

Space Shuttle Program



Focus Group

Presentation to JAPC
September 26-27, 2000

J.Rozewski
NASA JSC Resident Office -KSC

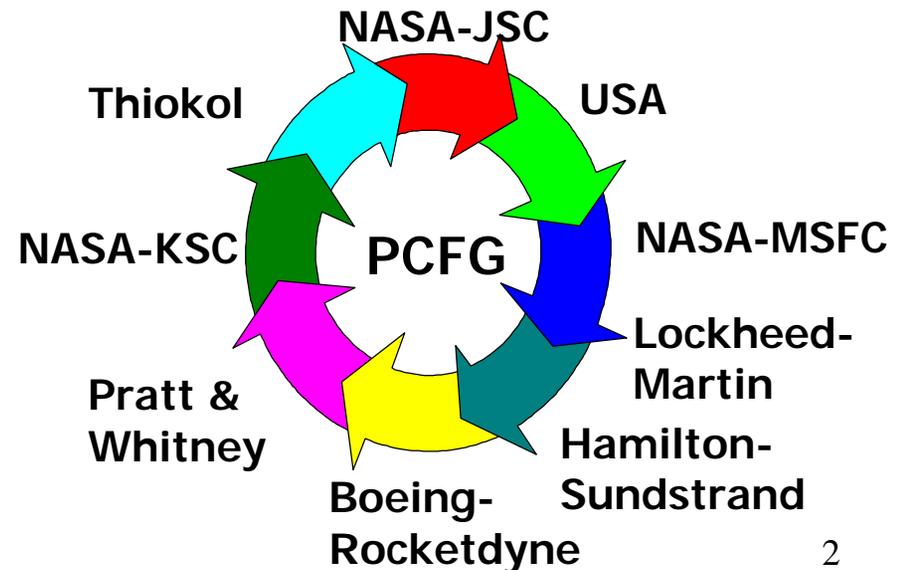


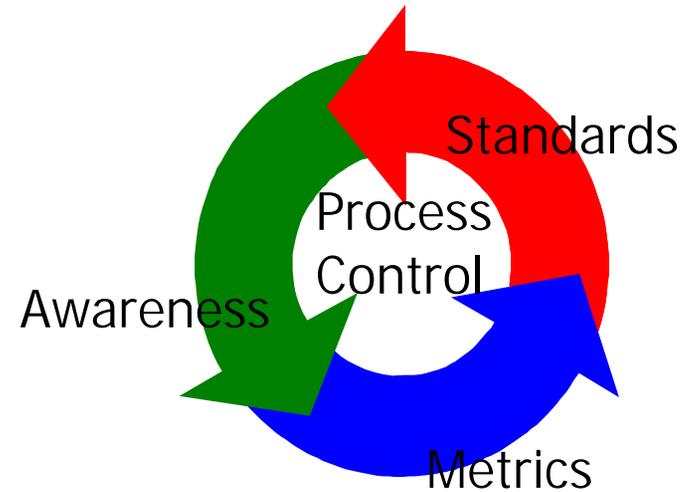
Process Control Focus Group

- Established by Shuttle Program Manager September 1999
- Membership From All SSP Prime Contractors & Centers
- Goal

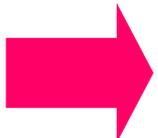
⇒ Increase awareness of importance of process control

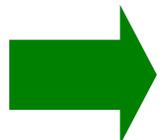
⇒ Provide consistency for process control across SSP

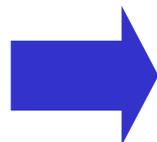




Approach:

 Create Process Control Standards
- Best Practices

 Increase Awareness
- Communication with Suppliers
- Sharing Lessons Learned

 Measure Performance
- Metrics





Program Management Plan

Standards

- Best Practices
- SSP Critical Process Master List

Awareness

- Lessons Learned Database
- SSP Supplier Visit Plan
- SSP Process Control Video

Metrics

- Metrics Established



Additional Products Planned:

- Process Control Posters
- Supplier-Targeted Brochures
- Annual SSP-wide Symposium/Supplier Visit Plan
- SSP Process Control Website -
 - Highlighted Best Practices
 - Lessons Learned Database
 - Links to Chief Engineer Council info



Space Shuttle Program Process Control Standards

- Monitor for early detection of variability of processes and uncoordinated changes
 - Best Practices:
 - Statistical Process Control (SPC)
 - Material fingerprinting
- Minimize process drift through process definition and assure that actual practice complies with written instructions.
 - Best Practices :
 - Product/Process Integrity Audit (PPIA)
 - NASA Engineering and Quality Audit (NEQA)
 - Quality system audits
- Maintain systems for understanding and mitigating process risks
 - Best Practices :
 - Process risk matrix
 - Advanced Quality System (AQS) risk analysis
 - Process FMEA's



Space Shuttle Program Process Control Standards

- Provide design product and process orientation by sharing lessons learned and by identifying critical characteristics and processes to control
 - Best Practices :
 - Build-to-Packages
 - Characteristic Accountability Worksheets
 - Procured Product Acceptance Record
 - Product fact sheets
 - Process baseline
- Reinforce personal accountability and responsibility to perform exactly in the manner described in written procedures and work instructions
 - Best Practices :
 - Stamp And Signature Warranty Program
- Maintain a robust, multifaceted program to promote awareness of processcontrol, the need to fully understand and report changes, and understand how a product fits into and impacts the overall program
 - Best Practices :
 - Space Flight Awareness Program (SFA)
 - Motivational Visits to Suppliers
 - Symposiums
 - Video, Product brochures and posters



Space Shuttle Program Process Control Standards

- Maintain Systems to identify and evaluate changes to equipment and environment.
 - Best Practices:
 - Product Protection Analysis (PPA)
 - Formal Configuration Control System
 - Engineering Source Approval (ESA)
- Establish systems to capture and maintain process knowledge and skills
 - Best Practices:
 - Mentoring
 - Job Shadowing
 - Formal Training and Certification program
 - Skill Assessments