

# Federal Aviation Administration (FAA) Safety Management Systems (SMS)

International



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## Concurrent Session 2a – Safety Management System (SMS)

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# EXPERIENCE / BACKGROUND

## Paul Esposito

- ◆ Certified Safety Professional
- ◆ Participated and participating in each FAA SMS pilot
- ◆ Involved in performing and teaching Risk Assessments for the past 10 years, worldwide for a variety of industries, to include airports.
- ◆ Member of the Technical Advisory Group, ISO (*International Standards Organization*) 31000 Risk Management
- ◆ Current member, Risk Assessment Task Force: American Society of Safety Engineers
- ◆ Currently part of the team for ACRP Project 09-08 *“Balancing Airport Stormwater and Wildlife Hazard Management: Analysis Tools and Guidance.”*



# Objectives for Today

**Today's presentation will focus on:**

- Where did SMS come from?
- Where do we see SMS in other industries?
- International implications?



# Basis for Management Systems

**Dr. W Edwards Deming's quality principles  
(Plan-Do-Check-Act) beginning in the '50s**

**Measuring and testing to predict typical results.**

- Inputs + Process + Outputs
  - By inspecting the inputs and the process more, the outputs can be better predicted, and inspected less.
- Rather than use mass inspection,
  - look for cause-effect relationship.
- 14 Points for Management



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[www.deming.org](http://www.deming.org)

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# Deming Principles

Three of his principles are particularly relevant to this discussion:

**Principle #3. Cease dependence on inspection to achieve quality.**

*By inspecting the inputs and the process more, the outputs can be better predicted, and inspected less. Rather than use mass inspection, look for cause-effect relationship.*



# Deming Principles

Three of his principles are particularly relevant to this discussion:

**Principle #5. Improve constantly and forever the system of production and service.**

*It is a call for continuous improvement. If you can measure the process, results will take care of themselves.*



# Deming Principles

Three of his principles are particularly relevant to this discussion:

**Principle # 10: Slogans like "Produce zero defects" and "Do it right the first time" are quite common.**

*But Deming stressed, they are also quite meaningless. At best, they are ignored. At worst, they infuriate people who understand the system causes errors not workers.*





# History of Common Safety Management Systems

Started with W. Edwards Deming (Plan-Do-Check-Act)

- 1959 US DOD Mil - Q - 9858
- 1979 BSI 5750 Quality Management
- 1986 OSHA's VPP criteria established (TED 8.1)
- 1987 ISO9000: Quality Management Systems
- 1989 OSHA's Program Management Guidelines published
- 1992 British BS 7750 Environmental Management System
- 1992 British Health & Safety Commission publishes management of health and safety at work
- 1996 ISO 14000 Environmental Management System
- 1996 British standard BS 8800 launched, used as model OHSMS
- 1999 OHSAS 18001 Specification published based on BS8800
- 2000 OHSAS 18002 Guidelines published to assist in the implementation of OHSAS 18001
- 2001 International Labor Organization OSH
- 2002 ISO 19011 Guidelines for ... management systems auditing
- 2005 ANSI publishes Z10
- 2006: Canada Publishes Z 1000
- 2007: OHSAS 18000 Revised



# US - FAA Safety Management Systems (SMS) - History

**AC (Advisory Circular) 150/5200-37, “Intro to SMS for Airport Operators”, 2007**

**ACRP (Airport Cooperative Research Program), SMS Overview, 2007**

**FAA Pilot Project, 2008**

**FAA Proof of Concept Study, 2008**

**FAA Pilot Project II, 2008**

**ACRP SMS Guidebook, 2009**

**ICAO (International Civil Aviation Organization) Safety Management Manual, Doc 9859, 2009**

**FAA Follow-on Implementation Study, 2009/10/11**

**FAA ARP (Office of Airports) Internal SMS Order (5200.11), 8/30/2010**

**NPRM (Notice of Proposed Rule Making), Oct. 2010**

**FAA Order 8040.4A Safety Risk Management Policy**

**150/5200-37A Draft AC: SMS for Airports, June 29, 2012**



# SMS Defined (US FAA)

**“The formal, business like approach to managing safety risk. It includes systematic procedures, practices, and policies for the management of safety (including safety policy, safety risk management, safety assurance, and safety promotion).”**

14 Code of Federal Regulations (CFR) Part 139, Certification of Airports

*AC150/5200-37, Introduction to SMS for Airport Operators*



# International History - Airport SMS

## ICAO – International Civil Aviation Organization

- 190 of the 193 UN members
- Nov 2005: amended annex 14, Volume 1 requiring SMS
- Safety Management Manual Published in 2006



# Air Transportation with OSHA Safety Certifications (VPP)

## 23 Sites – Air Transportation

DAL Global at Delta X2

Delta X 13

KII Aviation

Monsanto Aviation

Air Logistics of Alaska

Home Depot Aviation

Tri State generation

Entergy Aviation

GE Corporate

Koch Business holdings

## 11 Sites - Support Activities for Transportation

GE - Aviation

Honeywell

TSA Melbourne

Landmark

Air National Guard

NASA – Ellington and KSC

Tinker Software Maintenance Group

Executive Jet – Cincinnati

Naval Air Station Key West



# Objectives for Today

Today's presentation will focus on:

- Where did SMS come from?
- Where do we see SMS in other industries, countries?
- Lessons Learned from others.



# SMS International

**ISO, ILO and OHSAS standards and certified members are worldwide**

**Ireland adopts OSHA VPP in 2004, Mexico was next**

**Across many industries and service companies, not just manufacturing... includes municipalities, airports, etc.**



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# Lessons Learned from an International Perspective

## Based on ESIS customers worldwide:

- ◆ U.S. is more typically hazard based, internationally, risk based
- ◆ Employee involvement and participation may have cultural barriers – corporate culture can overcome
- ◆ Others from the audience perspective



# Other Tools

## FAA SMS

- [http://www.faa.gov/airports/airport\\_safety/safety\\_management\\_systems/](http://www.faa.gov/airports/airport_safety/safety_management_systems/)

## Pilot Working Group SharePoint

- <Http://sms.sharepointsite.net/default.aspx>
  - (password required)



# Any Questions?



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