



QLF

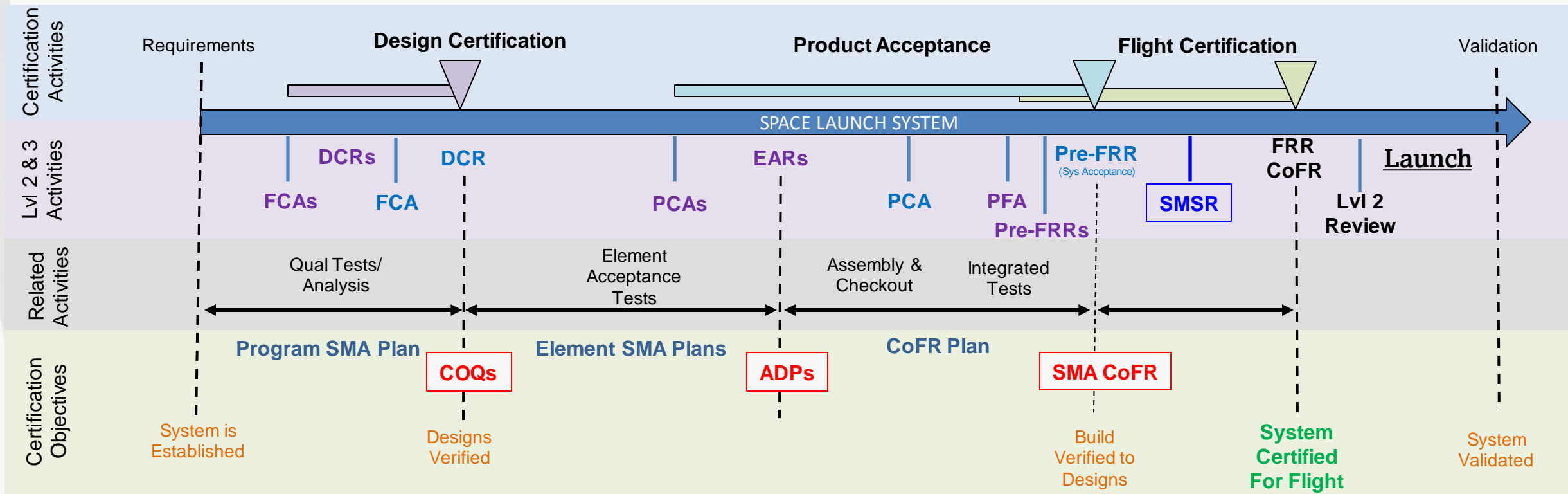
SLS SMA Quality Input to CoFR

Leigh W. Gordon

Booster CSO

March 14, 2024

SMA Contributions to CoFR

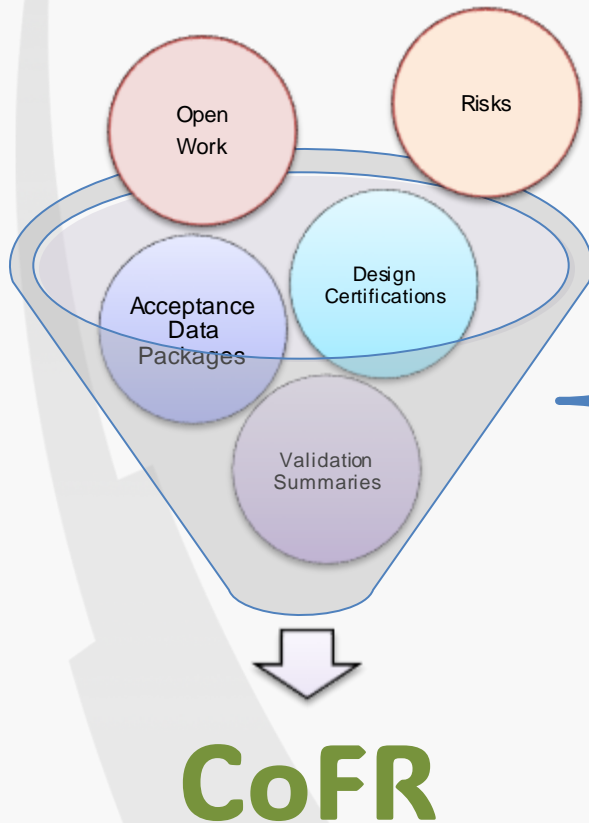


CoFR Simplified Flow Chart derived from SLS-PLAN-036

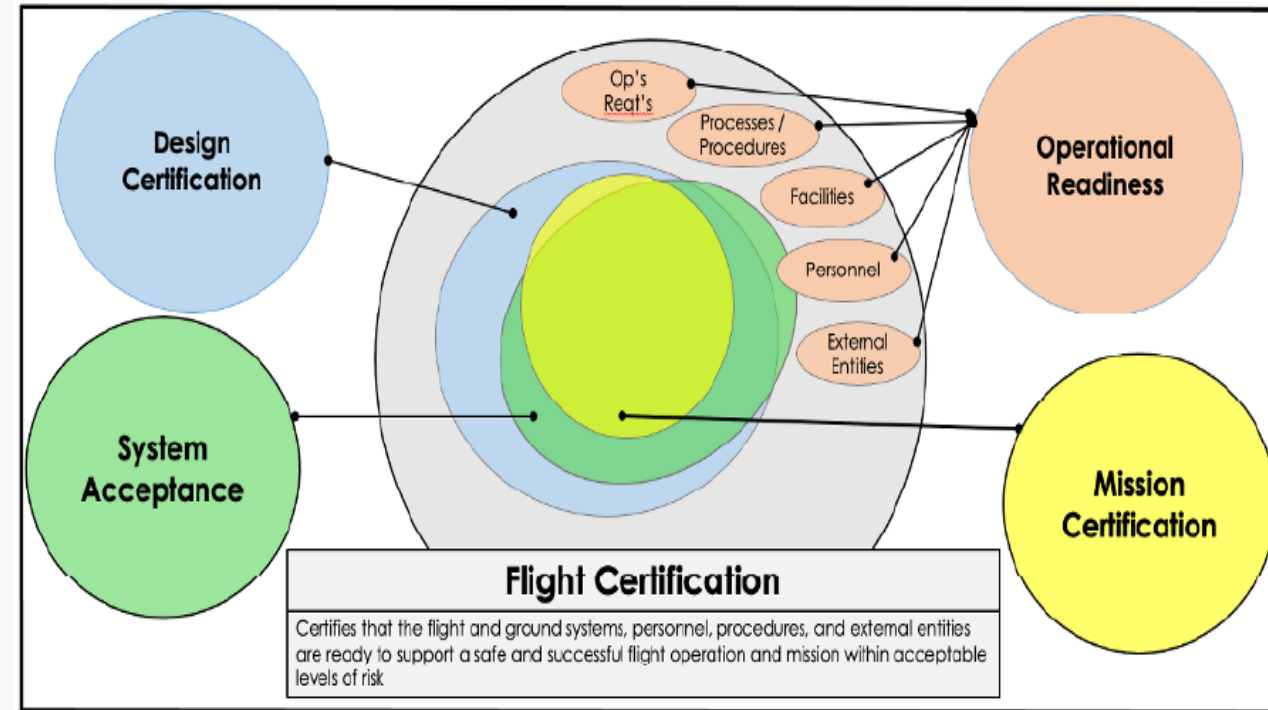
CSOs are members of applicable Milestone Boards and are responsible for technical authority (TA) for safety and mission assurance for the SLS Program including the SLS Elements. At each major review milestone e.g. the SLS Pre-FRR, the SLS SMA TAs will coordinate with Program Management. SMA TAs will participate in applicable milestone to further prepare to render a decision on flight readiness.

- ADP – Acceptance Data Package
- CoFR – Certification of Flight Readiness
- CoQ – Certification of Qualification
- DCR – Design Certification Review
- EAR – Element Acceptance Review
- FCA – Functional Configuration Audit
- FRR – Flight Readiness Review
- PCA – Physical Configuration Audit
- PFA – Pre-Flight Assessment
- SMSR – Safety and Mission Success Review

SMA Contributions to CoFR



- Mission Overview and Element Operations
- Design Overview
- Design Certification Summary
- Build and Element Verification Summary / Product Acceptance Assessment Summary
- Launch and Mission Support Readiness Summary
- Mission Specific Analysis/Test Summary
- Special Topics
- Prior Flight Performance
- Open Certification Items
- SMA Summary
- Mishap Response and Contingency Planning
- Element Risk Status
- Open Action Status
- Flight Readiness Statement



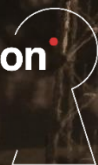
The CoFR process is an incremental series of activities that determine flight readiness through confirmation and summary of successful completion of precedent certification processes

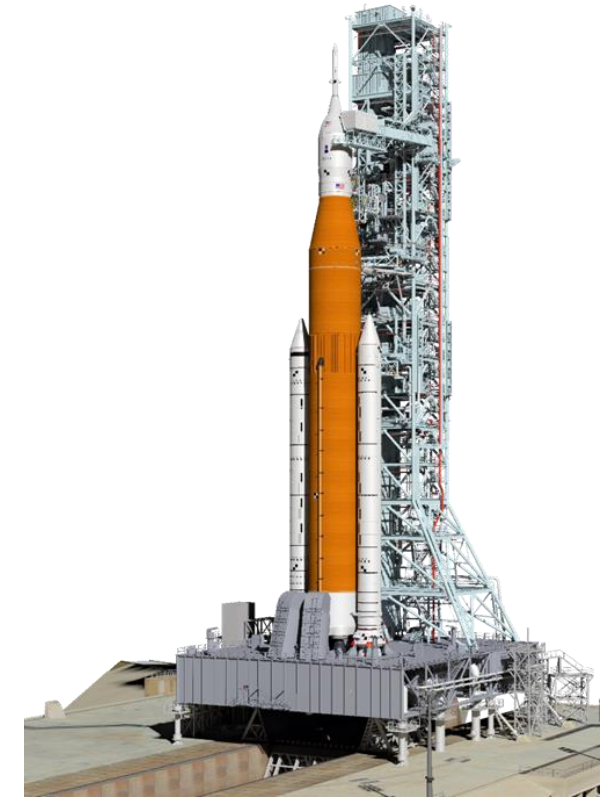
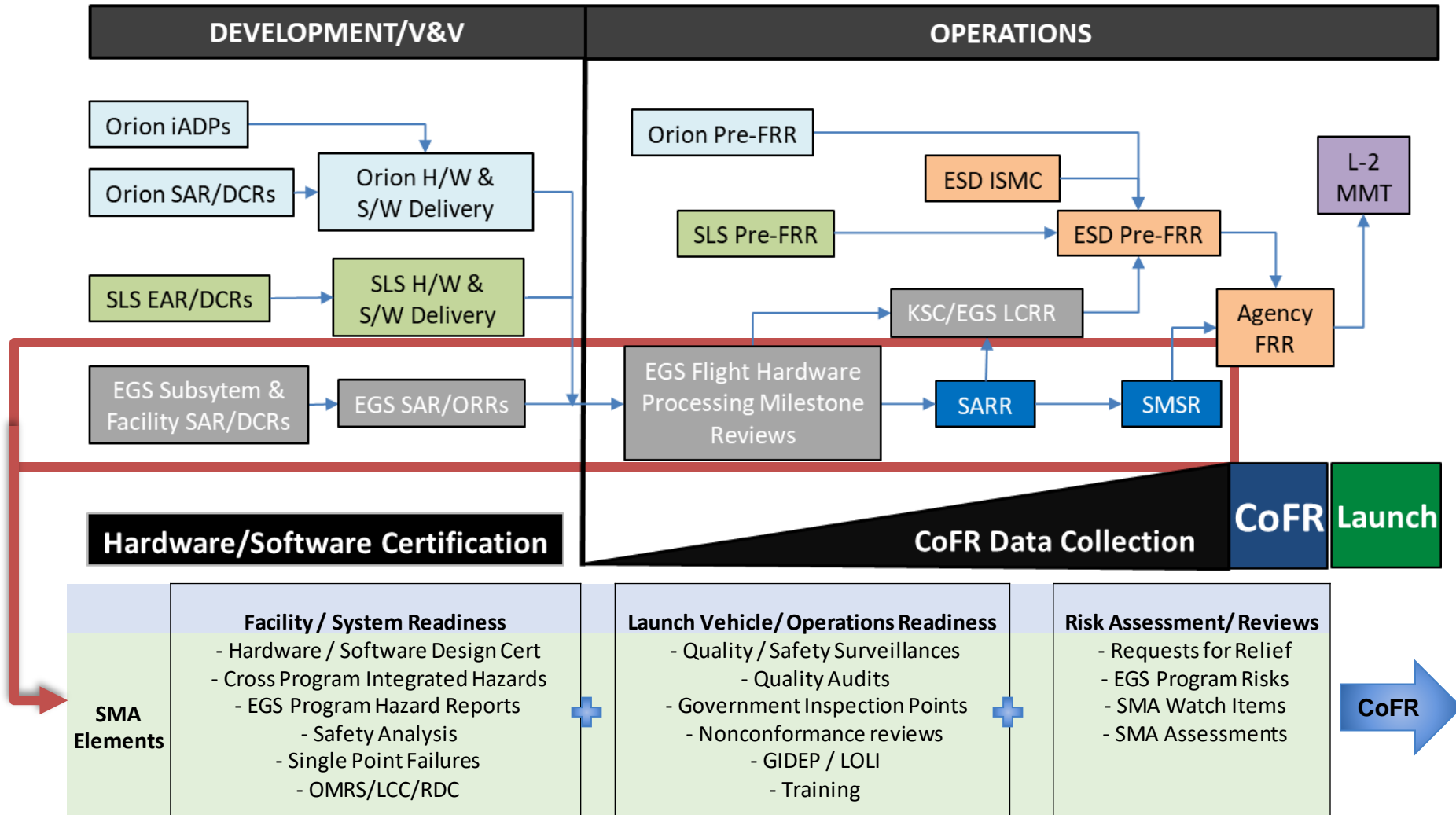
SMA significantly contributes to the CoFR process by completing thorough independent verifications of all HW and SW data.

SMA EGS Division CoFR Implementation



Exploration
Ground
Systems







Commercial Crew Program Elements for SMA Mission CoFR

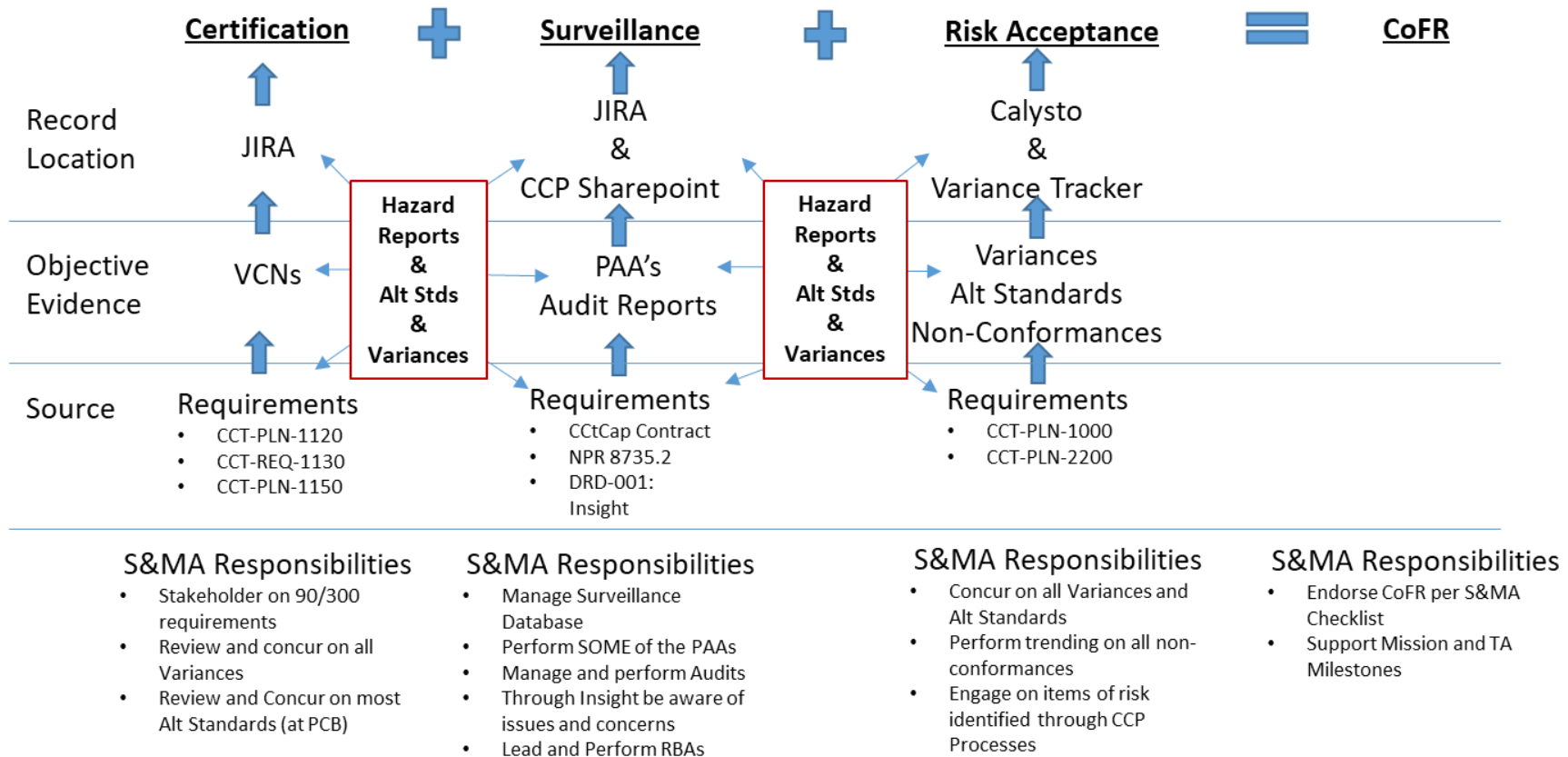
Billy Stover, Deputy Chief Safety Officer – CCP

March 05, 2024

KSC, FL



CCP SMA CoFR Strategy



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JOHN F. KENNEDY SPACE CENTER



QUALITY ELEMENTS FOR LSP MISSION COFR

Joe Dant
LSP Chief S&MA Officer



Quality Elements for LSP Mission CoFR



Non-Recurring

Recurring

Launch Vehicle Certification

Significant Insight + Targeted Approvals

Readiness Reviews

Risk Assessment

Agency Requirement

NPD 8610.7
Launch Services Risk Mitigation Policy

NPD 8610.23
Launch Vehicle Technical Oversight Policy

NPD 8610.24
LSP Pre-Launch Readiness Reviews

NPR 8000.4
Agency Risk Mgt Procedural Reqs

Program Requirement

LSP-PLN-324.01
LSP Cert Plan

LSP-PLN-321.01
LSP Insight & Approval Implementation

LSP-P-334.04
LSP CoFR Process

LSP-PLN-353.01
LSP Risk Mgt Plan
KTI 3643

LSP SMA Operating Plan

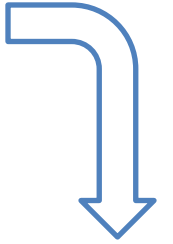
Quality Elements

- Quality Management System/Processes
- Supplier Audits
- Manufacturing & Operations
- Hardware Qualification

- Manufacturing Insight (fleet insight, floor presence, Assessment Examination Points – AEPs)
- Hardware build & nonconformance review
- Provider and supplier audits (Provider conducted, w/ option for government to conduct)
- Launch site quality insight
- Quality mission and fleet trending

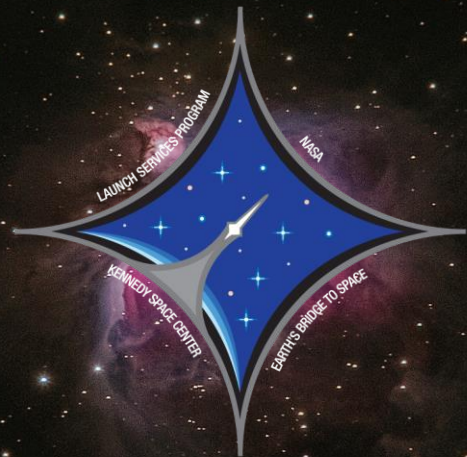
- Provider reviews
- KSC S&MA Readiness Review (SARR)
- LSP Launch Vehicle Readiness Review (LVRR)
- HQ's Safety & Mission Success Review (SMSR)
- FRR & LRR

- Quality Assessments: Insights, Evaluations, Watch Items
- Independent S&MA Tech Authority Rating and Rationale for all technical risks



CoFR

LSP Primary Missions



103
Launches
Since 1998

