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

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Topics

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- Background
- Design Philosophy & Implementation
- Definitions
- The question to ask
- Benefits
- How do you turn a Corporate PAL into a Corporate OSSP?
- Lessons learned

Abstract



Abstract

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 Philosophy₁

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



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Design Philosophy₂

- 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



Definitions₁

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.



Definitions₂

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)."¹

Definitions₃

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

Definitions₄

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



Definitions₅

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 processrelated documentation such as policies, defined processes, checklists, lessons-learned documents, templates, standards, procedures, plans, and training materials"⁴



Definitions₆

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."5

Definitions₇

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"⁶



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?



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"⁷

- 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

Required Information	Description
Reporting period covered	The status report must identify the period covered by the status report
Report submitter	Name of the project or group submitting report
Highlights or accomplishments	Summarize highlights for the reporting period
Schedule	Include schedule snapshot or major milestones
Next Steps	Summarize near-term next steps
Issues, concerns, or risks	Summarize issues, concerns and risks



Status Report A – Quad Chart



[dd Mmm yyyy]

[Program Name] Monthly Status Report for Mmm yyyy



Status Report B – Email message

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

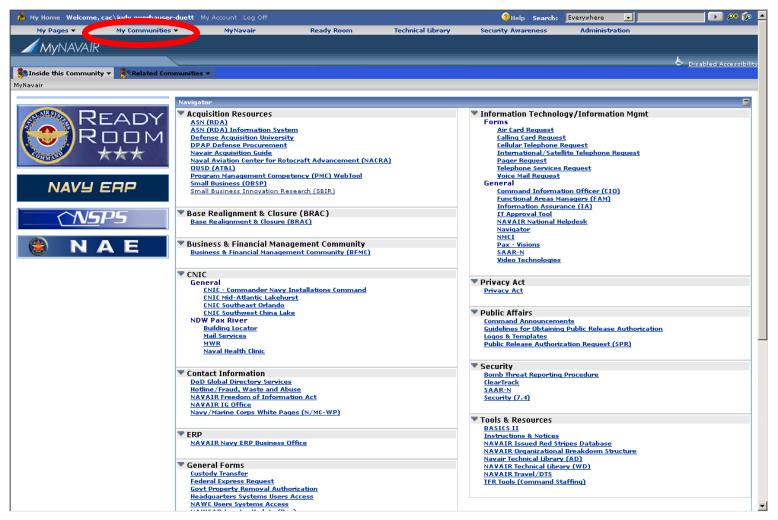




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16 - 19 Nov 2009

Report Problems

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	Itoms 1 to 2	× ₄ (of 3) 4 ↓ ▶
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Enter the subject and body of this message. The subject will act as the name of this new message. ?	0	5/1/08 12:55 PM
Subject Summary of the problem or issue	Items 1 to 3	(of 3) 🕴 🔸 🕨
Message Body		
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Description of what's not working.		
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From the Discussions tab, click **Report Problems**. Choose **New**, then **Message**

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