Maintaining Institutionalization After the Appraisal Team Leaves

BAE Systems
Electronics and Integrated Solutions Operating Group
Nashua, New Hampshire
USA
Presentation Agenda

– Introduction
  – The Organizational Facts
  – Experience Basis for Premise and Presented Approach

– “Elastic Band Phenomenon”
  – Comfort Zone Scenarios

– Making It Easy To Do The Right Things

– Conclusion

– Final Thoughts
Electronics & Integrated Solutions Operating Group
Electronic Warfare

- Calif.
- Merrimack (N.H.)
- Nashua
- Lansdale (Penn.)
- Pomona
- Texas
- Fort Worth
- N.Y.
- Yonkers
Experience Basis for Premise and Presented Approach

– Twelve years experience with appraisals and assessments
  – Four Software CMM® assessments
  – Two EIA / IS 731 appraisals
  – Two CMMI® appraisals

– SEI certified *Introduction to CMMI®* instructor on Enterprise Process Group staff

– Enterprise Process Group participant on SEI SCAMPI℠ upgrade team
Process Development Time Line

2006
Continue evolving process based on process improvement suggestions
Further expanding use of process

2005
Expanded Level 4 and 5 behaviors from systems and software
Implemented process improvement to enhance process usability
Class A appraisal assesses process (CMMI® SE / SW) at Level 3

2004
Class B appraisal assesses process (CMMI® SE / SW / IPPD / SS) at Level 4
Integrated Product Development Process implemented

2003
Enterprise Process Group officially formed
Management and technical (SE / SW) processes developed

2002
Systems Engineering Process assessed at EIA / IS - 731 Level 3
SW process updated to SW-CMM Level 5
Development of an integrated process begins

2001
Gap analysis performed for engineering and program management processes
Software process assessed at SW-CMM Level 4

2000
Software process assessed at SW-CMM Level 3

1998
Software process assessed at SW-CMM Level 3

1994
Software process assessed at SW-CMM Level 3

BAE SYSTEMS Lifecycle Management
CMMI® released by SEI
PMBOK® focus introduced

Customer requirements for CMMI® appearing in RFPs
The “Elastic Band Phenomenon”

– The Elastic Band Phenomenon Premise
– Once a formal appraisal or audit has been completed, the high energy and extra attention to process compliance will naturally wane, and the organization will tend to migrate toward the pre-appraisal comfort zone
Comfort Zone Scenarios

The appraisal coverage (AC) is less than the organization’s comfort zone (CZ)
- Following the appraisal, the organization remains in its comfort zone

The appraisal coverage is equal to the organization’s comfort zone
- Following the appraisal, the organization remains in its comfort zone

The appraisal coverage stretches the organization’s comfort zone
- Following the appraisal, the organization reverts back to some point less than its original comfort zone (Elastic Band Phenomenon)
Post-Appraisal Organizational Impact
(Reduced Comfort Zone)

Any reduction to process compliance emphasis may result in:

- Non-uniform application of the process
  - Reduced familiarity with the process through non-use
  - Increased cost of rework for process compliance
- Confusion as to when it is right to follow the process
  - Impression that compliance is only needed to pass appraisals
- Practitioners’ frustration with management for providing mixed signals on process compliance
  - Partial/Minimal process compliance; quality suspect

Potential for Poor Project Planning and Poor Project Execution
To facilitate institutionalization, the Enterprise Process Group ensures the process is easy to use

Approaches/techniques we are using:
- Process marketing
- Ease of access
- Process training
- Facilitated project start-up
- Planning work product reviews
- Process automation and process aids
- Internal process assessments
- Active process ombudsman
- Web-based process tips
- Solicited process improvement ideas
Process Marketing

– Display eye-catching posters around your company

– Instill a message: “Bring Your Team Together”

– Reinforce with a slogan: “Unifying Teams Through Integrated Processes”

– Develop a logo: “IPDP” is our Integrated Product Development Process
Ease of Access

Institute a comprehensive Web site that is easily navigated
Process Training

- Effective training is key to the success of a process
  - Multiple levels of training required

- Process introduction course
  - General material and recent changes
  - Annual refresher required

- Integrated training for both the planning and execution phases
  - Includes project management and technical management

- Related training for Peer Reviews, Decision Making, Risk Management, and Supplier Management
Facilitated Project Start-up

– The Enterprise Process Group and the Project Team coordinate the launch activities to develop a comprehensive project plan in a timely manner

– The Project Launch mentoring environment
  – Is a series of modules designed around project planning
  – Provides reinforcement of the process
  – Scopes the process based on project attributes
  – Facilitates planning work product development with project team leads
The Enterprise Process Group is actively engaged in the project's planning activities:

- Guides planning work product development during Project Launch
- Participates as a stakeholder
- Checks planning work products compliance
  - Review lists guide the development of work products and are used as the checklists for audits

Enterprise Process Group Partners with the Project Team during Project Planning
Process Automation and Process Aids

Process Customization Aid
- Uses a series of questions to help the project team select the applicable process elements
- Establishes the standard project shared area
- Pre-populates project information within the planning work products

Automation facilitates process use and compliance
Process Automation and Process Aids

**Project SharePoint Template**

- Enables a collaborative team environment

- Supports and automates aspects of the process
  - Issues & actions tracking
  - Project calendar

- Provides a single point of access for project information

- Common format allows new project personnel to quickly find project information
Responsibility Assignment Matrix (RAM) Aid

- Facilitates preparation for project meetings and work product reviews
- Ensures accurate stakeholder involvement for specific reviews
- Automates meeting invitations using MS Outlook
- Creates agenda, attendee list and minutes template
Internal Process Assessments

- Align with CMMI® and are independently conducted
  - Performed on individual projects
  - Staffed with people knowledgeable in the CMMI® and the organizational process
  - May be conducted periodically on projects with long durations
  - Similar to a Class B (without the organizational elements)

- Check for compliance with CMMI® and the organizational process

- Assess application and understanding of the process

- Indicate the effectiveness of:
  - Process institutionalization
  - Process training
  - Project start-up process
Active Process Ombudsman

- Web-based mechanism to ask process-related questions
  - How does the process apply?
  - Where do I find…?
  - Can you tell me how this practice relates to my project?

- Quick response is provided
  - Process Ombudsman confirms content and intent with requestor
  - Answer is developed and vetted with process team
  - Response sent back to requestor

- Web-based Frequently Asked Questions (FAQs) developed from Process Ombudsman activity
Web-based Process Tips

- Process Tips provide quick access to additional guidance
  - Focused on specific process topics
- Portal to the process
  - Provides interpretation of process intent
  - Reinforces process definitions
  - Reinforces correct behavior
  - Alerts of common misunderstandings
  - Links to related items
Solicited Process Improvement Ideas

– Enterprise Process Group actively solicits improvement suggestions from users
  – Accomplished directly through the Process Web site
  – Rewards for best suggestions
  – Results in process updates

– User involvement facilitates buy-in
  – Enables best practices
  – Encourages continuing inputs
  – Improved process enhances process institutionalization

Institutionalization is Enabled through User Involvement
Institutionalization….Raising the Bar
(Expanding the Comfort Zone)

– Expand the use of process to a wider spectrum of projects
  – Familiarize the largest possible audience with the process and the process terminology

– Leverage process, by its use, during proposal preparation
  – Ease transition between the proposal, and project planning and execution
    - Development of planning artifacts, technical plans, top-level system architecture that are aligned or compliant with the process

  – Design quality in (by use of the process) from the beginning

Reduces future Elastic Band Phenomena
Conclusion

– Establish an organizational standard process
  – It must be comprehensive, concise, coherent; yet easily usable

– Be watchful of the organization being pulled out of its comfort zone, and then relaxing to a previous level or lower (Elastic Band Phenomenon)

– Provide process support and process aids to reduce the tendency to revert to a relaxed state
  – To make the process easier to understand and use correctly
  – To make compliance routine; not unique (institutionalization)

– Implement process improvement as part of the process
  – Methods to suggest improvements must be easy to use
  – Suggestions must be embraced as improvement opportunities
Final Thoughts

– Questions?

– Comments?
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