



ACQUISITION

Reengineering the Acquisition/Procurement Process: Requirements Collection Methodology

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Agenda

A C Q U I S I T I O N

- Project Methodology
- Requirements Collection
 - Customer Sessions
 - Customer Voting
 - Stakeholder and Process Performer Sessions
- Preliminary Benchmarking
- Quick Hits
- Where are we Now?

Project Methodology

A C Q U I S I T I O N

Major improvement can come about through a single paradigm change, or by a combination of smaller but important changes.

Gather requirements

- Customers, stakeholders, process performers (you!), and suppliers

Assess current state of the process

- What & how we do it now

Benchmark

- Best practices

Future State

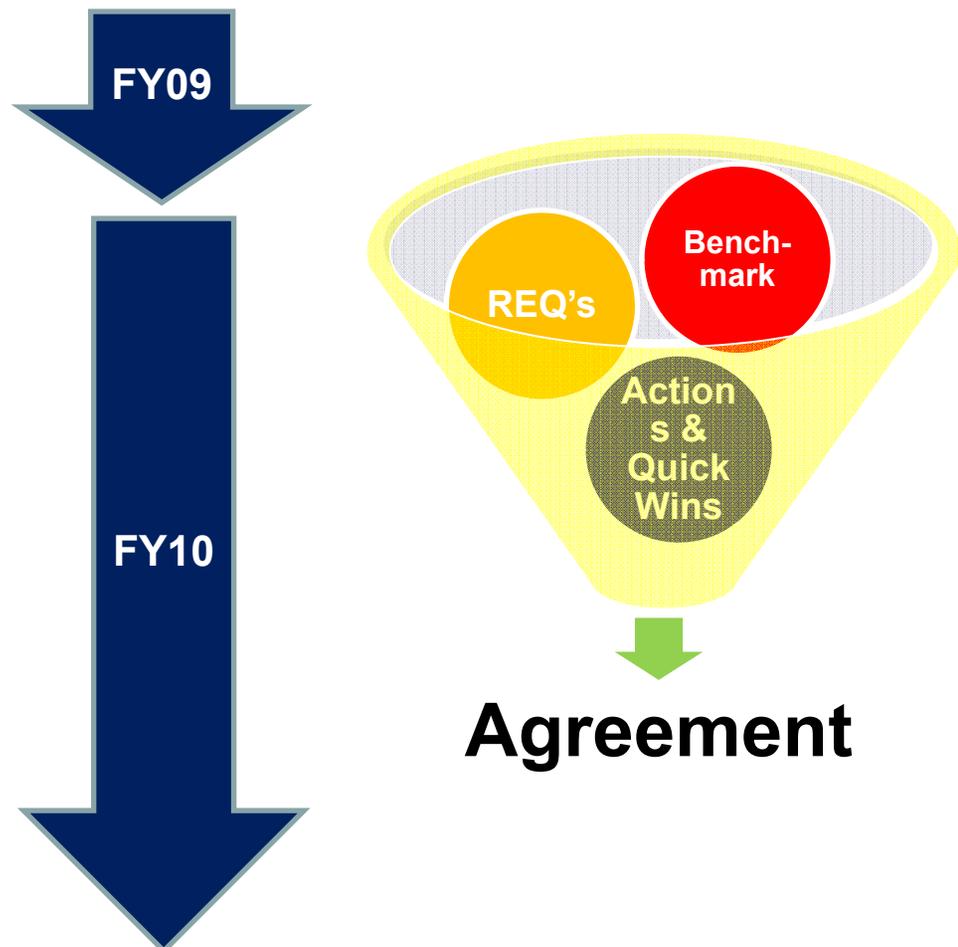
- What & how we should do it

Near-term and Long-term

- Identify “quick hits” & long-term actions

Agreement

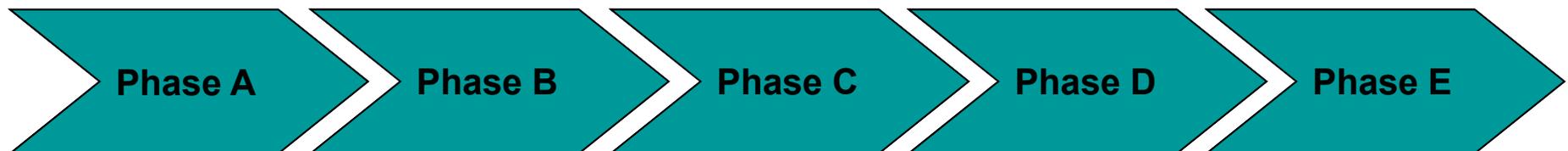
- Obtain agreement & implement the agreement



Methodology: Project Plan

A C Q U I S I T I O N

- Each phase has required products and independent reviews
- Phase A: Concept Studies/Development
 - Validate Customers, Stakeholders, and Process Performers
 - Requirements; Concept; Prelim. Concept of Operations; Prelim. Project Plan
 - Concept Review
- Phase B: Preliminary Design
 - Requirements (baseline); Prelim. Design; Concept of Operations; Project Plan; Integrated Baseline (tech-sched-cost)
 - Pre-PDR peer reviews; PDR; Confirmation Review
- Phase C: Final Design & Build
- Phase D: System Assembly, I&T, and Launch
- Phase E: Operations & Sustainment



Acquisition Reengineering Activity 1: Gather Customer Requirements

A C Q U I S I T I O N

- Activity 1 - Requirements Generation
 - Objective: to capture customer requirements as the basis for proposing a concept (and subsequent design) that meets the requirements in a verifiable manner
 - Requirements are solicited from:
 - Customers – primary customers are Project Managers and Proposal Managers
 - Stakeholders – we have a long list (e.g., Legal, Property, Invoice Management, Engineering and SMA management...)
 - Process Performers – buyers, negotiators, Contract Technical Managers (primary), others
 - Employ a modified version of the JPL Resource Management System technique
 - Products include preliminary requirements set & recommended “quick hits” (Lean Six Sigma Kaizen events and Just-Do-Its) for implementation
 - Establish JPL acquisition process definition



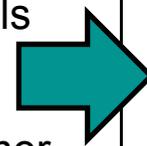
Customer Requirements Collection Method

A C Q U I S I T I O N

- Requirements collection & analysis tools
- Customer/stakeholder/process performer groups identified
- Collection sessions technique(s) mapped out
- Session pre-work conducted prior to each session

Requirements Collection Method

- ✓ 1. Identify requirements collection & analysis tools
- ✓ 2. Create requirements collection tool
- ✓ 3. Identify customer/stakeholder/process performer groups
- ✓ 4. Map out collection sessions technique(s)
- ✓ 5. Perform sessions pre-work



No.	Source		Requirement		
	Name	Type	Statement	Rationale	Impact
	Firstname Lastname	Project Manager	the acquisition process shall provide notification for all defective deliveries	user needs to know of discrepancies to replan activities	minimize schedule & cost impact to user
Sample					
1					
2					
3					
4					
5					

Illustrative

Sampling of requirement fields

- ▶ Source Name
- ▶ Source Type, e.g., Project Manager
- ▶ Requirement statement
- ▶ Requirement rationale
- ▶ Requirement impact
- ▶ Requirement source
- ▶ Mandatory?
- ▶ Top Five?

- ▶ Requirement category
- ▶ Disposition Rationale
 - ▶ Process Owner
 - ▶ Stakeholders
 - ▶ References
- ▶ Implementation Method
- ▶ Verification method
 - ▶ Status
 - ▶ Comments

Customer Sessions

A C Q U I S I T I O N

No.	Name	Org #	Count	Date
1	Strategic Planning & Project Formulation Office	150	4	3-Feb
2	Solar System Exploration Directorate	400	7	18-Feb
3	Exploration Systems & Technology Office	190	10	2-Mar
4	Chief Engineer	101	3	2-Mar
5	Cost Estimation & Pricing	251	3	15-Mar
6	Mechanical Systems Div.	350	9	15-Mar
7	Astronomy & Physics Directorate	700	3	22-Mar
8	Instruments & Science Data Systems Div.	380	5	22-Mar
9	Autonomous Systems Div.	340	14	23-Mar
10	Communications & Education Office	180	20	24-Mar
11	Earth Science & Technology Directorate	800	15	30-Mar
12	Systems & Software Div.	310	17	30-Mar
13	SEMOG	3101	13	2-Apr
14	Project Support Office	160	12	5-Apr
15	Safety & Mission Success Directorate	500	14	5-Apr
16	Comm., Tracking & Radar Div.	330	14	6-Apr
17	DSN Development, Operations, & Services Directorate	920	6	14-Apr
18	Chief information Officer	170	6	15-Apr
19	Science Div.	320	3	20-Apr
20	Enterprise Engineering Div.	370	16	27-Apr
21	Make-up Session	N/A	7	28-Apr
22	Chief Scientist	120	2	6-May
23	Mars Exploration Directorate	600	7	14-May
TOTAL			210	

Customer Voting

A C Q U I S I T I O N

Summary

- Following the Customer sessions, performed preliminary data analysis, identified the most commonly voiced/most impactful ideas, and prepared an electronic ballot for Customer voting.
- 51% of customers who attended the Customer Sessions responded.
- Customers were asked to
 - (1) make choices from a list of 40 items based on importance (Not Important at all, Fairly Important, Very Important) **and**
 - (2) respond with the Top 5 items from the list by typing the number of his/her selections in an input box.

General

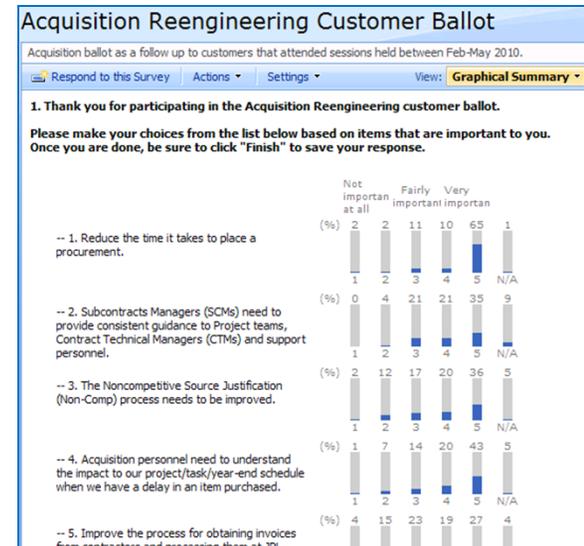
- Email with link to ballot was sent to customers on the morning of Monday, May 17
- Eligible voters: 224
- How many have voted: 115
- Voting complete: May 25

Thank you for participating in the Acquisition Reengineering customer ballot.

Please make your choices from the list below based on items that are important to you. Once you are done, be sure to click "Finish" to save your response.

	Not important at all	2	Fairly important	4	Very important	N/A
	1		3		5	
-- 1. Reduce the time it takes to place a procurement.	<input type="radio"/>					
-- 2. Subcontracts Managers (SCMs) need to provide consistent guidance to Project teams, Contract Technical Managers (CTMs) and support personnel.	<input type="radio"/>					

Sample



Ballot Analysis

A C Q U I S I T I O N

- Customer voting is one data point — but a very important one.
 - The customer voting process proved to be an excellent communication/feedback mechanism for the customers: they felt they were heard.
 - It also proved to be a useful educational vehicle for the Acquisition Division process performers who attended the sessions.
- Voting analysis focused on five “cuts” at the data:
 1. Those items receiving the largest number of “5” ratings
 - Ten items received 35 or more votes in this range, which means that at least 30% of those who voted rated them the most important (despite some voters finding the item not applicable to them).
 2. Those items receiving the largest number of combined “4” and “5” ratings.
 - Thirteen items received 50 or more votes in this range, which means at least 44% of those who voted rated them high (despite some voters finding the item not applicable).
 3. Those items receiving the largest number of “Top Five” designations.
 4. Those items specific to Commodities receiving high ratings.
 5. Those items specific to Subcontracts/Bypass receiving high ratings.

Customer Ballot email sent 5/17/10

A C Q U I S I T I O N

From: Taylor, Randall L (2680)
Sent: Monday, May 17, 2010 9:03 AM
To: Vanek, Tom (2600-Affiliate); Taylor, Randall L (2680)
Subject: Here's your CUSTOMER BALLOT for Acquisition Reengineering -- Vote Now!
Importance: High

Thank you again for participating in the Acquisition Reengineering Project customer requirements sessions. We held 24 customer sessions, with 224 persons participating.

We have analyzed the hundreds of brainstorming points that were generated. We've identified the suggestions that were most frequently heard and/or seem most likely to make a significant difference in acquisition/procurement process effectiveness and efficiency. These are included in your Customer Ballot (instructions below).

Voting should take you about 20 minutes. There are 40 items for you to rate in terms of importance to you. You do not need to provide a rating to every question. When you finish the ratings, you can indicate the items that represent your "Top Five" priorities.

Please note that we are still in the data-gathering phase. Just because an item receives the most votes does not guarantee that we will be able to implement it. We are collecting ideas from administrative divisions, stakeholders, and process performers as well as doing some preliminary benchmarking of process best practices. As explained at the sessions, our plan is to review your voting and this other data, identify near- and medium-term improvement tasks (and the resources required), and come back with a proposed improvement plan.

Your **Customer Ballot** is available at http://goto/Div26_Customer_Ballot. Please submit your ballot by COB, Thursday, May 20th.

Important Note: When clicking the link to the ballot, you may be requested for your JPL username and password. If prompted, please enter your Username in this format: JPL\username. Your responses will be kept confidential. We are requesting you to input your username and password since we are only allowing those that have participated in our customer sessions to access the ballot. If you have any trouble accessing the ballot, or have technical issues please contact Tom Vanek at tvanek@jpl.nasa.gov.

Randy

Customer Voting: Part 1 (115 responses)

A C Q U I S I T I O N

The following are the items **rated a 5** on the scale ranging from 1: Not important at all to 5: Very important.

Priorities	Vote count of 5s only	PCT
Reduce the time it takes to place a procurement (#1).	62	53.9%
The status of my procurement should always be visible to know where my item is, or if any problems or issues arise (#8).	54	47%
Have a capability to handle emergency procurements (#16).	44	38.2%
Acquisition personnel need to understand the impact to our project/task/year-end schedule when we have a delay in an item purchased (#4).	44	38.2%
Provide us a single point of contact in Acquisition & interact with us early (#10).	37	32.2%

The following are the items **rated either 4 or 5** on the scale ranging from 1: Not important at all to 5: Very important.

Priorities	Combined vote count of 4s and 5s	PCT
The status of my procurement should always be visible to know where my item is, or if any problems or issues arise (#8).	79	68.7%
Reduce the time it takes to place a procurement (#1).	75	65.2%
Have a capability to handle emergency procurements (#16).	69	60%
Acquisition personnel need to understand the impact to our project/task/year-end schedule when we have a delay in an item purchased (#4).	62	53.9%
Provide ordering and tracking tools that are user friendly (#19).	62	53.9%

Administrative Divisions/Stakeholder Sessions

A C Q U I S I T I O N

No.	Name	Org #	Count	Date
1	Ethics Office	102	4	6-Apr
2	Office of Protective Services	203	3	14-Apr
3	Office of the General Counsel	N/A	2	15-Apr
4	Office of Export Control	141	7	29-Apr
5	Facilities Div.	280	11	5-May
6	Logistics and Technical Information Div.	270	14	3-May
7	Program Business Management Div.	250	13	5-May
8	Human Resources	110	8	6-May
9	Task Order Administration	211	5	6-May
10	IBS Div.	220	11	11-May
TOTAL			78	

Process Performer Sessions

A C Q U I S I T I O N

No.	Name	Org #	Count	Date
1	Invoice Management Sec.	214	20	3-May
2	CTMs	N/A	6	11-May
3	Receiving Staff	2726	3	14-May
4	Rapid Procurement SCMs	282	7	19-May
5	PO SCMs	262	14	20-May
6	Cost Analysts	263	9	28-May
7	University SCMs	269	11	19-May
8	Support Services & Construction SCMs	266	12	18-May
9	Flight Projects SCMs	267	7	18-May
10	PAMs	268	2	19-May
11	Acquisition Mgt & APCS	26X	14	24-May
TOTAL			105	

Preliminary (Coarse) Benchmarking

A C Q U I S I T I O N

- **Objective:** To identify key acquisition/procurement major process improvement areas that might not surface from the requirements collection sessions, but have been previously done by other Acquisition initiatives.
- **Methodology**
 - Literature search, by Booz Allen Hamilton and by JPL, plus review of relevant Acquisition Div. activities.
- **Reviewed the following Division activities**
 - Division Strategic Plan — BAH compared project Preliminary Requirements to the Strategic Plan
 - Idea Summits — BAH compared project Preliminary Requirements to the collected ideas
 - R2C — JPL reviewed scope of potential Oracle Advanced Purchasing Suite implementation against the Project Plan
 - KPIs — BAH compared project Preliminary Requirements to the proposed Key Performance Indicators
- Benchmarking resulted in some changes to the Preliminary Requirements (and ideas for Quick Hits and Phase A2/3 study)

Preliminary Requirements

A C Q U I S I T I O N

- Objective of preliminary requirements: to serve as the basis for conducting Phase A2/3 conceptual design and targeted benchmarking; also provides a resource to identify Quick Hits for management.
- Methodology
 - Reviewed brainstorming ideas from customers, stakeholders, and process performers
 - Reviewed ballot results
 - Reviewed BAH & JPL benchmarking materials
 - Turned the most popular and/or most promising ideas into preliminary requirements
 - Added a small number of constraints that the new process must comply with
- BAH tested the draft preliminary requirements set against the Division Strategic Plan (goals and actions) and against the Idea Summits brainstorming ideas
 - Results were very good (not identical) alignment.

Quick Hits

A C Q U I S I T I O N

- “Quick Hits” are process improvement ideas that meet the following criteria:
 - They have clear value to customers (primarily), stakeholders, and process performers
 - They are properly sized to be implemented within 6 months or less (Kaizen-sized or smaller)
 - They do not require any programming by Institutional IT
 - The necessary resources are available and fit within the Acquisition Division budget (or possible small augmentation)
 - Their implementation is not expected to introduce impediments to the broader process reengineering effort
- An improvement opportunity that requires more study, or otherwise does not meet the above criteria, would be included in the Phase A/B reengineering activity.
- Quick Hits may be implemented in several ways, e.g.:
 - Just Do It
 - Facilitated focus group
 - Acquisition mini-team
 - Kaizen event
- The list of recommended Quick Hits is a menu for management to choose from. They can be implemented in any order. Apart from Just Do it items, prudence dictates embarking on a maximum of 3 Quick Hits per quarter (to ensure adequate oversight and synergistic coordination with other activities as well as to put less strain on the budget).

Where Are We Now?

A C Q U I S I T I O N

- Completed purchase requisition sub-process reengineering (11 “enablers” all operational)
- Completed Standard Subcontract Data Requirements (SDRL/DRDs) (official in command media)
- Received ATP for two Quick Hits
 - Control points sub-process
 - Communication norms
- Initiated planning for Advanced (Targeted) Benchmarking activity

Summary

A C Q U I S I T I O N

- Completed 44 requirements collection sessions with 391 persons, representing customers, stakeholders, and process performers
- Conducted customer voting with a 51% response rate
- Performed preliminary benchmarking
- Generated process Preliminary Requirements to guide new process conceptual design
- Provided recommended Quick Hits for management consideration
- Refined the plan for conceptual design phase

—Additional information is available in IEEE paper, “Reengineering the Acquisition/Procurement Process: A Methodology for Requirements Collection” (available from the authors)