Pulling Together Human Performance and Safety Management Systems

Dr. William B. Johnson

Chief Scientific & Technical Advisor for

Human Factors in A/C Maintenance Systems

Federal Aviation Administration

TURNING POLICY INTO REALITY

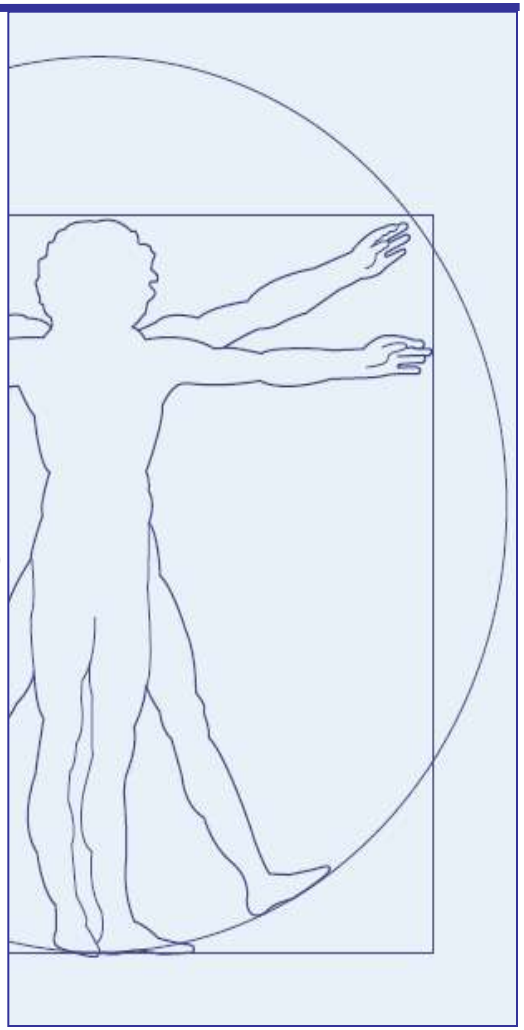
HUMAN PERFORMANCE AND SAFETY MANAGEMENT SYSTEMS

DERBY / 12 OCTOBER 2011

ROYAL AERONAUTICAL SOCIETY

Presentation Plan

- Summarize each presentation
- SMS Summary Statement from today
- Time Permitting: A couple of FAA R&D activities related to SMS



What have we heard?

EASA and SMS Regulation
Dr. Michel A. Masson, PhD, EASA

Human Performance & Systems Experience from Accidents /Incidents
Phil Sleight – Principal Inspector of Air Accidents Air Accident Investigation Branch

Error Management in the RAF – The Sweat and the Tears
Gp Capt Simon Brailsford RAF, Flight Safety, HQ Air Command

Proactive Risk Assessment – Bringing SMS in from the Cold
Rod Arnold, British Antarctic Survey

Human Factors and Engaged Engineers
Mick Adams MD Monarch Aircraft Engineering & Tech Director Monarch

Safety Promotion: A Successful Intervention Strategy
Alan Eccleston, Chief Airworthiness Engineer, Rolls-Royce

EASA and SMS Regulation (1 of 2)

Dr. Michael Masson EASA

1. Maintenance errors contribute to accidents and SMS can help identify risk areas

2. 50% are due to deviation to the procedures, data or rules

3. SMS in EU for Maintenance & Engineering:
   - Regulation EC n°2042/2003
   - Is specifically addressed by rulemaking task MDM.055
   - Start 3Q/2011 - Opinion to deliver in 2013

4. European Human Factors Advisory Group (EHFAG) assists EASA and European NAAs on HF

EASA and SMS Regulation (2 of 2)

Dr. Michael Masson EASA

1. Used Concorde to re-demonstrate human error

2. Culture from “Can do” to “Can do safely”

3. MDM.055 will influence Engineering SMS by 2013

HP Experience from Accidents /Incidents(1 of 2)

Phil Sleight – PI of Air Accidents, Air Accident Investigation Branch

AAIB has seen issues with the "system" and the human in the system.

Three recent incidents and accidents which all have similar factors:

- B737 Trim Tabs,
- Falcon business jet brake fire
- Dash 8 oil leak

HP Experience from Accidents /Incidents (2 of 2)

Phil Sleight – PI of Air Accidents, Air Accident Investigation Branch

The recommendations from these investigations are:

- To Improve clarity in test schedules, manuals and procedures.
- For regulators to review regulations and, continued airworthiness and human performance limitations (such as fatigue)
- For operators to clarify roles, responsibilities for staff conducting tests and to reflect this in procedures and training.

Summary:

1. In all cases the "system" failed
2. Several causal and contributory factors
3. Barriers to prevent occurrence were circumvented or in-effective
4. Human performance within the "system" affected the outcome.

Error Management in the RAF – The Sweat and the Tears

Gp Captain Simon Brailsford RAF, Flight Safety, HQ Air Command

1. "Every accident (non-combat) in the past 18 months was HF related"

2. Want to reduce "Reactive" error reduction

3. Key components
   - Just Culture
   - Error Reporting
   - (3x in 2011)
   - Analysis, feedback, intervention
   - Culture of communication and information sharing
   - "Error management is integral to SMS"

Bringing SMS in from the Cold (1 of 2)

Rod Arnold, British Antarctic Survey

- The British Antarctic Survey has an unusual responsibility to staff in the Antarctic. Added to this there is a 24 hr duty of care for everything.
- The development of a good safety culture is key. Safety reporting scheme is essential in detecting trends or areas of weakness in procedures and practices.
- Duty periods and working time are often more difficult to manage than environmental and operational challenges.
- The 24hr nature of the Survey's responsibility to all staff makes SMS critical.
- Proactive leadership seems to be the key to the success.

Bringing SMS in from the Cold (2 of 2)

Rod Arnold, British Antarctic Survey

Summary

1. **Identification of hazards**
2. **Competence in assessing the risks**
3. **Proper controls implemented**
4. **No divergence from safety critical control measures**
5. **Retention of knowledge**
6. **Safety Leadership**

Human Factors and Engaged Engineers

Mick Adams MD Monarch Aircraft Engineering & Tech Director Monarch

- Monarch Aircraft Engineering has introduced to its SMS a MSAVI theme (Monarch Standards and Values Information).
- MSAVI emphasises the need to personally 'Value' the benefits of doing things safely.
- MSAVI communicates any safety-related information across the business typically, within 24 hours of any safety related event.
- By focusing SMS around the personal and business values, Monarch has continued to build on its already high levels of employee engagement.
- Values and compliance and will show how the engineers have made a personal contribution to Monarchs SMS.

Safety Promotion: A Successful Intervention Strategy

Alan Eccleston, Chief Airworthiness Engineer, Rolls-Royce

- Air Transat A300 Fuel-Exhaustion in Azores, 24 August 2001
- Multiple Human Factors - flight crew and maintenancee personnel
- Many interventions implemented as a result of this incident

Not discussed too much

- Justifying cost of SMS
- Predictive Error assessment
- Fatigue risk

Summary

- HF is a “household” word
- SMS relies on leadership AND every person in the company
- We must collect the right data analyze quickly, report, and act on it
- Safety Culture is more than nice words. It was demonstrated by the commitment from today’s speakers.

Peer-to-Peer

Systematic Observations

Trusted Observers

Inform Workforce

M&RLOSA Characteristics

Volunteers

Targeted Enhancements

Confidentialty & Security

Management & Labor

Why LOSA?

Safety Issues

SMS Issues

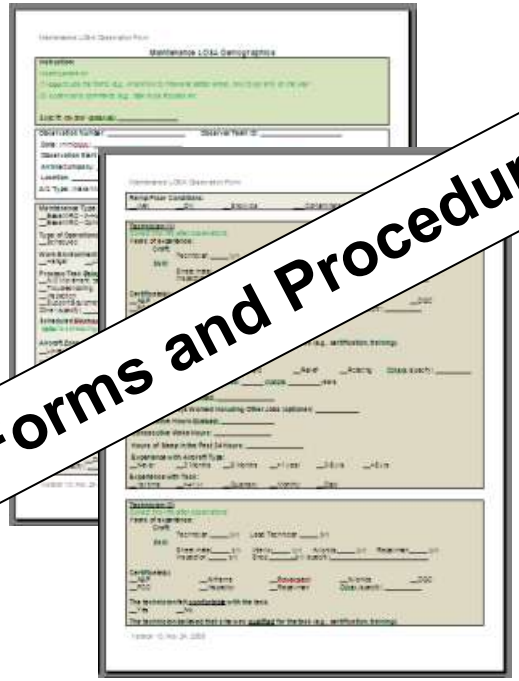
Cost Issues

SMS should have 3 Levels of Reporting

- Reactive - Triggered by an event
- Proactive - Routine quality programs
- Predictive - ASAP & MRLOSA (Normal Ops)

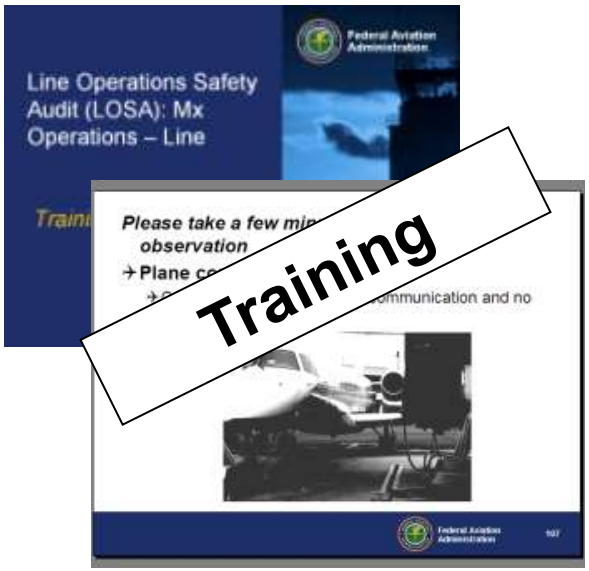
Products

Forms and Procedures



Database Software

Training



Federal Aviation Administration

www.mrlosa.com

Aircraft Maintenance Human Factors Web Portal

MX Home | Organization Info | Find Info | Applications | Website Help

MX Home » Find Info » Mx Research Projects - Current » M-LOSA Home

Line Operations Safety Assessments

- Home
- Introduction
- History
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- Benefits of LOSA
- Management and Labor
- Marketing
- MX Training
- Ramp Training
- Forms and Software
- Publications
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- FAQ

Home

Welcome to the Line Operations Safety Assessment Website

An ATA-FAA Collaborative Project
LOSA – Mx & Ramp

Enhancing Maintenance and Ramp safety through voluntary, peer-to-peer observations under strict non-jeopardy conditions.

Improving Safety in a Complex Environment

www.mxfatigue.com

NEW!!

Fatigue Countermeasures Training

Fatigue Awareness Video

Newsletter

Fatigue Awareness Video

Grounded – Action packed video loaded with fatigue information. Download a copy or order your DVDs today.
More >>

1 2 3 4

Frequently Requested Tools

Fatigue Management Toolbox

News & Events

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Regulations

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Links

sert Format Tools Slide Show Window Help Adobe PDF

Fatigue Countermeasure Workshop for Maintenance Personnel

Fatigue Countermeasures | Main Menu

EXIT

Main Menu: Fatigue Countermeasure Worksho

Click on the button to launch the desired lesson, video, or course exam. Note: you should complete all lessons before attempting the course exam.

Video: Grounded

Lesson 1: Fatigue Basics

Lesson 2: Sleep Basics

Lesson 3: Fatigue Management Strategies

Course Exam

"Coming to a theater near you"

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FAA Fatigue Risk Assessment Tool

PULSAR INFORMATICS

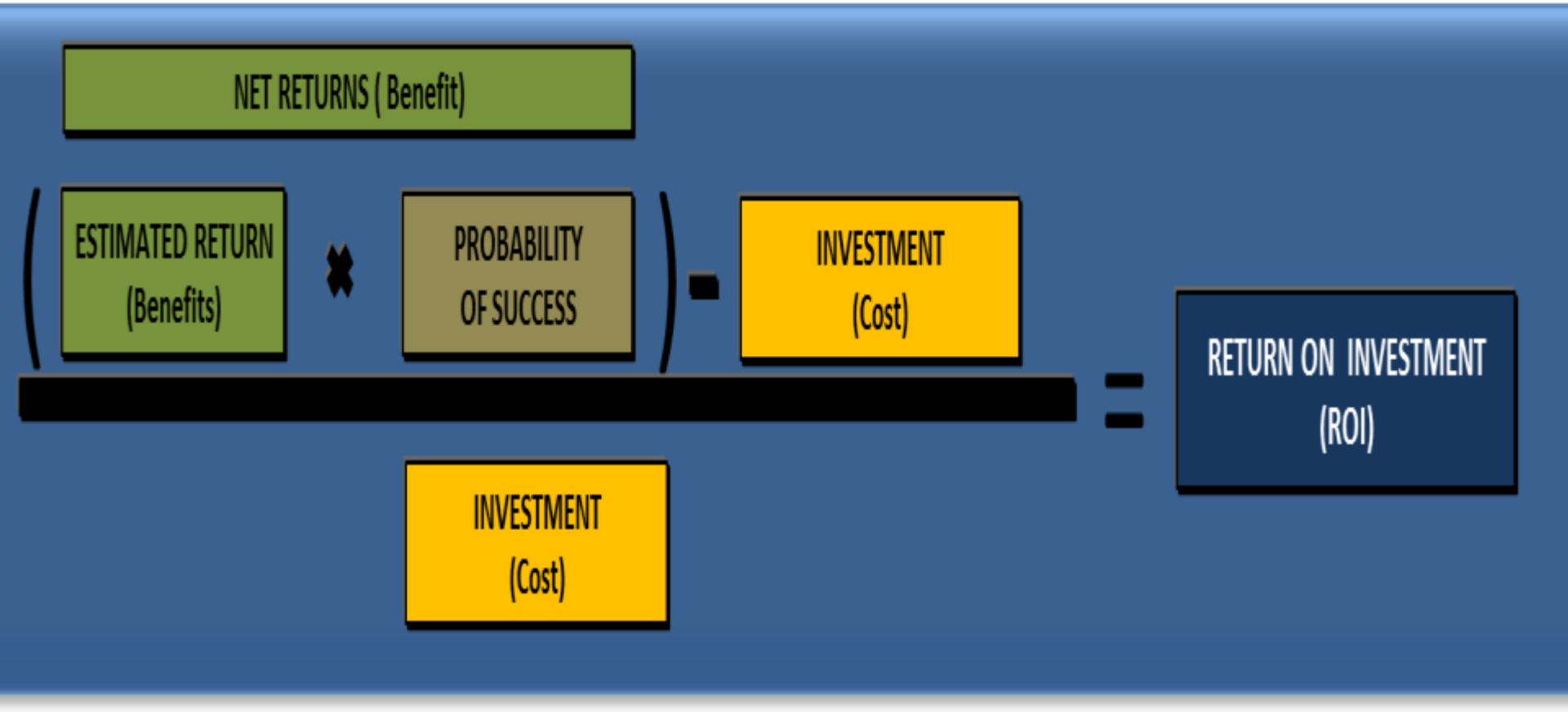
Overview

- This is a prototype tool being developed with the support of the FAA to assess fatigue related risk in aviation operations.
- The tool can be used to record incident data, and to give feedback regarding fatigue levels and incident risk.

Usage Guidelines

- To assess fatigue, you must enter sleep and work history over a period of several days.
- If you are reporting an incident, you should provide details of the incident.
- After you submit your data, a fatigue risk report will be generated. You can print or save the report.

Fill in the Blanks for ROI



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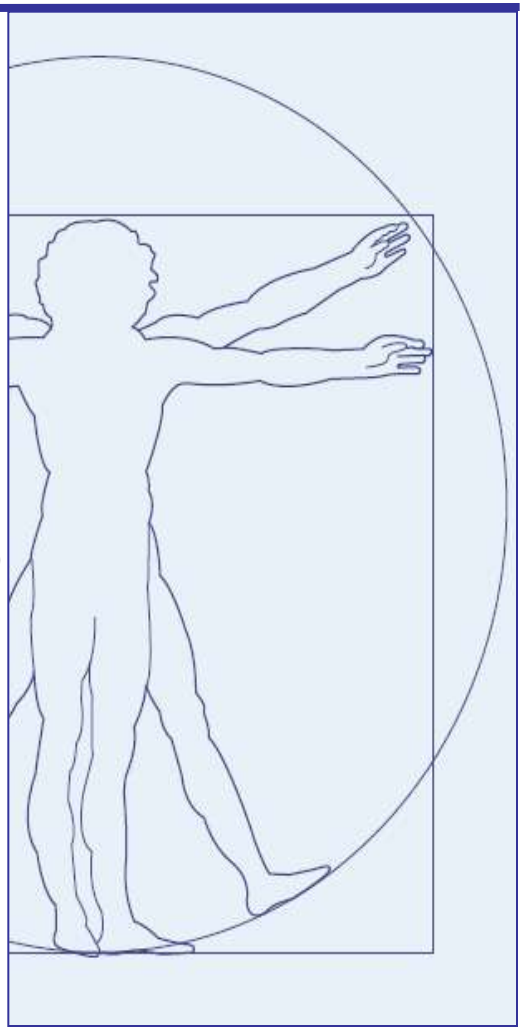

The End
Thank you