SMS IN PRACTICAL TERMS
LESSONS LEARNED

Applying a quality management system to safety.

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LANDRY

RELEVANT INCIDENT

5/4/2011 4:10:52 AM

SMS PROGRAM OVERSIGHT

- Surface Management Systems (SMS)
- Information Management - ACC
- Hazard Identification and Mitigation
- Accident/Incident Investigation
- Ramp Management
- Safety Risk Assessments (SRAs)
- Safety Action Committee
- Safety Training
- Ramp Use Planning
- Ramp Insurance Auditing
- Extended FOD Management
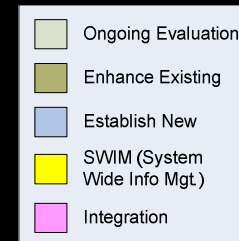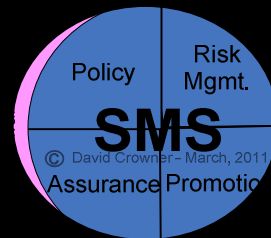- Baggage Makeup Inspections

OUR SUCCESSES

- 787-SAFE phone number established
- Rules & Regs changed – S.AF.E program
- ISAGO certification required for all applicable GSPs
- FOD assignments/walks conducted
- Ramp cleaning contracted
- Special SMS duties assigned
- Safety Newsletters published
- NPRM comments delivered
- GAO briefing completed
- 4 SRAs completed and documented
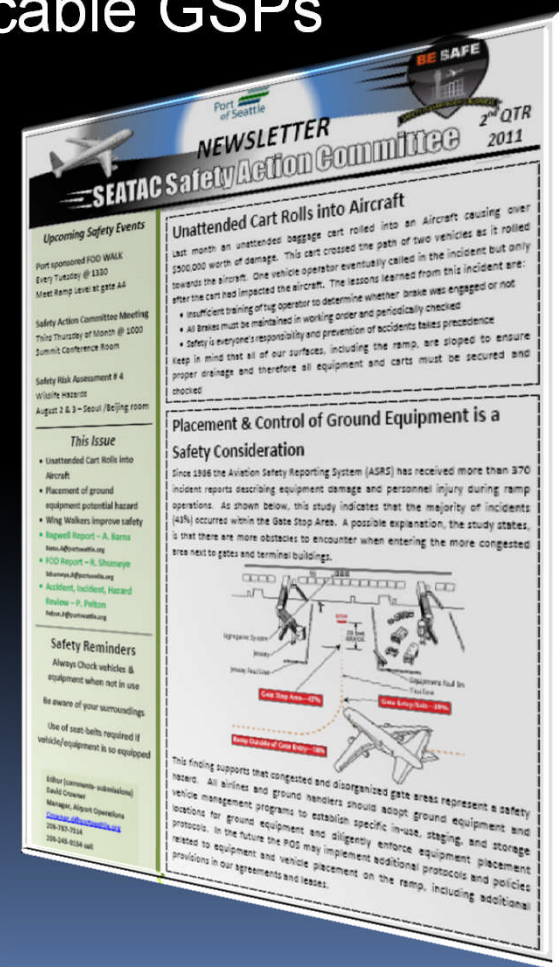
NOT REINVENTING THE WHEEL

Start with the core principles

We are already safety focused

Ongoing Evaluation

Enhance Existing

Establish New

SWIM (System Wide Info Mgt.)

Integration

SMS

Policy

Risk Mgmt.

Assurance

Promotion

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- Assess existing practices

- Establish new practices

- Improve hazard communications

- Integrate people, processes, practices, and technology

NOT REINVENTING THE WHEEL

Integration is key

We are already safety focused

Ongoing Evaluation

Enhance Existing

Establish New

SWIM (System Wide Info Mgt.)

Integration

Technology

Policy

Risk Mgmt.

Software

SMS

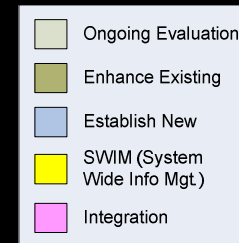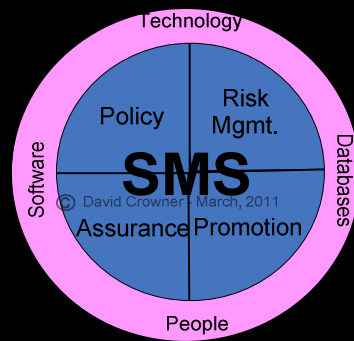© David Crowner - March, 2011

Databases

Assurance Promotion

People

- Assess existing practices

- Establish new practices

- Improve hazard communications

- Integrate people, processes, practices, and technology

Expand your awareness

We are already safety focused

Legend:
- Ongoing Evaluation
- Enhance Existing
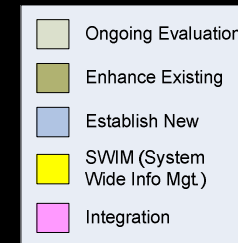- Establish New
- SWIM (System Wide Info Mgt.)
- Integration

- Assess existing practices

- Establish new practices

- Improve hazard communications

- Integrate people, processes, practices, and technology

We are already safety focused

Ongoing Evaluation

Enhance Existing

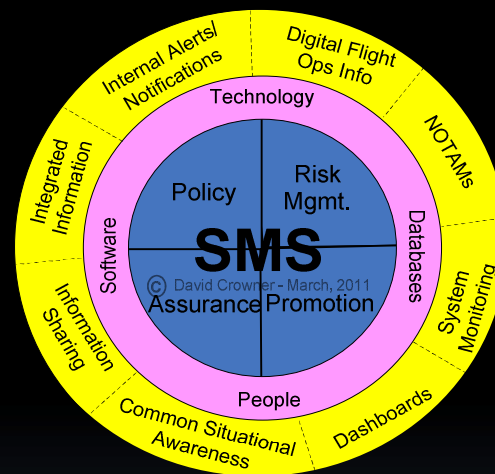Establish New

SWIM (System Wide Info Mgt.)

Integration

- Assess existing practices

- Establish new practices

- Improve hazard communications

- Integrate people, processes, practices, and technology

We are already safely focused

Legend:
- Ongoing Evaluation
- Enhance Existing
- Establish New
- SWIM (System Wide Info Mgt.)
- Integration

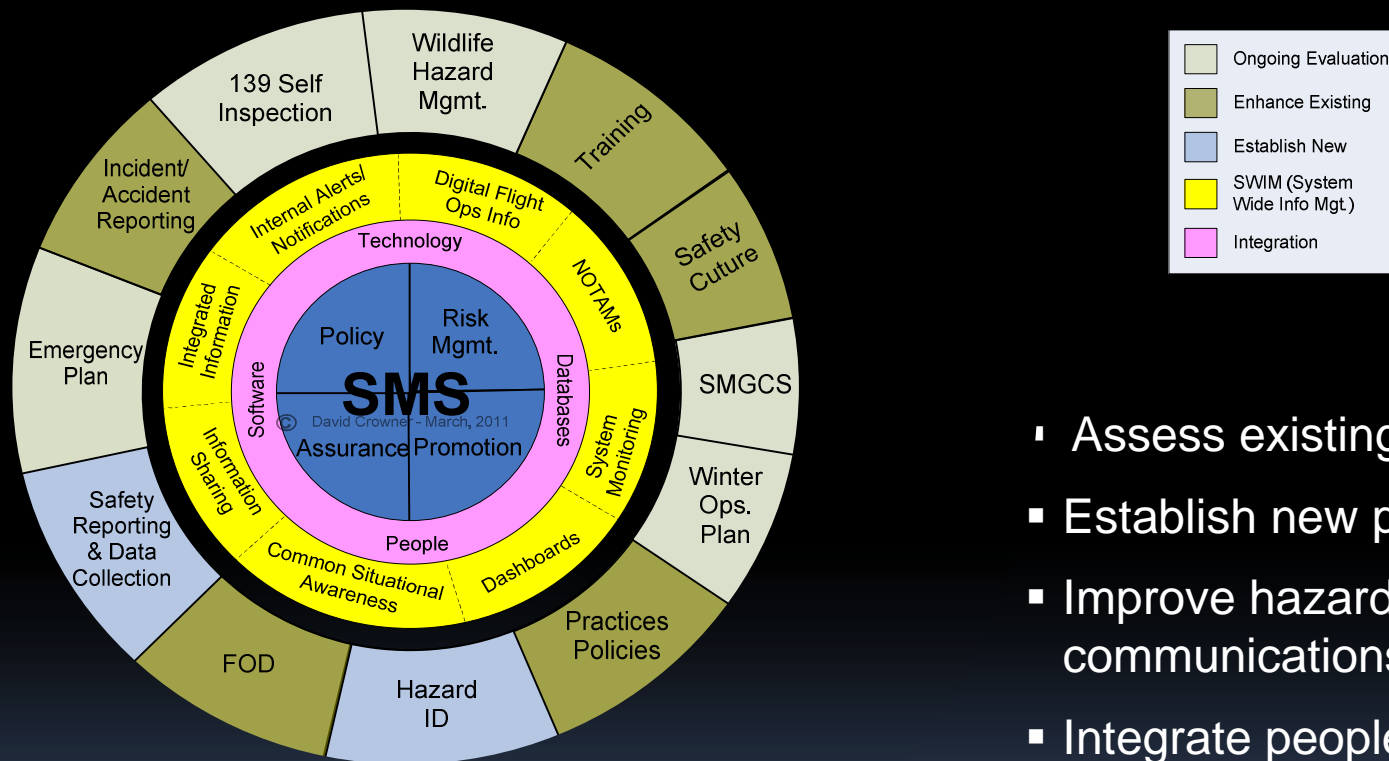- Assess existing practices
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- Improve hazard communications
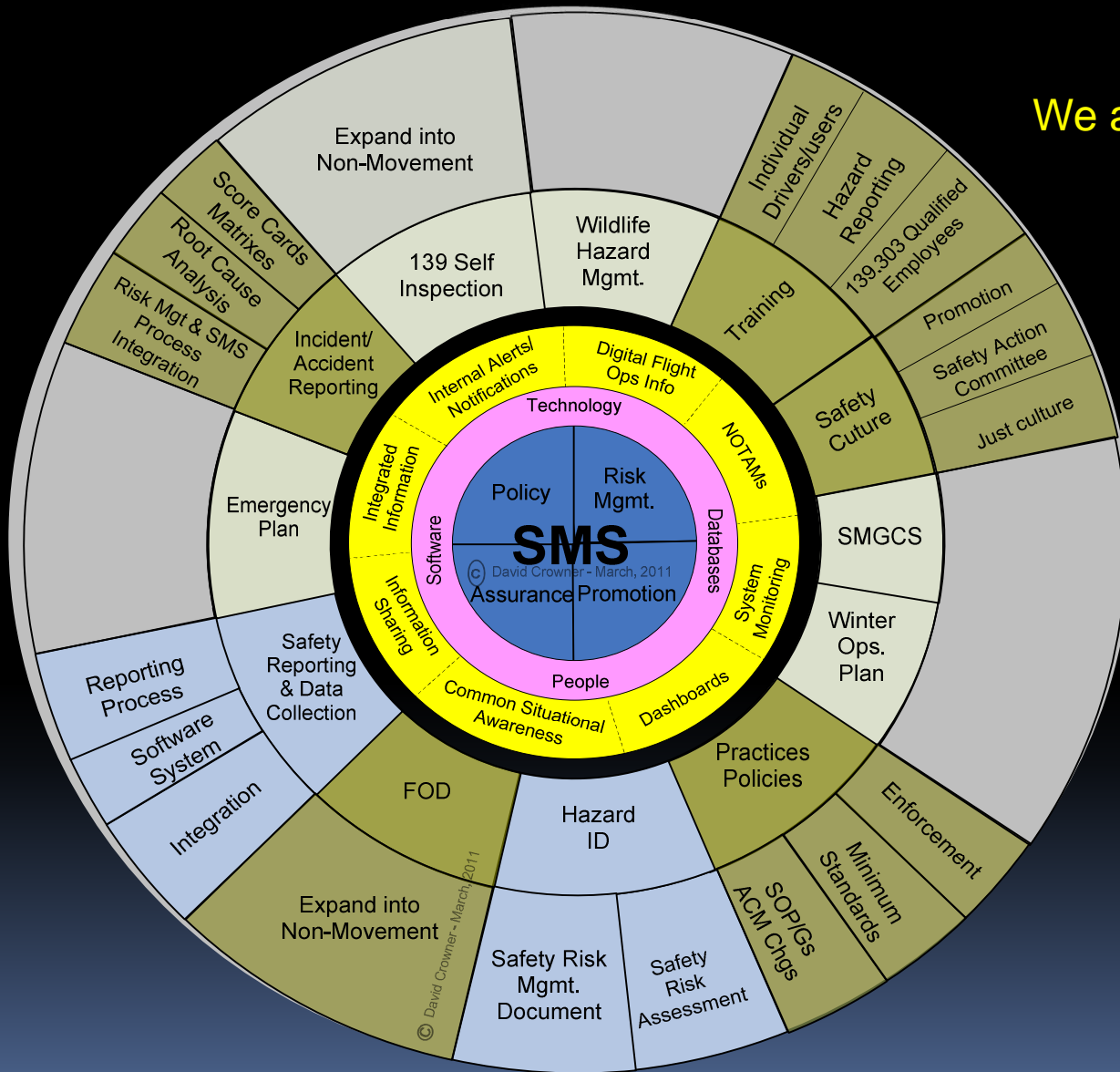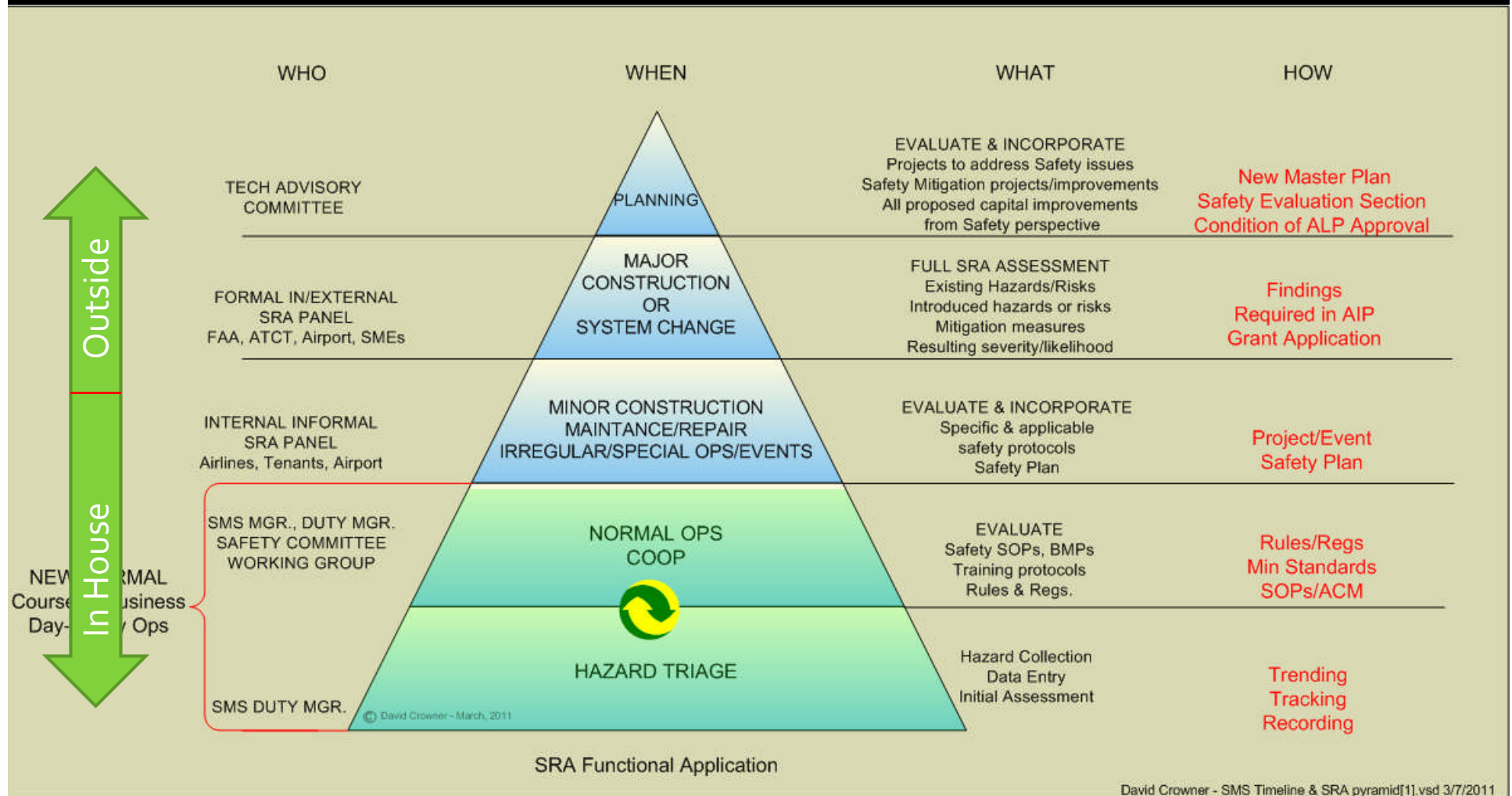- Integrate people, processes, practices, and technology

WHO	WHEN	WHAT	HOW
TECH ADVISORY COMMITTEE	PLANNING	EVALUATE & INCORPORATE — Projects to address Safety issues, Safety Mitigation projects/improvements, All proposed capital improvements from Safety perspective	New Master Plan, Safety Evaluation Section, Condition of ALP Approval
FORMAL IN/EXTERNAL SRA PANEL — FAA, ATCT, Airport, SMEs	MAJOR CONSTRUCTION OR SYSTEM CHANGE	FULL SRA ASSESSMENT — Existing Hazards/Risks, Introduced hazards or risks, Mitigation measures, Resulting severity/likelihood	Findings Required in AIP Grant Application
INTERNAL INFORMAL SRA PANEL — Airlines, Tenants, Airport	MINOR CONSTRUCTION MAINTANCE/REPAIR IRREGULAR/SPECIAL OPS/EVENTS	EVALUATE & INCORPORATE — Specific & applicable safety protocols, Safety Plan	Project/Event Safety Plan
SMS MGR., DUTY MGR. SAFETY COMMITTEE WORKING GROUP	NORMAL OPS COOP	EVALUATE — Safety SOPs, BMPs, Training protocols, Rules & Regs.	Rules/Regs Min Standards SOPs/ACM
SMS DUTY MGR.	HAZARD TRIAGE	Hazard Collection, Data Entry, Initial Assessment	Trending Tracking Recording

Outside / In House

NEW … RMAL Course … usiness Day- … y Ops

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SRA Functional Application

David Crowner - SMS Timeline & SRA pyramid[1].vsd 3/7/2011

Despite my best efforts to convince staff that we simply need to document, in accordance with this AC, what we are already doing – the sky is still falling

SEA SMS ORGANIZATION

SEA Safety Management System Organization Chart
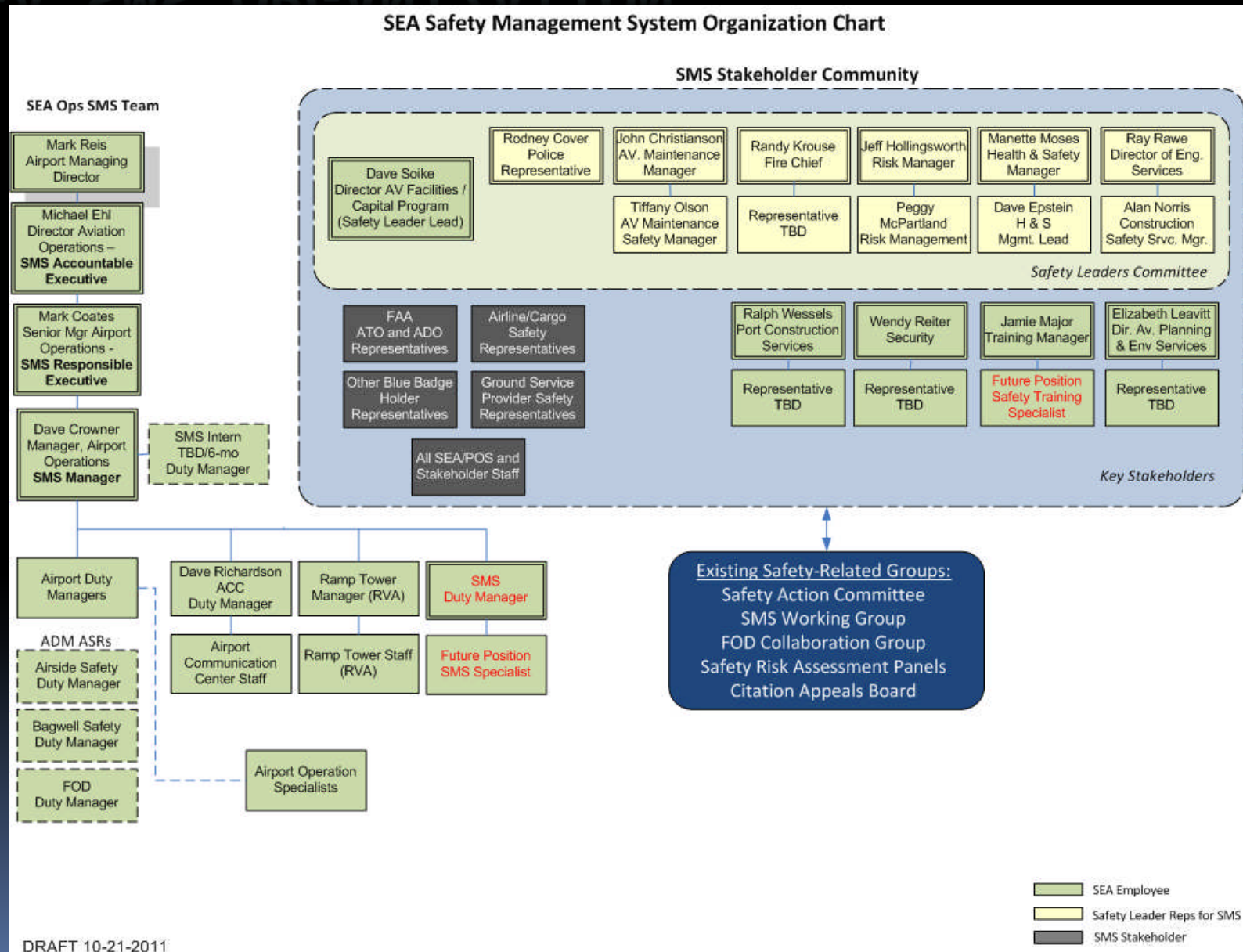
SMS TRAINING –(WHO & WHY)

	All airport badge holders	Airport Staff: Ops, Security, MX, Risk Duty/line managers, supervisors, controllers, agents	Executives & leadership Airport, Ground handler & Airline Executives, Department heads, Senior Management, Station Managers
Safety Orientation Badge issuance and renewal	• Hazard reporting requirements & practices • Your Role – Safety is everyone's business • Basic Safety awareness • Airport Safety Rules/Requirements • Compliance/enforcement/citations • Recommended BMPs • This training augments your own Company training and Safety requirements • FOD prevention • PPEs		
SMS Intro & Hazard Mgt. Annually as part of 139 training		▪ Human Factors ▪ FOD Prevention ▪ SRA Requirements & process ▪ Hazard Investigation & mitigation techniques ▪ KPI development & tracking ▪ After accident/incident forensics ▪ Root Cause Analysis ▪ Role in safety culture ▪ Non-Punitive policies ▪ Safety BMPs ▪ Compliance & Enforcement	
Risk & Quality Management SMS implementation & periodically thereafter			• Safety culture development & support • SMS Goals and integration with existing practices/policies • Non-Punitive Policy development • SRA Requirements & challenges • SMS benefits • SMS Roles and Responsibilities • SMS & Risk Management • Safety KPI alignment • SMS's role in decision making

How Executive Training is received is a good indicator of your executive support.

SEA SMS ROADMAP:

SAFETY MANAGEMENT SYSTEM

MANAGEMENT COM...

...DICATORS

VALUES
We Are:

- Safety focused and aligned
- Proponents of a Just Safety Culture
- Advocates of SMS as a Quality Mgt. system and process
- Collaborative safety partners with our stakeholders
- Safety Management System leaders

...ds established
...am and 787-SAFE
...propriately categorized

COMMITTMENT
We Pledge To:

- Be committed to safety at all levels of management
- Be accountable for a safe operation of the Airport
- Be engaged in and practice proactive safety measures & management
- Provide the resources necessary for a sustainable SMS program
- Develop, support and enforce policies and procedures to ensure SMS success
- Act in good faith in the management of our SMS program

...cable GSPs

OBJECTIVES
We Will:

- Have open-transparant safety communications
- Establish a proactive safety program through identification, tracking, trending, prioritization and treating of risks and hazards
- Understand and mitigate root causes and trends
- Collaborate and integrate with our Stakeholders, POS staff , Airlines and FAA
- Develop, maintain and promote a hazard reporting system
- Assess, Respond, Triage, and Mitigate all known hazards in a timely manner
- Establish and maintain clear lines of safety accountabilities and authority

...all applicable projects

...revious year

...hin 72 hours

PROACTIVE HAZ...
IDENTIFICATION & MITIGATION

...COLLABORATIVE INITIATIVES
PROCESSES & COMMUNICATIONS

SEA BENEFITS-THE INTERNAL "SELL"

- Formalizes safety program
- Ensures regulatory compliance
- Reduces risks

  "A safer workplace is a result of identifying hazards and eliminating or reducing the risk to an acceptable level"

- Holds staff and tenants accountable for safety performance
- Establishes safety performance goals
- Facilitates safety ownership through participation

A safer environment =
    Improved opportunities =
        Increased revenue

SRA RECOMMENDATIONS:

- Choose diverse but complementary panel members
- Facilitator should be independent of issue but understand subject (Can FAA be independent of issue?)
- Allow for conflicting positions but guide discussion back to consensus.
- Keep consequences credible
- Be faithful to the process

Describe System → Identify Hazards → Analyze Risk → Assess Risk → Treat Risk → Monitor Solutions → Describe System

Safety Risk Assessment #2

Winter Operations Communications and Information Dissemination

March 31, 2011

Presented by:

The Seattle-Tacoma International Airport

Port of Seattle

David Croxner
Operations Senior Manager

In collaboration with:
LANDRY
Landry Consultants LLC
4431 16th PL W
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NEXT STEPS

- Develop budget and seek approval
- Post and acquire positions
- Establish transition from project to operations
- Develop and deploy training curriculum for employees, tenants, and executives
- Deploy hazard reporting software (SMS-Pro)
- Develop alternatives to software
  - MAXIMO
- Complete Tech Integration Study

Safety Begins Here.

SYSTEM ISSUES:

STRENGTHS	WEAKNESSES
- Most of SMS is already being done - SMS is a quality management tool for making better, more effective safety decisions - SMS is the new "Standard of Care". - SMS is a proactive/predictive tool	- Lack of program and benefits promotion - Lack of resources within the FAA - Lack of training and SMS understanding for many FAA staff - Dissimilar language in ATO, AVO, ARP etc. - Authority and responsibilities not clear. - No common database or information sharing

RECOMMENDATIONS

- Take an assistance, rather then regulatory posture
- Promote the benefits – better decisions, proactive vs. reactive , predictive
- Train and familiarize staff
- Develop a common hazard data reporting platform that incorporates and correlates Airport, ATC and Pilot information (de-identified of course)
- Clearly identify roles and responsibilities within and between FAA and Airports for who and when Safety Risk Assessments should be performed
- Develop cross industry work teams to ensure alignment of programs, processes, and procedures
- Allow for AIP/PFC funds to support mitigation , data collection, technical integration and SRAs

FAA RISK MATRIX

Severity / Likelihood	Minimal 5	Minor 4	Major 3	Hazardous 2	Catastrophic 1
Frequent A	Green	Yellow	Red	Red	Red
Probable B	Green	Yellow	Red	Red	Red
Remote C	Green	Green	Yellow	Red	Red
Extremely Remote D	Green	Green	Green	Yellow	Red
Extremely Improbable E	Green	Green	Green	Green	Yellow/Red

High Risk
Medium Risk
Low Risk

AC 150/5200-37

SEA ADOPTED RISK MATRIX

Severity / Likelihood	Minimal 5	Minor 4	Major 3	Hazardous 2	Catastrophic 1
Frequent A	🟩	🟨	🟥	🟥	🟥
Probable B	🟩	🟨	🟨	🟥	🟥
Remote C	🟩	🟩	🟨	🟨	🟥
Extremely Remote D	🟩	🟩	🟩	🟨	🟨 **
Extremely Improbable E	🟩	🟩	🟩	🟩	🟨 **

** Must have multiple controls (mitigations)

THE BIGGER PICTURE:

SMS GAPS

- Lack of alignment within FAA
- FAA's role in SRAs unclear
  - ATO vs. Airports
  - What if FAA disagrees
  - Will local outcomes be respected
- Non-Airport participation reqs.
  - Airlines, GSPs, etc.
- Certification inspector training
- Funding and costs remain issue

P139 Safety Enhancements

- Indicated costs underestimated
- Ramp access vs. driver training not clear
- Blurs aircraft operator and airport roles
- Lack of training curriculum standards
- Increased training ≠ greater safety
- No English language requirement
- Lacks integration with SMS NPRM

SUMMARY & QUESTIONS

"Safe Does not Equal Risk Free"

"Ships are safe in the harbor, but that's not what ships are for"
William Shedd