

Use of Questionnaire-Based Appraisals in Process Improvement Programs

**Acquisition of Software-Intensive Systems Conference
Arlington, Virginia
January 28, 2003**

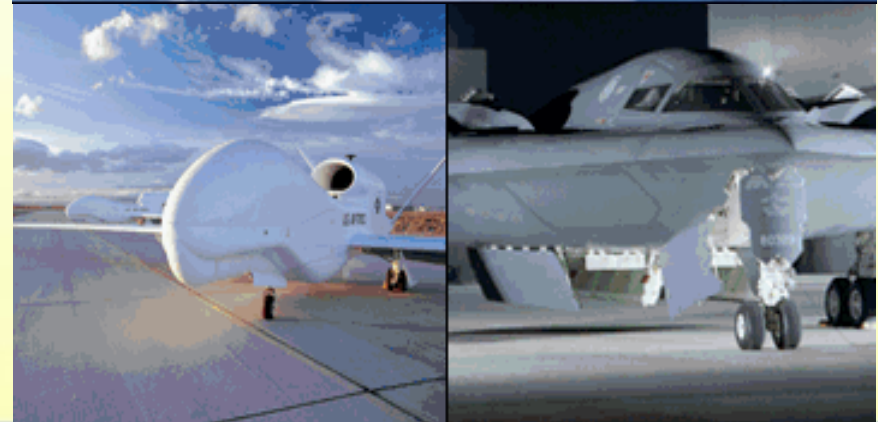
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Corporate Overview

- Headquartered in Los Angeles
- \$25 Billion (est.) Sales
- 120,000 Employees
- 50 States and 25 Countries
- Operates through Seven Sectors
 - Electronic Systems
 - Integrated Systems
 - Mission Systems
 - Newport News
 - Ship Systems
 - Space Technology
 - Information Technology



IT Sector Overview

- Nearly \$4 Billion in Revenues and More Than 21,000 Employees Worldwide
- Top-tier Integrator of Large-Scale Information Systems & Full Lifecycle IT Solutions
- Premier IT Provider to Defense, Intelligence, Civil Federal, State & Local Government, and Commercial Customers
- State & Local Solutions For: Homeland Security and Public Safety; Criminal Justice; IT Management; and Human Services
- Rich Understanding of Customer Domain
- Deep Pool of Technical Talent and Expertise



- **Introduction - Assessment Techniques**
- **Questionnaire-Based Appraisal (QBA) Overview**
- **Lessons Learned**
- **Conclusion**

- **Many Assessment techniques are available**
 - CBA-IPI (Capability Maturity Model Based Appraisal for Internal Process Improvement)
 - Evaluations
 - SCAMPI (Standard CMMISM Appraisal Method for Process Improvement (SCAMPISM))
 - Interview-based
 - Document Intensive
 - Questionnaire-Based
 - Mini-assessments

- **Why use assessments:**
 - Check process improvement progress (against some standard)
 - Gain insight into program/project process
 - Check maturity level
 - Baseline for a process improvement program
 - As an audit tool - to check a contractor/supplier in a procurement/contractual situation

- **What is it?**
 - Application of a “Maturity Questionnaire” in a disciplined way
 - **Maturity Questionnaire typically based on the Software Engineering Institute (SEI) published questionnaire**
 - **Rigorous technique to collect data in a facilitated manner**

- **Why is it used?**
 - Less invasive than a CBA-IPI
 - Less costly than a CBA-IPI
 - Involves a large number of program/project/organizational personnel
 - Provides quantitative data - thus various analyses are possible - e.g., Maturity Level

- **Where is it used?**
 - To obtain a baseline snapshot of the organization's process (as part of a process improvement program)
 - To obtain a snapshot of progress during a process improvement program
 - To get a quick judgment of maturity level
 - As a precursor to a full assessment (in place of maturity questionnaire)

- **Where is it used? (con't)**
 - Environmental Considerations:
 - **Majority of personnel have a reasonable understanding of the reference model**
 - **Majority of organizational personnel should be able to participate: 80-90 percent**

- **Method**
 - QBA Plan is developed
 - Questionnaire is prepared
 - Plan for processing of data (data base)
 - Orientation for organization (Appraisal Participants)
 - Questionnaire administered in facilitated setting
 - Includes orientation on model
 - Data collected, Analyzed, Reports prepared

- **Questionnaire**
 - Respondent Data
 - Question set (based on reference model)
- **Personnel**
 - Selection
 - Scheduling
- **Orientation**
 - On QBA process
 - On reference model used

- Section 2: Acquisition Planning 14 questions

Planning ensures that reasonable preparation for the acquisition project is conducted, all elements of the project are included, and that appropriate plans are developed and maintained.

In the Division/Program/Project you are currently working:

1. Are you involved with or have knowledge of planning for acquisition or for project planning?

If the answer to this question is Does Not Apply or No, go on to the next section.

A

C

G

Does
Not Apply

No

Yes

Comments:

4. Does a project plan exist which describes the general process for managing requirements?

A	B	C	D	E	F	G
Does	Don't	No	About	About	About	Yes
Not	Know		25% of	50% of	75% of	
Apply			the time	the time	the time	

Comments:

- **Environment**
 - Large, diverse DoD Project Environment
 - Development and Sustainment
 - Active process improvement programs underway (based on CMMI and SA-CMM)
 - Military/Civilian/Contractor mix

- **Method**

- Questionnaire with 11 topic (process) areas
- Pilot was conducted
- Sessions were scheduled for 2 hours (included orientation and facilitated questionnaire completion)
- Results were analyzed using Microsoft® Access

- **What went right**
 - Did provide visibility into existing PI efforts
 - Was cost effective - involved a minimum of resources for number of people engaged (low to moderate labor impact)
 - Engaged process improvement as well as other personnel
 - Discovered what organization could absorb
 - Format was good

- **What went wrong**

- Data-base design made analysis cumbersome
- QBA Orientation (and facilitation) time was too short
- Full personnel population expectation not achieved
- Misjudged participants level of expertise
- QBA did not meet sponsor's expectation
- Pilot test group was not representative

- **What we would have done differently**
 - Allowed sufficient time for process (facilitation, orientation, etc.)
 - More focus and control of Pilot session
 - Better Data Base tool
 - Used one model (Only SA-CMM)

- **QBA is a good technique (when used properly and in the right context)**
- **Can provide a good baseline for a new or existing process improvement program**
- **Is multidimensional - many uses**
- **Is cost effective**
- **Is non-invasive**
- **Provides quantitative data**

Questions?

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