Get It Sold, Keep It Sold

Making the Business Case for High Maturity
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Warm & Fuzzy Prospects . . .

. . . may initially attract management’s attention, but they will soon be asking, “What’s in it for me?”

CMMI Performance Results Summary

<table>
<thead>
<tr>
<th>Performance Category</th>
<th>Median Improvement</th>
<th>Number of Data Points</th>
<th>Lowest Improvement</th>
<th>Highest Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>34%</td>
<td>29</td>
<td>3%</td>
<td>87%</td>
</tr>
<tr>
<td>Schedule</td>
<td>50%</td>
<td>22</td>
<td>2%</td>
<td>95%</td>
</tr>
<tr>
<td>Productivity</td>
<td>61%</td>
<td>20</td>
<td>11%</td>
<td>329%</td>
</tr>
<tr>
<td>Quality</td>
<td>48%</td>
<td>34</td>
<td>2%</td>
<td>132%</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>14%</td>
<td>7</td>
<td>-4%</td>
<td>55%</td>
</tr>
<tr>
<td>Return on Investment</td>
<td>4.0 : 1</td>
<td>22</td>
<td>1.7 : 1</td>
<td>27.7 : 1</td>
</tr>
</tbody>
</table>

*Note: The performance results in this table express change over varying periods of time.*

This Is Your Opportunity to Market!

Given this . . .

. . . How do you make the business case for High Maturity

Organizational Goals & Objectives
Competing Resources
Cost Constraints
Competing Improvement Opportunities

You Need a Structured Methodology to Market the Value
Getting Past the Warm & Fuzzies

- Locate the opportunities
- Rank the candidates objectively
- Plan to execute successfully
- Capture & market the results
- Make it permanent

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</table>

- >67% Decrease in Cost
- >3x Increase in Productivity

- >15x Increase in Quality
- >93% Decrease in Errors/KSLOC

TRP-06-530

Given this . . .

Good Engineers Use Trade Studies

Use this . . .

. . . To make the business case for High Maturity

Organizational Goals & Objectives
Competing Resources
Cost Constraints
Competing Improvement Opportunities

Identify, Quantify & Prioritize Improvement Opportunities
Align Business Goals with the Work

Long Range Strategic Plan Goals

Local Tactical Goals (Annual Operating Plan)
Perform on Contracts Within Cost, Schedule, and Quality

x % of Total Project Effort

Engineering Discipline /Processes on the Project

Discipline Process A
- Sub-process A1
  - % of Process A (+/-)
  - % of Subprocess A! (+/-)
- Sub-process A2
  - x% of Discipline Process Under Statistical Control

High x+ %
Low x- %

Discipline Process B
- Sub-process B1
  - % of Process B (+/-)
  - % of Subprocess B1 (+/-)
- Sub-process B2

High x+ %
Low x- %

Discipline Process C
- Sub-process C1
  - % of Process C (+/-)
  - % of Subprocess C1 (+/-)
- Sub-process C2

High x+ %
Low x- %

x % of Total Discipline Effort

Locate the Opportunities
Choose the Right Projects

Identify owning Directors, proposals and evaluation criteria

Weight the evaluation criteria

Rank & score the candidates to determine the best process improvements to work

Rank the Candidates Objectively
Plan Obsessively

Identify data to be collected

Develop action plan for innovation

Specify evaluation criteria

Estimate budget & schedule

Measure & evaluate

Plan to Execute Successfully
Success Is in the Details - 1

Artifacts generated by following this process

Triggering data or process condition

Business rationale

Document the Issue, Problem or Opportunity

Success Is in the Details - 2

Process performance impacts

Approach for root cause analysis

Root cause

Preventive & corrective actions

Investigate the Root Cause
Success Is in the Details - 3

Develop the Action Plan

- Details of any pilot
- Proposal summary
- Life cycle impacts
- Implementation & evaluation description
- Detailed action items

Define the Resources & Document the Results

Cost & schedule to implement

Cost if not implemented

Measured performance change

Measured process capability

Measured performance change

Cost & schedule to implement

Cost if not implemented

Measured performance change

Measured process capability
Bring the Avionics Source Control Drawing (SCD) generation process under statistical control with a stable baseline.

<table>
<thead>
<tr>
<th>Year</th>
<th>Key Action</th>
<th>Target</th>
<th>2008</th>
<th>Comparison</th>
<th>2009</th>
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<td></td>
<td>Bring the Avionics Source Control Drawing (SCD) generation process under statistical control with a stable baseline.</td>
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**Market the Results**

Engineering PMT Steering Committee
Meeting #149
08 September 2009

Bob Tuthill / Joe Vandeville
Engineering Process Group
Northrop Grumman Corporation

**Keep Management Aware of the Value Provided**

More Examples from Past CMMI Conferences

- Presentations can be found at the DTIC’s NDIA Conference Proceedings web site
Making It Grow

- Good  Document the new process
- Better Publish & deliver new training
- Best  Change your engineering rates

When Managers See Money, Making the Next Business Case Gets Easier
Making the Sale

And you have this . . .

. . . You now can make the business case for High Maturity

Given this . . .

Organizational Goals & Objectives
Competing Resources
Cost Constraints
Competing Improvement Opportunities

Results Sell
QUESTIONS

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