Organizing Risk Management Programs

Or, What I learned from the Aviation Industry and the US Secret Service

TRANSVASIVE

Transparent and Pervasive Security

Aviation Industry: Safety

US Secret Service: Protection

SUCCESSFUL RISK MANAGEMENT

Safety: Aviation Industry

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It's never been safer to fly; deaths at record low

JOSHUA FREED, AP Airlines Writers, SCOTT MAYEROWITZ, AP Airlines Writers
Updated 11:12 a.m., Saturday, December 31, 2011

FILE - In this Dec. 23, 2011 file photo, travelers check their luggage at a United Airlines express check-in area at O'Hare International Airport in Chicago. Boarding an airplane has never been safer. In the last 10 years, there were 153 fatalities in U.S. airline crashes. That's 2 deaths for every 100 million passengers and the safest decade in the countryís aviation history, according to an Associated Press analysis of government accident data. Photo: Nam Y. Huh / AP

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NEW YORK (AP) — Boarding an airplane has never been safer.

The past 10 years have been the best in the country's aviation history with 153 fatalities. That's two deaths for every 100 million passengers on commercial flights, according to an Associated Press analysis of government accident data.

The improvement is remarkable. Just a decade earlier, at the time the safest, passengers were 10 times as likely to die when flying on an American plane. The risk of death was even greater during the start of the jet age, with 1,696 people dying — 133 out of every 100 million passengers — from 1962 to 1971. The figures exclude acts of terrorism.

The New School of Information Security

The Blog Inspired By The Book

Aviation Safety

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>
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>
> ...
> *There are a number of reasons for the improvements.*
>
> - *The industry has learned from the past. New planes and engines are designed with prior mistakes in mind. Investigations of accidents have led to changes in procedures to ensure the same missteps don't occur again.*
> - *Better sharing of information. New databases allow pilots, airlines, plane manufactures and regulators to track incidents and near misses. Computers pick up subtle trends. For instance, a particular runway might have a higher rate of aborted landings when there is fog. Regulators noticing this could improve lighting and add more time between landings.*
>
> *("It's never been safer to fly; deaths at record low", AP, link to Seattle PI version.)*

Well, it seems there's nothing for information security to learn here. Move along.

Filed under: Doing it Differently, measurement, Science of Risk Management by adam on Wednesday, January 25, 2012

Safety: Aviation Industry

Boeing Model 299: Checklists

Decisions on implementing safety controls

Tenerife: Crew Resource Management

Line Operations Safety Audits

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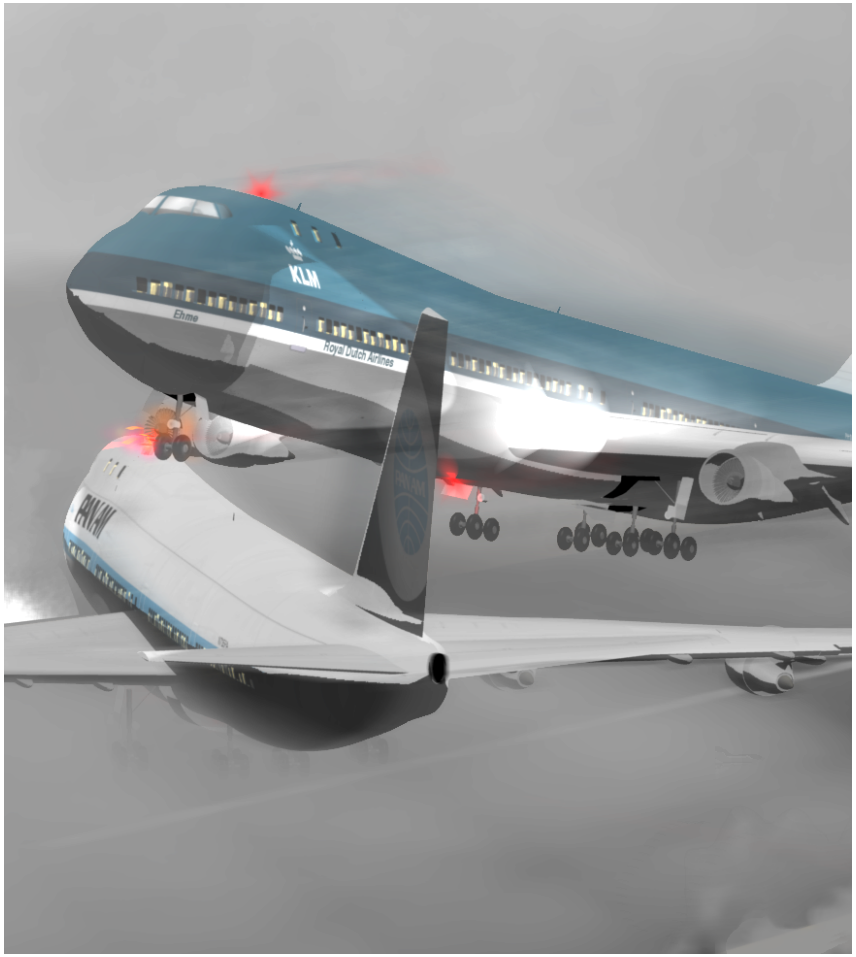

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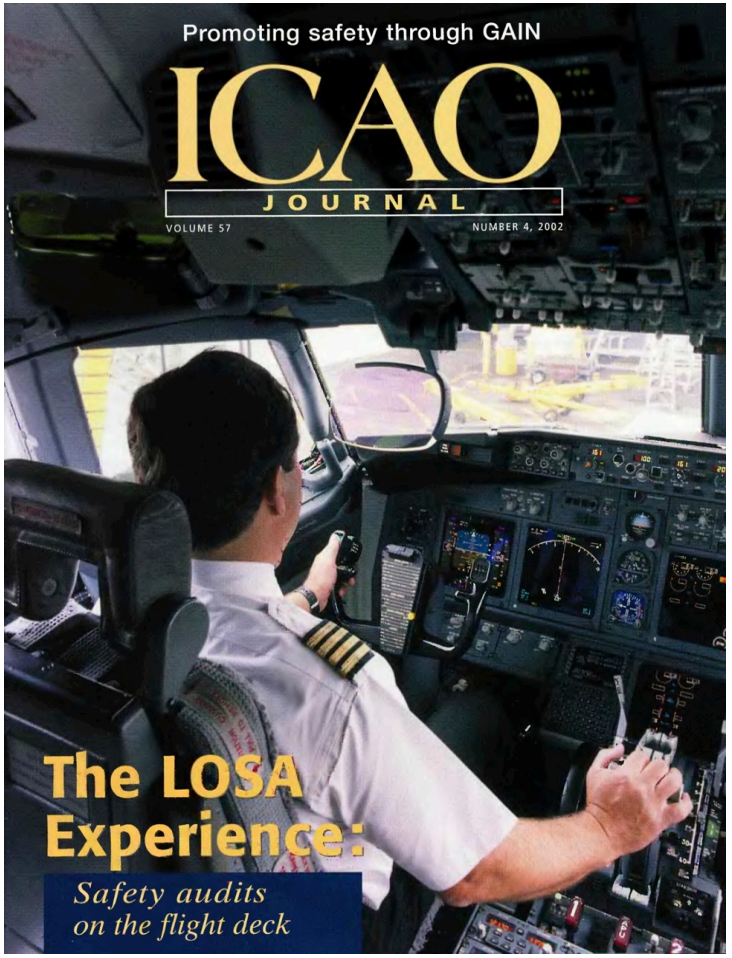

Protection: US Secret Service

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Exceptional Case Study Project

National Threat Assessment Center

Safe School Initiative (NTAC)

Insider Threat Study (NTAC/CERT)

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Safe School Initiative

An Interim Report on the Prevention of Targeted Violence in Schools

U.S. Secret Service National Threat Assessment Center
in collaboration with the
U.S. Department of Education
with support from the
National Institute of Justice

Co-Directors: Bryan Vossekuil, Marisa Reddy PhD, & Robert Fein PhD

October 2000

Protection: US Secret Service

Exceptional Case Study Project

National Threat Assessment Center

Safe School Initiative (NTAC)

Insider Threat Study (NTAC/CERT)

Insider Threat Study:

Illicit Cyber Activity in the Information Technology and Telecommunications Sector

Eileen Kowalski
National Threat Assessment Center
United States Secret Service
Washington, DC

Dawn Cappelli
Andrew Moore
CERT® Program
Software Engineering Institute
Carnegie Mellon University
Pittsburgh, PA

January 2008

Tale of Two Industries

Safety (Aviation Industry)

- Robust data set
- Statistics are useful
- Incidents are accidents
- Wait until an incident occurs, then react
- Data-driven
- Costs of incidents are measurable
- Threats are common and frequently encountered
- Threats are environmental or human errors
- Threats don't adapt to new safety controls
- Innovations have come from understanding and changing our own behaviors
- Decision making aided by tools like checklists, Crew Resource Management
- Risk Analysts biased to see everyone as only committing inadvertent errors
- Boring

Protection (US Secret Service)

- Limited data
- Statistics have limited usefulness
- Incidents are deliberate
- Find, manage threats before they can act
- Intelligence-driven
- Costs of incidents are difficult to measure
- Threats are uncommon and infrequently encountered
- Threats are people with malicious intent
- Threats adapt to new security controls
- Innovations have come from understanding and managing threat behaviors
- Decision making reliant on investigation, professional judgment
- Risk Analysts biased to see everyone as a potential threat
- Sexy

Information Safety
Information Protection

ORGANIZATION OF RISK MANAGEMENT

Organization of Risk Management

Information Safety

- Traditional Malware
- Phishing
- Disaster Recovery / BCP
- Incident Analysis
- Change Management
- Laptop Theft
- Software Security Quality
- Security Modeling
- Patch Management
- Compliance
- Fraud

Information Protection

- Custom Malware
- Spear Phishing
- Denial-of-Service Attacks
- Cyber Intelligence
- Incident Response*
- Server Data Breaches
- Software Security Architecture
- Threat Modeling
- Attack Simulation (Red Team)
- Reputation
- Fraud

Thank You!

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