Using CMMI® to Improve the Enterprise, Not Just its Processes

NDIA 10th CMMI Technology Conference
15-18 November 2010

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S&IS is Boeing’s center for all intelligence and government / commercial space systems. It is the world's leading manufacturer of geostationary satellites, and has the largest dedicated satellite factory in the world. S&IS’ headquarters is in Seal Beach, California.
ABSTRACT: Using CMMI® to Integrate and Improve the Enterprise, NOT Just its Processes

For some, the CMMI® Journey is about defining, executing and improving processes with the end goal of obtaining a CMMI® rating. Taking this approach usually results with good processes, satisfied process teams, a plaque on the wall and no real perceived value.

This presentation covers how we made high value achievements when renewing our CMMI® rating. This included making significant organizational integration improvements, and fostering a culture that recognizes CMMI makes good business sense.

The key was in creating value propositions using the right people, use cases and tools to facilitate efficient information access. Most importantly, we planned big, started small and had a detailed interpretation and implementation strategy of the CMMI® model.
Agenda

- Background - Transitioned to strategic CMMI® focus
- High leverage areas for value propositions
  - Appraisal preparation
  - Multi-disciplined problems
  - Use cases
- Critical steps in framing value propositions
- Getting MORE value from CMMI®

A Value Proposition is a Proposal that Adds Value
Where Have We Been on Our CMMI® Journey?

- Started using CMMI® as an improvement tool in early 2000
- Obtained numerous CMM® / CMMI® Level 3 / 5 ratings
- Received numerous RFPs that have CMMI® requirements
- Transitioned focus from tactical to strategic improvements
  - Broad scope
  - Infrastructure
  - Integration

Using CMMI® for the Right Reasons!
CMMI® Transition Team Included all Product Development and Process Management Stakeholders
Situation During our CMMI® Transition

- Very challenging business environment
  - Few new programs
  - Extreme competition
  - Focus on bottom line results - overhead cutbacks

- Significant organizational changes
  - Restructuring and realignment
  - New common processes
  - Aggressive improvement initiatives

Climate Focused on Adding Value
Described CMMI® to New Management Team

Global Nature of Approach Raised Concerns

• Plans
• Teaming
• Engineering / Support
• Status / Corrective Action
• Process Improvements

Seems ambitious. What value are we gaining?

Got It!
Succinctly Communicated Value of CMMI® Transition

- **Business Case**
  - Customers want it, competition using it
  - Proven best practices aligned with how we operate
  - Supports where we want to go

- **Examples of Value Propositions**
  - Shift from tactical to strategic thinking
  - Processes that are easier to locate
  - Better integration of activities
  - Faster access to data

**Related CMMI® to our Business and Operations**
Created Value Propositions from Appraisal Preparation

CMMI® Process Areas

Process Area 18
Process Area 17
Process Area 2
Process Area 1
Spec Prac 1-N
Gen Prac 1-12

NEW Top Level Processes

Process 21
Process 20
Process 2
Process 1
Steps 1-X
Output A
Output B

NEW Low Level Processes

Guide X
Guide X-1
Guide2
Guide 1
Steps 1-X
Document A
Product B

NEW RAAs / Lifecycle

IPT 7
IPT 6
IPT 1
Program Charter
RAAs
Lifecycle

What we’ve done in the past

Program and Functional Repositories
Programs
Domains
Functions

All this JUST for the Appraisal!!

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Created Value Propositions from Appraisal Preparation

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Appraisal Preparation Value Proposition 1: Enable People to Understand How to do Their Jobs

CMMI® Process Areas
- Process Area 18
- Process Area 17
- Process Area 2
- Process Area 1
  - Spec Prac 1-N
  - Gen Prac 1-12

NEW Top Level Processes
- Process 21
- Process 20
- Process 2
- Process 1
  - Steps 1-X
  - Output A
  - Output B

NEW RAAs / Lifecycle
- IPT 7
- IPT 6
- IPT 1
  - Program Charter
  - RAAs
  - Lifecycle

What we've done in the past
- Program and Functional Repositories
  - Programs
  - Domains
  - Functions

What to Do
How to Do
Who & When

Enable People to Understand How to do Their Jobs

NEW
- Top Level Processes
- Low Level Processes
- Mapped to
- Linked to

What to Do
How to Do
Who & When
Appraisal Preparation Value Proposition 2: Use Data Collection to Integrate Critical Activities

- How can we better leverage our training efforts?
- Are we collecting the right measures?
- How can we better focus our improvement activities?

What we’ve done in the past

Program and Functional Repositories

- Programs
- Domains
- Functions

Integrated Training Plans
Integrated Measurement Plans
Integrated Improvement Plans
Numerous Value Propositions Stemmed from Multi-disciplined Problems

**Problem**
- Evaluation data not integrated
  - Remove redundancies
  - Ensure comprehensiveness

**Solution**
- Internal Audits
- Program QA
- Functions
- Corporate
- Customer
- AS9100
- CMMI®

**Numerous Value Propositions**

**Now I know where to focus our resources**

<table>
<thead>
<tr>
<th>PROCESSES</th>
<th>INTEGRATED EVALUATION ACTIVITY</th>
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<tbody>
<tr>
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<td>Internal</td>
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### Other Value Propositions
Based on Simple, High Priority Use Cases

"Value Added !!"

<table>
<thead>
<tr>
<th>Target Users</th>
<th>Use Case #</th>
<th>Use Case Examples</th>
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<tbody>
<tr>
<td>Prog, Func Practitioner</td>
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<tr>
<td>Process Councils</td>
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<td>Are the right processes being deployed?</td>
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<td>CMMI® SME</td>
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<td>Customer</td>
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<td>How do I do my job?</td>
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<td>3</td>
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<td>Where can I find process related data?</td>
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<td>4</td>
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<td>How effective is our evaluation program?</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>What is our CMMI® approach?</td>
</tr>
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**Other Value Propositions**

**Based on Simple, High Priority Use Cases**

**Use Case Examples**

1. Are the right processes being deployed?
2. How do I do my job?
3. Where can I find process related data?
4. How effective is our evaluation program?
5. What is our CMMI® approach?
Framing Complex Value Propositions

Communication Challenge
- CMMI® terminology
- Broad scope of CMMI® effort

Solution
1. Translate CMMI® into how we operate
2. Focus audience on the value proposition’s scope
3. Illustrate the value of the proposition
Step 1 – Translate CMMI®:
Process Management in Our Own Paradigm
Step 2 – Focus the Audience: Large Quantity of Process Management Data

“Wow! That’s A lot of Data”
Step 3 – Illustrate the Value: Turn Chaos into Organized Process Asset Library Views

Explain the Real Situation

Process Data

Step 3 – Illustrate the Value:

VALUE Added!!

Process Framework
- Process Views
- Standard Tools
- Training Plans
- Process Audits
- Measurement Plans
- Measurement Repositories
- Improvement Plans
CMMI® Accelerated Our Capabilities in a Challenging Environment

- Integrated new processes
  - “What to”, “How to” and “When to” execute
- Defined clear RAAs for operating teams
- Integrated training, measurement and improvement plans
- Provided single portal with global access to process data
- Implemented comprehensive data management approach
- Consolidated process and product evaluation information

All Validated by a CMMI® Level 3 Rating
Getting MORE Value from CMMI®

- Develop detailed CMMI® implementation strategy
- Involve all stakeholders
- Understand high leverage areas for value propositions
- Frame your value propositions as simply as possible
  - Translate CMMI® using operational scenarios
  - Focus discussions to the audience

Use KISS: Keep It Simple Strategy!!
Creating CMMI Value Propositions

Questions?