

# Gulfstream SMS

Safety Management International Collaboration Group Meeting  
Seattle - October 25, 2013

Fred Etheridge / Rick Trusis / Carmen Schooley



# Gulfstream Aerospace Corporation

- Leading manufacturer of the world's most advanced business aircraft
- Meeting the needs of the world's most demanding travelers for over 50 years
- Focused solely on the unique aspects of business aviation
  - Operational Flexibility
  - Safety and Security
  - Performance and Efficiency
  - Comfort and In-flight Productivity
  - Reliability and Exceptional Quality
  - Unmatched Product Support



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# Gulfstream Aerospace – SMS Journey

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Started in 2007, with a team of three Gulfstream employees and two external consultants.

- Only one Gulfstream person worked full-time on the SMS

Spent the first 24 months working “behind-the-scenes”

- Conducted safety culture assessments across 11 sites in North America and Europe
- Designed and implemented a new Event Investigation process that aligned with our SMS
- Created an initial draft of our SMS Manual
- Created processes and training for SMS implementation

Executed pilot launch of the SMS at one site in 2009

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# Gulfstream Aerospace – SMS Journey



## Gulfstream SMS as of 2013

13 Part 145 repair facilities around the world

2 manufacturing facilities in Savannah GA

Engineering Organization

Flight Operations

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# Gulfstream Aerospace – SMS Journey

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The Gulfstream SMS process includes:

**Step 1 – Safety Culture Surveys**

**Step 2 – SMS Gap Analysis**

**Step 3 – Leadership Engagement**

**Step 4 – SMS Documentation and Support**

**Step 5 – SMS Go-Live**

**Step 6 – Ongoing SMS Support**

# The SMS Journey – Lessons Learned

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- Gulfstream operates under several National Aviation Authority certificates
  - The Gulfsteram Corporate SMS program utilizes some of the material provided by the SMICG
    - Assessment guidance material, brochures for senior leaders, etc.

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# The SMS Journey – Lessons Learned

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## Baseline Safety Culture Metrics

Safety Culture Surveys allow you to:

1. Engage the workforce & give them a voice
2. Identify cultural “Norms” and practices
3. Establish baseline metrics that can be used in the future to measure progress

# The SMS Journey – Lessons Learned

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## **SMS project plan must be managed and tracked**



1. Use project management processes
2. Utilize a multi-phased approach
3. Break it down to bite size chunks with short-term goals (60-90 days each)
4. Include structured change management processes throughout all phases
5. Communicate progress to management team on a regular basis

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# The SMS Journey – Lessons Learned

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## **Educating the Leadership Team**



1. To be successful, you must have leadership commitment and support
2. Explain the WHY before the WHAT
3. Use the Safety Culture Survey data to show leaders the risk in the operation
4. The leaders must see the business advantages before they will commit the resources needed to make the SMS successful

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# The SMS Journey – Lessons Learned

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## Engaging the Operation



1. Include people from the operation in the SMS process design and documentation
2. Use the knowledge and experience of the people doing the work in the operation
3. Gives them ownership and creates buy-in
4. Creates “champions” in the workforce that will help gain support for the SMS as it is implemented

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# The SMS Journey – Lessons Learned

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## Allow the Operation *Some* Flexibility

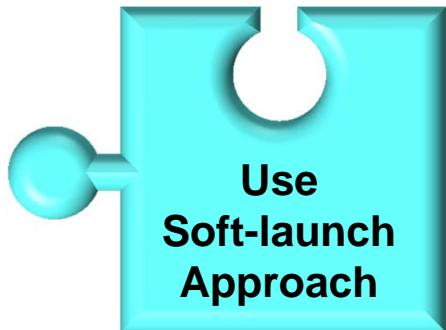


1. Use the same SMS tools and processes, but allow different parts of the operation flexibility in how they implement the SMS
2. Helps build acceptance by the operation
3. Allows them to adapt the SMS tools and processes to their operation

# The SMS Journey – Lessons Learned

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## Used a Soft-Launch Approach



1. For larger organizations or operations with several sites, don't try to launch the SMS across all sites/departments at one time
2. Each site/department requires education and support specific to their needs
3. Launching the SMS requires a structured process that should be adhered to ensure consistency across the enterprise

# The SMS Journey – Lessons Learned

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**SMS is a Journey – take time to celebrate successes**

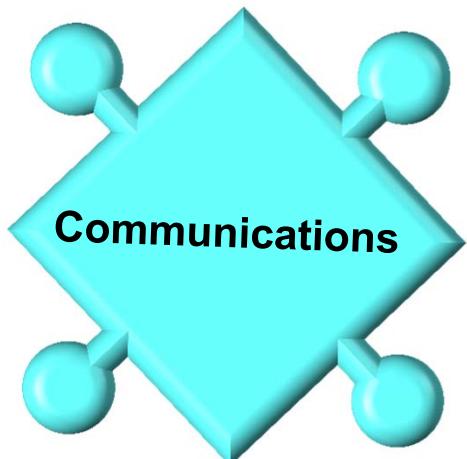


1. Celebrate the successful completion of each phase of the SMS project,
2. As the operation embraces the SMS, recognize and share their successes (hazard reporting goals, risks mitigated etc.)
3. Celebrating successes helps build team confidence and camaraderie and sets the team up for further success

# The SMS Journey – Lessons Learned

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## Communicate, Communicate, Communicate



1. Establish a communications strategy for each phase of the project
2. Ongoing Communications should be “tailored” for each stake-holder group:
  - Senior Leaders
  - Operational Managers and employees
  - Regulators
  - Customers and/or business partners

**Effective communications is critical to SMS success!**

# Gulfstream / FAA SMS Pilot - COS

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- Pilot focused on Continued Operational Safety (COS)
  - 18 month effort that began June 2011 and ended Dec 2012
  - Activities continue beyond the Pilot Program
- COS has 4 Key Facets
  - Identifying unsafe conditions
  - Reporting (FAA / GAC / Customers)
  - Resolving root cause / corrective action
  - Monitoring fleet implementation
- Pilot Encompassed Applicable Business Units
  - Programs / Engineering / Product Support
  - Initial / Final Phase Operations / Repair Stations

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# Gulfstream SMS Pilot – Key Activities

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- Key Level 1 Accomplishments
  - Responsible SMS management designated and enterprise COS organization established
  - COS Policy established
  - Plan completed for Gap Analysis & Implementation
  - Training plan developed
  - Successfully exited Level 1 in 2011
- Key Level 2 Accomplishments
  - Completed gap analysis across applicable organizations
  - Completed safety culture questionnaire across Engineering
  - Developed and deployed COS training for COS staff, COS Focals, and critical business units
  - Released multiple SOPs to address key gaps

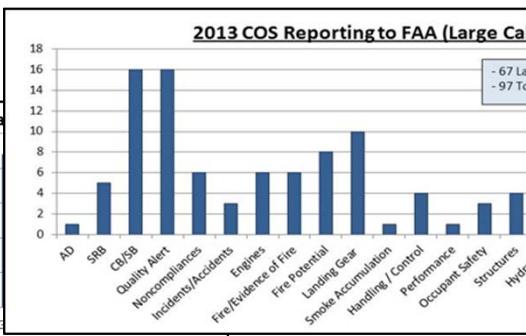
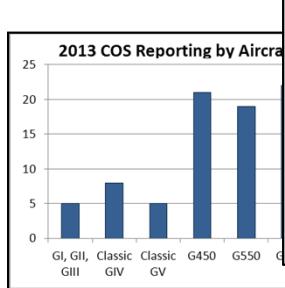
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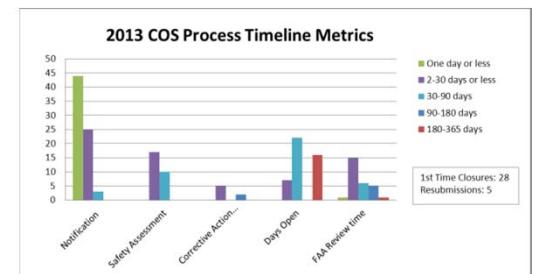
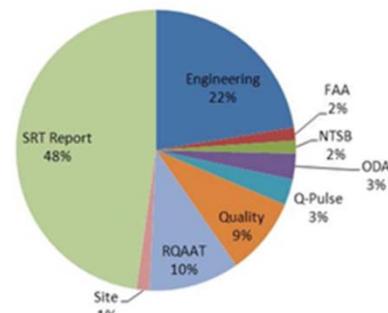
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# Gulfstream SMS Pilot - Key Level 3 Activities

- Evaluated and updated training material and requirements
  - Over 300 personnel trained across applicable GAC organizations
- Evaluated and updated COS SOP
- Supporting work methods drafted
- Implemented both Safety and Process Metrics
  - Significant enhancements to data collection capabilities for trending
  - Metrics briefed to Engineering Management and FAA



2013 COS Issue Sources



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# Gulfstream SMS Pilot Benefits / Successes

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- Documentation of good practices and procedures that were not formally defined
- More robust communications driving better recognition of potential safety issues
- Greater awareness of SMS principles across the organization
  - Reinforces the link between safety and engineering at all working levels
- Roles and responsibilities better defined across the organization
- Seeing benefits of improved reporting and feedback loop

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# Gulfstream SMS Pilot - Looking Forward

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- Future Activities
  - Leverage Corporate SMS Reporting System for internal reporting and disposition of COS issues
  - Improved/automated metrics reporting mechanisms
  - Improved database and trending capabilities
  - Continuous assessment and refinement of key processes
  - Release of key supporting work methods
- Challenges
  - Ensure State of Design Authority SMS approvals are accepted globally
  - Enterprise-wide standardization and coordination

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# Gulfstream Engineering SMS Implementation

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- SMS initiative focusing on Programs, Engineering, and Test Organization at Gulfstream
- Initial roll-out and implementation May 2013
- Followed standard corporate 6 step process with some additional documentation
- Created SMS Manual (standard) as well as SOPs for each team involved
  - Engineering Safety Council (ESC)
  - Engineering Management Team (EMT)
  - Event Review Team (ERT)
- SOPs defined paths for safety issues depending on type, to build upon existing processes instead of trying to create repetitive means
  - Product Issues (thru existing review boards, fleet monitoring programs, etc.)
  - EHS Issues (Facilities Requests, EHS Dept, etc.)

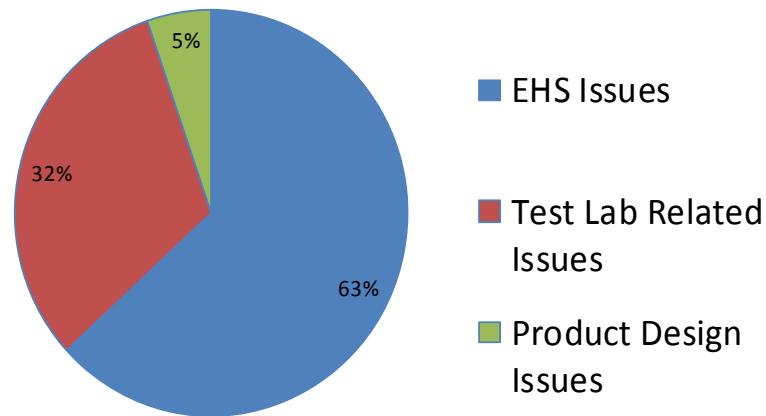
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# Gulfstream Engineering SMS Current Status

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- Engineering Safety Council meets weekly
- Engineering Management Team meets monthly
- Employees are entering safety issues into SMS database
- Quarterly Bulletin/Newsletter in work
  - To improve communication and awareness
  - Promote the safety culture and initiatives
  - To provide feedback for anonymous issues



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# Gulfstream Engineering SMS Successes

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- Corporate 6 step process is very helpful baseline
- Top management is engaged and supportive
- Engineering Safety Council is a cross-functional and proactive group
  - Seeks for deeper root cause analysis of issues
  - Understands the importance of a fully-functioning SMS
- Gulfstream employees are focused on safety and ‘doing the right thing’ – makes our job easier

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# Gulfstream Engineering SMS Challenges

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- Engineering SMS is different from operations-centric SMS
- Raising awareness of using the system for ‘bigger picture’ safety issues
  - Don’t want the system to be only for EHS issues
- Gaining trust and buy-in from all levels of employees
- Balancing promotion/culture/awareness efforts with over-communicating and over-training of employees
  - Keep training and communication pertinent
- Training and communicating how SMS fits in with existing processes for managing safety
- Tempering management’s desire to be aware of safety concerns with their desire to jump into the middle of them

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Thank You !



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