

NAS Enterprise Architecture

Infrastructure Roadmaps v19.0



BASELINE

February 2025



Infrastructure Roadmap Overview

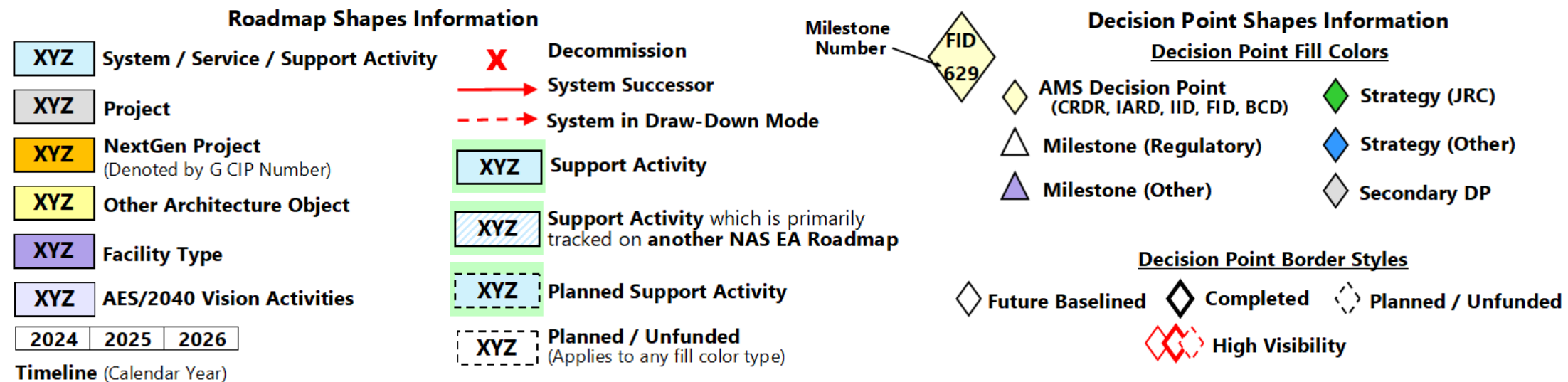
What are the Infrastructure Roadmaps?

- The FAA Infrastructure Roadmaps show the progression of system deployments, investments, and key decision points for major NAS acquisitions. They depict the acquisition strategy to evolve the NAS from the As-Is to the To-Be environment.
- The Infrastructure Roadmaps show all Capital Investment Plan (CIP) investment projects and systems identified in the NSIP that will deliver the necessary functionality to enable OIs and BTIs.

Guidelines for Understanding the Roadmaps

- The Infrastructure Roadmaps are organized by Domain (Automation, Communication, etc.) and depict projects, systems, services, decision points, and support activities.
- The timeline is in calendar years and shows a 17-year outlook.
- The roadmaps have swim lanes for Infrastructure (white), Support Activities (green), and Platform/Compute (purple).
- The DP diamonds represent the quarter in which a decision will occur.
- The Support Activity bars represent the dates that work is being performed on the activity.
- The Project bars represent the dates that CIP funding is allocated to a project.
- The System and Service bars represent the dates that a system or service is operational, with red lines indicating sustainment, drawdown, or convergence

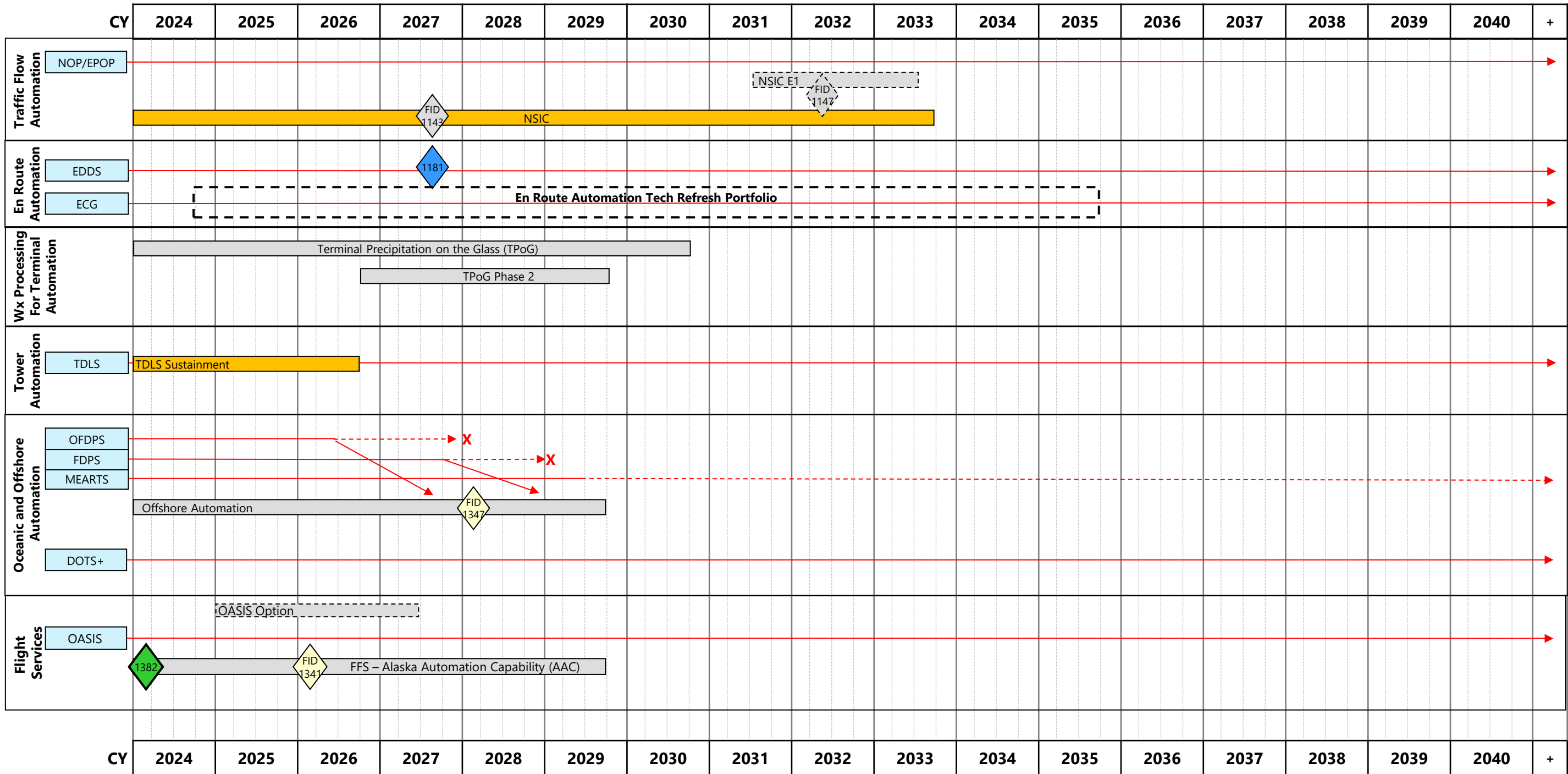
Infrastructure Roadmap Legend



Automation

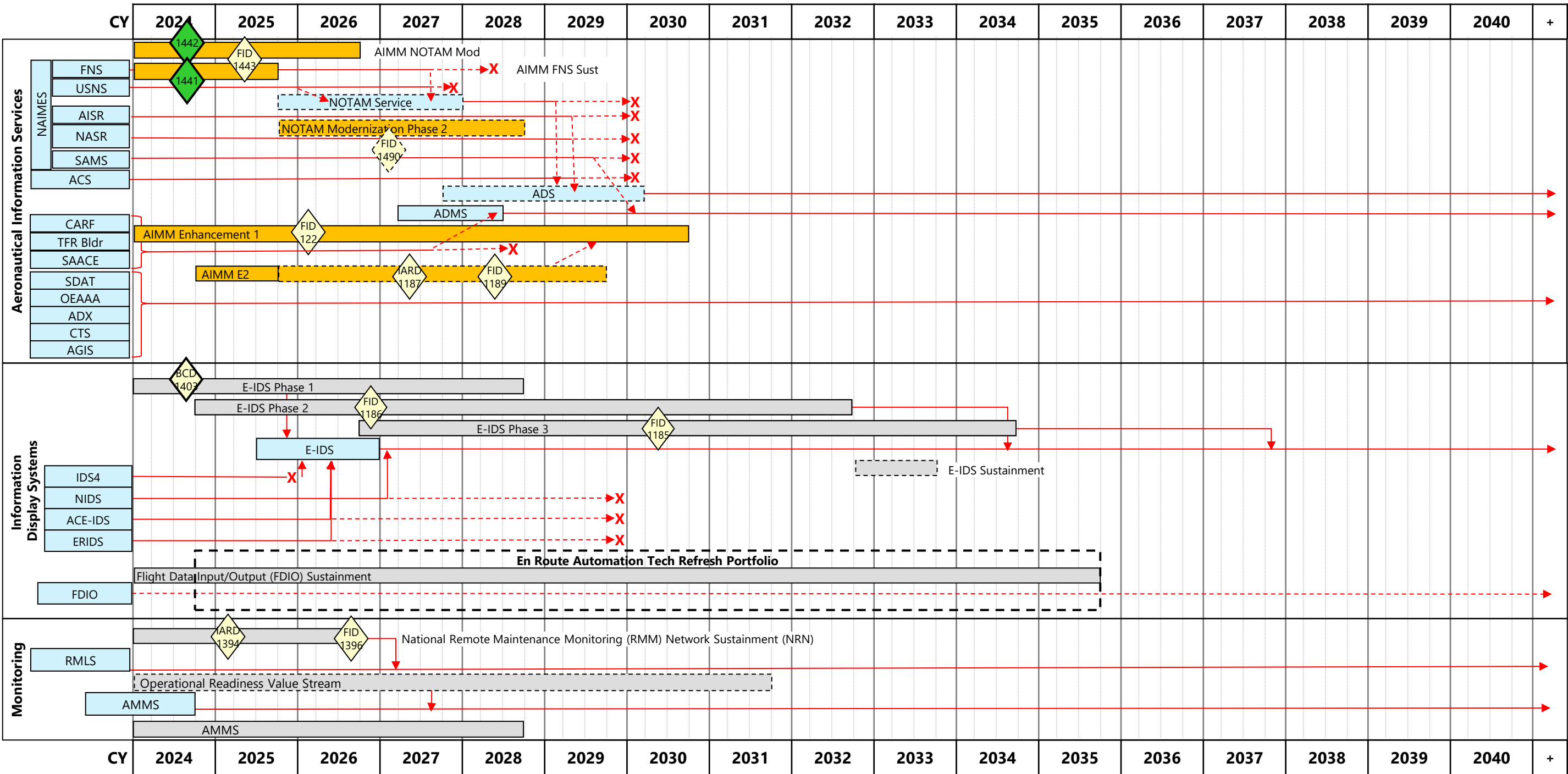
The Automation Roadmap presents an Executive View (EV) of the current automation systems supporting the National Airspace System (NAS) and their enhancement, sustainment or replacement through major development programs and support activities. The Automation Roadmap is intended to convey the major automation program strategy and acquisition decision points as well as program execution through the In-Service Decision. The roadmap serves as a summary view of more detailed plans within each development program.

Automation Roadmap (1 of 5)



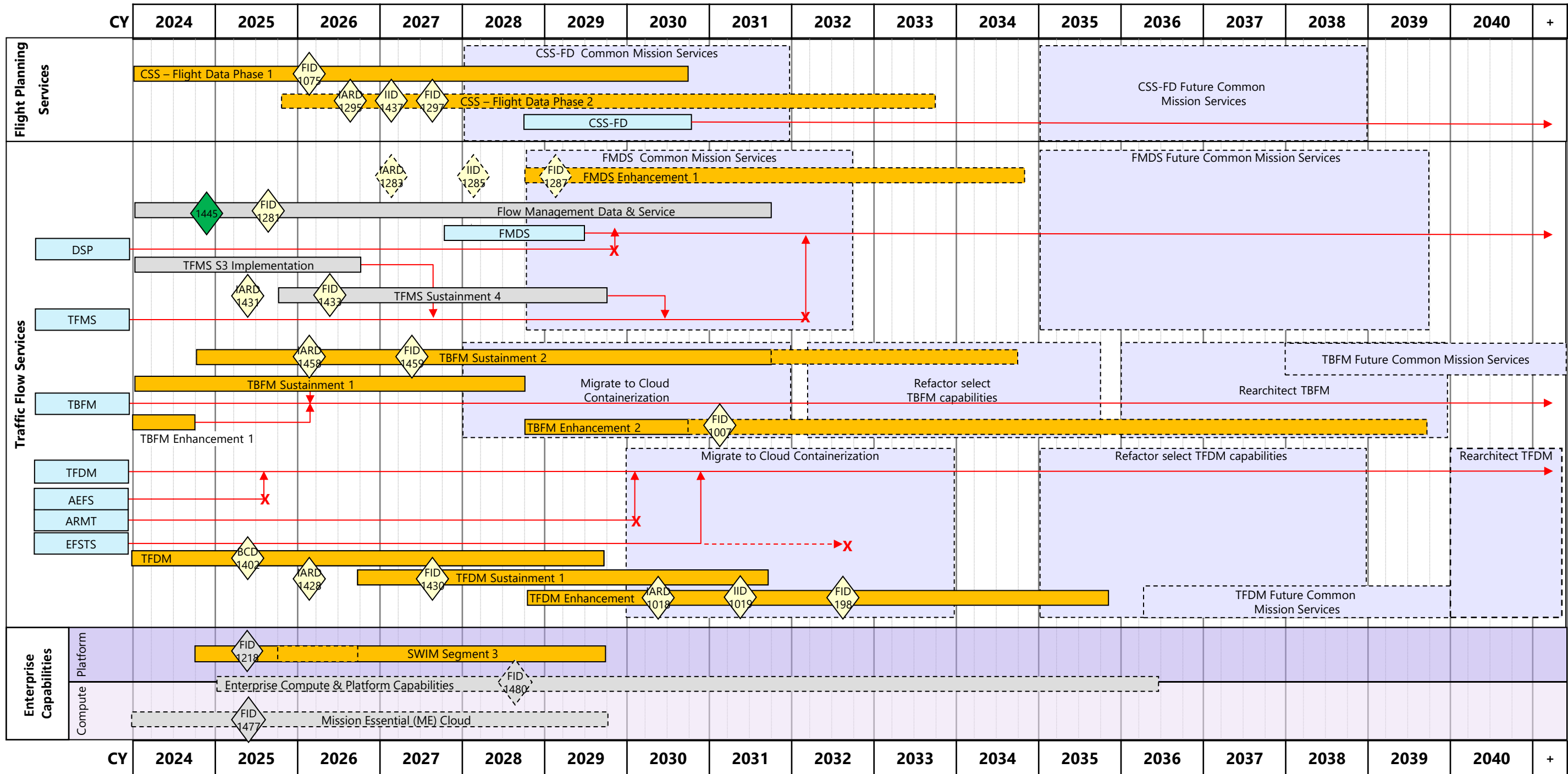
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Automation Roadmap (2 of 5)



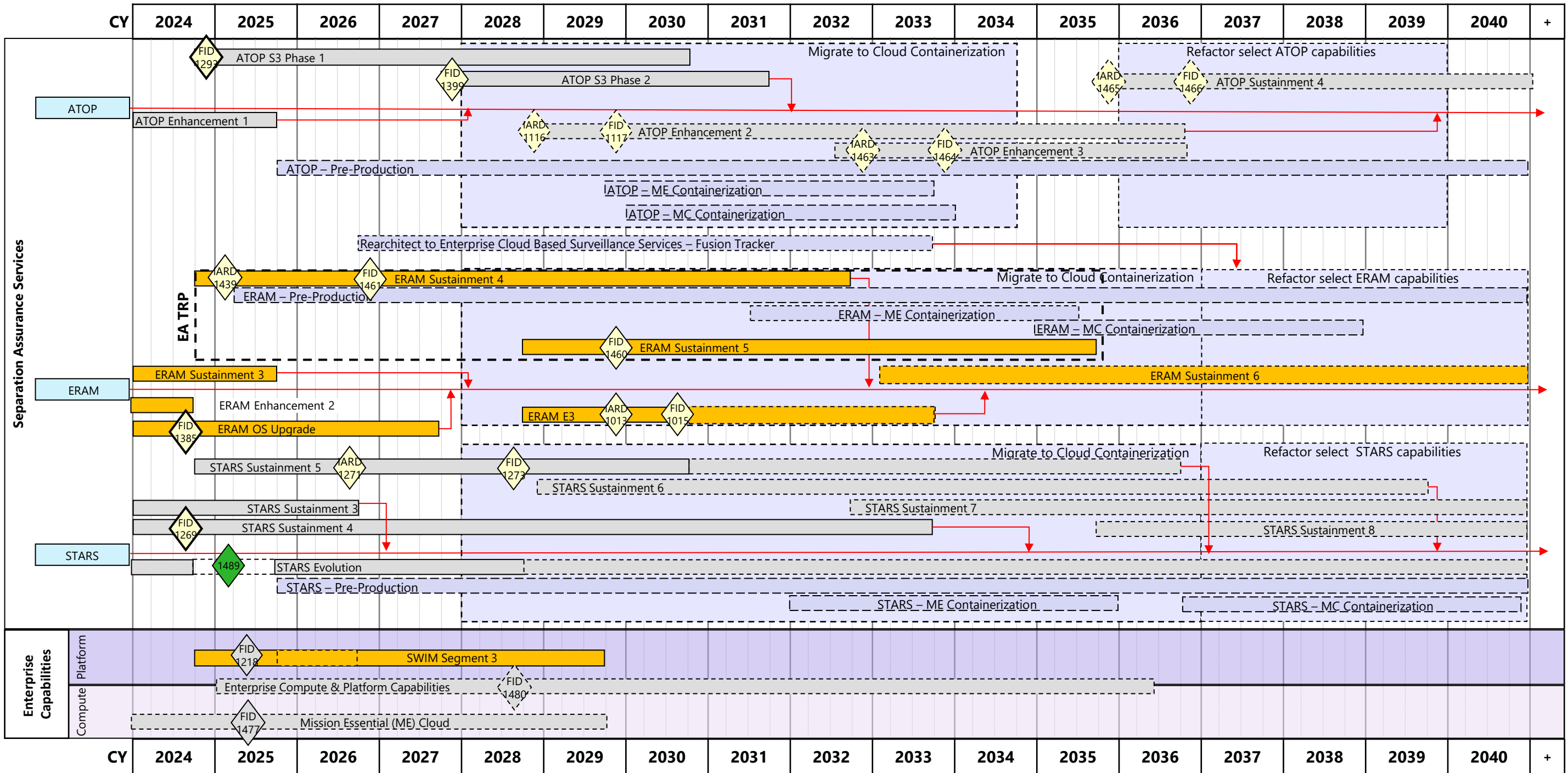
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Automation Roadmap (3 of 5)



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Automation Roadmap (4 of 5)



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Automation Roadmap (5 of 5)

CY	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	+	
	<div><div>Advanced Methods</div><div>Flight Object</div><div>Information Management</div><div>Common Status and Structure Data</div><div>Separation Automation System Engineering</div><div>Strategic Flow Management Application</div><div>Strategic Flow Management Engineering Enhancement</div><div>Surface Tactical Flow</div><div>Common Trajectory Models</div></div>																		
	CY	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	+

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Automation Roadmap: Assumptions

Identifier	Description
AUTO-01	Net-centric Enterprise Services will replace designated existing point to point interfaces with a system based on a Service Oriented Architecture providing enhanced data exchange, enhanced flexibility, and enhanced security for FAA Operations Personnel, and airspace users within a common information environment to support NextGen Operational Improvements.
AUTO-02	ADS-B is a necessary infrastructure element to support Trajectory Based Operations, Flexible Terminal, and High Density Terminal solution sets.
AUTO-03	Data Communication is a necessary infrastructure element to support Trajectory Based Operations, Flexible Terminal, and High Density Terminal solution sets.
AUTO-04	Operational Service Units will be responsible for JRC Final Investment Decisions.
AUTO-05	Policy and standards decisions prescribing the use of hand-held devices for data messaging by General Aviation pilots and aircraft are established.
AUTO-06	Consistent security management across Data Communication, Automation and SWIM support the evolution.
AUTO-07	Human-system integration will be conducted during analysis, design, development, and testing of Automation programs.
AUTO-08	Safety analysis and considerations will be included in all applicable phases of Automation analysis, design, development, and testing and platforms will provide data as required for safety monitoring and analysis.
AUTO-09	Automation platform designs will support environmental and energy saving initiatives.

Automation Roadmap: Decision Points (1 of 2)

DP #	Target Date CY	Primary Domain	Type	Name
122	2026 Q1	Automation	FID	Final Investment Decision (FID) for AIMM Enhancement 1
198	2032 Q3	Automation	FID	Final Investment Decision (FID) for TFDM Enhancement
1007	2031 Q1	Automation	FID	Final Investment Decision (FID) for TBFM Enhancement 2
1013	2029 Q4	Automation	IARD	Investment Analysis Readiness Decision (IARD) for ERAM Enhancement 3
1015	2030 Q3	Automation	FID	Final Investment Decision (FID) for ERAM Enhancement 3
1018	2030 Q2	Automation	IARD	Investment Analysis Readiness Decision (IARD) for TFDM Enhancement
1019	2031 Q2	Automation	IID	Initial Investment Decision (IID) for TFDM Enhancement
1075	2026 Q1	Automation	FID	Final Investment Decision (FID) for Common Support Services - Flight Data Phase 1
1116	2028 Q4	Automation	IARD	Investment Analysis Readiness Decision (IARD) for ATOP Enhancement 2
1117	2029 Q4	Automation	FID	Final Investment Decision (FID) for ATOP Enhancement 2
1143	2027 Q3	Commercial Space	FID	Final Investment Decision (FID) for National Airspace System (NAS) Space Integration Capabilities (NSIC)
1147	2032 Q2	Commercial Space	FID	Final Investment Decision (FID) for National Airspace System (NAS) Space Integration Capabilities (NSIC) Enhancement 1
1181	2027 Q3	Automation	Strategy (Other)	Strategy Decision for EDDS
1185	2030 Q2	Automation	FID	Final Investment Decision (FID) for E-IDS Phase 3
1186	2026 Q4	Automation	FID	Final Investment Decision (FID) for E-IDS Phase 2
1187	2027 Q2	Automation	IARD	Investment Analysis Readiness Decision (IARD) for AIMM Enhancement 2
1189	2028 Q2	Automation	FID	Final Investment Decision (FID) for AIMM Enhancement 2
1218	2025 Q2	Communication	FID	Final Investment Decision (FID) for SWIM Segment 3
1269	2024 Q3	Automation	FID	Final Investment Decision (FID) for STARS Sustainment 4
1271	2026 Q3	Automation	IARD	Investment Analysis Readiness Decision (IARD) for STARS Sustainment 5
1273	2028 Q3	Automation	FID	Final Investment Decision (FID) for STARS Sustainment 5
1281	2025 Q3	Automation	FID	Final Investment Decision (FID) for Flow Management Data and Services
1283	2027 Q1	Automation	IARD	Investment Analysis Readiness Decision (IARD) for Flow Management Data and Service (FMDS) Enhancement 1
1285	2028 Q1	Automation	IID	Initial Investment Decision (IID) for Flow Management Data and Service (FMDS) Enhancement 1
1287	2029 Q1	Automation	FID	Final Investment Decision (FID) for Flow Management Data and Service (FMDS) Enhancement 1
1293	2024 Q4	Automation	FID	Final Investment Decision (FID) for ATOP Sustainment 3 #1
1295	2026 Q3	Automation	IARD	Investment Analysis Readiness Decision (IARD) for Common Support Services - Flight Data Phase 2
1297	2027 Q3	Automation	FID	Final Investment Decision (FID) for Common Support Services - Flight Data (CSS-FD) Phase 2
1341	2026 Q1	Automation	FID	Final Investment Decision (FID) for Future Flight Service - Alaska Automation Capability (AAC)
1347	2028 Q1	Automation	FID	Final Investment Decision (FID) for Offshore Automation #2

Automation Roadmap: Decision Points (2 of 2)

DP #	Target Date CY	Primary Domain	Type	Name
1382	2024 Q1	Automation	Strategy	JRC Strategy Decision for Future Flight Service - Alaska Automation Capability (AAC)
1385	2024 Q3	Automation	FID	Final Investment Decision (FID) for ERAM Operating System Upgrade
1394	2025 Q1	Automation	IARD	Investment Analysis Readiness Decision (IARD) for National RMLS Network Sustainment
1396	2026 Q3	Automation	FID	Final Investment Decision (FID) for National RMLS Network Sustainment
1399	2027 Q4	Automation	FID	Final Investment Decision (FID) for ATOP Sustainment 3 #2
1402	2025 Q2	Automation	BCD	Baseline Change Decision (BCD) for Terminal Flight Data Management (TFDM)
1403	2024 Q3	Automation	BCD	Baseline Change Decision (BCD) for E-IDS Ph1
1406	2024 Q2	Communication	FID	Final Investment Decision (FID) for SWIM Segment 2D
1428	2026 Q1	Automation	IARD	Investment Analysis Readiness Decision (IARD) for Terminal Flight Data Management (TFDM) Sustainment 1
1430	2027 Q3	Automation	FID	Final Investment Decision (FID) for Terminal Flight Data Management (TFDM) Sustainment 1
1431	2025 Q2	Automation	IARD	Investment Analysis Readiness Decision (IARD) for Traffic Flow Management System (TFMS) Sustainment 4
1433	2026 Q2	Automation	FID	Final Investment Decision (FID) for Traffic Flow Management System (TFMS) Sustainment 4
1437	2027 Q1	Automation	IID	Initial Investment Decision (IID) for Common Support Services - Flight Data (CSS-FD) Phase 2
1439	2025 Q1	Automation	IARD	Investment Analysis Readiness Decision (IARD) for En Route Automation Tech Refresh Portfolio
1441	2024 Q3	Automation	Strategy	JRC Strategy Decision for FNS Sustainment
1442	2024 Q3	Automation	Strategy	JRC Strategy Decision for AIMM NOTAM Modernization
1443	2025 Q3	Automation	FID	Final Investment Decision (FID) for AIMM NOTAM Modernization
1445	2024 Q4	Automation	Strategy	JRC Strategy Decision for Flow Management Data and Services
1458	2026 Q1	Automation	IARD	Investment Analysis Readiness Decision (IARD) for Time Based Flow Management S2
1459	2027 Q2	Automation	FID	Final Investment Decision (FID) for TBFM S2
1460	2029 Q4	Automation	FID	Final Investment Decision (FID) for ERAM S5
1461	2026 Q4	Automation	FID	Final Investment Decision (FID) for En Route Automation Tech Refresh Portfolio, ERAM S4
1463	2032 Q4	Automation	IARD	Investment Analysis Readiness Decision (IARD) for ATOP E3
1464	2033 Q4	Automation	FID	Final Investment Decision (FID) for ATOP E3
1465	2035 Q4	Automation	IARD	Investment Analysis Readiness Decision (IARD) for ATOP S4
1466	2036 Q4	Automation	FID	Final Investment Decision (FID) for ATOP S4
1477	2025 Q2	Enterprise Services & Capabilities	FID	Final Investment Decision (FID) for Mission Essential (ME) Cloud
1480	2028 Q3	Enterprise Services & Capabilities	FID	Final Investment Decision (FID) for Enterprise Compute & Platform Capabilities
1489	2025 Q1	Automation	Strategy	JRC Strategy Decision for STARS Evolution
1490	2027 Q1	Automation	FID	Final Investment Decision (FID) for NOTAM Modernization Phase 2