improvement process (basic) ORG.2.1 Process establishment (component) ORG2.2 Process assessment (component) ORG2.3 Process improvement (component) 15504 Part 7: Guidelines for Process Improvement	7.3 Improvement	5.2.1 Enterprise Environment Management 5.2.3 System Life Cycle Processes Management	
PA 22 Training	ORG.3 Human resource management (extended)	7.4 Training	5.2.4 Resource Management	People CMM: Training Knowledge and Skills Analysis
PA 23 Innovation	ORG.4 Infrastructure (basic)	7.2 Infrastructure	-	
Areas not covered in FAA-iCMM v2.0	ORG.3 Human Resource management (extended) – practices regarding recruitment, staff evaluation, and staff records	None	Resource Management – activities regarding recruitment, retention, personnel pool, and staff review	N/a

*ISO/IEC TR 15504 process types are:
Basic – processes identical in intent to processes in ISO/IEC 12207
Extended – processes that are expansions of ISO/IEC 12207 processes
New – processes that are outside the scope of ISO/IEC 12207
Component – processes (group of one or more ISO/IEC 12207's activities from same process)
Extended Component – processes that are one or more of ISO/IEC 12207's activities from same process, with additional material.

Section 3: FAA-iCMM Version 2.0 Source Coverage Maps

FAA-iCMM v2.0 Source Coverage Maps	*Page*
FAA-iCMM v1.0 to FAA-iCMM v2.0	14
ISO 9001:2000 to FAA-iCMM v2.0	23
EIA/IS 731 to FAA-iCMM v2.0	28
CMMI-SE/SW/IPPD and CMMI-A to FAA-iCMM V2.0	47
President's Quality Award/Malcolm Baldrige National Quality Award Criteria to FAA-iCMM v2.0	57
ISO/IEC TR 15504 to FAA-iCMM v2.0	65
ISO/IEC 12207 to FAA iCMM V2.0	76
ISO/IEC CD 15288 CD3 to FAA-iCMM v2.0	85

FAA-iCMM v1.0 to FAA-iCMM v2.0

FAA-iCMM v1.0 Process Areas, Goals, and Practices	FAA-iCMM v2.0 Process Areas, Goals, and Practices
PA 01 Needs	***PA 01 Needs; PA 02 Requirements***
1. Customer needs are represented in a statement of system requirements.	PA 02 1. Requirements are developed from customer and other stakeholder needs.
2. Changes to the system requirements are communicated to the customer for agreement.	PA 02 3. All requirements information is recorded in a baseline that is maintained and controlled throughout the life cycle.
BP 01.01 Elicit Needs	BP 01.02 Elicit Needs
BP 01.02 Analyze Needs	BP 01.03 Analyze Needs
BP 01.03 Develop System Requirements	BP 02.07 Record and baseline requirements
BP 01.04 Obtain Customer Agreement	BP 02.07 Record and baseline requirements
BP 01.05 Inform Customer	BP 01.05 Communicate with Customers
PA 02 Requirements	***PA 02 Requirements; PA 01 Needs; PA 03 Design***
1. Requirements are derived from customer needs and other appropriate sources	PA 02 1. Requirements are developed from customer and other stakeholder needs.
2. Requirements are allocated to support the synthesis of solutions.	PA 03 3. Allocations of requirements to the design elements are established and maintained.
3. Requirements are unambiguous, traceable, and verifiable.	PA 02 2. Requirements satisfy established quality criteria including unambiguity, completeness, traceability, feasibility, and verifiability.
4. Requirements are controlled to establish a baseline for engineering and management use.	PA 02 3. All requirements information is recorded in a baseline that is maintained and controlled throughout the life cycle.
5. Plans, products, and activities are kept consistent with requirements.	PA 02 4. Plans, products, activities, and agreements are checked for consistency with requirements, and any inconsistencies are identified for correction.
BP 02.01 Develop detailed operational concept	BP 01.03 Analyze Needs
BP 02.02 Identify key requirements	BP 02.03 Identify key requirements
BP 02.03 Derive and partition requirements	BP 02.04 Derive requirements
BP 02.04 Identify interface requirements	BP 02.05 Identify external interface requirements
BP 02.05 Allocate requirements	BP 02.01 Identify Functional and Performance Requirements BP 03.04 Allocate Requirements
BP 02.06 Analyze requirements	BP 02.06 Analyze requirements
BP 02.07 Capture and baseline requirements	BP 02.07 Record and baseline requirements
BP 02.08 Analyze and incorporate requirements changes	BP 02.08 Analyze and resolve requirements change requests
BP 02.09 Maintain consistency and traceability	BP 02.09 Maintain consistency and traceability
PA 03 Architecture	***PA 03 Design; PA 02 Requirements***
1. A system architecture that will meet the defined requirements is established and maintained.	1. A product or service design that will meet the defined requirements is established and maintained.
2. The architecture evolves to meet changing requirements.	1. A product or service design that will meet the defined requirements is established and maintained.
BP 03.01 Derive system architecture requirements	BP 02.04 Derive requirements
BP 03.02 Identify key design issues	BP 03.01 Identify and Prioritize Design Issues
BP 03.03 Develop architectural structure	BP 03.02 Develop Design Structure
BP 03.04 Develop architectural interface requirements	BP 03.03 Develop Interface Specifications
BP 03.05 Allocate architecture requirements	BP 03.04 Allocate Requirements

FAA-iCMM v1.0 Process Areas, Goals, and Practices	FAA-iCMM v2.0 Process Areas, Goals, and Practices
BP 03.06 Capture system architecture	BP 03.08 Establish and Maintain Design Description
PA 04 Alternatives	***PA 04 Alternatives Analysis***
1. An evaluation strategy is established and maintained.	1. Strategies are established and maintained that support the analysis of alternatives and structured decision-making.
2. Alternatives are identified, analyzed and selected in accordance with the established strategy.	2. Alternative solutions to selected issues are analyzed and solutions selected or recommended in accordance with established strategy and criteria with the established strategy.
3. Results of the evaluation are recorded for each alternative.	3. Results and rationale of alternatives analysis are documented and communicated.
BP 04.01 Establish Evaluation Criteria	BP 04.01 Establish Analysis Strategy
BP 04.02 Define Analysis Approach	BP 04.03 Select Analysis Method
BP 04.03 Identify Alternatives	BP 04.04 Identify Alternative Solutions
BP 04.04 Analyze Alternatives	BP 04.05 Analyze Alternative Solutions
BP 04.05 Select Solution	BP 04.06 Select Solution
BP 04.06 Capture the Disposition of Each Alternative	BP 04.07 Communicate Analysis Results
PA 05 Outsourcing	***PA 05 Outsourcing***
1. Qualified suppliers are selected to provide product or process components.	2. Qualified suppliers are selected to provide solution or process components.
2. A productive communications environment is established and maintained with suppliers.	3. A productive communications environment is established and maintained with potential suppliers.
BP 05.01 Identify Needed System or Process Components	BP 05.01 Identify Needed Products or Services
BP 05.02 Identify Competent Suppliers	BP 05.02 Identify Competent Suppliers
BP 05.03 Prepare for the solicitation	BP 05.03 Prepare for the Solicitation or Tasking
BP 05.04 Choose Supplier	BP 05.04 Choose Supplier
BP 05.05 Communicate with Suppliers	BP 05.05 Communicate with Suppliers
PA 06 Software Development and Maintenance	***PA 06 Design Implementation; PA 02 Requirements; PA 03 Design; PA 08 Evaluation; PA 07 Integration***
1. The software engineering tasks are defined, integrated, and consistently performed to produce the software.	PA 06 1. Solution component(s) are developed.
2. Software work products are kept consistent with each other.	PA 06 2. Documentation to support solution component(s) is established and maintained.
BP 06.01 Integrate Methods and Tools	BP 06.01 Establish the Implementation Environment
BP 06.02 Analyze Allocated Requirements	BP 02.06 Analyze requirements BP 03.06 Establish Component Specifications
BP 06.03 Design Software	BP 03.05 Define Interactions among Design Elements BP 03.06 Establish Component Specifications BP 03.08 Establish and Maintain Design Description
BP 06.04 Implement Software	BP 06.02 Formulate product or service components BP 06.03 Develop Documentation
BP 06.05 Test Software	BP 08.04 Evaluate Incremental Work Products
BP 06.06 Perform Integration Testing	BP 08.05 Verify end-Products BP 07.05 Confirm Integrated Product or Service Operation
BP 06.07 Develop Documentation	BP 06.03 Develop Documentation
BP 06.08 Maintain Consistency across Software Work Products	BP 02.09 Maintain consistency and traceability BP 08.07 Analyze Evaluation Results BP 07.05 Confirm Integrated Product or Service

FAA-iCMM v1.0 Process Areas, Goals, and Practices	FAA-iCMM v2.0 Process Areas, Goals, and Practices
	Operation
PA 07 Integration	***PA 07 Integration; PA 03 Design; PA 08 Evaluation***
1. A strategy for integrating the system elements is defined.	PA 07 1. A strategy for integrating the product and service elements is defined.
2. Interfaces are defined in accordance with the system architecture.	PA 03 1. A product or service design that meets the product and service requirements is established and maintained.
3. System elements are verified.	PA 07 2. Readiness of product and service elements for integration is verified.
4. The system is integrated in accordance with the integration strategy.	PA 07 3. The product or service is integrated in accordance with the integration strategy.
BP 07.01 Define Interfaces	BP 03.03 Develop Interface Specifications
BP 07.02 Verify Receipt of System Elements	BP 07.02 Confirm Readiness of Product and Service Elements
BP 07.03 Verify System Element Correctness	BP 08.05 Verify end-Products
BP 07.04 Verify System Element Interfaces	BP 08.05 Verify end-Products
BP 07.05 Assemble Aggregates of System Elements	BP 07.04 Assemble Product and Service Elements
BP 07.06 Test System Level Integration	BP 07.05 Confirm Integrated Product or Service Operation
BP 07.07 Develop Integration Strategy	BP 07.01 Develop Integration Strategy
PA 08 System Test and Evaluation	***PA 08 Evaluation; PA 05 Outsourcing; PA 12 Supplier Agreement Management***
1. The evaluation approach, requirements and methods are defined to provide an objective basis to support the decision for acceptance of the system products and services.	PA 08 1. The evaluation approach, requirements, methods, and environment are established to provide an objective basis for determining whether the products and services meet requirements and can be accepted.
2. Evaluations are performed as planned.	PA 08 2. Evaluations are performed as planned
3. Analyses are conducted on results of evaluations and developer performance.	PA 08 3. Analyses are conducted on results of evaluations to support acceptance or corrective actions.
BP 08.01 Develop Evaluation Strategy and Requirements	BP 08.01 Develop Evaluation Strategy
BP 08.02 Define Evaluation Procedures	BP 08.02 Develop Evaluation Procedures
BP 08.03 Incorporate Evaluation Requirements into the Solicitation and Contract	BP 05.03 Prepare for the Solicitation or Tasking
BP 08.04 Monitor Developer Performance	BP 12.02 Review and Monitor Agreement Performance
BP 08.05 Perform Planned Evaluations	BP 08.03 Establish and Maintain Evaluation Environment BP 08.04 Evaluate incremental work products BP 08.05 Verify end-Products BP 08.06 Validate end-products
BP 08.06 Analyze Evaluation Results	BP 08.07 Analyze Evaluation Results
PA 09 Transition	***PA 09 Deployment, Transition, and Disposal***
1. The system support organization demonstrates its capacity to provide the required support upon assumption of responsibility for the system.	3. Customer/ stakeholder operation and support organizations demonstrate their capacity to support the product or service upon assumption of responsibility.
2. Continuity of configuration and requirements management is maintained during the transition.	3. Customer/ stakeholder operation and support organizations demonstrate their capacity to support the product or service upon assumption of responsibility.
BP 09.01 Conduct inventory	BP 09.03 Oversee Configuration of Product or Service

FAA-iCMM v1.0 Process Areas, Goals, and Practices	FAA-iCMM v2.0 Process Areas, Goals, and Practices
BP 09.02 Develop and follow transition to support strategy	BP 09.01 Develop, Deploy, and Maintain a Strategy for Deployment, Transition and Disposal Activities BP 09.05 Transition Product or Service
BP 09.03 Demonstrate support capability	BP 09.04 Demonstrate Support Capability
BP 09.04 Oversee the configuration management of the system	BP 09.03 Oversee Configuration of Product or Service
BP 09.05 Oversee the requirements management of the system	BP 09.03 Oversee Configuration of Product or Service
BP 09.06 Transfer and tailor developer's processes to the support organization	BP 09.05 Transition Product or Service
PA 10 Product Evolution	***PA 23 Innovation; PA 00 Integrated Enterprise Management***
1. Strategies that support disciplined product evolution are established and maintained.	BP 00.02 Align to achieve the vision
BP 10.01 Define product evolution	BP 00.01Establish and maintain strategic vision.
BP 10.02 Identify new product technologies	BP 23.01Maintain New Technology Awareness BP 23.02 Select new technologies
BP 10.03 Adapt development processes	BP 23.04 Infuse New Technologies
BP 10.04 Ensure critical component availability	BP 23.03 Prepare for Infusion
BP 10.05 Insert Product Technology	BP 23.04 Infuse New Technologies
PA11 Project Management	***PA 11 Project Management***
1. Plans for managing the project are established early in the project lifecycle and maintained.	1. Project plans are established, maintained and executed to provide required products and services that reflect customer and stakeholder needs.
2. Estimates of the project's planning parameters are established and maintained.	2. Estimates of the project's planning parameters are established and maintained to support resource estimates.
3. Commitments related to the project are established and maintained.	3. Commitments related to the project are established and maintained.
4. Progress of the project is evaluated against the project's established plans.	4. Progress of the project is evaluated against its plans.
5. Corrective actions are taken appropriately and managed to closure.	5. Corrective actions are taken when appropriate and managed to closure
BP 11.01 Identify the Activities	BP 11.02 Define the Activities and Life Cycle Approach
BP 11.02 Identify the Life Cycle Approach	BP 11.02 Define the Activities and Life Cycle Approach
BP 11.03 Establish Estimates	BP 11.04 Estimate Project Resource Requirements
BP 11.04 Establish Schedules	BP 11.05 Establish Schedules
BP 11.05 Establish and Maintain Plans	BP 11.06 Establish and Maintain Plans
BP 11.06 Establish Commitment	BP 11.07 Establish Commitment
BP 11.07 Monitor the Project according to Established Plans	BP 11.10 Monitor Project Performance
BP 11.08 Track Technical Process	BP 11.10 Monitor Project Performance
BP 11.09 Review Performance Against Established Plans	BP 11.11 Review and Analyze Project Performance
BP 11.10 Take Corrective Action	BP 11.12 Take Corrective Action
PA12 Contract Management	***PA 12 Supplier Agreement Management***
1. The contract is kept consistent with the requirements of the acquisition project and relevant laws, policies, regulations, and guidance.	1. The documented agreement is kept consistent with the acquirer's requirements and relevant laws, policies, regulations, and other applicable guidance.

FAA-iCMM v1.0 Process Areas, Goals, and Practices	FAA-iCMM v2.0 Process Areas, Goals, and Practices
2. Contractor performance, products, and services are reviewed throughout the project to identify risks, problems, and appropriate corrective actions.	2. Supplier performance, processes, products and services are reviewed and monitored to identify problems and to ensure that products and services conform to requirements.
3. Measurements are used to track the contractor's performance.	3. Measurements are used to track the supplier's performance.
4. Communications between the acquirer's project team and the contractor are established and maintained.	4. Communications between the acquirer and the supplier are established and maintained to foster a cooperative and productive agreement environment.
BP 12.01 Review and Use Planning documents	BP 12.01 Use Planning documents:
BP 12.02 Conduct Periodic Reviews	BP 12.02 Review and Monitor Agreement Performance
BP 12.03 Maintain Contract Integrity	BP 12.03 Maintain Supplier Agreement Integrity
BP 12.04 Monitor Contractor's Support Processes	BP 12.04 Monitor Supplier's Plans, Processes, Activities and Products
BP 12.05 Foster Cooperative Environment	BP 12.05 Foster Cooperative and Collaborative Environment.
PA 13 Risk Management	***PA 13 Risk Management; PA 11 Project Management***
1. Risk Management is an integral part of project management and engineering activities.	PA 13 1. A risk management strategy is established and used that includes the plans, methods and parameters for management of risk.
2. Risks are identified and assessed for their likelihood and impact.	PA 13 2. Risks are identified and assessed for their likelihood and consequence.
3. Risk mitigation is performed when analysis indicates action.	PA 13 3. Risk mitigation is performed when analysis indicates action.
BP 13.01 Develop Risk Management Approach	BP 13.01 Develop Risk Management Approach
BP 13.02 Identify Risks	BP 13.02 Identify Risks
BP 13.03 Assess Risks	BP 13.03 Assess Risks
BP 13.04 Review and Validate Risk Assessment	BP 11.11 Review and Analyze Project Performance GP 2.13 Review Performance with Higher-level Management
BP 13.05 Execute Risk Mitigation Plans	BP 13.05 Implement and Monitor Risk Mitigation Plans
PA 14 Coordination	***PA 14 Integrated Teaming***
1. The project goals, processes and interfaces between the disciplines necessary to the system life cycle are coordinated.	1. Integrated teams composed of appropriate disciplines and stakeholders are established and maintained
2. Methods are established and maintained for interdisciplinary communication, coordination, and conflict resolution.	2. Team processes and methods are established and maintained for effective coordination, collaboration, communication, conflict resolution and decision-making
BP 14.01 Involve Disciplines	BP 14.02 Establish and Maintain Integrated Teams
BP 14.02 Promote Cross-Discipline Understanding	BP 14.03 Establish and Maintain a Collaborative Workplace
BP 14.03 Establish Coordination Methods	BP 14.04 Establish Coordination and Communication Methods
BP 14.04 Establish Resolution Methods	BP 14.05 Establish Resolution Methods
BP 14.05 Communicate Interdisciplinary Activity Results	BP 14.06 Communicate Integrated Team Activity Results
BP 14.06 Develop and Communicate Project Goals	BP 14.01 Develop and Communicate Team Goals

FAA-iCMM v1.0 Process Areas, Goals, and Practices	FAA-iCMM v2.0 Process Areas, Goals, and Practices
PA 15 Quality Assurance and Management	***PA 15 Quality Assurance and Management***
1. Adherence of work products and activities to the applicable standards, procedures, and requirements is verified objectively.	1. Adherence of work products, services, and activities to applicable standards, procedures, and requirements is verified objectively.
2. Noncompliance issues that cannot be resolved within the software project are addressed by senior management.	2. Noncompliance issues are tracked and those that cannot be resolved at the project level are addressed by senior management.
3. Affected groups and individuals are informed of quality assurance activities, results, and quality improvement opportunities.	3. Affected groups and individuals are informed of quality assurance activities, and results. 5. Quality improvement opportunities are initiated with the appropriate stakeholders.
BP 15.01 Monitor Process Compliance	BP 15.02 Monitor Process Compliance
BP 15.02 Evaluate Product and Process	BP 15.02 Monitor Process Compliance BP 15.03 Monitor Product and Service Quality
BP 15.03 Detect Need for Corrective Actions	BP 15.05 Analyze Quality
BP 15.04 Record and Report Results	BP 15.04 Record and Report Results
BP 15.05 Analyze Quality	BP 15.05 Analyze Quality
BP 15.06 Initiate Quality Improvement Opportunities	BP 15.06 Initiate Quality Improvement
PA 16 Configuration Management	***PA 16 Configuration Management***
1. Configuration items that constitute baselines are identified.	1. Configuration items that are to be managed are identified.
2. Configuration items are controlled to support the disciplined evolution of the product baseline.	2. Configuration items are controlled and managed throughout the life cycle.
3. Configuration status is communicated to affected groups.	3. Status of configuration items is recorded and reported to all stakeholders.
4. Configuration baselines are audited to verify the product baseline integrity.	4. The integrity of baselines and work products is assured.
BP 16.01 Establish configuration management methodology	BP 16.01 Establish a Configuration Management Strategy
BP 16.02 Identify configuration units/items	BP 16.02 Identify and Baseline Configuration Items and Interim Work Products
BP 16.03 Establish and Maintain a repository for work product baselines	BP 16.03 Establish and Maintain a Repository for Work Product Baselines
BP 16.04 Control and track changes	BP 16.04 Control Changes
BP 16.05 Communicate configuration status	BP 16.05 Record and Report Configuration Status
BP 16.06 Conduct configuration audits	BP 16.06 Conduct Configuration Audits and Inspections
PA 17 Peer Review	***PA 08 Evaluation***
1. Defects in work products are identified and removed.	PA 08 2. Evaluations are performed as planned. PA 08 3. Analyses are conducted on results of evaluations to support acceptance or corrective actions
BP 17.01 Conduct peer reviews.	BP 08.04 Evaluate incremental work products
BP 17.02 Record and analyze peer review data.	BP 08.04 Evaluate incremental work products
PA 18 Measurement	***PA 18 Measurement and Analysis; PA 00 Integrated Enterprise Management; PA 11 Project Management***
1. Measurements are established, maintained and used based on the project and organization goals.	PA 18 1. Measures related to goals, objectives and major issues are established
2. Measurements are collected, analyzed and reported.	PA 18 2. Measurement data are collected, analyzed, and results are reported
BP 18.01 Establish Measures Based on Quantitative Goals	BP 18.01 Establish measures based on goals

FAA-iCMM v1.0 Process Areas, Goals, and Practices	FAA-iCMM v2.0 Process Areas, Goals, and Practices
BP 18.02 Collect and Analyze Measurement Data	BP 18.02 Collect relevant measurement data BP 18.04 Analyze measurement data
BP 18.03 Communicate Quantitative Status	BP 18.05 Communicate results
BP 18.04 Take Corrective Action	BP 00.06 Act on results of review BP 11.12 Take Corrective Action
PA 19 Prevention	***PA 15 Quality Assurance and Management***
1. Common causes of defects are sought out and identified.	PA 15 4. Causes of defects are sought out, identified, prioritized, corrected, and methods of elimination are evaluated.
2. Common causes of defects are prioritized and systematically eliminated.	PA 15 4. Causes of defects are sought out, identified, prioritized, corrected, and methods of elimination are evaluated.
BP 19.01 Conduct causal analysis meetings	BP 15.05 Analyze Quality
BP 19.02 Coordinate action proposals	BP 15.06 Initiate Quality Improvement
BP 19.03 Document and track prevention data	BP 15.07 Evaluate the Effect of Changes
BP 19.04 Revise processes for defect prevention	BP 15.06 Initiate Quality Improvement
PA 20 Organization Process Definition	***PA 20 Process Definition; PA 21 Process Improvement***
1. The organization's set of standard processes is established and maintained.	PA 20 1. The set of standard processes is established and maintained.
2. Guides for tailoring the organization's standard processes are established and maintained.	PA 20 2. Guides for tailoring the standard processes are established and maintained.
3. Goals, performance data, and other assets for the organization's processes are collected, maintained, and communicated.	PA 20 3. Goals, performance data, and other assets that support the processes are collected, maintained, and communicated.
4. Process definition and improvement activities are coordinated across the organization.	PA 21 2. Process improvement activities are coordinated across projects and the organization.
BP 20.01 Appraise processes	BP 21.03 Appraise process
BP 20.02 Identify process goals	BP 21.01 Identify Process Improvement Goals
BP 20.03 Establish standard processes	BP 20.01 Establish Standard Processes
BP 20.04 Develop tailoring guidelines	BP 20.02 Develop Tailoring Guidelines
BP 20.05 Maintain process assets	BP 20.03 Maintain Process Assets
BP 20.06 Coordinate and communicate process definition	BP 20.04 Coordinate and Communicate Process Definition
PA 21 Organization Process Improvement	***PA 21 Process Improvement; PA 20 Process Definition***
1. The set of standard processes and projects' defined processes are improved continuously.	PA 21 3. Improvements are deployed, monitored, and sustained within the project and organization.
BP 21.01 Establish process improvement program	BP 21.02 Establish Process Improvement Program
BP 21.02 Change the standard process	BP 20.01 Establish Standard Processes
PA 22 Training	***PA 22 Training***
1. Training needs are solicited and identified.	1. Training needs are solicited and identified.
2. Required training is provided.	2. Required training is provided
BP 22.01 Identify strategic needs	BP 22.01 Identify Training Needs
BP 22.02 Identify unique training needs	BP 22.01 Identify Training Needs
BP 22.03 Train individuals	BP 22.04 Train Individuals
BP 22.04 Obtain training	BP 22.03 Establish Training Mechanism
BP 22.05 Establish and maintain records	BP 22.05 Establish and Maintain Records
BP 22.06 Assess training effectiveness	BP 22.06 Assess Training Effectiveness

FAA-iCMM v1.0 Process Areas, Goals, and Practices	FAA-iCMM v2.0 Process Areas, Goals, and Practices
PA 23 Innovation	***PA 23 Innovation***
1. Agile adaptation to change is driven by the organization's profound knowledge of its products, processes, technologies, and core competencies.	1. Agile adaptation to change is driven by the organization's knowledge of its products, processes, technologies, and core competencies.
2. The organization environment is updated in a planned, controlled manner while minimizing disruptions to users.	3. Selected technologies are deployed to relevant parts of the organization in accordance with the organization's objectives and goals.
BP 23.01 Maintain New Technology Awareness	BP 23.01 Maintain New Technology Awareness
BP 23.02 Select New Technologies	BP 23.02 Select New Technologies
BP 23.03 Prepare for Infusion	BP 23.03 Prepare for Infusion
BP 23.04 Infuse New Technologies	BP 23.04 Infuse New Technologies
BP 23.05 Support Innovation	BP 23.05 Manage Innovation
Capability Levels and Generic Practices	**Capability Levels and Generic Practices**
Capability Level 1 - Initial: Performed Informally *(no goal)*	***Capability Level 1: Performed*** *Level 1 Goal: The process achieves the goals of the process area.*
1.1 Perform the Process	1.2 Perform the Process
Capability Level 2 - Repeatable: Planned and Tracked *Level 2 Goal: The activities for the process are institutionalized to support a repeatable process*	***Capability Level 2: Managed: Planned and Tracked*** *Level 2 Goal: The process is institutionalized as a managed (planned and tracked) process.*
2.1 Establish Policy	2.1 Establish Organizational Policy
2.2 Allocate Adequate Resources	2.4 Provide Adequate Resources
2.3 Assign Responsibility	2.5 Assign Responsibility
2.4 Ensure Training	2.6 Ensure Skill and Knowledge
2.5 Document the Process	2.2 Document the Process
2.6 Plan the Process	2.3 Plan the Process
2.7 Use a Repeatable Process	2.8 Consistently Use and Manage the Process
2.8 Manage Configurations	2.9 Manage Work Products
2.9 Assess Process Compliance	2.10 Objectively Assess Process Compliance.
2.10 Verify Work Products	2.11 Objectively Verify Work Products
2.11 Measure Process	2.12 Measure Performance
2.12 Review Status	2.13 Review Performance with Higher-level Management
2.13 Take Corrective Action	2.14 Take Corrective Actions
2.14 Coordinate Within the Project	2.15 Coordinate with Stakeholders
Capability Level 3: Defined; Well Defined *Level 3 Goal: The activities of the process are institutionalized to support a defined process.*	***Capability Level 3: Defined*** *Level 3 Goal: The process is institutionalized as a defined process.*
3.1 Standardize the Process	3.1 Standardize the Process
3.2 Use Defined Process	3.2 Establish and Use a Defined Process
3.3 Perform Reviews with Peers	2.11 Objectively Verify Work Products
3.4 Coordinate with Affected Groups	2.15 Coordinate with Stakeholders
Capability Level 4 - Managed; Quantitatively Controlled *Level 4 Goal: The activities of the processes are institutionalized to support quantitative management of defined processes.*	***Capability Level 4: Quantitatively Managed*** *Level 4 Goal: The process is institutionalized as a quantitatively managed process.*
4.1 Establish Quality Objectives for Product and Process	4.1 Stabilize Process Performance
4.2 Select Processes for Measurement	4.1 Stabilize Process Performance

FAA-iCMM v1.0 Process Areas, Goals, and Practices	**FAA-iCMM v2.0 Process Areas, Goals, and Practices**
4.3 Select Measures for the Process	4.1 Stabilize Process Performance
4.4 Determine Quantitative Process Capability	4.1 Stabilize Process Performance
4.5 Use Quantitative Process Capability	4.1 Stabilize Process Performance
Capability Level 5 – Optimizing; Continuously improving *Level 5 Goal: Continually improving processes are deployed throughout the organization.*	***Capability Level 5: Optimizing*** *Level 5 Goal: The process is institutionalized as an optimizing process*
5.1 Perform Continual Process Improvement on Organizational Standard and Tailored Processes	3.3 Improve Processes
5.2 Implement Improved Processes	3.3 Improve Processes

ISO 9001:2000 to FAA-iCMM v2.0

ISO 9001:2000 Subclauses	FAA-iCMM v2.0 Practices
Section 4 – Quality management system	
4.1 General requirements	BP 05.01 Identify Needed Products or Services BP 12.04 Monitor Supplier's Plans, Processes, Activities and Products BP 15.01 Establish a Quality Management System BP 20.01 Establish Standard Processes BP 21.05 Implement Improvements BP 21.06 Confirm Improvements BP 21.08 Monitor Performance GP 2.4 Provide Adequate Resources GP 2.12 Measure Performance GP 2.13 Review Performance with Higher-level Management GP 2.14 Take Corrective Actions GP 3.1 Standardize the Process GP 3.3 Improve Processes
4.2 Documentation requirements	
4.2.1 General	BP 00.01Establish and maintain strategic vision BP 15.01 Establish a Quality Management System BP 20.01 Establish Standard Processes GP 2.1 Establish Organizational Policy GP 2.2 Document the Process
4.2.2 Quality Manual	BP 15.01 Establish a Quality Management System BP 20.01 Establish Standard Processes GP 2.2 Document the Process GP 3.1 Standardize the Process
4.2.3 Control of Documents	BP 16.01 Establish a Configuration Management Strategy BP 16.02 Identify and Baseline Configuration Items and Interim Work Products BP 16.03 Establish and Maintain a Repository for Work Product Baselines BP 16.04 Control Changes BP 16.05 Record and Report Configuration Status BP 17.04 Share Information BP 17.05 Protect Information GP 2.9 Manage Work Products
4.2.4 Control of records	BP 08.07 Analyze Evaluation Results BP 15.04 Record and Report Results BP 16.03 Establish and Maintain a Repository for Work Product Baselines BP 16.04 Control Changes BP 17.01 Establish Information Management Strategy BP 17.03 Store Information BP 17.04 Share Information BP 17.05 Protect Information GP 2.9 Manage Work Products
Section 5 - Management responsibility	
5.1 Management commitment	BP 00.01 Establish and maintain strategic vision. BP 00.02 Align to achieve the vision BP 00.03 Establish and maintain strategy BP 00.04 Develop and deploy action plans

ISO 9001:2000 Subclauses	FAA-iCMM v2.0 Practices
	BP 00.05 Review performance BP 00.06 Act on results of review GP 2.1 Establish Organizational Policy GP 2.4 Provide Adequate Resources
5.2 Customer focus	BP 01.01 Identify Customers and Stakeholders BP 01.02 Elicit Needs BP 01.06 Determine Customer Satisfaction BP 02.07 Record and baseline requirements
5.3 Quality policy	BP 00.01 Establish and maintain strategic vision. BP 00.02 Align to achieve the vision BP 00.05 Review performance GP 2.1 Establish Organizational Policy
5.4 Planning	
5.4.1 Quality objectives	BP 00.02 Align to achieve the vision BP 00.03 Establish and maintain strategy BP 15.01 Establish a Quality Management System GP 2.3 Plan the Process
5.4.2 Quality management system planning	BP 15.01 Establish a Quality Management System GP 2.3 Plan the Process
5.5 Responsibility, authority, communication	
5.5.1 Responsibility and authority	GP 2.5 Assign Responsibility
5.5.2 Management representative	GP 2.5 Assign Responsibility
5.5.3 Internal Communication	BP 00.02 Align to achieve the vision BP 00.03 Establish and maintain strategy BP 00.04 Develop and deploy action plans GP 2.15 Coordinate with Stakeholders
5.6 Management review	
5.6.1 General	BP 00.05 Review performance GP 2.13 Review Performance with Higher-level Management
5.6.2 Review input	BP 00.05 Review performance BP 11.11 Review and Analyze Project Performance GP 2.13 Review Performance with Higher-level Management
5.6.3 Review output	BP 00.05 Review performance BP 11.11 Review and Analyze Project Performance BP 11.12 Take Corrective Action GP 2.13 Review Performance with Higher-level Management GP 2.14 Take Corrective Actions
Section 6 - Resource management	
6.1 Provision of resources	BP 00.04 Develop and deploy action plans GP 2.4 Provide Adequate Resources (applied to PAs 00, 01, 15, 20, and 21)
6.2 Human resources	
6.2.1 General	GP 2.6 Ensure Skill and Knowledge
6.2.2 Competence, awareness and training	BP 00.02 Align to achieve the vision. BP 22.01 Identify Training Needs BP 22.04 Train Individuals BP 22.05 Establish and Maintain Records BP 22.06 Assess Training Effectiveness BP 22.07 Establish Learning Environment GP 2.6 Ensure Skill and Knowledge
6.3 Infrastructure	BP 23.05 Manage Innovation GP 2.4 Provide Adequate Resources

ISO 9001:2000 Subclauses	FAA-iCMM v2.0 Practices
6.4 Work environment	BP 23.05 Manage Innovation GP 2.4 Provide Adequate Resources
Section 7 - Product realization	
7.1 Planning of product realization	BP 08.01 Develop Evaluation Strategy BP 08.02 Develop Evaluation Procedures BP 11.01 Define Project Objectives, Scope, and Outputs BP 11.06 Establish and Maintain Plans BP 15.01 Establish a Quality Management System GP 2.4 Provide Adequate Resources
7.2 Customer-related processes	
7.2.1 Determination of requirements related to the product	BP 01.02 Elicit Needs BP 01.03 Analyze Needs BP 02.01 Identify Functional and Performance Requirements BP 02.02 Identify Nonfunctional Requirements and Constraints BP 02.04 Derive requirements BP 02.05 Identify external interface requirements GP 2.7 Establish Work Product Requirements
7.2.2 Review of requirements related to the product	BP 02.07 Record and baseline requirements BP 02.08 Analyze and resolve requirements change requests BP 08.04 Evaluate incremental work products BP 11.01 Define Project Objectives, Scope, and Outputs
7.2.3 Customer communication	BP 01.05 Communicate with Customers BP 01.06 Determine Customer Satisfaction GP 2.15 Coordinate with Stakeholders
7.3 Design and development	
7.3.1 Design and development planning	BP 11.01 Define Project Objectives, Scope, and Outputs BP 11.02 Define the Activities and Life Cycle Approach BP 11.06 Establish and Maintain Plans BP 11.07 Establish Commitment BP 14.04 Establish Coordination and Communication Methods
7.3.2 Design and development inputs	BP 02.01 Identify Functional and Performance Requirements BP 02.02 Identify Nonfunctional Requirements and Constraints BP 02.04 Derive requirements BP 02.06 Analyze requirements BP 02.07 Record and baseline requirements BP 08.01 Develop Evaluation Strategy BP 08.04 Evaluate incremental work products
7.3.3 Design and development outputs	BP 03.06 Establish Component Specifications BP 03.08 Establish and Maintain Design Description BP 06.02 Formulate product or service components BP 06.03 Develop Documentation
7.3.4 Design and development review	BP 08.04 Evaluate incremental work products
7.3.5 Design and development verification	BP 08.04 Evaluate Incremental Work Products BP 08.05 Verify end-Products
7.3.6 Design and development validation	BP 08.04 Evaluate Incremental Work Products BP 08.06 Validate end-products
7.3.7 Control of design and development changes	BP 16.04 Control Changes BP 16.05 Record and Report Configuration Status GP 2.9 Manage Work Products
7.4 Purchasing	
7.4.1 Purchasing process	BP 05.02 Identify Competent Suppliers BP 05.04 Choose Supplier BP 12.08 Determine Product or Service Acceptance
7.4.2 Purchasing information	BP 05.03 Prepare for the Solicitation or Tasking

ISO 9001:2000 Subclauses	FAA-iCMM v2.0 Practices
7.4.3 Verification of purchased product	BP 08.04 Evaluate incremental work products BP 08.05 Verify end-Products BP 12.02 Review and Monitor Agreement Performance BP 12.04 Monitor Supplier's Plans, Processes, Activities and Products BP 12.08 Determine Product or Service Acceptance
7.5 Production and service provision	
7.5.1 Control of production and service provision	BP 06.01 Establish the Implementation Environment BP 06.03 Develop Documentation BP 09.01 Develop, Deploy, and Maintain a Strategy for Deployment, Transition and Disposal Activities BP 09.02 Prepare Facility and Infrastructure Environment BP 09.03 Oversee Configuration of Product or Service BP 09.05 Transition Product or Service BP 09.06 Deactivate and Dispose Replaced Product and/or Dispense with Service BP 10.01 Operate the system, product or service BP 10.02 Monitor and evaluate capacity, service, and performance BP 10.07 Provide customer support GP 2.4 Provide Adequate Resources
7.5.2 Validation of processes for production and service provision	BP 15.02 Monitor Process Compliance
7.5.3 Identification and traceability	BP 16.02 Identify and Baseline Configuration Items and Interim Work Products BP 16.05 Record and Report Configuration Status
7.5.4 Customer property	BP 16.02 Identify and Baseline Configuration Items and Interim Work Products BP 16.05 Record and Report Configuration Status BP 17.05 Protect Information GP 2.4 Provide Adequate Resources
7.5.5 Preservation of product	BP 09.05 Transition Product or Service BP 10.03 Confirm availability of parts and personnel
7.6 Control of monitoring and measuring devices	BP 08.01 Develop Evaluation Strategy BP 08.03 Establish and Maintain Evaluation Environment BP 18.01 Establish measures based on goals BP 18.02 Collect relevant measurement data
Section 8 - Measurement, analysis and improvement	
8.1 General	BP 08.07 Analyze Evaluation Results BP 15.02 Monitor Process Compliance BP 15.05 Analyze Quality BP 18.01 Establish measures based on goals BP 18.02 Collect relevant measurement data BP 18.04 Analyze measurement data GP 2.3 Plan the Process GP 3.3 Improve Processes
8.2 Monitoring and measurement	
8.2.1 Customer satisfaction	BP 01.06 Determine Customer Satisfaction
8.2.2 Internal Audit	BP 15.02 Monitor Process Compliance BP 15.03 Monitor Product and Service Quality GP 2.10 Objectively Assess Process Compliance GP 2.11 Objectively Verify Work Products
8.2.3 Monitoring and measurement of	BP 00.05 Review performance

ISO 9001:2000 Subclauses	FAA-iCMM v2.0 Practices
processes	BP 15.02 Monitor Process Compliance BP 18.01 Establish measures based on goals BP 18.02 Collect relevant measurement data BP 18.03 Store data and results BP 18.04 Analyze measurement data BP 18.05 Communicate results GP 2.10 Objectively Assess Process Compliance GP 2.12 Measure Performance
8.2.4 Monitoring and measurement of product	BP 00.05 Review performance BP 08.04 Evaluate incremental work products BP 08.05 Verify end-Products BP 15.03 Monitor Product and Service Quality BP 18.01 Establish measures based on goals BP 18.02 Collect relevant measurement data BP 18.03 Store data and results BP 18.04 Analyze measurement data BP 18.05 Communicate results GP 2.11 Objectively Verify Work Products GP 2.12 Measure Performance
8.3 Control of nonconforming product	BP 08.02 Develop Evaluation Procedures BP 08.05 Verify end-Products BP 11.12 Take Corrective Action
8.4 Analysis of data	BP 01.06 Determine Customer Satisfaction BP 08.07 Analyze Evaluation Results BP 15.05 Analyze Quality BP 18.02 Collect relevant measurement data BP 18.03 Store data and results BP 18.04 Analyze measurement data
8.5 Improvement	
8.5.1 Continual improvement	BP 08.07 Analyze Evaluation Results BP 20.04 Coordinate and Communicate Process Definition BP 21.02 Establish Process Improvement Program BP 21.04 Establish an Action Plan BP 21.05 Implement Improvements BP 21.07 Sustain and deploy Improvement Gains GP 3.3 Improve Processes
8.5.2 Corrective action	BP 10.05 Analyze failures BP 10.06 Take or initiate corrective action BP 10.07 Provide customer support BP 11.12 Take Corrective Action BP 15.05 Analyze Quality BP 15.06 Initiate Quality Improvement BP 15.07 Evaluate the Effect of Changes GP 2.14 Take Corrective Actions
8.5.3 Preventive action	BP 10.04 Perform preventive maintenance BP 13.01 Develop Risk Management Approach BP 13.02 Identify Risks BP 13.03 Assess Risks BP 13.04 Develop Risk Mitigation Plans BP 13.05 Implement and Monitor Risk Mitigation Plans BP 15.05 Analyze Quality BP 15.06 Initiate Quality Improvement BP 15.07 Evaluate the Effect of Changes

EIA/IS 731 to FAA-iCMM v2.0

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
FA 1.1 Define Stakeholder and System Level Requirements	***PA 01 Needs; PA 02 Requirements; PA 08 Evaluation***
SP 1.1-1-1 Identify, collect and baseline stakeholder needs, expectations and constraints.	BP 01.02 Elicit Needs.
SP 1.1-1-2a Elicit or stimulate stakeholder needs	BP 01.02 Elicit Needs.
SP 1.1-1-2b Prioritize stakeholder needs, expectations and constraints.	BP 01.04 Establish and Maintain a Statement of Need.
SP 1.1-1-3a Review, coordinate, and deconflict stakeholder needs and constraints.	BP 01.04 Establish and Maintain a Statement of Need.
SP 1.1-1-3b Inform stakeholders on a regular basis about the status and disposition of needs, expectations, or measures of effectiveness	BP 01.05 Communicate with Customers.
SP 1.1-2-1a Analyze and quantify functionality required by users.	BP 02.01 Identify Functional and Performance Requirements.
SP 1.1-2-1b Transform customer/user requirements into a set of system level requirements.	BP 02.07 Record and baseline requirements.
SP 1.1-2-1c Define a system requirements baseline.	BP 02.07 Record and baseline requirements.
SP 1.1-2-1d Obtain an agreement between acquirer and developer that system level requirements reflect their needs and expectation	BP 02.07 Record and baseline requirements.
SP 1.1-2-2a Develop operational concepts and scenarios, which include functionality, performance, maintenance, support and disposal as appropriate.	BP 01.03 Analyze Needs.
SP 1.1-2-2b Review adequacy of system requirements to meet stakeholder needs with key stakeholders.	BP 02.07 Record and baseline requirements.
SP 1.1-2-2c Review operational concepts and scenarios to refine and discover requirements	BP 01.03 Analyze Needs.
SP 1.1-2-2d Record system requirement decisions that have a significant effect on cost, technical or schedule performance, and the rationale for the decisions.	BP 02.03 Identify key requirements
SP 1.1-2-2e Define the environment the system will operate in, including boundaries and constraints.	BP 01.03 Analyze Needs
SP 1.1-2-3a Negotiate an agreement between stakeholders and developers that system level requirements represent an optimum balance of their needs and expectations.	BP 02.07 Record and baseline requirements.
SP 1.1-2-3b Allow for expansion and growth in system requirements.	BP 02.06 Analyze requirements.
SP 1.1-2-3c Analyze and quantify functionality indicated by stakeholder requirements.	BP 02.01 Identify Functional and Performance Requirements.
SP 1.1-2-4 Perform analyses, simulations or prototypes to assure that system requirements will satisfy stakeholder needs and expectations.	BP 02.06 Analyze requirements BP 02.07 Record and baseline requirements BP 08.04 Evaluate incremental work products.
FA 1.2 Define Technical Problem	***PA 02 Requirements; PA 01 Needs; PA 03 Design; PA 04 Alternatives Analysis; PA 13 Risk Management***
SP 1.2-1-1a Develop a detailed operational concept of the interaction of the system, the user, and the environment, that satisfies the operational, support, maintenance, and disposal needs.	BP 01.03 Analyze Needs.
SP 1.2-1-1b Derive, from the system and other (e.g., environmental) requirements, requirements that may be logically inferred and implied as essential to system effectiveness.	BP 02.04 Derive requirements.

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
SP 1.2-1-1c Identify key stakeholder requirements and constraints that have a strong influence on cost, schedule, functionality, risk, or performance.	BP 02.03 Identify key requirements.
SP 1.2-1-2a Identify and manage non-technical requirements concurrently with operational, functional, support, maintenance and disposal requirements.	BP 02.02 Identify Nonfunctional Requirements and Constraints.
SP 1.2-1-2b Balance system and development cost and complexity, schedule, performance, and capabilities of existing designs and products in all trade studies using established criteria.	BP 04.02 Define the Problem.
SP 1.2-1-2c Capture relationships between requirements for consideration during change management and requirements allocation.	BP 02.07 Record and baseline requirements.
SP 1.2-1-2d Maintain this status of requirements.	BP 02.07 Record and baseline requirements.
SP 1.2-1-3 Use validated models, simulations, and prototyping to reduce cost and risk of system development.	BP 13.04 Develop Risk Mitigation Plans.
SP 1.2-2-1a Partition requirements into groups, based on established criteria (such as similar functionality, performance, or coupling) to facilitate and focus the requirements analysis.	BP 02.01 Identify Functional and Performance Requirements. BP 02.07 Record and baseline requirements.
SP 1.2-2-1b Consider the sequencing of time-critical functions both initially and subsequently during system component development.	BP 02.01 Identify Functional and Performance Requirements. BP 03.05 Define Interactions among Design Elements.
SP 1.2-2-1c Identify interface requirements associated with things external to the system and internally between functional partitions or objects.	BP 02.05 Identify external interface requirements.
SP 1.2-2-1d Establish a derived requirements baseline, including the allocation of requirements to subsystems and system components.	BP 02.07 Record and baseline requirements.
SP 1.2-2-1e Allocate requirements to functional partitions, objects, people, or support elements to support synthesis of solutions.	BP 02.01 Identify Functional and Performance Requirements. BP 03.04 Allocate Requirements.
SP 1.2-2-2a Maintain requirements traceability to ensure that lower level (derived) requirements are necessary and sufficient to meet the objectives of higher level requirements, and are consistent with the product's functional architecture.	BP 02.09 Maintain consistency and traceability.
SP 1.2-2-2b Conduct trade studies or decision analyses to select between competing alternatives in all phases of the requirements process, including initial architecture development and subsequently in allocating requirements to lower levels of functional and physical architectures.	BP 03.02 Develop Design Structure.
SP 1.2-2-3 Capture rationale for system level requirements, derived requirements, allocations, and traceability.	BP 02.07 Record and baseline requirements.
SP 1.2-3-1a Analyze requirements to ensure that they are complete, correct, realizable and verifiable.	BP 02.06 Analyze requirements.
SP 1.2-3-1b Develop and document system and subsystem verification criteria concurrently with requirements development.	BP 08.02 Develop Evaluation Procedures.
SP 1.2-3-2 Formally review or inspect requirements for quality attributes including stability, lack of ambiguity, and traceability to the customer baseline.	BP 02.06 Analyze requirements.
SP 1.2-4-1 Document changes to requirements.	BP 02.08 Analyze and resolve requirements change requests.
SP 1.2-4-2a Establish a process for formally and proactively controlling and managing changes to requirements, considering	BP 02.08 Analyze and resolve requirements change requests.

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
impact prior to commitment to change, gaining stakeholder buy-in, and tracking and closing out the actions and results.	
SP 1.2-4-2b Evaluate the impact of requirement changes from the standpoint of all stakeholders.	BP 02.08 Analyze and resolve requirements change requests.
SP 1.2-5-1 Formally review requirements with stakeholders	BP 02.07 Record and baseline requirements.
SP 1.2-5-2a Involve stakeholders in the process of requirements development.	BP 01.05 Communicate with Customers.
SP 1.2-5-2b Baseline (describe, capture, and control) and communicate requirements and functional architectures to all stakeholders.	BP 02.07 Record and baseline requirements.
SP 1.2-5-2c Capture records of communications with stakeholders relative to requirements trade studies and allocations. (CM)	BP 01.05 Communicate with Customers.
SP 1.2-5-3 Periodically review requirements and their relationship with system functional and physical architectures.	BP 02.08 Analyze and resolve requirements change requests.
FA 1.3 Define Solution	***PA 03 Design; PA 08 Evaluation; PA 02 Requirements; PA 13 Risk Management***
SP 1.3-1-1a Capture and maintain a description of solution component features and constraints.	BP 03.08 Establish and Maintain Design Description
SP 1.3-1-1b Generate alternative system concepts physical architectures, and design solutions and select a solution in accordance with FA 1.4 - Assess and Select.	BP 03.02 Develop Design Structure.
SP 1.3-1-1c Identify interfaces between design components and their requirements for specification and management in accordance with the practices of FA 1.5 - Integrate System.	BP 03.03 Develop Interface Specifications.
SP 1.3-1-2a Identify architectural or design issues that must be resolved to support successful development of the system.	BP 03.01 Identify and Prioritize Design Issues.
SP 1.3-1-2b Evolve the operational concept to a level of detail appropriate to each level of physical decomposition and input to the practices of FA 1.2 - Define Technical Problem for maintenance.	BP 03.05 Define Interactions among Design Elements.
SP 1.3-1-2c Record and maintain the solution description and rationale in a way that is accessible to all stakeholders.	BP 03.08 Establish and Maintain Design Description.
SP 1.3-1-2d Assign responsibilities for establishing the system architecture and design, and for enforcing it during development.	GP 2.5 Assign Responsibility
SP 1.3-1-3a Fully define interfaces in terms of origination, destination, stimulus and data characteristics for software, and electrical and mechanical characteristics for hardware.	BP 03.03 Develop Interface Specifications.
SP 1.3-1-3b Plan for evolutionary use of purchased or non-developmental (COTS, GOTS, and reuse) items.	BP 03.07 Establish and Use a Strategy for Non-developmental Items.
SP 1.3-1-3c Develop system design alternatives which consider cost drivers, technology limitations and risk.	BP 03.02 Develop Design Structure.
SP 1.3-1-3d Develop timeline scenarios for system operation and user interaction for each alternative system design.	BP 03.05 Define Interactions among Design Elements.
SP 1.3-1-3e Establish a mechanism for determining if the prototyping of system functions is an appropriate part of the design process.	GP 2.3 Plan the Process (applied to PA 03)
SP 1.3-1-3f Establish a mechanism to identify design issues which should be subjected to decision analysis or trade studies throughout system development.	BP 03.01 Identify and Prioritize Design Issues.
SP 1.3-1-3g Capture the rationale for key (i.e., significant effect on cost, schedule or technical performance) decisions taken or defined.	BP 03.01 Identify and Prioritize Design Issues.
SP 1.3-1-4a Establish a mechanism to identify components which should be designed for reuse.	BP 03.07 Establish and Use a Strategy for Non-developmental Items.

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
SP 1.3-1-4b Develop system design alternatives which consider life cycle cost, complexity, system expansion, and growth.	BP 03.02 Develop Design Structure.
SP 1.3-1-4c Consider the evolution of requirement drivers and technology in selecting a preferred solution	BP 03.02 Develop Design Structure.
SP 1.3-1-5 Identify key architectural features which guide future system/product versions and upgrades.	BP 03.08 Establish and Maintain Design Description.
SP 1.3-2-1a Identify the assignment or allocation of requirements to design components and interfaces for recording and maintenance in accordance with requirement management practices of FA 1.2 - Define Technical Problem.	BP 03.04 Allocate Requirements.
SP 1.3-2-1b Identify traceability of derived requirements to parent requirements for recording and maintenance in accordance with requirement management practices of FA 1.2 - Define Technical Problem.	BP 02.07 Record and baseline requirements.
SP 1.3-2-2a Identify requirement performance and functional allocations to design components and interfaces for recording and maintenance in accordance with the requirement management practices of FA 1.2 - Define Technical Problem.	BP 03.04 Allocate Requirements.
SP 1.3-2-2b Allocate key requirements to alternative solution components.	BP 03.04 Allocate Requirements.
SP 1.3-2-3a Identify and allocate appropriate derived requirements that address the effectiveness and cost of life-cycle phases following development, such as production and operation, to the extent they are compatible with business objectives.	BP 03.04 Allocate Requirements.
SP 1.3-2-3b Identify key requirements and design issues for separate tracking per the requirement management practices of FA 1.2 - Define Technical Problem, and for consideration by the practices of FA 2.5 - Manage Risk.	BP 03.01 Identify and Prioritize Design Issues.
SP 1.3-2-3c Review derived and allocated requirements for completeness and correctness against established criteria and in the context of operational concept threads or scenarios in accordance with the practices of FA 1.6 - Verify System.	BP 08.04 Evaluate incremental work products.
SP 1.3-2-3d Identify evolving requirement issues and their impacts to ongoing programs as inputs to the requirement management practices of FA 1.2 – Define Technical Problem	BP 03.01 Identify and Prioritize Design Issues.
SP 1.3-2-3e Identify design constraints as requirements for each level of design.	BP 03.06 Establish Component Specifications.
SP 1.3-2-3f Capture the rationale for requirement allocation decisions.	BP 03.04 Allocate Requirements.
SP 1.3-3-1 Conduct internal and formal design reviews to verify that the design meets requirements.	BP 08.04 Evaluate incremental work products.
SP 1.3-3-2a Identify design risk areas for input to the practices of FA 2.5 – Manage Risk, and resolve risk items through analysis, prototyping, modeling or simulation.	BP 13.02 Identify Risks.
SP 1.3-3-2b Review component requirements to assure that the components are necessary and sufficient for meeting higher level requirements.	BP 08.04 Evaluate incremental work products.
SP 1.3-3-3 Verify that the implemented design will meet functional and performance requirements, through analysis, prototyping, modeling or simulation.	BP 08.04 Evaluate incremental work products.
FA 1.4 Assess and Select	***PA 04 Alternatives Analysis***
SP 1.4-1-1 Use structured decision making techniques to resolve technical issues.	BP 04.01 Establish Analysis Strategy.

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
SP 1.4-1-2 Select appropriate decision-making technique and record rationale for choice.	BP 04.03 Select Analysis Method.
SP 1.4-2-1 Consider all alternatives presented when making a decision.	BP 04.04 Identify Alternative Solutions.
SP 1.4-2-2 Identify alternatives for consideration in addition to those supplied with the problem statement.	BP 04.04 Identify Alternative Solutions.
SP 1.4-3-1 Use established, documented evaluation criteria.	BP 04.01 Establish Analysis Strategy.
SP 1.4-3-2a Evaluate the reasonableness and validity of assumptions.	BP 04.05 Analyze Alternative Solutions.
SP 1.4-3-2b Consider sensitivity of analysis results when establishing evaluation criteria.	BP 04.05 Analyze Alternative Solutions
SP 1.4-3-3a Include technology limitations, environmental impact, and risks in evaluation criteria.	BP 04.05 Analyze Alternative Solutions
SP 1.4-3-3b Include total ownership and life-cycle costs in evaluation criteria.	BP 04.05 Analyze Alternative Solutions
SP 1.4-3-3c Capture the rationale for the selection and rejection of evaluation criteria.	BP 04.07 Communicate Analysis Results.
SP 1.4-4-1a Select a balanced solution based on established criteria.	BP 04.06 Select Solution.
SP 1.4-4-1b Involve affected parties in the selection of preferred alternatives.	BP 04.06 Select Solution.
SP 1.4-4-2 Capture and communicate decisions and their rationale to affected parties.	BP 04.07 Communicate Analysis Results.
SP 1.4-4-3 Record alternative solutions and the rationale for rejection.	BP 04.07 Communicate Analysis Results.
FA 1.5 Integrate System	***PA 07 Integration; PA 03 Design; PA 08 Evaluation; PA 11 Project Management; PA 04 Alternatives Analysis***
SP 1.5-1-1 Develop an integration strategy.	BP 07.01 Develop Integration Strategy.
SP 1.5-1-2 Document integration strategy as part of an integration plan.	BP 07.01 Develop Integration Strategy.
SP 1.5-1-3a Develop the integration plan early in the program.	BP 07.01 Develop Integration Strategy.
SP 1.5-1-3b When multiple teams are involved with system development, establish and follow a formal procedure for coordinating integration activities.	GP 2.15 Coordinate with Stakeholders.
SP 1.5-1-4a Review the integration strategy on a continuous basis.	GP 2.11 Objectively Verify Work Products.
SP 1.5-1-4b Capture rationale for decisions taken and deferred.	BP 04.07 Communicate Analysis Results.
SP 1.5-1-5 Improve standard integration strategies based upon rationale for decisions which resulted in improved integration performance.	GP 3.3 Improve Processes.
SP 1.5-2-1a Coordinate interface definition, design, and changes between affected groups and individuals throughout the life cycle.	BP 07.03 Review and Coordinate Interface Definitions.
SP 1.5-2-1b Identify interface requirements baselines.	GP 2.9 Manage Work Products
SP 1.5-2-2a Review interface data.	BP 07.03 Review and Coordinate Interface Definitions.
SP 1.5-2-2b Ensure complete coverage of all interfaces.	BP 07.03 Review and Coordinate Interface Definitions.
SP 1.5-2-3a Capture all interface designs in a common interface control format.	BP 03.08 Establish and Maintain Design Description.
SP 1.5-2-3b Capture interface design rationale.	BP 03.08 Establish and Maintain Design Description.
SP 1.5-2-3c Store interface data in a commonly accessible repository.	BP 03.08 Establish and Maintain Design Description.

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
SP 1.5-2-4 Review the adequacy of interface documentation periodically.	BP 07.03 Review and Coordinate Interface Definitions.
SP 1.5-3-1a Verify the receipt of each system element (component) required to assemble the system in accordance with the physical architecture.	BP 07.02 Confirm Readiness of Product and Service Elements.
SP 1.5-3-1b Verify that the system element interfaces comply with the interface documentation prior to assembly.	BP 08.04 Evaluate incremental work products.
SP 1.5-3-2 Coordinate the receipt of system elements for system integration according to the planned integration strategy.	BP 07.02 Confirm Readiness of Product and Service Elements.
SP 1.5-4-1a Assemble aggregates of system elements in accordance with the integration plan.	BP 07.04 Assemble Product and Service Elements.
SP 1.5-4-1b Checkout assembled aggregates of system elements.	BP 07.05 Confirm Integrated Product or Service Operation.
SP 1.5-4-4 When multiple organizations are involved in system integration, periodically assess the quality of their mutual interaction to improve the program-level integration effort.	BP 11.11 Review and Analyze Project Performance.
FA 1.6 Verify System	***PA 08 Evaluation***
SP 1.6-1-1 Plan the set of comprehensive, integrated verification activities, addressing all certification requirements, objectives, resources, facilities, special equipment, and schedules applicable to the system development.	BP 08.01 Develop Evaluation Strategy.
SP 1.6-1-2a Include realistic operational and environmental scenarios in system verification plans.	BP 08.01 Develop Evaluation Strategy.
SP 1.6-1-2b Review verification plans early with peers within the developer's organization and with other system stakeholders to assess risky aspects of system development and to agree on alternative courses of action in the event of failures while conducting verification.	BP 08.04 Evaluate incremental work products.
SP 1.6-1-3 Require development of verification plans in organizational policy.	GP 2.1 Establish Organizational Policy.
SP 1.6-2-1 Define the methods, process, and evaluation criteria by which the systems, subsystems and work products are verified against their requirements in a written plan.	BP 08.02 Develop Evaluation Procedures.
SP 1.6-2-2 Identify the individual or team responsible for verification in the verification plan and assign qualified personnel per the plan.	GP 2.5 Assign Responsibility.
SP 1.6-2-3a Adjust system requirements and development plans appropriately according to risks of failing system verification.	BP 08.04 Evaluate incremental work products.
SP 1.6-2-3b Acquire test equipment and software and items to be tested according to a comprehensive strategy that enables reuse.	BP 08.03 Establish and Maintain Evaluation Environment.
SP 1.6-2-3c Validate test or analysis procedures and support facilities.	BP 08.02 Develop Evaluation Procedures.
SP 1.6-3-1a Perform re-verification of corrected deficiencies and changed requirements and designs.	BP 08.07 Analyze Evaluation Results.
SP 1.6-3-1b Inspect implemented, purchased, and reused components to verify they meet requirements.	BP 08.05 Verify end-Products.
SP 1.6-3-2a Test new and unproven designs (i.e., highest risk) at the lowest assembly level to verify their compliance with established requirements early in the development life cycle.	BP 08.04 Evaluate incremental work products.
SP 1.6-3-2b Review the incremental verification results vis-à-vis requirements with key stakeholders on an on-going basis.	BP 08.04 Evaluate incremental work products.
SP 1.6-3-2c Verify system, subsystem, and work products against requirements established in an earlier phase.	BP 08.04 Evaluate incremental work products.

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
SP 1.6-3-2d Perform incremental verification on systems, subsystems, and work products.	BP 08.04 Evaluate incremental work products.
SP 1.6-4-1 Compare the collected test, inspection, or review results with established evaluation criteria to assess the degree of success.	BP 08.07 Analyze Evaluation Results.
SP 1.6-4-2a Involve all product stakeholders in the review of system verification results and issues.	BP 08.07 Analyze Evaluation Results.
SP 1.6-4-2b Inform stakeholders of the results of verification activities.	BP 08.07 Analyze Evaluation Results.
SP 1.6-4-3 Use verification results to compare actual measurements and performance to technical performance parameters.	BP 08.07 Analyze Evaluation Results.
FA 1.7 Validate System	***PA 08 Evaluation; PA 01 Needs; PA 11 Project Management***
SP 1.7-1-1 Develop a strategy for system validation.	BP 08.01 Develop Evaluation Strategy.
SP 1.7-1-2 Define requirements for a realistic operational, maintenance, and support environment.	BP 08.01 Develop Evaluation Strategy.
SP 1.7-1-3 Formally document the environment, operational scenario, test procedures, inputs, outputs, expected results, and evaluation criteria for the system validation plan.	BP 08.02 Develop Evaluation Procedures.
SP 1.7-2-1 Conduct early requirements validation in some fashion on the program to reduce the risk of failing system validation.	BP 08.04 Evaluate incremental work products.
SP 1.7-2-2 Provide appropriate tools to support system requirement validation activities (e.g., rapid prototyping, simulation, decision making, etc.).	BP 08.03 Establish and Maintain Evaluation Environment.
SP 1.7-2-3 Factor system validation issues into risk analysis.	BP 13.02 Identify Risks.
SP 1.7-2-4 Review the results of early validation periodically to assess the adequacy of the system design as it matures, with corrective action taken as necessary.	BP 08.07 Analyze Evaluation Results.
SP 1.7-3-1 Perform operational test and evaluation in some manner.	BP 08.06 Validate end-products.
SP 1.7-3-2a Perform operational, maintenance, and support test and evaluation.	BP 08.06 Validate end-products.
SP 1.7-3-2b Provide appropriate tools to support system validation activities, both simulations and actual systems.	BP 08.03 Establish and Maintain Evaluation Environment.
SP 1.7-4-1 Assess system validation issues for their impact on the program.	BP 08.07 Analyze Evaluation Results.
SP 1.7-4-2a Coordinate the resolution of validation issues among affected projects within the program.	GP 2.15 Coordinate With Participants and Stakeholders
SP 1.7-4-2b Use the results of early validation to support tracking and oversight of technical performance parameters.	BP 11.10 Monitor Project Performance.
SP 1.7-4-3a Include early validation activities as part of concept definition to reduce risk of specifying invalid requirements.	BP 01.03 Analyze Needs.
SP 1.7-4-3b Include system validation issues (e.g., unanticipated or unintended functions or behavior) as an integral part of all formal, system level design reviews.	BP 08.04 Evaluate incremental work products.
FA 2.1 Plan and Organize	***PA 11 Project Management***
SP 2.1-1-1 Identify resources that are critical to the technical success of the program.	BP 11.04 Estimate Project Resource Requirements.
SP 2.1-1-2a Reconcile the level of technical work required for the program to the available level of funding or projected market potential.	BP 11.07 Establish Commitment.
SP 2.1-1-2b Assign responsibility for developing the technical management plan.	GP 2.5 Assign Responsibility.

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
SP 2.1-1-2c Designate a system engineering first-line manager or team leader to be responsible for negotiating technical commitments.	GP 2.5 Assign Responsibility.
SP 2.1-2-1a Determine a technical approach for the program.	BP 11.02 Define the Activities and Life Cycle Approach.
SP 2.1-2-1b Estimate the magnitude and technical feasibility of the program.	BP 11.03 Estimate Planning Parameters.
SP 2.1-2-2a Identify technical activities for the entire life cycle of the program.	BP 11.02 Define the Activities and Life Cycle Approach.
SP 2.1-2-2b Identify key technical performance parameters.	BP 11.03 Estimate Planning Parameters.
SP 2.1-2-2c Establish thresholds or profiles for key technical performance parameters.	BP 11.03 Estimate Planning Parameters.
SP 2.1-2-3 Identify and define a system life cycle with predefined stages of manageable size.	BP 11.02 Define the Activities and Life Cycle Approach.
SP 2.1-3-1a Generate a work breakdown structure for the program that defines logical units of work to be managed at the program level.	BP 11.02 Define the Activities and Life Cycle Approach.
SP 2.1-3-1b Develop cost estimates for the technical aspects of the program.	BP 11.04 Estimate Project Resource Requirements.
SP 2.1-3-1c Generate documented and approved statements of work for systems engineering activities.	BP 11.06 Establish and Maintain Plans.
SP 2.1-3-2a Define systems engineering work products, including data requirements, and activities in a traceable and accountable manner, including data requirements.	BP 11.01 Define Project Objectives, Scope, and Outputs. BP 11.02 Define the Activities and Life Cycle Approach.
SP 2.1-3-2b Ensure the technical management plan provides form and context for the planned technical activities and identify products.	BP 11.06 Establish and Maintain Plans.
SP 2.1-3-2c Ensure the work breakdown structure covers all the tasks and products necessary for the program.	BP 11.02 Define the Activities and Life Cycle Approach.
SP 2.1-3-3a Derive estimates for the size and cost of the systems engineering work products and efforts based upon historical data.	BP 11.04 Estimate Project Resource Requirements.
SP 2.1-3-3b Consider whether a system is precedented or unprecedented when generating estimates of the engineering effort.	BP 11.04 Estimate Project Resource Requirements.
SP 2.1-3-3c Capture the basis or rationale for systems engineering planning and estimates.	BP 11.04 Estimate Project Resource Requirements.
SP 2.1-3-3d Assure that the work breakdown structure reviewed is complete- and consistent with the system or product structure.	BP 11.02 Define the Activities and Life Cycle Approach.
SP 2.1-4-1 Develop schedules for the current life cycle phase as a part of the planning activities.	BP 11.05 Establish Schedules.
SP 2.1-4-2a Develop top level schedules for the remaining life cycle phases of the program.	BP 11.05 Establish Schedules.
SP 2.1-4-2b Address task dependencies as a part of scheduling.	BP 11.05 Establish Schedules.
SP 2.1-4-3 Provide traceability between the schedule (calendar-based plan) and the event-driven plan.	BP 11.05 Establish Schedules.
SP 2.1-5-1a Develop a technical management plan for the program.	BP 11.06 Establish and Maintain Plans.
SP 2.1-5-1b Ensure there are clear lines of responsibility and authority between systems engineering and program management.	BP 11.08 Organize to meet Project Objectives.
SP 2.1-5-2a Assign responsibility for program planning.	GP 2.5 Assign Responsibility.
SP 2.1-5-2b Include in the technical management plan provisions to maintain the plan and for recording deviations from the plan.	BP 11.06 Establish and Maintain Plans.
SP 2.1-5-2c Document the program roles, responsibilities, and objectives for each organization or functional discipline.	BP 11.06 Establish and Maintain Plans. BP 11.08 Organize to meet Project Objectives.
SP 2.1-5-2d Develop an event driven plan for technical aspects of the program.	BP 11.06 Establish and Maintain Plans.

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
SP 2.1-5-2e Review technical plans with stakeholders and obtain their commitment.	BP 11.07 Establish Commitment.
SP 2.1-5-3a Ensure the systems engineering activities and work products that are needed to establish and maintain control of the program are well defined.	BP 11.01 Define Project Objectives, Scope, and Outputs. BP 11.02 Define the Activities and Life Cycle Approach.
SP 2.1-5-3b Conduct formal reviews of the technical management plan to assess its consistency with the top-level program management plan and with lower-level plans.	BP 11.07 Establish Commitment.
FA 2.2 Monitor and Control	***PA 11 Project Management; PA 18 Measurement and Analysis***
SP 2.2-1-1 Determine the degree of oversight for programs needing monitoring and controlling to promote the organization's goals.	BP 11.06 Establish and Maintain Plans.
SP 2.2-1-2 Establish criteria against which each program is evaluated to determine if it should be under the Monitor and Control FA activities.	BP 11.06 Establish and Maintain Plans.
SP 2.2-2-1 Track the resources expended, the program schedule, and the technical performance measurements against the plan.	BP 11.10 Monitor Project Performance.
SP 2.2-2-3 Evaluate and document the program's efforts for the lessons learned.	BP 11.10 Monitor Project Performance.
SP 2.2-3-1a Periodically collect and analyze the measures of program and technical performance.	BP 11.10 Monitor Project Performance. BP 18.02 Collect relevant measurement data.
SP 2.2-3-1b Implement corrective action when measures deviate from expected results.	BP 11.12 Take Corrective Action.
SP 2.2-3-4 Analyze and use prediction based on the program's measures to determine if the program's completion is at risk and thus warrants corrective action.	BP 11.11 Review and Analyze Project Performance.
FA 2.3 Integrate Disciplines	***PA 14 Integrated Teaming***
SP 2.3-1-1 Involve all essential disciplines, including both traditional and specialty engineering, in the system development process in a timely manner	BP 14.02 Establish and Maintain Integrated Teams
SP 2.3-1-2 Adjust the mix of disciplines involved in each phase of system development as appropriate to the work being done.	BP 14.02 Establish and Maintain Integrated Teams
SP 2.3-1-3a Involve personnel from affected groups in planning and other systems engineering activities (i.e., developing, reviewing, allocating, and approving requirements) that affect them.	BP 14.02 Establish and Maintain Integrated Teams
SP 2.3-1-3b Allow systems engineering personnel to review and agree to designs, plans, and work products produced by other engineering disciplines or that affect multiple disciplines.	BP 14.02 Establish and Maintain Integrated Teams
SP 2.3-2-1 Proactively emphasize the importance of intergroup coordination.	BP 14.02 Establish and Maintain Integrated Teams BP 14.03 Establish and Maintain a Collaborative Workplace
SP 2.3-2-2a Capture and communicate intergroup coordination activities and the results of those activities.	BP 14.06 Communicate Integrated Team Activity Results
SP 2.3-2-2b Establish tools, methods, facilities (e.g., team rooms), and an information infrastructure that eases and supports interdisciplinary coordination.	BP 14.04 Establish Coordination and Communication Methods
SP 2.3-2-3a Provide means for individuals and groups to acquire skills that facilitate interdisciplinary cooperation, such as communication skills, group problem solving, and active listening.	BP 14.04 Establish Coordination and Communication Methods
SP 2.3-2-3b Plan for and provide regular exchanges of technical	BP 14.04 Establish Coordination and

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
information and issue identification and resolution among all stakeholders, including customers.	Communication Methods
SP 2.3-2-3c Establish a mechanism to ensure compliance with commitments made among groups.	BP 14.04 Establish Coordination and Communication Methods
SP 2.3-2-4 Espouse and model appropriate communication skills and interdepartmental cooperation on the part of upper management.	BP 14.04 Establish Coordination and Communication Methods
SP 2.3-3-1 Establish and use a process or method for identifying and resolving interdisciplinary issues.	BP 14.05 Establish Resolution Methods
SP 2.3-3-2 Communicate interdisciplinary issues and activities to affected groups, including program/project management and customer, supplier, and associate stakeholders.	BP 14.05 Establish Resolution Methods
SP 2.3-3-3 Establish a process for escalating and arbitrating technical differences, including a mechanism for authoritative resolution of conflicts.	BP 14.05 Establish Resolution Methods
FA 2.4 Coordinate with Suppliers	***PA 05 Outsourcing; PA 12 Supplier Agreement Management; PA 08 Evaluation***
SP 2.4-1-1 The organization identifies system components or services that will be provided by internal & external suppliers.	BP 05.01 Identify Needed Products or Services:
SP 2.4-1-2 The organization performs trade studies to determine make-vs-buy decisions based on business needs.	BP 05.01 Identify Needed Products or Services:
SP 2.4-2-1 Capable suppliers are chosen according to FA 1.4 - Assess and Select.	BP 05.02 Identify Competent Suppliers BP 05.04 Choose Supplier
SP 2.4-2-2a Criteria are established to evaluate potential suppliers that meet program and organization objectives.	BP 05.03 Prepare for the Solicitation or Tasking
SP 2.4-2-2b Suppliers are selected based upon input from the systems engineering team leader.	BP 5.04 Choose Supplier
SP 2.4-2-3 Suppliers are selected based on an evaluation of the supplier's ability to perform the work.	BP 05.02 Identify Competent Suppliers BP 05.04 Choose Supplier
SP 2.4-3-1 The organization provides the supplier with the needs, expectations, and measures of effectiveness for the system components and services to be delivered.	BP 05.05 Communicate with Suppliers
SP 2.4-3-2a When suppliers are used on the program, requirements for the work are formally documented.	BP 05.03 Prepare for the Solicitation or Tasking
SP 2.4-3-2b Requirements changes are re-negotiated with the supplier and the changes documented.	BP 12.03 Maintain Supplier Agreement Integrity
SP 2.4-3-3 There is a clearly documented agreement that contains a statement of work, specification, terms and conditions, a list of deliverables, a schedule, budget, and a defined acceptance process.	BP 5.05 Communicate with Suppliers
SP 2.4-3-4 The selected supplier is involved early in the program to assist in the requirements development and definition.	BP 5.05 Communicate with Suppliers
SP 2.4-4-1 The supplier's progress (schedule, cost, technical performance) is managed.	BP 12.02 Review and Monitor Agreement Performance
SP 2.4-4-2a Those involved in managing the supplier receive orientation in the technical aspects of the documented agreement.	GP 2.6 Ensure Skill and Knowledge
SP 2.4-4-2b The supplier's quality and configuration control activities are monitored.	BP 12.02 Review and Monitor Agreement Performance
SP 2.4-4-2c Acceptance testing is conducted as part of the delivery of the supplier's products.	BP 08.05 Verify end-Products.
SP 2.4-4-3a The documented agreement between the acquirer and the supplier is used as the basis for managing the supplier.	BP 12.02 Review and Monitor Agreement Performance

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
SP 2.4-4-3b Periodic informal reviews, technical reviews, and interchanges are held with the supplier.	BP 12.02 Review and Monitor Agreement Performance
SP 2.4-4-3c Formal reviews are conducted at selected milestones to address supplier's systems engineering accomplishments and results.	BP 12.02 Review and Monitor Agreement Performance
SP 2.4-4-3d Discrepancies discovered during acceptance testing are used to improve the supplier's processes and products.	BP 12.02 Review and Monitor Agreement Performance
SP 2.4-4-3e There is a mechanism for assuring that all suppliers follow their defined engineering process.	BP 12.02 Review and Monitor Agreement Performance
SP 2.4-4-4a Systems engineering personnel participate in and approve the plans, process, and product standards used by suppliers.	GP 2.5 Assign Responsibility.
SP 2.4-4-4b There is a mechanism for establishing and nurturing long term relationships with preferred suppliers.	BP 5.05 Communicate with Suppliers.
FA 2.5 Manage Risk	***PA 13 Risk Management; PA 14 Integrated Teaming***
SP 2.5-1-1 Plan risk management activities.	GP 2.3 Plan the Process.
SP 2.5-1-2 Provide an approved risk management plan containing risk levels and expected management response for each level.	GP 2.3 Plan the Process.
SP 2.5-1-3 Implement risk management for key processes within the program: design, test, manufacturing, etc.	BP 13.01 Develop Risk Management Approach.
SP 2.5-2-1 Identify performance risks.	BP 13.02 Identify Risks.
SP 2.5-2-2 Identify cost and schedule risks.	BP 13.02 Identify Risks.
SP 2.5-2-3 Review all elements of the work breakdown structure as part of the risk identification process in order to help ensure that all program aspects have been considered.	BP 13.02 Identify Risks.
SP 2.5-3-1 Assess risks qualitatively.	BP 13.03 Assess Risks.
SP 2.5-3-2 Assess each risk and determine the probability of occurrence and quantified consequence of impact for the program.	BP 13.03 Assess Risks.
SP 2.5-4-3a Review the analysis of risks for adequacy and completeness.	GP 2.11 Objectively Verify Work Products.
SP 2.5-4-3b For each risk, establish cause and effect relationships.	BP 13.03 Assess Risks.
SP 2.5-4-3c Analyze each risk for potential coupling to all other identified risks.	BP 13.03 Assess Risks.
SP 2.5-4-3d Develop alternative courses of action, work-arounds, and fall-back positions with a recommended course of action for each risk.	BP 13.04 Develop Risk Mitigation Plans.
SP 2.5-4-4 Use collected metrics regarding identified risks and examine them in light of previous risk analyses, and when established thresholds are exceeded, initiate corrective action.	BP 13.03 Assess Risks.
SP 2.5-5-2 Categorize risks into those that can be avoided, controlled, or accepted.	BP 13.03 Assess Risks.
SP 2.5-5-3a Document risk reduction profiles and review them for appropriateness.	BP 13.04 Develop Risk Mitigation Plans.
SP 2.5-5-3b Review risk mitigation (handling) including risk reduction profile for adequacy and completeness.	GP 2.11 Objectively Verify Work Products.
SP 2.5-6-2 Implement the risk mitigation strategy for the program.	BP 13.05 Implement and Monitor Risk Mitigation Plans.
SP 2.5-6-3 Document risk analysis results and mitigation plans.	BP 13.05 Implement and Monitor Risk Mitigation Plans.
SP 2.5-7-3a Monitor and re-evaluate risks at appropriate milestones.	BP 13.05 Implement and Monitor Risk Mitigation Plans.
SP 2.5-7-3b Provide the results of risk monitoring activities to affected personnel and disciplines.	GP 2.15 Coordinate with Stakeholders.

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
SP 2.5-7-3c Provide a mechanism for monitoring corrective actions taken and tracking open risk items to closure.	GP 2.12 Measure Performance.
SP 2.5-7-4 During risk monitoring, identify and analyze new risks and take corrective action.	BP 13.05 Implement and Monitor Risk Mitigation Plans.
SP 2.5-8-1 Establish a communication path between the risk management team and the program management team.	GP 2.15 Coordinate with Stakeholders.
SP 2.5-8-2a Involve a multi-functional group for risk management that spans both technical and business specialties –involve appropriate stakeholders	BP 14.02 Establish and Maintain Integrated Teams.
SP 2.5-8-2b Integrate risk management both vertically and horizontally across the program.	BP 13.01 Develop Risk Management Approach.
SP 2.5-8-3 Include risk management as a part of program formal reviews.	GP 2.13 Review Performance with Higher-level Management.
FA 2.6 Manage Data	***PA 17 Information Management***
SP 2.6-1-1 Establish program data and data management requirements.	BP 17.01 Establish Information Management Strategy.
SP 2.6-1-2 Review data management activities periodically to confirm that the program data requirements are still valid and on schedule.	BP 17.01 Establish Information Management Strategy. GP 2.11 Objectively Verify Work Products. GP 2.10 Objectively Assess Process Compliance.
SP 2.6-1-3 Establish program data requirements based upon a common or standard set of data requirements.	BP 17.01 Establish Information Management Strategy.
SP 2.6-1-3 Establish program data requirements based upon a common or standard set of data requirements.	BP 17.06 Establish Information Standards.
SP 2.6-2-1 Inspect program data for compliance to data requirements prior to delivery or archiving.	GP 2.11 Objectively Verify Work Products.
SP 2.6-2-2 Ensure that the process for review, approval and release of data is well understood through the program	GP 2.15 Coordinate with Stakeholders.
SP 2.6-3-1 Archive program data.	BP 17.03 Store Information.
SP 2.6-3-2 Establish a capability to retrieve desired program data quickly.	BP 17.04 Share Information.
SP 2.6-3-3a Provide a common data management archival and retrieval capability throughout the organization.	BP 17.02 Establish Information Management Capability.
SP 2.6-3-3b Archive data efficiently based upon common characteristics (e.g., key words, topics, contract number, etc.).	BP 17.03 Store Information.
SP 2.6-4-1 Changes to data requirements and data are controlled and communicated.	GP 2.9 Manage Work Products.
SP 2.6-5-1 Record and maintain the status of program data.	BP 17.04 Share Information
SP 2.6-5-2a Communicate status reports documenting data management activities to appropriate groups and individuals.	BP 17.04 Share Information.
SP 2.6-5-2b Alert individuals having responsibility for the generation of program data of upcoming milestones and delivery dates	GP 2.15 Coordinate with Stakeholders.
FA 2.7 Manage Configurations	***PA 16 Configuration Management***
SP 2.7-1-1 Identify, baseline, and control work products that define the product.	BP 16.02 Identify and Baseline Configuration Items and Interim Work Products. BP 16.03 Establish and Maintain a Repository for Work Product Baselines. BP 16.04 Control Changes.
SP 2.7-1-2a Identify, baseline, and control work products from all Focus Areas that are critical enough to require configuration management.	BP 16.01 Establish a Configuration Management Strategy. BP 16.02 Identify and Baseline Configuration

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
	Items and Interim Work Products. BP 16.04 Control Changes.
SP 2.7-1-2b Maintain a repository of work product baselines.	BP 16.03 Establish and Maintain a Repository for Work Product Baselines.
SP 2.7-1-2c Maintain the capability to store, manage, retrieve, and distinguish multiple versions of product elements and work products.	BP 16.03 Establish and Maintain a Repository for Work Product Baselines.
SP 2.7-1-3 Formally control release of products created from the baseline library.	BP 16.03 Establish and Maintain a Repository for Work Product Baselines. BP 16.04 Control Changes.
SP 2.7-2-1 Changes to established baselines are recorded, reviewed, approved, controlled, and verified as incorporated.	BP 16.03 Establish and Maintain a Repository for Work Product Baselines. BP 16.04 Control Changes. BP 16.05 Record and Report Configuration Status. BP 16.06 Conduct Configuration Audits and Inspections.
SP 2.7-2-2 Changes are evaluated through a process that ensures they are consistent with all the technical and program requirements.	BP 16.04 Control Changes. BP 16.06 Conduct Configuration Audits and Inspections.
SP 2.7-2-3 Changes are evaluated for their impact beyond the immediate program or contract requirements.	BP 16.01 Establish a Configuration Management Strategy. BP 16.04 Control Changes.
SP 2.7-3-1 Status of configuration data, changes, and access information is recorded, tracked, and communicated to affected groups.	BP 16.05 Record and Report Configuration Status.
SP 2.7-4-1 Periodically audit configuration management activities and processes to confirm that the resulting baselines and documentation are accurate and record audit results.	BP 16.06 Conduct Configuration Audits and Inspections.
FA 2.8 Ensure Quality	***PA 15 Quality Assurance and Management***
SP 2.8-1-1 Communicate management's role in quality activities and improvements to the program team.	GP 2.5 Assign Responsibility.
SP 2.8-1-2a Assign responsibility for quality activities and improvements to the program team.	GP 2.5 Assign Responsibility.
SP 2.8-1-2b Create an environment that encourages employee participation in identifying, reporting, and solving quality issues.	BP 15.06 Initiate Quality Improvement.
SP 2.8-2-1 Evaluate work products and system elements against requirements.	BP 15.03 Monitor Product and Service Quality.
SP 2.8-2-2 Establish a process to detect the need for corrective actions to products and processes.	BP 15.05 Analyze Quality.
SP 2.8-2-3a Evaluate processes for adherence to standards and policies throughout the system life cycle.	BP 15.03 Monitor Product and Service Quality.
SP 2.8-2-3b Perform in-progress or incremental evaluations of work products and system elements against requirements.	BP 15.03 Monitor Product and Service Quality.
SP 2.8-2-4 Feed back lessons learned into processes for robustness of future designs.	BP 15.05 Analyze Quality. BP 15.06 Initiate Quality Improvement.
SP 2.8-3-1 Use quality improvement tools in a disciplined manner to reduce defects and improve productivity.	BP 15.05 Analyze Quality.
SP 2.8-3-2 Provide readily available, just-in-time training on the use of advanced quality improvement tools.	BP 15.06 Initiate Quality.

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
FA 3.1 Define and Improve the Systems Engineering Process	***PA 21 Process Improvement; PA 20 Process Definition; PA 15 Quality Assurance and Management***
SP 3.1-1-2 Establish systems engineering process goals from the organization's business goals.	BP 21.01 Identify Process Improvement Goals.
SP 3.1-1-3a Assign responsibility and provide necessary resources to plan, implement, and communicate the organization's standard systems engineering process.	GP 2.4 Provide Adequate Resources. GP 2.5 Assign Responsibility.
SP 3.1-1-3b Document rationale for selection and inclusion of best practices in the organization's standard systems engineering process.	BP 20.01 Establish Standard Processes.
SP 3.1-2-2 Establish a process library for systems engineering process assets developed and collected by the program.	BP 20.03 Maintain Process Assets.
SP 3.1-2-3a Establish and assertively manage a library for systems engineering process assets developed and collected by the organization.	BP 20.03 Maintain Process Assets.
SP 3.1-2-3b Ensure that tailoring reports from application of the organization's standard systems engineering process to specific programs are recorded in the process library.	BP 20.03 Maintain Process Assets.
SP 3.1-2-3c Ensure that program results of applying the organization's standard systems engineering process are recorded in the process asset library.	BP 20.03 Maintain Process Assets.
SP 3.1-3-1 Identify existing systems engineering processes for use on programs.	BP 20.03 Maintain Process Assets.
SP 3.1-3-2a Establish and follow a written organizational policy (may be part of a broad-based policy) for implementing and maintaining systems engineering process (es).	BP 21.01 Identify Process Improvement Goals. GP 2.1 Establish Organizational Policy
SP 3.1-3-2b Describe and present the organizational policy clearly and completely to all engineering and program personnel.	BP 20.04 Coordinate and Communicate Process Definition.
SP 3.1-3-3a Plan, approve, and establish process management and improvement activities according to a formal procedure.	BP 21.04 Establish an Action Plan. GP 2.2 Document the Process GP 2.3 Plan the Process
SP 3.1-3-3b Develop and document a standard systems engineering process for the organization based on industry standards and industry-wide best practices.	BP 20.03 Maintain Process Assets.
SP 3.1-3-3c Define clearly the inputs and outputs of the sub-processes that comprise the systems engineering process.	BP 20.01 Establish Standard Processes.
SP 3.1-3-3d Define entrance and exit criteria for each major activity in the systems engineering process.	BP 20.01 Establish Standard Processes.
SP 3.1-3-3e Define a set of standard methods for use with the organization's standard systems engineering process used on programs.	BP 20.01 Establish Standard Processes.
SP 3.1-3-3f Establish a formal process for implementing and improving Systems Engineering Activities.	GP 2.2 Document the Process
SP 3.1-3-5 Integrate the systems engineering process with other engineering and enterprise processes to establish a unified product development process.	BP 20.01 Establish Standard Processes:
SP 3.1-4-3a Establish a set of tailoring guidelines for the organization's standard systems engineering process that permits the standard process to meet program-specific needs.	BP 20.02 Develop Tailoring Guidelines.
SP 3.1-4-3b Tailoring reports generated by the programs are reviewed and approved by the appropriate individuals (e.g., senior managers or	BP 20.02 Develop Tailoring Guidelines.

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
members of the engineering process group).	
SP 3.1-5-2 Assess the program-specific systems engineering processes and determine relative strengths and weaknesses.	BP 21.03 Appraise process.
SP 3.1-5-3a Assess the organization's standard systems engineering process.	BP 21.03 Appraise process.
SP 3.1-5-3b Review root causes of errors or problems to determine whether changes to the systems engineering process are required to prevent future occurrences.	BP 15.05 Analyze Quality.
SP 3.1-5-3c Use a mechanism for periodically assessing the systems engineering process.	BP 21.03 Appraise process.
SP 3.1-5-3d Seek to benchmark the organization's systems engineering process against processes used by other organizations.	BP 21.03 Appraise process.
SP 3.1-5-3e Determine the degree of program use of the organization's defined systems engineering process and methods.	BP 21.03 Appraise process.
SP 3.1-5-4a Measure and analyze systems engineering productivity for each major process activity within the systems engineering process.	BP 21.06 Confirm Improvements.
SP 3.1-5-4b Gather and analyze data from inspections to identify areas for improvement in the systems engineering process.	GP 3.3 Improve Processes:
SP 3.1-5-4c Use uniform systems engineering process metrics across programs.	BP 20.01 Establish Standard Processes.
SP 3.1-5-4d Use a mechanism to evaluate the utility of process metrics collected across all programs.	BP 21.08 Monitor Performance.
SP 3.1-5-5 Use a formal procedure to assure periodic management review of each program and institute changes to the systems engineering process.	BP 21.08 Monitor Performance.
SP 3.1-6-2a Perform improvement of systems engineering process (es) in use on programs in at least an informal manner.	BP 21.05 Implement Improvements
SP 3.1-6-2b Identify and communicate best practices within the organization to programs.	BP 21.03 Appraise process
SP 3.1-6-3a Use targeted improvements to change the organization's systems engineering process.	BP 21.05 Implement Improvements
SP 3.1-6-3b Provide a mechanism for users to identify proposed improvements to the systems engineering process.	BP 20.04 Coordinate and Communicate Process Definition:
SP 3.1-6-3c Communicate the existence and improvement of the organization's standard systems engineering process to all affected groups and programs.	BP 20.04 Coordinate and Communicate Process Definition.
FA 3.2 Manage Competency	***PA 22 Training***
SP 3.2-1-1 Encourage staff to continuously develop skills and knowledge.	BP 22.07 Establish Learning Environment.
SP 3.2-1-2a Reward mentoring as a means of increasing staff competency.	BP 22.07 Establish Learning Environment.
SP 3.2-1-2b Provide a mechanism to develop individual competency development goals consistent with both the individual's career objectives and the program's needs.	BP 22.07 Establish Learning Environment.
SP 3.2-1-3a Provide job opportunity and career advancement based on competency development achievements.	BP 22.07 Establish Learning Environment.
SP 3.2-1-3b Clearly state and communicate competency development opportunities and the relationship between competency development and career opportunity to all personnel within the organization.	BP 22.07 Establish Learning Environment.
SP 3.2-1-3c Provide a mechanism to formally recognize competency development achievements.	BP 22.07 Establish Learning Environment.

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
SP 3.2-1-3d Provide a mechanism for certification of competency achievement.	BP 22.07 Establish Learning Environment.
SP 3.2-2-1 Identify needed improvements in skill and knowledge throughout the organization using the programs' needs, organizational strategic plan, and existing employee skills as guidance.	BP 22.01 Identify Training Needs.
SP 3.2-2-2 Base near term competency development requirements upon immediate program needs.	BP 22.01 Identify Training Needs.
SP 3.2-2-3 Base long term competency development requirements upon the organization's strategic plan.	BP 22.01 Identify Training Needs.
SP 3.2-3-1a Train personnel to have the skills and knowledge needed to perform their assigned roles.	BP 22.04 Train Individuals.
SP 3.2-3-1b Maintain records of training and experience.	BP 22.05 Establish and Maintain Records.
SP 3.2-3-1c Provide knowledge from outside sources when in-house training or learning opportunities are unable to satisfy program needs.	BP 22.03 Establish Training Mechanism.
SP 3.2-3-2a Maintain training materials in an accessible repository.	BP 22.05 Establish and Maintain Records.
SP 3.2-3-2b Assign experienced personnel to perform training.	BP 22.05 Establish and Maintain Records.
SP 3.2-3-2c Involve management personnel in competency development activities, both as recipients and as participants.	BP 22.03 Establish Training Mechanism. BP 22.04 Train Individuals.
SP 3.2-3-2d Provide competency development for critical functional areas (e.g., analysis techniques specific to the organization's problem domains).	BP 22.04 Train Individuals.
SP 3.2-3-3a Integrate competency development opportunities, such as formal education, in-house training, and on-the-job training.	BP 22.04 Train Individuals.
SP 3.2-3-3b Provide cross-discipline technical management training to all disciplines, including program management.	BP 22.04 Train Individuals.
SP 3.2-3-3c Train managers of engineering organizations, team leaders, and engineers on the systems engineering process.	GP 2.6 Ensure Skill and Knowledge.
SP 3.2-3-3d Provide training in the basic principles of systems engineering to quality management, configuration management, and other support personnel.	GP 2.6 Ensure Skill and Knowledge.
SP 3.2-3-3e Provide training in a variety of forms, including formal training, on-the-job training, and just-in-time training, as required to meet program and individual needs.	GP 2.6 Ensure Skill and Knowledge.
SP 3.2-3-3f Integrate tools, methods, and procedures for competency development.	GP 2.4 Provide Adequate Resources.
SP 3.2-4-1a Assess in-progress or completed programs to determine whether staff knowledge was adequate for performing program tasks.	BP 22.06 Assess Training Effectiveness.
SP 3.2-4-1b Provide a mechanism for assessing the effectiveness of each training course with respect to set objectives.	BP 22.06 Assess Training Effectiveness.
SP 3.2-4-2 Require trainers to demonstrate proficiency in the topics for which they intend to train others.	BP 22.06 Assess Training Effectiveness. BP 22.03 Establish Training Mechanism.
SP 3.2-4-3a Provide a mechanism to evaluate students to verify their comprehension of training materials prior to recognition.	BP 22.06 Assess Training Effectiveness.
SP 3.2-4-3b Obtain student evaluations of how well competency development activities meet their needs.	BP 22.06 Assess Training Effectiveness.
SP 3.2-4-3c Establish completion criteria for each training course, documented in standards or course descriptions.	BP 22.06 Assess Training Effectiveness.
SP 3.2-4-4 Provide a mechanism to evaluate alumni capability to perform the style, scope, and intensity of systems engineering that the business needs.	BP 22.06 Assess Training Effectiveness.

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
FA 3.3 Manage Technology	***PA 23 Innovation; PA 03 Design; PA 05 Outsourcing***
SP 3.3-1-1a Identify technologies currently in use.	BP 23.01 Maintain New Technology Awareness.
SP 3.3-1-1b Identify new product technologies for competitive advantage.	BP 23.01 Maintain New Technology Awareness.
SP 3.3-1-2 Encourage innovation within the program.	BP 23.01 Maintain New Technology Awareness.
SP 3.3-1-3a Support participation by the organization in technical consortia, societies, and collaborations.	BP 23.01 Maintain New Technology Awareness.
SP 3.3-1-3b Incorporate, as part of the organization's annual budget, participation in identification, assessment, and insertion of new technology.	GP 2.4 Provide Adequate Resources.
SP 3.3-1-3c Establish a mechanism for maintaining awareness and disseminating knowledge of the state-of-the-art technology.	BP 23.01 Maintain New Technology Awareness.
SP 3.3-1-3d Establish a mechanism for monitoring the life cycle of currently used technologies and use this knowledge to plan for replacement of technologies approaching obsolescence.	BP 23.02 Select New Technologies.
SP 3.3-1-3e Perform cost/benefit analyses prior to the adoption of new technologies.	BP 23.02 Select New Technologies.
SP 3.3-2-2 Establish formal criteria for the reuse and COTS/internal development decision process.	BP 03.07 Establish and Use a Strategy for Non-developmental Items. BP 05.03 Prepare for the Solicitation or Tasking
SP 3.3-2-3a Establish a mechanism for applying business goals to the evaluation of internal development of technologies versus those externally available.	BP 03.07 Establish and Use a Strategy for Non-developmental Items. BP 05.03 Prepare for the Solicitation or Tasking
SP 3.3-2-3b Establish a mechanism for assessing existing designs and specifications for reuse in new applications.	BP 03.07 Establish and Use a Strategy for Non-developmental Items. BP 05.01 Identify Needed Products or Services
SP 3.3-2-3c Document technology improvement activities formally.	GP 2.2 Document the Process.
SP 3.3-3-2 Require appropriate analysis within the organization before new product or process technology insertion is allowed.	BP 23.03 Prepare for Infusion.
SP 3.3-3-3a Establish a mechanism for managing and supporting the introduction of new product or process technologies.	BP 23.05 Manage Innovation. BP 23.04 Infuse New Technologies.
SP 3.3-3-3b Review the effectiveness of newly introduced technologies (product or process) to verify analysis used to justify its introduction.	BP 23.05 Manage Innovation.
SP 3.3-3-3c Identify, discriminate, and insert product and process technology improvements.	BP 23.04 Infuse New Technologies. BP 23.02 Select New Technologies.
SP 3.3-3-5 Demonstrate that the achievement of specific business goals (e.g., increased profitability, increased market share, reduced time to market) can be directly attributable to the insertion of new product or process technology.	BP 23.05 Manage Innovation.
FA 3.4 Manage Systems Engineering Support Environment	***PA 23 Innovation; PA 05 Outsourcing; PA 20 Process Definition***
SP 3.4-1-2 Determine requirements for the support environment based on program specific needs.	BP 23.02 Select New Technologies.
SP 3.4-1-3a Include the needs of each program as part of a	BP 23.02 Select New Technologies.

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
documented set of requirements for the support environment.	
SP 3.4-1-3b Include the business goals of the organization in determining the documented requirements for the support environment.	BP 23.02 Select New Technologies.
SP 3.4-1-3c Regularly review and assess external trends that might affect the support environment for potential impact.	BP 23.01 Maintain New Technology Awareness.
SP 3.4-2-1 Deploy a Systems Engineering Support Environment that supports program needs.	BP 23.05 Manage Innovation.
SP 3.4-2-2a Pilot new tools prior to including them in the systems engineering support environment.	BP 23.03 Prepare for Infusion.
SP 3.4-2-2b Perform cost-benefit analysis for commercial off-the-shelf versus in-house developed environments.	BP 23.02 Select new technologies. BP 05.01 Identify needed products or services.
SP 3.4-2-3a Establish an organizational standard system engineering support environment.	GP 3.1 Standardize the Process. BP 20.03 Maintain Process Assets.
SP 3.4-2-3b Tailor the Systems Engineering Support Environment to individual program needs.	BP 23.05 Manage Innovation.
SP 3.4-2-5 Maximize integration of tools within the environment.	BP 23.05 Manage Innovation.
SP 3.4-3-1 Maintain the support environment to continuously support the program.	BP 23.05 Manage Innovation.
SP 3.4-3-2a Assign responsibilities for maintaining the support environment.	2.5 Assign Responsibility.
SP 3.4-3-2b Plan and track maintenance of the support environment.	GP 2.4 Provide Adequate Resources GP 2.12 Measure Performance BP 23.05 Manage Innovation.
SP 3.4-3-2c Maintain configuration control over the support environment.	GP 2.4 Provide Adequate Resources.
SP 3.4-3-3a Collect data on the systems engineering support environment usage and performance.	BP 23.05 Manage Innovation.
SP 3.4-3-3b Retire support tools or facilities which no longer support the organization's requirements.	BP 23.05 Manage Innovation.
SP 3.4-3-3c Upgrade or add support tools or facilities which enhance the ability to meet the organization's requirements.	BP 23.04 Infuse New Technologies.
SP 3.4-3-3d Seek periodic evaluation of the adequacy of the systems engineering support environment from users.	BP 23.05 Manage Innovation.
SP 3.4-3-4a Base support environment management decisions on the analysis of usage and performance data.	BP 23.05 Manage Innovation.
SP 3.4-3-5 Establish goals for improvements to systems engineering processes through the use of the systems engineering environment.	BP 23.05 Manage Innovation.
Generic Practices	***Generic Practices***
GP 2.1 Follow recorded and approved plans and processes, that were developed to meet program performance goals, in implementing the Focus Area.	GP 2.2 Document the Process. GP 2.3 Plan the Process. GP 2.4 Provide Adequate Resources. GP 2.5 Assign Responsibility GP 2.8 Consistently Use and Manage the Process
GP 2.2 Verify compliance with approved plans and processes, and take appropriate action when performance deviates from plan or when processes are not followed.	GP 2.10 Objectively Assess Process Compliance. GP 2.14 Take Corrective Actions
GP 3.1 Standardize and record a well-defined FA process for the organization that is designed to meet specific business goals, and is based on experiences captured from previous programs.	GP 3.1 Standardize the Process.
GP 3.2 Tailor the organization's standard process using standard	GP 3.2 Establish and Use a Defined Process.

EIA/IS 731 Focus Areas and Practices	FAA-iCMM v2.0 Process Areas and Practices
guidelines to meet specific program or organizational needs.	
GP 3.3 Implement and improve the FA activities (i.e., tailored process) per established and approved formal procedures.	GP 3.2 Establish and Use a Defined Process. GP 3.3 Improve Processes.
GP 3.4 Improve the organization's standard process using information from work product reviews and process compliance reviews.	GP 3.3 Improve Processes.
GP 4.1 Collect and analyze metrics to determine the performance of the tailored FA activities.	GP 4.1 Stabilize Process Performance
GP 4.2 Take appropriate action to align tailored FA performance and expectations.	GP 4.1 Stabilize Process Performance.
GP 5.1 Identify FA activities for which it is appropriate, and inappropriate, to quantify process repeatability.	GP 4.1 Stabilize Process Performance.
GP 5.2 Establish quantitative goals for improving the effectiveness of the standard process.	GP 4.1 Stabilize Process Performance. GP 5.1 Pursue Process Optimization.
GP 5.3 Improve the organization's standard process based on data and metrics collected from a continuing program of process compliance reviews and work product reviews.	GP 3.3 Improve Processes. GP 5.1 Pursue Process Optimization.
GP 5.4 Perform causal analysis of process and work product defects and eliminate causes of variation in quality, cost, and cycle time by changing the standard process.	GP 3.3 Improve Processes. GP 5.1 Pursue Process Optimization.

CMMI-SE/SW/IPPD and CMMI/A to FAA-iCMM V2.0

CMMI-SE/SW/IPPD v1.02 (and CMMI-A) Process Areas, Goals, and Practices	**FAA-iCMM v2.0 Process Areas, Goals, and Practices**
Organizational Process Focus (OPF)	***PA 20 Process Definition; PA 21 Process Improvement***
SG 1 Determine Process Improvement Opportunities	PA 21 – goal 1
SP 1.1-1 Establish Organizational Process Needs	BP 21.01 Identify Process Improvement Goals
SP 1.2-1 Assess the Organization's Processes	BP 21.03 Appraise process
SP 1.3-1 Identify the Organization's Process Improvements	BP 20.04 Coordinate and Communicate Process Definition BP 21.04 Establish an Action Plan
SG 2 Plan and Implement Process Improvement Activities	PA 21 – goal 2, 3
SP 2.1-1 Establish Process Action Plans	BP 20.04 Coordinate and Communicate Process Definition BP 21.04 Establish an Action Plan
SP 2.2-1 Implement Process Action Plans	BP 20.04 Coordinate and Communicate Process Definition BP 21.05 Implement Improvements
SP 2.3-1 Deploy Process and Related Process Assets	BP 20.04 Coordinate and Communicate Process Definition BP 21.07 Sustain and Deploy Improvement Gains
SP 2.4-1 Incorporate Process-Related Experiences into the Organization's Process Assets	BP 20.03 Maintain Process Assets
Organizational Process Definition (OPD)	***PA 20 Process Definition***
SG 1 Create Organizational Process Assets	PA 20 – goal 1, 2
SP 1.1-1 Establish Standard Processes	BP 20.01 Establish Standard Processes
SP 1.2-1 Establish Life-Cycle Model Descriptions	BP 20.01 Establish Standard Processes
SP 1.3-1 Establish Tailoring Criteria and Guidelines	BP 20.02 Develop Tailoring Guidelines
SG 2 Make Supporting Process Assets Available	PA 20 – goal 2
SP 2.1-1 Establish an Organizational Measurement Repository	BP 20.03 Maintain Process Assets
SP 2.2-1 Establish an Organizational Process Asset Library	BP 20.03 Maintain Process Assets
Organizational Training (OT)	***PA 22 Training***
SG 1 Identify Training Needs and Make Training Available	PA 22 – goal 1
SP 1.1-1 Establish the Strategic Training needs	BP 22.01 Identify Training Needs
SP 1.2-1 Determine Which Training Needs Are the Responsibility of the Organization	BP 22.01 Identify Training Needs BP 22.02 Establish Training Plan
SP 1.3-1 Establish Organizational Training Tactical Plan	BP 22.02 Establish Training Plan
SP 1.4-1 Establish Training Capability	BP 22.03 Establish Training Mechanism
SG 2 Provide Necessary Training	PA 22 – goal 2, goal 3
SP 2.1-1 Deliver Training	BP 22.04 Train Individuals
SP 2.2-1 Establish Training Records	BP 22.05 Establish and Maintain Records
SP 2.3-1 Assess Training Effectiveness	BP 22.06 Assess Training Effectiveness
Organizational Process Performance (OPP)	***PA 00 Integrated Enterprise Management; PA 18 Measurement and Analysis; Generic Practices***
SG 1 Establish Performance Baselines and Models	PA 18 – goal 1, goal 2, goal 3

CMMI-SE/SW/IPPD v1.02 (and CMMI-A) Process Areas, Goals, and Practices	FAA-iCMM v2.0 Process Areas, Goals, and Practices
SP 1.1-1 Select Processes	BP 00.01. Establish and maintain strategic vision GP 4.1 Stabilize Process Performance
SP 1.2-1 Establish Process Performance Measures	BP 18.01 Establish measures based on goals
SP 1.3-1 Establish Quality and Process Performance Objectives	BP 00.03 Establish and maintain strategy
SP 1.4-1 Establish Process Performance Baselines	BP 18.02 Collect relevant measurement data BP 18.03 Store data and results
SP 1.5-1 Establish Process Performance Models	BP 18.04 Analyze measurement data
Organizational Innovation and Deployment (OID)	***PA 23 Innovation***
SG 1 Select Improvements	PA 23 - goal 1
SP 1.1-1 Collect and Analyze Improvement Proposals	BP 23.01 Maintain New Technology Awareness BP 23.05 Manage Innovation
SP 1.2-1 Identify Innovations	BP 23.01 Maintain New Technology Awareness
SP 1.3-1 Pilot Improvements	BP 23.02 Select New Technologies
SP 1.4-1 Select Improvements for Deployment	BP 23.02 Select New Technologies
SG 2 Deploy Improvements	PA 23 – goal 3
SP 2.1-1 Plan the Deployment	BP 23.03 Prepare for Infusion
SP 2.2-1 Manage the Deployment	BP 23.04 Infuse New Technologies
SP 2.3-1 Measure Improvement Effects	BP 23.05 Manage Innovation
Project Planning (PP)	***PA 11 Project Management***
SG 1 Establish Estimates	PA 11 - goal 2
SP 1.1-1 Estimate the Scope of the Project	BP 11.01 Define Project Objectives, Scope and Outputs BP 11.02 Define the Activities and Life Cycle Approach
SP 1.2-1 Establish Estimates of Project Attributes	BP 11.03 Estimate Planning Parameters
SP 1.3-1 Define Project Life Cycle	BP 11.02 Define the Activities and Life Cycle Approach
SP 1.4-1 Determine Estimates of Effort and Cost	BP 11.04 Estimate Project Resource Requirements
SG 2 Develop a Project Plan	PA 11 - goal 1
SP 2.1-1 Establish the Budget and Schedule	BP 11.04 Estimate Project Resource Requirements BP 11.05 Establish Schedules
SP 2.2-1 Identify Project Risks	BP 13.02 Identify Risks
SP 2.3-1 Plan for Data Management	BP 11.06 Establish and Maintain Plans
SP 2.4-1 Plan for Project Resources	BP 11.06 Establish and Maintain Plans
SP 2.5-1 Plan for Needed Knowledge and Skills	BP 22.02 Establish Training Plan
SP 2.6-1 Plan Stakeholder Involvement	BP 11.06 Establish and Maintain Plans
SP 2.7-1 Establish the Project Plan	BP 11.06 Establish and Maintain Plans
SG 3 Obtain Commitment to the Plan	PA 11 – goal 3
SP 3.1-1 Review Subordinate Plans	BP 11.07 Establish Commitment
SP 3.2-1 Reconcile Work and Resource Levels	BP 11.07 Establish Commitment
SP 3.3-1 Obtain Plan Commitment	BP 11.07 Establish Commitment
Project Monitoring and Control (PMC)	***PA 11 Project Management***
SG 1 Monitor Project Against Plan	PA 11 – goal 4
SP 1.1-1 Monitor Project Planning Parameters	BP 11.10 Monitor Project Performance
SP 1.2-1 Monitor Commitments	BP 11.10 Monitor Project Performance
SP 1.3-1 Monitor Project Risks	BP 11.10 Monitor Project Performance
SP 1.4-1 Monitor Data Management	BP 11.10 Monitor Project Performance
SP 1.5-1 Monitor Stakeholder Involvement	BP 11.10 Monitor Project Performance
SP 1.6-1 Conduct Progress Reviews	BP 11.10 Monitor Project Performance
SP 1.7-1 Conduct Milestone Reviews	BP 11.11 Review and Analyze Project Performance

CMMI-SE/SW/IPPD v1.02 (and CMMI-A) Process Areas, Goals, and Practices	**FAA-iCMM v2.0 Process Areas, Goals, and Practices**
SG 2 Manage Corrective Action to Closure	PA 11 – goal 5
SP 2.1-1 Analyze Issues	BP 11.12 Take Corrective Action
SP 2.2-1 Take Correction Action	BP 11.12 Take Corrective Action
SP 2.3-1 Manage Corrective Action	BP 11.12 Take Corrective Action
Supplier Agreement Management (SAM)	***PA 05 Outsourcing; PA 12 Supplier Agreement Management: PA 09 Deployment, Transition, and Disposal***
SG 1 Establish Supplier Agreements	PA 05 – goal 3
SP 1.1-1 Analyze Needs and Requirements Determined by the Project	BP 05.01 Identify Needed Products or Services
SP 1.2-1 Select Suppliers	BP 05.04 Choose Supplier
SP 1.3-1 Establish Supplier Agreements	BP 05.05 Communicate with Suppliers
SG 2 Satisfy Supplier Agreements	PA 12 – goal 2, 5
SP 2.1-1 Acquire COTS Products	BP 05.03 Prepare for the Solicitation or Tasking BP 05.05 Communicate with Suppliers
SP 2.2-1 Execute the Supplier Agreement	BP 12.02 Review and Monitor Agreement Performance BP 12.03 Maintain Supplier Agreement Integrity BP 12.04 Monitor Supplier's Plans, Processes, Activities and Products BP 12.05 Foster Cooperative and Collaborative Environment BP 12.06 Analyze and Direct Agreement Activities
SP 2.3-1 Conduct Acceptance Testing	BP 08.05 Verify End-products
SP 2.4-1 Transition Products	BP 09.02 Prepare Facility and Infrastructure Environment BP 09.05 Transition Product or Service
Integrated Project Management (IPM)	***PA 11 Project Management; PA 14 Integrated Teaming***
SG 1 Use the Project's Defined Process	CL3 Goal: The process is institutionalized as a defined process
SP 1.1-1 Establish the Project's Defined Process	BP 11.02 Define the Activities and Life Cycle Approach GP3.1 Establish and Use a Defined Process
SP 1.2-1 Use Organizational Process Assets for Planning Project Activities	BP 11.03 Estimate Planning Parameters GP3.1 Establish and Use a Defined Process
SP 1.3-1 Integrate Plans	BP 11.06 Establish and Maintain Plans
SP 1.4-1 Manage the Project Using the Integrated Plans	BP 11.09 Direct the Project
SP 1.5-1 Contribute to the Organization's Process Assets	BP 20.03 Maintain Process Assets GP 3.3 Improve Processes
SG 2 Coordinate and Collaborate with Relevant Stakeholders	GP 2.5 Coordinate with Participants and Stakeholders PA 14 – goal 2
SP 2.1-1 Manage Stakeholder Involvement	BP 11.09 Direct the Project
SP 2.2-1 Manage Dependencies	BP 11.09 Direct the Project BP 11.10 Monitor Project Performance
SP 2.3-1 Resolve Coordination Issues	BP 11.09 Direct the Project
SG 3 Use the Project's Shared Vision	PA 11 – goal 3
SP 3.1-1 Define Project's Shared Vision Context	BP 11.07 Establish Commitment
SP 3.2-1 Establish the Project's Shared Vision	BP 11.07 Establish Commitment
SG 4 Organize Integrated Teams	PA 14 – goal 1

CMMI-SE/SW/IPPD v1.02 (and CMMI-A) Process Areas, Goals, and Practices	FAA-iCMM v2.0 Process Areas, Goals, and Practices
SP 4.1-1 Determine Integrated Team Structure for the Project	BP 11.08 Organize to Meet Project Objectives
SP 4.2-1 Develop a Preliminary Distribution of Requirements to Integrated Teams	BP 11.08 Organize to Meet Project Objectives
SP 4.3-1 Establish Integrated Teams	BP 14.02 Establish and Maintain Integrated Teams
Risk Management (RM)	***PA 13 Risk Management***
SG 1 Prepare for Risk Management	PA 13 – goal 1
SP 1.1-1 Determine Risk Sources and Categories	BP 13.02 Identify Risks
SP 1.2-1 Define Risk Parameters	BP 13.01 Develop Risk Management Approach
SP 1.3-1 Establish a Risk Management Strategy	BP 13.01 Develop Risk Management Approach
SG 2 Identify and Analyze Risks	PA 13 – goal 2
SP 2.1-1 Identify Risks	BP 13.02 Identify Risks
SP 2.2-1 Evaluate, Classify, and Prioritize Risks	BP 13.03 Assess Risks
SG 3 Mitigate Risks	PA 13 – goal 3
SP 3.1-1 Develop Risk Mitigation Plans	BP 13.04 Develop Risk Mitigation Plans
SP 3.2-1 Implement Risk Mitigation Plans	BP 13.05 Implement and Monitor Risk Mitigation Plans
Integrated Teaming (IT)	***PA 14 Integrated Teaming***
SG 1 Establish Team Composition	PA 14 – goal 1
SP 1.1-1 Identify Team Tasks	BP 14.02 Establish and Maintain Integrated Teams
SP 1.2-1 Identify Needed Knowledge and Skills	BP 14.02 Establish and Maintain Integrated Teams
SP 1.3-1 Assign Appropriate Team Members	BP 14.02 Establish and Maintain Integrated Teams
SG 2 Govern Team Operation	PA 14 – goal 2
SP 2.1-1 Establish a Shared Vision	BP 14.01 Develop and Communicate Team Goals
SP 2.2-1 Establish a Team Charter	BP 14.01 Develop and Communicate Team Goals
SP 2.3-1 Define Roles and Responsibilities	BP 14.02 Establish and Maintain Integrated Teams
SP 2.4-1 Establish Operating Procedures	BP 14.04 Establish Coordination and Communication Methods BP 14.05 Establish Resolution Methods
SP 2.5-1 Collaborate among Interfacing Teams	BP 14.03 Establish and Maintain a Collaborative Workplace
Quantitative Project Management (QPM)	***Generic Practices; PA 11 Project Management; PA 18 Measurement and Analysis***
SG 1 Quantitatively Manage the Project	CL4 Goal: The process is institutionalized as a quantitatively managed process (for PA 11)
SP 1.1-1 Establish the Project's Objectives	BP 11.01 Define Project Objectives, Scope, and Outputs
SP 1.2-1 Compose the Defined Process	GP 3.2 Establish and Use a Defined Process
SP 1.3-1 Select the Subprocesses to be Managed	GP 4.1 Stabilize Process Performance
SP 1.4-1 Manage Project Performance	BP 11.10 Monitor Project Performance
SG 2 Statistically Manage Subprocess Performance	CL4 Goal: The process is institutionalized as a quantitatively managed process
SP 2.1-1 Select Measures and Analytic Techniques	GP4.1 Stabilize Process Performance BP 18.02 Collect relevant measurement data
SP 2.2-1 Apply Statistical Methods to Understand Variation	GP4.1 Stabilize Process Performance BP 18.04 Analyze measurement data
SP 2.3-1 Monitor Performance of the Selected Subprocesses	GP4.1 Stabilize Process Performance
SP 2.4-1 Record Statistical Management Data	GP3.3 Improve Processes BP 18.03 Store data and results
Requirements Management (RQM)	***PA 02 Requirements***
SG 1 Manage Requirements	PA 02 – goal 3, goal 4

CMMI-SE/SW/IPPD v1.02 (and CMMI-A) Process Areas, Goals, and Practices	**FAA-iCMM v2.0 Process Areas, Goals, and Practices**
SP 1.1-1 Obtain an Understanding of Requirements	BP 02.07 Record and Baseline Requirements
SP 1.2-2 Obtain Commitment to Requirements	BP 02.07 Record and Baseline Requirements
SP 1.3-1 Manage Requirements Changes	BP 02.08 Analyze and Resolve Requirements Change Requests
SP 1.4-2 Maintain Bi-directional Traceability of Requirements	BP 02.09 Maintain Consistency and Traceability
SP 1.5-1 Identify Inconsistencies between Project Work and Requirements	BP 02.09 Maintain Consistency and Traceability
Requirements Development (RD)	***PA 01 Needs; PA 02 Requirements***
SG 1 Develop Customer Requirements	PA 01 – goal 1
SP 1.1-1 Collect Stakeholder Needs	BP 01.02 Elicit Needs
SP 1.1-2 Elicit Needs	BP 01.02 Elicit Needs
SP 1.2-1 Transform Stakeholder Needs, Expectations, Constraints, and Interfaces into Customer Requirements	BP 01.04 Establish and Maintain a Statement of Need BP 02.07 Record and Baseline Requirements
SG 2 Develop Product Requirements	PA 02 – goal 1
SP 2.1-1 Establish Product and Product Component Requirements	BP 02.03 Identify Key Requirements
SP 2.2-1 Allocate Product Component Requirements	BP 03.04 Allocate Requirements
SP 2.3-1 Identify Interface Requirements	BP 02.05 Identify External Interface Requirements
SG 3 Analyze and Validate Requirements	PA 02 – goal 2
SP 3.1-1 Establish Operational Concepts and Scenarios	BP 01.03 Analyze Needs
SP 3.2-1 Establish a Definition of Required Functionality	BP 02.01 Identify Functional and Performance Requirements
SP 3.3-1 Analyze Requirements	BP 02.06 Analyze Requirements
SP 3.4-3 Evaluate Product Cost, Schedule and Risk	BP 02.06 Analyze Requirements
SP 3.5-1 Validate Requirements	BP 08.04 Evaluate Incremental Work Products
SP 3.5-2 Validate Requirements with Comprehensive Methods	BP 08.04 Evaluate Incremental Work Products
Technical Solution (TS)	***PA 03 Design; PA 06 Design Implementation***
SG 1 Select Product Component Solutions	PA 03 – goal 1, 2
SP 1.1-1 Develop Alternative Solutions and Selection Criteria	BP 03.02 Develop Design Structure
SP 1.1-2 Develop Detailed Alternative Solutions and Selection Criteria	BP 03.02 Develop Design Structure
SP 1.2-2 Evolve Operational Concepts and Scenarios	BP 01.03 Analyze Needs BP 03.05 Define Interactions among Design Elements
SP 1.3-1 Select Product Component Solutions	BP 03.02 Develop Design Structure
SG 2 Develop the Design	PA 03 – goal 1
SP 2.1-1 Use Effective Design Methods	GP 2.2 Document the Process GP 2.4 Provide Adequate Resources GP 2.10 Objectively Assess Process Compliance GP 2.14 Take Corrective Action
SP 2.2-1 Develop a Technical Data Package	BP 03.08 Establish and Maintain Design Descriptions BP 06.03 Develop Documentation
SP 2.2-3 Establish a Complete Technical Data Package	BP 03.08 Establish and Maintain Design Descriptions BP 06.03 Develop Documentation

CMMI-SE/SW/IPPD v1.02 (and CMMI-A) Process Areas, Goals, and Practices	FAA-iCMM v2.0 Process Areas, Goals, and Practices
SP 2.3-1 Establish Interface Descriptions	BP 03.03 Develop Interface Specifications
SP 2.3-3 Design Comprehensive Interface	BP 03.03 Develop Interface Specifications
SP 2.4-3 Perform Make, Buy, or Reuse Analyses	BP 03.07 Establish and Use a Strategy for Non-developmental Items
SG 3 Implement the Product Design	PA 06 – goal 1
SP 3.1-1 Implement the Design	BP 06.02 Formulate product or service components
SP 3.2-1 Establish Product Support Documentation	BP 06.03 Develop Documentation
Product Integration (PI)	***PA 07 Integration***
SG 1 Prepare for Product Integration	PA 07 – goal 1
SP 1.1-1 Establish a Product Integration Strategy	BP 07.01 Develop Integration Strategy
SP 1.2-2 Establish the Product Integration Environment	BP 07.01 Develop Integration Strategy
SP 1.3-3 Define Detailed Product Integration Procedures	BP 07.01 Develop Integration Strategy
SG 2 Ensure Interface Compatibility	PA 07 – goal 1
SP 2.1-1 Review Interface Descriptions for Completeness	BP 07.03 Review and Coordinate Interface Definitions
SP 2.2-1 Manage Interfaces	BP 07.03 Review and Coordinate Interface Definitions
SG 3 Assemble Product Components and Deliver the Product	PA 07 – goal 3
SP 3.1-1 Confirm Readiness of Product Components for Integration	BP 07.02 Confirm Readiness of Product and Service Elements
SP 3.2-1 Assemble Product Components	BP 07.04 Assemble Product and Service Elements
SP 3.3-1 Checkout Assembled Product Components	BP 07.05 Confirm Integrated Product or Service Operation
SP 3.4-1 Package and Deliver the Product or Product Component	BP 09.05 Transition Product or Service
Verification (VER)	***PA 08 Evaluation***
SG 1 Prepare for Verification	PA 08 – goal 1
SP 1.1-1 Establish a Verification Strategy	BP 08.01 Develop Evaluation Strategy
SP 1.2-2 Establish the Verification Environment	BP 08.03 Establish and Maintain Evaluation Environment
SP 1.3-3 Establish Detailed Verification Plans	BP 08.02 Develop Evaluation Procedures
SG 2 Perform Peer Reviews	PA 08 – goal 2
SP 2.1-1 Prepare for Peer Reviews	BP 08.03 Establish and Maintain Evaluation Environment
SP 2.2-1 Conduct Peer Reviews	BP 08.04 Evaluate Incremental Work Products
SP 2.3-2 Analyze Peer Review Data	BP 08.07 Analyze Evaluation Results
SG 3 Verify Selected Work Products	PA 08 – goal 2
SP 3.1-1 Perform Verification	BP 08.05 Verify End Products
SP 3.2-2 Analyze Verification Results and Identify Corrective Action	BP 08.07 Analyze Evaluation Results
SP 3.3-1 Perform Re-Verification	BP 08.07 Analyze Evaluation Results
Validation (VAL)	***PA 08 Evaluation***
SG 1 Prepare for Validation	PA 08 – goal 1
SP 1.1-1 Establish a Validation Strategy	BP 08.01 Develop Evaluation Strategy
SP 1.2-2 Establish the Validation Environment	BP 08.03 Establish and Maintain Evaluation Environment
SP 1.3-3 Define Detailed Validation Procedures	BP 08.02 Develop Evaluation Procedures
SG 2 Validate Product or Product Components	PA 08 – goal 2
SP 2.1-1 Perform Validation	BP 08.06 Validate End Products

CMMI-SE/SW/IPPD v1.02 (and CMMI-A) Process Areas, Goals, and Practices	FAA-iCMM v2.0 Process Areas, Goals, and Practices
SP 2.2-1 Capture and Analyze Validation Results	BP 08.07 Analyze Evaluation Results
Configuration Management (CM)	***PA 16 Configuration Management***
SG 1 Establish Baselines	PA 16 – goal 1
SP 1.1-1 Identify Configuration Items	BP 16.02 Identify and Baseline Configuration Items and Interim Work Products
SP 1.2-1 Establish a Configuration Management System	BP 16.01 Establish a Configuration Management Strategy
SP 1.3-1 Create or Release Baselines	BP 16.03 Establish and Maintain a Repository for Work Product Baselines BP 16.04 Control Changes
SG 2 Track and Control Changes	PA 16 – goal 2
SP 2.1-1 Track Changes	BP 16.04 Control Changes BP 16.05 Record and Report Configuration Status
SP 2.2-1 Control Changes	BP 16.04 Control Changes
SG 3 Establish Integrity	PA 16 – goal 4
SP 3.1-1 Establish Configuration Management Records	BP 16.05 Record and Report Configuration Status BP 16.06 Conduct Configuration Audits and Inspections
SP 3.2-1 Perform Configuration Audits	BP 16.06 Conduct Configuration Audits and Inspections
Process and Product Quality Assurance (PPQA)	***PA 15 Quality Assurance and Management***
SG 1 Objectively Evaluate Processes and Work Products	PA 15 – goal 1
SP 1.1-1 Objectively Evaluate Processes	BP 15.02 Monitor Process Compliance
SP 1.2-1 Objectively Evaluate Work Products and Services	BP 15.03 Monitor Product and Service Quality
SG 2 Provide Objective Insight	PA 15 - goal 2
SP 2.1-1 Communicate and Ensure Resolution of Noncompliance Issues	BP 15.04 Record and Report Results
SP 2.2-1 Establish Records	BP 15.04 Record and Report Results BP 15.06 Initiate Quality Improvement
Measurement and Analysis (MA)	***PA 18 Measurement and Analysis***
SG 1 Align Measurement and Analysis Activities	PA 18 - goal 1
SP 1.1-1 Establish Measurement Objectives	BP 18.01 Establish measures based on goals
SP 1.2-1 Specify Measures	BP 18.01 Establish measures based on goals
SP 1.3-1 Specify Data Collection and Storage Procedures	BP 18.03 Store data and results
SP 1.4-1 Specify Analysis Procedures	BP 18.04 Analyze measurement data
SG 2 Provide Measurement Results	PA 18 – goal 2, goal 3
SP 2.1-1 Collect Measurement Data	BP 18.02 Collect relevant measurement data
SP 2.2-1 Analyze Measurement Data	BP 18.04 Analyze measurement data
SP 2.3-1 Store Data and Results	BP 18.03 Store data and results
SP 2.4-1 Communicate Results	BP 18.05 Communicate results
Decision Analysis and Resolution (DAR)	***PA 04 Alternatives Analysis***
SG 1 Evaluate Alternatives	PA 04 – goal 2
SP 1.1-1 Establish and Use Guidelines for Decision Analysis	BP 04.01 Establish Analysis Strategy
SP 1.2-1 Select Decision-Making Techniques	BP 04.03 Select Analysis Method
SP 1.3-1 Establish Evaluation Criteria	BP 04.02 Define the Problem
SP 1.4-1 Identify Alternative Solutions	BP 04.04 Identify Alternative Solutions
SP 1.5-1 Evaluate Alternatives	BP 04.05 Analyze Alternative Solutions
SP 1.6-1 Select Solutions	BP 04.06 Select Solution

CMMI-SE/SW/IPPD v1.02 (and CMMI-A) Process Areas, Goals, and Practices	**FAA-iCMM v2.0 Process Areas, Goals, and Practices**
Organizational Environment for Integration (OEI)	***PA 00 Integrated Enterprise Management; PA 14 Integrated Teaming; PA 23 Innovation***
SG 1 Provide IPPD Infrastructure	PA 00 – goal 1
SP 1.1-1 Establish the Organization's Shared Vision	BP 00.01 Establish and maintain strategic vision
SP 1.2-1 Establish an Integrated Work Environment	BP 23.05 Manage innovation
SP 1.3-1 Identify IPPD-Unique Skill Requirements	BP 22.01 Identify Training Needs
SG 2 Manage People for Integration	PA 00 – goal 1
SP 2.1-1 Establish Leadership Mechanisms	BP 00.01 Establish and maintain strategic vision
SP 2.2-1 Establish Incentives for Integration	BP 00.02 Align to achieve the vision
SP 2.3-1 Establish Mechanisms to Balance Team and Home Organization Responsibilities	BP 14.03 Establish and Maintain a Collaborative Workplace
Causal Analysis and Resolution (CAR)	***PA 15 Quality Assurance and Management; PA 18 Measurement and Analysis***
SG 1 Determine Causes of Defects	PA 15 – goal 4
SP 1.1-1 Select Defect Data for Analysis	BP 15.05 Analyze Quality BP 18.02 Collect relevant measurement data BP 18.04 Analyze measurement data
SP 1.2-1 Analyze Causes	BP 15.05 Analyze Causes
SG 2 Address Causes of Defects	PA 15 – goal 4
SP 2.1-1 Implement the Action Proposals	BP 15.05 Analyze Quality BP 15.06 Initiate Quality Improvement
SP 2.2-1 Evaluate the Effect of Changes	BP 15.07 Evaluate the Effect of Change
SP 2.3-1 Record Data	BP 15.04 Record and Report Results
Supplier Selection and Monitoring (CMMI-A)	***PA 05 Outsourcing; PA 12 Supplier Agreement Management: PA 09 Deployment, Transition, and Disposal***
SG 1 Establish and Maintain Supplier Requirements	PA 05 – goal 2
SP 1.1-1 Determine Customer Needs	BP 05.01 Identify Needed Products or Services
SP 1.2- Determine Sourcing Options	BP 05.02 Identify Competent Suppliers
SP 1.3-1 Establish and Maintain Requirements	BP 02.07 Record and Baseline Requirements
SG 2 Select Suppliers and Establish Agreements	PA 05 – goal 2 and 3 PA 12 – goal 1
SP 2.1-1 Conduct the Solicitation	BP 05.03 Prepare for the Solicitation or Tasking
SP 2.2-1 Select Suppliers	BP 05.04 Choose Supplier
SP 2.3-1 Establish and Maintain Agreements	BP 05.05 Communicate with Suppliers BP 12.03 Maintain Supplier Agreement Integrity
SG 3 Monitor Supplier Performance and Products	PA 12 – goal 2
SP 3.1-1 Monitor and Evaluate Supplier Performance	BP 12.04 Monitor Supplier's Plans, Processes, Activities and Products
SP 3.2-1 Perform Reviews	BP 12.02 Review and Monitor Agreement Performance BP 08.04 Evaluate Incremental Work Products
SP 3.3-1 Conduct In Progress Evaluations	BP 08.04 Evaluate Incremental Work Products
SG 4 Accept and Transition Products	PA 12 – goal 5; PA 09 – goal 1-4
SP 4.1-1 Conduct Acceptance Evaluations	BP 08.05 Verify End Products
SP 4.2-1 Transition Products	BP 09.02 Prepare Facility and Infrastructure Environment BP 09.05 Transition Product or Service

CMMI-SE/SW/IPPD v1.02 (and CMMI-A) Process Areas, Goals, and Practices	**FAA-iCMM v2.0 Process Areas, Goals, and Practices**
Integrated Supplier Management (CMMI-A)	***PA 05 Outsourcing; PA 12 Supplier Agreement Management***
SG 1 Analyze Needs	PA 05 – goal 1
SP 1.1-1 Analyze Off-the-Shelf Products	BP 05.02 Identify Competent Suppliers
SP 1.2-1 Analyze Custom-Made Sources	BP 05.04 Choose Supplier
SP 1.3-1 Determine Acquisition Sources	BP 05.04 Choose Supplier
SG 2 Appraise Custom-Made Product Suppliers	PA 05 – goal 2 PA 12 – goal 2
SP 2.1-1 Appraise the Supplier's Engineering Process	BP 05.02 Identify Competent Suppliers BP 12.04 Monitor Supplier's Plans, Processes, Activities and Products BP 12.06 Analyze and Direct Agreement Activities
SP 2.2-1 Appraise the Outputs of the Supplier's Engineering Process	BP 12.04 Monitor Supplier's Plans, Processes, Activities and Products
SP 2.3-1 Adjust the Acquisition Approach	BP 12.06 Analyze and Direct Agreement Activities
SG 3 Establish a Cooperative Environment	PA 05 – goal 3 PA 12 – goal 4
SP 3.1-1 Encourage Customer Participation	BP 12.05 Foster Cooperative and Collaborative Environment
SP 3.2-1 Foster a Cooperative and Productive Environment	BP 12.05 Foster Cooperative and Collaborative Environment
Quantitative Supplier Management (CMMI-A)	***PA 12 Supplier Agreement Management; PA 15 Quality Assurance and Management***
SG 1 Define Quantitative Objectives	
SP 1.1-1 Determine Quantitative Objectives	BP 05.01 Identify Needed Products or Services BP 15.01 Establish a Quality Management System BP 02.07 Record and Baseline Requirements
SP 1.2-1 Incorporate Quantitative Objectives into Acquisition Documents	BP 05.03 Prepare for the Solicitation or Tasking
SG 2 Quantitatively manage the acquisition effort	PA 12 – goal 3
SP 2.1-1 Compare Results Against Quantitative Objectives	BP 12.02 Review and Monitor Agreement Performance BP 15.05 Analyze Causes
SP 2.2-1 Apply Quantitative Measurements	BP 12.02 Review and Monitor Agreement Performance BP 15.05 Analyze Causes
SP 2.3-1 Identify Special Causes of Variance	BP 12.06 Analyze and Direct Agreement Activities BP 15.05 Analyze Causes
SP 2.4-1 Take Corrective Action	BP 12.06 Analyze and Direct Agreement Activities BP 15.06 Initiate Quality Improvement
Generic Goals and Generic Practices	**Capability Level Goals and Generic Practices**
GG 1 Achieve Specific Goals	***L1 Goal: The process achieves the goals of the process area***
GP 1.1 Identify Work Scope	1.1 Identify Work Scope
GP 1.2 Perform Base Practices	1.2 Perform the Process
GG 2 Institutionalize a Managed Process	***L2 Goal: The process is institutionalized as a managed (planned and tracked) process***
GP 2.1 Establish an Organizational Policy	2.1 Establish Organizational Policy
GP 2.2 Plan the Process	2.3 Plan the process 2.7 Establish work product requirements 2.2 Document the process
GP 2.3 Provide Resources	2.4 Provide adequate resources

CMMI-SE/SW/IPPD v1.02 (and CMMI-A) Process Areas, Goals, and Practices	**FAA-iCMM v2.0 Process Areas, Goals, and Practices**
GP 2.4 Assign Responsibility	2.5 Assign responsibility
GP 2.5 Train People	2.6 Ensure skill and knowledge
GP 2.6 Manage Configurations	2.9 Manage work products
GP 2.7 Identify and Involve Relevant Stakeholders	2.15 Coordinate with participants and stakeholders
GP 2.8 Monitor and Control the Process	2.12 Measure process performance 2.14 Take corrective action
GP 2.9 Objectively Evaluate Adherence	2.10 Objectively assess process compliance 2.11 Objectively verify work products
GP 2.10 Review Status with Higher-Level Management	2.13 Review performance with higher-level management
GG 3 Institutionalize a Defined Process	***L3 Goal: The process is institutionalized as a defined process***
GP 3.1 Establish a Defined Process	3.1 Standardize the process 3.2 Establish and use a defined process
GP 3.2 Collect Improvement Information	3.3 Improve processes
GG 4 Institutionalize a Quantitatively Managed Process	***L4 Goal: The process is institutionalized as a quantitatively managed process.***
GP 4.1 Establish Quality Objectives	4.1 Stabilize process performance
GP 4.2 Stabilize Subprocess Performance	4.1 Stabilize process performance
GG 5 Institutionalize an Optimizing Process	***L5 Goal: The process is institutionalized as an optimizing process.***
GP 5.1 Ensure Continuous Process Improvement	5.1 Pursue process optimization
GP 5.2 Correct Common Cause of Problems	5.1 Pursue process optimization

President's Quality Award/Malcolm Baldrige National Quality Award Criteria* to FAA-iCMM v2.0

President's Quality Award/Malcolm Baldrige National Quality Award Categories/Items	**FAA-iCMM v2.0 Process Areas and Practices**
1. Leadership	***PA 00 Integrated Enterprise Management***
1.1 Organizational Leadership	*PA 00 Integrated Enterprise Management; PA 14 Integrated Teaming; PA 22 Training; PA 23 Innovation*
1.1a Senior Leadership Direction	
1-set, communicate, deploy values, expectations, focus	BP 00.01 Establish and maintain strategic vision BP 00.02 Align to achieve the vision
2-establish and reinforce environment	BP 00.01 Establish and maintain strategic vision BP 22.07 Establish Learning Environment BP 14.03 Establish and Maintain a Collaborative Workplace BP 23.05 Manage Innovation:
3-set directions and future opportunities	BP 00.01 Establish and maintain strategic vision
1.1b Organization Performance Review	
1-review organizational performance	BP 00.05 Review performance
2-translate review findings into priorities and opportunities	BP 00.06 Act on results of review
3-deploy findings, priorities, and opportunities	BP 00.06 Act on results of review
4-use findings and feedback to improve leadership and management	BP 00.06 Act on results of review
*1.2 Organization Responsibility and Citizenship***	*PA 00 Integrated Enterprise Management; PA 13 Risk Management*
1.2a Responsibilities to the Public	
1-address impacts and risks on society	BP 00.07 Fulfill public responsibility BP 13.01 Develop Risk Management Approach
2-anticipate public concerns	BP 00.07 Fulfill public responsibility
3-ensure ethical business practices	BP 00.07 Fulfill public responsibility
1.2b Support of Key Communities	BP 00.07 Fulfill public responsibility
2. Strategic Planning	***PA 00 Integrated Enterprise Management; PA 18 Measurement and Analysis***
2.1 Strategy Development	*PA 00 Integrated Enterprise Management; PA 20 Process Definition; PA 04 Alternatives Analysis*
2.1a Strategy Development Process	
1-describe strategic planning process	GP 2.2 Document the process; GP 3.1 Standardize the Process (for PA 00) BP 20.01 Establish Standard Processes
2-consider key factors	BP 00.03 Establish and maintain strategy
2.1b Strategic Objectives - describe strategic objectives and timetable for implementing them; - evaluate options to assess relative to key factors	 BP 00.03 Establish and maintain strategy BP 04.05 Analyze Alternative Solutions
2.2 Strategy Deployment	*PA 00 Integrated Enterprise Management; PA 18 Measurement and Analysis*
2.2a Action Plan Development and Deployment	
1-develop action plans	BP 00.04 Develop and deploy action plans
2-determine key human resource requirements	BP 00.04 Develop and deploy action plans

* Note that criteria item descriptions in this table have been shortened and abbreviated.
** See page 64

President's Quality Award/Malcolm Baldrige National Quality Award Categories/Items	FAA-iCMM v2.0 Process Areas and Practices
3-allocate resources	BP 00.04 Develop and deploy action plans
4-identify key performance measures/indicators for tracking	BP 00.04 Develop and deploy action plans
5-communicate and deploy strategic objectives, action plans, measures to achieve alignment	BP 00.04 Develop and deploy action plans BP 18.05 Communicate results
2.2b Performance Projection	
1-project key performance measures/indicators	BP 00.03 Establish and maintain strategy BP 18.04 Analyze measurement data
2-compare projected performance with competitors, key benchmarks, past performance, as appropriate	BP 18.04 Analyze measurement data
3. Customer Focus**	***PA 01 Needs; PA 10 Operation and Support; PA 02 Requirements***
3.1 Customer and Market Knowledge	*PA 01 Needs; PA 02 Requirements; PA 21 Process Improvement*
3.1a Customer and Market Knowledge	
1-determine customers and/or market segments	BP 01.01 Identify Customers and Stakeholders
2-listen and learn to determine key requirements	BP 01.02 Elicit Needs
3-determine key features and relative importance/ value to customers	BP 01.04 Establish and Maintain a Statement of Need BP 02.03 Identify Key Requirements
4-keep listening and learning methods current with business needs and directions	GP 2.3 Plan the process; GP 2.14 Take corrective action; GP 3.3 Improve processes BP 21.01 Identify Process Improvement Goals BP 21.02 Establish Process Improvement Program BP 21.03 Appraise process BP 21.04 Establish an Action Plan BP 21.05 Implement Improvements BP 21.06 Confirm Improvements BP 21.07 Sustain and deploy Improvement Gains BP 21.08 Monitor Performance
3.2 Customer Satisfaction and Relationships	*PA 01 Needs; PA 10 Operation and Support; PA 21 Process Improvement; PA 08 Evaluation; PA 20 Process Description*
3.2a Customer Relationships	
1-determine key methods for customer access	BP 01.05 Communicate with Customers BP 10.07 Provide Customer Support
2-determine and deploy customer contact requirements	BP 01.05 Communicate with Customers BP 10.07 Provide Customer Support
3-implement complaint management	BP 01.06 Determine Customer Satisfaction BP 10.07 Provide Customer Support
4-build relationships with customers	BP 01.06 Determine Customer Satisfaction BP 01.05 Communicate with Customers
5-keep relationships approaches current with business needs and directions	GP 2.3 Plan the process; GP 2.14 Take corrective action; GP 3.3 Improve processes BP 21.01 Identify Process Improvement Goals BP 21.02 Establish Process Improvement Program BP 21.03 Appraise process BP 21.04 Establish an Action Plan BP 21.05 Implement Improvements BP 21.06 Confirm Improvements BP 21.07 Sustain and deploy Improvement Gains BP 21.08 Monitor Performance

President's Quality Award/Malcolm Baldrige National Quality Award Categories/Items	FAA-iCMM v2.0 Process Areas and Practices
3.2b Customer Satisfaction Determination	
1-describe process for determining customer satisfaction and dissatisfaction	GP 2.2 Document the process; GP 3.1 Standardize the process (for PA 01) BP 20.01 Establish Standard Processes BP 08.01 Develop Evaluation Strategy
2-follow up with customers to assure feedback	BP 01.06 Determine Customer Satisfaction BP 10.07 Provide Customer Support
3-use information on customer satisfaction	BP 01.06 Determine Customer Satisfaction
4-keep approaches current with business needs and directions	GP 2.3 Plan the process; GP 2.14 Take corrective action; GP 3.3 Improve processes BP 21.01 Identify Process Improvement Goals BP 21.02 Establish Process Improvement Program BP 21.03 Appraise process BP 21.04 Establish an Action Plan BP 21.05 Implement Improvements BP 21.06 Confirm Improvements BP 21.07 Sustain and deploy Improvement Gains BP 21.08 Monitor Performance
4. Information and Analysis	***PA 18 Measurement and Analysis; PA 00 Integrated Enterprise Management; PA 21 Process Improvement***
4.1 Measurement of Organizational Performance	*PA 18 Measurement and Analysis; PA 21 Process Improvement*
4.1a Measurement of Organizational Performance	
1-select measures/indicators	BP 18.01 Establish measures based on goals
2-keep measurement system current with business needs and directions	GP 2.3 Plan the process; GP 2.14 Take corrective action; GP 3.3 Improve processes (for PA 18) BP 21.01 Identify Process Improvement Goals BP 21.02 Establish Process Improvement Program BP 21.03 Appraise process BP 21.04 Establish an Action Plan BP 21.05 Implement Improvements BP 21.06 Confirm Improvements BP 21.07 Sustain and deploy Improvement Gains BP 21.08 Monitor Performance
4.2 Analysis of Organizational Performance	*PA 18 Measurement and Analysis; PA 00 Integrated Enterprise Management*
4.2a Analysis of Organizational Performance	
1-analyze performance to support review and planning	BP 18.02 Collect relevant measurement data BP 18.03 Store data and results BP 18.04 Analyze measurement data BP 18.05 Communicate results
2-link organization-level analysis to operations	BP 18.01 Establish measures based on goals BP 18.02 Collect relevant measurement data BP 18.03 Store data and results BP 18.04 Analyze measurement data BP 18.05 Communicate results
3-analyze performance to support operations and align with action plans	BP 18.01 Establish measures based on goals BP 18.02 Collect relevant measurement data BP 18.03 Store data and results BP 18.04 Analyze measurement data BP 18.05 Communicate results BP 00.05. Review performance

President's Quality Award/Malcolm Baldrige National Quality Award Categories/Items	FAA-iCMM v2.0 Process Areas and Practices
5. Human Resource Focus	***PA 22 Training; PA 14 Integrated Teaming; PA 23 Innovation; PA 00 Integrated Enterprise Management; PA 11 Project Management; PA 05 Outsourcing; PA 01 Needs***
5.1 Work Systems	*PA 14 Integrated Teaming; PA 11 Project Management; PA 22 Training; PA 00 Integrated Enterprise Management; PA 05 Outsourcing*
5.1a Work Systems and Job Design	
1-design, organize, manage work and jobs to promote cooperation, collaboration, initiative, innovation, flexibility and keep current with business needs	BP 14.03 Establish and Maintain a Collaborative Workplace BP 11.07 Establish Commitment
2-encourage, motivate employees to develop and utilize potential	BP 22.07 Establish Learning Environment
3-manage employee performance to support high performance	*(beyond scope of iCMM v2.0)*
4-reinforce high performance through compensation, recognition, rewards/incentives	BP 00.02. Align to achieve the vision
5-ensure effective communication, cooperation, and knowledge/skill sharing	BP 22.07 Establish Learning Environment
6-identify characteristics and skills needed; recruit and hire; consider performance requirements, diversity, and fair work force practices	BP 22.01 Identify Training Needs BP 05.01 Identify Needed Products or Services BP 05.02 Identify Competent Suppliers BP 05.03 Prepare for the Solicitation or Tasking BP 05.04 Choose Supplier *(for contract employees only – organizational recruitment beyond scope of iCMM v2.0)*
5.2 Employee Education, Training, and Development	*PA 22 Training*
5.2a Employee Education, Training and Development	
1-balance short and longer-term organizational and employee education and training needs	BP 22.01 Identify Training Needs
2-design education and training to keep current with needs	BP 22.01 Identify Training Needs
3-seek and use input from employees and supervisors on education and training needs, expectations, and design	BP 22.01 Identify Training Needs BP 22.03 Establish Training Mechanism
4-deliver and evaluate education and training	BP 22.04 Train Individuals BP 22.06 Assess Training Effectiveness
5-address key developmental and training needs	BP 22.01 Identify Training Needs
6-address performance excellence in education and training	BP 22.01 Identify Training Needs
7-reinforce knowledge and skills on the job	BP 22.07 Establish Learning Environment
5.3 Employee Well-Being and Satisfaction	*PA 23 Innovation; PA 00 Integrated Enterprise Management; PA 01 Needs*
5.3a Work Environment - address and improve workplace health, safety, and ergonomic factors	BP 23.05 Manage Innovation
5.3b Employee Support Climate	
1-enhance work climate via services, benefits, and policies	BP 00.01. Establish and maintain strategic vision.

President's Quality Award/Malcolm Baldrige National Quality Award Categories/Items	FAA-iCMM v2.0 Process Areas and Practices
2-encourage and motivate employees to develop and utilize full potential in a diverse workforce	BP 22.07 Establish Learning Environment
5.3c Employee Satisfaction	
1-determine key factors that affect employee well-being, satisfaction, and motivation	BP 01.02 Elicit Needs
2-assess/determine employee well-being, satisfaction, and motivation	BP 01.06 Determine Customer Satisfaction:
3-relate findings to business results to identify improvement priorities	BP 00.05 Review Performance BP 00.06 Act on results of review
6. Process Management	***PA 20 Process Definition; PA 21 Process Improvement; PA 11 Project Management; PA 23 Innovation; Generic Practices;*** *(Process Management applies to all PAs)*
6.1 Product and Service Processes	*All Life Cycle PAs*
6.1a Design Processes	*PA 20 Process Definition; PA 21 Process Improvement; PA 23 Innovation*
1-describe processes for product/service design and production/delivery	BP 20.01 Establish Standard Processes BP 21.01 Identify Process Improvement Goals
2-include changing requirements in product/service designs and production/delivery systems and processes	BP 21.01 Identify Process Improvement Goals BP 21.05 Implement Improvements BP 02.08 Analyze and resolve requirements change requests
3-incorporate new technology into products/services and systems and processes as appropriate	BP 23.01 Maintain New Technology Awareness BP 23.02 Select New Technologies BP 23.03 Prepare for Infusion BP 23.04 Infuse New Technologies BP 23.05 Manage Innovation
4-address quality, cycle time, transfer of learning, cost control, new design technology, productivity, and other efficiency/effectiveness factors in process design	GP 3.3 Improve Processes
5-ensure process design accommodates key operational performance requirements	BP 21.05 Implement Improvements BP 08.04 Evaluate Incremental Work Products
6-coordinate and test design and production/delivery processes to ensure capability for trouble-free and timely introduction of products/services	BP 23.03 Prepare for Infusion BP 23.04 Infuse New Technologies BP 23.05 Manage Innovation BP 08.01 Develop Evaluation Strategy
6.1b Production/Delivery Processes	*Applies to Life Cycle PAs: PA 01 Needs; PA 02 Requirements; PD03 Design; PA 06 Design Implementation; PA 07 Integration; PA 08 Evaluation; PA 09 Deployment, Transition, and Disposal; PA 10 Operation and Support*
1-describe key production/delivery processes and key performance requirements	BP 20.01 Establish Standard Processes GP 2.2 Document the process GP 3.1 Standardize the Process GP 4.1 Stabilize Process Performance
2-ensure operation of processes meets key performance requirements	BP 11.10 Monitor Project Performance GP 2.12 Measure process performance GP 2.14 Take corrective action GP 4.1 Stabilize Process Performance
3-use in-process measures/indicators to control and improve processes, including customer input as appropriate	GP 2.12 Measure process performance GP 2.14 Take corrective action BP 10.02 Monitor and evaluate capacity, service and

President's Quality Award/Malcolm Baldrige National Quality Award Categories/Items	FAA-iCMM v2.0 Process Areas and Practices
	performance BP 11.10 Monitor Project Performance GP 4.1 Stabilize Process Performance
4-improve processes to achieve better process performance and improvements to products/services, as appropriate, and share improvements, as appropriate	BP 21.01 Identify Process Improvement Goals BP 21.02 Establish Process Improvement Program BP 21.03 Appraise process BP 21.04 Establish an Action Plan BP 21.05 Implement Improvements BP 21.06 Confirm Improvements BP 21.07 Sustain and deploy Improvement Gains BP 21.08 Monitor Performance GP 2.3 Plan the process GP 2.12 Measure process performance GP 2.14 Take corrective action GP 3.3 Improve processes GP 5.1 Pursue Process Optimization
6.2 Support Processes	*Applies to Support PAs: PA 04 Alternatives Analysis; PA 05 Outsourcing; PA 15 Quality Assurance and Management; PA 16 Configuration Management; PA 17 Information Management; PA 18 Measurement and Analysis; PA 20 Process Definition; PA 21 Process Improvement; PA 22 Training; PA 23 Innovation*
6.2a Support Processes	
1-describe key support processes	BP 20.01 Establish Standard Processes GP 2.2 Document the process GP 3.1 Standardize the Process GP 4.1 Stabilize Process Performance
2-determine key support process requirements, with input from customers as appropriate	GP 2.3 Plan the process GP 4.1 Stabilize Process Performance
3-design processes to meet requirements	BP 20.01 Establish Standard Processes GP 2.2 Document the process GP 3.1 Standardize the Process GP 4.1 Stabilize Process Performance
4-ensure operation meets requirements; use in-process measures and/or customer feedback	BP 15.01 Establish a Quality Management System BP 15.02 Monitor Process Compliance BP 15.05 Analyze Quality BP 11.10 Monitor Project Performance GP 2.12 Measure process performance GP 2.14 Take corrective action GP 4.1 Stabilize Process Performance
5-improve support processes to achieve better performance and keep current with organization needs and directions; share improvements, as appropriate	BP 15.04 Record and Report Results BP 15.06 Initiate Quality Improvement BP 21.01 Identify Process Improvement Goals BP 21.02 Establish Process Improvement Program BP 21.03 Appraise process BP 21.04 Establish an Action Plan BP 21.05 Implement Improvements BP 21.06 Confirm Improvements BP 21.07 Sustain and deploy Improvement Gains BP 21.08 Monitor Performance GP 2.3 Plan the process GP 2.12 Measure process performance

President's Quality Award/Malcolm Baldrige National Quality Award Categories/Items	**FAA-iCMM v2.0 Process Areas and Practices**
	GP 2.14 Take corrective action GP 3.3 Improve processes GP 5.1 Pursue Process Optimization
6.3 Supplier and Partnering Processes	*PA 05 Outsourcing; PA 12 Supplier Agreement Management; PA 08 Evaluation*
6.3a Supplier and Partnering Processes	
1-describe products/services purchased	BP 05.01 Identify Needed Products or Services
2-incorporate performance requirements into supplier/partner process management;	BP 05.03 Prepare for the Solicitation or Tasking
3-ensure performance requirements met; provide feedback	BP 05.03 Prepare for the Solicitation or Tasking BP 12.02 Review and Monitor Agreement Performance BP 08.05 Verify End Products
4-minimize inspection, test, audit costs	BP 12.07 Administer Supplier Agreement
5-provide assistance and/or incentives to suppliers/partners to help them improve performance	BP 05.03 Prepare for the Solicitation or Tasking BP 12.05 Foster Cooperative and Collaborative Environment
6-improve (own) supplier/partner processes to keep current with organization needs and directions; share improvements as appropriate	BP 05.04 Choose Supplier BP 05.05 Communicate with Suppliers BP 12.04 Monitor Supplier's Plans, Processes, Activities and Products BP 12.05 Foster Cooperative and Collaborative Environment BP 21.01 Identify Process Improvement Goals BP 21.02 Establish Process Improvement Program BP 21.03 Appraise process BP 21.04 Establish an Action Plan BP 21.05 Implement Improvements BP 21.06 Confirm Improvements BP 21.07 Sustain and deploy Improvement Gains BP 21.08 Monitor Performance GP 2.3 Plan the process GP 2.12 Measure process performance GP 2.14 Take corrective action GP 3.3 Improve processes
7. Business Results	***PA 00 Integrated Enterprise Management; PA 18 Measurement and Analysis; PA 12 Supplier Agreement Management*** *BP 18.03 Store data and results (all items)*
7.1 Customer-Focused Results	*PA 00 Integrated Enterprise Management*
7.1a Customer-Focused Results	
1-describe current levels and trends in key measures/indicators of customer satisfaction, dissatisfaction, satisfaction relative to competitors	BP 00.05 Review Performance (input from PA 01, and PA 18)
2-describe current levels and trends in key measures/indicators of customer loyalty, positive referral, customer-perceived value, relationship building as appropriate	BP 00.05 Review Performance (input from PA 01, and PA 18)
3-describe current levels and trends in key measures/indicators of product and service performance	BP 00.05 Review Performance (input from PA 01 and PA 10, and PA 18)

President's Quality Award/Malcolm Baldrige National Quality Award Categories/Items	**FAA-iCMM v2.0 Process Areas and Practices**
*7.2 Financial Performance Results***	*PA 00 Integrated Enterprise Management*
7.2a Financial Performance Results	
1-describe current levels and trends in key measures/indicators of financial performance	BP 00.05 Review Performance (input from PA 18)
2-describe current levels and trends in key measures/indicators of market performance and/or mission accomplishment including program impact, market share/position, business growth, new markets, as appropriate	BP 00.05 Review Performance (input from PA 18)
7.3 Human Resource Results	*PA 00 Integrated Enterprise Management*
7.3a Human Resource Results	
1-describe current levels and trends in key measures/indicators of employee well-being, satisfaction and dissatisfaction, and development	BP 00.05 Review Performance (input from PA 22 for development, and PA 18)
2-describe current levels and trends in key measures/indicators of work system performance and effectiveness	BP 00.05 Review Performance (input from PA 23 for work environment, and PA 18)
7.4 Supplier and Partner Results	*PA 00 Integrated Enterprise Management; PA 12 Supplier Agreement Management*
7.4a Supplier and Partner Results describe current levels and trends in key measures/indicators of supplier/partner performance, including improvements resulting from performance and performance management	BP 12.01 Use Planning Documents BP 12.02 Review and Monitor Agreement Performance BP 12.04 Monitor Supplier's Plans, Processes, Activities and Products BP 00.05 Review Performance (input from PA 12 and PA 18)
7.5 Organizational Effectiveness Results	*PA 00 Integrated Enterprise Management*
7.5a Organizational Effectiveness Results	
1-describe current levels and trends in key measures/indicators or key design, production, delivery, and support process performance; include productivity, cycle time, in-process and other appropriate measures of effectiveness and efficiency	BP 00.05 Review Performance (input from all applicable PAs, and PA 18)
2-describe results for key measures/indicators or regulatory/legal compliance and citizenship	BP 00.05 Review Performance (input from PA 00, and PA 18)
3-describe results for key measures/indicators or accomplishment of organizational strategy **	BP 00.05 Review Performance (input from PA 00, and PA 18)

**Note that in most cases President's Quality Award (PQA) criteria and Malcolm Baldrige National Quality Award (MBNQA) criteria are identical. The following are the exceptions:

Names of sections:
1.2 Organization Responsibility and Citizenship (PQA)
1.2 Public Responsibility and Citizenship (MBNQA)

3. Customer Focus (PQA)
3. Customer and Market Focus (MBNQA)

7.2 Financial Performance Results (PQA)
7.2 Financial and Market Performance Results (MBNQA)

One item is in PQA but does not appear in MBNQA: *7.5a-3*

ISO/IEC TR 15504 to FAA-iCMM v2.0

ISO/IEC TR 15504 Processes (with process type*) and Practices	FAA-iCMM (v2.0) Process Areas and Practices
CUS Customer Supplier process category	
CUS.1 Acquisition (basic)	***PA 05 Outsourcing; P A12 Supplier Agreement Management***
CUS.1.BP1 : Identify the need.	BP 05.01 Identify Needed Products or Services:
CUS.1.BP2 : Prepare and negotiate contract	BP 05.04 Choose Supplier
CUS.1.BP3 : Monitor the acquisition.	BP 12.07 Administer Supplier Agreement
CUS.1.1 Acquisition preparation (component)	***PA 05 Outsourcing***
CUS.1.1.BP1 : Identify the need.	BP 05.01 Identify Needed Products or Services:
CUS.1.1.BP2 : Define the requirements.	BP 05.01 Identify Needed Products or Services
CUS.1.1.BP3 : Prepare acquisition strategy.	BP 05.03 Prepare for the Solicitation or Tasking
CUS.1.1.BP4 : Define acceptance criteria.	BP 05.03 Prepare for the Solicitation or Tasking
CUS.1.2 Supplier selection (component)	***PA 05 Outsourcing***
CUS.1.2.BP1 : Define acquisition requirements.	BP 05.01 Identify Needed Products or Services: BP 05.03 Prepare for the Solicitation or Tasking
CUS.1.2.BP2 : Select a supplier.	BP 05.04 Choose Supplier
CUS.1.2.BP3 : Prepare and negotiate contract.	BP 05.04 Choose Supplier
CUS.1.3 Supplier monitoring (component)	***PA 12 Supplier Agreement Management***
CUS.1.3.BP1 : Provide supplier feedback	BP 12.05 Foster Cooperative and Collaborative Environment.
CUS.1.3.BP2 : Review development with supplier.	BP 12.02 Review and Monitor Agreement Performance
CUS.1.3.BP3 : Monitor the acquisition.	BP 12.07 Administer Supplier Agreement
CUS.1.3.BP4 : Monitor supplier.	BP 12.04 Monitor Supplier's Plans, Processes, Activities and Products BP 12.07 Administer Supplier Agreement
CUS.1.4 Customer acceptance (component)	***PA 12 Supplier Agreement Management; PA 08 Evaluation***
CUS.1.4.BP1 : Evaluate the delivered product.	BP 12.08 Determine Product or Service Acceptance BP 08.05 Verify End Products
CUS.1.4.BP2 : Accept the delivered product.	BP 12.08 Determine Product or Service Acceptance
CUS.2 Supply (basic)	***PA 00 Integrated Enterprise Management; PA 11 Project Management; all life cycle PAs; PA 09 Deployment, Transition, and Disposal***
CUS.2.BP1 : Prepare response.	BP 00.04 Develop and deploy action plans
CUS.2.BP2 : Negotiate contract.	BP 00.04. Develop and deploy action plans BP 11.07 Establish Commitment
CUS.2.BP3 : Develop system or software.	All life cycle PAs
CUS2.BP4 : Identify attributes for successful delivery and installation.	BP 09.02 Prepare Facility and Infrastructure Environment BP 09.04 Demonstrate Support Capability
CUS.2.BP5 : Deliver and install software.	BP 09.04 Demonstrate Support Capability BP 09.05 Transition Product or Service
CUS.3 Requirements elicitation (new)	***PA 01 Needs; PA 02 Requirements***
CUS.3.BP1 : Obtain customer requirements and requests.	BP 01.02 Elicit Needs

* See page 75 for process types

ISO/IEC TR 15504 Processes (with process type*) and Practices	FAA-iCMM (v2.0) Process Areas and Practices
CUS.3.BP2 : Agree on requirements.	BP 02.07 Record and Baseline Requirements
CUS.3.BP3 : Establish customer requirements baseline.	BP 02.07 Record and Baseline Requirements
CUS.3.BP4 : Manage customer requirements changes.	BP 02.08 Analyze and Resolve Requirements Change Requests
CUS.3.BP5 : Understand customer expectations.	BP 01.02 Elicit Needs
CUS.3.BP6 : Establish customer query mechanism.	BP 01.05 Communicate with Customers
CUS.4 Operation (extended)	***PA 10 Operation and Support***
CUS.4.BP1 : Software Operation	BP 10.01 Operate the system, product, or service
CUS.4.BP2 : Operation evaluation.	BP 10.02 Monitor and evaluate capacity, service and performance
CUS.4.BP3 : Support customer.	BP 10.07 Provide Customer Support
CUS.4.1Operational use (extended component)	***PA 10 Operation and Support; PA 13 Risk Management***
CUS.4.1.BP1 : Identify operational risks.	BP 13.02 Identify Risks
CUS.4.1.BP2 : Perform operational testing.	BP 08.06 Validate End-products
CUS.4.1.BP3 : Operate the software.	BP 10.01 Operate the system, product, or service
CUS.4.1.BP4 : Review software operation problem	BP 10.06 Take or Initiate Corrective Action
CUS.4.1.BP5 : Resolve operational problems	BP 10.06 Take or Initiate Corrective Action
CUS.4.1.BP6 : Handle user requests.	BP 10.07 Provide Customer Support
CUS.4.1.BP7 : Document temporary work-arounds.	BP 10.06 Take or Initiate Corrective Action
CUS.4.1.BP8 : Monitor system capacity and service.	BP 10.02 Monitor and evaluate capacity, service and performance
CUS.4.2 Customer support (extended component)	***PA 01 Needs; PA 10 Operation and Support; PA 09 Deployment, Transition, and Disposal***
CUS.4.2.BP1 : Provide user training.	BP 10.07 Provide Customer Support BP 09.03 Oversee Configuration of Product or Service
CUS.4.2.BP2 : Establish product support.	BP 10.07 Provide Customer Support
CUS.4.2.BP3 : Monitor performance.	BP 10.02 Monitor and evaluate capacity, service and performance
CUS.4.2.BP4 : Determine customer satisfaction level.	BP 01.06 Determine Customer Satisfaction
CUS.4.2.BP5 : Compare with competitors.	BP 01.06 Determine Customer Satisfaction
CUS.4.2.BP6: Communicate customer satisfaction	BP 01.05 Communicate with Customers BP 01.06 Determine Customer Satisfaction
ENG Engineering process category	
ENG.1 Development (basic)	***All Life Cycle PAs; PA 11 Project Management***
ENG.1.BP1 : Define and implement the software or system development process.	BP 11.06 Establish and Maintain Plans BP 11.10 Monitor Project Performance All life cycle PAs
ENG.1.BP2 : Define and implement the traceability process.	BP 02.09 Maintain consistency and traceability
ENG.1.BP3 : Define and implement the testing process.	BP 08.01 Develop Evaluation Strategy BP 08.02 Develop Evaluation Procedures BP 08.05 Verify End-products BP 08.06 Validate End-products
ENG.1.BP4 : Define and implement the delivery process.	BP 09.01 Develop, Deploy, and Maintain a Strategy for Deployment, Transition and Disposal Activities
ENG.1.1 System requirements analysis and design (component)	***PA 02 Requirements; PA 03 Design; PA 11 Project Management; PA 01 Needs; PA 05 Outsourcing***

ISO/IEC TR 15504 Processes (with process type*) and Practices	FAA-iCMM (v2.0) Process Areas and Practices
ENG.1.1.BP1 : Identify system requirements.	BP 02.01 Identify Functional and Performance Requirements BP 02.05 Identify external interface requirements
ENG.1.1.BP2 : Analyze system requirements	BP 03.02 Develop Design Structure
ENG.1.1.BP3 : Describe system architecture.	BP 03.02 Develop Design Structure
ENG.1.1.BP4 : Allocate requirements.	BP 03.04 Allocate Requirements
ENG.1.1.BP5 : Develop release strategy.	BP 11.01 Define Project Objectives, Scope and Outputs
ENG.1.1.BP6 : Communicate system requirements	BP 01.05 Communicate with Customers BP 05.05 Communicate with Suppliers
ENG.1.1.BP7 : Establish traceability.	BP 02.09 Maintain Consistency and Traceability
ENG.1.2 Software requirements analysis (component)	***PA 02 Requirements; PA 08 Evaluation; PA 11 Project Management***
ENG.1.2.BP1 : Specify software requirements.	BP 02.01 Identify Functional and Performance Requirements
ENG.1.2.BP2 : Determine operating environment impact.	BP 02.05 Identify external interface requirements
ENG.1.2.BP3 : Evaluate and validate requirements with customer.	BP 08.04 Evaluate Incremental work Products
ENG.1.2.BP4 : Develop validation criteria for software.	BP 02.02 Identify Nonfunctional Requirements and Constraints
ENG.1.2.BP5 : Develop release strategy.	BP 11.01 Define Project Objectives, Scope and Outputs
ENG.1.2.BP6 : Update requirements.	BP 02.08 Analyze and resolve requirements change requests
ENG.1.2.BP7 : Communicate software requirements	BP 02.07 Record and baseline requirements
ENG.1.2.BP8 : Evaluate the software requirements.	BP 08.04 Evaluate Incremental work Products
ENG.1.3 Software design (component)	***PA 03 Design; PA 08 Evaluation; PA 02 Requirements***
ENG.1.3.BP1 : Develop software architectural design.	BP 03.02 Develop Design Structure
ENG.1.3.BP2 : Design interfaces.	BP 03.03 Develop Interface Specifications
ENG.1.3.BP3 : Verify the software design.	BP 08.04 Evaluate Incremental work Products
ENG.1.3.BP4 : Develop detailed design.	BP 03.02 Develop Design Structure
ENG.1.3.BP5 : Establish Traceability.	BP 02.09 Maintain consistency and traceability
ENG.1.4 Software construction (component)	***PA 06 Design Implementation; PA 08 Evaluation; PA 02 Requirements***
ENG.1.4.BP1 : Develop software units.	BP 06.02 Formulate product or service components BP 06.03 Develop Documentation
ENG.1.4.BP2 : Develop unit verification procedures.	BP 08.02 Develop Evaluation Procedures
ENG.1.4.BP3 : Verify the software units.	BP 08.04 Evaluate Incremental work Products
ENG.1.4.BP4 : Establish traceability.	BP 02.09 Maintain consistency and traceability
ENG.1.5 Software integration (component)	***PA 07 Integration; PA 08 Evaluation***
ENG.1.5.BP1 : Develop software integration strategy.	BP 07.01 Develop Integration Strategy
ENG.1.5.BP2 : Develop integrated software item regression test strategy.	BP 08.01 Develop Evaluation Strategy
ENG.1.5.BP3 : Develop tests for integrated software items.	BP 08.01 Develop Evaluation Strategy
ENG.1.5.BP4 : Test integrated software items.	BP 08.04 Evaluate Incremental Work Products

ISO/IEC TR 15504 Processes (with process type*) and Practices	FAA-iCMM (v2.0) Process Areas and Practices
ENG.1.5.BP5 : Integrate software item.	BP 07.04 Assemble Product and Service Elements BP 08.04 Evaluate Incremental Work Products
ENG.1.5.BP6 : Regression test integrated software items.	BP 08.04 Evaluate Incremental Work Products
ENG.1.6 Software testing (component)	***PA 08 Evaluation***
ENG.1.6.BP1 : Develop integrated software test strategy, including regression strategy.	BP 08.01 Develop Evaluation Strategy
ENG.1.6.BP2 : Develop tests for integrated software.	BP 08.02 Develop Evaluation Procedures
ENG.1.6.BP3 : Test integrated software.	BP 08.05 Verify End Products
ENG.1.6.BP4 : Regression test integrated software.	BP 08.05 Verify End Products
ENG.1.7 System integration and testing (component)	***PA07 Integration; PA08 Evaluation***
ENG.1.7.BP1 : Develop system integration and test strategy.	BP 07.01 Develop Integration Strategy
ENG.1.7.BP2 : Develop system regression test strategy.	BP 08.01 Develop Evaluation Strategy
ENG.1.7.BP3 : Build aggregates of system units.	BP 07.04 Assemble Product and Service Elements
ENG.1.7.BP4 : Develop tests for system aggregates.	BP 08.02 Develop Evaluation Procedures
ENG.1.7.BP5 : Test system aggregates.	BP 08.04 Evaluate Incremental Work Products
ENG.1.7.BP6 : Develop tests for system.	BP 08.02 Develop Evaluation Procedures
ENG.1.7.BP7 : Test integrated system.	BP 08.05 Verify End Products
ENG.1.7.BP8 : Regression test system aggregates or integrated system.	BP 08.05 Verify End Products
ENG.2 System and software maintenance (basic)	***All life cycle PAs; PA 11 Project Management***
ENG.2.BP1 : Determine maintenance requirements.	BP 09.04 Demonstrate Support Capability BP 02.02 Identify Nonfunctional Requirements and Constraints
ENG.2.BP2 : Develop maintenance strategy.	BP 11.01 Define Project Objectives, Scope and Outputs BP 09.01 Develop, Deploy, and Maintain a Strategy for Deployment, Transition and Disposal Activities
ENG 2.BP3 : Analyze user problems and enhancements.	BP 02.08 Analyze and resolve requirements change requests
ENG.2.BP4 : Determine modifications for next upgrade.	BP 11.01 Define Project Objectives, Scope and Outputs
ENG.2.BP5 : Implement and test modifications.	BP 08.05 Verify End Products (all life cycle PAs to implement)
ENG.2.BP6 : Upgrade user system.	BP 09.05 Transition Product or Service
ENG.2.BP7 : Retire user system.	BP 09.03 Oversee Configuration of Product or Service BP 09.06 Deactivate and Dispose Replaced Product and/or Dispense with Service
SUP Support process category	
SUP.1 Documentation (extended)	***PA 17 Information Management; PA 08 Evaluation***
SUP.1.BP1 : Develop documentation policy.	GP 2.1 Establish Organizational Policy
SUP.1.BP2 : Establish standards for documents.	BP 17.06 Establish Information Standards
SUP.1.BP3 : Specify documentation requirements.	BP 17.06 Establish Information Standards
SUP.1.BP4 : Develop document.	(done in applicable process areas)
SUP.1.BP5 : Check document.	BP 08.04 Evaluate Incremental Work Products

ISO/IEC TR 15504 Processes (with process type*) and Practices	FAA-iCMM (v2.0) Process Areas and Practices
SUP.1.BP6 : Distribute document.	BP 17.04 Share Information
SUP.1.BP7 : Maintain document.	BP 17.03 Store Information
SUP.2 Configuration management (basic)	***PA 16 Configuration Management***
SUP.2.BP1 : Develop configuration management strategy.	BP 16.01 Establish a Configuration Management Strategy
SUP.2.BP2 : Establish configuration management system.	BP 16.01 Establish a Configuration Management Strategy BP 16.03 Establish and Maintain a Repository for Work Product Baselines
SUP.2.BP3 : Identify configuration items.	BP 16.02 Identify and Baseline Configuration Items and Interim Work Products
SUP.2.BP4 : Maintain configuration item description.	BP 16.02 Identify and Baseline Configuration Items and Interim Work Products BP16.03 Establish and Maintain a Repository for Work Product Baselines BP 16.04 Control Changes BP 16.05 Record and Report Configuration Status
SUP.2.BP5 : Manage changes.	BP 16.04 Control Changes BP 16.05 Record and Report Configuration Status
SUP.2.BP6 : Manage product releases.	BP 16.03 Establish and Maintain a Repository for Work Product Baselines BP 16.04 Control Changes
SUP.2.BP7 : Maintain configuration item history.	BP 16.03 Establish and Maintain a Repository for Work Product Baselines BP 16.05 Record and Report Configuration Status
SUP.2.BP8 : Report configuration status.	BP 16.05 Record and Report Configuration Status
SUP.2.BP9 : Manage the release and delivery of configuration items.	BP 16.03 Establish and Maintain a Repository for Work Product Baselines
SUP.3 Quality assurance (basic)	***PA 15 Quality Assurance and Management***
SUP.3.BP1 : Develop quality assurance strategy.	BP 15.01 Establish a Quality Management System
SUP.3.BP2 : Establish quality standards.	BP 15.01 Establish a Quality Management System
SUP.3.BP3 : Define quality records.	BP 15.01 Establish a Quality Management System
SUP.3.BP4 : Assure quality of process activities.	BP 15.02 Monitor Process Compliance
SUP.3.BP5 : Assure quality of work products.	BP 15.03 Monitor Product and Service Quality
SUP.3.BP6 : Report quality results	BP 15.04 Record and Report Results
SUP.3.BP7 : Handle deviations.	BP 15.04 Record and Report Results
SUP.4 Verification (basic)	***PA 08 Evaluation; PA 11 Project Management***
SUP.4.BP1 : Develop verification strategy.	BP 08.01 Develop Evaluation Strategy
SUP.4.BP2 : Conduct verification.	BP 08.05 Verify End Products
SUP.4.BP3 : Determine actions for verification results.	BP 08.07 Analyze Evaluation Results
SUP.4.BP4 : Track actions for verification results.	BP 11.12 Take Corrective Action
SUP.5 Validation (basic)	***PA 08 Evaluation; PA 11 Project Management***
SUP.5.BP1 : Develop validation strategy.	BP 08.01 Develop Evaluation Strategy
SUP.5.BP2 : Perform validation.	BP 08.06 Validate End Products

ISO/IEC TR 15504 Processes (with process type*) and Practices	FAA-iCMM (v2.0) Process Areas and Practices
SUP.5.BP3 : Determine actions for validation results.	BP 08.07 Analyze Evaluation Results
SUP.5.BP4 : Track actions for validation results.	BP 11.12 Take Corrective Action
SUP.6 Joint review (basic)	***PA 08 Evaluation; PA 11 Project Management; PA 00 Integrated Enterprise Management; PA 21 Process Improvement***
SUP.6.BP1 : Prepare joint review.	BP 08.02 Develop Evaluation Procedures
SUP.6.BP2 : Establish review criteria.	BP 08.02 Develop Evaluation Procedures
SUP.6.BP3 : Conduct joint management review.	GP 2.13 Review Performance with Higher Level Management BP 00.05. Review performance BP 11.11 Review and Analyze Project Performance
SUP.6.BP4 : Conduct joint technical review.	BP 08.04 Evaluate Incremental Work Products BP 11.11 Review and Analyze Project Performance
SUP.6.BP5 : Conduct joint process review.	BP 11.11 Review and Analyze Project Performance BP 21.08 Monitor Performance
SUP.6.BP6 : Conduct joint system acceptance review.	BP 11.11 Review and Analyze Project Performance
SUP.6.BP7 : Determine actions for review results.	BP 11.11 Review and Analyze Project Performance
SUP.6.BP8 : Track actions for review results.	BP 11.12 Take Corrective Action
SUP.7 Audit (basic)	***PA 15 Quality Assurance and Management***
SUP.7.BP1 : Develop and implement audit strategy.	BP 15.01 Establish a Quality Management System
SUP.7.BP2 : Plan an audit.	GP 2.3 Plan the Process
SUP.7.BP3 : Audit software development activities.	BP 15.02 Monitor Process Compliance
SUP.7.BP4 : Audit management activities.	BP 15.02 Monitor Process Compliance
SUP.7.BP5 : Audit process performance.	BP 15.02 Monitor Process Compliance BP 15.05 Analyze Quality
SUP.7.BP6 : Audit final products and system.	BP 15.03 Monitor Product and Service Quality
SUP.7.BP7 : Identify corrective actions from the audit report.	BP 15.05 Analyze Quality
SUP.7.BP8 : Track actions for audit report.	BP 15.06 Initiate Quality Improvement
SUP.8 Problem resolution (basic)	***PA 15 Quality Assurance and Management; PA 10 Operation and Support***
SUP.8.BP1 : Establish problem report system.	GP 2.14 Take Corrective Action BP 10.07 Provide customer support
SUP.8.BP2 : Prioritize problems.	BP 15.05 Analyze Quality
SUP.8.BP3 : Determine actions for problems.	BP 15.06 Initiate Quality Improvement
SUP.8.BP4 : Track actions for problems.	BP 15.06 Initiate Quality Improvement
SUP.8.BP5 : Review and distribute solutions.	BP 15.06 Initiate Quality Improvement
SUP.8.BP6 : Analyze problem trends.	BP 15.05 Analyze Quality
MAN Management process category	
MAN.1 Management (basic)	***PA 11 Project Management***
MAN.1.BP1 : Identify activities and tasks.	BP 11.01 Define Project Objectives, Scope and Outputs
MAN.1.BP2 : Evaluate feasibility of achieving process.	BP 11.01 Define Project Objectives, Scope and Outputs
MAN.1.BP3 : Plan and allocate resources and infrastructure.	BP 11.04 Estimate Project Resource Requirements

ISO/IEC TR 15504 Processes (with process type*) and Practices	FAA-iCMM (v2.0) Process Areas and Practices
MAN.1.BP4 : Implement activities.	BP 11.09 Direct the Project
MAN.1.BP5 : Monitor performance.	BP 11.10 Monitor Project Performance
MAN.1.BP6 : Review work products and evaluate results.	BP 11.11 Review and Analyze Project Performance
MAN.1.BP7 : Take action on performance deviation.	BP 11.12 Take Corrective Action
MAN.1.BP8 : Demonstrate successful achievement.	BP 11.12 Take Corrective Action
MAN.2 Project management (new)	***PA 11 Project Management; PA 14 Integrated Teaming***
MAN.2.BP1 : Define the scope of work.	BP 11.01 Define Project Objectives, Scope and Outputs
MAN.2.BP2 : Determine development strategy.	BP 11.01 Define Project Objectives, Scope and Outputs
MAN.2.BP3 : Select software life cycle model.	BP 11.02 Define the Activities and Life Cycle Approach
MAN.2.BP4 : Size and estimate tasks and resources.	BP 11.03 Estimate Planning Parameters
MAN.2.BP5 : Develop work breakdown structure.	BP 11.02 Define the Activities and Life Cycle Approach
MAN.2.BP6 : Identify infrastructure requirements.	BP 11.04 Estimate Project Resource Requirements
MAN.2.BP7 : Establish project schedule.	BP 11.05 Establish Schedules
MAN.2.BP8 : Allocate responsibilities.	BP 11.07 Establish Commitment
MAN.2.BP9 : Identify interfaces.	BP 14.03 Establish and Maintain a Collaborative Workplace
MAN.2.BP10 : Establish and implement project plans.	BP 11.06 Establish and Maintain Plans
MAN.2.BP11 : Track progress against plans.	BP 11.10 Monitor Project Performance
MAN.2.BP12 : Act to correct deviations.	BP 11.12 Take Corrective Action
MAN.3 Quality management (new)	***PA 15 Quality Assurance and Management***
MAN.3.BP1 : Establish quality goals.	BP 15.01 Establish a Quality Management System
MAN.3.BP2 : Define overall strategy.	BP 15.01 Establish a Quality Management System
MAN.3.BP3 : Identify quality activities.	GP 2.3 Plan the Process
MAN.3.BP4 : Perform quality activities.	GP 2.8 Consistently Use and Manage the Process
MAN.3.BP5 : Assess quality.	BP 15.05 Analyze Quality
MAN.3.BP6 : Take corrective action.	BP 15.06 Initiate Quality Improvement
MAN.4 Risk management (new)	***PA 13 Risk Management***
MAN.4.BP1 : Establish risk management scope.	BP 13.01 Develop Risk Management Approach
MAN.4.BP2 : Identify risks.	BP 13.02 Identify Risks
MAN.4.BP3 : Analyze and prioritize risks.	BP 13.03 Assess Risks
MAN.4.BP4 : Define risk management strategies.	BP 13.04 Develop Risk Mitigation Plans
MAN.4.BP5 : Define risk metrics.	BP 13.05 Implement and Monitor Risk Mitigation Plans
MAN.4.BP6 : Implement risk management strategies.	BP 13.05 Implement and Monitor Risk Mitigation Plans
MAN.4.BP7 : Assess results of risk management strategies.	BP 13.05 Implement and Monitor Risk Mitigation Plans
MAN.4.BP8 : Take corrective action.	BP 13.05 Implement and Monitor Risk Mitigation Plans
ORG Organization process category	
ORG.1 Organizational alignment (new)	***PA 00 Integrated Enterprise Management; PA 14 Integrated Teaming***

ISO/IEC TR 15504 Processes (with process type*) and Practices	FAA-iCMM (v2.0) Process Areas and Practices
ORG.1.BP1 : Develop a strategic vision.	BP 00.01 Establish and maintain strategic vision
ORG.1.BP2 : Deploy vision.	BP 00.02 Align to achieve the vision
ORG.1.BP3 : Develop a quality culture.	BP 00.01. Establish and maintain strategic vision.
ORG.1.BP4 : Build and empower teams.	BP 14.02 Establish and Maintain Teams BP 14.04 Define Project Teams
ORG.1.BP5 : Provide incentives.	BP 00.02 Align to achieve the vision
ORG.2 Improvement process (basic)	***PA 20 Process Definition; PA 21 Process Improvement***
ORG.2.BP1 : Define organizational processes.	BP 20.01 Establish Standard Processes
ORG.2.BP2 : Deploy the processes.	BP 21.07 Sustain and deploy Improvement Gains
ORG.2.BP3 : Assess the deployed processes.	BP 21.03 Appraise process
ORG.2.BP4 : Improve the standard processes.	BP 21.04 Establish an Action Plan BP 21.05 Implement Improvements
ORG.2.1 Process establishment (component)	***PA 20 Process Definition; PA 21 Process Improvement; PA 04 Alternatives Analysis; PA 18 Measurement and Analysis***
ORG.2.1.BP1 : Define goals.	BP 21.01 Identify Process Improvement Goals
ORG.2.1.BP2 : Identify activities, roles, authorities & responsibilities.	BP 20.01 Establish Standard Processes
ORG.2.1.BP3 : Define and document the processes performed in the organization.	BP 20.01 Establish Standard Processes BP 04.01 Establish Analysis Strategy
ORG.2.1.BP4 : Establish organisational policies.	GP 2.1 Establish Organizational Policy
ORG.2.1.BP5 : Establish performance expectations.	BP 21.01 Identify Process Improvement Goals
ORG.2.1.BP6 : Deploy the process.	BP 21.07 Sustain and deploy Improvement Gains
ORG.2.1.BP7 : Check the standard processes deployment.	BP 21.08 Monitor Performance
ORG.2.1.BP8 : Capture process data.	BP 18.03 Store data and results
ORG.2.1.BP9 : Maintain the standard processes.	BP 20.01 Establish Standard Processes
ORG.2.2 Process assessment (component)	***PA 21 Process Improvement; PA 20 Process Definition***
ORG.2.2.BP1 : Determine the assessment method.	BP 21.03 Appraise process
ORG.2.2.BP2 : Define assessment goals.	BP 21.03 Appraise process
ORG.2.2.BP3 : Define the assessment inputs.	BP 21.03 Appraise process
ORG.2.2.BP4 : Plan the assessment.	BP 21.03 Appraise process
ORG.2.2.BP5 : Perform the assessment to collect data.	BP 21.03 Appraise process
ORG.2.2.BP6 : Validate the data.	BP 21.03 Appraise process
ORG.2.2.BP7 : Identify strengths and weaknesses.	BP 21.03 Appraise process
ORG.2.2.BP8 : Maintain the assessment results.	BP 20.03 Maintain Process Assets
ORG.2.2.BP9 : Exploit the assessment result.	BP 21.04 Establish an Action Plan
ORG.2.2.BP10 : Report the assessment result.	BP 21.03 Appraise process
ORG.2.3 Process improvement (component)	***PA 21 Process Improvement; PA 15 Quality Assurance and Management***
ORG.2.3.BP1 : Identify improvement opportunities.	BP 21.01 Identify Process Improvement Goals BP 15.06 Initiate Quality Improvement
ORG.2.3.BP2 : Define scope of improvement activities.	BP 21.02 Establish Process Improvement Program
ORG.2.3.BP3 : Understand the process.	BP 21.03 Appraise process
ORG.2.3.BP4 : Identify improvements.	BP 21.04 Establish an Action Plan
ORG.2.3.BP5 : Prioritize improvements.	BP 21.04 Establish an Action Plan

ISO/IEC TR 15504 Processes (with process type*) and Practices	FAA-iCMM (v2.0) Process Areas and Practices
ORG.2.3.BP6 : Define measures of impact.	BP 21.04 Establish an Action Plan
ORG.2.3.BP7 : Change the process.	BP 21.05 Implement Improvements
ORG.2.3.BP8 : Confirm the improvement.	BP 21.06 Confirm Improvements
ORG.2.3.BP9 : Deploy improvement.	BP 21.07 Sustain and deploy Improvement Gains
ORG.3 Human resource management (extended)	***PA 22 Training; PA 14 Integrated Teaming***
ORG.3.BP1 : Identify human resource needs.	*(beyond v2.0 scope)*
ORG.3.BP2 : Develop or acquire training.	BP 22.03 Establish Training Mechanism
ORG.3.BP3 : Train personnel.	BP 22.04 Train Individuals
ORG.3.BP4 : Recruit qualified staff.	*(beyond v2.0 scope)*
ORG.3.BP5 : Define evaluation criteria.	*(beyond v2.0 scope)*
ORG.3.BP6 : Evaluate staff performance.	*(beyond v2.0 scope)*
ORG.3.BP7 : Provide feedback on performance.	*(beyond v2.0 scope)*
ORG.3.BP8 : Maintain staff records.	*(beyond v2.0 scope)*
ORG.3.BP9 : Define project teams.	BP 14.02 Establish and Maintain Teams BP 14.04 Define Project Teams BP 14.05 Establish Resolution Methods
ORG.3.BP10 : Empower project teams.	BP 14.01 Develop and Communicate Team Goals BP 14.04 Define Project Teams
ORG.3.BP11 : Maintain project team interactions.	BP 14.03 Establish and Maintain a Collaborative Workplace
ORG.4 Infrastructure (basic)	***PA 23 Innovation; PA 02 Requirements; PA 10 Operation and Support; PA 17 Information Management***
ORG.4.BP1 : Identify software engineering environment requirements.	BP 02.01 Identify Functional and Performance Requirements BP 02.02 Identify Nonfunctional Requirements and Constraints
ORG.4.BP2 : Provide a software engineering environment.	BP 23.05 Manage Innovation
ORG.4.BP3 : Provide support for individuals using the software engineering infrastructure.	BP10.07. Provide customer support
ORG.4.BP4 : Maintain software engineering environment.	BP 23.05 Manage Innovation
ORG.4.BP5 : Provide a workspace conductive to productive performance.	BP 23.05 Manage Innovation
ORG.4.BP6 : Ensure data integrity and security.	BP 17.05 Protect Information
ORG.4.BP7 : Provide remote access facility.	BP 23.05 Manage Innovation
ORG.5 Measurement (new)	***PA 18 Measurement and Analysis; PA 15 Quality Assurance and Management: PA 21 Process Improvement***
ORG.5.BP1 : Establish metrics for process management.	BP 18.01 Establish measures based on goals
ORG.5.BP2 : Establish metrics for the quality of work products.	BP 18.01 Establish measures based on goals
ORG.5.BP3 : Conduct quantitative process management.	Generic practices, levels 2, 3, 4, 5
ORG.5.BP4 : Measure the quality of work products.	BP 18.02 Collect relevant measurement data BP 18.04 Analyze measurement data BP 15.03 Monitor Product and Service Quality

ISO/IEC TR 15504 Processes (with process type*) and Practices	FAA-iCMM (v2.0) Process Areas and Practices
ORG.5.BP5 : Make measurement data available for decision-making.	BP 18.02 Collect relevant measurement data BP 18.03 Store data and results BP 18.05 Communicate results
ORG.5.BP6 : Define benchmark.	BP 18.02 Collect relevant measurement data BP 18.03 Store data and result
ORG.5.BP7 : Benchmark processes.	BP 18.04 Analyze measurement data BP 21.03 Appraise process
ORG.6 Reuse (new)	***PA 20 Process Definition; PA 17 Information Management***
ORG.6.BP1 : Define organizational reuse strategy.	BP 20.01 Establish Standard Processes
ORG.6.BP2 : Establish reuse library.	BP 17.02 Establish Information Management Capability BP 20.03 Maintain Process Assets
ORG.6.BP3 : Identify reusable entities.	BP 20.01 Establish Standard Processes
ORG.6.BP4 : Develop reusable entities.	BP 20.01 Establish Standard Processes
ORG.6.BP5 : Keep reusable entities stable and consistent.	BP 17.06 Establish Information Standards BP 20.03 Maintain Process Assets
ORG.6.BP6 : Report and certify reusable entities and domain knowledge.	BP 20.04 Coordinate and Communicate Process Definition
ORG.6.BP7 : Inform potential users about reusable entities and domain knowledge.	BP 17.04 Share Information BP 20.04 Coordinate and Communicate Process Definition
Capability Levels and Management Practices	**Capability Levels and Generic Practices**
Level 0: Incomplete process	***Capability Level 0: Incomplete***
Level 1: Performed process	***Capability Level 1: Performed***
PA 1.1 Process performance attribute	
MP 1.1.1 Identify	1.1 Identify Work Scope
MP 1.1.2 Ensure that the scope of work is identified	1.1 Identify Work Scope
MP 1.1.3 Ensure that base practices are implemented	1.2 Perform the Process
Level 2: Managed process	***Capability Level 2: Managed: Planned and Tracked***
PA 2.1 Performance management attribute	
MP 2.1.1 Identify the objectives	2.3 Plan the Process
MP 2.1.2 Plan the performance of the process	2.3 Plan the Process
MP 2.1.3 Plan and assign the responsibility and authority	2.3 Plan the Process 2.5 Assign Responsibility
MP 2.1.4 Manage the execution of the activities	2.12 Measure Performance 2.14 Take Corrective Actions
PA 2.2 Work product management attribute	
MP 2.2.1 Identify the requirements	2.7 Establish Work Product Requirements
MP 2.2.2 Manage	2.9 Manage Work Products
MP 2.2.3 Identify and define	2.7 Establish Work Product Requirements
MP 2.2.4 Manage the quality of work products	2.11 Objectively Verify Work Products
Level 3: Established process	***Capability Level 3: Defined***
PA 3.1 Process definition attribute	
MP 3.1.1 Identify the standard process	3.1 Standardize the Process
MP 3.1.2 Implement and/or tailor the standard process	3.2 Establish and Use a Defined Process
MP 3.1.3 Gather process performance data	3.3 Improve Processes
MP 3.1.4 Establish and refine the understanding of the process behaviour	3.3 Improve Processes
MP 3.1.5 Refine	3.3 Improve Processes
PA 3.2 Process resource attribute	

ISO/IEC TR 15504 Processes (with process type*) and Practices	FAA-iCMM (v2.0) Process Areas and Practices
MP 3.2.1 Identify and document the roles, responsibilities and competencies	2.5 Assign Responsibility 2.6 Ensure Skill and Knowledge
MP 3.2.2 Identify and document the process infrastructure requirements	2.3 Plan the Process
MP 3.2.3 Provide, allocate and use the resources	2.4 Provide Adequate Resources 2.8 Consistently Use and Manage the Process
MP 3.2.4 Provide, allocate and use an adequate process infrastructure	2.4 Provide Adequate Resources 2.8 Consistently Use and Manage the Process
Level 4: Predictable process	***Capability Level 4: Quantitatively Managed***
PA 4.1 Measurement attribute	
MP 4.1.1 Identify product and process goals and measures	2.3 Plan the Process 3.2 Establish and Use a Defined Process 4.1 Stabilize Process Performance
MP 4.1.2 Collect the specified product and process measures	3.3 Improve Processes 4.1 Stabilize Process Performance
MP 4.1.3 Analyze trends in the performance of the process	3.3 Improve Processes
MP 4.1.4 Measure the process capability	4.1 Stabilize Process Performance
PA 4.2 Process control attribute	
MP 4.2.1 Identify suitable measurement techniques	2.12 Measure Performance 3.3 Improve Processes 4.1 Stabilize Process Performance
MP 4.2.2 Collect measures and identify process control parameters	4.1 Stabilize Process Performance
MP 4.2.3 Control the process performance using the analysis measures	4.1 Stabilize Process Performance 5.1 Pursue Process Optimization
Level 5: Optimizing process	***Capability Level 5: Optimizing***
PA 5.1 Process change attribute	
MP 5.1.1 Identify changes to the standard process definition	3.3 Improve Processes
MP 5.1.2 Assess the impact of all proposed changes	3.3 Improve Processes
MP 5.1.3 Define an implementation strategy for the approved change	3.3 Improve Processes
MP 5.1.4 Implement the approved changes	3.3 Improve Processes
MP 5.1.5 Evaluate the effectiveness of process change	3.3 Improve Processes 5.1 Pursue Process Optimization
PA 5.2 Continuous improvement attribute	
MP 5.2.1 Define the process improvement goals for the process	5.1 Pursue Process Optimization
MP 5.2.2 Analyse the source of real and potential problems in the current process	3.3 Improve Processes 5.1 Pursue Process Optimization
MP 5.2.3 Implement changes to selected areas	3.3 Improve Processes
MP 5.2.4 Validate the effectiveness of process change	3.3 Improve Processes 5.1 Pursue Process Optimization

*Process types are:
Basic – processes identical in intent to the processes in ISO/IEC 12207
Extended – processes that are expansions of ISO/IEC 12207 processes
New – processes that are outside the scope of ISO/IEC 12207
Component – processes (a group of one or more ISO/IEC 12207's activities from the same process)
Extended Component – processes that are one or more of ISO/IEC 12207's activities from the same process, with additional material. These would normally be Component processes of Extended processes.

ISO/IEC 12207 to FAA iCMM V2.0

ISO/IEC 12207 Software life cycle Processes, Activities, and Tasks	**FAA-iCMM v2.0 Process Areas and Practices**
5 Primary life cycle processes	
5.1 Acquisition process	**PA 01 Needs; PA 02 Requirements; PA 05 Outsourcing; PA 12 Supplier Agreement Management; PA 08 Evaluation; PA 13 Risk Management**
5.1.1 Initiation.	***PA 01 Needs; PA 02 Requirements; PA 05 Outsourcing; PA 13 Risk Management***
5.1.1.1	BP 01.03 Analyze Needs. BP 01.04 Establish and Maintain a Statement of Need. BP 05.01 Identify Needed Products or Services.
5.1.1.2	BP 05.01 Identify Needed Products or Services. BP 02.01 Identify Functional and Performance Requirements. BP 02.02 Identify Nonfunctional Requirements and Constraints. BP 02.04 Derive requirements. BP 02.05 Identify external interface requirements. BP 02.06 Analyze requirements.
5.1.1.3	BP 02.07 Record and baseline requirements. BP 05.03 Prepare for the Solicitation or Tasking.
5.1.1.4	GP2.5 Assign Responsibility
5.1.1.5	GP2.8 Consistently use and mange the process
5.1.1.6	BP 05.01 Identify Needed Products or Services.
5.1.1.7	BP 05.02 Identify Competent Suppliers
5.1.1.8	BP 05.03 Prepare for the Solicitation or Tasking BP 13.02 Identify Risks. BP 13.04 Develop Risk Mitigation Plans.
5.1.1.9	BP 05.03 Prepare for the Solicitation or Tasking
5.1.2 Request-for-proposal [-tender] preparation.	***PA 05 Outsourcing; PA 02 Requirements;***
5.1.2.1	BP 05.03 Prepare for Solicitation or Tasking
5.1.2.2	BP 02.02 Identify Nonfunctional Requirements or Constraints. BP 05.03 Prepare for the Solicitation or Tasking
5.1.2.3	BP 02.02 Identify Nonfunctional Requirements or Constraints. BP 05.03 Prepare for the Solicitation or Tasking
5.1.2.4	BP 02.02 Identify Nonfunctional Requirements or Constraints. BP 05.03 Prepare for the Solicitation or Tasking
5.1.3 Contract preparation and update.	***PA 05 Outsourcing; PA 12 Supplier Agreement Management***
5.1.3.1	BP 05.03 Prepare for the Solicitation or Tasking.
5.1.3.2	BP 05.04 Choose Supplier.
5.1.3.3	BP 05.04 Choose Supplier.
5.1.3.4	BP 05.04 Choose Supplier.
5.1.3.5	BP 12.03 Maintain Supplier Agreement Integrity
5.1.4 Supplier monitoring.	***PA 12 Supplier Agreement Management***
5.1.4.1:	BP 12.02 Review and Monitor Agreement Performance
5.1.4.2:	BP 12.02 Review and Monitor Agreement Performance
5.1.5 Acceptance and completion.	***PA 08 Evaluation; PA 12 Supplier Agreement Management***
5.1.5.1	BP 12.08 Determine Product or Service Acceptance BP 08.02 Develop Evaluation Procedures. BP 08.03 Establish and Maintain Evaluation Environment
5.1.5.2	BP 08.05 Verify end-Products.
5.1.5.3	BP 12.08 Determine Product or Service Acceptance

ISO/IEC 12207 Software life cycle Processes, Activities, and Tasks	FAA-iCMM v2.0 Process Areas and Practices
5.2 Supply process	**PA 00 Integrated Enterprise Management; PA 11 Project Management; PA 02 Requirements; PA 08 Evaluation; PA 09 Deployment, Transition, and Disposal; PA 12 Supplier Agreement Management; PA 04 Alternatives Analysis**
5.2.1 Initiation.	***PA 00 Integrated Enterprise Management; PA 02 Requirements; PA 04 Alternatives Analysis***
5.2.1.1	BP 02.06 Analyze requirements: BP 02.07 Record and baseline requirements: BP 00.04 Develop and Deploy Action Plans
5.2.1.2	BP 00.04 Develop and Deploy Action Plans BP 04.06 Select Solution:
5.2.2 Preparation of response.	***PA 00 Integrated Enterprise Management***
5.2.2 .1	BP 00.04. Develop and deploy action plans
5.2.3 Contract.	***PA 00 Integrated Enterprise Management; PA 11 Project Management; PA 12 Supplier Agreement Management***
5.2.3.1	BP 00.04 Develop and deploy action plans BP 11.07 Establish Commitment:
5.2.3.2	BP 12.03 Maintain Supplier Agreement Integrity BP 11.09 Direct the Project.
5.2.4 Planning.	***PA 00 Integrated Enterprise Management; PA 11 Project Management; PA 02 Requirements; PA 04 Alternatives Analysis***
5.2.4.1	BP 02.06 Analyze requirements: BP 02.07 Record and baseline requirements: BP 00.04 Develop and Deploy Action Plans
5.2.4.2	BP 11.02 Define the Activities and Life Cycle Approach
5.2.4.3	BP 11.01 Define Project Objectives, Scope, and Outputs
5.2.4.4	BP 11.01 Define Project Objectives, Scope, and Outputs BP 11.02 Define the Activities and Life Cycle Approach: BP 04.06 Select Solution
5.2.4.5	BP 11.06 Establish and Maintain Plans:
5.2.5 Execution and control.	***PA 11 Project Management; PA 12 Supplier Agreement Management***
5.2.5.1	BP 11.09 Direct the Project:
5.2.5.2	GP 2.8 Consistently Use and Manage the Process
5.2.5.3	BP 11.10 Monitor Project Performance:
5.2.5.4	BP 12.01 Use Planning documents:
5.2.5.5	BP 11.10 Monitor Project Performance
5.2.5.6	BP 11.10 Monitor Project Performance
5.2.6 Review and evaluation.	***PA 08 Evaluation; PA 12 Supplier Agreement Management***
5.2.6.1	BP 12.05 Foster Cooperative and Collaborative Environment.
5.2.6.2	BP 08.05 Verify end-Products.
5.2.6.3	Mapping N/A
5.2.6.4	BP 12.08 Determine Product or Service Acceptance
5.2.6.5	BP 12.05 Foster Cooperative and Collaborative Environment.
5.2.6.6	See 6.3
5.2.7 Delivery and completion.	***PA 09 Deployment, Transition, and Disposal***
5.2.7.1	BP 09.05 Transition Product or Service
5.2.7.2	BP 09.04 Demonstrate Support Capability
5.3 Development process	**PA 11 Project Management; PA 02 Requirements; PA 03 Design; PA 06 Design Implementation; PA 07 Integration; PA 08 Evaluation; PA 09 Deployment, Transition, and Disposal; PA 16 Configuration Management**

ISO/IEC 12207 Software life cycle Processes, Activities, and Tasks	FAA-iCMM v2.0 Process Areas and Practices
5.3.1 Process implementation.	***PA 11 Project Management; PA 09 Deployment, Transition, and Disposal***
5.3.1.1	BP 11.02 Define the Activities and Life Cycle Approach
5.3.1.2	see 6.1, 6.2, 6.8
5.3.1.3	GP 3.2 Establish and Use a Defined Process
5.3.1.4	GP 2.3 Plan the Process
5.3.1.5	BP 09.02 Prepare Facility and Infrastructure Environment BP 09.04 Demonstrate Support Capability (practices address the presumed intent to prove the needed environment for operation and maintenance of delivered items)
5.3.2 System requirements analysis.	***PA 02 Requirements***
5.3.2.1	BP 02.02 Identify Nonfunctional Requirements and Constraints. BP 02.01 Identify Functional and Performance Requirements. BP 02.05 Identify external interface requirements. BP 02.07 Record and baseline requirements.
5.3.2.2	BP 02.06 Analyze requirements. BP 02.09 Maintain consistency and traceability.
5.3.3 System architectural design.	***PA 03 Design; PA 08 Evaluation***
5.3.3.1	BP 03.02 Develop Design Structure. BP 03.04 Allocate Requirements. BP 03.08 Establish and Maintain Design Description.
5.3.3.2	BP 08.04 Evaluate incremental work products.
5.3.4 Software requirements analysis.	***PA 02 Requirements***
5.3.4.1	BP 02.01 Identify Functional and Performance Requirements. BP 02.02 Identify Nonfunctional Requirements and Constraints.
5.3.4.2	BP 02.06 Analyze requirements. BP 02.09 Maintain consistency and traceability.
5.3.4.3	BP 02.07 Record and baseline requirements.
5.3.5 Software architectural design.	***PA03 Design; PA 06 Design Implementation; PA 08 Evaluation; PA 11 Project Management***
5.3.5.1	BP 03.04 Allocate Requirements. BP 03.08 Establish and Maintain Design Description. BP 03.02 Develop Design Structure.
5.3.5.2	BP 03.03 Develop Interface Specifications.
5.3.5.3	BP 03.02 Develop Design Structure.
5.3.5.4	BP 06.03 Develop Documentation:
5.3.5.5	BP 08.01 Develop Evaluation Strategy BP 11.05 Establish Schedules.
5.3.5.6	BP 08.04 Evaluate incremental work products.
5.3.5.7	See 6.6
5.3.6 Software detail design.	***PA 03 Design; PA 06 Design Implementation; PA 08 Evaluation***
5.3.6.1	BP 03.04 Allocate Requirements. BP 03.06 Establish Component Specifications.
5.3.6.2	BP 03.03 Develop Interface Specifications: BP 03.08 Establish and Maintain Design Description.
5.3.6.3	BP 03.08 Establish and Maintain Design Description
5.3.6.4	BP 06.03 Develop Documentation:
5.3.6.5	BP 08.01 Develop Evaluation Strategy. BP 08.01 Develop Evaluation Strategy
5.3.6.6	BP 08.01 Develop Evaluation Strategy
5.3.6.7	BP 08.04 Evaluate incremental work products.
5.3.6.8	See 6.6

ISO/IEC 12207 Software life cycle Processes, Activities, and Tasks	FAA-iCMM v2.0 Process Areas and Practices
5.3.7 Software coding and testing.	***PA 06 Design Implementation; PA 08 Evaluation***
5.3.7.1	BP 06.02 Formulate product or service components. BP 06.03 Develop Documentation. BP 08.02 Develop Evaluation Procedures.
5.3.7.2	BP 08.04 Evaluate incremental work products.
5.3.7.3	BP 06.03 Develop Documentation
5.3.7.4	BP 08.01 Develop Evaluation Strategy
5.3.7.5	BP 08.07 Analyze Evaluation Results
5.3.8 Software integration.	***PA 07 Integration; PA 06 Design Implementation; PA 08 Evaluation***
5.3.8.1	BP 07.01 Develop Integration Strategy.
5.3.8.2	BP 07.01 Develop Integration Strategy.
5.3.8.3	BP 06.03 Develop Documentation:
5.3.8.4	BP 08.02 Develop Evaluation Procedures:
5.3.8.5	BP 08.04 Evaluate incremental work products.
5.3.8.6	See 6.6
5.3.9 Software qualification testing.	***PA 08 Evaluation; PA 16 Configuration Management***
5.3.9.1	BP 08.04 Evaluate incremental work products.
5.3.9.3	BP 08.04 Evaluate incremental work products.
5.3.9.4	See 6.6
5.3.9.5	BP 16.03 Establish and Maintain a Repository for Work Product Baselines. BP 16.05 Record and Report Configuration Status
5.3.10 System integration.	***PA 07 Integration; PA 08 Evaluation***
5.3.10.1	BP 07.04 Assemble Product and Service Elements.
5.3.10.2	BP 08.02 Develop Evaluation Procedures
5.3.10.3	BP 08.05 Verify end-Products.
5.3.11 System qualification testing.	***PA 07 Integration; PA 08 Evaluation; PA 16 Configuration Management***
5.3.11.1	BP 08.05 Verify end-Products.
5.3.11.2	BP 08.05 Verify end-Products.
5.3.11.3	BP 08.05 Verify end-Products.
5.3.11.4	BP 16.03 Establish and Maintain a Repository for Work Product Baselines. BP 16.05 Record and Report Configuration Status
5.3.12 Software installation.	***PA 09 Deployment, Transition, and Disposal***
5.3.12.1	BP 09.01 Develop, Deploy, and Maintain a Strategy for Deployment, Transition and Disposal Activities
5.3.12.2	BP 09.05 Transition Product or Service
5.3.13 Software acceptance support.	***PA 11 Project Management; PA 09 Deployment, Transition, and Disposal***
5.3.13.1	BP 11.10 Monitor Project Performance
5.3.13.2	BP 09.05 Transition Product or Service
5.3.13.3	BP 09.04 Demonstrate Support Capability
5.4 Operation process	**PA 10 Operation and Support; PA 08 Evaluation**
5.4.1 Process implementation.	***PA 10 Operation and Support; PA 08 Evaluation***
5.4.1.1	GP 2.3 Plan the Process
5.4.1.2	BP10.07. Provide customer support GP 2.2 Document the Process
5.4.1.3	BP 08.02 Develop Evaluation Procedure GP 2.2 Document the Process
5.4.2 Operational testing.	***PA 08 Evaluation***

ISO/IEC 12207 Software life cycle Processes, Activities, and Tasks	**FAA-iCMM v2.0 Process Areas and Practices**
5.4.2.1	BP 08.06 Validate end-products.
5.4.2.2	BP 08.06 Validate end-products.
5.4.3 System operation.	***PA 10 Operation and Support***
5.4.3.1	BP10.01. Operate the system, product or service
5.4.4 User support.	***PA 10 Operation and Support***
5.4.4.1	BP10.07. Provide customer support
5.4.4.2	BP10.07. Provide customer support
5.4.4.3	BP10.06. Take or initiate corrective action
5.5 Maintenance process	**PA 02 Requirements; PA 03 Design; PA 06 Design Implementation; PA 08 Evaluation; PA 09 Deployment, Transition, and Disposal; PA 16 Configuration Management; PA 17 Information Management**
5.5.1 Process implementation.	***PA 09 Deployment, Transition, and Disposal; PA 16 Configuration Management***
5.5.1.1	BP 09.01 Develop, Deploy, and Maintain a Strategy for Deployment, Transition and Disposal Activities
5.5.1.2	GP 2.2 Document the Process
5.5.1.3	BP 16.04 Control Changes
5.5.2 Problem and modification analysis.	***PA 02 Requirements; PA 08 Evaluation; PA 03 Design***
5.5.2.1	BP 02.08 Analyze and resolve requirements change requests.
5.5.2.2	BP 08.07 Analyze Evaluation Results
5.5.2.3	BP 03.02 Develop Design Structure
5.5.2.4	BP 03.02 Develop Design Structure
5.5.2.5	BP 02.08 Analyze and resolve requirements change requests.
5.5.3 Modification implementation.	***PA 06 Design Implementation; PA 08 Evaluation***
5.5.3.1	BP 06.02 Formulate product or service components.
5.5.3.2	BP 06.02 Formulate product or service components. BP 08.02 Develop Evaluation Procedures.
5.5.4 Maintenance review/acceptance.	***PA 08 Evaluation***
5.5.4.1	BP 08.04 Evaluate incremental work products.
5.5.4.2	BP 08.04 Evaluate incremental work products.
5.5.5 Migration.	***PA 09 Deployment, Transition, and Disposal; PA 17 Information Management***
5.5.5.1	Mapping N/A
5.5.5.2	BP 09.01 Develop, Deploy, and Maintain a Strategy for Deployment, Transition and Disposal Activities
5.5.5.3	BP 09.05 Transition Product or Service
5.5.5.4	BP 09.05 Transition Product or Service
5.5.5.5	BP 09.05 Transition Product or Service
5.5.5.6	BP 09.05 Transition Product or Service
5.5.5.7	BP 17.05 Protect Information. BP 17.04 Share Information.
5.5.6 Software retirement.	***PA 09 Deployment, Transition, and Disposal***
5.5.6.1	BP 09.06 Deactivate and Dispose Replaced Product and/or Dispense with Service
5.5.6.2	BP 09.06 Deactivate and Dispose Replaced Product and/or Dispense with Service
5.5.6.3	BP 09.06 Deactivate and Dispose Replaced Product and/or Dispense with Service
5.5.6.4	BP 09.06 Deactivate and Dispose Replaced Product and/or Dispense with Service

ISO/IEC 12207 Software life cycle Processes, Activities, and Tasks	FAA-iCMM v2.0 Process Areas and Practices
5.5.6.5	BP 09.06 Deactivate and Dispose Replaced Product and/or Dispense with Service
6 Supporting life cycle processes	
6.1 Documentation process	**PA 17 Information Management; PA 16 Configuration Management; PA 08 Evaluation**
6.1.1 Process implementation.	***PA 17 Information Management***
6.1.1.1	BP 17.01 Establish Information Management Strategy.
6.1.2 Design and development.	***PA 17 Information Management; PA 08 Evaluation***
6.1.2.1	BP 17.06 Establish Information Standards.
6.1.2.2	BP 08.04 Evaluate incremental work products.
6.1.2.3	BP 08.04 Evaluate incremental work products.
6.1.3 Production.	***PA 17 Information Management; PA 16 Configuration Management***
6.1.3.1	BP 17.05 Protect Information.
6.1.3.2	BP 16.04 Control Changes
6.1.4 Maintenance.	
6.1.4.1	See 5.5 and 6.2
6.2 Configuration management process	**PA 16 Configuration Management**
6.2.1 Process implementation.	***PA 16 Configuration Management***
6.2.1.1	BP 16.01 Establish a Configuration Management Strategy
6.2.2 Configuration identification.	***PA 16 Configuration Management***
6.2.2.1	Goal 16.2. Configuration items are controlled and managed throughout the life cycle.
6.2.3 Configuration control.	***PA 16 Configuration Management***
6.2.3.1	BP 16.03 Establish and Maintain a Repository for Work Product Baselines BP 16.04 Control Changes BP 16.05 Record and Report Configuration Status BP 16.06 Conduct Configuration Audits and Inspections
6.2.4 Configuration status accounting.	***PA 16 Configuration Management***
6.2.4.1	BP 16.05 Record and Report Configuration Status
6.2.5 Configuration evaluation.	***PA 16 Configuration Management***
6.2.5.1	BP 16.06 Conduct Configuration Audits and Inspections
6.2.6 Release management and delivery.	***PA 16 Configuration Management; PA 17 Information Management***
6.2.6.1	BP 16.03 Establish and Maintain a Repository for Work Product Baselines BP 17.05 Protect Information
6.3 Quality assurance process	**PA 15 Quality Assurance and Management; PA 20 Process Definition; PA 11 Project Management; PA 12 Supplier Agreement Management; PA 16 Configuration Management**
6.3.1 Process implementation.	***PA 15 Quality Assurance and Management; PA 20 Process Definition***
6.3.1.1	BP 15.01 Establish a Quality Management System
6.3.1.2	BP 15.01 Establish a Quality Management System BP 20.01 Establish Standard Processes GP 2.15 Coordinate With Participants and Stakeholders
6.3.1.3	BP 15.01 Establish a Quality Management System
6.3.1.4	BP 15.04 Record and Report Results
6.3.1.5	BP 15.04 Record and Report Results
6.3.1.6	BP 15.02 Monitor Process Compliance

ISO/IEC 12207 Software life cycle Processes, Activities, and Tasks	FAA-iCMM v2.0 Process Areas and Practices
6.3.2 Product assurance.	***PA 15 Quality Assurance and Management; PA 16 Configuration Management***
6.3.2.1	BP 15.02 Monitor Process Compliance
6.3.2.2	BP 15.02 Monitor Process Compliance
6.3.2.3	BP 16.06 Conduct Configuration Audits and Inspections
6.3.3 Process assurance.	***PA 15 Quality Assurance and Management; PA 12 Supplier Agreement Management***
6.3.3.1	BP 15.02 Monitor Process Compliance
6.3.3.2	BP 15.02 Monitor Process Compliance
6.3.3.3	BP 12.07 Administer Supplier Agreement
6.3.3.4	BP 15.02 Monitor Process Compliance
6.3.3.5	BP 15.03 Monitor Product and Service Quality
6.3.3.6	GP 2.6 Ensure Skill and Knowledge
6.3.4 Assurance of quality systems.	***PA 11 Project Management***
6.3.4.1	BP 11.10 Monitor Project Performance
6.4 Verification process	**PA 08 Evaluation; PA 05 Outsourcing**
6.4.1 Process implementation.	***PA 08 Evaluation; PA 05 Outsourcing***
6.4.1.1	BP 08.01 Develop Evaluation Strategy
6.4.1.2	GP 2.2 Document the Process
6.4.1.3	BP 05.02 Identify Competent Suppliers
6.4.1.4	BP 08.01 Develop Evaluation Strategy
6.4.1.5	GP 2.3 Plan the Process
6.4.1.6	GP 2.8 Consistently Use and Manage the Process
6.4.2 Verification.	***PA 08 Evaluation***
6.4.2.1	BP 08.04 Evaluate incremental work products.
6.4.2.2	BP 08.04 Evaluate incremental work products.
6.4.2.3	BP 08.04 Evaluate incremental work products.
6.4.2.4	BP 08.04 Evaluate incremental work products.
6.4.2.5	BP 08.04 Evaluate incremental work products.
6.4.2.6	BP 08.04 Evaluate incremental work products.
6.4.2.7	BP 08.04 Evaluate incremental work products.
6.5 Validation process	**PA 08 Evaluation; PA 05 Outsourcing**
6.5.1 Process implementation.	***PA 08 Evaluation; PA 05 Outsourcing***
6.5.1.1	BP 08.01 Develop Evaluation Strategy
6.5.1.2	GP 2.2 Document the Process
6.5.1.3	BP 05.02 Identify Competent Suppliers
6.5.1.4	GP 2.3 Plan the Process
6.5.1.5	GP 2.8 Consistently Use and Manage the Process
6.5.2 Validation.	***PA 08 Evaluation***
6.5.2.1	BP 08.02 Develop Evaluation Procedures:
6.5.2.2	BP 08.04 Evaluate incremental work products.
6.5.2.3	See 6.5.2.1 and 6.5.2.2
6.5.2.4	BP 08.06 Validate end-products.
6.5.2.5	BP 08.06 Validate end-products.
6.6 Joint review process	**PA 08 Evaluation; PA 11 Project Management**
6.6.1 Process implementation.	***PA 08 Evaluation***
6.6.1.1	BP 08.04 Evaluate incremental work products.
6.6.1.2	GP 2.15 Coordinate With Participants and Stakeholders
6.6.1.3	GP 2.15 Coordinate With Participants and Stakeholders
6.6.1.4	BP 08.04 Evaluate incremental work products.
6.6.1.5	BP 08.04 Evaluate incremental work products.

ISO/IEC 12207 Software life cycle Processes, Activities, and Tasks	**FAA-iCMM v2.0 Process Areas and Practices**
6.6.1.6	GP 2.15 Coordinate With Participants and Stakeholders
6.6.2 Project management reviews.	***PA 11 Project Management***
6.6.2.1	BP 11.11 Review and Analyze Project Performance:
6.6.3 Technical reviews.	***PA 08 Evaluation***
6.6.3.1	BP 08.04 Evaluate incremental work products.
6.7 Audit process	**PA 15 Quality Assurance and Management**
6.7.1 Process implementation.	***PA 15 Quality Assurance and Management***
6.7.1.1	BP 15.01 Establish a Quality Management System
6.7.1.2	BP 15.02 Monitor Process Compliance BP 15.03 Monitor Product and Service Quality
6.7.1.3	2.15 Coordinate With Participants and Stakeholders
6.7.1.4	2.15 Coordinate With Participants and Stakeholders
6.7.1.5	BP 15.04 Record and Report Results
6.7.1.6	BP 15.04 Record and Report Results
6.7.1.7	BP 15.04 Record and Report Results
6.7.2 Audit	***PA 15 Quality Assurance and Management***
6.7.2.1	BP 15.02 Monitor Process Compliance BP 15.03 Monitor Product and Service Quality
6.8 Problem resolution process	**PA 15 Quality Assurance and Management**
6.8.1 Process implementation.	***PA 15 Quality Assurance and Management***
6.8.1.1	BP 15.04 Record and Report Results BP 15.05 Analyze Quality BP 15.06 Initiate Quality Improvement BP 15.07 Evaluate the Effect of Changes
6.8.2 Problem resolution.	***PA 15 Quality Assurance and Management***
6.8.2.1	BP 15.04 Record and Report Results
7 Organizational life cycle processes	
7.1 Management process	**PA 11 Project Management; PA 13 Risk Management**
7.1.1 Initiation and scope definition.	***PA 11 Project Management***
7.1.1.1	BP 11.01 Define Project Objectives, Scope, and Outputs
7.1.1.2	BP 11.09 Direct the Project
7.1.1.3	BP 11.01 Define Project Objectives, Scope, and Outputs
7.1.2 Planning.	***PA 11 Project Management; PA 13 Risk Management***
7.1.2.1	BP 11.04 Estimate Project Resource Requirements. BP 11.05 Establish Schedules. BP 11.06 Establish and Maintain Plans. BP 11.07 Establish Commitment. BP 13.03 Assess Risks
7.1.3 Execution and control.	***PA 11 Project Management***
7.1.3.1	BP 11.09 Direct the Project.
7.1.3.2	BP 11.10 Monitor Project Performance.
7.1.3.3	BP 11.11 Review and Analyze Project Performance.
7.1.3.4	BP 11.11 Review and Analyze Project Performance.
7.1.4 Review and evaluation.	***PA 11 Project Management***
7.1.4.1	BP 11.12 Take Corrective Action BP 11.11 Review and Analyze Project Performance BP 11.10 Monitor Project Performance
7.1.4.2	BP 11.11 Review and Analyze Project Performance.
7.1.5 Closure.	***PA 11 Project Management***
7.1.5.1	BP 11.11 Review and Analyze Project Performance.

ISO/IEC 12207 Software life cycle Processes, Activities, and Tasks	FAA-iCMM v2.0 Process Areas and Practices
7.1.5.2	BP 11.11 Review and Analyze Project Performance.
7.2 Infrastructure process	**PA 23 Innovation**
7.2.1 Process implementation.	***PA 23 Innovation***
7.2.1.1	GP 2.2 Document the Process BP23.05 Manage Innovation:
7.2.1.2	GP 2.3 Plan the Process GP 2.2 Document the Process
7.2.2 Establishment of the infrastructure.	***PA 23 Innovation***
7.2.2.1	BP23.05 Manage Innovation:
7.2.2.2	BP23.05 Manage Innovation
7.2.3 Maintenance of the infrastructure.	***PA 23 Innovation***
7.2.3.1	BP23.05 Manage Innovation
7.3 Improvement process	**PA 20 Process Definition; PA 21 Process Improvement; PA 18 Measurement and Analysis**
7.3.1 Process establishment.	***PA 20 Process Definition***
7.3.1.1	BP 20.01 Establish Standard Processes
7.3.2 Process assessment.	***PA 21 Process Improvement***
7.3.2.1	BP 21.03 Appraise process
7.3.2.2	BP 21.03 Appraise process
7.3.3 Process improvement process	**PA 21 Process Improvement; PA 18 Measurement and Analysis**
7.3.3.1	BP 21.04 Establish an Action Plan
7.3.3.2	BP 18.02 Collect relevant measurement data BP 18.03 Store data and results BP 18.04 Analyze measurement data BP 18.05 Communicate results BP 21.06 Confirm Improvements
7.3.3.3	BP 18.02 Collect relevant measurement data BP 18.03 Store data and results BP 18.04 Analyze measurement data BP 18.05 Communicate results BP 21.06 Confirm Improvements
7.4 Training process	**PA 22 Training**
7.4.1 Process implementation.	***PA 22 Training***
7.4.1.1	BP 22.01 Identify Training Needs BP 22.02 Establish Training Plan
7.4.2 Training material development.	***PA 22 Training***
7.4.2.1	BP 22.03 Establish Training Mechanism
7.4.3 Training plan implementation.	***PA 22 Training***
7.4.3.1	BP 22.05 Establish and Maintain Records BP 22.04 Train Individuals
7.4.3.2	GP 2.4 Provide Adequate Resources
Annex G	
G.10 Management process	***PA13 Risk Management***
k)	BP 13.01 Develop Risk Management Approach.
l)	BP 13.02 Identify Risks.
m)	BP 13.03 Assess Risks.
n)	BP 13.04 Develop Risk Mitigation Plans.
o)	BP 13.05 Implement and Monitor Risk Mitigation Plans.

ISO/IEC CD 15288 CD3 to FAA-iCMM v2.0

ISO/IEC CD 15288 CD3 Processes and Activities	**FAA-iCMM v2.0 Process Areas and Practices**
5. System Life Cycle Processes	
5.1 Agreement Processes	
5.1.1 Acquisition Process	***PA 05 Outsourcing; PA 12 Supplier Agreement Management***
5.1.1.3 Acquisition Process Activities	
1.	BP 05.03 Prepare for the Solicitation or Tasking
2.	BP 05.03 Prepare for the Solicitation or Tasking
3.	BP 05.02 Identify Competent Suppliers BP 05.03 Prepare for the Solicitation or Tasking BP 05.05 Communicate with Suppliers BP 12.02 Review and Monitor Agreement Performance
4.	BP 5.04 Choose Supplier
5.	BP 5.04 Choose Supplier
6.	BP 12.02 Review and Monitor Agreement Performance BP 12.06 Analyze and Direct Agreement Activities
7.	BP 12.08 Determine Product or Service Acceptance
5.1.2 Supply Process	***PA 00 Integrated Enterprise Management; PA 11 Project Management***
5.1.2.3 Supply Process Activities	
1.	BP 00.04 Develop and deploy action plans
2.	BP 00.04 Develop and deploy action plans
3.	BP 11.07 Establish Commitment
4.	BP 11.11 Review and Analyze Project Performance BP 11.10 Monitor Project Performance BP 11.06 Establish and Maintain Plans
5.	BP 11.11 Review and Analyze Project Performance.
5.2 Enterprise Processes	
5.2.1 Enterprise Environment Management Process	***PA 00 Integrated Enterprise Management; PA 21 Process Improvement***
5.2.1.3 Enterprise Environment Management Activities	
1.	BP 00.03. Establish and maintain strategy BP 21.01 Identify Process Improvement Goals
2.	BP 00.04. Develop and deploy action plans
3.	GP 2.1 Establish Organizational Policy GP 2.2 Document the Process
4.	BP 00.04. Develop and deploy action plans GP 2.1 Establish Organizational Policy GP 2.4 Provide Adequate Resources
5.	BP 00.05. Review performance BP 00.06. Act on results of review BP 21.06 Confirm Improvements BP 21.08 Monitor Performance
6.	BP 21.06 Confirm Improvements BP 21.08 Monitor Performance
7.	BP 00.06. Act on results of review BP 21.05 Implement Improvements

ISO/IEC CD 15288 CD3 Processes and Activities	**FAA-iCMM v2.0 Process Areas and Practices**
5.2.2 Investment Management Process	***PA 00 Integrated Enterprise Management***
5.2.2.3 Investment Management Activities	
1.	BP00.04. Develop and deploy action plans
2.	BP00.04. Develop and deploy action plans
3.	BP00.04. Develop and deploy action plans
4.	BP00.04. Develop and deploy action plans
5.	BP00.04. Develop and deploy action plans
6.	BP00.05. Review performance
7.	BP00.05. Review performance
8.	BP00.06. Act on results of review
9.	BP00.06. Act on results of review
5.2.3 System Life Cycle Processes Management Process	***PA 20 Process Definition; PA 21 Process Improvement; PA 18 Measurement and Analysis; PA 00 Integrated Enterprise Management; PA 15 Quality Assurance and Management***
5.2.3.3 System Life Cycle Processes Management Activities	
1.	BP 20.01 Establish Standard Processes
2.	BP 20.02 Develop Tailoring Guidelines
3.	BP 20.03 Maintain Process Assets BP 21.07 Sustain and deploy Improvement Gains
4.	BP 18.01 Analyze Measurement Data
5.	BP 15.02 Monitor Process Compliance BP 15.04 Record and Report Results BP 15.05 Analyze Quality BP 21.08 Monitor Performance
6.	BP 15.06 Initiate Quality Improvement BP 21.06 Confirm Improvements
7.	BP 20.03 Maintain Process Assets BP 21.05 Implement Improvements
8.	BP 00.02 Align to Achieve the Vision
5.2.4 Resource Management Process	***PA 22 Training; PA 17 Information Management; PA 14 Integrated Teaming***
5.2.4.3 Resource Management Activities	
1.	GP 2.3 Provide Adequate Resources
2.	GP 2.3 Provide Adequate Resources
3.	*(Out of Model Scope)*
4.	BP 22.04 Train Personnel ("recruit" and "retain" are not within the scope of this model.)
5.	BP 22.04 Train Individuals BP 22.07 Establish Learning Environment
6.	BP 22.05 Establish and Maintain Records
7.	BP 22.07 Establish Learning Environment
8	GP 2.1 Document the Process BP 17.03 Store Information
9.	BP 17.01 Establish Information Management Strategy
10.	BP 14.03 Establish and Maintain a Collaborative Workplace
5.3 Project Processes	
5.3.1 Project Planning Process	***PA 11 Project Management***
5.3.1.3 Project Planning Process	

ISO/IEC CD 15288 CD3 Processes and Activities	**FAA-iCMM v2.0 Process Areas and Practices**
Activities	
1.	BP 11.01 Define Project Objectives, Scope, and Outputs
2.	BP 11.01 Define Project Objectives, Scope, and Output BP 11.02 Define the Activities and Life Cycle Approach
3.	BP 11.02 Define the Activities and Life Cycle Approach
4.	BP 11.05 Establish Schedule
5.	BP 11.05 Establish Schedule
6.	BP 11.04 Estimate Project Resource Requirements
7.	BP 11.07 Establish Commitment BP 11.08 Organize to Meet Project Objectives
8.	BP 11.04 Estimate Project Resource Requirements
9.	BP 11.06 Establish and Maintain Plans
10.	BP 11.06 Establish and Maintain Plans
11.	BP 11.01 Define Project Objectives, Scope, and Outputs
12.	BP 11.01 Define Project Objectives, Scope, and Output
5.3.2 Project Assessment Process	***PA 11 Project Management; PA 01 Needs; PA 18 Measurement and Analysis; PA 07 Integration***
5.3.2.3 Project Assessment Process Activities	
1.	BP 11.10 Monitor Project Performance
2.	BP 11.10 Monitor Project Performance
3.	BP 11.10 Monitor Project Performance
4.	BP 11.10 Monitor Project Performance
5.	BP 11.10 Monitor Project Performance
6.	BP 11.10 Monitor Project Performance BP 07.02 Confirm Readiness of Product and Service Elements
7.	BP 11.10 Monitor Project Performance
8.	BP 11.11 Review and Analyze Project Performance
9.	BP 11.11 Review and Analyze Project Performance BP 01.06 Determine Customer Satisfaction
10.	BP 11.09 Direct the Project BP 18.05 Communicate Results
5.3.3 Project Control Process	***PA 11 Project Management***
5.3.3.3 Project Control Process Activities	
1.	BP 11.12 Take Corrective Action
2.	BP 11.09 Direct the Project BP 11.12 Take Corrective Action
3.	BP 11.12 Take Corrective Action
4.	BP 11.09 Direct the Project BP 11.12 Take Corrective Action
5.	BP 11.09 Direct the Project BP 11.12 Take Corrective Action
6.	BP 11.09 Direct the Project BP 11.12 Take Corrective Action
7.	BP 11.12 Take Corrective Action
8.	BP 11.12 Take Corrective Action
9.	BP 11.09 Direct the Project
5.3.4 Decision Making Process	***PA 04 Alternatives Analysis***
5.3.4.3 Decision Making Process Activities	

ISO/IEC CD 15288 CD3 Processes and Activities	**FAA-iCMM v2.0 Process Areas and Practices**
1.	BP 04.01 Establish Analysis Strategy
2.	BP 04.02 Define the Problem BP 04.04 Identify Alternative Solutions
3.	BP 04.04 Identify Alternative Solutions
4.	BP 04.02 Define the Problem BP 04.03 Select Analysis Method
5.	BP 04.05 Analyze Alternative Solutions
6.	BP 04.07 Communicate Analysis Results
7.	BP 04.07 Communicate Analysis Results BP 04.01 Establish Analysis Strategy
5.3.5 Risk Management Process	***PA 13 Risk Management***
5.3.5.3 Risk Management Activities	
1.	BP 13.01 Develop Risk Management Approach
2.	BP 13.01 Develop Risk Management Approach
3.	BP 13.02 Identify Risks BP 13.01 Develop Risk Management Approach
4.	BP 13.03 Assess Risks
5.	BP 13.03 Assess Risks BP 13.01 Develop Risk Management Approach
6.	BP 13.04 Develop Risk Mitigation Plans
7.	BP 13.05 Implement and Monitor Risk Mitigation Plans
5.3.6 Configuration Management Process	***PA 16 Configuration Management***
5.3.6.3 Configuration Management Process Activities	
1.	BP 16.01 Establish a Configuration Management Strategy BP 16.03 Establish and Maintain a Repository for Work Product Baselines
2.	BP 16.02 Identify and Baseline Configuration Items and Interim Work Products
3.	BP 16.03 Establish and Maintain a Repository for Work Product Baselines
4.	BP 16.01 Establish a Configuration Management Strategy BP 16.04 Control Changes BP 16.05 Record and Report Configuration Status
5.	BP 16.05 Record and Report Configuration Status BP 16.06 Conduct Configuration Audits and Inspections
6.	BP 16.06 Conduct Configuration Audits and Inspections
5.3.7 Information Management Process	***PA 17 Information Management; PA 18 Measurement and Analysis***
5.3.7.3 Information Management Process Activities	
1.	BP 17.01 Establish Information Management Strategy
2.	GP 2.5 Assign Responsibility
3.	BP 17.05 Protect Information BP 18.03 Store Data and Results
4.	BP 17.02 Establish Information Management Capability BP 17.05 Protect Information BP 17.04 Share Information BP 17.06 Establish Information Standards
5.	BP 17.03 Store Information

ISO/IEC CD 15288 CD3 Processes and Activities	**FAA-iCMM v2.0 Process Areas and Practices**
6.	BP 17.03 Store Information
7.	BP 17.04 Share Information
8.	BP 17.03 Store Information BP 17.05 Protect Information
9.	BP 17.05 Protect Information
5.4 Technical Processes	
5.4.1 Stakeholder Requirements Definition Process	***PA 01 Needs; PA 02 Requirements***
5.4.1.3 Stakeholder Requirements Definition Activities	
1.	BP 01.01 Identify Customers and Stakeholders
2.	BP 01.02 Elicit Needs
3.	BP 01.03 Analyze Needs BP 02.04 Derive requirements
4.	BP 01.03 Analyze Needs
5.	BP 01.03 Analyze Needs
6.	BP 01.03 Analyze Needs
7.	BP 01.03 Analyze Needs
8.	BP 01.04 Establish and Maintain a Statement of Need
9.	BP 01.04 Establish and Maintain a Statement of Need
10.	BP 01.04 Establish and Maintain a Statement of Need
11.	BP 01.04 Establish and Maintain a Statement of Need
5.4.2 Requirements Analysis Process	***PA 02 Requirements; PA 01 Needs***
5.4.2.3 Requirements Analysis Process Activities	
1.	BP 01.03 Analyze Needs BP 02.05 Identify external interface requirements:
	BP 02.01 Identify Functional and Performance Requirements
2.	BP 02.03 Identify key requirements
3.	BP 02.01 Identify Functional and Performance Requirements
4.	BP 02.01 Identify Functional and Performance Requirements
5.	BP 02.01 Identify Functional and Performance Requirements
6.	BP 02.06 Analyze requirements
7.	BP 02.09 Maintain consistency and traceability
8.	BP 02.07 Record and baseline requirements
5.4.3 Architectural Design Process	***PA 03 Design; PA 08 Evaluation***
5.4.3.3 Architectural Design Process Activities	
1.	BP 03.04 Allocate Requirements
2.	BP 03.04 Allocate Requirements
3.	BP 03.07 Establish and Use a Strategy for Non- developmental Items
4.	BP 03.02 Develop Design Structure
5.	BP 03.03 Develop Interface Specifications
6.	BP 08.04 Evaluate incremental work products.
7.	BP 03.06 Establish Component Specifications
8.	BP 03.08 Establish and Maintain Design Description
5.4.4 Implementation Process	***PA 06 Design Implementation; PA 09 Deployment, Transition, and Disposal; PA 08 Evaluation; PA 17 Information Management***
5.4.4.3 Implementation Process Activities	

ISO/IEC CD 15288 CD3 Processes and Activities	FAA-iCMM v2.0 Process Areas and Practices
1.	BP 06.01 Establish the Implementation Environment
2.	BP 06.01 Establish the Implementation Environment
3.	GP 2.4 Provide Adequate Resources
4.	BP 06.01 Establish the Implementation Environment
5.	BP 06.02 Formulate product or service components
6.	BP 16.06 Conduct Configuration Audits and Inspections BP 09.05 Transition Product or Service
7.	BP 08.07 Analyze Evaluation Results BP 17.04 Share Information
8.	BP 09.05 Transition Product or Service
5.4.5 Integration Process	***PA 07 Integration; PA 17 Information Management; PA 12 Supplier Agreement Management; PA 15 Quality Assurance & Management***
5.4.5.3 Integration Process Activities	
1.	BP 07.01 Develop Integration Strategy
2.	BP 07.01 Develop Integration Strategy
3.	BP 17.05 Protect Information BP 07.02 Confirm Readiness of Product and Service Elements
4.	BP 12.08 Determine Product or Service Acceptance BP 08.05 Verify End-Products
5.	BP 07.04 Assemble Product and Service Elements
6.	BP 07.05 Confirm Integrated Product or Service Operation BP 15.04 Record and Report Results BP 15.05 Analyze Quality
5.4.6 Verification Process	***PA 08 Evaluation***
5.4.6.3 Verification Process Activities	
1.	BP 08.01 Develop Evaluation Strategy
2.	BP 08.01 Develop Evaluation Strategy BP 08.02 Develop Evaluation Procedures
3.	BP 08.03 Establish and Maintain Evaluation Environment
4.	BP 08.04 Evaluate Incremental Work Products BP 08.05 Verify End-Products
5.	BP 08.05 Verify End-Products BP 08.04 Evaluate Incremental Work Products
6.	BP 08.07 Analyze Evaluation Results
5.4.7 Transition Process	***PA 09 Deployment, Transition, and Disposal***
5.4.7.3 Transition Process Activities	
1.	BP 09.01 Develop, Deploy, and Maintain a Strategy for Deployment, Transition and Disposal Activities
2.	BP 09.02 Prepare Facility and Infrastructure Environment
3.	BP 09.02 Prepare Facility and Infrastructure Environment
4.	BP 09.04 Demonstrate Support Capability BP 09.05 Transition Product or Service
5.	BP 09.04 Demonstrate Support Capability
6.	BP 09.05 Transition Product or Service
7.	BP 09.05 Transition Product or Service
5.4.8 Validation Process	***PA 08 Evaluation***
5.4.8.3 Validation Process Activities	
1.	BP 08.01 Develop Evaluation Strategy
2.	BP 08.02 Develop Evaluation Procedure

ISO/IEC CD 15288 CD3 Processes and Activities	FAA-iCMM v2.0 Process Areas and Practices
3.	BP 08.02 Develop Evaluation Procedure BP 08.03 Establish and Maintain Evaluation Environment
4.	BP 08.04 Evaluate Incremental Work Products BP 08.06 Validate End-products
5.	BP 08.06 Validate end-products.
6.	BP 08.07 Analyze Evaluation Results
5.4.9 Operation Process	***PA 10 Operation and Support; PA 11 Project Management***
5.4.9.3 Operation Process Activities	
1.	BP 11.01 Define Project Objectives, Scope, and Outputs BP 11.02 Define the Activities and Life Cycle Approach:
2.	BP 6.03 Develop Documentation
3.	GP 2.4 Provide Adequate Resources GP 2.5 Assign Responsibility GP 2.6 Ensure Skill and Knowledge
4.	BP10.01 Operate the System, Product or Service
5.	BP10.02 Monitor and evaluate capacity, service, and performance
6.	BP10.05 Analyze failures
7.	BP10.06 Take or initiate corrective action
8.	BP10.06 Take or initiate corrective action
5.4.10 Maintenance Process	***PA 10 Operation and Support; PA 11 Project Management; PA 02 Requirements***
5.4.10.3 Maintenance Process Activities	
1.	BP 11.01 Define Project Objectives, Scope, and Outputs
2.	BP 06.03 Develop Documentation
3.	BP 02.02 Identify Nonfunctional Requirements and Constraints:
4.	BP10.02 Monitor and Evaluate Capacity, Service and Performance BP10.07 Provide Customer Support
5.	GP 2.2 Document the Process
6.	BP10.03 Confirm availability of parts and personnel
7.	BP10.04 Perform preventive maintenance
8.	BP10.05 Analyze failures
9.	BP10.06 Take or initiate corrective action
10.	BP10.06 Take or initiate corrective action
11.	BP10.06 Take or initiate corrective action
5.4.11 Disposal Process	***PA 09 Deployment, Transition, and Disposal***
5.4.11.3 Disposal Process Activities	
1.	BP 09.06 Deactivate and Dispose Replaced Product and/or Dispense with Service
2.	BP 09.06 Deactivate and Dispose Replaced Product and/or Dispense with Service
3.	BP 09.06 Deactivate and Dispose Replaced Product and/or Dispense with Service
4.	BP 09.06 Deactivate and Dispose Replaced Product and/or Dispense with Service
5.	BP 09.06 Deactivate and Dispose Replaced Product and/or Dispense with Service
6.	BP 09.06 Deactivate and Dispose Replaced Product and/or Dispense with Service
7.	BP 09.06 Deactivate and Dispose Replaced Product and/or Dispense with Service

Section 4: FAA-iCMM Version 2.0 Practice-Level Maps

FAA-iCMM Version 2.0 Practice-Level Maps	*Page*
Table GP: FAA-iCMM v2.0 Sources of Capability Levels and Generic Practices	93
Table PA 00: FAA-iCMM v2.0 Sources of Integrated Enterprise Management Practices	101
Table PA 01: FAA-iCMM v2.0 Sources of Needs Practices	109
Table PA 02: FAA-iCMM v2.0 Sources of Requirements Practices	115
Table PA 03: FAA-iCMM v2.0 Sources of Design Practices	124
Table PA 04: FAA-iCMM v2.0 Sources of Alternatives Analysis Practices	130
Table PA 05: FAA-iCMM v2.0 Sources of Outsourcing Practices	134
Table PA 06: FAA-iCMM v2.0 Sources of Design Implementation Practices	142
Table PA 07: FAA-iCMM v2.0 Sources of Integration Practices	144
Table PA 08: FAA-iCMM v2.0 Sources of Evaluation Practices	148
Table PA 09: FAA-iCMM v2.0 Sources of Deployment, Transition, and Disposal Practices	160
Table PA 10: FAA-iCMM v2.0 Sources of Operation and Support Practices	169
Table PA 11: FAA-iCMM v2.0 Sources of Project Management Practices	173
Table PA 12: FAA-iCMM v2.0 Sources of Supplier Agreement Management Practices	185
Table PA 13: FAA-iCMM v2.0 Sources of Risk Management Practices	195
Table PA 14: FAA-iCMM v2.0 Sources of Integrated Teaming Practices	200
Table PA 15: FAA-iCMM v2.0 Sources of Quality Assurance and Management Practices	206
Table PA 16: FAA-iCMM v2.0 Sources of Configuration Management Practices	214
Table PA 17: FAA-iCMM v2.0 Sources of Information Management Practices	220
Table PA 18: FAA-iCMM v2.0 Sources of Measurement and Analysis Practices	224
Table PA 20: FAA-iCMM v2.0 Sources of Process Definition Practices	229
Table PA 21: FAA-iCMM v2.0 Sources of Process Improvement Practices	235
Table PA 22: FAA-iCMM v2.0 Sources of Training Practices	248
Table PA 23: FAA-iCMM v2.0 Sources of Innovation Practices	255

Table GP: FAA-iCMM v2.0 Sources of Capability Levels and Generic Practices

FAA-iCMM v2.0 Capability Levels and Generic Practices	***FAA-iCMM v1.0 Capability Levels and Generic Practices***	***CMMI-SE/SW/IPPD (continuous) Capability Levels and Generic Practices***	***EIA/IS 731 Capability Levels and Generic Practices***	***ISO/IEC TR 15504 Capability Levels, Process Attributes, and Management Practices***
Capability Level 0				
Capability Level 0: Incomplete One or more of the goals of the process area are not achieved. (No goal or generic practices at this level)	No level 0 – called "not implemented"	L0: Incomplete Not performed or partially performed. One or more of the specific goals of the process area are not satisfied.	Level 0: Initial Practices are not performed	Level 0: Incomplete process
Capability Level 1				
Capability Level 1: Performed L1 Goal: The process achieves the goals of the process area.	Capability Level 1 - Initial: Performed Informally (no goal)	L1: Performed L1 Generic Goal: Achieve Specific Goals	Level 1: Performed	Level 1: Performed process
1.1 Identify Work Scope		1.1 Identify Work Scope	(no generic practices at CL1)	MP 1.1-1 Identify input and output work products MP 1.1.2 Ensure that the scope of work is identified
1.2 Perform the Process	1.1 Perform the Process	1.2 Perform Base Practices		MP 1.1.3 Ensure that base practices are implemented
Capability Level 2				
Capability Level 2: Managed: Planned and Tracked L2 Goal: The process is institutionalized as a managed (planned and tracked) process.	Capability Level 2 - Repeatable: Planned and Tracked Level 2 Goal: The activities for the process are institutionalized to support a repeatable process.	L2: Managed L2 Generic Goal: The process is institutionalized as a managed process.	Level 2: Managed Activities are planned and tracked; performance verified; products conform; use measurement to track performance.	Level 2: Managed Process

FAA-iCMM v2.0 Capability Levels and Generic Practices	***FAA-iCMM v1.0 Capability Levels and Generic Practices***	***CMMI-SE/SW/IPPD (continuous) Capability Levels and Generic Practices***	***EIA/IS 731 Capability Levels and Generic Practices***	***ISO/IEC TR 15504 Capability Levels, Process Attributes, and Management Practices***
2.1 Establish Organizational Policy	2.1 Establish Policy	2.1 Establish an Organizational Policy		
2.2 Document the Process	2.5 Document the Process	2.2 Plan the Process (includes subpractice to define and document the process description)	GP2.1 example activities: Document the approach to performing the activities of the FA; Reasonable processes are documented	MP 3.1.1 Identify the standard process
2.3 Plan the Process	2.6 Plan the Process	2.2 Plan the Process	GP 2.1 Follow recorded and approved plans and processes … Example activity: Plan the performance of the process in accordance with the established program goals (such as profit, customer satisfaction, schedule delivery and quality goals)	MP 2.1.1 Identify the objectives MP 2.1.2 Plan the performance of the process MP 2.1.3 Plan and assign the responsibility and authority MP 3.2.2 Identify and document the process infrastructure requirements MP 4.1.1 Identify product and process goals and measures
2.4 Provide Adequate Resources	2.2 Allocate Adequate Resources	2.3 Provide Resources	(in 2.1 example activities) Allocate adequate resources including people, training, tools, budget, and time for performing the FA.	MP 3.2.3 Provide, allocate and use the resources MP 3.2.4 Provide, allocate and use an adequate process infrastructure
2.5 Assign Responsibility	2.3 Assign Responsibility	2.4 Assign Responsibility	(in 2.1 example activities) Assign responsibilities for developing the work products and providing the services of the FA	MP 2.1.3 Plan and assign the responsibility and authority MP 3.2.1 Identify and document the roles, responsibilities and competencies
2.6 Ensure Skill and Knowledge	2.4 Ensure Training	2.5 Train people		MP 3.2.1 Identify and document the roles, responsibilities and competencies

FAA-iCMM v2.0 Capability Levels and Generic Practices	***FAA-iCMM v1.0 Capability Levels and Generic Practices***	***CMMI-SE/SW/IPPD (continuous) Capability Levels and Generic Practices***	***EIA/IS 731 Capability Levels and Generic Practices***	***ISO/IEC TR 15504 Capability Levels, Process Attributes, and Management Practices***
2.7 Establish Work Product Requirements	(new GP)	2.2 Plan the process		MP 2.2-1 Identify the requirements MP 2.2-3 Identify and define
2.8 Consistently Use and Manage the Process	2.7 Use a Repeatable Process		2.1 Example activity "Use the documented plans, standards, or procedures in implementing the process for the program"	2.1 Performance management attribute: result 3 MP 3.2.3 Provide, allocate and use the resources MP 3.2.4 Provide, allocate and use an adequate process infrastructure
2.9 Manage Work Products	2.8 Manage Configurations	2.6 Manage Configurations:		MP 2.2.2 Manage
2.10 Objectively Assess Process Compliance.	2.9 Assess Process Compliance .	2.9 Objectively Evaluate Adherence	GP 2.2 Verify compliance with approved plans and processes, and take appropriate action when performance deviates from plan or when processes are not followed.	
2.11 Objectively Verify Work Products	2.10 Verify Work Products 3.3 Perform Reviews with Peers	2.9 Objectively Evaluate Adherence		MP 2.2.4 Manage the quality of work products
2.12 Measure Performance	2.11 Measure Process	2.8 Monitor and Control the Process		MP 2.1.4 Manage the execution of the activities MP 4.1.2 Collect the specified product and process measures MP 4.2.1 Identify suitable measurement techniques
2.13 Review Performance with Higher-level Management	2.12 Review Status	2.10 Review Status with Higher-level Management		

FAA-iCMM v2.0 Capability Levels and Generic Practices	***FAA-iCMM v1.0 Capability Levels and Generic Practices***	***CMMI-SE/SW/IPPD (continuous) Capability Levels and Generic Practices***	***EIA/IS 731 Capability Levels and Generic Practices***	***ISO/IEC TR 15504 Capability Levels, Process Attributes, and Management Practices***
2.14 Take Corrective Action	2.13 Take Corrective Action	2.8 Monitor and Control the Process 2.10 Review Status with Higher-level Management	GP 2.2 Verify compliance with approved plans and processes, and take appropriate action when performance deviates from plan or when processes are not followed.	MP 2.1.4 Manage the execution of the activities
2.15 Coordinate with Stakeholders	2.14 Coordinate Within the Project 3.4 Coordinate with Affected Groups	2.7 Identify and Involve Relevant Stakeholders.		
Capability Level 3				
Capability Level 3: Defined Level 3 Goal: The process is institutionalized as a defined process.	Capability Level 3: Defined; Well Defined Level 3 Goal: The activities of the process are institutionalized to support a defined process.	L3: Defined L3 Generic Goal: The process is institutionalized as a defined process.	Level 3: Defined Activities are performed according to a well-defined process using approved, tailored versions of standard, documented processes.	Level 3: Established process
3.1 Standardize the Process	3.1 Standardize the Process	3.1 Establish a Defined Process (includes standardization of the process)	GP 3.1 Standardize and record a well-defined FA process for the organization that is designed to meet specific business goals, and is based on experiences captured from previous programs.	MP 3.1-1 Identify the standard process

FAA-iCMM v2.0 Capability Levels and Generic Practices	***FAA-iCMM v1.0 Capability Levels and Generic Practices***	***CMMI-SE/SW/IPPD (continuous) Capability Levels and Generic Practices***	***EIA/IS 731 Capability Levels and Generic Practices***	***ISO/IEC TR 15504 Capability Levels, Process Attributes, and Management Practices***
3.2 Establish and Use a Defined Process	3.2 Use Defined Process	3.1 Establish a Defined Process	GP 3.2 Tailor the organization's standard process using standard guidelines to meet specific program or organizational needs. GP 3.3 Implement and improve the FA activities (i.e., tailored process) per established and approved formal procedures.	MP 3.1.2 Implement and/or tailor the standard process [MP 4.1.1 Identify product and process goals and measures (Note: also required at iCMM CL2)]
3.3 Improve Processes	5.1 Perform Continual Process Improvement on the Organizational Standard and Tailored Processes	3.2 Collect Improvement Information	GP 3.3 Implement and improve the FA activities (i.e., tailored process) per established and approved formal procedures. GP 3.4 Improve the organization's standard process using information from work product reviews and process compliance reviews.	MP 3.1.3 Gather process performance data MP 3.1.4 Establish and refine the understanding of the process behavior MP 3.1 5 Refine [MP 4.1.2 Collect the specified product and process measures (Note: also required at iCMM CL2)] MP 4.1.3 Analyze trends in the performance of the process [MP 4.2.1 Identify suitable measurement techniques (Note: also required at iCMM CL2)] MP 5.1.1 Identify changes to the standard process definition MP 5.1.2 Assess the impact of all proposed changes

FAA-iCMM v2.0 Capability Levels and Generic Practices	***FAA-iCMM v1.0 Capability Levels and Generic Practices***	***CMMI-SE/SW/IPPD (continuous) Capability Levels and Generic Practices***	***EIA/IS 731 Capability Levels and Generic Practices***	***ISO/IEC TR 15504 Capability Levels, Process Attributes, and Management Practices***
3.3 Improve processes (continued)	5.2 Implement Improved Processes		GP 5.3 Improve the organization's standard process based on data and metrics collected from a continuing program of process compliance reviews and work product reviews. GP 5.4 Perform causal analysis of process and work product defects and eliminate causes of variation in quality, cost, and cycle time by changing the standard process.	MP 5.1.3 Define an implementation strategy for the approved change MP 5.1.4 Implement the approved changes MP 5.1.5 Evaluate the effectiveness of process change MP 5.2.2 Analyze the source of real and potential problems in the current process MP 5.2.3 Implement changes to selected areas of the tailored process according to the implementation strategy. MP 5.2.4 Validate the effectiveness of process change
Capability Level 4				
Capability Level 4: Quantitatively Managed Level 4 Goal: The process is institutionalized as a quantitatively managed process.	Capability Level 4: Managed; Quantitatively Controlled Level 4 Goal: The activities of the processes are institutionalized to support quantitative management of defined processes.	L4: Quantitatively Managed L4 Generic Goal: The process is institutionalized as a quantitatively managed process.	Level 4: Measured Metrics are defined for the organization and programs, and mechanisms are in place to track program and organizational performance quantitatively, and to take corrective actions on the basis of those measures.	Level 4: Predictable Process

FAA-iCMM v2.0 Capability Levels and Generic Practices	***FAA-iCMM v1.0 Capability Levels and Generic Practices***	***CMMI-SE/SW/IPPD (continuous) Capability Levels and Generic Practices***	***EIA/IS 731 Capability Levels and Generic Practices***	***ISO/IEC TR 15504 Capability Levels, Process Attributes, and Management Practices***
4.1 Stabilize Process Performance	4.1 Establish Quality Objectives for Product and Process 4.2 Select Processes for Measurement. 4.3 Select Measures for the Process 4.4 Determine Quantitative Process Capability 4.5 Use Quantitative Process Capability	4.1 Establish Quality Objectives 4.2 Stabilize Subprocess Performance	GP 5.1 Identify FA activities for which it is appropriate, and inappropriate, to quantify process repeatability. GP 5.2 Establish quantitative goals for improving the effectiveness of the standard process. GP 4.1 Collect and analyze metrics to determine the performance of the tailored FA activities. GP 4.2 Take appropriate action to align tailored FA performance and expectations.	[MP 4.1.1 Identify product and process goals and measures (Note: also required at iCMM CL2 and CL3)] MP 4.1.4 Measure the process capability [MP 4.2.1 Identify suitable measurement techniques (Note: also required at iCMM CL2 and CL3)] MP 4.2.2 Collect measures and identify process control parameters MP 4.2.3 Control the process performance using the analysis measures [MP 4.1.2 Collect the specified product and process measures (Note: also required at iCMM) CL2 and CL3]
Capability Level 5				
Capability Level 5: Optimizing Level 5 Goal: The process is institutionalized as an optimizing process	Capability Level 5: Optimizing; Continuously improving Level 5 Goal: Continually improving processes are deployed throughout the organization.	L5: Optimizing L5 Generic Goal: The process is institutionalized as an optimizing process.	Level 5: Optimizing The organization establishes quantitative performance goals (targets) for process effectiveness and efficiency based on its business goals. The organization is able to continuously improve its process by gathering quantitative data from performing the processes and from piloting innovative ideas and technologies.	Level 5: Optimizing Process

FAA-iCMM v2.0 Capability Levels and Generic Practices	***FAA-iCMM v1.0 Capability Levels and Generic Practices***	***CMMI-SE/SW/IPPD (continuous) Capability Levels and Generic Practices***	***EIA/IS 731 Capability Levels and Generic Practices***	***ISO/IEC TR 15504 Capability Levels, Process Attributes, and Management Practices***
5.1 Pursue Process Optimization	(CL5 GPs moved to CL3)	5.1 Ensure Continuous Process Improvement 5.2 Correct Common Cause of Problems	GP 5.3 Improve the organization's standard process based on data and metrics collected from a continuing program of process compliance reviews and work product reviews. GP 5.4 Perform causal analysis of process and work product defects and eliminate causes of variation in quality, cost, and cycle time by changing the standard process.	MP 5.2.1 Define the process improvement goals for the process [MP 5.2.2 Analyze the source of real and potential problems in the current process (Note: also required at iCMM CL3)] [MP 4.2.3 Control the process performance using the analysis measures (Note: also required at iCMM CL4)] [MP 5.1.5 Evaluate the effectiveness of process change (Note: also required at iCMM CL3)] [MP 5.2.4 Validate the effectiveness of process change (Note: also required at iCMM CL3)]

Table PA 00: FAA-iCMM v2.0 Sources of Integrated Enterprise Management Practices - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 00 Integrated Enterprise Management	**PA 10 Product Evolution** **PA 18 Measurement**	**5.1 Management commitment** **5.3 Quality policy** **5.4.1 Quality objectives** **5.5.3 Internal communication**		**Organizational Environment for Integration (OEI)** **Organizational Process Performance (OPP)**	**1.1 Organizational Leadership** **1.2 Public Responsibility and Citizenship** **2.1 Strategic Development** **2.2 Strategy Deployment** **7. Business Results**
Goals					
1. Vision, mission, values, performance goals and objectives are established, maintained, and communicated to all employees. .				SG 1. Provide IPPD Infrastructure (OEI) SG 2. Manage People for Integration (OEI)	1. Leadership - Clear values and high performance expectations are set and deployed that address the needs of all stakeholders. 1.1 Organizational Leadership - Directions are set and future opportunities are sought. 2. Strategic Planning - Work processes are aligned with the organization's strategic directions, thereby ensuring that improvement and learning reinforce organizational priorities.
2. Strategies are developed and projects are launched that visibly support goal achievement.	1. Strategies that support disciplined product evolution are established and maintained.				2. Strategic Planning - Strategies are developed and deployed for goal achievement
3. Projects are continued, changed, or terminated based on performance, within the capability of the organization, and with acceptable risk and potential					

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 00 Integrated Enterprise Management	**PA 10 Product Evolution** **PA 18 Measurement**	**5.1 Management commitment** **5.3 Quality policy** **5.4.1 Quality objectives** **5.5.3 Internal communication**		**Organizational Environment for Integration (OEI)** **Organizational Process Performance (OPP)**	**1.1 Organizational Leadership** **1.2 Public Responsibility and Citizenship** **2.1 Strategic Development** **2.2 Strategy Deployment** **7. Business Results**
benefit to the organization.					
Practices					
BP 00.01 Establish and maintain strategic vision	BP 10.01 Define Product Evolution	5.1 Management commitment 5.3 Quality policy 4.2.1 General		SP 1.1-1 Establish the Organization's Shared Vision. (OEI) SP 1.1-1 Select Processes (OPP)	1.1.a-1 Set organizational values, performance expectations, and a focus on creating and balancing value for customers and other stakeholders 1.1a-3 Set directions and seek future opportunities. 1.1a-2 Establish and reinforce environment for empowerment and innovation, and encourage and support organizational and employee learning 5.3b-1 Enhance work climate via services, benefits, and policies
BP 00.02 Align to achieve the vision		5.1 Management commitment 5.3 Quality policy 5.4.1 Quality objectives 5.5.3 Internal communication 6.2.2 Competence, awareness, and training d)		SP 2.1-1 Establish Leadership Mechanisms (OEI) SP 2.2-1 Establish Incentives for Integration (OEI)	1.1a-1 Communicate, and deploy organizational values, performance expectations, and a focus on creating and balancing value for customers and other stakeholders. 5.1a-4 Reinforce high performance through compensation, recognition, rewards/incentives
BP 00.03. Establish and maintain strategy		5.1 Management commitment 5.4.1 Quality objectives 5.5.3 Internal communication		SP 1.3-1 Establish Quality and Process Performance Objectives (OPP)	2.1a and b Develop strategy, strategic objectives, and strategic plan including timetable for accomplishing objectives; consider/evaluate the following key factors in setting strategic direction:

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 00 Integrated Enterprise Management	**PA 10 Product Evolution** **PA 18 Measurement**	**5.1 Management commitment** **5.3 Quality policy** **5.4.1 Quality objectives** **5.5.3 Internal communication**		**Organizational Environment for Integration (OEI)** **Organizational Process Performance (OPP)**	**1.1 Organizational Leadership** **1.2 Public Responsibility and Citizenship** **2.1 Strategic Development** **2.2 Strategy Deployment** **7. Business Results**
					- customer and market/ mission needs/ expectations, including new product/service opportunities - competitive and mission environment and capabilities, including use of new technology - financial, societal, and other potential risks - human resource capabilities and needs - operational capabilities and needs, including resource availability - supplier and/or partner capabilities and needs 2.2b Performance Projection (use PA 18) project key performance measures/ indicators, compare projected performance with competitors, key benchmarks, past performance, as appropriate
BP 00.04. Develop and deploy action plans		5.1 Management commitment 5.5.3 Internal communication 6.1 Provision of resources			2.2a-1 Develop short- and longer-term action plans that address key strategic objectives. 2.2a-2 Identify key human resource requirements and plans, based on strategic objectives and action plans. 2.2a-3 Allocate resources to ensure accomplishment of overall action plan. 2.2a-4 Identify key performance measures and/or indicators for tracking progress relative to action plans.

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 00 Integrated Enterprise Management	**PA 10 Product Evolution** **PA 18 Measurement**	**5.1 Management commitment** **5.3 Quality policy** **5.4.1 Quality objectives** **5.5.3 Internal communication**		**Organizational Environment for Integration (OEI)** **Organizational Process Performance (OPP)**	**1.1 Organizational Leadership** **1.2 Public Responsibility and Citizenship** **2.1 Strategic Development** **2.2 Strategy Deployment** **7. Business Results**
					2.2a-5 Communicate and deploy strategic objectives, action plans, and performance measures/indicators to achieve overall organizational alignment. 2.2a Assure alignment and consistency in order to provide a basis for setting and communicating priorities for ongoing improvement activities—part of the daily work of all work units.
BP 00.05. Review performance		5.1 Management commitment 5.6.Management Review 5.6.1 General 8.2.3 Monitoring and measurement of processes 8.2.4 Monitoring and measurement of product 5.3 Quality Policy 5.6.3 Review Output			1.1b-1 Review organizational performance and capabilities to assess organizational health, competitive performance, and progress relative to performance goals and changing organizational needs. 1.1b-1 Use key performance measures as part of regular review. Include employee feedback. 4.2a 3-analyze performance to support operations and align with action plans
BP 00.06. Act on results of review	BP 18.04 Take corrective action (from PA 18 Measurement in v1.0)	5.1 Management commitment			1.1b-2,3 Translate organizational performance review findings into priorities for improvement and opportunities for innovation and reinvention, and deploy them throughout the organization and, as appropriate, to suppliers/partners and key customers to ensure organizational alignment. 1.1b-4 Use organizational performance

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 00 Integrated Enterprise Management	**PA 10 Product Evolution** **PA 18 Measurement**	**5.1 Management commitment** **5.3 Quality policy** **5.4.1 Quality objectives** **5.5.3 Internal communication**		**Organizational Environment for Integration (OEI)** **Organizational Process Performance (OPP)**	**1.1 Organizational Leadership** **1.2 Public Responsibility and Citizenship** **2.1 Strategic Development** **2.2 Strategy Deployment** **7. Business Results**
					review findings and employee feedback to improve leadership effectiveness and the effectiveness of management throughout the organization.
BP 00.07. Fulfill public responsibility					1.2a-1 Address the impacts on society of products, services, and operations considering regulatory and legal requirements and risks associated with products, services, and operations. (Consider health and safety) 1.2a-2 Anticipate and proactively prepare for public concerns with current and future products, services, and operations. 1.2a-3Ensure ethical business practices in all stakeholder transactions and interactions. 1.2b Support and strengthen key communities in selected areas of emphasis.

Table PA 00: FAA-iCMM v2.0 Sources of Integrated Enterprise Management Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 00 Integrated Enterprise Management	**ORG.1 Organizational alignment (new)** **CUS.2 Supply – respond to request**	**5.2 Supply**	**5.2.1 Enterprise Environment Mgmt** **5.2.2 Investment Management** **5.2.3 System Life Cycle Processes Mgmt** **5.2.4 Resource Management (partially)** **5.1.2 Supply – evaluate request**	**IPD-CMM (v0.98)** **PA18 Shared Vision** **PA19 Organizational Leadership**
Goals				
1. Vision, mission, values, performance goals and objectives are established, maintained, and communicated to all employees.	ORG.1 outcomes			
2. Strategies are developed and projects are launched that visibly support goal achievement.			5.2.2.2 1	
3. Projects are continued, changed, or terminated based on performance, within the capability of the organization, and with acceptable risk and potential benefit to the organization.			5.2.2.2 2,3, and 4	

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 00 Integrated Enterprise Management	**ORG.1 Organizational alignment (new)** **CUS.2 Supply – respond to request**	**5.2 Supply**	**5.2.1 Enterprise Environment Mgmt** **5.2.2 Investment Management** **5.2.3 System Life Cycle Processes Mgmt** **5.2.4 Resource Management (partially)** **5.1.2 Supply – evaluate request**	**IPD-CMM (v0.98)** **PA18 Shared Vision** **PA19 Organizational Leadership**
Practices				
BP 00.01. Establish and maintain strategic vision	ORG.1.BP1 : Develop a strategic vision. ORG.1.BP3 : Develop a quality culture.			BP18.1 Align mental models of the members of the group with reality. BP18.2 Develop the group's shared vision with collaboration by stakeholders. BP18.4 Periodically reinforce the clarity and reality of the vision. BP19.1 Develop visions for the organization and its projects using PA18 Shared vision as guidance
BP 00.02. Align to achieve the vision	ORG.1.BP2 : Deploy vision. ORG.1.BP5 : Provide incentives.		5.2.3.3 - 8	BP18.3 Deploy the group's shared vision. BP19.2 Establish and perform a plan for developing and deploying an organizational structure consistent with the organizational vision. BP19.3 Maintain an organizational structure that supports IPD concepts and principles. BP19.4 Establish and maintain an integrated support structure by tying together people, processes, tools and facilities BP19.5 Ensure employees have

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 00 Integrated Enterprise Management	**ORG.1 Organizational alignment (new)** **CUS.2 Supply – respond to request**	**5.2 Supply**	**5.2.1 Enterprise Environment Mgmt** **5.2.2 Investment Management** **5.2.3 System Life Cycle Processes Mgmt** **5.2.4 Resource Management (partially)** **5.1.2 Supply – evaluate request**	**IPD-CMM (v0.98)** **PA18 Shared Vision** **PA19 Organizational Leadership**
				incentives to display desired behaviors and make decisions consistent with achieving the organization vision.
BP00.03. Establish and maintain strategy			5.2.1.3 - 1.	
BP 00.04. Develop and deploy action plans	CUS.2.BP1 : Prepare response. CUS.2.BP2 : Negotiate contract.	5.2.2 .1	5.2.1.3-2 5.2.1.3-4 5.2.2.3-1 5.2.2.3-2 5.2.2.3-3 5.2.2.3-4 5.2.2.3-5 5.1.2.3-1 5.1.2.3-2	
BP 00.05. Review performance	SUP.6.BP3 : Conduct joint management review.		5.2.1.3-5 5.2.2.3-6 5.2.2.3-7	
BP 00.06. Act on results of review			5.2.1.3-5 5.2.1.3-7 5.2.2.3-8 5.2.2.3-9	
BP 00.07. Fulfill public responsibility				

Table PA 01: FAA-iCMM v2.0 Sources of Needs Practices – Part 1

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 01 Needs	**PA01 Needs** **PA24 Human Factors Engineering** **PA02 Requirements**	**5.2 Customer Focus** **7.2.1 Determination of requirements related to the product** **7.2.3 Customer communication** **8.2.1 Customer satisfaction** **8.4 Analysis of data**	**1.1 Define Stakeholder and System Level Requirements**	**Requirements Development (RD)** **Technical Solution (TS)**	**3.1 Customer and Market Knowledge** **3.2 Customer Satisfaction and Relationships** **6.1 Product and Service Processes**
Goals					
1. A statement of customer and other stakeholder needs and expectations is established and maintained.		.		SG 1 Develop Customer Requirements (RD)	
2. A description of the interaction of needed products and services with users in the intended environment is defined.					
3. Communication with the customer and other stakeholders is established and maintained.					
4. Customer satisfaction with products and services is					

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 01 Needs	**PA01 Needs** **PA24 Human Factors Engineering** **PA02 Requirements**	**5.2 Customer Focus** **7.2.1 Determination of requirements related to the product** **7.2.3 Customer communication** **8.2.1 Customer satisfaction** **8.4 Analysis of data**	**1.1 Define Stakeholder and System Level Requirements**	**Requirements Development (RD)** **Technical Solution (TS)**	**3.1 Customer and Market Knowledge** **3.2 Customer Satisfaction and Relationships** **6.1 Product and Service Processes**
determined and monitored.					
Practices					
BP 01.01 Identify Customers and Stakeholders	New	5.2 Customer Focus			3.1a -Identify customers
BP 01.02 Elicit Needs	BP 01.01 Elicit Needs	5.2 Customer Focus 7.2.1 Determination of requirements related to the product. b)	SP 1.1-1-1 Identify, collect and baseline stakeholder needs, expectations and constraints. SP 1.1-1-2a Elicit or stimulate stakeholder needs.	SP 1.1-1. Collect Stakeholder Needs (RD) SP 1.1-2. Elicit Needs (RD)	3.1a- Listen and learn, analyze and use data and information obtained 5.3c 1-Determine key factors that affect employee well-being, satisfaction, and motivation
BP 01.03 Analyze Needs	BP 01.02 Analyze Needs BP 02.01 Develop detailed operational concept Human Factors Engineering Addendum	7.2.1 Determination of requirements related to the product. b)	SP 1.1-2-2a Develop operational concepts and scenarios, which include functionality, performance, maintenance, support and disposal as appropriate. SP 1.1-2-2c Review operational concepts and scenarios to refine and discover requirements.	SP 3.1-1. Establish Operational Concepts and Scenarios (RD) SP 1.2-2 Evolve Operational Concepts and Scenarios (TS)	

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 01 Needs	**PA01 Needs** **PA24 Human Factors Engineering** **PA02 Requirements**	**5.2 Customer Focus** **7.2.1 Determination of requirements related to the product** **7.2.3 Customer communication** **8.2.1 Customer satisfaction** **8.4 Analysis of data**	**1.1 Define Stakeholder and System Level Requirements**	**Requirements Development (RD)** **Technical Solution (TS)**	**3.1 Customer and Market Knowledge** **3.2 Customer Satisfaction and Relationships** **6.1 Product and Service Processes**
			SP 1.1-2-2e Define the environment the system will operate in, including boundaries and constraints. SP 1.2-1-1a Develop a detailed operational concept of the interaction of the system, the user, and the environment, that satisfies the operational, support, maintenance, and disposal needs.		
BP 01.04 Establish and Maintain a Statement of Need			SP 1.1-1-2b Prioritize stakeholder needs, expectations and constraints. SP 1.1-1-3a Review, coordinate, and deconflict stakeholder needs and constraints.	SP 1.2-1. Transform stakeholder needs, expectations, constraints, and interfaces into customer requirements. (RD)	3.1a-Determine or project key product/service features and their relative importance to customers
BP 01.05 Communicate with Customers	BP 01.05 Inform Customer	7.2.3 Customer Communication	SP 1-1-1-3b Inform stakeholders on a regular basis about the status and disposition of needs, expectations, or measures of effectiveness. SP 1.2-5-2a Involve stakeholders in the process of requirements development. SP 1.2-5-2c Capture records of		3.2a-Build relationships with customers

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 01 Needs	**PA01 Needs** **PA24 Human Factors Engineering** **PA02 Requirements**	**5.2 Customer Focus** **7.2.1 Determination of requirements related to the product** **7.2.3 Customer communication** **8.2.1 Customer satisfaction** **8.4 Analysis of data**	**1.1 Define Stakeholder and System Level Requirements**	**Requirements Development (RD)** **Technical Solution (TS)**	**3.1 Customer and Market Knowledge** **3.2 Customer Satisfaction and Relationships** **6.1 Product and Service Processes**
			communications with stakeholders relative to requirements trade studies and allocations.		
BP 01.06 Determine Customer Satisfaction: Determine customer satisfaction with products and services.	New	5.2 Customer Focus 8.2.1 Customer satisfaction 8.4 Analysis of data a) 7.2.3 Customer Communication			3.2b- Determine customer satisfaction 3.2b-Follow-up with customers with prompt, actionable feedback 5.3c 2-assess/ determine employee well-being, satisfaction, and motivation

Table PA 01: FAA-iCMM v2.0 Sources of Needs Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 01 Needs	**CUS.1 Acquisition (basic)** **CUS.1.1 Acquisition preparation (comp)** **CUS.3 Requirements elicitation (new)** **CUS.4 Customer Support** **ENG1.1 System requirements analysis and design (component)**	**5.1 Acquisition**	**5.4.1 Stakeholder Requirements Definition** **5.4.2 Requirements Analysis** **5.3.2.3 Project Assessment**	
Goals				
1. A statement of customer and other stakeholder needs and expectations is established and maintained.	CUS.3 results 2, 6, 3		5.4.1.2 Outcomes 1) 2) 4) 5) 6)	
2. A description of the interaction of needed products and services with users in the intended environment is defined.			5.4.1.2 Outcomes 1) 5)	
3. Communication with the customer and other stakeholders is established and maintained.	CUS.3 results 4, 1, 5			
4. Customer satisfaction with products and services is determined and monitored.				
Practices				
BP 01.01 Identify Customers and Stakeholders			5.4.1.3-1	

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 01 Needs	**CUS.1 Acquisition (basic)** **CUS.1.1 Acquisition preparation (comp)** **CUS.3 Requirements elicitation (new)** **CUS.4 Customer Support** **ENG1.1 System requirements analysis and design (component)**	**5.1 Acquisition**	**5.4.1 Stakeholder Requirements Definition** **5.4.2 Requirements Analysis** **5.3.2.3 Project Assessment**	
BP 01.02 Elicit Needs	CUS.3.BP1 : Obtain customer requirements and requests. CUS.3.BP5 : Understand customer expectations.		5.4.1.3-2	
BP 01.03 Analyze Needs		5.1.1.1	5.4.1.3-3 5.4.1.3-4 5.4.1.3-5 5.4.1.3-6 5.4.1.3-7 5.4.2.3-1	
BP 01.04 Establish and Maintain a Statement of Need		5.1.1.1	5.4.1.3-10 5.4.1.3-11 5.4.1.3-8 5.4.1.3-9	
BP 01.05 Communicate with Customers	CUS.3.BP6 : Establish customer query mechanism. ENG.1.1.BP6 : Communicate system requirements. CUS.4.2.BP6 : Communicate customer satisfaction.			
BP 01.06 Determine Customer Satisfaction	CUS.4.2.BP4 : Determine customer satisfaction level. CUS.4.2.BP5 : Compare with competitors. CUS.4.2.BP6: Communicate customer satisfaction.		5.3.2.3- 9	

Table PA 02: FAA-iCMM v2.0 Sources of Requirements Practices - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 02 Requirements	**PA 02 Requirements** **PA 24 Human Factors Engineering** **PA 01 Needs** **PA 03 Architecture**	**7.2.1 Determination of requirements related to product** **7.2.2 Review of requirements related to the product** **7.3.2 Design and development inputs** **5.2 Customer Focus**	**1.1 Define Stakeholder and System Level Requirements** **1.2 Define Technical Problem**	**Requirements Development (RD)** **Requirements Management (RQM)** **Supplier Selection and Monitoring (**SSM)** **Quantitative Supplier Management (**QSM)**	**3.1 Customer and Market Knowledge** **6.1 Product and Service Processes**
Goals					
1. Requirements are derived from customer and other stakeholder needs.	Requirements are derived from customer needs and other appropriate sources. (PA 02) Customer needs are represented in a statement of system requirements. (PA 01)			SG 2 Develop Product Requirements (RD)	
2. Requirements are unambiguous, complete, traceable, feasible, and verifiable.	Requirements are unambiguous, traceable, and verifiable (PA 02)			SG 3 Analyze and Validate Requirements (RD)	
3. All requirements information is recorded and controlled to establish a baseline that is maintained throughout the life cycle.	Requirements are controlled to establish a baseline for engineering and management use. (PA 02) Changes to system requirements are communicated to the customer for agreement (PA 01)			SG 1 Manage Requirements (RQM)	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 02 Requirements	**PA 02 Requirements PA 24 Human Factors Engineering PA 01 Needs PA 03 Architecture**	**7.2.1 Determination of requirements related to product 7.2.2 Review of requirements related to the product 7.3.2 Design and development inputs 5.2 Customer Focus**	**1.1 Define Stakeholder and System Level Requirements 1.2 Define Technical Problem**	**Requirements Development (RD) Requirements Management (RQM) Supplier Selection and Monitoring (**SSM) Quantitative Supplier Management (**QSM)**	**3.1 Customer and Market Knowledge 6.1 Product and Service Processes**
4. Plans, products, activities, and agreements are checked for consistency with requirements, and any inconsistencies are identified for correction.	5. Plans products and activities are kept consistent with requirements (PA 02)			SG 1 Manage Requirements (RQM)	
Practices					
BP 02.01 Identify Functional and Performance Requirements	-	7.2.1 Determination of requirements related to the product 7.3.2 Design and development inputs	SP 1.1-2-1a Analyze and quantify functionality required by users. SP 1.1-2-3c Analyze and quantify functionality indicated by stakeholder requirements. SP 1.2-2-1b Consider the sequencing of time-critical functions both initially and subsequently during system component development. SP 1.2-2-1a Partition requirements into groups, based on established criteria (such as similar functionality, performance, or coupling) to facilitate and focus the requirements analysis.	SP 3.2-1.Establish a definition of required functionality (RD)	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 02 Requirements	**PA 02 Requirements** **PA 24 Human Factors Engineering** **PA 01 Needs** **PA 03 Architecture**	**7.2.1 Determination of requirements related to product** **7.2.2 Review of requirements related to the product** **7.3.2 Design and development inputs** **5.2 Customer Focus**	**1.1 Define Stakeholder and System Level Requirements** **1.2 Define Technical Problem**	**Requirements Development (RD)** **Requirements Management (RQM)** **Supplier Selection and Monitoring (**SSM)** **Quantitative Supplier Management (**QSM)**	**3.1 Customer and Market Knowledge** **6.1 Product and Service Processes**
BP 02.02 Identify Nonfunctional Requirements and Constraints	-	7.2.1 Identification of requirements related to the product c) d) 7.3.2 Design and/or development inputs b)	SP 1.2-1-2a Identify and manage non-technical requirements concurrently with operational, functional, support, maintenance and disposal requirements.		
BP 02.03 Identify key requirements	BP 02.02 Identify key requirements		SP 1.2-1-1c Identify key stakeholder requirements and constraints that have a strong influence on cost, schedule, functionality, risk, or performance. SP 1.1-2-2d Record system requirement decisions that have a significant effect on cost, technical or schedule performance, and the rationale for the decisions.	SP 2.1-1. Establish Product and Product Component Requirements (RD)	3.1a-3 Determine or project key product/service features and their relative importance to customers
BP 02.04 Derive requirements	BP 02.03 Derive and partition requirements *(partition moved to BP 02.07)* BP 03.01 Derive system architecture requirements	7.2.1 Determination of requirements related to product 7.3.2 Design and development inputs c) d)	SP 1.2-1-1b Derive, from the system and other (e.g., environmental) requirements, requirements that may be logically inferred and implied as essential to system effectiveness.		

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 02 Requirements	**PA 02 Requirements PA 24 Human Factors Engineering PA 01 Needs PA 03 Architecture**	**7.2.1 Determination of requirements related to product 7.2.2 Review of requirements related to the product 7.3.2 Design and development inputs 5.2 Customer Focus**	**1.1 Define Stakeholder and System Level Requirements 1.2 Define Technical Problem**	**Requirements Development (RD) Requirements Management (RQM) Supplier Selection and Monitoring (**SSM) Quantitative Supplier Management (**QSM)**	**3.1 Customer and Market Knowledge 6.1 Product and Service Processes**
BP 02.05 Identify external interface requirements	BP 02.04 Identify interface requirements *(internal interfaces moved to PA 03)*	7.2.1 Determination of requirements related to product	SP 1.2-2-1c Identify interface requirements associated with things external to the system and internally between functional partitions or objects.	SP 2.3-1.Identify Interface Requirements: (RD)	
BP 02.06 Analyze requirements	BP 02.06 Analyze requirements	7.3.2 Design and development inputs	SP 1.2-3-1a Analyze requirements to ensure that they are complete, correct, realizable and verifiable. SP 1.2-3-1b Develop and document system and subsystem verification criteria concurrently with requirements development. SP 1.2-3-2 Formally review or inspect requirements for quality attributes including stability, lack of ambiguity, and traceability to the customer baseline. SP 1.1-2-4 Perform analyses, simulations or prototypes to assure that system requirements will satisfy stakeholder needs and expectations. SP 1.1-2-3b Allow for expansion and growth in system requirements.	SP 3.3-1 Analyze Requirements (RD) SP 3.4-3 Evaluate Product Cost, Schedule and Risk (RD)	
BP 02.07 Record and baseline requirements	BP 01.03 Develop System Requirements	7.3.2 Design and development inputs	SP 1.1-2-1b Transform customer/user requirements into a set of system level requirements.	SP 1.2-1. Transform Stakeholder Needs, Expectations, Constraints,	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 02 Requirements	**PA 02 Requirements** **PA 24 Human Factors Engineering** **PA 01 Needs** **PA 03 Architecture**	**7.2.1 Determination of requirements related to product** **7.2.2 Review of requirements related to the product** **7.3.2 Design and development inputs** **5.2 Customer Focus**	**1.1 Define Stakeholder and System Level Requirements** **1.2 Define Technical Problem**	**Requirements Development (RD)** **Requirements Management (RQM)** **Supplier Selection and Monitoring (**SSM)** **Quantitative Supplier Management (**QSM)**	**3.1 Customer and Market Knowledge** **6.1 Product and Service Processes**
	BP 01.04 Obtain Customer Agreement BP 02.07 Capture and baseline requirements	5.2 Customer focus 7.2.2 Review of requirements related to the product	SP 1.1-2-1c Define a system requirements baseline. SP 1.1-2-1d Obtain an agreement between acquirer and developer that system level requirements reflect their needs and expectations. SP 1.1-2-2b Review adequacy of system requirements to meet stakeholder needs with key stakeholders. SP 1.1-2-3a Negotiate an agreement between stakeholders and developers that system level requirements represent an optimum balance of their needs and expectations. SP 1.1-2-4 Perform analyses, simulations or prototypes to assure that system requirements will satisfy stakeholder needs and expectations. SP 1.2-5-1 Formally review requirements with stakeholders. SP 1.2-1-2c Capture relationships between requirements for consideration during change management and requirements allocation.	and Interfaces into Customer Requirements. (RD) SP 1.1-1.Obtain an Understanding of Requirements (RQM) SP 1.2-2.Obtain Commitment to Requirements (RQM) SP 1.1-1 Determine Quantitative Objectives (QSM – ** CMMI-A) SP 1.3-1 Establish and Maintain Requirements (SSM – ** CMMI-A)	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 02 Requirements	**PA 02 Requirements PA 24 Human Factors Engineering PA 01 Needs PA 03 Architecture**	**7.2.1 Determination of requirements related to product 7.2.2 Review of requirements related to the product 7.3.2 Design and development inputs 5.2 Customer Focus**	**1.1 Define Stakeholder and System Level Requirements 1.2 Define Technical Problem**	**Requirements Development (RD) Requirements Management (RQM) Supplier Selection and Monitoring (**SSM) Quantitative Supplier Management (**QSM)**	**3.1 Customer and Market Knowledge 6.1 Product and Service Processes**
			SP 1.2-1-2d Maintain this status of requirements. SP 1.2-2-1d Establish a derived requirements baseline, including the allocation of requirements to subsystems and system components. SP 1.2-2-3 Capture rationale for system level requirements, derived requirements, allocations, and traceability. SP 1.2-5-2b Baseline (describe, capture, and control) and communicate requirements and functional architectures to all stakeholders. (CM also) SP 1.2-2-1a Partition requirements into groups, based on established criteria (such as similar functionality, performance, or coupling) to facilitate and focus the requirements analysis.		
BP 02.08 Analyze and resolve requirements change requests	BP 02.08 Analyze and incorporate requirements changes	7.2.2 Review of product requirements	SP 1.2-4-1 Document changes to requirements. SP 1.2-4-2a Establish a process for formally and proactively controlling and managing changes to requirements, considering impact	SP 1.3-1. Manage Requirements Changes (RQM)	6.1a 2-include changing requirements in product/service designs and production/

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 02 Requirements	**PA 02 Requirements PA 24 Human Factors Engineering PA 01 Needs PA 03 Architecture**	**7.2.1 Determination of requirements related to product 7.2.2 Review of requirements related to the product 7.3.2 Design and development inputs 5.2 Customer Focus**	**1.1 Define Stakeholder and System Level Requirements 1.2 Define Technical Problem**	**Requirements Development (RD) Requirements Management (RQM) Supplier Selection and Monitoring (**SSM) Quantitative Supplier Management (**QSM)**	**3.1 Customer and Market Knowledge 6.1 Product and Service Processes**
			prior to commitment to change, gaining stakeholder buy-in, and tracking and closing out the actions and results. SP 1.2-4-2b Evaluate the impact of requirement changes from the standpoint of all stakeholders. SP 1.2-5-3 Periodically review requirements and their relationship with system functional and physical architectures.		delivery systems and processes
BP 02.09 Maintain consistency and traceability	BP 02.09 Maintain consistency and traceability		SP 1.2-2-2a Maintain requirements traceability to ensure that lower level (derived) requirements are necessary and sufficient to meet the objectives of higher level requirements, and are consistent with the product's functional architecture.	SP 1.4-2. Maintain Bi-directional Traceability of Requirements (RQM) SP 1.5-1. Identify Inconsistencies between Project Work and Requirements (RQM)	

Table PA 02: FAA-iCMM v2.0 Sources of Requirements Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA02 Requirements	**CUS.1 Acquisition** **CUS.3 Requirements elicitation (new)** **ENG.1 Development (basic)** **ENG1.1 System requirements analysis and design (component)** **ENG.1.2 Software requirements analysis (comp)**	**5.1 Acquisition** **5.3 Development – system requirements analysis; software requirements analysis** **5.5 Maintenance – problem and modification analysis** **7.1 Management**	**5.4.1 Stakeholder Requirements Definition** **5.4.2 Requirements Analysis** **5.4.3 Architectural Design** **5.4.10 Maintenance**	
Goals				
1. Requirements are derived from customer and other stakeholder needs.			5.4.2.2 Requirements Analysis Outcomes 1) 2)	
2. Requirements are unambiguous, complete, traceable, feasible, and verifiable.			5.4.2.2 Requirements Analysis Outcomes 5)	
3. All requirements information is recorded and controlled to establish a baseline that is maintained throughout life cycle.	CUS.3 Result 3			
4. Plans, products, activities, and agreements are checked for consistency with requirements, and any inconsistencies are identified for correction.			5.4.2.2 Requirements Analysis Outcomes 3) 4) 5.4.3.2 Architectural Design Outcomes 4)	
Practices				
BP 02.01 Identify functional and performance requirements	ENG.1.1.BP1 : Identify system requirements. ENG.1.2.BP1 : Specify software requirements. ORG.4.BP1 : Identify software engineering environment requirements.	5.1.1.2 5.3.2.1 5.3.4.1	5.4.2.3-2 5.4.2.3-4 5.4.2.3-5 5.4.2.3-6	

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA02 Requirements	**CUS.1 Acquisition** **CUS.3 Requirements elicitation (new)** **ENG.1 Development (basic)** **ENG1.1 System requirements analysis and design (component)** **ENG.1.2 Software requirements analysis (comp)**	**5.1 Acquisition** **5.3 Development – system requirements analysis; software requirements analysis** **5.5 Maintenance – problem and modification analysis** **7.1 Management**	**5.4.1 Stakeholder Requirements Definition** **5.4.2 Requirements Analysis** **5.4.3 Architectural Design** **5.4.10 Maintenance**	
BP 02.02 Identify nonfunctional requirements and constraints	ENG.2.BP1 : Determine maintenance requirements ENG.1.2.BP4 : Develop validation criteria for software. ORG.4.BP1 : Identify software engineering environment requirements.	5.1.1.2 5.3.4.1 5.3.2.1	5.4.10.3-3	
BP 02.03 Identify key requirements			5.4.2.3-3	
BP 02.04 Derive requirements		5.1.1.2	5.4.1.3-3	
BP 02.05 Identify external interface requirements	ENG.1.1.BP1 : Identify system requirements. ENG.1.2.BP2 : Determine operating environment impact.	5.1.1.2 5.3.2.1	5.4.2.3-1	
BP 02.06 Analyze requirements		5.1.1.2 5.3.2.2 5.3.4.2	5.4.2.3-7 5.4.1.3-8	
BP 02.07 Record and baseline requirements	CUS.3.BP2 : Agree on requirements CUS.3.BP3 : Establish customer requirements baseline ENG.1.2.BP7 : Communicate software requirements.	5.1.1.3 5.3.2.1 5.3.4.3	5.4.2.3-9	
BP 02.08 Analyze and resolve requirements change requests	CUS.3.BP4 : Manage customer requirements changes. ENG.2.BP3 : Analyze user problems and enhancements. ENG.1.2.BP6 : Update requirements.	5.5.2.1 5.5.2.5 7.1.1.3		
BP 02.09 Maintain consistency and traceability	ENG.1.1.BP7 : Establish traceability ENG.1.BP2 : Define and implement the traceability process. ENG.1.3.BP5 : Establish traceability ENG.1.4.BP4 : Establish traceability.	5.3.2.2 5.3.4.2	5.4.2.3-8	

Table PA 03: FAA-iCMM v2.0 Sources of Design Practices - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 03 Design	**PA 03 Architecture PA 06 Software Development and Maintenance**	**7.3 Design and development**	**1.3 Define Solution**	**Technical Solution (TS) Requirements Development (RD)**	**6.1 Product and Service Processes**
Goals					
1. A product or service design that will meet the defined requirements is established and maintained.	1. A system architecture that will meet the defined requirements is established and maintained. 2. The architecture evolves to meet changing requirements.	7.3.3 Design and development outputs a)	1.3-1 Design Synthesis	SG 1 Select Product Component Solutions (TS) SG 2 Develop the Design (TS)	
2. The established product or service design is based on an evaluation of alternatives against criteria that represent the requirements.				SG 1 Select Product Component Solutions (TS)	
Practices					
BP 03.01 Identify and Prioritize Design Issues	BP 03.02 Identify key design issues		SP 1.3-1-2a Identify architectural or design issues that must be resolved to support successful development of the system. SP 1.3-2-3d Identify evolving requirement issues and their impacts to ongoing programs as inputs to the requirement management practices of FA 1.2 – Define Technical Problem SP 1.3-1-3f Establish a mechanism to identify design issues which should be subjected to decision analysis		

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 03 Design	**PA 03 Architecture PA 06 Software Development and Maintenance**	**7.3 Design and development**	**1.3 Define Solution**	**Technical Solution (TS) Requirements Development (RD)**	**6.1 Product and Service Processes**
			or trade studies throughout system development. SP 1.3-1-3g Capture the rationale for key (i.e., significant effect on cost, schedule or technical performance) decisions taken or defined. SP 1.3-2-3b Identify key requirements and design issues for separate tracking per the requirement management practices of FA 1.2 - Define Technical Problem, and for consideration by the practices of FA 2.5 - Manage Risk.		
BP 03.02 Develop Design Structure	BP 03.03 Develop architectural structure BP 06.03 Design Software		SP 1.3-1-1b Generate alternative system concepts physical architectures, and design solutions and select a solution in accordance with FA 1.4 - Assess and Select. SP 1.3-1-3c Develop system design alternatives which consider cost drivers, technology limitations and risk. SP 1.3-1-4b Develop system design alternatives which consider life cycle cost, complexity, system expansion, and growth. SP 1.3-1-4c Consider the evolution of requirement drivers and technology in selecting a preferred solution. SP 1.2-2-2b Conduct trade studies or decision analyses to select between competing alternatives in all phases of the requirements process, including initial architecture development and subsequently in allocating requirements to lower levels of functional and physical architectures.	SP 1.1-1 Develop Alternative Solutions and Selection Criteria (TS) SP 1.1-2 Develop Detailed Alternative Solutions and Selection Criteria (TS) SP 1.3-1 Select Product Component Solutions (TS)	
BP 03.03 Develop Interface Specifications	BP 03.04 Develop architectural interface requirements		SP 1.3-1-1c Identify interfaces between design components and their requirements for specification and management in accordance with the practices of FA 1.5 - Integrate System.	SP 2.3-3 Design Comprehensive Interface (TS) SP 2.3-1 Establish	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 03 Design	**PA 03 Architecture PA 06 Software Development and Maintenance**	**7.3 Design and development**	**1.3 Define Solution**	**Technical Solution (TS) Requirements Development (RD)**	**6.1 Product and Service Processes**
	BP 06.03Design Software		SP 1.3-1-3a Fully define interfaces in terms of origination, destination, stimulus and data characteristics for software, and electrical and mechanical characteristics for hardware.	Interface Descriptions (TS)	
BP 03.04 Allocate Requirements	BP 03.05 Allocate architecture requirements BP 06.03 Design Software		SP 1.3-2-1a Identify the assignment or allocation of requirements to design components and interfaces for recording and maintenance in accordance with requirement management practices of FA 1.2 - Define Technical Problem. SP 1.3-2-2a Identify requirement performance and functional allocations to design components and interfaces for recording and maintenance in accordance with the requirement management practices of FA 1.2 - Define Technical Problem. SP 1.3-2-2b Allocate key requirements to alternative solution components. SP 1.3-2-3a Identify and allocate appropriate derived requirements that address the effectiveness and cost of life-cycle phases following development, such as production and operation, to the extent they are compatible with business objectives. SP 1.3-2-3f Capture the rationale for requirement allocation decisions. SP 1.2-2-1e Allocate requirements to functional partitions, objects, people, or support elements to support synthesis of solutions.	SP 2.2-1 Allocate Product Component Requirements (RD)	
BP 03.05 Define Interactions among Design Elements	BP 06.03 Design Software		SP 1.3-1-2b Evolve the operational concept to a level of detail appropriate to each level of physical decomposition and input to the practices of FA 1.2 - Define Technical Problem for maintenance. SP 1.3-1-3d Develop timeline scenarios for system	SP 1.2-2 Evolve Operational Concepts and Scenarios (TS)	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 03 Design	**PA 03 Architecture PA 06 Software Development and Maintenance**	**7.3 Design and development**	**1.3 Define Solution**	**Technical Solution (TS) Requirements Development (RD)**	**6.1 Product and Service Processes**
			operation and user interaction for each alternative system design.		
BP 03.06 Establish Component Specifications	BP 06.03 Design Software	7.3.3 Design and development outputs a) b)	SP 1.3-2-3e Identify design constraints as requirements for each level of design.		
BP 03.07 Establish and Use a Strategy for Non-developmental Items			SP 1.3-1-3bPlan f or evolutionary use of purchased or non-developmental (COTS, GOTS, and reuse) items. SP 1.3-1-4a Establish a mechanism to identify components which should be designed for reuse. SP 3.3-2-2 Establish formal criteria for the reuse and COTS/internal development decision process. SP 3.3-2-3a Establish a mechanism for applying business goals to the evaluation of internal development of technologies versus those externally available. SP 3.3-2-3b Establish a mechanism for assessing existing designs and specifications for reuse in new applications.	SP 2.4-3 Perform Make, Buy, or Reuse Analyses (TS)	
BP 03.08 Establish and Maintain Design Description	BP 03.06 Capture system architecture BP 06.03 Design Software	7.3.3 Design and development outputs a) b) c) d)	SP 1.3-1-1a Capture and maintain a description of solution component features and constraints. SP 1.3-1-2c Record and maintain the solution description and rationale in a way that is accessible to all stakeholders. SP 1.3-1-5 Identify key architectural features which guide future system/product versions and upgrades. SP 1.5-2-3a Capture all interface designs in a common interface control format. SP 1.5-2-3b Capture interface design rationale. SP 1.5-2-3c Store interface data in a commonly accessible repository	SP 2.2-1 Develop a Technical Data Package (TS) SP 2.2-3 Establish a Complete Technical Data Package (TS)	

Table PA 03: FAA-iCMM v2.0 Sources of Design Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 03 Design	**ENG1.1 System requirements analysis and design (component)** **ENG.1.3 Software design**	**Development – system architectural design; software architectural design; software detailed design**	**5.4.3.3 Architectural Design Process Outcomes/Activities**	**EIA-632** **4.3.2 Solution Definition** **IEEE Std 1220** **6.5 Synthesis**
Goals				
1. A product or service design that will meet the defined requirements is established and maintained.	ENG.1.1 System requirements analysis and design process. ENG.1.3 Software design process.		5.4.3.2 Architectural Design Process Outcomes 1) 2) 3) 5) 6)	EIA-632 Requirement 18—Physical Solution Representations
2. The established product or service design is based on an evaluation of alternatives against criteria that represent the requirements.				
Practices				
BP 03.01 Identify and Prioritize Design Issues				
BP 03.02 Develop Design Structure	ENG.1.1.BP2 : Analyze system requirements. ENG.1.1.BP3 : Describe system architecture. ENG.1.3.BP1 : Develop software architectural design. ENG.1.3.BP4 : Develop detailed design.	5.3.3.1 5.3.5.1 5.3.5.3 5.5.2.3 5.5.2.4	5.4.3.3 Architectural Design Process Activities 4.	EIA-632 Requirement 18—Physical Solution Representations

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 03 Design	**ENG1.1 System requirements analysis and design (component)** **ENG.1.3 Software design**	**Development – system architectural design; software architectural design; software detailed design**	**5.4.3.3 Architectural Design Process Outcomes/Activities**	**EIA-632** **4.3.2 Solution Definition** **IEEE Std 1220** **6.5 Synthesis**
BP 03.03 Develop Interface Specifications	ENG.1.3.BP2 : Design interfaces.	5.3.5.2 5.3.6.2	5.4.3.3 Architectural Design Process Activities 5.	
BP 03.04 Allocate Requirements	ENG.1.1.BP4: Allocate requirements.	5.3.3.1 5.3.5.1 5.3.6 Software detailed design 5.3.6.1	5.4.3.3 Architectural Design Process Activities 1. 2.	
BP 03.05 Define Interactions among Design Elements				
BP 03.06 Establish Component Specifications		5.3.6.1.	5.4.3.3 Architectural Design Process Activities 7.	EIA-632 Requirement 19—Specified Requirements
BP 03.07 Establish and Use a Strategy for Non-developmental Items			5.4.3.3 Architectural Design Process Activities 3.	EIA-632 Requirement 18—Physical Solution Representations
BP 03.08 Establish and Maintain Design Description		5.3.3.1. 5.3.5.1 5.3.6 Software detailed design. 5.3.6.2 5.3.6.3	5.4.3.3 Architectural Design Process Activities 8.	EIA-632 Requirement 19—Specified Requirements

Table PA 04: FAA-iCMM v2.0 Sources of Alternatives Analysis Practices - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 04 Alternatives Analysis	**PA 04 Alternatives**	**-**	**1.4 Assess and Select**	**Decision Analysis and Resolution**	**6.2 Support Processes 2. Strategic Planning**
Goals					
1. Strategies are established and maintained that support the analysis of alternatives and structured decision-making.	1. An evaluation strategy is established and maintained.		Theme 1.4-1 Selection of Appropriate Decision-Making Techniques		**2. Strategic Planning – An effective improvement system combines improvements of many types and degrees of involvement. This requires clear strategic guidance, particularly when improvement alternatives compete for limited resources.**
2. Alternative solutions to selected issues are analyzed and solutions selected or recom-mended in accordance with established strategy and criteria.	2. Alternatives are identified, analyzed and selected in accordance with the established strategy.		Theme 1.4-2 Consideration of Alternatives Theme 1.4-3 Evaluation Criteria Theme 1.4-4 Selection and Communication of Alternatives	SG 1 Evaluate Alternatives	
3. Results and rationale of alternatives analysis are documented and communicated.	3. Results of the evaluation are recorded for each alternative.				
Practices					
BP 04.01 Establish Analysis Strategy	BP04.01 Establish Evaluation Criteria		SP 1.4-1-1 Use structured decision making techniques to resolve technical issues. SP 1.4-3-1 Use established, documented evaluation criteria.	SP 1.1-1 Establish and Use Guidelines for Decision Analysis	
BP 04.02 Define the Problem			SP 1.2-1-2b Balance system and development cost and complexity, schedule,	SP 1.3-1 Establish Evaluation Criteria	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 04 Alternatives Analysis	**PA 04 Alternatives**	**-**	**1.4 Assess and Select**	**Decision Analysis and Resolution**	**6.2 Support Processes 2. Strategic Planning**
			performance, and capabilities of existing designs and products in all trade studies using established criteria.		
BP 04.03 Select Analysis Method	BP04.02 Define Analysis Approach		SP 1.4-1-2 Select appropriate decision-making technique and record rationale for choice.	SP 1.2-1 Select Decision-Making Techniques	
BP 04.04 Identify Alternative Solutions	BP04.03 Identify Alternatives		SP 1.4-2-1 Consider all alternatives presented when making a decision. SP 1.4-2-2 Identify alternatives for consideration in addition to those supplied with the problem statement.	SP 1.4-1 Identify Alternative Solutions	
BP 04.05 Analyze Alternative Solutions	BP04.04 Analyze Alternatives		SP 1.4-3-2a Evaluate the reasonableness and validity of assumptions. SP 1.4-3-2b Consider sensitivity of analysis results when establishing evaluation criteria. SP 1.4-3-3a Include technology limitations, environmental impact, and risks in evaluation criteria. SP 1.4-3-3b Include total ownership and life-cycle costs in evaluation criteria.	SP 1.5-1 Evaluate Alternatives	2.1 b) Strategic Objectives - describe strategic objectives and timetable for implementing them; - evaluate options to assess relative to key factors
BP 04.06 Select Solution	BP04.05 Select Solution		SP 1.4-4-1a Select a balanced solution based on established criteria. SP 1.4-4-1b Involve affected parties in the selection of preferred alternatives.	SP 1.6-1 Select Solutions	
BP 04.07 Communicate Analysis Results	BP04.06Capture the Disposition of Each Alternative		SP 1.4-4-2 Capture and communicate decisions and their rationale to affected parties. SP 1.4-4-3 Record alternative solutions and the rationale for rejection. SP 1.4-3-3c Capture the rationale for the selection and rejection of evaluation criteria. SP 1.5-1-4b Capture rationale for decisions taken and deferred.		

Table PA 04: FAA-iCMM v2.0 Sources of Alternatives Analysis Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 04 Alternatives Analysis		-	**5.3.4 Decision Making**	**EIA-632** **4.5.1 Systems Analysis Process**
Goals			**Outcomes**	
1. Strategies are established and maintained that support the analysis of alternatives and structured decision-making.				
2. Alternative solutions to selected issues are analyzed and solutions selected or recommended in accordance with established strategy and criteria.			5.3.4.2 Decision Making Process Outcomes 1) 2) 3) 4)	EIA-632 4.5.1 Systems Analysis Process Requirement 23
3. Results and rationale of alternatives analysis are documented and communicated.				
Practices			**Activities**	
BP 04.01 Establish Analysis Strategy	ORG.2.1.BP3 : Define and document the processes performed in the organization		5.3.4.3 - Decision Making Process Activities 1. 7.	

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 04 Alternatives Analysis		**-**	**5.3.4 Decision Making**	**EIA-632** **4.5.1 Systems Analysis Process**
BP 04.02 Define the Problem			5.3.4.3- Decision Making Process Activities 2. 4.	
BP 04.03 Select Analysis Method			5.3.4.3 - Decision Making Process Activities 4.	
BP 04.04 Identify Alternative Solutions			5.3.4.3 - Decision Making Process Activities 2. 3.	
BP 04.05 Analyze Alternative Solutions			5.3.4.3 - Decision Making Process Activities 5.	
BP 04.06 Select Solution		5.2.1.2 5.2.4.4		
BP 04.07 Communicate Analysis Results			5.3.4.3- Decision Making Process Activities 6. 7.	EIA-632 Requirement 23

Table PA 05: FAA-iCMM v2.0 Sources of Outsourcing Practices – Part 1

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 05 Outsourcing	**PA 05 Outsourcing**	**7.4 Purchasing**	**2.4 Coordinate with Suppliers**	**Supplier Agreement Management (SAM)** ****Supplier Selection and Monitoring (SSM)** ****Integrated Supplier Management (ISM)** **Quantitative Supplier Management (QSM)**	**6.3 Supplier and Partnering Processes** **5.1 Work Systems**
Goals					
1. Needs for outsourcing are determined.			2.4-1 Outsourced Work Product Identification	SG-1. Analyze Needs and Requirements Determined by the Project (SAM)	
2. Qualified suppliers are selected to provide solution or process components.	1. Qualified suppliers are selected to provide product or process components.	7.4 Purchasing	2.4-1 Outsourced Work Product Identification 2.4-2 Supplier Selection 3.3-2 Technology Re-use and Commercial-Off-The-Shelf Technology	SG-1. Establish and Maintain Supplier Requirements (SSM) SG-2. Select Suppliers and Establish Agreements (SSM) SG-2. Appraise custom-made Product Suppliers (ISM)	
3. A productive communications environment is established and maintained with potential suppliers.	2. A productive communications environment is established and maintained with suppliers.			SG 1. Establish Supplier Agreements. (SAM) SG 1. Establish Supplier Agreements. (SAM) SG-2. Select Suppliers and Establish Agreements (SSM) SG-2. Establish a Cooperative Environment (ISM)	
Practices					
BP 05.01 Identify Needed Products or Services	BP 05.01 Identify Needed System or Process Components	4.1 General requirements	SP 2.4-1-1 The organization identifies system components or services that will be provided by internal & external suppliers SP 2.4-1-2 The organization performs trade studies to determine	SP 1.1-1 Analyze needs and requirements Determined by the project. (SAM) SP 1.1-1 Determine Customer Needs (SSM) SP 1.1-1 Determine	5.1a - 6 How do you identify characteristics and skills needed by potential employees; how do you recruit and hire new employees?

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 05 Outsourcing	**PA 05 Outsourcing**	**7.4 Purchasing**	**2.4 Coordinate with Suppliers**	**Supplier Agreement Management (SAM)** ****Supplier Selection and Monitoring (SSM)** ****Integrated Supplier Management (ISM)** **Quantitative Supplier Management (QSM)**	**6.3 Supplier and Partnering Processes** **5.1 Work Systems**
			make-vs-buy decisions based on business needs. SP 3.4-2-2b Perform cost-benefit analysis for commercial off-the-shelf versus in-house developed environments. SP 3.3-2-3b Establish a mechanism for assessing existing designs and specifications for reuse in new applications.	Quantitative Objectives (QSM)	How do you take into account key performance requirements, diversity of your community, and fair work force practices? N1. The term employees refers to … as well as any contract employees supervised by your organization. 6.3-1 What key products/services do you acquire from suppliers and/or partners?
BP 05.02 Identify Competent Suppliers	BP 05.02 Identify Competent Suppliers	7.4.1 Purchasing Control	SP 2.4-2-1 Capable suppliers are chosen according to FA 1.4 - Assess and Select. SP 2.4-2-3 Suppliers are selected based on an evaluation of the supplier's ability to perform the work.	SP 1.2- Determine Sourcing Options (SSM) SP 1.1-1 Analyze Off-the-Shelf Products (ISM) SP 2.1-1 Appraise the Supplier's Engineering Process (ISM)	5.1a. (6) How do you identify characteristics and skills needed by potential employees; how do you recruit and hire new employees? How do you take into account key performance requirements, diversity of your community, and

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 05 Outsourcing	**PA 05 Outsourcing**	**7.4 Purchasing**	**2.4 Coordinate with Suppliers**	**Supplier Agreement Management (SAM)** ****Supplier Selection and Monitoring (SSM)** ****Integrated Supplier Management (ISM)** **Quantitative Supplier Management (QSM)**	**6.3 Supplier and Partnering Processes** **5.1 Work Systems**
					fair work force practices? N1. The term employees refers to … as well as any contract employees supervised by your organization.
BP 05.03 Prepare for the Solicitation or Tasking	BP 05.03 Prepare for the solicitation BP 08.03 Incorporate Evaluation Requirements into the Solicitation and Contract	7.4.2 Purchasing Information	SP 2.4-2-2a Criteria are established to evaluate potential suppliers that meet program and organization objectives. SP 2.4-3-2a When suppliers are used on the program, requirements for the work are formally documented. SP 3.3-2-2 Establish formal criteria for the reuse and COTS/internal development decision process. SP 3.3-2-3a Establish a mechanism for applying business goals to the evaluation of internal development of technologies versus those externally available.	SP 2.1-1 Conduct the Solicitation (SSM) SP 2.1-1 Acquire COTS Products (SAM) SP 1.2-1 Incorporate Quantitative Objectives into Acquisition Documents (QSM)	5.1a. (6) How do you identify characteristics and skills needed by potential employees; how do you recruit and hire new employees? How do you take into account key performance requirements, diversity of your community, and fair work force practices? N1. The term employees refers to … as well as any contract employees supervised by your organization. 6.3 (2) How do you incorporate performance

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 05 Outsourcing	**PA 05 Outsourcing**	**7.4 Purchasing**	**2.4 Coordinate with Suppliers**	**Supplier Agreement Management (SAM)** ****Supplier Selection and Monitoring (SSM)** ****Integrated Supplier Management (ISM)** **Quantitative Supplier Management (QSM)**	**6.3 Supplier and Partnering Processes** **5.1 Work Systems**
					requirements into supplier… management? What key performance requirements must your suppliers … meet …? 6.3 (3) How do you ensure that your performance requirements are met? How do you provide timely and actionable feedback to suppliers and/or partners? Include the key performance measures and/or indicators 6.3 (5) How do you provide assistance and/or incentives to suppliers and/or partners to help them improve their overall performance and to improve their abilities to contribute to your current and longer-term performance?

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 05 Outsourcing	**PA 05 Outsourcing**	**7.4 Purchasing**	**2.4 Coordinate with Suppliers**	**Supplier Agreement Management (SAM)** ****Supplier Selection and Monitoring (SSM)** ****Integrated Supplier Management (ISM)** **Quantitative Supplier Management (QSM)**	**6.3 Supplier and Partnering Processes** **5.1 Work Systems**
BP 05.04 Choose Supplier	BP 05.04 Choose Supplier	7.4.1 Purchasing Control (second paragraph.)	SP 2.4-2-1 Capable suppliers are chosen according to FA 1.4 - Assess and Select. SP 2.4-2-2b Suppliers are selected based upon input from the systems engineering team leader. SP 2.4-2-3 Suppliers are selected based on an evaluation of the supplier's ability to perform the work.	SP 2.2-1 Select Suppliers (SSM) SP 1.2-1 Analyze Custom-made Sources (ISM) SP 1.3-1 Determine Acquisition Sources (ISM)	5.1a. (6) How do you identify characteristics and skills needed by potential employees; how do you recruit and hire new employees? How do you take into account key performance requirements, diversity of your community, and fair work force practices? N1. The term employees refers to … as well as any contract employees supervised by your organization. 6.3 (6) How do you improve your supplier and/or partner processes, including your role as supportive customer/partner, to keep current with your organization needs and directions? How are improvements shared

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 05 Outsourcing	**PA 05 Outsourcing**	**7.4 Purchasing**	**2.4 Coordinate with Suppliers**	**Supplier Agreement Management (SAM)** ****Supplier Selection and Monitoring (SSM)** ****Integrated Supplier Management (ISM)** **Quantitative Supplier Management (QSM)**	**6.3 Supplier and Partnering Processes** **5.1 Work Systems**
					throughout your organization, as appropriate?
BP 05.05 Communicate with Suppliers	BP 05.05 Communicate with Suppliers		SP 2.4-3-1 … provides the supplier with the needs, expectations, and measures of effectiveness . SP 2.4-3-2b Requirements changes are re-negotiated with the supplier and the changes documented. SP 2.4-3-3 … clearly documented agreement … statement of work, specification, terms and conditions, a list of deliverables, a schedule, budget, and a defined acceptance process. SP 2.4-3-4 … supplier is involved early in the program to assist in … development and definition. SP 2.4-4-4b … mechanism for establishing and nurturing long term relationships with preferred suppliers.	SP 1.3-1 Establish supplier agreements. (SAM) SP 2.3-1 Establish and Maintain Agreements (SSM) SP 2.1-1 Acquire COTS Products (SAM CMM-A)	6.3 Supplier and Partnering Processes (6) How do you improve your supplier and/or partner processes, including your role as supportive customer/partner, to keep current with your organization needs and directions? How are improvements shared throughout your organization, as appropriate?

Table PA 05: FAA-iCMM v2.0 Sources of Outsourcing Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 05 Outsourcing	**CUS.1 Acquisition (basic)** **CUS.1.1 Acquisition preparation (component)** **CUS.1.2 Supplier selection (component)** **ENG.1.1 System requirements analysis and design (component)**	**5.1 Acquisition** **6.4 Verification** **6.5 Validation**	**5.1.1 Acquisition Process**	
Goals				
1. Needs for outsourcing are determined.	CUS.1			
2. Qualified suppliers are selected to provide solution or process components.			5.1.1.2	
3. A productive communications environment is established and maintained with potential suppliers.	CUS.1			
Practices				
BP 05.01 Identify Needed Products or Services	CUS.1.BP1 : Identify the need. CUS.1.1.BP1 : Identify the need. CUS.1.1.BP2 : Define the requirements.	5.1.1.1 5.1.1.2 5.1.1.6	5.2.4.3 4)	
BP 05.02 Identify Competent Suppliers		5.1.1.7 6.4.1.3 6.5.1.3	5.1.1.3 3)	
BP 05.03 Prepare for the Solicitation or Tasking	CUS.1.1.BP3 Prepare acquisition strategy. CUS.1.1.BP4 Define acceptance criteria. CUS.1.2.BP1 Define acquisition requirements.	5.1.1.3 5.1.1.8 5.1.1.9 5.1.2 5.1.3.1	5.1.1.3	

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 05 Outsourcing	**CUS.1 Acquisition (basic)** **CUS.1.1 Acquisition preparation (component)** **CUS.1.2 Supplier selection (component)** **ENG.1.1 System requirements analysis and design (component)**	**5.1 Acquisition** **6.4 Verification** **6.5 Validation**	**5.1.1 Acquisition Process**	
		5.1.2.4		
BP 5.04 Choose Supplier:	CUS.1.BP2 Select a supplier. CUS.1.2.BP3 Prepare and negotiate contract.	5.1.3.2 5.1.3.3 5.1.3.4	5.1.1.3 4) 5)	
BP 5.05 Communicate with Suppliers:	ENG.1.1.BP6 : Communicate system requirements.		5.1.1.3 3)	

Table PA 06: FAA-iCMM v2.0 Sources of Design Implementation Practices - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 06 Design Implementation	**PA 06 Software Development and Maintenance**	**7.3 Design and development**	**-**	**Technical Solution (TS)**	**6.1 Product and Service Processes**
Goals					
1. Solution component(s) are developed.	1. The software engineering tasks are defined, integrated, and consistently performed to produce the software.			SG 3:Implement the Product Design (TS)	
2. Documentation to support solution component(s) is established and maintained.	2. Software work products are kept consistent with each other.				
Practices					
BP 06.01 Establish the Implementation Environment	BP 06.01 Integrate Methods and Tools	7.5.1 Control of production and service provision a) b) c) d) e) f)			
BP 06.02 Formulate product or service components	BP 06.04 Implement Software	7.3.3 Design and development outputs a)		SP3.1-1: Implement the Design (TS)	
BP 06.03 Develop Documentation	BP 06.04 Implement Software BP 06.07 Develop Documentation	7.3.3Design and development outputs b) c) d) 7.5.1 Control of production and service provision a) b) c) d) e) f)		SP3.2-1: Establish Product Support Documentation (TS) SP 2.2-1 Develop a Technical Data Package (TS) SP 2.2-3 Establish a Complete Technical Data Package (TS)	

Table PA 06: FAA-iCMM v2.0 Process Areas and their Major Sources - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA06 Design Implementation	**ENG.1 Development (basic)** **ENG.1.4 Software construction (component)**	**5.3 Development** **5.5 Maintenance**	**Implementation**	**EIA-632: Product Realization**
Goals			**Outcomes**	
1. Solution component(s) are developed.			5.4.4.1:Implementation Process	
2. Documentation to support solution component(s) is established and maintained.				
Practices				
BP 06.01 Establish the Implementation Environment			5.4.4.3-2 5.4.4.3-4	
BP 06.02 Formulate product or service components	ENG.1.4.BP1 : Develop software units.	5.3.7 Software coding and testing. 5.3.7.1 a) 5.5.3 Modification implementation. 5.5.3.1 5.5.3.2 b)	5.4.4.3-5: a) b) 5.4.4.2-2:	EIA 632 Requirement 20
BP 06.03 Develop Documentation	ENG.1.4.BP1 : Develop software units.	5.3.7 Software coding and testing. 5.3.7.1 a) 5.3.5.4 5.3.7.3 5.3.8.3 5.3.6.4	5.4.4.2-2:	

Table PA 07: FAA-iCMM v2.0 Sources of Integration Practices - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 07 Integration	**PA 07 Integration**	**-**	**1.5 Integrate System**	**Product Integration (PI)**	**6.1 Product and Service Processes**
Goals	**Goals**		**Themes**		
1. A strategy for integrating the product and service elements is defined.	A strategy for integrating the system elements is defined. Interfaces are defined in accordance with the system architecture.		Integration Strategy Integration Preparation Interface Coordination	SG 1 The strategy for conducting product integration is established and maintained (PI) SG 2 The product component interfaces, both internal and external, are compatible (PI)	
2. Readiness of product and service elements for integration is verified.	System elements are verified.				
3. The product or service is integrated in accordance with the integration strategy.	4. The system is integrated in accordance with the integration strategy.		System Element Integration	SG 3 Verified product components are assembled and the integrated, verified, and validated product is delivered. (PI)	
Practices					
BP 07.01 Develop Integration Strategy.	BP 07.07 Develop Integration Strategy		SP 1.5-1-1 Develop an integration strategy. SP 1.5-1-2 Document the integration strategy as part of an integration plan. SP 1.5-1-3a Develop the integration plan early in the program.	SP 1.1-1 Establish a Product Integration Strategy (PI) SP 1.2-2 Establish the Product Integration Environment (PI) SP 1.3-3 Define Detailed Product Integration Procedures (PI)	
BP 07.02 Confirm Readiness of Product and Service Elements.	BP 07.02 Verify Receipt of System Elements		SP 1.5-3-1a Verify the receipt of each system element (component) required to assemble the system in accordance with the physical architecture. SP 1.5-3-2 Coordinate the receipt of	SP 3.1-1 Confirm Readiness of Product Components for Integration (PI)	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 07 Integration	**PA 07 Integration**	**-**	**1.5 Integrate System**	**Product Integration (PI)**	**6.1 Product and Service Processes**
			system elements for system integration according to the planned integration strategy.		
BP 07.03 Review and Coordinate Interface Definitions**.**			SP 1.5-2-1a Coordinate interface definition, design, and changes between affected groups and individuals throughout the life cycle. SP 1.5-2-2a Review interface data. SP 1.5-2-2b Ensure complete coverage of all interfaces. SP 1.5-2-4 Review the adequacy of interface documentation periodically.	SP 2.1-1 Review Interface Descriptions for Completeness (PI) SP 2.2-1 Manage Interfaces (PI)	
BP 07.04 Assemble Product and Service Elements.	BP 07.05 Assemble Aggregates of System Elements		SP 1.5-4-1a Assemble aggregates of system elements in accordance with the integration plan.	SP 3.2-1 Assemble Product Components (PI)	
BP 07.05 Confirm Integrated Product or Service Operation	BP 07.06 Test System Level Integration		SP 1.5-4-1b Checkout assembled aggregates of system elements.	SP 3.3-1 Checkout Assembled Product Components (PI)	

Table PA 07: FAA-iCMM v2.0 Sources of Integration Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 07 Integration	**ENG.1.7 System integration & testing (comp)** **ENG.1.5 Software integration (component)**	**5.3 Development** **5.3.8 Software integration** **5.3.10 System integration**	**5.4.5 Integration**	**EIA-632 System Design, Product Realization, Application Key Concepts**
Goals				
1. A strategy for integrating the product and service elements is defined.	5.1.2.8 ENG.1.7 System integration and testing process. 5.1.2.6 ENG.1.5 Software integration process.		5.4.5.2 Integration Process Outcomes 1) 2)	
2. Readiness of product and service elements for integration is verified.				
3. The product or service is integrated in accordance with the integration strategy.	5.1.2.8 ENG.1.7 System integration and testing process.		5.4.5.2 Integration Process Outcomes 1) 2)	
Practices				
BP 07.01 Develop Integration Strategy.	ENG.1.7.BP1 : Develop system integration and test strategy. ENG.1.5.BP1 : Develop software integration strategy.	5.3.8 Software integration. 5.3.8.1 5.3.8.2	5.4.5.3 Integration Process Activities 1. 2.	EIA 632 Requirement 32
BP 07.02 Confirm Readiness of Product and Service Elements.			5.4.5.3 Integration Process Activities 3.	
BP 07.03 Review and Coordinate Interface Definitions.				

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 07 Integration	**ENG.1.7 System integration & testing (comp)** **ENG.1.5 Software integration (component)**	**5.3 Development** **5.3.8 Software integration** **5.3.10 System integration**	**5.4.5 Integration**	**EIA-632 System Design, Product Realization, Application Key Concepts**
BP 07.04 Assemble Product and Service Elements.	ENG.1.7.BP3 : Build aggregates of system units. ENG.1.5.BP5 : Integrate software item.	5.3.10 System integration. 5.3.10.1	5.4.5.3 Integration Process Activities 5.	EIA 632 Requirement 20
BP 07.05 Confirm Integrated Product or Service Operation			5.4.5.3 Integration Process Activities 6.	EIA 632 Requirement 20

Table PA 08: FAA-iCMM v2.0 Sources of Evaluation Practices - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 08 Evaluation	**PA 08 System Test and Evaluation** **PA 17 Peer Review**	**8.3 Control of nonconforming product** **7.3.4 Design and development review** **7.3.5 Design and development verification** **7.3.6 Design and development validation**	**1.6 Verify System** **1.7 Validate System**	**Verification (VER)** **Validation (VAL)** **Supplier Agreement Management (SAM)** **Requirements Development (RD)** ****Supplier Selection and Monitoring (SSM)**	**Product and Service Processes** **3.2 Customer Satisfaction and Relationships**
Goals					
1. The evaluation approach, requirements, methods, and environment are established to provide an objective basis for determining whether the products and services meet requirements and can be accepted.	1.The evaluation approach, requirements and methods are defined to provide an objective basis to support the decision for acceptance of the system products and services.		1.6-1 Integrated Verification Planning 1.6-2 Preparation for Verification 1.7-1 Validation Strategy	SG 1 Preparation for verification is conducted. (VER) SG 1 Preparation for validation is conducted. (VAL)	
2. Evaluations are performed as planned.	2. Evaluations are performed as planned.		1.6-3 Incremental Verification 1.7-3 Product Validation	SG 2 Peer reviews are performed on selected work products. (VER) SG 3 Selected work products are verified against their specified requirements. (VER) SG 2 The product or product components are validated to ensure that they are suitable for use in	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 08 Evaluation	**PA 08 System Test and Evaluation** **PA 17 Peer Review**	**8.3 Control of nonconforming product** **7.3.4 Design and development review** **7.3.5 Design and development verification** **7.3.6 Design and development validation**	**1.6 Verify System** **1.7 Validate System**	**Verification (VER)** **Validation (VAL)** **Supplier Agreement Management (SAM)** **Requirements Development (RD)** ****Supplier Selection and Monitoring (SSM)**	**Product and Service Processes** **3.2 Customer Satisfaction and Relationships**
				their intended operating environment. (VAL)	
3. Analyses are conducted on results of evaluations to support acceptance or corrective actions.	3. Analyses are conducted on results of evaluations and developer performance.		Analysis and Actions 1.7-4 Analysis and Actions		
Practices					
BP 08.01 Develop Evaluation Strategy.	BP 08.01 Develop Evaluation Strategy and Requirements.	7.3.1 Design and development planning a) b)	SP 1.6-1-1 Plan the set of comprehensive, integrated verification activities, addressing all certification requirements, objectives, resources, facilities, special equipment, and schedules applicable to the system development. SP 1.6-1-2a Include realistic operational and environmental scenarios in system verification plans. SP 1.7-1-1 Develop a strategy for system validation. SP 1.7-1-2 Define requirements for a realistic operational, maintenance, and support environment.	SP 1.1-1 Establish a Verification Strategy. (VER) SP 1.1-1 Establish a Validation Strategy. (VAL)	3.2 b. (1) What processes, measurement methods, and data do you use to determine customer satisfaction and dissatisfaction? Include how your measurements capture actionable information that reflects customers' future business and/or potential for positive referral. 6.1 a (6) How do you coordinate and test design and

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 08 Evaluation	**PA 08 System Test and Evaluation** **PA 17 Peer Review**	**8.3 Control of nonconforming product** **7.3.4 Design and development review** **7.3.5 Design and development verification** **7.3.6 Design and development validation**	**1.6 Verify System** **1.7 Validate System**	**Verification (VER)** **Validation (VAL)** **Supplier Agreement Management (SAM)** **Requirements Development (RD)** ****Supplier Selection and Monitoring (SSM)**	**Product and Service Processes** **3.2 Customer Satisfaction and Relationships**
					production/ delivery processes to ensure capability for trouble-free and timely introduction of products/services?
BP 08.02 Develop Evaluation Procedures	BP 08.02 Define Evaluation Procedures		SP 1.6-2-1 Define the methods, process, and evaluation criteria by which the systems, subsystems and work products are verified against their requirements in a written plan. SP 1.6-2-3c Validate test or analysis procedures and support facilities. SP 1.7-1-3 Formally document the environment, operational scenario, test procedures, inputs, outputs, expected results, and evaluation criteria for system validation plan.	SP 1.3-3 Establish Detailed Verification Plans (VER) SP 1.3-3 Define Detailed Validation Procedures (VAL)	
BP 08.03 Establish and Maintain Evaluation Environment	BP 08.05 Perform Planned Evaluations		SP 1.7-3-2b Provide appropriate tools to support system validation activities, both simulations and actual systems. SP 1.7-2-2 Provide appropriate tools to support system requirement validation activities (e.g., rapid prototyping, simulation, decision	SP 1.2-2 Establish the Verification Environment (VER) SP 1.2-2 Establish the Validation Environment (VAL) SP 2.1-1 Prepare for Peer Reviews (VER)	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 08 Evaluation	**PA 08 System Test and Evaluation** **PA 17 Peer Review**	**8.3 Control of nonconforming product** **7.3.4 Design and development review** **7.3.5 Design and development verification** **7.3.6 Design and development validation**	**1.6 Verify System** **1.7 Validate System**	**Verification (VER)** **Validation (VAL)** **Supplier Agreement Management (SAM)** **Requirements Development (RD)** ****Supplier Selection and Monitoring (SSM)**	**Product and Service Processes** **3.2 Customer Satisfaction and Relationships**
			making, etc.) SP 1.6-2-3b Acquire test equipment and software and items to be tested according to a comprehensive strategy that enables reuse.		
BP 08.04 Evaluate incremental work products	BP 08.05 Perform Planned Evaluations BP 17.01 Conduct Peer Reviews BP 06.03 Design Software:	7.2.2 Review of requirements related to the product a) b) c) 7.3.2 Design and development inputs a) b) c) d) 7.3.4 Design and development review a) b) 7.4.3 Verification of purchased product 8.2.4 Monitoring and measurement of product	SP 1.7-4-3b Include system validation issues (e.g., unanticipated or unintended functions or behavior) as an integral part of all formal, system level design reviews. SP 1.6-3-2a Test new and unproven designs (i.e., highest risk) at the lowest assembly level to verify their compliance with established requirements early in the development life cycle. SP 1.6-3-2b Review the incremental verification results vis-à-vis requirements with key stakeholders on an on-going basis. SP 1.6-3-2c Verify system, subsystem, and work products against requirements established in an earlier phase. SP 1.6-3-2d Perform incremental verification on systems, subsystems, and work products.	SP 2.2-1 Conduct Peer Reviews (VER) SP 3.2-1 Perform Reviews (SSM) SP 3.3-1 Conduct In Progress Evaluations (SSM) SP 3.5-1 Validate Requirements (RD) SP 3.5-2 Validate Requirements with Comprehensive Methods (RD)	6.1 Describe how your organization manages key product and service design and delivery processes. 6.1a -5-ensure process design accommodates key operational performance requirements

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 08 Evaluation	**PA 08 System Test and Evaluation** **PA 17 Peer Review**	**8.3 Control of nonconforming product** **7.3.4 Design and development review** **7.3.5 Design and development verification** **7.3.6 Design and development validation**	**1.6 Verify System** **1.7 Validate System**	**Verification (VER)** **Validation (VAL)** **Supplier Agreement Management (SAM)** **Requirements Development (RD)** ****Supplier Selection and Monitoring (SSM)**	**Product and Service Processes** **3.2 Customer Satisfaction and Relationships**
			SP 1.6-2-3a Adjust system requirements and development plans appropriately according to risks of failing system verification. SP 1.5-3-1b Verify that the system element interfaces comply with the interface documentation prior to assembly. SP 1.3-2-3c Review derived and allocated requirements for completeness and correctness against established criteria and in the context of operational concept threads or scenarios in accordance with the practices of FA 1.6 - Verify System. SP 1.6-1-2b Review verification plans early with peers within the developer's organization and with other system stakeholders to assess risky aspects of system development and to agree on alternative courses of action in the event of failures while conducting verification. SP 1.7-2-1 Conduct early requirements validation in some fashion on the program to reduce the risk of failing system validation.		

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 08 Evaluation	**PA 08 System Test and Evaluation** **PA 17 Peer Review**	**8.3 Control of nonconforming product** **7.3.4 Design and development review** **7.3.5 Design and development verification** **7.3.6 Design and development validation**	**1.6 Verify System** **1.7 Validate System**	**Verification (VER)** **Validation (VAL)** **Supplier Agreement Management (SAM)** **Requirements Development (RD)** ****Supplier Selection and Monitoring (SSM)**	**Product and Service Processes** **3.2 Customer Satisfaction and Relationships**
			SP 1.1-2-4 Perform analyses, simulations or prototypes to assure that system requirements will satisfy stakeholder needs and expectations.		
BP 08.05 Verify end-Products	BP 08.05 Perform Planned Evaluations	7.3.5 Design and development verification 7.4.3 Verification of purchased product 8.2.4 Monitoring and measurement of product 8.3 Control of nonconforming product	SP 1.6-3-1b Inspect implemented, purchased, and reused components to verify they meet requirements.	SP 3.1-1 Perform Verification (VER) SP 4.1-1 Conduct Acceptance Evaluations (SSM) SP 2.3-1 Conduct Acceptance Testing (SSM)	6.3a. (3) How do you ensure that your performance requirements are met? How do you provide timely and actionable feedback to suppliers and/or partners? Include the key performance measures and/or indicators and any targets you use for supplier and/or partner assessment.
BP 08.06 Validate end-products	BP 08.05 Perform Planned Evaluations	7.3.6 Design and development validation	SP 1.7-3-1 Perform operational test and evaluation in some manner. SP 1.7-3-2a Perform operational, maintenance, and support test and evaluation.	SP 2.1-1 Perform Validation (VER)	
BP 08.07 Analyze Evaluation Results	BP 08.06 Analyze Evaluation Results	4.2.4 Control of records	SP 1.6-4-1 Compare the collected test, inspection, or review results	SP 2.3-2 Analyze Peer Review Data (VER)	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 08 Evaluation	**PA 08 System Test and Evaluation** **PA 17 Peer Review**	**8.3 Control of nonconforming product** **7.3.4 Design and development review** **7.3.5 Design and development verification** **7.3.6 Design and development validation**	**1.6 Verify System** **1.7 Validate System**	**Verification (VER)** **Validation (VAL)** **Supplier Agreement Management (SAM)** **Requirements Development (RD)** ****Supplier Selection and Monitoring (SSM)**	**Product and Service Processes** **3.2 Customer Satisfaction and Relationships**
	BP 17.02 Record and Analyze Peer Review Data.	8.1 General 8.4 Analysis of data	with established evaluation criteria to assess the degree of success. SP 1.6-4-2a Involve all product stakeholders in the review of system verification results and issues. SP 1.6-4-2b Inform stakeholders of the results of verification activities. SP 1.6-4-3 Use verification results to compare actual measurements and performance to technical performance parameters. SP 1.7-2-4 Review the results of early validation periodically to assess the adequacy of the system design as it matures, with corrective action taken as necessary. SP 1.7-4-1 Assess system validation issues for their impact on the program. SP 1.6-3-1a Perform re-verification of corrected deficiencies and changed requirements and designs. SP 1.7-4-2a Coordinate the resolution of validation issues among affected projects within the program.	SP 2.2-1 Capture and Analyze Validation Results (VAL) SP 3.2-2 Analyze Verification Results and Identify Corrective Action (VER) SP 3.3-1 Perform Re-Verification (VER)	

Table PA 08: FAA-iCMM v2.0 Sources of Evaluation Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 08 Evaluation	**CUS.1.4 Customer acceptance (component)** **ENG.1 Development (basic)** **ENG.1.6 Software testing (component)** **ENG.1.7 System integration and testing (component)** **SUP.4 Verification (basic)** **SUP.5 Validation (basic)** **SUP.6 Joint review (basic)**	**5.1 Acquisition** **5.3 Development – software testing; software qualification testing; system qualification testing; software acceptance support** **5.4 Operation – operational testing** **5.5.4 Maintenance – review/ acceptance** **6.4 Verification** **6.5 Validation** **6.6 Joint review**	**5.4.6 Verification** **5.4.8 Validation** **5.4.3 Architectural Design**	**EIA-632**
Goals				
1.The evaluation approach, requirements, methods, and environment are established to provide an objective basis for determining whether the products and services meet requirements and can be accepted.				
2. Evaluations are performed as planned.				
3. Analyses are conducted on results of evaluations to support acceptance or corrective actions.				

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 08 Evaluation	**CUS.1.4 Customer acceptance (component)** **ENG.1 Development (basic)** **ENG.1.6 Software testing (component)** **ENG.1.7 System integration and testing (component)** **SUP.4 Verification (basic)** **SUP.5 Validation (basic)** **SUP.6 Joint review (basic)**	**5.1 Acquisition** **5.3 Development – software testing; software qualification testing; system qualification testing; software acceptance support** **5.4 Operation – operational testing** **5.5.4 Maintenance – review/ acceptance** **6.4 Verification** **6.5 Validation** **6.6 Joint review**	**5.4.6 Verification** **5.4.8 Validation** **5.4.3 Architectural Design**	**EIA-632**
Practices				
BP 08.01 Develop Evaluation Strategy	SUP.4.BP1 : Develop verification strategy. SUP.5.BP1 : Develop Validation Strategy. ENG.1.6.BP1 : Develop integrated software test strategy, including regression strategy. ENG.1.BP3 : Define and implement the testing process. ENG.1.5.BP2 : Develop integrated software item regression test strategy. ENG.1.5.BP3 : Develop tests for integrated software items. ENG.1.7.BP2 : Develop system regression test strategy.	5.3.5.5 5.3.6.5 5.3.7.4 6.4.1.1. 6.4.1.4	5.4.6.3 Verification Process Activities 1. 2. 5.4.8.3 Validation Process Activities 1.	EIA-632 Requirement 31 – End Product Verification
BP 08.02 Develop Evaluation Procedures	ENG.1.6.BP2 : Develop tests for integrated software. ENG.1.7.BP4 : Develop tests for system aggregates. ENG.1.7.BP6 : Develop tests for system. SUP.6.BP1 : Prepare joint review. SUP.6.BP2 : Establish review criteria. ENG.1.BP3 : Define and implement the	5.1.5 Acceptance and completion. 5.1.5.1 5.3.7.1 b) 5.3.8.4 6.5.2.1 5.3.10.2 5.4.1.3	5.4.8.3 Validation Process Activities 2. 3.	

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 08 Evaluation	**CUS.1.4 Customer acceptance (component)** **ENG.1 Development (basic)** **ENG.1.6 Software testing (component)** **ENG.1.7 System integration and testing (component)** **SUP.4 Verification (basic)** **SUP.5 Validation (basic)** **SUP.6 Joint review (basic)**	**5.1 Acquisition** **5.3 Development – software testing; software qualification testing; system qualification testing; software acceptance support** **5.4 Operation – operational testing** **5.5.4 Maintenance – review/ acceptance** **6.4 Verification** **6.5 Validation** **6.6 Joint review**	**5.4.6 Verification** **5.4.8 Validation** **5.4.3 Architectural Design**	**EIA-632**
	testing process. ENG.1.4.BP2 : Develop unit verification procedures.	5.5.3.2 b)		
BP 08.03 Establish and Maintain Evaluation Environment		5.1.5 Acceptance and completion. 5.1.5.1	5.4.8.3 Validation Process Activities 3.	EIA-632 Requirement 30 Incremental Evaluation
BP 08.04 Evaluate incremental work products	ENG.1.5.BP4 : Test integrated software items. ENG.1.5.BP5 : Integrate software item. ENG.1.5.BP6 : Regression test integrated software items. ENG.1.7.BP5 : Test system aggregates. SUP.6.BP4 : Conduct joint technical review. ENG.1.2.BP3 : Evaluate and validate requirements with customer. ENG.1.2.BP8 : Evaluate the software requirements. ENG.1.4.BP3 : Verify the software units. SUP.1.BP5 : Check document. ENG.1.4.BP3 : Verify the software design.	5.5.4 Maintenance review/acceptance. 5.5.4.1 5.5.4.2 5.3.5.6 5.3.3.2 5.3.6. 6.4.2.1 Contract verification. 5.3.7.2. 5.3.8.5 5.3.9.1 5.3.9.3 6.1.2.3. 6.1.2.2 6.4.2.3 Requirements verification. a) b) 6.4.2.4 Design verification.	5.4.3.3. Architectural Design Process Activities 6. 5.4.6.3. Verification Process Activities 4.	

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 08 Evaluation	**CUS.1.4 Customer acceptance (component)** **ENG.1 Development (basic)** **ENG.1.6 Software testing (component)** **ENG.1.7 System integration and testing (component)** **SUP.4 Verification (basic)** **SUP.5 Validation (basic)** **SUP.6 Joint review (basic)**	**5.1 Acquisition** **5.3 Development – software testing; software qualification testing; system qualification testing; software acceptance support** **5.4 Operation – operational testing** **5.5.4 Maintenance – review/ acceptance** **6.4 Verification** **6.5 Validation** **6.6 Joint review**	**5.4.6 Verification** **5.4.8 Validation** **5.4.3 Architectural Design**	**EIA-632**
		a) 6.4.2.5 Code verification. a). b) 6.4.2.6 Integration verification. a) 6.4.2.7 Documentation verification. a) b) c) 6.5.2.2 6.6.1.1 6.6.1.4 6.6.1.5 6.6.3.1 a)		
BP 08.05 Verify end-Products	SUP.4.BP2 : Conduct verification. CUS.1.4.BP1 : Evaluate the delivered product. ENG.1.6.BP3 : Test integrated software. ENG.1.6.BP4 : Regression test integrated software. ENG.1.7.BP7 : Test integrated system. ENG.1.7.BP8 : Regression test system aggregates or integrated system.	5.1.5 Acceptance and completion. 5.1.5.2 5.3.11 System qualification testing. 5.3.11.1 5.3.11.2 a) b) c) 5.3.11.3	5.4.6.3 Verification Process Activities 4. 5.	EIA-632 Requirement 31 – End Product Verification

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 08 Evaluation	**CUS.1.4 Customer acceptance (component)** **ENG.1 Development (basic)** **ENG.1.6 Software testing (component)** **ENG.1.7 System integration and testing (component)** **SUP.4 Verification (basic)** **SUP.5 Validation (basic)** **SUP.6 Joint review (basic)**	**5.1 Acquisition** **5.3 Development – software testing; software qualification testing; system qualification testing; software acceptance support** **5.4 Operation – operational testing** **5.5.4 Maintenance – review/ acceptance** **6.4 Verification** **6.5 Validation** **6.6 Joint review**	**5.4.6 Verification** **5.4.8 Validation** **5.4.3 Architectural Design**	**EIA-632**
	ENG.2.BP5 : Implement and test modifications. ENG.1.BP3 : Define and implement the testing process.	5.2.6.2 5.3.10.3		
BP 08.06 Validate end-products	SUP.5.BP2 : Perform validation. CUS.4.1.BP2 : Perform operational testing. ENG.1.BP3 : Define and implement the testing process.	5.4.2 Operational testing. 5.4.2.1 5.4.2.2 6.5.2.4 6.5.2.5	5.4.8.3 Validation Process Activities 5.	EIA-632 Requirement 33 End Products Validation Process
BP 08.07 Analyze Evaluation Results	SUP.4.BP3 : Determine actions for verification results. SUP.5.BP3 : Determine actions for validation results.	5.3.7.5 a) b) c) d) e) f) g) 5.5.2.2	5.4.6.3 Verification Process Activities 5. 5.4.8.3 Validation Process Activities 6. 5.4.4.3. Implementation Process Activities 7.	EIA-632 Requirement 30 Incremental Evaluation

Table PA 09: FAA-iCMM v2.0 Sources of Deployment, Transition and Disposal Practices – Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 09 Deployment, Transition and Disposal	**PA09 Transition**	**7.5 Production and service provision** **7.5.5 Preservation of product**	**-**	**Supplier Selection and Monitoring (**SSM)** **Product Integration (PI)** **Supplier Agreement Management (SAM)**	**6.1 Product and Service Processes**
Goals					
1. Customer/ stakeholder operation and support facilities are prepared to accept the delivery, placement and transition of the product or service into use.	*New*	7.5.5 Preservation of product		SG 4 Accept and Transition Products (SSM)	
2. Customer/ stakeholder operation and support personnel are prepared to accept delivery, placement and transition of the product or service into use.	*New*	7.5.5 Preservation of product		SG 4 Accept and Transition Products (SSM)	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 09 Deployment, Transition and Disposal	**PA09 Transition**	**7.5 Production and service provision** **7.5.5 Preservation of product**	**-**	**Supplier Selection and Monitoring (**SSM)** **Product Integration (PI)** **Supplier Agreement Management (SAM)**	**6.1 Product and Service Processes**
3. Customer/ stakeholder operation and support organizations demonstrate their capacity to support the product or service upon assumption of responsibility.	1. The system support organization demonstrates its capacity to provide the required support upon assumption of responsibility for the system. 2. Continuity of configuration and requirements management is maintained during the transition.			SG 4 Accept and Transition Products (SSM)	
4. Continuity of operational performance is maintained.	*New*			SG 4 Accept and Transition Products (SSM)	
5. The replaced product or service is deactivated, disposed and/or dispensed of, as appropriate.	*New*				

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 09 Deployment, Transition and Disposal	**PA09 Transition**	**7.5 Production and service provision** **7.5.5 Preservation of product**	**-**	**Supplier Selection and Monitoring (**SSM)** **Product Integration (PI)** **Supplier Agreement Management (SAM)**	**6.1 Product and Service Processes**
Practices					
BP 09.01 Develop, Deploy, and Maintain a Strategy for Deployment, Transition and Disposal Activities	BP 09.02. Develop and follow transition to support strategy	7.5.1 Control of production and service provision f)			6.1 a (1) What are your design processes for products/services and their related production/ delivery processes?
BP 09.02 Prepare Facility and Infrastructure Environment	*New*	7.5.1 Control of production and service provision f)		SP 2.4-1 Transition Products (SAM) SP 4.2.1 Transition Products (SSM) 1. Ensure there are appropriate facilities to receive, store, use, and maintain the acquired products. 2. Ensure that appropriate training is provided for the people involved in receiving, storing, using, and maintaining the acquired products. 3. Ensure that storing, distributing, and using the acquired products is performed according to the terms and conditions specified in the supplier agreement or license.	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 09 Deployment, Transition and Disposal	**PA09 Transition**	**7.5 Production and service provision** **7.5.5 Preservation of product**	**-**	**Supplier Selection and Monitoring (**SSM)** **Product Integration (PI)** **Supplier Agreement Management (SAM)**	**6.1 Product and Service Processes**
BP 09.03 Oversee Configuration of Product or Service	BP 09.01 Conduct Inventory BP 09.04 Oversee the Configuration Management of the System BP 09.05 Oversee the Requirements Management of the System	7.5.1 Control of production and service provision f)			
BP 09.04 Demonstrate Support Capability	BP 09.03 Demonstrate Support Capability				
BP 09.05 Transition Product or Service	BP9.02 Develop and follow Transition to Support Strategy BP9.06 Transfer and Tailor Developer's Processes to Support Organization	7.5.1 Control of production and service provision f) 7.5.5 Preservation of product		SP 3.4-1 Package and Deliver the Product or Product Component (PI) SP 2.4-1 Transition Products (SAM) SP 4.2-1 Transition Products (SSM)	
BP 09.06 Deactivate and Dispose Replaced Product and/or Dispense with Service	*New*	7.5.1 Control of production and service provision f)			

Table PA 09: FAA-iCMM v2.0 Sources of Deployment, Transition and Disposal Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 09 Deployment, Transition and Disposal	**CUS.2 Supply (basic)** **ENG.1 Development (basic)**	**5.2 Supply – delivery, completion** **5.3 Development – software installation** **5.5 Maintenance – migration, retirement**	**5.4.7 Transition** **5.4.11 Disposal** **5.4.4 Implementation**	**EIA-632 Implementation; Transition to Use**
Goals				
1. Customer/ stakeholder operation and support facilities are prepared to accept the delivery, placement and transition of the product or service into use.				
2. Customer/ stakeholder operation and support personnel are prepared to accept delivery, placement and transition of the product or service into use.				

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 09 Deployment, Transition and Disposal	**CUS.2 Supply (basic)** **ENG.1 Development (basic)**	**5.2 Supply – delivery, completion** **5.3 Development – software installation** **5.5 Maintenance – migration, retirement**	**5.4.7 Transition** **5.4.11 Disposal** **5.4.4 Implementation**	**EIA-632 Implementation; Transition to Use**
3. Customer/ stakeholder operation and support organizations demonstrate their capacity to support the product or service upon assumption of responsibility.				
4. Continuity of operational performance is maintained.				
5. The replaced product or service is deactivated, disposed and/or dispensed of, as appropriate.				
Practices				
BP 09.01 Develop, Deploy, and Maintain a Strategy for Deployment, Transition and Disposal Activities	ENG.1.BP4. Define and implement the delivery process. ENG.2.BP2. Develop maintenance strategy.	5.5.1.1 5.3.12.1 5.5.5.2	5.4.7.3 1)	Requirement 19: (e) Establish projects … that will satisfy requirements for … installation … related to the system's end products. Requirement 21: (d) Prepare … sites where end products

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 09 Deployment, Transition and Disposal	**CUS.2 Supply (basic)** **ENG.1 Development (basic)**	**5.2 Supply – delivery, completion** **5.3 Development – software installation** **5.5 Maintenance – migration, retirement**	**5.4.7 Transition** **5.4.11 Disposal** **5.4.4 Implementation**	**EIA-632 Implementation; Transition to Use**
				will be stored, installed, used or maintained, or serviced. Requirement 30: (a)(3). Establish and checkout the environment … in which verification … will be implemented. Requirement 31: (a)(3) Establish and checkout the environment … in which verification … will be implemented. (a)(4) Assure that the test articles are on hand, assembled or integrated with the verification environment … Requirement 32: (a)(3) Establish and checkout the environment … in which verification … will be implemented.

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 09 Deployment, Transition and Disposal	**CUS.2 Supply (basic)** **ENG.1 Development (basic)**	**5.2 Supply – delivery, completion** **5.3 Development – software installation** **5.5 Maintenance – migration, retirement**	**5.4.7 Transition** **5.4.11 Disposal** **5.4.4 Implementation**	**EIA-632 Implementation; Transition to Use**
BP 09.02 Prepare Facility and Infrastructure Environment	CUS.2.BP4. Identify attributes for successful delivery and installation.	5.3.1.5	5.4.7.3 2) 3)	EIA 632: 20: (a). Receive from suppliers … or the acquirer … the subsystem products that make up the system's end products … or build the end products according to specified requirements. (c). Assemble the validated subsystem products, or physically integrate such products, into the respective test article or end product to be verified. EIA 632: 21: (a) Acquire and put in place appropriate enabling products to carry out relevant transition to use requirements. (b) Prepare … end products for shipping and storage. (c) Store end products awaiting shipping and … ship or transport to the acquirer at the intended usage sites. (e) Install end products … at the appropriate sites.
BP 09.03 Oversee Configuration of Product or Service	CUS.4.2.BP1. Provide user training. ENG.2.BP7. Retire user system.			

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 09 Deployment, Transition and Disposal	**CUS.2 Supply (basic)** **ENG.1 Development (basic)**	**5.2 Supply – delivery, completion** **5.3 Development – software installation** **5.5 Maintenance – migration, retirement**	**5.4.7 Transition** **5.4.11 Disposal** **5.4.4 Implementation**	**EIA-632 Implementation; Transition to Use**
BP 09.04 Demonstrate Support Capability	CUS.2.BP4. Identify attributes for successful delivery and installation. CUS.2.BP5. Deliver and install software. ENG.2.BP1. Determine maintenance requirements.	5.2.7.2 5.3.13.3 5.3.1.5	5.4.7.3 4) 5)	EIA 632: Requirement 21: (h) Provide … training for users, maintenance and other personnel.
BP 09.05 Transition Product or Service	CUS.2.BP5. Deliver and install software. ENG.2.BP5. Upgrade user system.	5.2.7.1 5.3.13.2 5.5.5.3 5.5.5.4 5.5.5.5 5.5.5.6 5.3.12.2 5.3.13.1	5.4.7.3 4) 6) 7) 5.4.4.3 6)	
BP 09.06 Deactivate and Dispose Replaced Product and/or Dispense with Service	ENG.2.BP7. Retire user system.	5.5.6.1 5.5.6.2 5.5.6.3 5.5.6.4 5.5.6.5	5.4.11.3	

Table PA 10: FAA-iCMM v2.0 Sources of Operation and Support Practices - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 10 Operation and Support	**-**	**7.5.1 Control of production and service provision** **8.5.2 Corrective action** **8.5.3 Preventive action** **8.4 Analysis of data**	**-**	**-**	**6.1 Product and Service Processes** **b. Production/ Delivery Processes** **3.2 Customer Satisfaction and Relationships**
Goals					
1.The product, system, or service is operated and monitored.					
2. Methods are established and used to sustain required service levels and to detect the need for corrective action.					
3. Operational support is provided and needed corrective actions are deployed.					
Practices					
BP 10.01. Operate the system, product or service		7.5.1 Control of production and service provision a) b)			
BP 10.02. Monitor and evaluate capacity, service, and performance		7.5.1 Control of production and services provision c) d) e)			6.1b Identify and use measures for control and improvement of production/delivery processes

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 10 Operation and Support	**-**	**7.5.1 Control of production and service provision** **8.5.2 Corrective action** **8.5.3 Preventive action** **8.4 Analysis of data**	**-**	**-**	**6.1 Product and Service Processes** **b. Production/ Delivery Processes** **3.2 Customer Satisfaction and Relationships**
BP 10.03. Confirm availability of parts and personnel		7.5.5 Preservation of Product			
BP 10.04. Perform preventive maintenance		8.5.3 Preventive action			
BP 10.05. Analyze failures		8.4 Analysis of Data 8.5.2 Corrective action b) c)			
BP 10.06. Take or initiate corrective action		8.5.2 Corrective Action d)			
BP 10.07. Provide customer support		7.5.1Control of production and service provision f) 8.5.2 Corrective action a) e)			3.2a Customer Relationships-determine key methods for customer access; determine and deploy customer contact requirements; implement complaint management

Table PA 10: FAA-iCMM v2.0 Sources of Operation and Support Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 10 Operation and Support	**CUS.4 Operation (extended)** **CUS.4.1 Operational use (ext. component)** **CUS.4.2 Customer support (ext. component)** **SUP.8 Problem resolution (basic)** **ORG.4 Infrastructure (basic)**	**5.4 Operation** **5.5 Maintenance**	**5.4.9 Operation** **5.4.10 Maintenance**	
Goals				
1.The product, system, or service is operated and monitored.	CUS.4 Result 1 CUS.4.1 Result 2	G.11 Operation Process b) d)	5.4.9.2 Operation Process Outcomes 1) 2)	
2. Methods are established and used to sustain required service levels and to detect the need for corrective action.	CUS.4 Result 1	G.11 Operation Process a) c)	5.4.9.2 Operation Process Outcomes 3)	
3. Operational support is provided and needed corrective actions are deployed.	CUS.4 Result 3	G.11 Operation Process e) f) g)	5.4.9.2 Operation Process Outcomes 4)	
Practices				
BP 10.01. Operate the system, product or service	CUS.4.BP1: Software Operation CUS.4.1.BP3: Operate the software.	5.4.3 System operation 5.4.3.1	5.4.9.3-4	
BP 10.02. Monitor and evaluate capacity, service, and performance	CUS.4.BP2: Operation Evaluation CUS.4.1.BP8: Monitor system capacity and service. CUS.4.2.BP3. Monitor performance.		5.4.9.3-5 5.4.10.3-4	

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 10 Operation and Support	**CUS.4 Operation (extended)** **CUS.4.1 Operational use (ext. component)** **CUS.4.2 Customer support (ext. component)** **SUP.8 Problem resolution (basic)** **ORG.4 Infrastructure (basic)**	**5.4 Operation** **5.5 Maintenance**	**5.4.9 Operation** **5.4.10 Maintenance**	
BP 10.03. Confirm availability of parts and personnel			5.4.10.3-6	
BP 10.04. Perform preventive maintenance			5.4.10.3-7	
BP 10.05. Analyze failures			5.4.10.3-8 5.4.9.3-6	
BP 10.06. Take or initiate corrective action	CUS.4.1.BP4: Review software operation problem. CUS.4.1.BP5: Resolve operational problems. CUS.4.1.BP7: Document temporary work-arounds.	5.4.4 User support 5.4.4.3	5.4.10.3-9 5.4.10.3-10 5.4.10.3-11 5.4.9.3-7 5.4.9.3- 8	
BP 10.07. Provide customer support	CUS.4.2.BP2 : Establish product support. CUS.4.BP3 : Support customer. CUS.4.2.BP1 : Provide user training. CUS.4.1.BP6 : Handle user requests. SUP.8.BP1 : Establish problem report system. ORG.4.BP3 : Provide support for individuals using the software engineering infrastructure.	5.4.4 User support 5.4.4.2 5.4.4.1	5.4.10.3-4.	

Table PA 11: FAA-iCMM v2.0 Sources of Project Management Practices - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 11 Project Management	**PA11 Project Management**	**7.1 Planning of Product Realization** **7.3.1 Design and Development Planning**	**2.1 Plan and Organize** **2.2 Monitor and Control**	**Project Planning (PP)** **Project Monitoring and Control (PMC)** **Integrated Project Management (IPM)** **Quantitative Project Management (QPM)**	**6.2 Support Processes** **5.1 a) Work Systems and Job Design** **6.1 Product and Service Processes**
Goals					
1. Project plans are established, maintained and executed to provide required products and services that reflect customer and stakeholder needs.	1. Plans for managing the project are established early in the project lifecycle and maintained.		2.1-5 Technical Management Plan 2.1-2 Technical Approach 2.1-3 Work Breakdown Structure, Estimation, and Task Description 2.2-1 Degree of Formality	SG 2 Develop a Project Plan. (PP)	
2. Estimates of the project's planning parameters are established and maintained to support resource estimates.	2. Estimates of the project's planning parameters are established and maintained.		2.1-1 Critical Resources 2.1-4 Schedules	SG 1 Establish Estimates (PP)	
3. Commitments related to the project are established and maintained.	3. Commitments related to the project are established and maintained.		(EIA 731 addresses commitment in Technical Plans)	SG 3 Obtain Commitment to the Plan (PP)	
4. Progress of the project is evaluated against its plans.	4. Progress of the project is evaluated against the project's established plans.		2.2-2 Monitoring	SG 1 Monitor Project Against Plan (PMC)	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 11 Project Management	**PA11 Project Management**	**7.1 Planning of Product Realization** **7.3.1 Design and Development Planning**	**2.1 Plan and Organize** **2.2 Monitor and Control**	**Project Planning (PP)** **Project Monitoring and Control (PMC)** **Integrated Project Management (IPM)** **Quantitative Project Management (QPM)**	**6.2 Support Processes** **5.1 a) Work Systems and Job Design** **6.1 Product and Service Processes**
5. Corrective actions are taken when appropriate and managed to closure	5. Corrective actions are taken appropriately and managed to closure.		Thresholds Exceeded	SG 2 Manage Corrective Action to Closure (PMC)	
Practices					
BP 11.01 Define Project Objectives, Scope, and Outputs		7.1 Planning of product realization a) b) c) d) 7.3.1 Design and development planning 7.2.2 Review of requirements related to the product a) b) c)	SP 2.1-3-2a Define systems engineering work products, including data requirements, and activities in a traceable and accountable manner, including data requirements. SP 2.1-5-3a Ensure the systems engineering activities and work products that are needed to establish and maintain control of the program are well defined.	SP 1.1-1 Establish and maintain a top-level work breakdown structure (WBS) to estimate of the scope of the project. (PP) SP 1.1-1 Establish the Project's Objectives (QPM)	
BP 11.02 Define the Activities and Life Cycle Approach	BP 11.01 Identify the Activities BP 11.02 Identify the Life Cycle Approach	7.3.1 Design and development planning a)	SP 2.1-2-2a Identify technical activities for the entire life cycle of the program. SP 2.1-3-1a Generate a work breakdown structure for the program that defines logical units of work to be managed at the program level. SP 2.1-3-2a Define systems engineering work products, including data requirements, and activities in a	SP 1.1-1 Establish and maintain a top-level work breakdown structure (WBS) to estimate of the scope of the project. (PP) SP 1.1-1 Establish and maintain the project's defined process. (IPM) (includes selecting the standard process	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 11 Project Management	**PA11 Project Management**	**7.1 Planning of Product Realization** **7.3.1 Design and Development Planning**	**2.1 Plan and Organize** **2.2 Monitor and Control**	**Project Planning (PP)** **Project Monitoring and Control (PMC)** **Integrated Project Management (IPM)** **Quantitative Project Management (QPM)**	**6.2 Support Processes** **5.1 a) Work Systems and Job Design** **6.1 Product and Service Processes**
			traceable and accountable manner, including data requirements. SP 2.1-3-2c Ensure the work breakdown structure covers all the tasks and products necessary for the program. SP 2.1-3-3d Assure that the work breakdown structure reviewed is complete- and consistent with the system or product structure. SP 2.1-5-3a Ensure the systems engineering activities and work products that are needed to establish and maintain control of the program are well defined. SP 2.1-2-3 Identify and define a system life cycle with predefined stages of manageable size. SP 2.1-2-1a Determine a technical approach for the program.	and tailoring) SP 1.3-1 Define the project lifecycle phases upon which to scope the planning effort. (IPM)	
BP 11.03 Estimate Planning Parameters	BP 11.03 Establish Estimates		SP 2.1-2-1b Estimate the magnitude and technical feasibility of the program. SP 2.1-2-2b Identify key technical performance parameters. SP 2.1-2-2c Establish thresholds or profiles for key technical performance parameters.	SP 1.2-1 Establish and document estimates of the attributes of the work products and tasks. (PP) SP 1.2-1 Use the organization's process assets and measurement repository for estimating and planning the project's activities. (IPM) (includes estimating planning parameters)	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 11 Project Management	**PA11 Project Management**	**7.1 Planning of Product Realization** **7.3.1 Design and Development Planning**	**2.1 Plan and Organize** **2.2 Monitor and Control**	**Project Planning (PP)** **Project Monitoring and Control (PMC)** **Integrated Project Management (IPM)** **Quantitative Project Management (QPM)**	**6.2 Support Processes** **5.1 a) Work Systems and Job Design** **6.1 Product and Service Processes**
BP 11.04 Estimate Project Resource Requirements	BP 11.03 Establish Estimates		SP 2.1-3-1b Develop cost estimates for the technical aspects of the program. SP 2.1-3-3a Derive estimates for the size and cost of the systems engineering work products and efforts based upon historical data. SP 2.1-3-3c Capture the basis or rationale for systems engineering planning and estimates. SP 2.1-3-3b Consider whether a system is precedented or unprecedented when generating estimates of the engineering effort. SP 2.1-1-1 Identify resources that are critical to the technical success of the program.	SP 1.4-1 Determine Estimates of Effort and Cost. (PP) SP 2.1-1 Establish the Budget and Schedule (PP)	
BP 11.05 Establish Schedules	BP 11.04 Establish Schedules		SP 2.1-4-1 Develop schedules for the current life cycle phase as a part of the planning activities. SP 2.1-4-2a Develop top level schedules for the remaining life cycle phases of the program. SP 2.1-4-2b Address task dependencies as a part of scheduling. SP 2.1-4-3 Provide traceability between the schedule (calendar-based plan) and the event-driven plan.	SP 2.1-1 Establish the Budget and Schedule (PP)	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 11 Project Management	**PA11 Project Management**	**7.1 Planning of Product Realization** **7.3.1 Design and Development Planning**	**2.1 Plan and Organize** **2.2 Monitor and Control**	**Project Planning (PP)** **Project Monitoring and Control (PMC)** **Integrated Project Management (IPM)** **Quantitative Project Management (QPM)**	**6.2 Support Processes** **5.1 a) Work Systems and Job Design** **6.1 Product and Service Processes**
BP 11.06 Establish and Maintain Plans	BP 11.05 Establish and Maintain Plans	7.3.1 Design and development planning 7.1 Planning of product realization a) b) c) d)	SP 2.1-5-1a Develop a technical management plan for the program. SP 2.1-5-2b Include in the technical management plan provisions to maintain the plan and for recording deviations from the plan. SP 2.1-5-2d Develop an event driven plan for technical aspects of the program. SP 2.1-3-2b Ensure the technical management plan provides form and context for the planned technical activities and identify products. SP 2.1-3-1c Generate documented and approved statements of work for systems engineering activities. SP 2.1-5-2c Document the program roles, responsibilities, and objectives for each organization or functional discipline. SP 2.2-1-1 Determine the degree of oversight for programs needing monitoring and controlling to promote the organization's goals. SP 2.2-1-2 Establish criteria against which each program is evaluated to determine if it should be under the Monitor and Control FA activities.	SP 1.3-1 Integrate the project plan and the subordinate plans to describe the project's defined process. (IPM) SP 2.3-1 Plan for Data Management (PP) SP 2.4-1 Plan for Project Resources (PP) SP 2.7-1 Establish the Project Plan (PP) SP 2.6-1 Plan Stakeholder Involvement (PP) SP 1.3-1 Integrate Plans (IPM)	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 11 Project Management	**PA11 Project Management**	**7.1 Planning of Product Realization** **7.3.1 Design and Development Planning**	**2.1 Plan and Organize** **2.2 Monitor and Control**	**Project Planning (PP)** **Project Monitoring and Control (PMC)** **Integrated Project Management (IPM)** **Quantitative Project Management (QPM)**	**6.2 Support Processes** **5.1 a) Work Systems and Job Design** **6.1 Product and Service Processes**
BP 11.07 Establish Commitment	BP 11.06 Establish Commitment	7.3.1 Design and development planning	SP 2.1-1-2a Reconcile the level of technical work required for the program to the available level of funding or projected market potential. SP 2.1-5-2e Review technical plans with stakeholders and obtain their commitment. SP 2.1-5-3b Conduct formal reviews of the technical management plan to assess its consistency with the top-level program management plan and with lower-level plans.	SP 3.1-1 Review Subordinate Plans (PP) SP 3.2-1 Reconcile Work and Resource Levels (PP) SP 3.3-1 Obtain Plan Commitment (PP) SP 3.1-1 Identify expectations, constraints, interfaces, and operational conditions applicable to the project's shared vision. (IPM) SP 3.2-1 Establish and maintain a shared vision for the project. (IPM)	5.1.a. (1) How do you design, organize, and manage work and jobs to promote cooperation and collaboration, individual initiative, innovation and flexibility, and to keep current with business needs?
BP 11.08 Organize to meet Project Objectives			SP 2.1-5-2c Document the program roles, responsibilities, and objectives for each organization or functional discipline. SP 2.1-5-1b Ensure there are clear lines of responsibility and authority between systems engineering and program management.	SP 4.1-1 Determine Integrated Team Structure for the Project. (IPM) SP 4.1-2 Develop a preliminary distribution of requirements to Integrated Teams. (IPM)	
BP 11.09 Direct the Project				SP 2.1-1 Manage the involvement of the relevant stakeholders in the project. (IPM) SP 2.2-1 Participate with	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 11 Project Management	**PA11 Project Management**	**7.1 Planning of Product Realization** **7.3.1 Design and Development Planning**	**2.1 Plan and Organize** **2.2 Monitor and Control**	**Project Planning (PP)** **Project Monitoring and Control (PMC)** **Integrated Project Management (IPM)** **Quantitative Project Management (QPM)**	**6.2 Support Processes** **5.1 a) Work Systems and Job Design** **6.1 Product and Service Processes**
				relevant stakeholders to identify, negotiate, and track critical dependencies. (IPM) SP 2.3-1 Resolve issues with relevant stakeholders. (IPM) SP 1.4-1 Manage the Project Using the Integrated Plans (IPM)	
BP 11.10 Monitor Project Performance	BP 11.07 Monitor the Project according to Established Plans BP 11.08 Track Technical Process		SP 2.2-2-1 Track the resources expended, the program schedule, and the technical performance measurements against the plan. SP 2.2-2-3 Evaluate and document the program's efforts for the lessons learned. SP 2.2-3-1a Periodically collect and analyze the measures of program and technical performance.	SP 2.2-1 Participate with relevant stakeholders to identify, negotiate, and track critical dependencies. (IPM) SP 1.1-1 Monitor Project Planning Parameters (PMC) SP 1.2-1 Monitor Commitments (PMC) SP 1.3-1 Monitor Project Risks (PMC) SP 1.4-1 Monitor Data Management (PMC) SP 1.5-1 Monitor Stakeholder Involvement (PMC) SP 1.6-1 Conduct Progress Reviews (PMC) SP 1.4-1 Manage Project Performance (QPM)	6.1b – 2-ensure operation of processes meets key performance requirements 6.1b 3-use in-process measures/indicators to control and improve processes, including customer input as appropriate 6.1b-4-ensure operation meets requirements; use in-process measures and/or customer feedback

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 11 Project Management	**PA11 Project Management**	**7.1 Planning of Product Realization** **7.3.1 Design and Development Planning**	**2.1 Plan and Organize** **2.2 Monitor and Control**	**Project Planning (PP)** **Project Monitoring and Control (PMC)** **Integrated Project Management (IPM)** **Quantitative Project Management (QPM)**	**6.2 Support Processes** **5.1 a) Work Systems and Job Design** **6.1 Product and Service Processes**
BP 11.11 Review and Analyze Project Performance	BP 11.09 Review Performance Against Established Plans BP 13.04 Review and Validate Risk Assessment	5.6.2 Review Input c) d) e) 5.6.3 Review output a) b) c)	SP 2.2-3-4 Analyze and use prediction based on the program's measures to determine if the program's completion is at risk and thus warrants corrective action. SP 1.5-4-4 When multiple organizations are involved in system integration, periodically assess the quality of their mutual interaction to improve the program-level integration effort.	SP 1.7-1 Conduct Milestone Reviews. (PMC)	
BP 11.12 Take Corrective Action	BP 11.10 Take Corrective Action	5.6.3 Review output a) b) c) 8.3 Control of nonconforming product a)	SP 2.2-3-1b Implement corrective action when measures deviate from expected results.	SP 2.1-1 Analyze Issues (PMC) SP 2.2-1 Take Correction Action (PMC) SP 2.3-1 Manage Corrective Action. (PMC)	

Table PA 11: FAA-iCMM v2.0 Sources of Project Management Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 11 Project Management	**MAN.1 Management (basic)** **MAN.2 Project management (new)** **SUP.8 Problem resolution (basic)**	**6.8 Problem Resolution** **7.1 Management** **5.2 Supply**	**5.3.1 Project Planning** **5.3.2 Project Assessment** **5.3.3 Project Control** **5.1.2 Supply**	**SA-CMM V1.02** **Acquisition** **Risk Management**
Goals				
1. Project plans are established, maintained and executed to provide required products and services that reflect customer and stakeholder needs.			5.3.1.2 Project Planning Process Outcomes 1) 2) 3). 4) 5)	
2. Estimates of the project's planning parameters are established and maintained to support resource estimates.				
3. Commitments related to the project are established and maintained.				
4. Progress of the project is evaluated against its plans.			5.3.2.2 Project Assessment Process Outcomes 1) 2) 3) 4) 5)	

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 11 Project Management	**MAN.1 Management (basic)** **MAN.2 Project management (new)** **SUP.8 Problem resolution (basic)**	**6.8 Problem Resolution** **7.1 Management** **5.2 Supply**	**5.3.1 Project Planning** **5.3.2 Project Assessment** **5.3.3 Project Control** **5.1.2 Supply**	**SA-CMM V1.02** **Acquisition** **Risk Management**
5. Corrective actions are taken when appropriate and managed to closure			5.3.3.2 Project Control Process Outcomes 1) 2) 3) 4)	
Practices			**Activities**	
BP 11.01 Define Project Objectives, Scope, and Outputs	MAN.1.BP1 : Identify activities and tasks. MAN.1.BP2 : Evaluate feasibility of achieving process. MAN.2.BP1 : Define the scope of work. MAN.2.BP2 : Determine development strategy. ENG.1.2.BP5 : Develop release strategy. ENG.1.1.BP5 : Develop release strategy. ENG.2.BP4 : Determine modifications for next upgrade. ENG.2.BP2 : Develop maintenance strategy.	5.2.4 Planning. 5.2.4.3 5.2.4.4 7.1.1 Initiation and scope definition. 7.1.1.1	5.3.1.3 Project Planning Process Activities 1. 2. 11. 12. 5.4.9.3 1. 5.4.10.3 1.	
BP 11.02 Define the Activities and Life Cycle Approach	MAN.2.BP3 : Select software life cycle model. MAN.2.BP5 : Develop work breakdown structure.	5.2.4 Planning. 5.2.4.2 5.2.4.4	5.3.1.3 Project Planning Process Activities 3. 5.4.9.3 1.	
BP 11.03 Estimate Planning Parameters	MAN.2.BP4 : Size and estimate tasks and resources.			
BP 11.04 Estimate Project Resource Requirements	MAN.2.BP6 : Identify infrastructure requirements. MAN.1.BP3 : Plan and allocate resources and infrastructure.	7.1.2 Planning. 7.1.2.1 b) c) h) i)	5.3.1.3 Project Planning Process Activities 6. 8.	

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 11 Project Management	**MAN.1 Management (basic)** **MAN.2 Project management (new)** **SUP.8 Problem resolution (basic)**	**6.8 Problem Resolution** **7.1 Management** **5.2 Supply**	**5.3.1 Project Planning** **5.3.2 Project Assessment** **5.3.3 Project Control** **5.1.2 Supply**	**SA-CMM V1.02** **Acquisition** **Risk Management**
BP 11.05 Establish Schedules	MAN.2.BP7 : Establish project schedule.	5.3.5.5 7.1.2 Planning. 7.1.2.1: a)	5.3.1.3 Project Planning Process Activities 4. 5.	
BP 11.06 Establish and Maintain Plans	MAN.2.BP10 : Establish and implement project plans. ENG.1.BP1 : Define and implement the software or system development process.	5.2.4 Planning. 5.2.4.5 7.1.2 Planning. 7.1.2.1	5.3.1.3 Project Planning Process Activities 9. 5.3.1.3. 10. 5.1.2.3 4.	
BP 11.07 Establish Commitment	MAN.2.BP8 : Allocate responsibilities. CUS .2.BP2 Negotiate Contract.	7.1.2 Planning. 7.1.2.1 d) e) 5.2.3.1	5.3.1.3 Project Planning Process Activities 7. 5.1.2.3 Supply Process Activities 3.	
BP 11.08 Organize to meet Project Objectives	MAN .2 BP9 : Identify interfaces.		5.3.1.3 Project Planning Process Activities 7.	
BP 11.09 Direct the Project	MAN.1.BP4 : Implement activities.	5.2.5 Execution and control. 5.2.5.1 7.1.3 Execution and control. 7.1.3.1	5.3.3.3 Project Control Process Activities 2. 4. 5. 6. 5.3.2.3 Project Assessment Process 10. 5.3.3.3 9.	
BP 11.10 Monitor Project Performance	MAN.1.BP5 : Monitor performance. MAN.2.BP11 : Track progress against plans. SUP.5.BP4 : Track actions for validation	5.2.5 Execution and control. 5.2.5.3 7.1.3 Execution and control. 7.1.3.2.	5.3.2.3 Project Assessment Process 1. 2. 3.	

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 11 Project Management	**MAN.1 Management (basic)** **MAN.2 Project management (new)** **SUP.8 Problem resolution (basic)**	**6.8 Problem Resolution** **7.1 Management** **5.2 Supply**	**5.3.1 Project Planning** **5.3.2 Project Assessment** **5.3.3 Project Control** **5.1.2 Supply**	**SA-CMM V1.02** **Acquisition** **Risk Management**
	results. ENG.1.BP1 : Define and implement the software or system development process.		4. 5. 6. 7. 5.1.2.3 4.	
BP 11.11 Review and Analyze Project Performance	MAN.1.BP6 : Review work products and evaluate results. SUP.6.BP7 : Determine actions for review results. SUP.6.BP3 : Conduct joint management review. SUP.6.BP4 : Conduct joint technical review. SUP.6.BP6 : Conduct joint system acceptance review. SUP.6.BP5 : Conduct joint process review.	6.6.2.1 7.1.3 Execution and control. 7.1.3.3 7.1.4 Review and evaluation. 7.1.4.2 7.1.5 Closure. 7.1.5.1 7.1.5.2	5.3.2.3 Project Assessment Process Activities 8. 9. 5.1.2.3 4. 5.	Activity 7: Project reviews include the status of identified risks.
BP 11.12 Take Corrective Action	MAN.1.BP7 : Take action on performance deviation. MAN.2.BP12 : Act to correct deviations. SUP.6.BP8 : Track actions for review results. SUP.4.BP4 : Track actions for verification results. SUP.5.BP4 : Track actions for validation results. MAN.1.BP8 : Demonstrate successful achievement.		5.3.3.3 Project Control Process Activities 1. 2. 3. 4. 5. 6. 7. 8.	

Table PA 12: FAA-iCMM v2.0 Sources of Supplier Agreement Management Practices – Part 1

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 12 Supplier Agreement Management	**PA 12 Contract Management PA 08 System Test and Evaluation**	**7.4 Purchasing**	**2.4 Coordinate with Suppliers**	**Supplier Agreement Management (SAM) **Supplier Selection and Monitoring (SSM) **Integrated Supplier Management (ISM) **Quantitative Supplier Management (QSM)**	**6.3 Supplier and Partnering Processes 7. 4 Supplier and Partner Results**
Goals					
1. The documented agreement is kept consistent with the acquirer's requirements and relevant laws, policies, regulations, and other applicable guidance.	1. The contract is kept consistent with the requirements of the acquisition project and relevant laws, policies, regulations, and guidance.			SG 2 Select Suppliers and establish Agreements (SSM)	
2. Supplier performance, processes, products and services are reviewed and monitored to identify problems and to ensure that products and services conform to requirements.	2. Contractor performance, products, and services are reviewed throughout the project to identify risks, problems, and appropriate corrective actions.	7.4.3 Verification of purchased products	2.4-4: Supplier Management. The program and organization review and concur with the supplier's plans and procedures. The program should also monitor the supplier's conformance to these plans and procedures through appropriate reviews and audits.	SG 2 Satisfy Supplier Agreements (SSM) SG 3 Monitor Supplier Performance and Products (SSM) SG 2 Appraise Custom-Made product Suppliers (ISM)	

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 12 Supplier Agreement Management	**PA 12 Contract Management PA 08 System Test and Evaluation**	**7.4 Purchasing**	**2.4 Coordinate with Suppliers**	**Supplier Agreement Management (SAM) **Supplier Selection and Monitoring (SSM) **Integrated Supplier Management (ISM) **Quantitative Supplier Management (QSM)**	**6.3 Supplier and Partnering Processes 7. 4 Supplier and Partner Results**
3. Measurements are used to track the supplier's performance.	3. Measurements are used to track the contractor's performance.			SG 2 Quantitatively Manage the Acquisition Effort (QSM)	
4. Communications between the acquirer and the supplier are established and maintained to foster a cooperative and productive agreement environment.	4. Communications between the acquirer's project team and the contractor are established and maintained.	7.4.3 Verification of purchased products		SG 3 Establish a Cooperative Environment (ISM)	
5. Acceptance of deliverable products or services is based on the supplier meeting the terms and conditions described in the agreement.	*New*	7.4.3 Verification of purchased products	2.4-4 Supplier Management. Appropriate acceptance testing ensures that the delivered component satisfies the need.	SG 2 Satisfy Supplier Agreements (SSM)	
Practices					
BP 12.01 Use Planning documents:	BP 12.01 Review and Use Planning documents:		SP 2.4-4-3e There is a mechanism for assuring that all suppliers follow their defined engineering process.		7.4 a. What are your current levels and trends in key measures and/or indicators of supplier and partner performance?

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 12 Supplier Agreement Management	**PA 12 Contract Management PA 08 System Test and Evaluation**	**7.4 Purchasing**	**2.4 Coordinate with Suppliers**	**Supplier Agreement Management (SAM) **Supplier Selection and Monitoring (SSM) **Integrated Supplier Management (ISM) **Quantitative Supplier Management (QSM)**	**6.3 Supplier and Partnering Processes 7. 4 Supplier and Partner Results**
					Include your performance and/or cost improvements resulting from supplier and partner performance and performance management.
BP 12.02 Review and Monitor Agreement Performance	BP 12.02 Conduct Periodic Reviews BP 08.04 Monitor Developer Performance	7.4.3 Verification of purchased product	SP 2.4-4-1 The supplier's progress (schedule/cost/technical/performance) is managed. SP 2.4-4-2b The supplier's quality and configuration control activities are monitored. SP 2.4-4-2c Acceptance testing is conducted as part of the delivery of the supplier's products. SP 2.4-4-3a The documented agreement between the acquirer and the supplier … basis for managing the supplier. SP 2.4-4-3b Periodic informal reviews, technical reviews, and interchanges are held with the supplier. SP 2.4-4-3c Formal reviews are conducted at selected milestones SP 2.4-4-3d Discrepancies discovered during acceptance testing are used to improve the supplier's processes and products. SP 2.4-4-3e There is a mechanism for assuring that all suppliers follow their defined engineering process	SP2.2-1 Execute the Supplier Agreement Sub practice 3: Sub practice 4: (SAM) SP3.2-1: Perform Reviews; (SAM)	6.3 a. How do you ensure that your performance requirements are met? How do you provide timely and actionable feedback to suppliers and/or partners? Include the key performance measures and/or indicators and any targets you use for supplier and/or partner assessment. 7.4 a. What are your current levels and trends in key measures and/or indicators of supplier and partner performance?

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 12 Supplier Agreement Management	**PA 12 Contract Management PA 08 System Test and Evaluation**	**7.4 Purchasing**	**2.4 Coordinate with Suppliers**	**Supplier Agreement Management (SAM) **Supplier Selection and Monitoring (SSM) **Integrated Supplier Management (ISM) **Quantitative Supplier Management (QSM)**	**6.3 Supplier and Partnering Processes 7. 4 Supplier and Partner Results**
BP 12.03 Maintain Supplier Agreement Integrity	BP 12.03 Maintain Contract Integrity		SP 2.4-3-2b Requirements changes are re-negotiated with the supplier and the changes documented.	SP2.2-1 Execute the Supplier Agreement: Sub practice 8: (SAM)	
BP 12.04 Monitor Supplier's Plans, Processes, Activities and Products	BP 12.04 Monitor Contractor's Support Processes	4.1 General requirements 7.4.3 Verification of purchased product	SP 2.4-4-2b The supplier's quality and configuration control activities are monitored.	SP2.2-1 Execute the Supplier Agreement: Sub practice 2: (SAM) SP3.1-1: Monitor and evaluate supplier performance, sub practice 2: (SSM) SP2.1-1 Appraise the Supplier's Engineering Process: (ISM) SP 2.2-1 Appraise the Outputs of the Supplier's Engineering Process (ISM)	6.3 (6) How do you improve your supplier and/or partner processes, including your role as supportive customer/partner, to keep current with your organization needs and directions? How are improvements shared throughout your organization, as appropriate? 7.4 What are your current levels and trends in key measures and/or indicators of supplier and partner performance? Include your performance and/or cost improvements resulting from supplier and partner performance and performance management.

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 12 Supplier Agreement Management	**PA 12 Contract Management PA 08 System Test and Evaluation**	**7.4 Purchasing**	**2.4 Coordinate with Suppliers**	**Supplier Agreement Management (SAM) **Supplier Selection and Monitoring (SSM) **Integrated Supplier Management (ISM) **Quantitative Supplier Management (QSM)**	**6.3 Supplier and Partnering Processes 7. 4 Supplier and Partner Results**
BP 12.05 Foster Cooperative and Collaborative Environment.	BP 12.05 Foster Cooperative Environment		SP 2.4-4-4b There is a mechanism for establishing and nurturing long term relationships with preferred suppliers.	SG 2 Satisfy Supplier Agreements (SAM) SP 2.2-1: Execute the Supplier Agreement; Sub practice 6: (SAM) SP 3.1-1 Encourage Customer Participation (ISM) SP3.2-1: Foster a Cooperative and Productive Environment: (ISM)	6.3 a. (5) How do you provide assistance and/or incentives to suppliers and/or partners to help them improve their overall performance and to improve their abilities to contribute to your current and longer-term performance? (6) … How are improvements shared throughout your organization, as appropriate?
BP 12.06 Analyze and Direct Agree-ment Activities	New			SP 2.1-1sub practice4:(ISM) SP 2.3-1 Adjust Acquisition Approach (ISM)	
BP12.07 Administer Supplier Agreement	New				6.3 a. (4) How do you minimize overall costs associated with inspections, tests, and process and/or performance audits?
BP 12.08 Determine Product or Service Acceptance	New	7.4.3Verificatio n of purchased product	SP 2.4-4-2c Acceptance testing is conducted as part of the delivery of the supplier's products.		

Table PA 12: FAA-iCMM v2.0 Sources of Supplier Agreement Management Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 12 Supplier Agreement Management	**CUS.1 Acquisition (basic)** **CUS.1.1 Acquisition preparation (component)** **CUS.1.3 Supplier monitoring (component)** **CUS.1.4 Customer acceptance process** **CUS.2 Supply – establish contract**	**5.1 Acquisition** **6.3 Quality Assurance** **5.2 Supply – contract activity**	**5.1.1 Acquisition** **5.1.2 Supply (to negotiate agreement)**	**SA-CMM v1.02** **Contract Tracking and Oversight** **Contract Performance**
Goals				
1. The documented agreement is kept consistent with the acquirer's requirements and relevant laws, policies, regulations, and other applicable guidance.				Contract Tracking and Oversight - Goal 3: The contract, and any changes, adhere to relevant laws, policies, regulations, and other planned guidance and implements project software acquisition requirements.
2. Supplier performance, processes, products and services are reviewed and monitored to identify problems and to ensure that products and services conform to requirements.				Contract Tracking and Oversight - Goal 1: project team has sufficient insight into the contractor's software engineering effort to ensure the effort is managed and controlled and complies with contract requirements. Contract Performance – Goal 1: The quality of contractor team process, performance, products, and services is appraised throughout the contract's period of performance to identify risks and take appropriate action to

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 12 Supplier Agreement Management	**CUS.1 Acquisition (basic)** **CUS.1.1 Acquisition preparation (component)** **CUS.1.3 Supplier monitoring (component)** **CUS.1.4 Customer acceptance process** **CUS.2 Supply – establish contract**	**5.1 Acquisition** **6.3 Quality Assurance** **5.2 Supply – contract activity**	**5.1.1 Acquisition** **5.1.2 Supply (to negotiate agreement)**	**SA-CMM v1.02** **Contract Tracking and Oversight** **Contract Performance**
				mitigate those risks as early as possible.
3. Measurements are used to track the supplier's performance.				
4. Communications between the acquirer and the supplier are established and maintained to foster a cooperative and productive agreement environment.				Contract Tracking and Oversight - Goal 2: The project team and contractor team maintain ongoing communication and commitments are agreed by both parties. Contract Performance – Goal 2: Contract performance management activities intended to foster a cooperative and productive environment among the end user, project team, and the contractor team are implemented.
5. Acceptance of deliverable products or services is based on the supplier meeting the terms and conditions	CUS.1.4			

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 12 Supplier Agreement Management	**CUS.1 Acquisition (basic)** **CUS.1.1 Acquisition preparation (component)** **CUS.1.3 Supplier monitoring (component)** **CUS.1.4 Customer acceptance process** **CUS.2 Supply – establish contract**	**5.1 Acquisition** **6.3 Quality Assurance** **5.2 Supply – contract activity**	**5.1.1 Acquisition** **5.1.2 Supply (to negotiate agreement)**	**SA-CMM v1.02** **Contract Tracking and Oversight** **Contract Performance**
described in the agreement.				
Practices				
BP 12.01 Use Planning documents:		5.2.5.4		Contract Tracking and Oversight - Activity 1: The project team performs its activities in accordance with its documented contract tracking and oversight plans. Contract Tracking and Oversight - Activity 2: the project team reviews required contractor software planning documents which, when satisfactory, are used to oversee the contractor team's software engineering effort. Contract Performance – Activity 1: The project team performs its activities in accordance with its documented contract performance management plans.
BP 12.02 Review and Monitor Agreement Performance	CUS.1.3 BP2: Review development with supplier.	5.1.4 Supplier Monitoring, 5.1.4.1 5.1.4.2 6.3.2.1	5.1.1.3 3) 6)	Contract Tracking and Oversight - Activity 3: The project team conducts periodic reviews and

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 12 Supplier Agreement Management	**CUS.1 Acquisition (basic)** **CUS.1.1 Acquisition preparation (component)** **CUS.1.3 Supplier monitoring (component)** **CUS.1.4 Customer acceptance process** **CUS.2 Supply – establish contract**	**5.1 Acquisition** **6.3 Quality Assurance** **5.2 Supply – contract activity**	**5.1.1 Acquisition** **5.1.2 Supply (to negotiate agreement)**	**SA-CMM v1.02** **Contract Tracking and Oversight** **Contract Performance**
				interchanges with the contractor team. Contract Performance - Activity 4: Measurements from appraisals are used to evaluate the contractor team's performance and trends analyzed. Activity 6: The end user periodically participates in the evaluation of evolving software products and services to determine the satisfaction of operational requirements.
BP 12.03 Maintain Supplier Agreement Integrity		5.1.3.5 5.2.3.2		Contract Performance - Activity 5: As understanding of the contractor team's software engineering process, products, and services improves, the project team may propose changes to the software acquisition approach to mitigate risks.
BP 12.04 Monitor Supplier's Plans, Processes, Activities and Products	CUS.1.3.BP4: Monitor supplier.	6.3.1.5		Contract Performance - Activity 2: The contractor team's software engineering process is appraised

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 12 Supplier Agreement Management	**CUS.1 Acquisition (basic)** **CUS.1.1 Acquisition preparation (component)** **CUS.1.3 Supplier monitoring (component)** **CUS.1.4 Customer acceptance process** **CUS.2 Supply – establish contract**	**5.1 Acquisition** **6.3 Quality Assurance** **5.2 Supply – contract activity**	**5.1.1 Acquisition** **5.1.2 Supply (to negotiate agreement)**	**SA-CMM v1.02** **Contract Tracking and Oversight** **Contract Performance**
				according to the project's defined software acquisition process.
BP 12.05 Foster Cooperative and Collaborative Environment.	CUS.1.3.BP1 : Provide supplier feedback.	5.2.6.1 5.2.6.5		Contract Performance - Activity 7: Contract performance management activities are performed to foster a cooperative and productive environment among the end user, project team, and the contractor team.
BP 12.06 Analyze and Direct Agreement Activities		6.3.3.5	5.1.1.3 6)	
BP12.07 Administer Supplier Agreement	CUS.1.BP3 : Monitor the acquisition. CUS.1.3.BP3: Monitor the acquisition. CUS.1.3.BP4: Monitor supplier.	6.3.3.1 6.3.3.2 6.3.3.3 6.3.3.4		
BP 12.08 Determine Product or Service Acceptance	CUS.1.4.BP1: Evaluate the delivered product. CUS.1.4.BP2: Accept the delivered product.	5.1.5 5.1.5.1 5.1.5.3 5.2.6.4 6.3.2.2 6.3.2.3	5.1.1.3 7)	

Table PA 13: FAA-iCMM v2.0 Sources of Risk Management Practices - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 13 Risk Management	**PA13 Risk Management**	**8.5.3 Preventive Action**	**2.5 Manage Risk**	**Risk Management (RM)** **Project Planning (PP)**	**6.2 Support processes** **1.2 Organization Responsibility and Citizenship**
Goals					
1. A risk management strategy is established and used that includes the plans, methods and parameters for management of risk.	1. Risk Management is an integral part of project management and engineering activities.	.	2.5-1 Risk Management Plan 2.5-5 Development of a Risk Mitigation Strategy	SG 1 Prepare for Risk Management (RM)	
2. Risks are identified and assessed for their likelihood and consequence.	2. Risks are identified and assessed for their likelihood and impact.		2.5-2 Identification of Performance, Cost, and Schedule Risks 2.5-3 Risk Quantification Risk Analysis	SG 2 Identify and Analyze Risks (RM)	
3. Risk mitigation is performed when analysis indicates action.	3. Risk mitigation is performed when analysis indicates action.			SG 3 Mitigate Risks (RM)	
4. Risk mitigation actions are monitored to determine their effectiveness and corrective action is taken as needed.			2.5-7 Monitoring of Risk Mitigation Action 2.5-8 Communication and Coordination of Risk Status and Risk Mitigation Efforts Across Affected Groups		
Practices					
BP 13.01 Develop Risk Management Approach	BP 13.01 Develop Risk Management Approach:	8.5.3 Preventive action a) b) c) d)	SP 2.5-8-2b Integrate risk management both vertically and horizontally across the program. SP 2.5-1-3 Implement risk management for	SP 1.3-1 Establish and maintain the strategy and methods to be used for risk management. (RM) SP 1.2-1 Define the	Include your key practices, measures, and targets for regulatory and legal requirements and for risks associated with

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 13 Risk Management	**PA13 Risk Management**	**8.5.3 Preventive Action**	**2.5 Manage Risk**	**Risk Management (RM) Project Planning (PP)**	**6.2 Support processes 1.2 Organization Responsibility and Citizenship**
		e)	key processes within the program: design, test, manufacturing, etc.	parameters used to analyze and classify risks, and the parameters used to control the risk management effort. (RM)	your products, services, and operations. An integral part of performance management and improvement is proactively addressing legal and regulatory requirements and risk factors. Addressing these areas requires establishing appropriate measures and/or indicators that senior leaders track in their overall performance review.
BP 13.02 Identify Risks	BP 13.02 Identify Risks	8.5.3 Preventive action a)	SP 2.5-2-1 – c1 Identify performance risks. SP 2.5-2-2 –c2 Identify cost and schedule risks. SP 2.5-2-3 Review all elements of the work breakdown structure as part of the risk identification process in order to help ensure that all program aspects have been considered.	SP 1.1-1 Determine Risk Sources and Categories. (RM) SP 2.1-1 Identify and document the risks. (RM) SP 2.2-1 Identify Project Risks. (PP)	
BP 13.03 Assess Risks	BP 13.03 Assess Risks	8.5.3 Preventive action b)	SP 2.5-3-1 Assess risks qualitatively. SP 2.5-3-2 Assess each risk and determine the probability of occurrence and quantified consequence of impact for the program. SP 2.5-4-3b For each risk, establish cause	SP 2.2-1 Evaluate and classify each identified risk using the defined risk categories and parameters, and determine its relative	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 13 Risk Management	**PA13 Risk Management**	**8.5.3 Preventive Action**	**2.5 Manage Risk**	**Risk Management (RM) Project Planning (PP)**	**6.2 Support processes 1.2 Organization Responsibility and Citizenship**
			and effect relationships. SP 2.5-4-3c Analyze each risk for potential coupling to all other identified risks. SP 2.5-4-4 Use collected metrics regarding identified risks and examine them in light of previous risk analyses, and when established thresholds are exceeded, initiate corrective action. SP 2.5-5-2 Categorize risks into those that can be avoided, controlled, or accepted.	priority. (RM)	
BP 13.04 Develop Risk Mitigation Plans		8.5.3 Preventive action c)	SP 2.5-5-3a Document risk reduction profiles and review them for appropriateness. SP 2.5-4-3d Develop alternative courses of action, work-arounds, and fall-back positions with a recommended course of action for each risk. SP 1.2-1-3 Use validated models, simulations, and prototyping to reduce cost and risk of system development. (in Risk Mgmt)	SP 3.1-1 Develop a risk mitigation plan for the most important risks to the project, as defined by the risk management strategy. (RM)	
BP 13.05 Implement and Monitor Risk Mitigation Plans	BP 13.05 Execute Risk Mitigation Plans	8.5.3 Preventive action c) d) e)	SP 2.5-6-2 Implement the risk mitigation strategy for the program. SP 2.5-6-3 Document risk analysis results and mitigation plans. SP 2.5-7-3a Monitor and re-evaluate risks at appropriate milestones. SP 2.5-7-4 During risk monitoring, identify and analyze new risks and take corrective action.	SP 3.2-1 Monitor the status of each risk periodically and implement the risk mitigation plan as appropriate. (RM)	

Table PA 13: FAA-iCMM v2.0 Sources of Risk Management Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 13 Risk Management	**MAN.4 Risk management (new)**	**-**	**5.3.5 Risk Management**	
Goals				
1. A risk management strategy is established and used that includes the plans, methods and parameters for management of risk.	- the scope of the risk management to be performed for the project will be determined; - appropriate risk management strategies will be defined and implemented;			
2. Risks are identified and assessed for their likelihood and consequence.	- risks to the project will be identified in the project strategy, and as they develop during the conduct of the project; - the risks will be analyzed and the priority in which to apply resources to monitor these risks will be determined;		5.3.5.2 1) 2)	
3. Risk mitigation is performed when analysis indicates action.	- appropriate action will be taken to correct or avoid the impact of risk.		5.3.5.2 3) 4)	
4. Risk mitigation actions are monitored to determine their effectiveness and corrective action is taken as needed.	- risk metrics will be defined, applied, and assessed to determine the change in the risk state and the progress of the monitoring activities;			
Practices				
BP 13.01 Develop Risk Management Approach	MAN.4.BP1 : Establish risk management scope.	G.10 Management process k)	5.3.5.3 Risk Management Activities 1. 2.	

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 13 Risk Management	**MAN.4 Risk management (new)**	**-**	**5.3.5 Risk Management**	
BP 13.02 Identify Risks	MAN.4.BP2 : Identify risks. CUS.4.1.BP1 : Identify operational risks.	5.1.1.8 f. Appendix G.10 Management process l)	5.3.5.3 Risk Management Activities 3.	
BP 13.03 Assess Risks	MAN.4.BP3 : Analyze and prioritize risks.	7.1.2.1 f) G.10 Management process m)	5.3.5.3 Risk Management Activities 4. 5.	
BP 13.04 Develop Risk Mitigation Plans.	MAN.4.BP4 : Define risk management strategies.	5.1.1.8 f. Appendix G.10 Management process n)	5.3.5.3 Risk Management Activities 6.	
BP 13.05 Implement and Monitor Risk Mitigation Plans	MAN.4.BP5 : Define risk metrics. MAN.4.BP6 : Implement risk management strategies. MAN.4.BP7 : Assess results of risk management strategies. MAN.4.BP8 : Take corrective action.	G.10 Management process o)	5.3.5.3 Risk Management Activities 7.	
Other				
GP 2.15 Coordinate With Participants and Stakeholders, applied to the Risk Management process area.				SA-CMM Activity 4 The project team encourages and rewards project-wide participation in the identification and mitigation of risks. (except “reword”)

Table PA 14: FAA-iCMM v2.0 Sources of Integrated Teaming Practices - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 14 Integrated Teaming	**PA 14 Coordination**	**7.3.1 Design and development planning**	**2.3 Integrate Disciplines**	**Integrated Teaming (IT) Integrated Project Management (IPM) Organizational Environment for Integration (OEI)**	**5.1 Work Systems 1.1 Organizational Leadership**
Goals					
1. Integrated teams composed of appropriate disciplines and stakeholders are established and maintained	1. The project goals, processes and interfaces between the disciplines necessary to the system life cycle are coordinated.			SG 1 Establish Team Composition (IT) SG 4 Organize Integrated Teams (IPM)	
2. Team processes and methods are established and maintained for effective coordination, collaboration, communication, conflict resolution and decision-making	2. Methods are established and maintained for interdisciplinary communication, coordination, and conflict resolution.			SG 2 Govern Team Operation (IT) SG 2 Coordinate and Collaborate with Relevant Stakeholders (IPM)	
Practices					
BP 14.01 Develop and Communicate Team Goals	BP 14.06 Develop and Communicate Project Goals			SP 2.1-1 Establish a Shared Vision (IT) SP 2.2-1 Establish a Team Charter (IT)	
BP 14.02 Establish and Maintain Integrated Teams	BP 14.01 Involve Disciplines		SP 2.3-1-1 Involve all essential disciplines, including both traditional and specialty engineering, in the system development process in a timely manner.	SP 1.1-1 Identify Team Tasks (IT)	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 14 Integrated Teaming	**PA 14 Coordination**	**7.3.1 Design and development planning**	**2.3 Integrate Disciplines**	**Integrated Teaming (IT) Integrated Project Management (IPM) Organizational Environment for Integration (OEI)**	**5.1 Work Systems 1.1 Organizational Leadership**
			SP 2.3-1-2 Adjust the mix of disciplines involved in each phase of system development as appropriate to the work being done. SP 2.3-1-3a Involve personnel from affected groups in planning and other systems engineering activities (i.e., developing, reviewing, allocating, and approving requirements) that affect them. SP 2.3-1-3b Allow systems engineering personnel to review and agree to designs, plans, and work products produced by other engineering disciplines or that affect multiple disciplines. SP 2.3-2-1 Proactively emphasize the importance of intergroup coordination.	SP 2.3-1 Define Roles and Responsibilities (IT) SP 1.2-1 Identify Needed Knowledge and Skills (IT) SP 1.3-1 Assign Appropriate Team Members (IT) SP 4.3-1 Establish Integrated Teams (IPM)	
BP 14.03 Establish and Maintain a Collaborative Workplace	BP 14.02 Promote Cross-Discipline Understanding		SP 2.3-2-1 Proactively emphasize the importance of intergroup coordination.	SP 2.5-1 Collaborate among Interfacing Teams (IT) SP 2.3-1 Establish Mechanisms to Balance Team and Home Organization Responsibilities (OEI)	5.1a-1 Design, organize, manage work and jobs to promote cooperation, collaboration, initiative, innovation, flexibility and keep current with business needs 1.1a-2 Build and empower teams An environment for empowerment is

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 14 Integrated Teaming	**PA 14 Coordination**	**7.3.1 Design and development planning**	**2.3 Integrate Disciplines**	**Integrated Teaming (IT) Integrated Project Management (IPM) Organizational Environment for Integration (OEI)**	**5.1 Work Systems 1.1 Organizational Leadership**
					established and reinforced
BP 14.04 Establish Coordination and Communication Methods	BP 14.03 Establish Coordination Methods	7.3.1 Design and development planning (interfaces and commun-ication between groups)	SP 2.3-2-2b Establish tools, methods, facilities (e.g., team rooms), and an information infrastructure that eases and supports interdisciplinary coordination. SP 2.3-2-3a Provide means for individuals and groups to acquire skills that facilitate interdisciplinary cooperation, such as communication skills, group problem solving, and active listening. SP 2.3-2-3b Plan for and provide regular exchanges of technical information and issue identification and resolution among all stakeholders, including customers. SP 2.3-2-3c Establish a mechanism to ensure compliance with commitments made among groups. SP 2.3-2-4 Espouse and model appropriate communication skills and interdepartmental cooperation on the part of upper management.	SP 2.4-1 Establish Operating Procedures (IT)	
BP 14.05 Establish Resolution Methods	BP 14.04 Establish Resolution Methods		SP 2.3-3-1 Establish and use a process or method for identifying and resolving interdisciplinary issues. SP 2.3-3-2 Communicate interdisciplinary issues and activities to affected groups, including program/project management and customer, supplier, and associate stakeholders. SP 2.3-3-3 Establish a process for escalating	SP 2.4-1 Establish Operating Procedures (IT)	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 14 Integrated Teaming	**PA 14 Coordination**	**7.3.1 Design and development planning**	**2.3 Integrate Disciplines**	**Integrated Teaming (IT) Integrated Project Management (IPM) Organizational Environment for Integration (OEI)**	**5.1 Work Systems 1.1 Organizational Leadership**
			and arbitrating technical differences, including a mechanism for authoritative resolution of conflicts.		
BP 14.06 Communicate Integrated Team Activity Results	BP 14.05 Communicate Interdisciplinary Activity Results		SP 2.3-2-2a Capture and communicate intergroup coordination activities and the results of those activities.		

Table PA 14: FAA-iCMM v2.0 Sources of Integrated Teaming Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 14 Integrated Teaming	**ORG.3 Human resource management (ext)** **ORG.1 Organizational alignment (new)** **MAN.2 Project management (new)**	**-**	**5.2.4 Resource Management Process**	
Goals				
1. Integrated teams composed of appropriate disciplines and stakeholders are established and maintained				
2. Team processes and methods are established and maintained for effective coordination, collaboration, communication, conflict resolution and decision-making				
Practices				
BP 14.01 Develop and Communicate Team Goals	ORG.3.BP10 : Empower project teams.			
BP 14.02 Establish and Maintain Integrated Teams	ORG.3.BP9: Define project teams. ORG.1.BP4: Build and empower teams.			

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 14 Integrated Teaming	**ORG.3 Human resource management (ext)** **ORG.1 Organizational alignment (new)** **MAN.2 Project management (new)**	**-**	**5.2.4 Resource Management Process**	
BP 14.03 Establish and Maintain a Collaborative Workplace	ORG.3.BP11 : Maintain project team interactions. MAN.2.BP9 : Identify interfaces.		5.2.4.3-10	
BP 14.04 Establish Coordination and Communication Methods	ORG.3.BP9: Define project teams. ORG.3.BP10 : Empower project teams. ORG.1.BP4: Build and empower teams.			
BP 14.05 Establish Resolution Methods	ORG.3.BP9 : Define project teams.			
BP 14.06 Communicate Integrated Team Activity Results				

Table PA 15: FAA-iCMM v2.0 Sources of Quality Assurance and Management Practices – Part 1

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 15 Quality Assurance & Management	**PA 15 Quality Assurance & Management** **PA 19 Prevention**	**4.1 General requirements** **7.5 Production and service provision** **8. Measurement, analysis and improvement**	**2.8 Ensure Quality** **3.1 Define and Improve the Systems Engineering Process**	**Process and Product Quality Assurance (PPQA)** **Causal Analysis and Resolution (CAR)** **Quantitative Supplier Management (**QSM)**	**6.2 Support Processes**
Goals					
1. Adherence of work products, services, and activities to applicable standards, procedures, and requirements is verified objectively.	1. Adherence of work products and activities to the applicable standards, procedures, and requirements is verified objectively. (PA 15)		2.8-2 Quality Process 2.8-3 Tools and Techniques	SG 1. Objectively Evaluate Processes and Work Products. (PPQA)	6.2 (4) How does your day-to-day operation of key support processes ensure meeting key performance requirements? How do you determine and use key performance measures and/or customer feedback in your support processes?
2. Noncompliance issues are tracked and those that cannot be resolved at the project level are addressed by senior management.	2. Noncompliance issues that cannot be resolved within the software project are addressed by senior management (PA 15)			SG 2. Provide Objective Insight (PPQA)	
3. Affected groups and individuals are informed of quality assurance activities, and results.	3. Affected groups and individuals are informed of quality assurance activities, results (PA15)				
4. Causes of defects are sought out,	PA 19 1. Common causes of		Theme: 2.8-3 Tools and Techniques	SG 1 Determine Causes of Defects (CAR	

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 15 Quality Assurance & Management	**PA 15 Quality Assurance & Management** **PA 19 Prevention**	**4.1 General requirements** **7.5 Production and service provision** **8. Measurement, analysis and improvement**	**2.8 Ensure Quality** **3.1 Define and Improve the Systems Engineering Process**	**Process and Product Quality Assurance (PPQA)** **Causal Analysis and Resolution (CAR)** **Quantitative Supplier Management (**QSM)**	**6.2 Support Processes**
identified, prioritized, corrected, and methods of elimination are evaluated.	defects are sought out and identified. 2. Common causes of defects are prioritized and systematically eliminated.			SG 2 Address Causes of Defects (CAR)	
5. Quality improvement opportunities are initiated with the appropriate stakeholders.	PA 15 3. … and quality improvement opportunities.				6.2 (5) How do you improve your support processes to achieve better performance and to keep them current with organization needs and directions, as appropriate? How are improvements shared with other organizational units and processes, as appropriate?
Practices					
BP 15.01 Establish a Quality Management System		4. Quality Management system 4.1 General requirements 4.2.1 General 4.2.2 Quality manual 5.4 Planning 5.4.1 Quality objectives		SP 1.1-1 Determine Quantitative Objectives (QSM)	6.2 (4) How does your day-to-day operation of key support processes ensure meeting key performance requirement How do you determine and use key performance measures and/or customer feedback in

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 15 Quality Assurance & Management	**PA 15 Quality Assurance & Management** **PA 19 Prevention**	**4.1 General requirements** **7.5 Production and service provision** **8. Measurement, analysis and improvement**	**2.8 Ensure Quality** **3.1 Define and Improve the Systems Engineering Process**	**Process and Product Quality Assurance (PPQA)** **Causal Analysis and Resolution (CAR)** **Quantitative Supplier Management (**QSM)**	**6.2 Support Processes**
		5.4.2 Quality management system planning 7.1 Planning of product realization			your support processes?
BP 15.02 Monitor Process Compliance	BP 15.01 Monitor Process Compliance BP 15.02 Evaluate Product and Process	7.5.2 Validation of processes for production and service provision 8.1 General 8.2.2 Internal audit 8.2.3 Monitoring and measurement of processes		SP 1.1-1 Objectively Evaluate Processes (PPQA)	6.2 (4) How does your day-to-day operation of key support processes ensure meeting key performance requirements? How do you determine and use key performance measures and/or customer feedback in your support processes?
BP 15.03 Monitor Product and Service Quality	BP 15.02 Evaluate Product and Process	8.2.2 Internal audit 8.2.4 Monitoring and measurement of product	SP 2.8-2-1 Evaluate work products and system elements against requirements. SP 2.8-2-3a Evaluate processes for adherence to standards and policies throughout the system life cycle. SP 2.8-2-3b Perform in-progress or incremental evaluations of work products and system elements against requirements.	SP 1.2-1 Objectively Evaluate Work Products and Services (PPQA)	
BP 15.04 Record and Report Results	BP 15.04 Record and Report Results	4.2.4 Control of records		SP 2.2-1 Establish Records (CAR)	6.2 (5) How do you improve your support

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 15 Quality Assurance & Management	**PA 15 Quality Assurance & Management** **PA 19 Prevention**	**4.1 General requirements** **7.5 Production and service provision** **8. Measurement, analysis and improvement**	**2.8 Ensure Quality** **3.1 Define and Improve the Systems Engineering Process**	**Process and Product Quality Assurance (PPQA)** **Causal Analysis and Resolution (CAR)** **Quantitative Supplier Management (**QSM)**	**6.2 Support Processes**
				SP 2.2-1 Communicate and Ensure Resolution of Noncompliance Issues (PPQA)	processes to achieve better performance and to keep them current with organization needs and directions, as appropriate? How are improvements shared with other organizational units and processes, as appropriate?
BP 15.05 Analyze Quality	BP 15.03 Detect Need for Corrective Actions BP 15.05 Analyze Quality BP 19.01 Conduct Causal Analysis Meetings	8.1 General 8.4 (b-d) Analysis of data 8.5.2 b) 8.5.2 c) 8.5.3 a)	SP 2.8-2-2 Establish a process to detect the need for corrective actions to products and processes. SP 2.8-2-4 Feed back lessons learned into processes for robustness of future designs. SP 3.1-5-3b Review root causes of errors or problems to determine whether changes to the systems engineering process are required to prevent future occurrences. SP 2.8-3-1 Use quality improvement tools in a disciplined manner to reduce defects and improve productivity.	SP 1.1-1 Select Defect Data for Analysis (CAR) SP 1.2-1 Analyze Causes (CAR) SP 2.1-1 Implement the Action Proposals (CAR) SP 2.1-1 Compare Results Against Quantitative Objectives (QSM) SP 2.2-1 Apply Quantitative Measurements (QSM) SP 2.3-1 Identify Special Causes of Variance (QSM)	6.2 (4) How does your day-to-day operation of key support processes ensure meeting key performance requirements? How do you determine and use key performance measures and/or customer feedback in your support processes?
BP 15.06 Initiate Quality Improvement	BP 15.06 Initiate Quality Improvement Opportunities	8.5.2 d) 8.5.3 c)	SP 2.8-2-4 Feed back lessons learned into processes for robustness of future designs.	SP 2.2-1 Record Data (PPQA) SP 2.1-1 Implement the	6.2 (5) How do you improve your support processes to achieve

FAA-iCMM v2.0	*FAA-iCMM v1.0*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area (**CMMI-A)*	*MBNQA/PQA Category/item*
PA 15 Quality Assurance & Management	**PA 15 Quality Assurance & Management** **PA 19 Prevention**	**4.1 General requirements** **7.5 Production and service provision** **8. Measurement, analysis and improvement**	**2.8 Ensure Quality** **3.1 Define and Improve the Systems Engineering Process**	**Process and Product Quality Assurance (PPQA)** **Causal Analysis and Resolution (CAR)** **Quantitative Supplier Management (**QSM)**	**6.2 Support Processes**
	BP 19.02 Coordinate Action Proposals BP 19.04 Revise Processes for Defect Prevention		SP 2.8-1-2b Create an environment that encourages employee participation in identifying, reporting, and solving quality issues. SP 2.8-3-2 Provide readily available, just-in-time training on the use of advanced quality improvement tools.	Action Proposals (CAR) SP 2.4-1 Take Corrective Action (CAR)	better performance and to keep them current with organization needs and directions, as appropriate? How are improvements shared with other organizational units and processes, as appropriate?
BP 15.07 Evaluate the Effect of Changes	BP 19.03 Document and Track Prevention Data	8.5.2 d) f) 8.5.3 d) e)		SP 2.2-1 Evaluate the Effect of Changes (CAR)	

Table PA 15: FAA-iCMM v2.0 Sources of Quality Assurance and Management Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 15 Quality Assurance & Management	**SUP.3 Quality assurance (basic)** **MAN.3 Quality management (new)** **SUP.7 Audit (basic)** **SUP.8 Problem resolution (basic)** **ORG.2 Improvement process (basic)** **ORG.5 Measurement (new)**	**6.3 Quality Assurance** **6. 7Audit** **6.8 Problem resolution**	**5.2.3 System Life Cycle Processes Management**	
Goals				
1. Adherence of work products, services, and activities to applicable standards, procedures, and requirements is verified objectively.		6.3 Quality assurance process 6.7 Audit process.		
2. Noncompliance issues are tracked and those that cannot be resolved at the project level are addressed by senior management.				
3. Affected groups and individuals are informed of quality assurance activities, and results.				
4. Causes of defects are sought out, identified, priori-tized, corrected, and methods of		6.8 Problem resolution process		

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 15 Quality Assurance & Management	**SUP.3 Quality assurance (basic)** **MAN.3 Quality management (new)** **SUP.7 Audit (basic)** **SUP.8 Problem resolution (basic)** **ORG.2 Improvement process (basic)** **ORG.5 Measurement (new)**	**6.3 Quality Assurance** **6. 7Audit** **6.8 Problem resolution**	**5.2.3 System Life Cycle Processes Management**	
elimination are evaluated.				
5. Quality improvement opportunities are initiated with the appropriate stakeholders.		6.8 Problem resolution process		
Practices				
BP 15.01 Establish a Quality Management System	SUP.3.BP1 : Develop quality assurance strategy. SUP.3.BP2 : Establish quality standards. SUP.3.BP3 : Define quality records. SUP.7.BP1 : Develop and implement audit strategy. MAN.3.BP1 : Establish quality goals. MAN.3.BP2 : Define overall strategy.	6.3.1.1 6.3.1.3 6.3.4.1 6.7.1.1 6.3.1.2		
BP 15.02 Monitor Process Compliance	SUP.3.BP4 : Assure quality of process activities. SUP.7.BP3 : Audit software development activities. SUP.7.BP4 : Audit management activities. SUP.7.BP5 : Audit process performance.	6.7.1.2 6.7.2.1 6.3.1.6 6.3.2.1 6.3.2.2 6.3.3.1 6.3.3.2 6.3.3.4	5.2.3.3 System Life Cycle Processes Management Process Activities 5	
BP 15.03 Monitor Product and Service Quality	SUP.3.BP5 : Assure quality of work products. SUP.7.BP6 : Audit final products and system. ORG.5.BP4 : Measure the quality of work products.	6.7.1.2 6.7.2.1 6.3.3.5		

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 15 Quality Assurance & Management	**SUP.3 Quality assurance (basic)** **MAN.3 Quality management (new)** **SUP.7 Audit (basic)** **SUP.8 Problem resolution (basic)** **ORG.2 Improvement process (basic)** **ORG.5 Measurement (new)**	**6.3 Quality Assurance** **6. 7Audit** **6.8 Problem resolution**	**5.2.3 System Life Cycle Processes Management**	
BP 15.04 Record and Report Results	SUP.3.BP6 : Report quality results. SUP.3.BP7 : Handle deviations.	6.7.1.5 6.7.1.6 6.7.1.7 6.8.1.1 a) 6.8.2.1 5.4.5.3 6.3.1.4 6.3.1.5	5.2.3.3 System Life Cycle Processes Management Process Activities 5	
BP 15.05 Analyze Quality	SUP.7.BP5 : Audit process performance. SUP.7.BP7 : Identify corrective actions from the audit report. SUP.8.BP2 : Prioritize problems. SUP.8.BP6 : Analyze problem trends. MAN.3.BP5 : Assess quality.	6.8.1.1 5.4.5.3.	5.2.3.3 System Life Cycle Processes Management Process Activities 5	
BP 15.06 Initiate Quality Improvement	ORG.2.3.BP1 : Identify improvement opportunities. SUP.7.BP8 : Track actions for audit report. SUP.8.BP3 : Determine actions for problems. SUP.8.BP4 : Track actions for problems. SUP.8.BP5 : Review and distribute solutions. MAN.3.BP6 : Take corrective action.	6.8.1.1 a)	5.2.3.3 System Life Cycle Processes Management Process Activities 6	
BP 15.07 Evaluate the Effect of Changes		6.8.1.1 a) d)		

Table PA 16: FAA-iCMM v2.0 Sources of Configuration Management Practices – Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 16 Configuration Management	**PA 16 Configuration Management**	**7.5.3 Identification and traceability** **4.2.3 Control of documents** **4.2.4 Control of records**	**2.7 Manage Configurations**	**Configuration Management (CM)**	**6.2 Support Processes**
Goals					
1. Configuration items that are to be managed are identified.	1. Configuration items that constitute baselines are identified.		2.7-1. Identification	SG 1. Establish Baselines	
2. Configuration items are controlled and managed throughout the life cycle.	2. Configuration items are controlled to support the disciplined evolution of the product baseline.		2.7-2. Change Control	SG 2. Track and Control Changes	
3. Status of configuration items is recorded and reported to all stakeholders.	3. Configuration status is communicated to affected groups.		2.7-3. Status Accounting		
4. The integrity of baselines and work products is assured.	4. Configuration baselines are audited to verify the product baseline integrity.		2.7-4. Audit	SG 3. Establish Integrity	
Practices					
BP 16.01 Establish a Configuration Management Strategy	BP 16.01 Establish Configuration Management Methodology	4.2.3 Control of Documents	2.7-1 Baselines may also be established at different times internally and with a customer etc. SP 2.7-1-2a Identify, baseline, and control work products from all Focus	SP 1.2-1. Establish a Configuration Management System SP 1.2-1 Sub-practice 1:	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 16 Configuration Management	**PA 16 Configuration Management**	**7.5.3 Identification and traceability** **4.2.3 Control of documents** **4.2.4 Control of records**	**2.7 Manage Configurations**	**Configuration Management (CM)**	**6.2 Support Processes**
			Areas that are critical enough to require configuration management. SP 2.7-2-3 Changes are evaluated for their impact beyond the immediate program or contract requirements.		
BP 16.02 Identify and Baseline Configuration Items and Interim Work Products	BP 16.02 Identify Configuration Units/Items	4.2.3 Control of Documents 7.5.3 Identification and traceability 7.5.4 Customer property	SP 2.7-1-1 Identify, baseline, and control work products that define the product. SP 2.7-1-2a Identify, baseline, and control work products from all Focus Areas that are critical enough to require configuration management.	SP 1.1-1.Identify Configuration Items	
BP 16.03 Establish and Maintain a Repository for Work Product Baselines	BP 16.03 Establish and Maintain a Repository for Work Product Baselines	4.2.3 Control of Documents 4.2.4 Control of records	SP 2.7-1-1 Identify, baseline, and control work products that define the product. 2.7-1 Baselines may also be established at different times internally and with a customer etc. SP 2.7-1-2b Maintain a repository of work product baselines. SP 2.7-1-2c Maintain the capability to store, manage, retrieve, and distinguish multiple versions of product elements and work products. SP 2.7-1-3 Formally control release of products created from the baseline library. SP 2.7-2-1 Changes to established baselines are recorded, reviewed,	SP 1.3-1. Create or Release Baselines SP 3.1-1 Subpractice 5:	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 16 Configuration Management	**PA 16 Configuration Management**	**7.5.3 Identification and traceability** **4.2.3 Control of documents** **4.2.4 Control of records**	**2.7 Manage Configurations**	**Configuration Management (CM)**	**6.2 Support Processes**
			approved, controlled, and verified as incorporated.		
BP 16.04 Control Changes	BP 16.04 Control and Track Changes	4.2.3 Control of Documents	SP 2.7-1-1 Identify, baseline, and control work products that define the product. SP 2.7-1-2a Identify, baseline, and control work products from all Focus Areas that are critical enough to require configuration management. SP 2.7-1-3 Formally control release of products created from the baseline library. SP 2.7-2-1 Changes to established baselines are recorded, reviewed, approved, controlled, and verified as incorporated. SP 2.7-2-2 Changes are evaluated through a process that ensures they are consistent with all the technical and program requirements. SP 2.7-2-3 Changes are evaluated for their impact beyond the immediate program or contract requirements.	SP 1.3-1. Create or Release Baselines SP 2.1-1.Track Changes SP 2.2-1.Control Changes	
BP 16.05 Record and Report Configuration Status	BP 16.05 Communicate Configuration Status	4.2.3 Control of Documents 7.3.7 Control of design and development changes 7.5.3 Identification	SP 2.7-3-1 Status of configuration data, changes, and access information is recorded, tracked, and communicated to affected groups. SP 2.7-2-1 Changes to established baselines are recorded, reviewed,	SP 2.1-1.Track Changes SP 3.1-1 Establish Configuration Management Records SP 3.1-1 Sub 1: SP 3.1-1 Sub 2:	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 16 Configuration Management	**PA 16 Configuration Management**	**7.5.3 Identification and traceability** **4.2.3 Control of documents** **4.2.4 Control of records**	**2.7 Manage Configurations**	**Configuration Management (CM)**	**6.2 Support Processes**
		and traceability 7.5.4 Customer property	approved, controlled, and verified as incorporated.	SP 3.1-1 Sub 3: SP 3.1-1 Sub 4: SP 3.1-1 Sub 5: SP 3.1-1 Sub 6:	
BP 16.06 Conduct Configuration Audits and Inspections	BP 16.06 Conduct Configuration Audits		SP 2.7-4-1 Periodically audit configuration management activities and processes to confirm that the resulting baselines and documentation are accurate and record audit results. SP 2.7-2-1 Changes to established baselines are recorded, reviewed, approved, controlled, and verified as incorporated. SP 2.7-2-2 Changes are evaluated through a process that ensures they are consistent with all the technical and program requirements.	SP 3.1-1 Sub 6: SP 3.2-1.Perform Configuration Audits	

Table PA 16: FAA-iCMM v2.0 Sources of Configuration Management Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 16 Configuration Management	**SUP.2 Configuration management (basic)**	**6.2 Configuration Management** **6.1 Documentation** **6.3 Quality Assurance** **5.5 Maintenance**	**5.3.6 Configuration Management**	
Goals				
1. Configuration items that are to be managed are identified.			5.3.6.2 1)	
2. Configuration items are controlled and managed throughout the life cycle.		6.2.2	5.3.6.2 2) 3)	
3. Status of configuration items is recorded and reported to all stakeholders.			5.3.6.2 4)	
4. The integrity of baselines and work products is assured.				
Practices				
BP 16.01 Establish a Configuration Management Strategy	SUP.2.BP1. Develop configuration management strategy. SUP.2.BP2. Establish configuration management system.	6.2.1.1	5.3.6.3. Configuration Management Process Activities 1. 4.	
BP 16.02 Identify and Baseline Configuration Items and Interim Work Products	SUP.2.BP3 Identify configuration items. SUP.2.BP4 Maintain configuration item description.		5.3.6.3. Configuration Management Process Activities 2.	

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 16 Configuration Management	**SUP.2 Configuration management (basic)**	**6.2 Configuration Management** **6.1 Documentation** **6.3 Quality Assurance** **5.5 Maintenance**	**5.3.6 Configuration Management**	
BP 16.03 Establish and Maintain a Repository for Work Product Baselines	SUP.2.BP2. Establish configuration management system. SUP.2.BP4 Maintain configuration item description. SUP.2.BP7 Maintain configuration item history. SUP.2.BP9 Manage the release and delivery of configuration items.	6.2.3.1 6.2.6 6.2.6.1	5.3.6.3. Configuration Management Process Activities 1. 3.	
BP 16.04 Control Changes	SUP.2.BP6 Manage product releases. SUP.2.BP5 Manage changes. SUP.2.BP4 Maintain configuration item description.	5.5.1.3 6.2.3.1 6.1.3.2	5.3.6.3. Configuration Management Process Activities 4.	
BP 16.05 Record and Report Configuration Status	SUP.2.BP4 Maintain configuration item description. SUP.2.BP7 Maintain configuration item history. SUP.2.BP8 Report configuration status. SUP.2.BP5 Manage changes.	6.2.3.1 6.2.4.1	5.3.6.3. Configuration Management Process Activities 5)	
BP 16.06 Conduct Configuration Audits and Inspections		6.2.3.1 6.3.2.3	5.3.6.3. Configuration Management Process Activities 5 6.	

Table PA 17: FAA-iCMM v2.0 Sources of Information Management Practices - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 17 Information Management		**4.2.3 Control of Documents** **7.5.4 Customer property**	**2.6 Manage Data**	**-**	**6.2 Support Processes**
Goals					
1. An infrastructure is established and maintained to provide the mechanisms and media needed to support the information management at project, organization and enterprise levels.					
2. Information is managed in accordance with established requirements and strategy.			2.6-1 Data Requirements Identification 2.6-5 Status		
3. Information is stored and protected from loss, damage, and unwarranted access.					
4. Timely access to information is available to those that need it.			2.6-3 Maintenance and Distribution		
Practices					
BP 17.01 Establish Information			SP 2.6-1-1 Establish program data and data management requirements.		

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 17 Information Management		**4.2.3 Control of Documents** **7.5.4 Customer property**	**2.6 Manage Data**	**-**	**6.2 Support Processes**
Management Strategy			SP 2.6-1-2 Review data management activities periodically to confirm that the program data requirements are still valid and on schedule. SP 2.6-1-3 Establish program data requirements based upon a common or standard set of data requirements.		
BP 17.02 Establish Information Management Capability			SP 2.6-3-3a Provide a common data management archival and retrieval capability throughout the organization.		
BP 17.03 Store Information			SP 2.6-3-1 Archive program data. SP 2.6-3-3b Archive data efficiently based upon common characteristics (e.g., key words, topics, contract number, etc.).		
BP 17.04 Share Information		4.2.3 Control of documents d)	SP 2.6-3-2 Establish a capability to retrieve desired program data quickly. SP 2.6-5-1 Record and maintain the status of program data. SP 2.6-5-2a Communicate status reports documenting data management activities to appropriate groups and individuals.		
BP 17.05 Protect Information		7.5.4 Customer property 4.2.3 Control of documents e) f) g)			
BP 17.06 Establish Information Standards					

Table PA 17: FAA-iCMM v2.0 Sources of Information Management Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 17 Information Management	**SUP.1 Documentation (extended)** **ORG.6 Reuse (new)**	**6.1 Documentation** **6.2 Configuration Management** **5.5 Maintenance**	**5.3.7 Information Management** **5.2.4 Resource Management** **5.4.5 Integration Process**	**Malcolm Baldrige National Quality Criteria *2001*** **4.2 Information Management**
Goals				
1. An infrastructure is established and maintained to provide the mechanisms and media needed to support the information management at project, organization and enterprise levels.				
2. Information is managed in accordance with established requirements and strategy.		6.1 Documentation Process 6.1.1.1	5.3.7.2 1. 2.	
3. Information is stored and protected from loss, damage, and unwarranted access.			5.3.7.2 3.	
4. Timely access to information is available to those that need it.			5.3.7.2 5. 5.2.4.2 3.	4.2 Describe how your organization ensures quality and availability of needed data and information for employees, suppliers/ partners, and customers.
Practices				
BP 17.01 Establish Information Management Strategy		6.1 Documentation Process 6.1.1.1	5.3.7.3 1. 5.2.4.3 9.	4.2 Describe how your organization ensures the quality and availability of needed data and information for employees, suppliers/ partners, and customers.
BP 17.02 Establish Information Management Capability	ORG.6.BP2 : Establish reuse library			

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 17 Information Management	**SUP.1 Documentation (extended)** **ORG.6 Reuse (new)**	**6.1 Documentation** **6.2 Configuration Management** **5.5 Maintenance**	**5.3.7 Information Management** **5.2.4 Resource Management** **5.4.5 Integration Process**	**Malcolm Baldrige National Quality Criteria *2001*** **4.2 Information Management**
BP 17.03 Store Information	SUP.1.BP7 : Maintain document.		5.3.7.3 5. 6. 8. 5.2.4.3 8.	
BP 17.04 Share Information	SUP.1.BP6 : Distribute document. ORG.6.BP7 : Inform potential users about reusable entities and domain knowledge.	5.5.5.7	5.3.7.3 Information Management Activities 4 7. 5.4.4.3 Implementation Process Activities 7.	4.2 Describe how your organization ensures quality and availability of needed data and information for employees, suppliers/partners, and customers. 4.2 a (1) How do you make needed data and information available? How do you make them accessible to employees, suppliers/ partners, and customers…?
BP 17.05 Protect Information	ORG.4.BP6 : Ensure data integrity and security.	5.5.5.7 6.1.3.1 6.2.6.1	5.3.7.3 Information Management Activities 3. 9. 5.2.4.3 Resource Management Activities 8. 9. 5.4.5.3. Integration Activities 3.	
BP 17.06 Establish Information Standards	SUP.1.BP2 : Establish standards for documents. SUP.1.BP3 : Specify documentation requirements. ORG.6.BP5 : Keep reusable entities stable and consistent.	6.1.2.1	5.3.7.3 Information Management Activities 4.	

Table PA 18: FAA-iCMM v2.0 Sources of Measurement and Analysis Practices - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 18 Measurement and Analysis	**PA18 Measurement**	**7.6 Control of monitoring and measuring devices 8.1 General 8.2.3 Monitoring and measurement of processes 8.2.4 Monitoring and measurement of product 8.4 Analysis of data**	**2.2 Monitor and Control**	**Measurement and Analysis (MA) Organizational Process Performance (OPP) Causal Analysis and Resolution (CAR) Quantitative Project Management (QPM)**	**4.1 Measurement of Organizational Performance 4.2 Analysis of Organizational Performance 6.2 Support Processes 7. Business Results (all items)**
Goals					
1. Measures related to goals, objectives and major issues are established	1. Measurements are established, maintained and used based on the project and organization goals.			SG 1. Align measurement and analysis activities (MA) SG 1. Establish Performance Baselines and Models (OPP)	4.1(1) How do you address the major components of an effective performance measurement system, including the following key factors: selection of measures/indicators
2. Measurement data are collected, analyzed, and results are reported	2. Measurements are collected, analyzed and reported			SG 2. Provide measurement results (MA) SG 1. Establish Performance Baselines and Models (OPP)	4.2(a)How does analysis support daily operations of key systems and processes throughout your organization. Include how this analysis ensures that measures align with action plans
3. Measurement data and results are stored for use.				SG 2. Provide measurement results (MA) SG 1. Establish Performance Baselines and Models (OPP)	
Practices					
BP 18.01 Establish measures based on goals	BP18.01 Establish measures based on goals	8.1 General 7.6 Control of monitoring and measurement devices 8.2.3 Monitoring and measurement of processes		SP 1.1-1 Establish Measurement Objectives (MA) SP 1.2-1 Specify Measures (MA) SP 1.2-1 Establish Process Performance Measures (OPP)	4.1a 1-select measures/indicators 4.2a-2-link organization-level analysis to operations 4.2a 3-analyze performance to

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 18 Measurement and Analysis	**PA18 Measurement**	**7.6 Control of monitoring and measuring devices 8.1 General 8.2.3 Monitoring and measurement of processes 8.2.4 Monitoring and measurement of product 8.4 Analysis of data**	**2.2 Monitor and Control**	**Measurement and Analysis (MA) Organizational Process Performance (OPP) Causal Analysis and Resolution (CAR) Quantitative Project Management (QPM)**	**4.1 Measurement of Organizational Performance 4.2 Analysis of Organizational Performance 6.2 Support Processes 7. Business Results (all items)**
		8.2.4 Monitoring and measurement of product			support operations and align with action plans
BP 18.02 Collect relevant measurement data	BP18.02 Collect and analyze measurements	8.1 General 7.6 Control of monitoring and measurement devices 8.2.3 Monitoring and measurement of processes 8.2.4 Monitoring and measurement of product 8.4 Analysis of data	SP2.2-3-1a Periodically collect and analyze the measures of program and technical performance.	SP 2.1-1 Collect Measurement Data (MA) SP 1.4-1 Establish Process Performance Baselines (OPP) SP 1.1-1 Select Defect Data for Analysis (CAR) SP 2.1-1 Select Measures and Analytic Techniques (QPM)	4.2a 1-analyze performance to support review and planning 4.2a-2-link organization-level analysis to operations 4.2a 3-analyze performance to support operations and align with action plans
BP 18.03 Store data and results		8.2.3 Monitoring and measurement of processes 8.2.4 Monitoring and measurement of product 8.4 Analysis of data		SP 1.3-1 Specify Data Collection and Storage Procedures (MA) SP 2.3-1 Store Data and Results (MA) SP 1.4-1 Establish Process Performance Baselines (OPP) SP 2.4-1 Record Statistical Management Data (QPM)	4.2a 1-analyze performance to support review and planning 4.2a-2-link organization-level analysis to operations 4.2a 3-analyze performance to support operations and align with action plans 7. Business Results (all items)
BP 18.04 Analyze measurement data	BP18.02 Collect and analyze measurements	8.1 General 8.2.3 Monitoring and measurement of processes 8.2.4 Monitoring and measurement of product 8.4 Analysis of data	SP 2.2-3-4 Analyze and use prediction based on program's measures to deter-mine if the program's completion is at risk and thus warrants corrective action.	SP 1.4-1 Specify Analysis Procedures (MA) SP 2.2-1 Analyze Measurement Data (MA) SP 1.5-1 Establish Process Performance Models (OPP) SP 1.1-1 Select Defect Data for Analysis (CAR)	4.2a 1-analyze performance to support review and planning 4.2a-2-link organization-level analysis to operations 4.2a 3-analyze performance to support operations and align with action plans 2.2b 1-project key

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 18 Measurement and Analysis	**PA18 Measurement**	**7.6 Control of monitoring and measuring devices** **8.1 General** **8.2.3 Monitoring and measurement of processes** **8.2.4 Monitoring and measurement of product** **8.4 Analysis of data**	**2.2 Monitor and Control**	**Measurement and Analysis (MA)** **Organizational Process Performance (OPP)** **Causal Analysis and Resolution (CAR)** **Quantitative Project Management (QPM)**	**4.1 Measurement of Organizational Performance** **4.2 Analysis of Organizational Performance** **6.2 Support Processes** **7. Business Results (all items)**
				SP 2.2-1 Apply Statistical Methods to Understand Variation (QPM)	performance measures/ indicators 2.2b 2-compare projected performance with competitors, key benchmarks, past performance, as appropriate
BP18.05 Communicate results	BP18.03 Communicate quantitative status	8.2.3 Monitoring and measurement of processes 8.2.4 Monitoring and measurement of product		SP 2.4-1 Communicate Results (MA)	4.2a 1-analyze performance to support review and planning 2.2a 5-communicate and deploy strategic objectives, action plans, measures to achieve alignment 4.2a-2-link organization-level analysis to operations 4.2a 3-analyze performance to support operations and align with action plans

Table PA 18: FAA-iCMM v2.0 Sources of Measurement and Analysis Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 18 Measurement and Analysis	**ORG.5 Measurement (new)**	**7.3.3 Process Improvement (data and analysis)**	**5.2.3 System Life Cycle Processes Management**	**Practical Software/System Measurement ISO/TR10017:1999(E) – Guidance on Statistical Techniques for ISO 9001:1994**
Goals				
1. Measures related to goals, objectives and major issues are established				
2. Measurement data are collected, analyzed, and results are reported				
3. Measurement data and results are stored for use.				
Practices				
BP 18.01 Establish measures based on goals	ORG.5.BP1 : Establish metrics for process management. ORG.5.BP2 : Establish metrics for the quality of work products.		5.2.3.3-4	Practical Software/System Measurement
BP 18.02 Collect relevant measurement data	ORG.5.BP6 : Define benchmark. ORG.5.BP4 : Measure the quality of work products.	7.3.3.2 7.3.3.3		Practical Software/System Measurement
BP 18.03 Store data and results	ORG.5.BP5 : Make measurement data available for decision-making. ORG.5.BP6 : Define benchmark. ORG.2.1.BP8 : Capture process data.	7.3.3.2 7.3.3.3		

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 18 Measurement and Analysis	**ORG.5 Measurement (new)**	**7.3.3 Process Improvement (data and analysis)**	**5.2.3 System Life Cycle Processes Management**	**Practical Software/System Measurement ISO/TR10017:1999(E) – Guidance on Statistical Techniques for ISO 9001:1994**
BP 18.04 Analyze measurement data	ORG.5.BP7 : Benchmark processes. ORG.5.BP4 : Measure the quality of work products.	7.3.3.2 7.3.3.3		ISO/TR10017:1999(E) – Guidance on Statistical Techniques for ISO9001: 1994 Practical Software/System Measurement
BP 18.05 Communicate results	ORG.5.BP5 : Make measurement data available for decision-making.	7.3.3.2 7.3.3.3		

Table PA 20: FAA-iCMM v2.0 Sources of Process Definition Practices – Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 20 Process Definition	**PA 20 Organization Process Definition**	**4. Quality management system 4.2.2 Quality Manual 8.5.1 Continual Improvement**	**3.1 Define and Improve the Systems Engineering Process**	**Organizational Process Focus (OPF) Organizational Process Definition (OPD) Integrated Project Management (IPM)**	**6.Process Management (all items) 2.1 Strategy Development**
Goals					
1. The set of standard processes is established and maintained.	1. The organization's set of standard processes is established and maintained.		3.1-3 Systems Engineering Process Development 3.1-6 Improvements to Systems Engineering Process	SG 1 Create Organizational Process Assets (OPD)	
2. Guides for tailoring the standard processes are established and maintained.	2. Guides for tailoring the organization's standard processes are established and maintained.		3.1-4 Tailoring	SG 2 Make Supporting Process Assets Available (OPD)	
3. Goals, performance data, and other assets that support the processes are collected, maintained, and communicated.	3. Goals, performance data, and other assets for the organization's processes are collected, maintained, and communicated.		3.1-1 Systems Engineering Process Awareness 3.1-2 Establishment of a Systems Engineering Process Asset Library 3.1-3 Systems Engineering Process Development 3.1-6 Improvements to Systems Engineering Process	SG 1 Create Organizational Process Assets (OPD)	
Practices					
BP 20.01 Establish Standard Processes	BP 20.03 Establish Standard Processes BP 21.02 Change the standard process	4 Quality management system 4.1 General requirements 4.2.1 General	SP 3.1-1-3b Document rationale for selection and inclusion of best practices in the organization's standard systems engineering process.	SP 1.1-1 Establish standard processes (OPD) SP 1.2-1 Establish life-cycle model descriptions (OPD)	2.1 a. (1) What is your strategic planning process? 6.1 a- (1) What are your design processes

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 20 Process Definition	**PA 20 Organization Process Definition**	**4. Quality management system** **4.2.2 Quality Manual** **8.5.1 Continual Improvement**	**3.1 Define and Improve the Systems Engineering Process**	**Organizational Process Focus (OPF)** **Organizational Process Definition (OPD)** **Integrated Project Management (IPM)**	**6.Process Management (all items)** **2.1 Strategy Development**
		4.2.2 Quality manual	SP 3.1-5-4c Use uniform systems engineering process metrics across programs. SP 3.1-3-3c Define clearly the inputs and outputs of the sub-processes that comprise the systems engineering process. SP 3.1-3-3d Define entrance and exit criteria for each major activity in the systems engineering process. SP 3.1-3-3e Define a set of standard methods for use with the organization's standard systems engineering process used on programs. SP 3.1-3-5 Integrate the systems engineering process with other engineering and enterprise processes to establish a unified product development process.		for products/services and their related production/delivery processes? 6.1 b. (1) What are your key production/delivery processes and their key performance requirements? 6.2 a. (1) What are your key support processes? (3) How do you design these processes to meet all the key requirements?
BP 20.02 Develop Tailoring Guidelines	BP 20.04 Develop Tailoring Guidelines		SP 3.1-4-3a Establish a set of tailoring guidelines for the organization's standard systems engineering process that permits the standard process to meet program-specific needs. SP 3.1-4-3b Tailoring reports generated by the programs are reviewed and approved by the appropriate individuals (e.g., senior	SP 1.3-1 Establish tailoring criteria and guidelines (OPD)	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 20 Process Definition	**PA 20 Organization Process Definition**	**4. Quality management system 4.2.2 Quality Manual 8.5.1 Continual Improvement**	**3.1 Define and Improve the Systems Engineering Process**	**Organizational Process Focus (OPF) Organizational Process Definition (OPD) Integrated Project Management (IPM)**	**6.Process Management (all items) 2.1 Strategy Development**
			managers or members of the engineering process group).		
BP 20.03 Maintain Process Assets	BP 20.05 Maintain Process Assets		SP 3.1-2-2 Establish a process library for systems engineering process assets developed and collected by the program. SP 3.1-2-3a Establish and assertively manage a library for systems engineering process assets developed and collected by the organization. SP 3.1-2-3b Ensure that tailoring reports from application of the organization's standard systems engineering process to specific programs are recorded in the process library. SP 3.1-2-3c Ensure that program results of applying the organization's standard systems engineering process are recorded in the process asset library. SP 3.1-3-1 Identify existing systems engineering processes for use on programs. SP 3.1-3-3b Develop and document a standard systems engineering process for the organization based on industry standards and industry-wide best practices.	SP 2.4-1 Incorporate process-related experiences into the Organization's process assets Organizational Process Definition: (OPF) SP 2.1-1 Establish an organizational measurement repository (OPF) SP 2.2-1 Establish an organizational process asset library (OPF) SP 1.5-1 Contribute to the Organization's Process Assets (IPM)	

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 20 Process Definition	**PA 20 Organization Process Definition**	**4. Quality management system** **4.2.2 Quality Manual** **8.5.1 Continual Improvement**	**3.1 Define and Improve the Systems Engineering Process**	**Organizational Process Focus (OPF)** **Organizational Process Definition (OPD)** **Integrated Project Management (IPM)**	**6.Process Management (all items)** **2.1 Strategy Development**
			SP 3.1-3-3e Define a set of standard methods for use with the organization's standard systems engineering process used on programs.		
BP 20.04 Coordinate and Communicate Process Definition	BP 20.06 Coordinate and Communicate Process Definition	8.5.1 Continual Improvement	SP 3.1-3-2b Describe and present the organizational policy clearly and completely to all engineering and program personnel. SP 3.1-6-2b Identify and communicate best practices within the organization to programs. SP 3.1-6-3b Provide a mechanism for users to identify proposed improvements to the systems engineering process. SP 3.1-6-3c Communicate the existence and improvement of the organization's standard systems engineering process to all affected groups and programs.	SP 1.3-1 Identify the organization's process improvements (OPF) SP 2.1-1 Establish process action plans (OPF) SP 2.2-1 Implement process action plans (OPF) SP 2.3-1 Deploy process and related process assets (OPF)	

Table PA 20: FAA-iCMM v2.0 Sources of Organization Process Definition Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 20 Process Definition	**ORG.2 Improvement process (basic)** **ORG.2.1 Process establishment (component)** **ORG2.2 Process assessment (component)** **ORG.6 Reuse (new)**	**7.3 Improvement**	**5.2.3 System Life Cycle Processes Management**	
Goals				
1. The set of standard processes is established and maintained.	ORG 2. ORG.2.1	7.3.1 7.3.1.1		
2. Guides for tailoring the standard processes are established and maintained.				
3. Goals, performance data, and other assets that support the processes are collected, maintained, and communicated.				
Practices				
BP 20.01 Establish Standard Processes	ORG.2.1 Process establishment process. ORG.2.BP1: Define organizational processes. ORG.2.1.BP2: Identify activities, roles, authorities & responsibilities. ORG.2.1.BP3: Define and document the processes performed in the organization. ORG.2.1.BP9: Maintain the standard processes.	7.3.1 7.3.1.1 6.3.1.2	5.2.3.3 System Life Cycle Processes Management Process Activities 1.	

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 20 Process Definition	**ORG.2 Improvement process (basic)** **ORG.2.1 Process establishment (component)** **ORG2.2 Process assessment (component)** **ORG.6 Reuse (new)**	**7.3 Improvement**	**5.2.3 System Life Cycle Processes Management**	
	ORG.6.BP1 : Define organizational reuse strategy. ORG.6.BP3 : Identify reusable entities. ORG.6.BP4 : Develop reusable entities.			
BP 20.02 Develop Tailoring Guidelines	ORG.2.1 Process establishment process.	7.1.1.3	5.2.3.3 System Life Cycle Processes Management Process Activities 2.	
BP 20.03 Maintain Process Assets	ORG.2.1 Process establishment process. ORG.2.2 Process assessment process. ORG.2.2.BP8: Maintain the assessment results. ORG.6.BP2 : Establish reuse library. ORG.6.BP5 : Keep reusable entities stable and consistent.		5.2.3.3 System Life Cycle Processes Management Process Activities 3. 8.	
BP 20.04 Coordinate and Communicate Process Definition	ORG.6.BP6 : Report and certify reusable entities and domain knowledge. ORG.6.BP7 : Inform potential users about reusable entities and domain knowledge.			

Table PA 21: FAA-iCMM v2.0 Sources of Process Improvement Practices – Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 21 Process Improvement	**PA 20 Organization Process Definition PA 21 Organization Process Improvement**	**4 Quality management system 8.5 Improve-ment**	**3.1 Define and Improve the Systems Engineering Process**	**Organizational Process Focus (OPF) Organizational Process Definition (OPD)**	**6. Process Management (all items) 3.1 Customer and Market Knowledge 3.2 Customer Satisfaction and Relationships 4.1 Measurement of Organizational Performance**
Goals					
1. Goals for processes improvement are established and progress towards them is evaluated.				SG 1. Determine Process Improvement Opportunities (OPF)	
2. Process improvement activities are coordinated across projects and the organization.	4. Process definition and improvement activities are coordinated across the organization. (PA 20)		3.1-5 Assessment of Systems Engineering Process	SG 2. Make Supporting Process Assets Available (OPD)	
3. Improvements are deployed, monitored, and sustained within the project and organization.	1. The set of standard processes and projects' defined processes are improved continuously (PA 21)	8.5.1 Continual improvement		SG 2. Plan and Implement Process Improvement Activities (OPF)	
Practices					
BP 21.01 Identify Process Improvement Goals	BP 20.02 Identify Process Goals		SP 3.1-1-2 Establish systems engineering process goals from the organization's business goals.	SP 1.1-1 Establish organizational process needs (OPF)	3.1 a. (4) How do you keep your listening and learning methods, and keep them current with business

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 21 Process Improvement	**PA 20 Organization Process Definition** **PA 21 Organization Process Improvement**	**4 Quality management system** **8.5 Improve-ment**	**3.1 Define and Improve the Systems Engineering Process**	**Organizational Process Focus (OPF)** **Organizational Process Definition (OPD)**	**6. Process Management (all items)** **3.1 Customer and Market Knowledge** **3.2 Customer Satisfaction and Relationships** **4.1 Measurement of Organizational Performance**
			SP 3.1-3-2a Establish and follow a written organizational policy (may be part of a broad-based policy) for implementing and maintaining systems engineering process(es). SP 3.1-3-3c Define clearly the inputs and outputs of the sub-processes that comprise the systems engineering process. SP 3.1-3-3d Define entrance and exit criteria for each major activity in the systems engineering process. SP 3.1-3-3e Define a set of standard methods for use with the organization's standard systems engineering process used on programs.		needs and directions? 3.2 a. (5) How do you keep your approaches to customer access and relationships current with business needs and directions? 3.2 b. (4) How do you keep your approaches to satisfaction determination current with business needs and directions? 4.1 a. (2) How do you keep your performance measurement system current with business needs and directions? 6.1 a. (1) … design processes for products/ services and their related production/delivery processes? 6.1a (2) … incorporate changing customer/market and mission-related requirements into … designs and … systems and processes? 6.2 a (5) … improve your support processes to achieve better performance … keep them current with organization needs and directions, …? … improvements shared … 6.3 a. (6) … improve your supplier

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 21 Process Improvement	**PA 20 Organization Process Definition PA 21 Organization Process Improvement**	**4 Quality management system 8.5 Improve-ment**	**3.1 Define and Improve the Systems Engineering Process**	**Organizational Process Focus (OPF) Organizational Process Definition (OPD)**	**6. Process Management (all items) 3.1 Customer and Market Knowledge 3.2 Customer Satisfaction and Relationships 4.1 Measurement of Organizational Performance**
					and/or partner processes, including your role as supportive customer/partner, to keep current with your organization needs and directions? … improvements shared
BP 21.02 Establish Process Improvement Program	BP 21.01 Establish process improvement program	8.5.1 Continual improvement			3.1 a. (4) How do you keep your listening and learning methods, and keep them current with business needs and directions? 3.2 a. (5) How do you keep your approaches to customer access and relationships current with business needs and directions? 3.2 b. (4) How do you keep your approaches to satisfaction determination current with business needs and directions? 4.1 a. (2) How do you keep your performance measurement system current with business needs and directions? 6.2 a (5) … improve your support processes to achieve better performance … keep them current with organization needs and directions, …? … improvements shared … 6.3 a. (6) … improve your supplier

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 21 Process Improvement	**PA 20 Organization Process Definition** **PA 21 Organization Process Improvement**	**4 Quality management system** **8.5 Improve-ment**	**3.1 Define and Improve the Systems Engineering Process**	**Organizational Process Focus (OPF)** **Organizational Process Definition (OPD)**	**6. Process Management (all items)** **3.1 Customer and Market Knowledge** **3.2 Customer Satisfaction and Relationships** **4.1 Measurement of Organizational Performance**
					and/or partner processes, including your role as supportive customer/partner, to keep current with your organization needs and directions? … improvements shared
BP 21.03 Appraise process	BP 20.01 Appraise Processes		SP 3.1-5-2 Assess the program-specific systems engineering processes and determine relative strengths and weaknesses. SP 3.1-5-3a Assess the organization's standard systems engineering process. SP 3.1-5-3c Use a mechanism for periodically assessing the systems engineering process. SP 3.1-5-3d Seek to benchmark the organization's systems engineering process against processes used by other organizations. SP 3.1-5-3e Determine the degree of program use of the organization's defined systems engineering process and methods. SP 3.1-6-2b Identify and communicate best practices within the organization to programs.	SP 1.2-1 Assess the Organization's Processes (OPF)	3.1 a. (4) How do you keep your listening and learning methods, and keep them current with business needs and directions? 3.2 a. (5) How do you keep your approaches to customer access and relationships current with business needs and directions? 3.2 b. (4) How do you keep your approaches to satisfaction determination current with business needs and directions? 4.1 a. (2) How do you keep your performance measurement system current with business needs and directions? 6.2 a. (5) … improve your support processes to achieve better performance … keep them current with organization needs and directions, …? … improvements shared … 6.3 a. (6) … improve your supplier

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 21 Process Improvement	**PA 20 Organization Process Definition PA 21 Organization Process Improvement**	**4 Quality management system 8.5 Improve-ment**	**3.1 Define and Improve the Systems Engineering Process**	**Organizational Process Focus (OPF) Organizational Process Definition (OPD)**	**6. Process Management (all items) 3.1 Customer and Market Knowledge 3.2 Customer Satisfaction and Relationships 4.1 Measurement of Organizational Performance**
					and/or partner processes, including your role as supportive customer/partner, to keep current with your organization needs and directions? … improvements shared
BP 21.04 Establish an Action Plan		8.5.1 Continual improvement	SP 3.1-3-3a Plan, approve, and establish process management and improvement activities according to a formal procedure.	SP 1.3-1 Identify the Organization's Process Improvements (OPF) SP 2.1-1 Establish Process Action Plans (OPF)	3.1 a. (4) How do you keep your listening and learning methods, and keep them current with business needs and directions? 3.2 a. (5) How do you keep your approaches to customer access and relationships current with business needs and directions? 3.2 b. (4) How do you keep your approaches to satisfaction determination current with business needs and directions? 4.1 a. (2) How do you keep your performance measurement system current with business needs and directions? 6.2 a. (5) … improve your support processes to achieve better performance … keep them current with organization needs and directions, …? … improvements shared … 6.3 a. (6) … improve your supplier

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 21 Process Improvement	**PA 20 Organization Process Definition PA 21 Organization Process Improvement**	**4 Quality management system 8.5 Improve-ment**	**3.1 Define and Improve the Systems Engineering Process**	**Organizational Process Focus (OPF) Organizational Process Definition (OPD)**	**6. Process Management (all items) 3.1 Customer and Market Knowledge 3.2 Customer Satisfaction and Relationships 4.1 Measurement of Organizational Performance**
					and/or partner processes, including your role as supportive customer/partner, to keep current with your organization needs and directions? … improvements shared
BP 21.05 Implement Improvements		4.1 General requirements 8.5.1 Continual improvement	SP 3.1-3-3f Establish a formal process for implementing and improving Systems Engineering Activities. SP 3.1-6-2a Perform improvement of systems engineering process(es) in use on programs in at least an informal manner. SP 3.1-6-3a Use targeted improvements to change the organization's systems engineering process.	SP 2.2-1 Implement Process Action Plans (OPF)	3.1 a. (4) How do you keep your listening and learning methods, and keep them current with business needs and directions? 3.2 a. (5) How do you keep your approaches to customer access and relationships current with business needs and directions? 3.2 b. (4) How do you keep your approaches to satisfaction determination current with business needs and directions? 4.1 a. (2) How do you keep your performance measurement system current with business needs and directions? 6.1 a. (2) … incorporate changing customer/market and mission-related requirements into product/service designs and production/delivery systems and processes? 6.1 a. (5) … ensure that … process

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 21 Process Improvement	**PA 20 Organization Process Definition** **PA 21 Organization Process Improvement**	**4 Quality management system** **8.5 Improve-ment**	**3.1 Define and Improve the Systems Engineering Process**	**Organizational Process Focus (OPF)** **Organizational Process Definition (OPD)**	**6. Process Management (all items)** **3.1 Customer and Market Knowledge** **3.2 Customer Satisfaction and Relationships** **4.1 Measurement of Organizational Performance**
					design accommodates all key operational performance requirements? 6.2 a (5) … improve your support processes to achieve better performance … keep them current with organization needs and directions, …? … improvements shared … 6.3 a. (6) … improve your supplier and/or partner processes, including your role as supportive customer/partner, to keep current with your organization needs and directions? … improvements shared
BP 21.06 Confirm Improvements		4.1 General requirements	SP 3.1-5-4a Measure and analyze systems engineering productivity for each major process activity within the systems engineering process.		3.1 a. (4) How do you keep your listening and learning methods, and keep them current with business needs and directions? 3.2 a. (5) How do you keep your approaches to customer access and relationships current with business needs and directions? 3.2 b. (4) How do you keep your approaches to satisfaction determination current with business needs and directions? 4.1 a. (2) How do you keep your

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 21 Process Improvement	**PA 20 Organization Process Definition** **PA 21 Organization Process Improvement**	**4 Quality management system** **8.5 Improve-ment**	**3.1 Define and Improve the Systems Engineering Process**	**Organizational Process Focus (OPF)** **Organizational Process Definition (OPD)**	**6. Process Management (all items)** **3.1 Customer and Market Knowledge** **3.2 Customer Satisfaction and Relationships** **4.1 Measurement of Organizational Performance**
					performance measurement system current with business needs and directions? 6.2 a (5) … improve your support processes to achieve better performance … keep them current with organization needs and directions, …? … improvements shared … 6.3 a. (6) … improve your supplier and/or partner processes, including your role as supportive customer/partner, to keep current with your organization needs and directions? … improvements shared
BP 21.07 Sustain and deploy Improvement Gains		8.5.1 Continual improvement		SP 2.3-1 Deploy Process and Related Process Assets (OPF)	3.1 a. (4) How do you keep your listening and learning methods, and keep them current with business needs and directions? 3.2 a. (5) How do you keep your approaches to customer access and relationships current with business needs and directions? 3.2 b. (4) How do you keep your approaches to satisfaction determination current with business needs and directions? 4.1 a. (2) How do you keep your

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 21 Process Improvement	**PA 20 Organization Process Definition** **PA 21 Organization Process Improvement**	**4 Quality management system** **8.5 Improve-ment**	**3.1 Define and Improve the Systems Engineering Process**	**Organizational Process Focus (OPF)** **Organizational Process Definition (OPD)**	**6. Process Management (all items)** **3.1 Customer and Market Knowledge** **3.2 Customer Satisfaction and Relationships** **4.1 Measurement of Organizational Performance**
					performance measurement system current with business needs and directions? 6.2 a. (5) … improve your support processes to achieve better performance … keep them current with organization needs and directions, …? … improvements shared … 6.3 a. (6) … improve your supplier and/or partner processes, including your role as supportive customer/partner, to keep current with your organization needs and directions? … improvements shared
BP 21.08 Monitor Performance		4.1 General requirements	SP 3.1-5-4d Use a mechanism to evaluate the utility of process metrics collected across all programs. SP 3.1-5-5 Use a formal procedure to assure periodic management review of each program and institute changes to the systems engineering process.		3.1 a. (4) How do you keep your listening and learning methods, and keep them current with business needs and directions? 3.2 a. (5) How do you keep your approaches to customer access and relationships current with business needs and directions? 3.2 b. (4) How do you keep your approaches to satisfaction determination current with business needs and directions? 4.1 a. (2) How do you keep your

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 21 Process Improvement	**PA 20 Organization Process Definition** **PA 21 Organization Process Improvement**	**4 Quality management system** **8.5 Improve-ment**	**3.1 Define and Improve the Systems Engineering Process**	**Organizational Process Focus (OPF)** **Organizational Process Definition (OPD)**	**6. Process Management (all items)** **3.1 Customer and Market Knowledge** **3.2 Customer Satisfaction and Relationships** **4.1 Measurement of Organizational Performance**
					performance measurement system current with business needs and directions? 6.2 a. (5) … improve your support processes to achieve better performance … keep them current with organization needs and directions, …? … improvements shared … 6.3 a. (6) … improve your supplier and/or partner processes, including your role as supportive customer/partner, to keep current with your organization needs and directions? … improvements shared

Table PA 21: FAA-iCMM v2.0 Sources of Process Improvement Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 21 Process Improvement	**ORG.2 Improvement process (basic)** **ORG2.3 Process improvement (component)** **15504 Part 7: Guidelines for Process Improvement** **ORG.6 Reuse (new)**	**7.3 Improvement**	**5.2.3 System Life Cycle Processes Management** **5.2.1 Enterprise Management**	
Goals				
1. Goals for processes improvement are established and progress towards them is evaluated.		7.3.1.1		
2. Process improvement activities are coordinated across projects and the organization.	ORG.2 Improvement process			
3. Improvements are deployed, monitored, and sustained within the project and organization.	ORG.2 Improvement process .	7.3.1.1		
Practices				
BP 21.01 Identify Process Improvement Goals	Part 7 - 5.1 Examine the organization's needs and business goals ORG.2.1.BP1: Define goals. ORG.2.1.BP5: Establish performance expectations. ORG.2.3.BP1 : Identify improvement opportunities.		5.2.1.3 1) 5.2.3.3 4)	

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 21 Process Improvement	**ORG.2 Improvement process (basic)** **ORG2.3 Process improvement (component)** **15504 Part 7: Guidelines for Process Improvement** **ORG.6 Reuse (new)**	**7.3 Improvement**	**5.2.3 System Life Cycle Processes Management** **5.2.1 Enterprise Management**	
BP 21.02 Establish Process Improvement Program	Part 7 - 5.2 Initiate process improvement ORG.2.3.BP2 : Define scope of improvement activities.			
BP 21.03 Appraise process	Part 7 - 5.3 Prepare for and conduct a process assessment ORG.2.3 Process improvement process ORG.2.BP3 : Assess the deployed processes. ORG.2.2.BP1: Determine the assessment method. ORG.2.2.BP2: Define assessment goals. ORG.2.2.BP3: Define the assessment inputs. ORG.2.2.BP4: Plan the assessment. ORG.2.2.BP5: Perform the assessment to collect data. ORG.2.2.BP6: Validate the data. ORG.2.2.BP7: Identify strengths and weaknesses ORG.2.2.BP10: Report the assessment result. ORG.2.3.BP3 : Understand the process. ORG.5.BP7 : Benchmark processes.	7.3.2.1 7.3.2.2		
BP 21.04 Establish an Action Plan	Part 7 - 5.4 Analyse assessment output and derive action plan ORG.2.3 Process improvement process ORG.2.BP4 : Improve the standard processes. ORG.2.2.BP9: Exploit the assessment result. ORG.2.3.BP4 : Identify improvements. ORG.2.3.BP5 : Prioritize improvements. ORG.2.3.BP6 : Define measures of impact.	7.3.3.1	5.2.1.3 2)	
BP 21.05 Implement Improvements	Part 7 - 5.5 Implement improvements ORG.2.BP4: Improve the standard processes. ORG.2.3.BP7 : Change the process.		5.2.1.3 7) 5.2.3.3 7)	

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 21 Process Improvement	**ORG.2 Improvement process (basic)** **ORG2.3 Process improvement (component)** **15504 Part 7: Guidelines for Process Improvement** **ORG.6 Reuse (new)**	**7.3 Improvement**	**5.2.3 System Life Cycle Processes Management** **5.2.1 Enterprise Management**	
BP 21.06 Confirm Improvements	Part 7 - 5.6 Confirm improvements ORG.2.3 Process improvement process ORG.2.3.BP8 : Confirm the improvement.	7.3.3.2 7.3.3.3	5.2.1.3 5) 6) 5.2.3.3 6)	
BP 21.07 Sustain and deploy Improvement Gains	Part 7 - 5.7 Sustain improvement gains ORG.2.3 Process improvement process ORG.2.BP2: Deploy the processes. ORG.2.1.BP6: Deploy the process. ORG.2.3.BP9 : Deploy improvement. ORG.6 Reuse process ORG.6.BP1 : Define organizational reuse strategy. ORG.6.BP3 : Identify reusable entities.		5.2.3.3 3)	
BP 21.08 Monitor Performance	Part 7 - 5.8 Monitor performance ORG.2.3 Process improvement process ORG.2.1.BP7: Check the standard processes deployment. SUP.6.BP5: Conduct joint process review.		5.2.1.3 5) 6) 5.2.3.3 5)	

Table PA 22: FAA-iCMM v2.0 Sources of Training Practices - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 22 Training	**PA 22 Training**	**6.2.2 Com-petence, awareness, and training**	**3.2 Manage Competency**	**Organizational Training (OT)** **Organizational Environment for Integration (OEI)** **Project Planning (PP)**	**5.2 Employee Education, Training, and Development** **5.3 Employee Well-Being and Satisfaction** **6.2 Support Processes** **1.1 Organizational Leadership**
Goals					
Training needs are solicited and identified.	Training needs are solicited and identified.			SG 1. Identify Training Needs and Make Training Available (OT)	
Required training is provided	Required training is provided.			SG 2. Provide Necessary Training (OT)	
Training effectiveness is assessed				SG 2. Provide Necessary Training (OT)	
Practices					
BP 22.01 Identify Training Needs	BP 22.01 Identify Strategic Needs BP 22.02 Identify Unique Training Needs	6.2.2 a)	SP 3.2-2-1 Identify needed improvements in skill and knowledge throughout the organization using the programs' needs, organizational strategic plan, and existing employee skills as guidance. SP 3.2-2-3 Base long term competency development requirements upon the organization's strategic plan. SP 3.2-2-2 Base near term competency development requirements upon immediate program needs.	SP 1.1-1. Establish the Strategic Training Needs. (OT) SP 1.2-1. Determine Which Training Needs are the Responsibility of the Organization (OT) SP 1.3-1 Identify IPPD-unique Skill Requirements (OEI)	5.2a-1 Balance short- and longer-term organizational and employee needs 5.21-3 Seek and use input from employees and their supervisors/ managers on education and training needs, expectations, and design 5.2a-5 Address key developmental and training needs 5.2a-6 Address

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 22 Training	**PA 22 Training**	**6.2.2 Competence, awareness, and training**	**3.2 Manage Competency**	**Organizational Training (OT)** **Organizational Environment for Integration (OEI)** **Project Planning (PP)**	**5.2 Employee Education, Training, and Development** **5.3 Employee Well-Being and Satisfaction** **6.2 Support Processes** **1.1 Organizational Leadership**
					performance excellence in education and training 5.2a-2 Design education and training to keep current with needs 5.1a-6 Identify characteristics and skills needed
BP 22.02 Establish Training Plan				SP 1.3-1. Establish an Organizational Training Tactical Plan. (OT) SP 2.5-1Plan for Needed Knowledge and Skills (PP)	
BP 22.03 Establish Training Mechanism	BP 22.04 Obtain Training		SP 3.2-3-1c Provide knowledge from outside sources when in-house training or learning opportunities are unable to satisfy program needs. SP 3.2-3-2b Assign experienced personnel to perform training. SP 3.2-3-2c Involve management personnel in competency development activities, both as recipients and as participants.	SP 1.4-1.Establish Training Capability (OT)	5.2a-3 Seek and use input from employees and their supervisors/ managers on education and training needs, expectations, and design Include formal and informal education, training, and learning, as appropriate.
BP 22.04 Train Individuals	BP 22.03 Train Individuals	6.2.2 b)	SP 3.2-3-1a Train personnel to have the skills and knowledge needed to perform their assigned roles.	SP 2.1-1. Deliver Training (OT)	5.2a-4 Deliver and evaluate education and training for both long and short term

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 22 Training	**PA 22 Training**	**6.2.2 Competence, awareness, and training**	**3.2 Manage Competency**	**Organizational Training (OT)** **Organizational Environment for Integration (OEI)** **Project Planning (PP)**	**5.2 Employee Education, Training, and Development** **5.3 Employee Well-Being and Satisfaction** **6.2 Support Processes** **1.1 Organizational Leadership**
			SP 3.2-3-2c Involve management personnel in competency development activities, both as recipients and as participants. SP 3.2-3-2d Provide competency development for critical functional areas (e.g., analysis techniques specific to the organization's problem domains). SP 3.2-3-3a Integrate competency development opportunities, such as formal education, in-house training, and on-the-job training. SP 3.2-3-3b Provide cross-discipline technical management training to all disciplines, including program management. SP 3.2-3-3c Train managers of engineering organizations, team leaders, and engineers on the systems engineering process. SP 3.2-3-3d Provide training in the basic principles of systems engineering to quality management, configuration management, and other support personnel. SP 3.2-3-3e Provide training in a variety of forms, including formal training, on- the-job training, and just-in-time training, as required to meet program and individual needs. SP 3.2-3-3f Integrate tools, methods, and procedures for competency development.		

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 22 Training	**PA 22 Training**	**6.2.2 Competence, awareness, and training**	**3.2 Manage Competency**	**Organizational Training (OT)** **Organizational Environment for Integration (OEI)** **Project Planning (PP)**	**5.2 Employee Education, Training, and Development** **5.3 Employee Well-Being and Satisfaction** **6.2 Support Processes** **1.1 Organizational Leadership**
BP 22.05 Establish and Maintain Records	BP 22.05 Establish and Maintain Records	6.2.2 e)	SP 3.2-3-1b Maintain records of training and experience. SP 3.2-3-2a Maintain training materials in an accessible repository.	SP 2.2-1. Establish Training Records (OT)	
BP 22.06 Assess Training Effectiveness	BP 22.06 Assess Training Effectiveness	6.2.2 c)	SP 3.2-4-1a Assess in-progress or completed programs to determine whether staff knowledge was adequate for performing program tasks. SP 3.2-4-1b Provide a mechanism for assessing the effectiveness of each training course with respect to set objectives. SP 3.2-4-2 Require trainers to demonstrate proficiency in the topics for which they intend to train others. SP 3.2-4-3a Provide a mechanism to evaluate students to verify their comprehension of training materials prior to recognition. SP 3.2-4-3b Obtain student evaluations of how well competency development activities meet their needs. SP 3.2-4-3c Establish completion criteria for each training course, documented in standards or course descriptions. SP 3.2-4-4 Provide a mechanism to evaluate alumni capability to perform the style, scope, and intensity of systems engineering that the business needs.	SP 2.3-1. Assess Training Effectiveness (OT)	5.2a-4 Deliver and evaluate education and training for both long and short term

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 22 Training	**PA 22 Training**	**6.2.2 Competence, awareness, and training**	**3.2 Manage Competency**	**Organizational Training (OT)** **Organizational Environment for Integration (OEI)** **Project Planning (PP)**	**5.2 Employee Education, Training, and Development** **5.3 Employee Well-Being and Satisfaction** **6.2 Support Processes** **1.1 Organizational Leadership**
BP 22.07 Establish Learning Environment		6.2.2 d)	SP 3.2-1-1 Encourage staff to continuously develop skills and knowledge. SP 3.2-1-2a Reward mentoring as a means of increasing staff competency. SP 3.2-1-2b Provide a mechanism to develop individual competency development goals consistent with both the individual's career objectives and the program's needs. SP 3.2-1-3a Provide job opportunity and career advancement based on competency development achievements. SP 3.2-1-3b Clearly state and communicate competency development opportunities and the relationship between competency development and career opportunity to all personnel within the organization. SP 3.2-1-3c Provide a mechanism to formally recognize competency development achievements. SP 3.2-1-3d Provide a mechanism for certification of competency achievement.		1.1a-2 Establish and reinforce environment for empowerment and innovation, and encourage and support organizational and employee learning Reinforce knowledge and skills on the job 5.3b-2 Encourage and motivate employees to develop and utilize full potential in a diverse workforce 5.1a-2 Encourage, motivate employees to develop and utilize potential 5.1a-5 Ensure effective communication, cooperation, and knowledge/skill sharing

Table PA 22: FAA-iCMM v2.0 Sources of Training Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 22 Training	**ORG.3 Human resource management (extended)**	**7.4 Training**	**5.2.4 Resource Management**	**People CMM: Training (TR) Knowledge and Skills Analysis (KSA)**
Goals				
Training needs are solicited and identified.	ORG.3 Result 2			
Required training is provided	ORG.3 Result 2			
Training effectiveness is assessed				
Practices				
BP 22.01 Identify Training Needs		7.4.1.1.		Critical skills required for performing critical tasks are identified in each unit (TR-Act1) The training needs for each unit are identified (TR-Act2) The core competencies that the organization must develop and maintain to perform its business functions are identified. (KSA-Act1) Profiles of the knowledge and skills underlying each of the organization's core competencies are developed. (KSA-Act2)
BP 22.02 Establish Training Plan		7.4.1.1		

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 22 Training	**ORG.3 Human resource management (extended)**	**7.4 Training**	**5.2.4 Resource Management**	**People CMM: Training (TR) Knowledge and Skills Analysis (KSA)**
BP 22.03 Establish Training Mechanism	ORG.3.BP2 : Develop or acquire training.	7.4.2.1		Relevant training opportunities are identified and made available to support each individual's development. (TR-Act5)
BP 22.04 Train Individuals	ORG.3.BP3 : Train Personnel.	7.4.3.1	5.2.4.3-5 5.2.4.3-4	Individuals and/or groups receive the training they need to perform their assigned tasks. (TR-Act5)
BP 22.05 Establish and Maintain Records		7.4.3.1		
BP 22.06 Assess Training Effectiveness				
BP 22.07 Establish Learning Environment			5.2.4.3-7 5.2.4.3-5	

Table PA 23: FAA-iCMM v2.0 Sources of Innovation Practices - Part 1

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 23 Innovation	**PA 23 Innovation PA 10 Product Evolution**	**6.3 Infrastructure 6.4 Work Environment**	**3.4 Manage Systems Engineering Support Environment 3.3 Manage Technology**	**Organizational Innovation and Deployment (OID) Organizational Environment for Integration (OEI)**	**6.1 Product and Service Processes 1.1Organizational Leadership 5.3 Employee Well-Being and Satisfaction 6.2 Support Processes**
Goals					
1. Agile adaptation to change is driven by the organization's knowledge of its products, processes, technologies, and core competencies.	1. Agile adaptation to change is driven by the organization's profound knowledge of its products, processes, technologies, and core competencies. (PA 23)			SG 1.Select Improvements (OID)	
2. The organization's products, services, processes, and work environment are continually evaluated for suitability to use identified improvements and innovations.					6.1 New technology is incorporated into products/services and into production/delivery systems and processes, as appropriate.
3. Selected technologies are deployed to relevant parts of the organization in accordance with the organization's objectives and goals.	2. The organization environment is updated in a planned, controlled manner while minimizing disruptions to users. (PA 23)			SG 2.Deploy Improvements (OID)	6.1 New technology is incorporated into products/services and into production/delivery systems and processes, as appropriate.

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 23 Innovation	**PA 23 Innovation** **PA 10 Product Evolution**	**6.3 Infrastructure** **6.4 Work Environment**	**3.4 Manage Systems Engineering Support Environment** **3.3 Manage Technology**	**Organizational Innovation and Deployment (OID)** **Organizational Environment for Integration (OEI)**	**6.1 Product and Service Processes** **1.1Organizational Leadership** **5.3 Employee Well-Being and Satisfaction** **6.2 Support Processes**
Practices					
BP 23.01 Maintain New Technology Awareness	BP 23.01 Maintain New Technology Awareness BP 10.02 Identify new product technologies		SP 3.3-1-1a Identify technologies currently in use. SP 3.3-1-1b Identify new product technologies for competitive advantage. SP 3.3-1-2 Encourage innovation within the program. SP 3.3-1-3a Support participation by the organization in technical consortia, societies, and collaborations. SP 3.3-1-3c Establish a mechanism for maintaining awareness and disseminating knowledge of the state-of-the-art technology. SP 3.4-1-3c Regularly review and assess external trends that might affect the support environment for potential impact.	SP 1.1-1. Collect and Analyze Improvement Proposals. (OID) SP 1.2-1. Identify Innovations (OID)	6.1 New technology is incorporated into products/services and into production/delivery systems and processes, as appropriate.
BP 23.02 Select New Technologies	BP 23.02 Select New Technologies BP 10.02 Identify new product technologies		SP 3.3-1-3d Establish a mechanism for monitoring the life cycle of currently used technologies and use this knowledge to plan for replacement of technologies approaching obsolescence. SP 3.3-1-3e Perform cost/benefit analyses prior to the adoption of new technologies. SP 3.3-3-3c Identify, discriminate, and insert product and process technology improvements. SP 3.4-1-2 Determine requirements for	SP 1.3-1.Pilot Improvements (OID) SP 1.4-1. Select Improvements for Deployment (OID)	6.1 New technology is incorporated into products/services and into production/delivery systems and processes, as appropriate.

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 23 Innovation	**PA 23 Innovation** **PA 10 Product Evolution**	**6.3 Infrastructure** **6.4 Work Environment**	**3.4 Manage Systems Engineering Support Environment** **3.3 Manage Technology**	**Organizational Innovation and Deployment (OID)** **Organizational Environment for Integration (OEI)**	**6.1 Product and Service Processes** **1.1Organizational Leadership** **5.3 Employee Well-Being and Satisfaction** **6.2 Support Processes**
			the support environment based on program specific needs. SP 3.4-1-3a Include the needs of each program as part of a documented set of requirements for the support environment. SP 3.4-1-3b Include the business goals of the organization in determining the documented requirements for the support environment. SP 3.4-2-2b Perform cost-benefit analysis for commercial off-the-shelf versus in-house developed environments.		
BP 23.03 Prepare for Infusion	BP 23.03 Prepare for Infusion BP 10.04 Ensure critical component availability		SP 3.3-3-2 Require appropriate analysis within the organization before new product or process technology insertion is allowed. SP 3.4-2-2a Pilot new tools prior to including them in the systems engineering support environment.	SP 2.1-1. Plan the Deployment (OID)	6.1 New technology is incorporated into products/services and into production/delivery systems and processes, as appropriate. 6.1a -6 coordinate and test design and production/delivery processes to ensure capability for trouble-free and timely introduction of products/services
BP 23.04 Infuse New Technologies	BP 23.04 Infuse New Technologies		SP 3.3-3-3a Establish a mechanism for managing and supporting the introduction	SP 2.2-1.Manage the Deployment (OID)	6.1 New technology is incorporated into

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 23 Innovation	**PA 23 Innovation** **PA 10 Product Evolution**	**6.3 Infrastructure** **6.4 Work Environment**	**3.4 Manage Systems Engineering Support Environment** **3.3 Manage Technology**	**Organizational Innovation and Deployment (OID)** **Organizational Environment for Integration (OEI)**	**6.1 Product and Service Processes** **1.1Organizational Leadership** **5.3 Employee Well-Being and Satisfaction** **6.2 Support Processes**
	BP 10.03 Adapt development processes BP 10.05 Insert Product Technology		of new product or process technologies. SP 3.3-3-3c Identify, discriminate, and insert product and process technology improvements. SP 3.4-3-3c Upgrade or add support tools or facilities which enhance the ability to meet the organization's requirements.		products/services and into production/delivery systems and processes, as appropriate. 6.1a - 6-coordinate and test design and production/delivery processes to ensure capability for trouble-free and timely introduction of products/services
BP 23.05 Manage Innovation:	BP 23.05 Support Innovation	6.3 Infrastructure a) b) c) 6.4 Work Environment	SP 3.3-3-3a Establish a mechanism for managing and supporting the introduction of new product or process technologies. SP 3.3-3-3b Review the effectiveness of newly introduced technologies (product or process) to verify analysis used to justify its introduction. SP 3.3-3-5 Demonstrate that the achievement of specific business goals (e.g., increased profitability, increased market share, reduced time to market) can be directly attributable to the insertion of new product or process technology. SP 3.4-2-1 Deploy a Systems Engineering Support Environment that supports program needs. SP 3.4-2-3b Tailor the Systems	SP 1.1-1. Collect and Analyze Improvement Proposals. (OID) SP 2.3-1. Measure Improvement Effects (OID) SP 1.2-1.Establish an Integrated Work Environment (OEI)	6.1 New technology is incorporated into products/services and into production/delivery systems and processes, as appropriate. 5.3a Work Environment - address and improve workplace health, safety, and ergonomic factors 6.1a - 6-coordinate and test design and production/delivery processes to ensure capability for trouble-free and timely

FAA-iCMM v2.0 Process Area	*FAA-iCMM v1.0 Process Area*	*ISO 9001:2000 Subclause*	*EIA/IS 731 Focus Area*	*CMMI-SE/SW/IPPD Process Area*	*MBNQA/PQA Category/item*
PA 23 Innovation	**PA 23 Innovation** **PA 10 Product Evolution**	**6.3 Infrastructure** **6.4 Work Environment**	**3.4 Manage Systems Engineering Support Environment** **3.3 Manage Technology**	**Organizational Innovation and Deployment (OID)** **Organizational Environment for Integration (OEI)**	**6.1 Product and Service Processes** **1.1Organizational Leadership** **5.3 Employee Well-Being and Satisfaction** **6.2 Support Processes**
			Engineering Support Environment to individual program needs. SP 3.4-2-5 Maximize integration of tools within the environment. SP 3.4-3-1 Maintain the support environment to continuously support the program. SP 3.4-3-3b Retire support tools or facilities which no longer support the organization's requirements. SP 3.4-3-3d Seek periodic evaluation of the adequacy of the systems engineering support environment from users. SP 3.4-3-4a Base support environment management decisions on the analysis of usage and performance data. SP 3.4-3-5 Establish goals for improvements to systems engineering processes through the use of the systems engineering environment. SP 3.4-3-3a Collect data on the systems engineering support environment usage and performance.		introduction of products/services 1.1a-2 An environment for innovation is established and reinforced

Table PA 23: FAA-iCMM v2.0 Sources of Innovation Practices - Part 2

FAA-iCMM v2.0 Process Area	*ISO/IEC TR 15504 Processes (with process type)*	*IEEE/EIA (ISO/IEC) 12207 Software life cycle processes*	*ISO/IEC CD 15288 System Life Cycle Processes*	*Other Sources*
PA 23 Innovation	**ORG.4 Infrastructure (basic)**	**7.2 Infrastructure**	**-**	
Goals				
1. Agile adaptation to change is driven by the organization's knowledge of its products, processes, technologies, and core competencies.				
2. The organization's products, services, processes, and work environment are continually evaluated for suitability to use identified improvements and innovations				
3. Selected technologies are deployed to relevant parts of the organization in accordance with the organization's objectives and goals.				
Practices				
BP23.01 Maintain New Technology Awareness				
BP 23.02 Select New Technologies				
BP 23.03 Prepare for Infusion				
BP 23.04 Infuse New Technologies				
BP 23.05 Manage Innovation	ORG.4.BP2 : Provide a software engineering environment. ORG.4.BP4 : Maintain software engineering environment. ORG.4.BP5 : Provide a workspace conducive to productive performance. ORG.4.BP7 : Provide remote access facility.	7.2.2.1 7.2.3.1 7.2.2.2		

Table 2: FAA-iCMM v1.0 Process Areas and their Major Sources

FAA-iCMM v1.0 Process Area	***Systems Engineering SE-CMM v1.1 Process Area***	***Software Acquisition SA-CMM v1.01 Key Process Area***	***Software Engineering SW-CMM v1.1 Key Process Area***
Lifecycle or Engineering Processes			
PA01 Needs	Understand Customer Needs & Expectations	-	-
PA02 Requirements	Derive & Allocate Requirements	Requirements Development & Management	Requirements Management *(SW Product Engineering*)*
PA03 Architecture	Evolve System Architecture	-	*(SW Product Engineering*)*
PA04 Alternatives	Analyze Candidate Solutions	-	-
PA05 Outsourcing	Coordinate with Suppliers	Solicitation	SW Subcontract Management
PA06 Software Development and Maintenance	-	-	SW Product Engineering
PA07 Integration	Integrate System	-	
PA08 System Test and Evaluation	Verify &Validate System	Evaluation	
PA09 Transition	-	Transition to Support	-
PA10 Product Evolution	Manage Product Line Evolution	-	-
Management or Project Processes			
PA11 Project Management	Plan Technical Effort Monitor & Control Technical Effort	SW Acquisition Planning Project Management Project Performance Management	SW Project Planning SW Project Tracking and Oversight Integrated SW Management
PA12 Contract Management	*(Coordinate with Suppliers*)*	Contract Tracking and Oversight Contract Performance Management	SW Subcontract Management
PA13 Risk Management	Manage Risk	Acquisition Risk Management	*(*Integrated SW Management)*
PA14 Coordination	Integrate Disciplines		Intergroup Coordination
Supporting Processes (not lifecycle phase dependent)			
PA15 Quality Assurance & Management	Ensure Quality		SW Quality Assurance
PA16 Configuration Management	Manage Configurations		SW Configuration Management
PA17 Peer Review	Level 3 Common Features		Peer Reviews
PA18 Measurement	Level 4 Common Features	Quantitative Process Management Quantitative Acquisition Management	Quantitative Process Management SW Quality Management

FAA-iCMM v1.0 Process Area	***Systems Engineering SE-CMM v1.1 Process Area***	***Software Acquisition SA-CMM v1.01 Key Process Area***	***Software Engineering SW-CMM v1.1 Key Process Area***
PA19 Prevention	Level 5 Common Features	-	Defect Prevention
	Organizational Processes		
PA20 Organization Process Definition	Define Organization's Systems Engineering Process	Process Definition and Maintenance	Organization Process Focus Organization Process Definition
PA21 Organization Process Improvement	Improve Organization's Systems Engineering Process	Continuous Process Improvement	Process Change Management
PA22 Training	Provide Ongoing Skills & Knowledge	Training Program	Training Program
PA23 Innovation	Manage Systems Engineering Support Environment	Acquisition Innovation Management	Technology Change Management

**a few practices from these process areas contributed to the FAA-iCMM process area*

Section 6: FAA-iCMM Version 1.0 Practice-Level Maps

FAA-iCMM Version 1.0 Practice-Level Maps	*Page*
Table PA 01: FAA-iCMM v1.0 Sources of Needs Practices	264
Table PA 02: FAA-iCMM v1.0 Sources of Requirements Practices	265
Table PA 03: FAA-iCMM v1.0 Sources of Architecture Practices	268
Table PA 04: FAA-iCMM v1.0 Sources of Alternatives Practices	269
Table PA 05: FAA-iCMM v1.0 Sources of Outsourcing Practices	270
Table PA 06: FAA-iCMM v1.0 Sources of Software Development and Maintenance Practices	272
Table PA 07: FAA-iCMM v1.0 Sources of Integration Practices	273
Table PA 08: FAA-iCMM v1.0 Sources of System Test and Evaluation Practices	274
Table PA 09: FAA-iCMM v1.0 Sources of Transition Practices	276
Table PA 10: FAA-iCMM v1.0 Sources of Product Evolution Practices	277
Table PA 11: FAA-iCMM v1.0 Sources of Project Management Practices	278
Table PA 12: FAA-iCMM v1.0 Sources of Contract Management Practices	288
Table PA 13: FAA-iCMM v1.0 Sources of Risk Management Practices	290
Table PA 14: FAA-iCMM v1.0 Sources of Coordination Practices	292
Table PA 15: FAA-iCMM v1.0 Sources of Quality Assurance and Management Practices	294
Table PA 16: FAA-iCMM v1.0 Sources of Configuration Management Practices	295
Table PA 17: FAA-iCMM v1.0 Sources of Peer Review Practices	297
Table PA 18: FAA-iCMM v1.0 Sources of Measurement Practices	298
Table PA 19: FAA-iCMM v1.0 Sources of Prevention Practices	301
Table PA 20: FAA-iCMM v1.0 Sources of Organization Process Definition Practices	302
Table PA 21: FAA-iCMM v1.0 Sources of Organization Process Improvement Practices	305
Table PA 22: FAA-iCMM v1.0 Sources of Training Practices	307
Table PA 23: FAA-iCMM v1.0 Sources of Innovation Practices	308

Table PA 01: FAA-iCMM v1.0 Sources of Needs Practices

PA 01 Needs Base Practices	***SE-CMM*** **Understand Customer Needs and Expectations:** ***Base Practices***
1. Elicit Needs	6.1 Elicit the customer's needs, expectations, and measures of effectiveness.
2. Analyze Needs	6.2 Analyze the customer's needs and expectations to develop a preliminary operational concept of the system.
3. Develop System Requirements	6.3 Develop a statement of system requirements.
4. Obtain Customer Agreement	6.4 Obtain customer agreement that system requirements satisfy their needs and expectations.
5. Inform Customer	6.5 Inform the customer on a regular basis about the status and disposition of needs, expectations, and measures of effectiveness.

Table PA 02: FAA-iCMM v1.0 Sources of Requirements Practices

PA 02 Requirements base practices	***SE-CMM*** **Derive and Allocate Requirements:** ***Base Practices*** **(* Evolve System Architecture)**	***SA-CMM*** **Requirements Development and Management:** ***Activities Performed*** **(** Evaluation)**	***SW-CMM*** **Requirements Management:** ***Activities Performed***	***SW-CMM*** **Software Product Engineering:** ***Selected Activities Performed***
1. Develop operational concept	2.1 Develop a detailed operational concept of interaction of system, user, and environment, that satisfies the operational need.	2. The project team develops and baselines software-related contractual requirements and places them under change control early in the project, but not later than release of solicitation package.		
2. Identify key requirements	2.2 Identify key requirements that have a strong influence on cost, schedule, functionality, risk, or performance.	2. The project team develops and baselines software-related contractual requirements and places them under change control early in the project, but not later than release of solicitation package.		
3. Derive and partition requirements	2.4 Derive, from the system and other requirements, require-ments that may be logically inferred and implied as essential to system effectiveness. 2.3 Partition functions into groups based on established criteria to facilitate & focus requirements analysis. * 3.8 Identify appropri-ate derived require-ments that address the effective-ness and cost of life cycle phases following development, such as production and operation.	2. The project team develops and baselines software-related contractual requirements and places them under change control early in the project, but not later than release of solicitation package.		
4. Identify interface requirements	2.5 Identify the requirements associated with external interfaces to the system and interfaces between functional partitions or objects.	2. The project team develops and baselines software-related contractual requirements and places them under change control early in the project, but not later than release of solicitation package.		

PA 02 Requirements base practices	***SE-CMM* Derive and Allocate Requirements: *Base Practices* (* Evolve System Architecture)**	***SA-CMM* Requirements Development and Management: *Activities Performed* (** Evaluation)**	***SW-CMM* Requirements Management: *Activities Performed***	***SW-CMM* Software Product Engineering: *Selected Activities Performed***
5. Allocate requirements	2.6 Allocate requirements to functional partitions, objects, people, or support elements to support synthesis of solutions.	2. The project team develops and baselines software-related contractual requirements and places them under change control early in the project, but not later than release of solicitation package.		
6. Analyze requirements	2.7 Analyze requirements to ensure they are verifiable by the methods available to the development effort.	** **EV-Ac2** The project's evaluation requirements are developed in conjunction with the development of the system or software technical requirements.		2. The software requirements are developed, main-tained, documented, and verified by systematically analyzing the allocated requirements according to the project's defined software process.
7. Capture and baseline requirements	2.9 Capture system and other requirements, derived requirements, derivation rationale, allocations, traceability, and requirements status.	2. The project team develops and baselines software-related contractual requirements and places them under change control early in the project, but not later than release of solicitation package.		
8. Analyze and incorporate requirements changes		3. The project team appraises system requirements change requests for their impact on software being acquired. 4. The project team appraises all changes to software-related contractual requirements for their impact on performance, architecture, support-ability, and system resource utilization and contract schedule and cost.	3. Changes to the allocated requirements are reviewed and incorporated into the software product.	

PA 02 Requirements base practices	***SE-CMM*** **Derive and Allocate Requirements:** ***Base Practices*** ***(*** **Evolve System Architecture)**	***SA-CMM*** **Requirements Development and Management:** ***Activities Performed*** ***(**** **Evaluation*)***	***SW-CMM*** **Requirements Management:** ***Activities Performed***	***SW-CMM*** **Software Product Engineering:** ***Selected Activities Performed***
9. Maintain consistency and traceability	2.8 Maintain requirements traceability to ensure that lower level (derived) requirements are necessary and sufficient to meet the objectives of higher level requirements. * 3.6 Maintain requirement traceability for the architecture's requirements to ensure that lower level (derived) requirements are necessary and sufficient to meet the needs of higher level requirements or design.	5. Bi-directional traceability between the software-related contractual requirements and the contractor's software work products and services is maintained throughout the effort.	2. The software engineering group uses the allocated requirements as the basis for software plans, work products, and activities.	10. Consistency is maintained across software work products, including the software plans, process descriptions, allocated requirements, software requirements, software design, code, test plans, and test procedures.
Covered by generic practices		1. The project team performs its activities in accordance with its documented requirements development and management plans.	1. The software engineering group reviews the allocated requirements before they are incorporated into the software project.	

Table PA 03: FAA-iCMM v1.0 Sources of Architecture Practices

PA 03 Architecture Base Practices	***SE-CMM*** **Derive and Allocate Requirements:** ***Base Practices***	***SW-CMM*** **Software Product Engineering:** ***Selected Activities Performed***
1. Derive system architecture requirements	3.1 Derive the requirements for the system architecture.	
2. Identify key design issues	3.2 Identify the key design issues that must be resolved to support successful development of the system.	3. The software design is developed, maintained, documented, and verified, according to project's defined software process, to accommodate the software requirements and to form the framework for coding.
3. Develop architectural structure	3.3 Generate alternative(s) and constraints for the architecture and select a solution in accordance with the Alternatives process area (PA 04).	3. The software design is developed, maintained, documented, and verified, according to project's defined software process, to accommodate the software requirements and to form the framework for coding.
4. Develop architecture interface requirements	3.4 Develop the interface requirements for the selected architecture components.	3. The software design is developed, maintained, documented, and verified, according to project's defined software process, to accommodate the software requirements and to form the framework for coding.
5. Allocate architecture requirements	3.5 Allocate the system and derived requirements to the chosen architecture components and interfaces.	3. The software design is developed, maintained, documented, and verified, according to project's defined software process, to accommodate the software requirements and to form the framework for coding.
6. Capture results and rationale	3.7 Describe the system architecture by capturing the design results and rationale.	3. The software design is developed, maintained, documented, and verified, according to project's defined software process, to accommodate the software requirements and to form the framework for coding. 8. The documentation that will be used to operate and maintain the software is developed and maintained according to the project's defined software process.
To other PAs	3.6 Maintain requirement traceability for the architecture's requirements to ensure that lower level (derived) requirements are necessary and sufficient to meet the needs of higher level requirements or design. (PA 02) 3.8 Identify appropriate derived requirements that address the effectiveness and cost of life cycle phases following development, such as production and operation. (PA 02)	

Table PA 04: FAA-iCMM v1.0 Sources of Alternative Practices

PA 04 Alternatives base practices	***SE-CMM* Analyze Candidate Solutions: *Base Practices***
1. Establish Evaluation Criteria	1.1 Establish evaluation criteria based on the identified problem and its defined constraints.
2. Define Analysis Approach	1.2 Define the general approach for the analysis, based on the established evaluation criteria.
3. Identify Alternatives	1.3 Identify alternatives for evaluation in addition to those provided with the problem statement.
4. Analyze Alternatives	1.4 Analyze the competing candidate solutions against the established evaluation criteria.
5. Select Solution	1.5 Select the solution that satisfies the established evaluation criteria.
6. Capture the Disposition of Each Alternative	1.6 Capture the disposition of each alternative under consideration and the rationale for the disposition.

Table PA 05: FAA-iCMM v1.0 Sources of Outsourcing Practices

PA 05 Outsourcing base practices	***SE-CMM* Coordinate with Suppliers: *Base Practices***	***SA-CMM* Solicitation: *Activities Performed* (*Evaluation)**	***SW-CMM* Software Subcontract Management: *Activities Performed***
1. Identify System or Process Components	18.1.Identify needed systems components or services that must be provided by other/outside organizations.		1. The work to be subcontracted is defined and planned according to a documented procedure. (define the work)
2. Identify competent suppliers	18.2.Identify suppliers that have shown expertise in the identified areas.		2. The software subcontractor is selected, based on an evaluation of the subcontractor's ability to perform the work, based on a documented procedure.
3. Prepare for the solicitation		3. Cost and schedule estimates for the software products and services being sought are prepared. 4. Software cost and schedule estimates are independently reviewed for comprehensiveness and realism. *** EV.Ac3**. The evaluation requirements are incorporated into the solicitation package and resulting contract.	
4. Choose supplier	18.3.Choose suppliers in accordance with the Analyze Candidate Solutions process areas.		2. The software subcontractor is selected, based on an evaluation of the subcontract bidders' ability to perform the work, according to a documented procedure.
5. Communicate with Suppliers	18.4. Provide to suppliers the needs, expectations, and measures of effectiveness held by the organization for the system components or services that are to be delivered. 18.5. Maintain timely two-way communi-cation with suppliers.	5. The project team takes action to ensure the mutual understanding of software requirements and plans prior to contract award.	
Covered by generic practices		1. The project team performs its activities in accordance with its documented solicitation	1. The work to be subcontracted is defined and planned according to a documented procedure. 6. Changes to the software subcontractor's

PA 05 Outsourcing base practices	***SE-CMM* Coordinate with Suppliers: *Base Practices***	***SA-CMM* Solicitation: *Activities Performed* (*Evaluation)**	***SW-CMM* Software Subcontract Management: *Activities Performed***
		plans. 2. The project team performs its activities in accordance with its documented proposal evaluation plans.	statement of work, subcontract terms and conditions, and other commitments are resolved according to a documented procedure.
To other PAs			3. The contractual agreement between the prime contractor and the software contractor is used as the basis for managing the subcontract. (PA 12) 4. A documented subcontractor's software development plan is reviewed and approved by prime contractor. (PA 12) 5. A documented and approved subcontractor's software development plan is used for tracking the software activities and communicating status. (PA 12) 7. The prime contractor's management conducts periodic status/coordination reviews with the software subcontractor's management. (PA 12) 8. Periodic technical reviews and interchanges are held with the software subcontractor. (PA 12) 9. Formal reviews to address the subcontractor's software engineering accomplishments and results are conducted at selected milestones according to a documented procedure. (PA 12) 10. The prime contractor's software quality assurance group monitors the subcontractor's software quality assurance activities according to a documented procedure. (PA 12, PA 15) 11. The prime contractor's software configuration management group monitors the subcontractor's activities for software configuration management according to a documented procedure. (PA 12) 12. The prime contractor conducts acceptance testing as part of the delivery of the subcontractor's software products according to a documented procedure. (PA 08) 13. The software subcontractor's performance is evaluated on a periodic basis, and the evaluation is reviewed with the subcontractor. (PA 12)

Table PA 06: FAA-iCMM v1.0 Sources of Software Development and Maintenance Practices

PA 06 Software development & Maintenance Base Practices	***SW-CMM*** **Software Product Engineering:** ***Activities Performed***
1. Integrate methods and tools	1. Appropriate software engineering methods and tools are integrated into the project's defined software process.
2. Analyze allocated requirements	2. The software requirements are developed, maintained, documented, and verified by systematically analyzing the allocated requirements according to the project's defined software process.
3. Design software	3. The software design is developed, maintained, documented, and verified, according to the project's defined software process, to accommodate the software requirements and to form the framework for coding.
4. Implement software	4. The software code is developed, maintained, documented, and verified, according to the project's defined software process, to implement the software requirements and software design.
5. Test software	5. Software testing is performed according to the project's defined software process.
6. Perform integration testing	6. Integration testing of the software is planned and performed according to the project's defined software process.
7. Develop documentation	8. The documentation that will be used to operate and maintain the software is developed and maintained according to the project's defined software process.
8. Maintain consistency across software work products	10. Consistency is maintained across software work products, including the software plans, process descriptions, allocated requirements, software requirements, software design, code, test plans, and test procedures.
To other PAs	7. System and acceptance testing of the software are planned and performed to demonstrate that the software satisfies its requirements. (to PA 08) 9. Data on defects identified in peer reviews and testing are collected and analyzed according to the project's defined software process. (to PA 17)

Table PA 07: FAA-iCMM v1.0 Sources of Integration Practices

PA 07 Integration base practices	***SE-CMM*** **Integrate System:** ***Base Practices***	***SW-CMM*** **Software Product Engineering:** ***Activities Performed***
1. Define Interfaces	5.1.Develop detailed specifications of the interfaces implied by the system architecture.	
2. Verify Receipt of System Elements	5.3.Verify the receipt of each system element required to assemble the system in accordance with the physical architecture.	
3. Verify System Element Correctness	5.4.Verify the implemented design features of developed or purchased system elements against their requirements.	6. Integration testing of the software is planned and performed according to the project's defined software process. 7. System and acceptance testing of the software are planned and performed to demonstrate that the software satisfies its requirements.
4. Verify System Element Interfaces	5.5 Verify that the system element interfaces comply with the interface specifications prior to assembly.	6. Integration testing of the software is planned and performed according to the project's defined software process. 7. System and acceptance testing of the software are planned and performed to demonstrate that the software satisfies its requirements.
5. Assemble Aggregates of System Elements	5.6.Assemble aggregates of system elements in accordance with the established integration strategy.	
6. Test System Level Integration	5.7.Check the integrated system interfaces in accordance with the established integration strategy.	6. Integration testing of the software is planned and performed according to the project's defined software process. 7. System and acceptance testing of the software are planned and performed to demonstrate that the software satisfies its requirements.
7. Develop Integration Strategy	5.8.Develop an integration strategy and supporting documentation that identify the optimal sequence for receipt, assembly, and activation of the various components that make up the system.	6. Integration testing of the software is planned and performed according to the project's defined software process.
To other PAs	5.2 Coordinate Interfaces. (PA 14)	

Table PA 08: FAA-iCMM v1.0 Sources of System Test and Evaluation Practices

PA 08 System Test and Evaluation base practices	***SE-CMM*** **Verification and Validation:** ***Base Practices***	***SA-CMM*** **Evaluation: (*Contract Performance Management)** ***Activities Performed***	***SW-CMM*** **Software Product Engineering: (**Software Subcontract Management)** ***Activities Performed***
1. Develop Evaluation Strategy and Requirements	7.1. Establish plans for verification and validation that identify the overall requirements, objectives, resources, facilities, special equipment, and schedule applicable to the system development.	2. The project's evaluation requirements are developed in conjunction with the development of the system or software technical requirements.	
2. Define Evaluation Procedures	7.2.Define the methods, process, reviews, inspections, and tests by which incremental products are verified against established criteria or requirements that were established in a previous phase. 7.3.Define the methods, processes, and evaluation criteria by which the system or product is verified against the system or product requirements. 7.4.Define the methods, process, and evaluation criteria by which the system or product will be validated against the customer's needs and expectations.		7. System and acceptance testing of the software are planned and performed to demonstrate that the software satisfies its requirements.
3. Incorporate Evaluation Requirements into the Solicitation and Contract		3. The evaluation requirements are incorporated into the solicitation package and resulting contract.	
4. Monitor Contractor Performance		4. The project team assesses contractor's performance for compliance with evaluation requirements.	

PA 08 System Test and Evaluation base practices	***SE-CMM*** **Verification and Validation:** ***Base Practices***	***SA-CMM*** **Evaluation:** **(*Contract Performance Management)** ***Activities Performed***	***SW-CMM*** **Software Product Engineering:** **(**Software Subcontract Management)** ***Activities Performed***
5. Perform Planned Evaluations	7.5.Perform the verification and validation activities that are specified by the verification and validation plans, procedures, and capture results.	5. Planned evaluations are performed on the acquired S/W products and services prior to acceptance for operational use. *6. The end user periodically participates in the evaluation of evolving software products and services to determine the satisfaction of operational requirements.	7. System and acceptance testing of the software are planned and performed to demonstrate that the software satisfies its requirements. **12. The prime contractor conducts acceptance testing as part of the delivery of the subcontractors software products according to a documented procedure.
6. Analyze Evaluation Results	7.6.Compare the collected test, inspection, or review results with established evaluation criteria to assess the degree of success.	4. The project team assesses contractor's performance for compliance with evaluation requirements. 6. Results of the evaluations are analyzed and compared to the contract's requirements to establish an objective basis to support the decision to accept the products and services or to take further action.	
Covered by generic practices		1. The project team performs its activities in accordance with its documented evaluation plans.	5. Software testing is performed according to the project's defined software process. 6. Integration testing of SW is planned and performed according to the project's defined software process.

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Table PA 09: FAA-iCMM v1.0 Sources of Transition Practices

PA 09 Transition base practices	***SA-CMM* Transition to Support: *Abilities to Perform***	***SA-CMM* Transition to Support: *Activities Performed***
1. Conduct inventory	4. The software support organization, prior to transition, has a complete inventory of all software related items that are to be transitioned.	
2. Develop and follow transition to support strategy		1. The project team performs its activities in accordance with its documented transition to support plans.
3. Demonstrate support capability		2. Responsibility for the software products is transferred only after the software support organization demonstrates its capability to modify and support the software products.
4. Oversee the configuration management of the system		3. The project team oversees the configuration control of the software products throughout the transition.
5. Oversee the requirements management of the system		
6. Transfer and tailor developer's processes to support organization		

Table PA 10: FAA-iCMM v1.0 Sources of Product Evolution Practices

PA 10 Product Evolution Base Practices	***SE-CMM*** **Manage Product Line Evolution:** ***Base Practices***
1. Define Product Evolution	15.1. Define the types of products to be offered.
2. Identify New Product Technologies	15.2. Identify new product technologies or enabling infrastructure that will help the organization acquire, develop, and apply technology for competitive advantage.
3. Adapt development processes	15.3. Make the necessary changes in the product development cycle to support the development of new products.
4. Ensure critical component availability	15.4. Ensure critical components are available to support planned product evolution.
5. Insert Product Technology	15.5. Insert new technology into product development, marketing, and manufacturing.

Table PA 11-a: FAA-iCMM v1.0 Sources of Project Management Practices

PA 11 Project Management base practices	***SE-CMM*** **Monitor and Control Technical Effort:** ***Base Practices***	***SE-CMM*** **Plan Technical Effort:** ***Base Practices***	***SA- CMM*** **Software Acquisition Planning:** ***Activities Performed***	***SA- CMM*** **Project Management:** ***Activities Performed***
1. Identify the Activities		12.5 Identify technical activities for the entire life cycle of the project.	4. Life cycle support of the software is included in software acquisition planning documentation.	
2. Identify the Life Cycle Approach		12.4 Determine the technical process to be used on the project.	2. The software acquisition strategy for the project is developed and documented.	
3. Establish Estimates		12.2 Develop estimates for the factors that affect the magnitude and technical feasibility of the project. 12.3 Develop cost estimates for all technical resources required by the project.	5. Life cycle cost and schedule estimates for the software products and services being acquired are prepared and independently reviewed.	
4. Develop Schedules for the Project		12.7 Develop technical schedules for the entire project life cycle.		
5. Establish and Maintain Plans		12.1 Identify resources that are critical to the technical success of the project. 12.6 Define project processes to support effective interaction with customer(s) and supplier(s). 12.8 Establish technical parameters with thresholds for the project and the system. 12.9 Use the information gathered in planning activities to develop technical	2. The software acquisition strategy for the project is developed and documented. 3. The software acquisition planning is documented and the planning documentation is maintained over the life of the project. 4. Life cycle	2. The organization of the project provides for the management of all project functions. 3. The software acquisition management activities of the project team are directed to accomplish the project directives.

PA 11 Project Manageme nt base practices	***SE-CMM* Monitor and Control Technical Effort: *Base Practices***	***SE-CMM* Plan Technical Effort: *Base Practices***	***SA- CMM* Software Acquisition Planning: *Activities Performed***	***SA- CMM* Project Management: *Activities Performed***
		management plans that will serve as the basis for tracking the salient aspects of the project and the systems engineering effort.	support of the software is included in software acquisition planning docu-mentation.	
6. Establish Commit-ment		12.10 Review the technical management plans with all affected groups and individuals, and obtain group commitment.	1. Planning personnel are involved in system acquisition planning.	
7. Monitor the Project according to Established Plans	11.1 Direct technical effort in accordance with technical management plans. 11.5 Review performance against the technical management plans.			1. The project team performs its activities in accordance with its documented software acquisition management plans. 3. The software acquisition management activities of the project team are directed to accomplish the project directives. 4. The software acquisition management activities of the project team are controlled.
8. Track Project to Established Plans	11.2 Track actual use of resources against technical management plans. 11.3 Track performance against the established technical parameters.			6. The project team tracks project status, execution, funding, and expenditures and takes action.
9. Review Perform-ance against Established Plans	11.4 Review performance against the technical management plans. 11.5 Analyze Issues resulting from the tracking and review of technical parameters to determine corrective actions.			

PA 11 Project Management base practices	***SE-CMM*** **Monitor and Control Technical Effort:** ***Base Practices***	***SE-CMM*** **Plan Technical Effort:** ***Base Practices***	***SA- CMM*** **Software Acquisition Planning:** ***Activities Performed***	***SA- CMM*** **Project Management:** ***Activities Performed***
10. Take Corrective Action	11.5 Analyze issues resulting from tracking and review of technical parameters to determine corrective actions. 11.6 Take corrective actions when technical parameters indicate future problems or when actual results deviate from plans.			5. The project team implements a corrective action system for the identification, recording, tracking, and correction of problems discovered during software acquisition. 6. The project team tracks project status, execution, funding, and expenditures and takes action.

Table PA 11-b: FAA-iCMM v1.0 Sources of Project Management Practices

PA 11 Project Management base practices	*SA-CMM Project Performance Management: Activities Performed*	*SW CMM Project Planning: Activities Performed*	*SW-CMM Project Tracking and Oversight: Activities Performed*	*SW-CMM Integrated Software Management: Activities Performed*	*Other CMM References*
1. Identify the Activities		2. Software project planning is initiated in the early stages of, and in parallel with, the overall project planning. 8. Software work products that are needed to establish and maintain control of the software project are identified. 13. The software risks associated with the cost, resource, schedule, and technical aspects of the project are identified, assessed, and documented. 14. Plan for the project's software engineering facilities and support tools are prepared.			
2. Identify the Life Cycle Approach		5. A software life cycle with predefined stages of manageable size is identified or defined.			
3. Establish Estimates		9. Estimates for the size of the software work products (or changes to the size of software work products) are derived according to a documented procedure. 10. Estimates for the software project's effort and costs are derived according to a documented procedure. 11. Estimates for the project's critical	11. Actual measurement data and replanning data for the software project are recorded.	5. The organization's software process database is used for software planning and estimating.	

PA 11 Project Manageme nt base practices	*SA-CMM Project Performance Management: Activities Performed*	*SW CMM Project Planning: Activities Performed*	*SW-CMM Project Tracking and Oversight: Activities Performed*	*SW-CMM Integrated Software Management: Activities Performed*	*Other CMM References*
		computer resources are derived according to a documented procedure. 12. The project's software schedule is derived according to a documented procedure.			
4. Develop Schedules for the Project		5. A software life cycle with predefined stages of manageable size is identified or defined. 12. The project's software schedule is derived according to a documented procedure.			
5. Establish and Maintain Plans		6. The project's software development plan is developed according to a documented procedure. 7. The plan for the software product is documented. 13. The software risks associated with the cost, resource, schedule, and technical aspects of the project are identified, assessed, and documented. 14. Plansfor the project's software engineering facilities and support tools are prepared. 15. Software planning data are recorded.	1. A documented software development plan is used for tracking the software activities and communicating status. 2. The project's software development plan is revised according to a documented procedure.		
6. Establish Commit-ment		1. The software engineering group participates on the project proposal team.	3. Software project commitments and changes to commitments made to individuals and		

PA 11 Project Manageme nt base practices	***SA-CMM Project Performance Management: Activities Performed***	***SW CMM Project Planning: Activities Performed***	***SW-CMM Project Tracking and Oversight: Activities Performed***	***SW-CMM Integrated Software Management: Activities Performed***	***Other CMM References***
		3. The software engineering group participates with other affected groups in the overall project planning throughout the project's life. 4. Software project commitments made to individuals and groups external to the organization are reviewed with senior management according to a documented procedure.	groups external to the organization are reviewed with senior management ccording to a documented procedure. 4. Approved changes to commitments that affect the software project are communicated to the members of the software engineering group and other software-related groups.		
7. Monitor the Project according to Established Plans	3. The project team's software acquisition management activities are performed in accordance with the Project Management Plan.		12. The software engineering group conducts periodic internal reviews to track technical progress, plans, performance, and issues against the software development plan.		*SA- SOL - Ac 1:* The project team performs its activities in accordance with its doc-umented solicitation plans.
8.Track Project to Established Plans	6. The acquisition organization's software acquisition process repository is used for project planning, estimating, and management.		1. A documented software development plan is used for tracking the software activities and communicating status. 5. The size of the software work products (or size of the changes to the software work products) are tracked, and corrective actions are taken as necessary. 6. The project's software effort and		

PA 11 Project Manageme nt base practices	*SA-CMM Project Performance Management: Activities Performed*	*SW CMM Project Planning: Activities Performed*	*SW-CMM Project Tracking and Oversight: Activities Performed*	*SW-CMM Integrated Software Management: Activities Performed*	*Other CMM References*
			costs are tracked, and corrective actions are taken as necessary. 7. The project's critical computer resources are tracked, and corrective actions are taken as necessary. 8. Theproject's software schedule is tracked, and corrective actions are taken as necessary. 9. Software engineering technical activities are tracked, and corrective actions are taken as necessary. 10. The software risks associated with cost, resource, schedule, and technical aspects of the project are tracked. 12. The software engineering group conducts periodic internal reviews to track technical progress, plans, performance and issues against the software development plan.		
9. Review Perform-ance against Established Plans	8. The project team performs periodic reviews to ensure current and projected needs of the end user will be satisfied.		12. The software engineering group conducts periodic internal reviews to track technical progress, plans, performance, and issues against the software development plan. 13. Formal reviews to address the	11. Reviews of the software project are periodically performed to determine actions needed to bring the software project's performance and results in line	

PA 11 Project Manageme nt base practices	***SA-CMM Project Performance Management: Activities Performed***	***SW CMM Project Planning: Activities Performed***	***SW-CMM Project Tracking and Oversight: Activities Performed***	***SW-CMM Integrated Software Management: Activities Performed***	***Other CMM References***
			accomplishments and results of the software project are conducted at selected project milestones according to a documented procedure.	with the current and projected needs of the business, customer, and end users, as appropriate.	
10. Take Corrective Action			5. The size of the software work products (or size of the changes to the software work products) are tracked, and corrective actions are taken as necessary. 6. The project's software effort and costs are tracked, and corrective actions are taken as necessary. 7. The project's critical computer resources are tracked, and corrective actions are taken as necessary. 8. The project's software scheduleis tracked, and corrective actions are taken as necessary. 9. Software engineering technical activities are tracked, and corrective actions are taken as necessary.		SA-QAM - Ac 7: Changes are imple-mented to correct project's acquired products and services that are out of expected or acceptable bounds SA - QPM Ac 7: Changes are imple-mented to correct the project's defined software acquisition process where it is out of expected or acceptable bounds.
Covered by generic practices *[* Or other PAs]*	1. The project's defined software acquisition process is developed and documented by tailoring the acquisition	6. The project's software development plan is developed according to a documented procedure. 7. The plan for the software project is		1. The projects defined software process is developed by tailoring the organization's standard software process	SA-CPM - Ac 5: As understandi ng of the software engineering process, products,

PA 11 Project Manageme nt base practices	*SA-CMM Project Performance Management: Activities Performed*	*SW CMM Project Planning: Activities Performed*	*SW-CMM Project Tracking and Oversight: Activities Performed*	*SW-CMM Integrated Software Management: Activities Performed*	*Other CMM References*
	organization's standard software acquisition process according to the organization's tailoring guidelines. 2. The project team develops and maintains the Project Management Plan in accordance with the acquisition organization's standard software acquisition process. 3. The project team's software acquisition management activities are performed in accordance with the Project Management Plan. 4. The projects defined software acquisition process is revised as required to remain consistent with current project objectives. *5. [also to **PA 14**] The project team coordinates its activities with other organizations and activities	documented. 12. The project's software schedule is derived according to a documented procedure.		according to a documented procedure. 2. Each projects defined software process is revised according to a documented procedure. 3. The projects software development plan, which describes the use of the projects defined software process, is developed and revised according to a documented procedure. 4. The software project is managed in accordance with the projects defined software process. 5. The organization's software process database is used for software planning and estimating. 6. The size of the software products (or size of changes to the software work products) is managed according to a documented procedure. 7. The project's software effort	and services improves, the project team may propose changes to the software products, or services, process plans, and activities. SA-QAM - Ac. 2: The acquisition organiza-tion utilizes quantitative measures as a normal part of manage-ment review and oversight of acquired products and services. SA-QPM - Ac 5: Reports docu-menting the results of the project team's quantitative process manage-ment activities are prepared

PA 11 Project Manageme nt base practices	*SA-CMM Project Performance Management: Activities Performed*	*SW CMM Project Planning: Activities Performed*	*SW-CMM Project Tracking and Oversight: Activities Performed*	*SW-CMM Integrated Software Management: Activities Performed*	*Other CMM References*
	supporting the project. 6. The acquisition organization's software acquisition process repository is used for project planning, estimating, and management. 7. Critical dependencies are identified, negotiated, and managed. 8. The project team performs periodic reviews to ensure current and projected needs of the end user will be satisfied. 9. Measurements are used to determine project team performance and trends analyzed. 11. The project team's software acquisition lessons learned are identified, documented, and entered into acquisition organization's software acquisition process repository.			and costs are managed according to a documented procedure. 8. The project's critical computer resources are managed according to a documented procedure 9. The critical dependencies and critical paths of the project's software schedule are managed according to a documented schedule 11. Reviews of the software project are periodically performed to determine the actions needed to bring the software project's performance and results in line with the current and projected needs of the business, customer, and end users, as appropriate. 12. The organization's software process database is used for software planning and estimating.	and distributed. SA-QAM - Ac 7: Changes are imple-mented to correct project's acquired products and services that are out of expected or acceptable bounds.

Table PA 12: FAA-iCMM v1.0 Sources of Contract Management Practices

PA 12 Contract Management base practices	***SA- CMM*** **Contract Tracking and Oversight (CTO) and Contract Performance Management (CPM)** ***Activities Performed***	***SE-CMM*** **Coordinate With Suppliers (PA18) (Mostly covered in PA05, Outsourcing)** ***Base Practices***	***SW-CMM*** **Software Subcontract Management (SSM)** ***Activities Performed***
1.Review and use planning documents	CTO.Ac2. The project team reviews required contractor software planning documents which, when satisfactory, are used to oversee the contractor's software engineering effort.		3. The contractual agreement between the prime contractor and the software contractor is used as the basis for managing the subcontract. 4. A documented subcontractor's software development plan is reviewed and approved by prime contractor. 5. A documented and approved subcontractor's software development plan is used for tracking the software activities and communicating status.
2 Conduct Periodic reviews	CTO.Ac3. The project team conducts periodic reviews and interchanges with the contractor. CTO.Ac4. The project team reviews and tracks the development of the software engineering environment required to provide life cycle support for the acquired software.		7. The prime contractor's management conducts periodic status/coordination reviews with the software subcontractor's management. 8. Periodic technical reviews and interchanges are held with the software subcontractor. 9. Formal reviews to address the subcontractor's software engineering accomplishments and results are conducted at selected milestones according to a documented procedure. 13. The software subcontractor's performance is evaluated on a periodic basis, and the evaluation is reviewed with the subcontractor.
3. Maintain contract integrity	CTO.Ac6. The project team maintains the integrity of the contract throughout the contract performance period.		
4. Monitor contractor's support processes			10. The prime contractor's software quality assurance group monitors the subcontractor's software quality assurance activities according to a documented procedure. 11. The prime contractor's software configuration management group monitors the subcontractor's activities for software configuration management according to a documented procedure.

PA 12 Contract Management base practices	***SA- CMM*** **Contract Tracking and Oversight (CTO) and Contract Performance Management (CPM)** ***Activities Performed***	***SE-CMM*** **Coordinate With Suppliers (PA18) (Mostly covered in PA05, Outsourcing)** ***Base Practices***	***SW-CMM*** **Software Subcontract Management (SSM)** ***Activities Performed***
5. Foster cooperative environment	CPM.Ac7. Contract performance mgmt activities are performed to foster a cooperative environment between the project team and the contractor.	PA18.5 Maintain timely two-way commu-nication with suppliers.	
Covered by generic practices	CTO.Ac1. The project team performs its activities in accordance with its documented contract tracking and oversight plans. CTO.Ac5. Any problems or issues found by the project team during tracking and oversight are recorded in the appropriate corrective action system and tracked to closure. CPM.Ac1. The project team performs its activities in accordance with its documented contract performance management plans. CPM.Ac2 The contractor's software engineering process is appraised according to the project's defined software acquisition process. (Note: "appraised" in SA-CMM indicates review and comparison against requirements or standards) CPM.Ac3. Results of the contractor's engineering activities are appraised according to the projects defined software acquisition process. CPM.Ac4. Measurements from appraisals are used to evaluate the contractor's performance, and trends are analyzed.		1. The work to be subcontracted is defined and planned according to a documented procedure. 6. Changes to the software subcontractor's statement of work, subcontract terms and conditions, and other commitments are resolved according to a documented procedure.
To other PAs	CPM.Ac5. As understanding of the software engineering process, products, and services improves, the project team may propose changes to the software products or services, process descriptions, plans, and activities. (PA21) CPM.Ac6. The end user periodically participates in the evaluation of evolving sw products and services to determine the satisfaction of operational requirements. (GP3.5 applied to PA08 and PA07)		2. The software subcontractor is selected, based on an evaluation of the subcontract bidders' ability to perform the work, according to a documented procedure. (in Outsourcing, PA05) 12. The prime contractor conducts acceptance testing as part of the delivery of the subcontractor's software products according to a documented procedure. (GP2.4 for PA08)

Table PA 13: FAA-iCMM v1.0 Sources of Risk Management Practices

PA 13 Risk Management base practices	***SE- CMM*** **Manage Risk:** ***Base Practices***	***SW-CMM*** **Integrated Software Management:** ***Activities performed***	***SA-CMM*** **Acquisition Risk Management:** ***Activities Performed***	***SA -CMM*** **Project Performance Management:** ***Activities Performed***	***SW- CMM*** **Software Project Planning & Tracking & Oversight** ***Activities Performed***
1. Develop Risk Management Approach	1. Develop a plan for risk-management activities that is the basis for identifying, assessing, mitigating, and monitoring risks for the life of the project.		1. Software acquisition risk management activities are integrated into software acquisition planning. 2. The Software Acquisition Risk Management Plan is developed in accordance with the project's defined software acquisition process. 4. Risk Management is conducted as an integral part of the solicitation, project performance management, and contract performance management processes.		
2. Identify Risks	2. Identify project risks by examining project objectives with respect to the alternatives and constraints, and identifying what can go wrong.	10. The project's software risks are identified, assessed, documented and managed according to a documented procedure.		10. The project team identifies and analyzes risks and identifies specific risk handling actions for those risks.	13. The software risks associated with the cost, resource, schedule, and technical aspects of the project are identified, assessed, and documented.

PA 13 Risk Management base practices	***SE- CMM* Manage Risk: *Base Practices***	***SW-CMM* Integrated Software Management: *Activities performed***	***SA-CMM* Acquisition Risk Management: *Activities Performed***	***SA -CMM* Project Performance Management: *Activities Performed***	***SW- CMM* Software Project Planning & Tracking & Oversight *Activities Performed***
3. Assess Risks	3. Assess risks and determine the probability of occurrence and consequence of realization.	10. The project's software risks are identified, assessed, documented and managed according to a documented procedure.		10. The project team identifies and analyzes risks and identifies specific risk handling actions for those risks.	13. The software risks associated with the cost, resource, schedule, and technical aspects of the project are identified, assessed, and documented.
4. Review and Validate Risk Assessment	4. Obtain formal recognition of the project risk assessment.				
5. Execute Risk Mitigation Plans	5. Implement the risk-mitigation activities. 6. Monitor risk-mitigation activities to ensure that the desired results are being obtained.	10. The project's software risks are identified, assessed, documented and managed according to a documented procedure. 11. Reviews of the software project are periodically performed to determine the actions needed to bring the software project's performance and results in line with the current and projected needs of the business, customer, and end users, as appropriate.	3. The project team performs its software acquisition risk management activities in accordance with its documented plans. 5. Software acquisition risk handling actions are tracked and controlled until risks are mitigated.		10. The software risks associated with cost, resource, schedule, and technical aspects of the project are tracked.

Table PA 14: FAA-iCMM v1.0 Sources of Coordination Practices

PA 14 Coordination base practices	***SE-CMM*** **Integrate Disciplines: (*Integrate Systems)** ***Base Practices***	***SW-CMM*** **Intergroup Coordination (Requirements Management (RM), SW Project Planning (SPP), Integrated SW Management (ISM)):** ***Activities Performed***	***SA-CMM*** **Project Performance Management (Software Acquisition Planning (SAP)):** ***Activities Performed***
1. Involve Disciplines	1. Involve the disciplines that are essential to system development in a timely manner.	1. The software engineering group and the other engineering groups participate with the customer and end users, as appropriate, to establish the system requirements. RM-Ac1. The software engineering group reviews the allocated requirements before they are incorporated into the software project. SPP.Ac1. The software engineering group participates on the project proposal team. SPP.Ac3. The software engineering group participates with other affected groups in the overall project planning throughout the project's life.	5. The project team coordinates its activities with other organizations and activities supporting the project. SAP-Ac1. Software acquisition planning personnel are involved in system acquisition planning.
2. Promote Cross-Discipline Understanding	4.2. Promote cross-discipline understanding among the developers.		
3. Establish Coordination Methods	4.3. Establish methods for interdisciplinary coordination. * **5.2**. Coordinate interface specifications and changes with all affected groups and individuals.	2. Representatives of the project's software engineering group work with representatives of the other engineering groups to monitor and coordinate technical activities and resolve technical issues. 5. Work products produced as input to other engineering groups are reviewed by representatives of the receiving groups to ensure that the work products meet their needs. 6. Intergroup issues not resolvable by the individual representatives of the project engineering groups are handled according to a documented procedure. 7. Representatives of the project engineering groups conduct periodic technical reviews and interchanges.	8. The project team performs periodic reviews to ensure current and projected needs of the end user will be satisfied.

PA 14 Coordination base practices	***SE-CMM*** **Integrate Disciplines: (*Integrate Systems)** ***Base Practices***	***SW-CMM*** **Intergroup Coordination (Requirements Management (RM), SW Project Planning (SPP), Integrated SW Management (ISM)):** ***Activities Performed***	***SA-CMM*** **Project Performance Management (Software Acquisition Planning (SAP)):** ***Activities Performed***
4. Establish Resolution Methods	4.4. Establish and use methods for identifying and resolving interdisciplinary issues, and creating integrated solutions.	1. The software engineering group and the other engineering groups participate with the customer and end users, as appropriate, to establish the system requirements. 2. Representatives of the project's software engineering group work with representatives of the other engineering groups to monitor and coordinate technical activities and resolve technical issues. 4. Critical dependencies between engineering groups are identified, negotiated, and tracked according to a documented procedure. 5. Work products produced as input to other engineering groups are reviewed by representatives of the receiving groups to ensure that the work products meet their needs. 6. Intergroup issues not resolvable by the individual representatives of the project engineering groups are handled according to a documented procedure. ISM-Ac9. Critical dependencies and critical paths of the project's software schedule are managed according to a documented procedure.	7. Critical dependencies are identified, negotiated, and managed.
5. Communicate Interdisciplinary Activity Results	4.5. Communicate results of inter-disciplinary activities to affected groups.	7. Representatives of the project engineering groups conduct periodic technical reviews and interchanges.	
6. Develop and Communicate Project Goals	4.6. Develop project goals and ensure that all affected groups and individuals are fully aware of them.		
covered by generic practice		3. A documented plan is used to communicate intergroup commitments and to coordinate and track the work performed.	

Table PA 15: FAA-iCMM v1.0 Sources of Quality Assurance and Management Practices

PA 15 Quality Assurance and Management Base practices	***SE-CMM*** **Ensure Quality:** ***Base practices***	***SW-CMM*** **Software Quality Assurance (SQA):** ***(* Software Subcontract Management) Activities Performed***
1. Monitor Process Compliance	8.1 Ensure the defined system engineering process is adhered to during the system life cycle.	4. The SQA group reviews the software engineering activities to verify compliance. 8. The SQA group conducts periodic reviews of its activities and findings with the customer's SQA personnel, as appropriate. 3. The SQA group participates in the preparation and review of the project's software development plan, standards, and procedures. ***SSM**-Ac 10. The prime contractor's software quality assurance group monitors the subcontractor's software quality assurance activities according to a documented procedure.
2. Evaluate product and process quality	8.2 Evaluate work product measures against the requirements for work product quality. 8.3 Measure the quality of the systems engineering process used by the project.	5. The SQA group audits designated software work products to verify compliance.
3. Detect need for corrective action	8.7 Establish a mechanism or a set of mechanisms to detect the need for corrective actions to processes or products.	7. Deviations identified in the software activities and software work products are documented and handled according to a documented procedure.
4. Record and report results	8.5 Obtain employee participation in identifying and reporting quality issues.	6. The SQA group periodically reports the results of its activities to the software engineering group.
5. Analyze quality	8.4 Analyze quality measurements to develop recommendations for quality improvement or corrective action, as appropriate.	
6. Initiate quality improvement opportunities.	8.6 Initiate activities that address identified quality issues or quality improvement opportunities.	
Covered by generic practices		1. A SQA plan is prepared for the software project according to a documented procedure. 2. The SQA group's activities are performed in accordance with the SQA plan.

Table PA 16: FAA-iCMM v1.0 Sources of Configuration Management Practices

PA 16 Configuration Management base practices	**SE-CMM Manage Configurations: *Base Practices***	***SA-CMM* Transition to Support: *Activities Performed***	***SW-CMM* Configuration Management: *Activities Performed***
1.Establish a configuration management strategy	9.1 Decide among candidate methods for configuration management.		1. (ability) A board having authority for managing the project's software baseline (i.e., a software configuration control board -- SCCB) exists or is established. 4. The software work products to be placed under configuration management are identified.
2. Identify and baseline configuration items and interim work products	9.2 Identify configuration units that constitute identified baselines.		4. The software work products to be placed under configuration management are identified.
3. Establish and maintain a repository for work product baselines	9.3 Maintain a repository of work product baselines.		3. A configuration management library system is established as a repository for the software baselines. 7. Products from the software baseline library are created and their release is controlled according to a documented procedure.
4. Control changes	9.4 Control changes to established configuration units.	3. The project team oversees the configuration control of the software products throughout the transition.	5. Change requests and problem reports for all configuration items/units are initiated, recorded, reviewed, approved, and tracked according to a documented procedure. 6. Changes to baselines are controlled according to a documented procedure. 7. Products from the software baseline library are created and their release is controlled according to a documented procedure. 8. Status of configuration data is recorded according to a documented procedure.
5. Record and report configuration status	9.5 Communicate status of configuration data, proposed changes, and access information to affected groups.	3. The project team oversees the configuration control of the software products throughout the transition.	5. Change requests and problem reports for all configuration items/units are initiated, recorded, reviewed, approved, and tracked according to a documented procedure. 8. Status of configuration data is recorded according to a documented procedure. 9. Standard reports documenting

PA 16 Configuration Management base practices	**SE-CMM Manage Configurations: *Base Practices***	***SA-CMM* Transition to Support: *Activities Performed***	***SW-CMM* Configuration Management: *Activities Performed***
			the SCM activities and the contents of the software baseline are developed and made available to affected groups and individuals.
6. Conduct configuration audits and inspections.			10. Software baseline audits are conducted according to a documented procedure.
Covered by generic practices			1. A SCM plan is prepared for each software project according to a documented procedure. 2. A documented and approved SCM plan is used as the basis for performing the SCM activities.

Table PA 17: FAA-iCMM v1.0 Sources of Peer Review Practices

PA 17 Peer Review base practices	***SW-CMM*** **Peer Review:** **(*SPE- Software Product Engineering)** ***Activities Performed***
1. Conduct peer reviews	2. Peer reviews are performed according to a documented procedure.
2. Record peer review data	3. Data on the conduct and results of the peer reviews are recorded. * **SPE**-Ac 9. Data on defects identified in peer reviews and testing are collected and analyzed according to the project's defined software process.
Covered by generic practices	1. Peer reviews are planned, and the plans are documented.

Table PA 18: FAA-iCMM v1.0 Sources of Measurement Practices

PA 18 Measurement base practices	***SA-CMM* Quantitative Process Management: *Activities Performed***	***SA-CMM* Quantitative Acquisition Management: *Activities Performed***	***SW-CMM* Quantitative Process Management: *Activities Performed***	***SW-CMM* Software Quality Management: *Activities Performed***
1. Establish Measures Based on Goals		3. The quantitative objectives for each project's software products and services are defined. 4. The quantitative objectives for each project's products and services are incorporated into the solicitation package and resulting contract according to the project's defined software acquisition process.		3. The project's quantitative quality goals for the software products are defined, monitored, and revised throughout the software life cycle. 5. The software project's quanti-tative quality goals for products are allocated appro-priately to subcon-tractors delivering software products to the project.
2. Collect and Analyze Measurements	3. The measurement data used to quantitatively control the project's defined software acquisition process are collected in accordance with the project's quantitative process management plans. 4. Each project's defined software acquisition process is analyzed and quantitatively controlled according to the project's quantitative process management plans.	5. Each project's acquired software products and services are measured, analyzed and compared to the project's established quantitative objectives.	4. The measurement data are collected according to a documented procedure5. The project's defined software process is analyzed and brought under quantitative control according to a documented procedure.	4. The quality of the project's software products is measured, analyzed, and compared to the products' quantitative quality goals on an event-driven basis.
3. Communicate quantitative status	5. Reports documenting the results of the project team's quantitative process management activities are prepared and distributed.		6. Reports documenting the results of the software project's quantitative process management activities are prepared and distributed.	

PA 18 Measurement base practices	***SA-CMM* Quantitative Process Management: *Activities Performed***	***SA-CMM* Quantitative Acquisition Management: *Activities Performed***	***SW-CMM* Quantitative Process Management: *Activities Performed***	***SW-CMM* Software Quality Management: *Activities Performed***
4. Take corrective action	4. Each project's defined software acquisition process is analyzed and quantitatively controlled according to the project's quantitative process management plans.		5. The project's defined software process is analyzed and brought under quantitative control according to a documented procedure.	
Covered by generic practices	1. The acquisition organization's software acquisition process capability baseline is established and maintained according to a written procedure. 2. Each project team performs its activities in accordance with its documented quantitative process management plans. 6. Causal analysis of each project's defined software acquisition process is conducted on a periodic basis to determine root causes of variances from project plans. 7. Changes are implemented to correct the project's defined software acquisition process where it is out of expected or acceptable bounds.	1. Each project team performs its activities in accordance with its documented quantitative acquisition management plans. 2. The acquisition organization utilizes quantitative measures as a normal part of management review and oversight of acquired products and services. 6. Causal analysis of each project's acquired products and services is conducted on a periodic basis to determine root causes of variances from project plans. 5. Each project's acquired software products and services are measured, analyzed and compared to the project's established quantitative objectives. 7. Changes are implemented to correct project's acquired products and services that are out of expected or acceptable bounds.	1. The software project's plan for quantitative process management is developed according to a documented procedure. 2. The software project's quantitative process management activities are performed in accordance with the project's quantitative process management plan 3. The strategy for the data collection and the quantitative analyses to be performed are determined based on the project's defined process. 4. The measurement data used to control the project's defined software process quantitatively are collected according to a documented procedure 7. The process capability baseline is established and maintained according to a docu-mented procedure	1. The project's software quality plan is developed and maintained according to a documented procedure. 2. The project's software quality plan is the basis for the project's activities for software quality management.
To other PAs	6. Causal analysis of each project's defined	2. The acquisition organization utilizes		-

PA 18 Measurement base practices	***SA-CMM* Quantitative Process Management: *Activities Performed***	***SA-CMM* Quantitative Acquisition Management: *Activities Performed***	***SW-CMM* Quantitative Process Management: *Activities Performed***	***SW-CMM* Software Quality Management: *Activities Performed***
	software acquisition process is conducted on a periodic basis to determine root causes of variances from project plans. (PA 19)	quantitative measures as a normal part of management review and oversight of acquired products and services. (PA 11) 6. Causal analysis of each project's acquired products and services is conducted on a periodic basis to determine root causes of variances from project plans. (PA 19)		

Table PA 19: FAA-iCMM v1.0 Sources of Prevention Practices

PA 19 Prevention base practices	***SW-CMM*** **Defect Prevention:** ***Activities Performed***	***SA-CMM*** **Quantitative Performance Management:** **(* Quantitative Acquisition Management)** ***Selected Activities Performed***
1. Conduct causal analysis meetings	3. Causal analysis meetings are conducted according to a documented procedure.	6. Causal analysis of each project's defined software acquisition process is conducted on a periodic basis to determine root causes of variances from project plans. *** QAM-**Ac 6. Causal analysis of each project's acquired products and services is conducted on a periodic basis to determine root causes of variances from project plans.
2. Coordinate action proposals	4. Each of the teams assigned to coordinate defect prevention activities meets on a periodic basis to review and coordinate implementation of action proposals from the causal analysis meetings.	
3. Document and track prevention data	5. Defect prevention data are documented and tracked across the teams coordinating defect prevention activities.	
4. Revise processes for defect prevention	6. Revisions to the organization's standard software process resulting from defect prevention actions are incorporated according to a documented procedure. 7. Revisions to the project's defined software process resulting from defect prevention actions are incorporated according to a documented procedure.	
Covered by generic practices	1. The software project develops and maintains a plan for its defect prevention activities. 2. At the beginning of a software task, the members of the team performing the task meet to prepare for the activities of that task and the related defect preventions. 8. Members of the software engineering group and software-related groups receive feedback on the status and results of the organization's and project's defect prevention activities on a periodic basis.	

Table PA 20: FAA-iCMM v1.0 Sources of Organization Process Definition Practices

PA 20 Organ-ization Process Definition base practices	***SE-CMM* Define Org's Systems Eng Process *Improve Org's Systems Eng Process *Base Practices***	***SA-CMM* Process Definition and Maintenance (PDM) **Continuous Process Improvement (CPI) *Activities Performed***	***SW-CMM* Organization Process Focus (OPF) *Activities Performed***	***SW-CMM* Organization Process Definition (OPD) *Activities Performed***
1. Appraise processes	***BP14.01**. Appraise the existing processes being performed in the organization to understand their strengths and weaknesses.	3. The acquisition organization's standard software acquisition process is appraised periodically and action plans developed to address the findings of the appraisal.	1. The software process is assessed periodically, and action plans are developed to address the assessment findings.	
2. Identify process goals	1. Establish goals for the organization's systems engineering process from the organization's business goals.			
3. Establish standard process	3. Develop a well-defined standard systems engineering process for the organization.	2. The acquisition organization's standard software acquisition process is defined and maintained in accordance with its documented process definition and maintenance plans.		1. The organization's standard software process is developed and maintained according to a documented procedure.
4. Develop tailoring guidelines	4. Define guidelines for tailoring the organization's standard systems engineering process for project use in developing the project's defined process.	5. Guidelines and criteria for a project's selection and tailoring of the acquisition organization's standard software acquisition process are developed and maintained.		4. Guidelines and criteria for the projects' tailoring of the organization's standard software process are developed and maintained.
5. Maintain process assets	2. Collect and maintain systems-engineering process assets.	4. The acquisition organization's and projects' activities for defining and maintaining their software acquisition processes are coordinated at the	4. The use of the organization's software process database is coordinated at the organizational level. 5. New processes, methods, and tools in limited use in the	3. Descriptions of software life cycles that are approved for use by the projects are documented and maintained.

PA 20 Organ-ization Process Definition base practices	***SE-CMM* Define Org's Systems Eng Process *Improve Org's Systems Eng Process *Base Practices***	***SA-CMM* Process Definition and Maintenance (PDM) **Continuous Process Improvement (CPI) *Activities Performed***	***SW-CMM* Organization Process Focus (OPF) *Activities Performed***	***SW-CMM* Organization Process Definition (OPD) *Activities Performed***
		organization level. 6. An organizational repository of software acquisition process information is established, managed, controlled, and maintained to support process definition and maintenance activities.	organization are monitored, evaluated, and, where appropriate, transferred to other parts of the organization.	5. The organization's software process database is established and maintained. 6. A library of software process-related documentation is established and maintained.
6. Coordinate and Communicate process definition	*** BP14.04** Communicate process improvements to existing projects and to other affected groups, as appropriate.	7. Project teams are informed of the acquisition organization's and projects' activities for process definition and maintenance. ****2 (CPI).** The software acquisition process group coordinates process improvement activities	3. The organization's and projects' activities for developing and improving their software processes are coordinated at the organization level. 4. The use of the organization's software process database is coordinated at the organizational level. 6. Training for the organization's and projects' software processes is coordinated across the organization. 7. The groups involved in implementing the software processes are informed of the organization's and projects' activities for software process development and improvement. ***2. (PCM)** The group responsible for the organization's software process activities (e.g. software engineering process group) coordinates the software process improvement activities.	
covered by generic practices		1. The acquisition organization performs its activities in	2. The organization develops and maintains a plan for its software	2. The organization's standard software

PA 20 Organ-ization Process Definition base practices	***SE-CMM* Define Org's Systems Eng Process *Improve Org's Systems Eng Process *Base Practices***	***SA-CMM* Process Definition and Maintenance (PDM) **Continuous Process Improvement (CPI) *Activities Performed***	***SW-CMM* Organization Process Focus (OPF) *Activities Performed***	***SW-CMM* Organization Process Definition (OPD) *Activities Performed***
		accordance with its documented process definition and maintenance plans. 2. The acquisition organization's standard software acquisition process is defined and maintained in accordance with its documented process definition and maintenance plans.	process development and improvement activities.	process is documented according to established organization standards.

Table PA 21: FAA-iCMM v1.0 Sources of Organization Process Improvement Practices

PA 21 Organization Process Improvement Base Practices	***SE-CMM*** **Improve Org's Systems Engineering Process** ***Base Practices***	***SA-CMM*** **Continuous Process Improvement (CPI)** ***Activities Performed***	***SW-CMM*** **Process Change Management (PCM)** ***Activities Performed***
1.Establish process improvement program	2. Plan improvements to the organization's processes based on analyzing the impact of potential improvements on achieving the goals of the processes.	3. Process improvement proposals are handled according to a written procedure.	1. A software process improvement program is established which empowers the members of the organization to improve the processes of the organization. 5. Software process improvement proposals are handled according to a documented procedure. 6. Members of the organization actively participate in teams to develop software process improvements for assigned process areas.
2. Change the standard process	3. Change the organization's standard systems engineering process to reflect targeted improvements.	4. Process improvements are transferred into practice according to a written procedure. 5. Records of process improvement activities are maintained in the acquisition organization's repository for software acquisition process information.	7. Where appropriate, the software process improvements are installed on a pilot basis to determine their benefits and effectiveness before they are introduced into normal practice.
Covered by generic practices		1. The acquisition organization performs its activities in accordance with its documented continuous process improvement plans.	3. The organization develops and maintains a plan for software process improvement according to a documented procedure. 4. The software process improvement activities are performed in accordance with the software process improvement plan. 8. When the decision is made to transfer a software process improvement into

PA 21 Organization Process Improvement Base Practices	***SE-CMM*** **Improve Org's Systems Engineering Process** ***Base Practices***	***SA-CMM*** **Continuous Process Improvement (CPI)** ***Activities Performed***	***SW-CMM*** **Process Change Management (PCM)** ***Activities Performed***
			normal practice, the improvement is implemented according to a documented procedure. 9. Records of software process improvement are maintained. 10. Software managers and technical staff receive feedback on the status and results of the software process improvement activities on an event-driven basis.
To other PAs	1. Appraise the existing processes being performed in the organization to understand their strengths and weaknesses. (PA20) 4. Communicate process improvements to existing projects and to other affected groups, as appropriate. (PA20)	2. The software acquisition process group coordinates process improvement activities. (PA20)	2. The group responsible for the organization's software process activities (e.g. software engineering process group) coordinates the software process improvement activities. (PA20)

Table PA 22: FAA-iCMM v1.0 Sources of Training Practices

PA 22 Training Base practices	***SE-CMM*** **Provide Ongoing Skills and Knowledge:** ***Base Practices***	***SA-CMM*** **Training Program:** ***Activities Performed***	***SW-CMM*** **Training Program:** ***Activities Performed***
1. Identify strategic training needs	17.1 Identify training needs.	1. The org's training program is developed and maintained.	2. The organization's training plan is developed and revised according to a documented procedure.
2. Identify unique training needs	17.1 Identify training needs. 17.3 Assure availability of skill and knowledge.	1. The org's training program is developed and maintained. 2. Each software acquisition project identifies specific training needs and develops a training plan in accordance with training program procedures.	1. Each software project develops and maintains a training plan that specifies its training needs. 2. The organization's training plan is developed and revised according to a documented procedure.
3. Train individuals	17.5 Train personnel.	3. Software training for the project team is performed in accordance with the org's training program. 4. A waiver procedure for required training is established and used to determine whether individuals already possess the knowledge and skills required to perform their designated roles.	3. The training for the organization is performed in accordance with the organization's training plan. 5. A waiver procedure for required training is established and used to determine whether individuals already possess the knowledge and skills required to perform their designated roles.
4. Obtain training	17.2 Select mode of knowledge or skill acquisition. 17.4 Prepare training materials.		4. Training courses prepared at the organizational level are developed and maintained according to the organization standards.
5. Establish and maintain records	17.7 Maintain training records. 17.8 Maintain training materials.	5. Training records are maintained.	4. Training courses prepared at the organizational level are developed and maintained according to the organization standards. 6. Records of training are maintained.
6. Assess training effectiveness	17.6 Assess training effectiveness.	6. Measurements are used to determine the quality of the training program.	

Table PA 23: FAA-iCMM v1.0 Sources of Innovation Practices

Innovation base practices	***SE-CMM*** **Manage Systems Engineering Support Environment:** ***Base Practices***	***SA-CMM*** **Acquisition Innovation Management:** ***Activities Performed***	***SW-CMM*** **Technology Change Management:** ***Activities Performed***	***SE-CMM*** **Manage Product Line Evolution:** ***Selected Base Practices***
1. Maintain New Technology Awareness	16.1 Maintain awareness of the technologies that support the organization's goals.	5. Software acquisition management personnel are kept informed of new technologies.	2. The group responsible for the organization's technology change management activities works with the software projects in identifying areas of technology change. 3. Software managers and technical staff are kept informed of new technologies.	15.2 Identify new product technologies or enabling infrastructure that will help the organization acquire, develop, and apply technology for competitive advantage.
2. Select New Technologies	16.2 Determine requirements for the organization's systems engineering support environment based on organizational needs. 16.7 Monitor the systems engineering support environment for improvement opportunities.	2. The group responsible for conducting acquisition innovation management activities conducts routine and periodic appraisals of new techniques and technologies as candidates for inclusion in the acquisition organization's standard software acquisition process.	4. The group responsible for the organization's technology change management systematically analyzes the organization's standard software process to identify areas that need or could benefit from new technology. 5. Technologies are selected and acquired for the organization and software projects according to a documented procedure.	
3. Prepare for Infusion	16.3 Obtain a systems engineering support environment that meets the requirements established in Determine Support Requirements by using the practices in the Analyze Candidate Solutions process area.		6. Pilot efforts for improving technology are conducted, where appropriate, before a new technology is introduced into normal practice.	

Innovation base practices	***SE-CMM*** **Manage Systems Engineering Support Environment:** ***Base Practices***	***SA-CMM*** **Acquisition Innovation Management:** ***Activities Performed***	***SW-CMM*** **Technology Change Management:** ***Activities Performed***	***SE-CMM*** **Manage Product Line Evolution:** ***Selected Base Practices***
4. Infuse New Technologies	16.5 Insert new technologies into the systems engineering support environment based on the organization's business goals and the projects' needs.		7. Appropriate new technologies are incorporated into the organization's standard software process according to a documented procedure. 8. Appropriate new technologies are incorporated into the projects' defined software processes according to a documented procedure.	15.5 Insert new technology into product development, marketing, and manufacturing.
5. Support Innovation	16.4 Tailor the systems engineering support environment to individual project's needs. 16.6. Maintain the systems engineering support environment to continuously support the projects dependent on it. 16.7 Monitor the systems engineering support environment for improvement opportunities.	4. The acquisition organization works with the projects to foster an environment which facilitates adoption of initiatives beneficial to the acquisition organization.		
covered by generic practices		1. The acquisition organization performs its activities in accordance with documented acquisition innovation management plans. 3. The project team performs its activities in accordance with its documented acquisition innovation management plans.	1. The organization develops and maintains a plan for technology change management.	

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