



Design & Manufacturing Industry



SMS Focus Group (SMS-FG)

FAA Part 5 D&M SMS Workshop

Panel discussion – “Take aways/lessons learned”

Al Madar – Boeing
Amy Cooper – Beta
Mike Millat – Pratt & Whitney
Jim Pietraski - Lycoming

BETA
TECHNOLOGIES





Amy Cooper

Aircraft Integration & SMS Manager
BETA Technologies

Amy supports BETA's Airworthiness Organization in managing the development of the SMS and COS programs. Beginning her career as an engineer at Boeing, Amy got the opportunity to geek out on all things aerospace, working on projects ranging from designing parts for NASA's SLS rocket to working as a Materials Review Board engineer supporting the 787 production line. Prior to joining BETA, Amy was a software technology program manager at Bandwidth. She holds a BS in Mechanical Engineering from the University of Alabama in Huntsville, an MS in Engineering from UCLA, and an MBA from UNC Kenan-Flagler. In her free time, she enjoys being outside with her dog (Harper!), snowboarding, and triathlon-ing.

BETA at a Glance

- Headquartered in Burlington, VT
- 7 years old
- > 650 employees
- Privately held
- > 350 patents



Two aircraft, many applications



ALIA CTOL

All-electric, conventional takeoff & landing airplane for airport-to-airport missions.

Safe | Integrated redundancies and extensive real-world testing

Simple | Air cooling with no articulating motors or propellers



ALIA VTOL

All-electric vertical takeoff & landing aircraft for urban and rural routes.

Pragmatic | Purpose-built for simplicity and ease of operation

Quiet | Making missions in populated environments possible

BETA is beginning our SMS journey

Where we are at...

BETA recently submitted our **Gap Analysis & Implementation Plan** for the **Voluntary SMS Program**

What we've learned so far...

Engaging in the SMS community

- Participate in the SMS discussions going on throughout the industry

Open invitation to participate in SMS development

- Emergent team of diverse stakeholders to guide development

Bringing structured process to R&D culture

- Avoiding processes for process-sake
- Humility & patience as a safety manager

Being clear about the scope of SMS

- SMS can't do it all without the support of many other processes that contribute to the overall safety of the product



Part 5 SMS D&M Workshop Panel – Pratt & Whitney

25 June 2024



Michael Millat

PRATT & WHITNEY SMS PROGRAM MANAGER

Engineer, Pilot, and Safety professional with 8 years at Pratt & Whitney working in and around Product Safety disciplines including safety risk assessment, accident investigation, and Safety Management System (SMS) implementation.

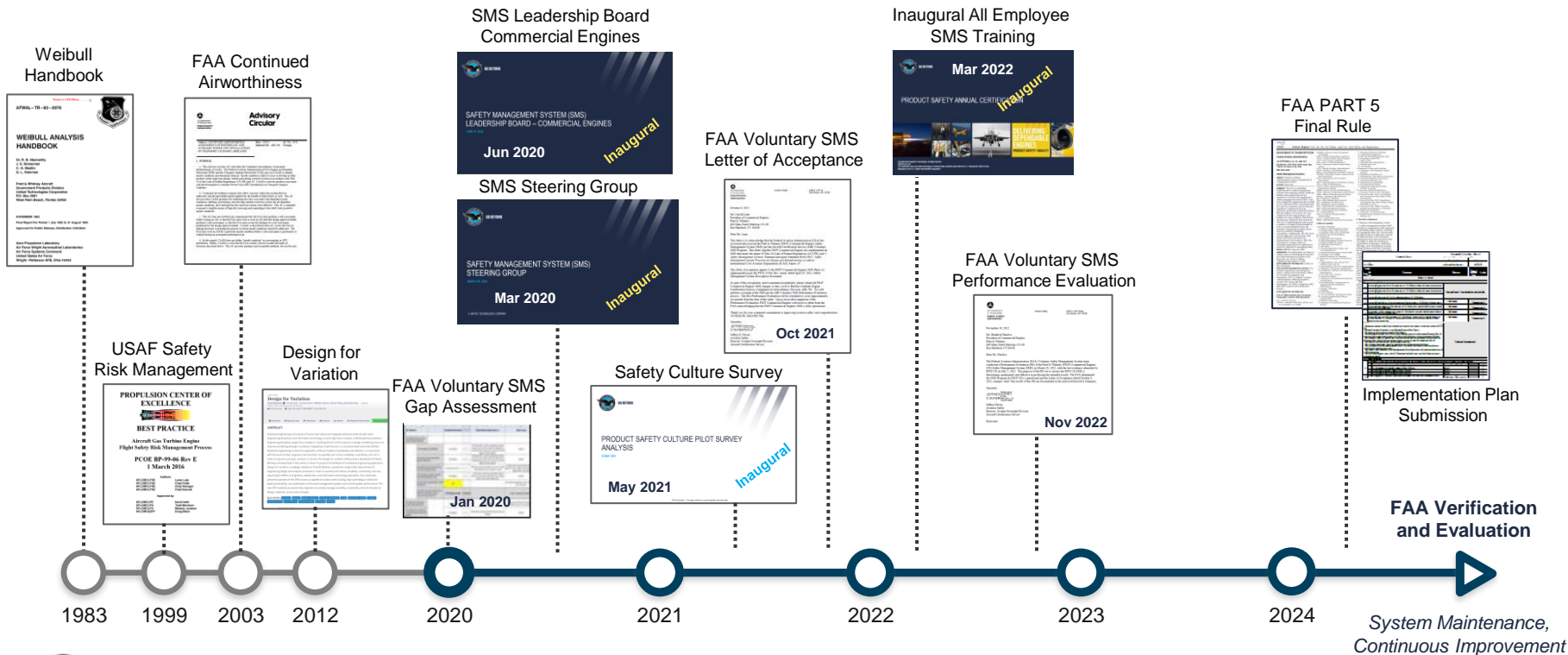
Former C-17A instructor pilot stationed at beautiful Charleston, SC and equally beautiful McChord Field, WA.

Active in multiple technical working groups for maintaining and updating SMS guidance material including the SMS International standard (SM-0001), and the Supply Chain Management Handbook (SCMH); and an active member of the Design and Manufacturing SMS Focus Group.



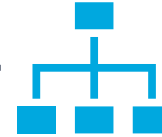
Pratt & Whitney's SMS Journey

Building on a proud history of contributions to aviation safety



Discussion Topics

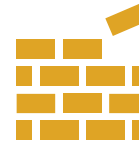
Achieving Culture Shift All the Way Down



Integrating SMS into Existing Processes



Thinking Long-Term (not just compliance)



Never Lose Focus on the “Why”





JAMES PIETRASKI

LYCOMING ENGINES

Lycoming Engines : 2006 – Present

- Development Engineering
- Six Sigma
- Quality Manager
- Test Engineering
- SMS Manager



LYCOMING ENGINES

WILLIAMSPORT, PA



SHINGO PRIZE
FOR OPERATIONAL EXCELLENCE



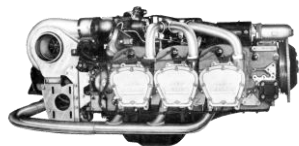
- 650,000 sq. ft. with an additional 105,000 sq. ft. ready to utilize.
- 520+ employees
- 2010 Shingo Prize
- FAA Production Certificate #3
- AS9100REV D Certified
- Precision Machining
- Component Fabrication, Assembly, & Test
- Metallurgical & Special Processes



LYCOMING PRODUCT LINE



iE2
Engine



541 Series



320 Series



540 Series



EL-005 Series



Thunderbolt Engine



235 Series



360 Series



580 Series



DEL-120
Series



390 Series



720 Series

TEXTRON HAS 5 MAIN BUSINESS SECTORS



TEXTRON AVIATION



BELL



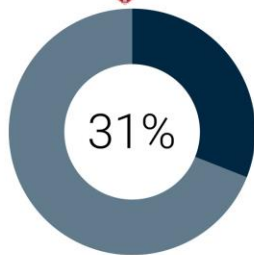
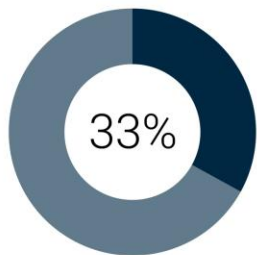
TEXTRON SYSTEMS



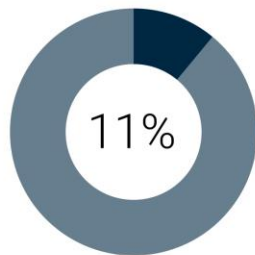
INDUSTRIAL



FINANCE



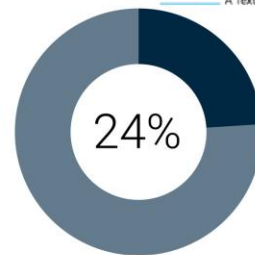
TEXTRON Systems



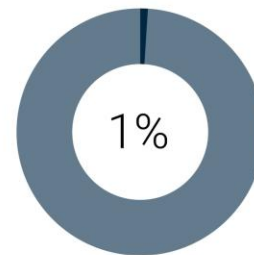
EZGO



TEXTRON OFF ROAD



TEXTRON FINANCIAL



LYCOMING SMS STATUS

Began our journey under the Volunteer Program
Gap Analysis / Implementation Plan - Accepted

Lessons:

- It's good to have a company to benchmark, but another company's SMS may not work in your environment
- Communication needs to flow in both directions. Need to provide feedback.

