



Procurement Quality Assurance Overview

NASA Briefing

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Procurement Quality Assurance Overview

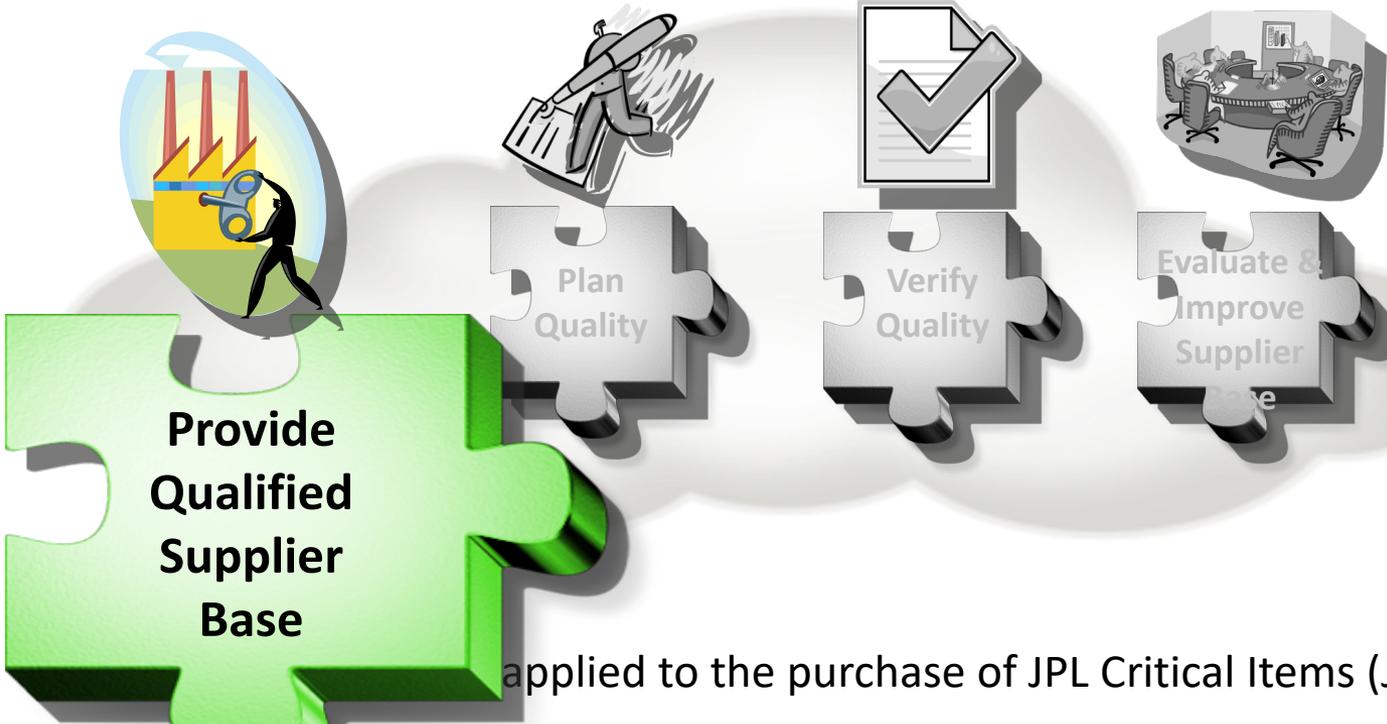


Scope

- PQA controls are applied to the purchase of JPL Critical Items (JCI)
- Procurement JCI is defined as:
 - Flight Hardware
 - Engineering Models, Qualification Units with Flight potential

Procurement Quality Assurance

Overview



- Procurement JCI is defined as:

- Flight Hardware

- Audits
- ASL

models, Qualification Units with Flight potential

Provide *Qualified Supplier Base*



- Qualifying to be an Approved Supplier
 1. 3rd Party Reciprocity – accept certification by registered auditing firm
 - NADCAP required for Special Processes
 2. Supplier Audits
 - Quality Management System
 - Product/Process
 3. ASL Exemption
 - Assesses risk of purchase and adds proper mitigations
 - One-Time Exemption requires QAE, MAM, PQA approval
 - Multiple Exemptions requires additional approvals by QA Section & Project Manager
 4. Supplier Visits (newly developed for small-sats and cubesats)
 - Supplier completes a questionnaire for specific product and processes along with QMS information
 - PQA and Engineering visit the supplier and focus on risk/gap assessment.
 - Gaps are captured and mitigations addressed

Provide *Qualified Supplier Base*



- Approved Supplier List Database
 1. Houses all supplier performance related information
 - Scope
 - Rating
 - Audits
 - Receipts and Nonconformances
 - Source Inspections
 - Supplier Issue Reports
 - Pictures
 - User feedback
 - Corrective Actions
 2. Required to be used whenever JCI hardware is procured

Procurement Quality Assurance Overview



Scope

- PQA controls are applied to the purchase of JPL Critical Items (JCI)
- Procurement JCI is defined as:
 - Flight Hardware
 - Engine

- Quality Clauses
- QCRD
- Exemption/Bypass in Units with Flight potential

Plan

Supplier Quality Requirements



- Quality Planning responsibilities include:
 - Attaching Quality Clauses (QCs)
 - Generating Quality Clause Requirements Documents (QCRD)
 - Reviewing Exemptions (ASL Exemptions, QC Exemption Request, JCI Bypass)
- All procurements marked as JCI/Flight are routed to PQA for QCs to be attached
 - QCs are project and institutional requirements that flow down to our suppliers.
 - Examples of QCs: Certificate of Conformance, Source Inspection, EEE Date of Manufacture, etc.
- QC requirements are identified for each project in a Quality Clause Requirements Document (QCRDs)
 - Contains the minimum QCs that need to be attached to a contract based on commodity
 - Pre-coordinated with the Project's QAE, MAM, M&P, and PPE early in the life-cycle
 - This was cited as a NASA Best Practice
 - QC Exemption Request (QCER)
 - Completed when a supplier cannot meet one or more of the Quality Clauses imposed

Procurement Quality Assurance Overview



Scope

- PQA controls are applied to Critical Items (JCI)
 - Procurement JCI is defined as:
 - Flight Hardware
 - Engineering Models, Qualification Items, and Potential
- Source Inspection
 - Rec. Inspection

Verify

Supplier Quality Requirements



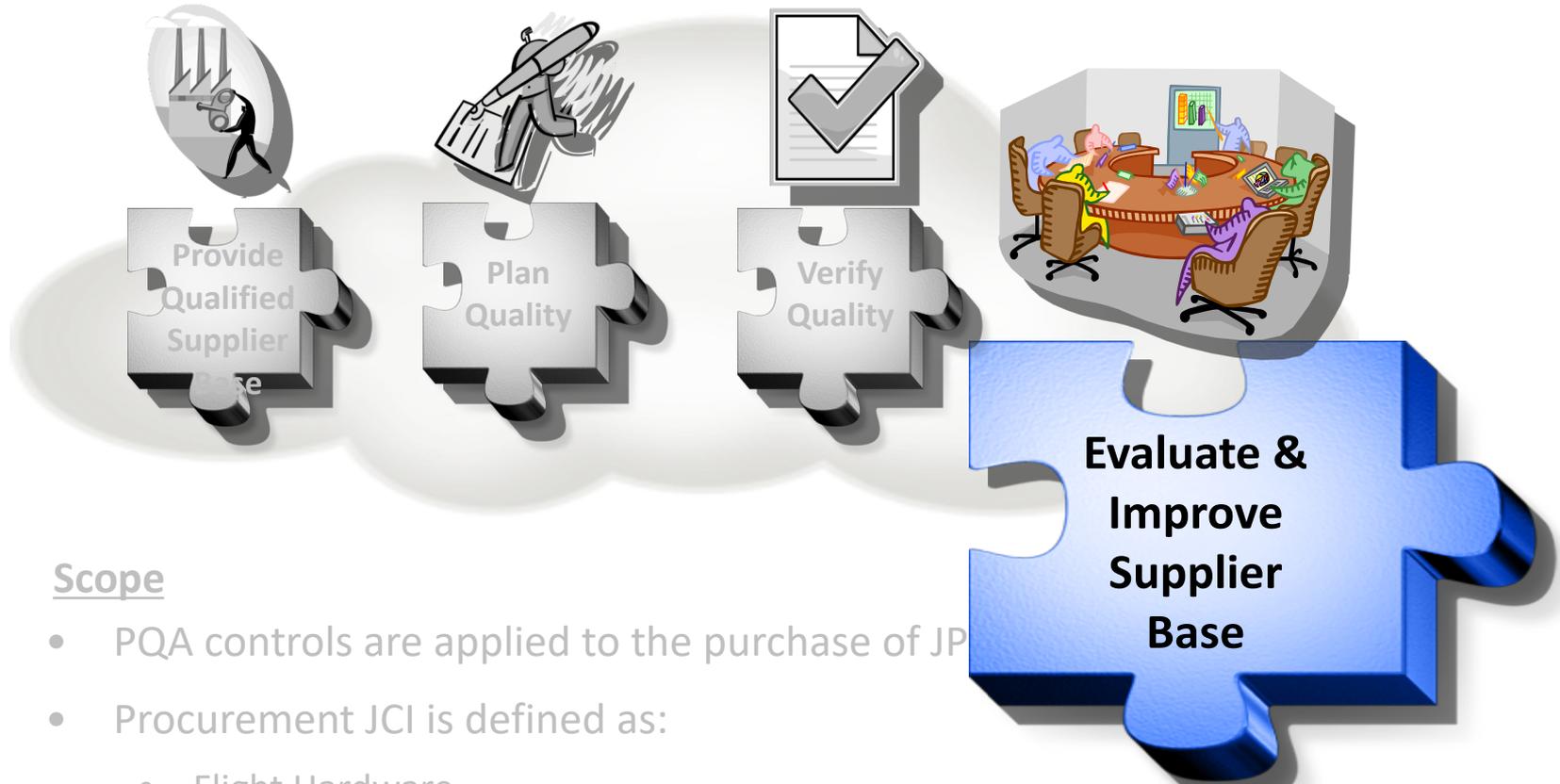
Source Inspection

- PQA applies a Source Inspection Clause when a characteristic cannot be verified during final inspection or it makes business sense to inspect at the suppliers facility

Inspection Groups (Receiving, Electronic, and Mechanical Inspection)

- All procurements marked as JCI/Flight are inspected
- The requisition writer will receive an email when the item hits the dock
 - May request priority via e-mail
- Jobs logged into Inspection Queues
 - The Inspection Queue tracks jobs, provides status, prioritizes, and feeds metrics (i.e. cycle time, backlog, and aging)
- Inspection performed per Inspection Plan, Contract Requirements, Drawings, Specifications, etc.
- Document inspection results on and attach certifications and RIP to the IR

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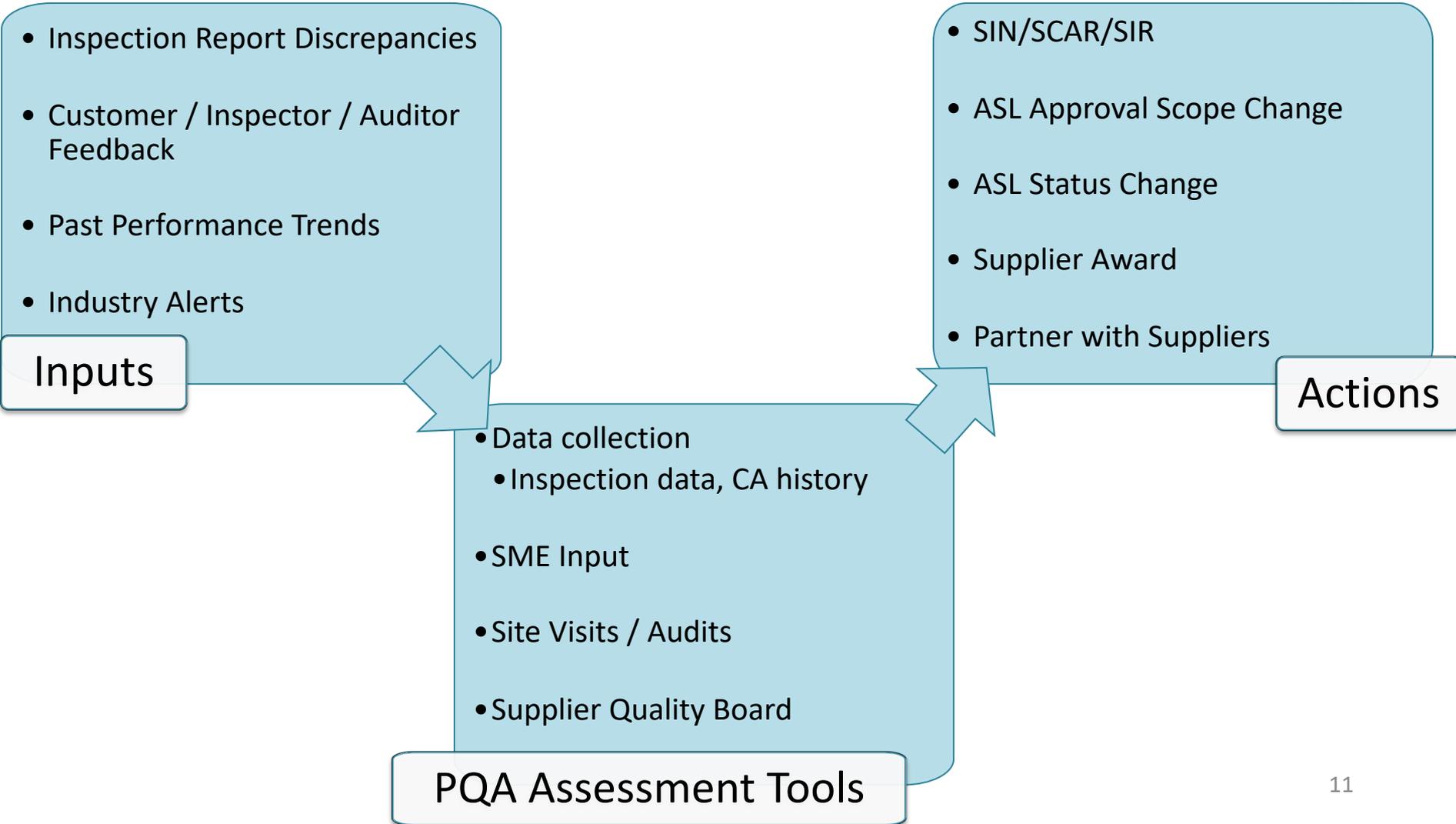


Scope

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 - Flight Hardware
 - Engineering Models, Qualification Units with Flight

- Supplier Rating System
- Corrective Actions
- Supplier Quality Board
- PQA Supplier Awards

Evaluate & Improve *Supplier Performance*



Evaluate & Improve *Supplier Performance*



Supplier Rating System (SRS)

- Supplier Rating System Calculation
 - Supplier Performance
 - QARS Inspection Data
 - Feedback
 - Customer Feedback
 - Inspector Feedback
 - Auditor Feedback
- Average SCAR Grades

Overall Quality Rating	
Green	Excellent
Yellow	Satisfactory
Red	Potentially Unsatisfactory

Evaluate & Improve *Supplier Performance*



Corrective Action System

- Discrepancies in CA System
 - Supplier Responsible Nonconformances from Supplier Related IRs
- Determination Options
 - No Action
 - The supplier receives no notification on the discrepancy found.
 - Supplier Information Notices (SINs)
 - Provides Nonconformance Information to Suppliers
 - No Response Required
 - Supplier Corrective Action Request (SCAR)
 - Provides Nonconformance Information to Suppliers
 - Supplier is required to perform a root cause analysis and a corrective action
 - SCARs are graded by PQA and feedback given to the supplier and included in the Supplier Rating System

Evaluate & Improve *Supplier Performance*



Supplier Quality Board (SQB)

- Cross-functional team
 - Acquisition
 - Manufacturing
 - Engineering
 - Mission Assurance
 - Quality Assurance Engineering
 - Configuration Management
 - Electronic Parts and Material Inventories
 - Procurement Quality Assurance
- Inspection
- Forum to review supplier performance and determine appropriate actions to take based on performance
- Distributes supplier updates via “SQB Newsletter”
- Collaborates with institutional experts and suppliers to perform investigations
- Presents Supplier Trust And Recognition (STAR) Awards