NAVAIR's Process Asset Library (PAL) Demo, A Step toward a Corporate Organization’s Set of Standard Processes (OSSP)

Prepared for NDIA CMMI Conference Abstract 9379

Approved for Public Release by NAVAIR Public Affairs Office 06 NOV 2009
Topics

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Abstract
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The CMMI speaks of having an Organization’s Set of Standard Processes (OSSP). The Naval Air Systems Command (NAVAIR) had many smaller subdivisions before even looking at the CMM and CMMI model for process improvement (PI). Before we (NAVAIR) can converge on one set of standard processes for use across NAVAIR, we have to start somewhere. The Systems and Software Process Improvement Community of Practice (SPI CoP) was formed to share PI across the Enterprise. PI advocates across the Enterprise were encouraged to participate and share processes, templates, checklists, tools, etc. across the group. As more and more groups converge on a set of processes it may become possible to build a corporate OSSP. In the meantime a small working group was funded to build a Process Asset Library (PAL) demonstration to collect and share the assets.

This presentation shares the PAL journey using the corporate website over the past two years from requirements, design, and implementation, through piloting and deployment.
Background
Background

- NAVAIR PAL demo efforts began in 2007
- Built on requirements of Mission Area Teams
- Searched for PALs to emulate
- Uses CMMI® as framework
Design Philosophy and Implementation
Design Philosophy

Take advantage of the MyNAVAIR Corporate website built-in capabilities

• Announcements for events, policy, and training link
• Discussions for improvement forums, problem reporting, and communications with users
• Documents area to browse/search for assets, download and submit assets with special upload area for process submission
PAL Overview or Main Page

Announcements

- How to locate & download assets
- When and how to submit assets
- How to use discussion threads
- When and how to submit problem report

Updated Documents

- NPPC Maintenance Notes 20090211.doc
- Process Asset Index 20090207.xls
- NAVAIR PAL How To Guide.doc
- Asset Submission Form for the NAVAIR PAL V3.doc
- NAVAIR Labor Tracking Template 20090300.xls

Recent Messages

- Report Problems: Another test problem report
  Posted by Susan_Simms on 1/29/09 5:27 AM
  Wanted to see how this works...

- Report Problems: break for the day
  Posted by ca@peter_youreself on 2/2/09 7:24 PM
  any takers

- Report Problems: no break for the day
  Posted by ca@james_lidell on 2/23/09 7:34 PM
  We will finish when we are done...

- Report Problems: I was able to copy a whole bunch of files
  Posted by ca@peter_youreself on 2/24/09 7:15 PM
  to CEO box

- PI Topics: Pilot test of including links in discussions
  Posted by ca@allard_hunter on 3/29/09 7:37 PM
  WOW! This is pretty cool. Here is a link of one of my favorite sites: https://www.rodeo-roux.com/
Design Philosophy

- Any NAVAIR team member can access
- Use Excel spreadsheet and built in search capability to locate assets
- Link to other government PALs rather than duplicating assets
- Group assets according to Capability Maturity Model Integrated (CMMI®) Process Area and asset type
Who are the PAL Users?

There are three levels of PAL users:

1. General User
   - Can read / download all PAL assets
   - Can submit assets for PAL inclusion
   - Can post / reply to discussion threads

2. Gatekeeper
   - Processes/ loads assets into the PAL
   - Responds to PAL issues in the discussion threads

3. Administrator
   - Responds to user PAL problems
   - Grants access to new gatekeepers / administrators
PAL Organization

- Assets displayed alphabetically in All Assets folder (Documents tab)
- Shortcuts to assets grouped by
  - Functional Area (Acquisition, Engineering, Project Mgmt, Process Mgmt, and Support) and CMMI® Process Area
  - Type of asset (Checklist, Example, Form, Guidance, Policy, Process, Standard, Template, and Training)
Who thinks they have a PAL?
Who thinks they have a corporate OSSP?
Definitions
Before we discuss how we could move to a corporate OSSP let us make sure we are starting with the same definitions for some basic words: standard, standard process, defined process, organization’s PAL, OSSP and tailoring.
Definitions

The Software Engineering Institute (SEI) defines a **standard** as
“*formal mandatory requirements developed and used to prescribe consistent approaches to development (e.g., ISO/IEC standards, IEEE standards, and organizational standards).*”

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1. SEI website.
Definitions

SEI defines a **standard process** as

“an operational definition of the basic process that guides the establishment of a common process in an organization. A standard process describes the fundamental process elements that are expected to be incorporated into any defined process. It also describes the relationships (e.g., ordering and interfaces) among these process elements.”

\(^2\)
SEI defines a **defined process** as “a managed process that is tailored from the organization’s set of standard processes according to the organization’s tailoring guidelines; has a maintained process description; and contributes work products, measures, and other process improvement information to the organizational process assets.”

\(^3\)
Definitions

They define an organization’s PAL as “a library of information used to store and make available process assets that are useful to those who are defining, implementing, and managing processes in the organization. This library contains process assets that include process-related documentation such as policies, defined processes, checklists, lessons-learned documents, templates, standards, procedures, plans, and training materials”\(^4\)
Definitions

They define an OSSP as “a collection of definitions of the processes that guide activities in an organization. These process descriptions cover the fundamental process elements (and their relationships to each other, such as ordering and interfaces) that must be incorporated into the defined processes that are implemented in projects across the organization. A standard process enables consistent development and maintenance activities across the organization and is essential for long-term stability and improvement.”
Definitions

Lastly SEI defines **tailoring** as “altering, or adapting the process description for a particular end. For example, a project establishes its defined process by tailoring from the organization’s set of standard processes to meet the objectives, constraints, and environment of the project.”
The Question to ask
The Question to ask

- Why would you want to make your PAL a corporate or enterprise OSSP? There could be a number of reasons to take the leap. Two of the easiest reasons would be
  - To reduce stovepipe process development across the Enterprise providing horizontal integration. Rather than developing individual processes, each project would use the organizational standard and any tailoring to achieve their defined process
  - Obtaining a CMMI Maturity Level 3 rating requires an OSSP. It doesn’t require a corporate OSSP but there are benefits to a corporate OSSP.
What are the benefits?
A corporate OSSP provides benefits:
- Builds on mature processes
- Increases horizontal integration
- Reduces overall cost as well as maintenance cost,
- Reduces time to develop/change processes,
- Reduces training,
- And increases quality.

Note: Horizontal integration produces buy-in from the organization when the members participate in the process building. Horizontal Integration does not mean you have to use the same format for the outputs of your processes.
How do you turn a Corporate PAL into a Corporate OSSP?
Develop “Content Standard”

- Statement of minimum information required to be represented in work products or outputs (e.g., CDRLs)
  - Provide explanation or samples for information elements in content standards
  - Include tailoring guidance as needed
Example Status Report Content Standard

- Introductory Statement
- List of required information

<table>
<thead>
<tr>
<th>Required Information</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporting period covered</td>
<td>The status report must identify the period covered by the status report</td>
</tr>
<tr>
<td>Report submitter</td>
<td>Name of the project or group submitting report</td>
</tr>
<tr>
<td>Highlights or accomplishments</td>
<td>Summarize highlights for the reporting period</td>
</tr>
<tr>
<td>Schedule</td>
<td>Include schedule snapshot or major milestones</td>
</tr>
<tr>
<td>Next Steps</td>
<td>Summarize near-term next steps</td>
</tr>
<tr>
<td>Issues, concerns, or risks</td>
<td>Summarize issues, concerns and risks</td>
</tr>
</tbody>
</table>
## Status Report A – Quad Chart

**[Program Name] Monthly Status Report for Mmm yyyy**

### [Program Name] Highlights

- XX
- XX

### Next Steps

**Short-term**
- XX
- XX

### Schedule

Include Schedule in format of your choice

### Issues/Concerns/Risks

Include any issues, concerns or risks
- XX
  - yy

[ dd Mmm yyy]
Subject: [Program Name] Monthly Status Report for Mmm yyyy:

Body of Message:

Program Highlights:

Schedule snapshot or list of major milestones (explain deviations from plan):

Next steps:

Issues/concerns/ risks:
My Steps to developing a Content Standard from Multiple Processes

- Gather all the related processes within the organization addressing a particular process area.
- Note required information for each process.
- Note overlapping information which may be presented differently.
- Write the content standard list based on what you want to require.
- Note tailoring allowed.
- Socialize the content standard.
- Deploy the content standard.

Remember a content standard is a WHAT, not a HOW.
Lessons Learned
Lessons Learned

We have a few lessons learned even before we think about extending our demo PAL:

- Content standards allow for different style preferences
- Content standards with tailoring guidelines will allow smaller groups within the organization to tailor out content they can’t afford.
Endnotes

1 The Software Engineering Institute; CMMI® for Development, Version 1.2; Carnegie Mellon University, 2006, p.568
2 The Software Engineering Institute; CMMI® for Development, Version 1.2; Carnegie Mellon University, 2006, p.568
3 The Software Engineering Institute; CMMI® for Development, Version 1.2; Carnegie Mellon University, 2006, p.551
4 The Software Engineering Institute; CMMI® for Development, Version 1.2; Carnegie Mellon University, 2006, p.546
5 The Software Engineering Institute; CMMI® for Development, Version 1.2; Carnegie Mellon University, 2006, p.546
6 The Software Engineering Institute; CMMI® for Development, Version 1.2; Carnegie Mellon University, 2006, p.557
7 “Content Standard” is a process engineering concept developed by Natural Systems Process Improvement (Natural SPI).
Questions
Backup Slides
Logon to MyNAVAIR & Choose NAVAIR PAL Community
Choose NAVAIR PAL Project
Functional Area or Type
The Process Asset Index is located at the top level of the PAL Documents folder.
All assets are listed in the index – with hyperlinks to the copy in the All Assets folder. Click the pull down menu to apply a filter to that column.
Click the asset name and choosing **Save** or right click the asset and choose **Download**
Submitting New Assets

Download the submission form, fill it out, and upload the form and asset using the Upload button.
Collaborate on New PI Topics

From the Discussions tab, click **PI Topics**. Choose **New**, then **Message**
Collaborate on Existing PI Topics

Select the topic and click Reply
From the Discussions tab, click **Report Problems**. Choose **New**, then **Message**.