

Process Improvement on a Shoestring Budget

- Process Reuse
- Learn to Play with What You Already Have
 - Harvesting Process Assets
- Creative Ways to Use Common Tools
 - Building a World Class Process Asset Library Utilizing Tools You Already Have
- Project Contract

Mining For Process Gold

Presented by: Rudy Gamberini

Career

- ~~• InterDigital Communication LLC [Telecommunication specifically Cell Phone Technology]~~
- Process Performance – Process Consultant
- Northrop-Grumman- CMMi 3, 4, and 5 in just under two years [DOD Aerospace]
- JP Morgan Chase – First exposure to Six Sigma [Credit Card Division]
- Reuters – 13 years, ISO 9001, CMM 2 and almost CMM Level 3 [Trading Systems]
- Mechanical Engineer – Automated Manufacturing

Pearls of Wisdom

- The Grass is Brown Everywhere
- Stochastic Process Control is best left to the Manufacturing Sector
- **"Lies, damned lies, and statistics"**
- Process Improvement would be So Much Easier if it Didn't Involve People

Different Companies Same Behavior

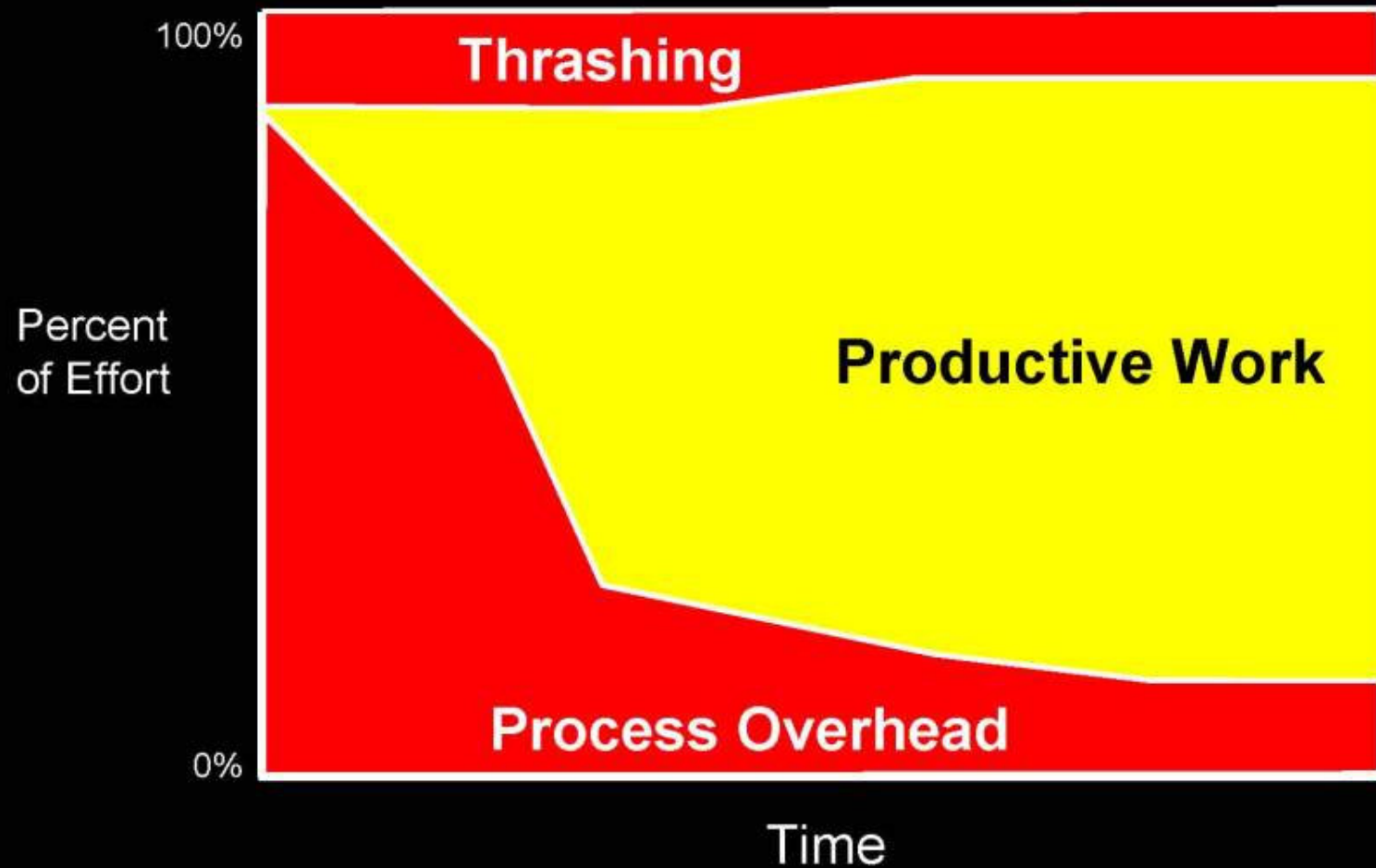
- Same Issues Result in Similar Approaches
- People are the Common Denominator
- Most Common Process Approach:
Big Honkin Binder



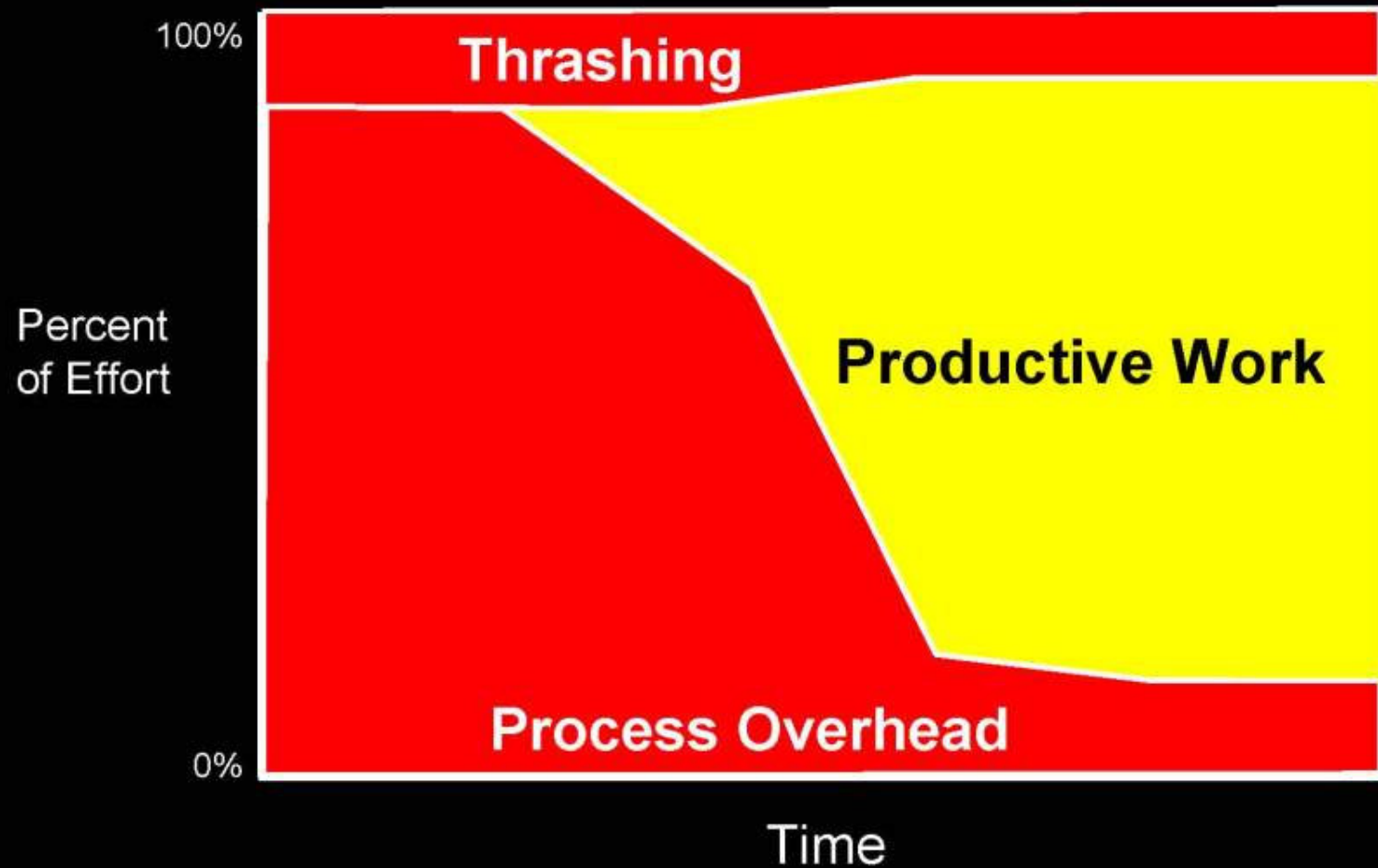
Process Reuse

Steve McConnell's View

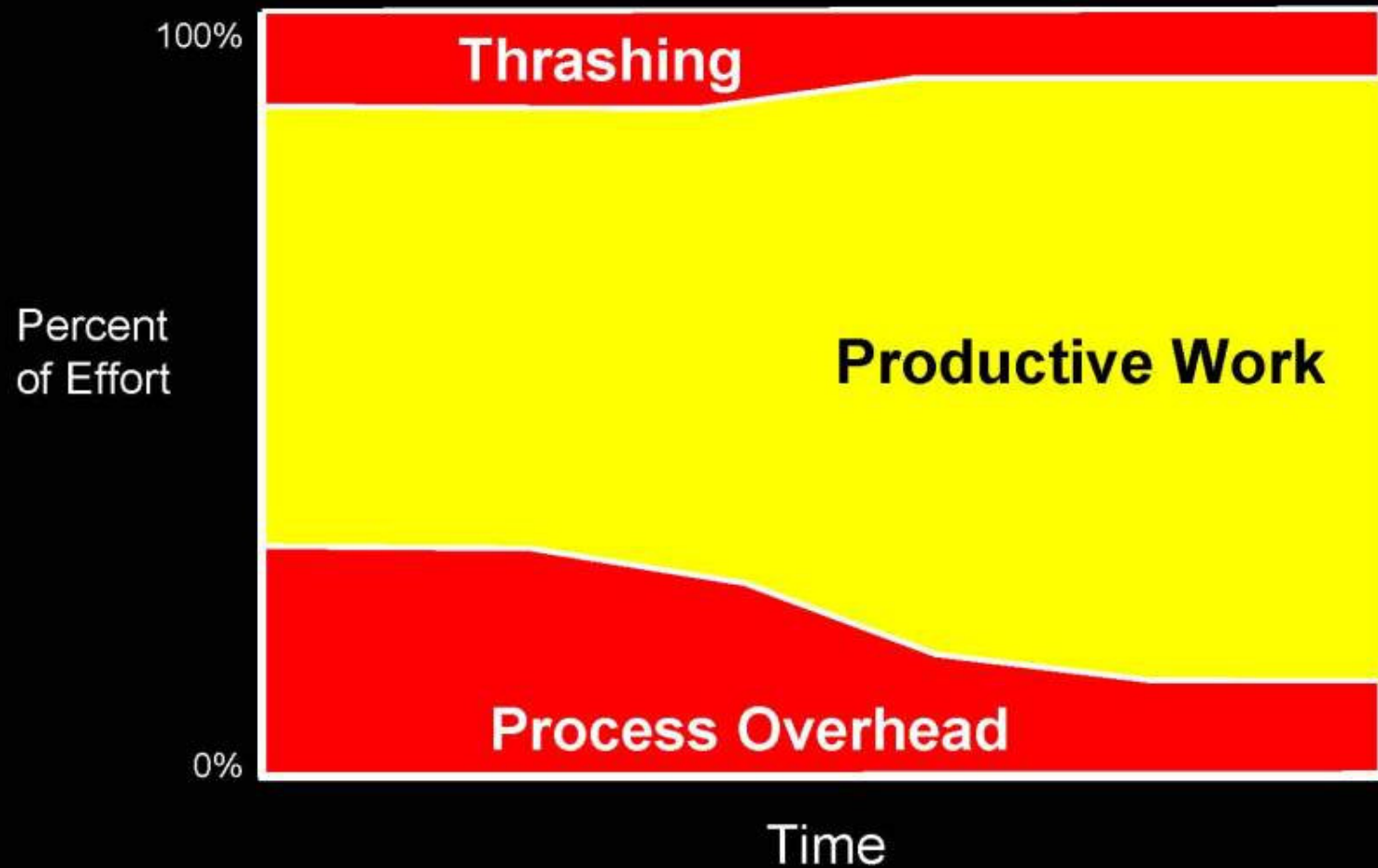
Effect of Adding Process the First Time (What I Wrote in Software Project Survival Guide)



Effect of Adding Process the First Time (What I Think Now)



Effect of Adding Reused Processes



Simple Truths

- If You are Building Products, You have a Process
- Currently Used Processes are Best Since They Have Already Been Accepted
- Word of Mouth is the Least Efficient and or Effective Way to Reuse Process

Where Did We Store That Document?



Getting Organized

- Harvesting Your Existing Process Assets
- Sorting and Classifying the Assets
- Version Control and Storing
- Easy Retrieval

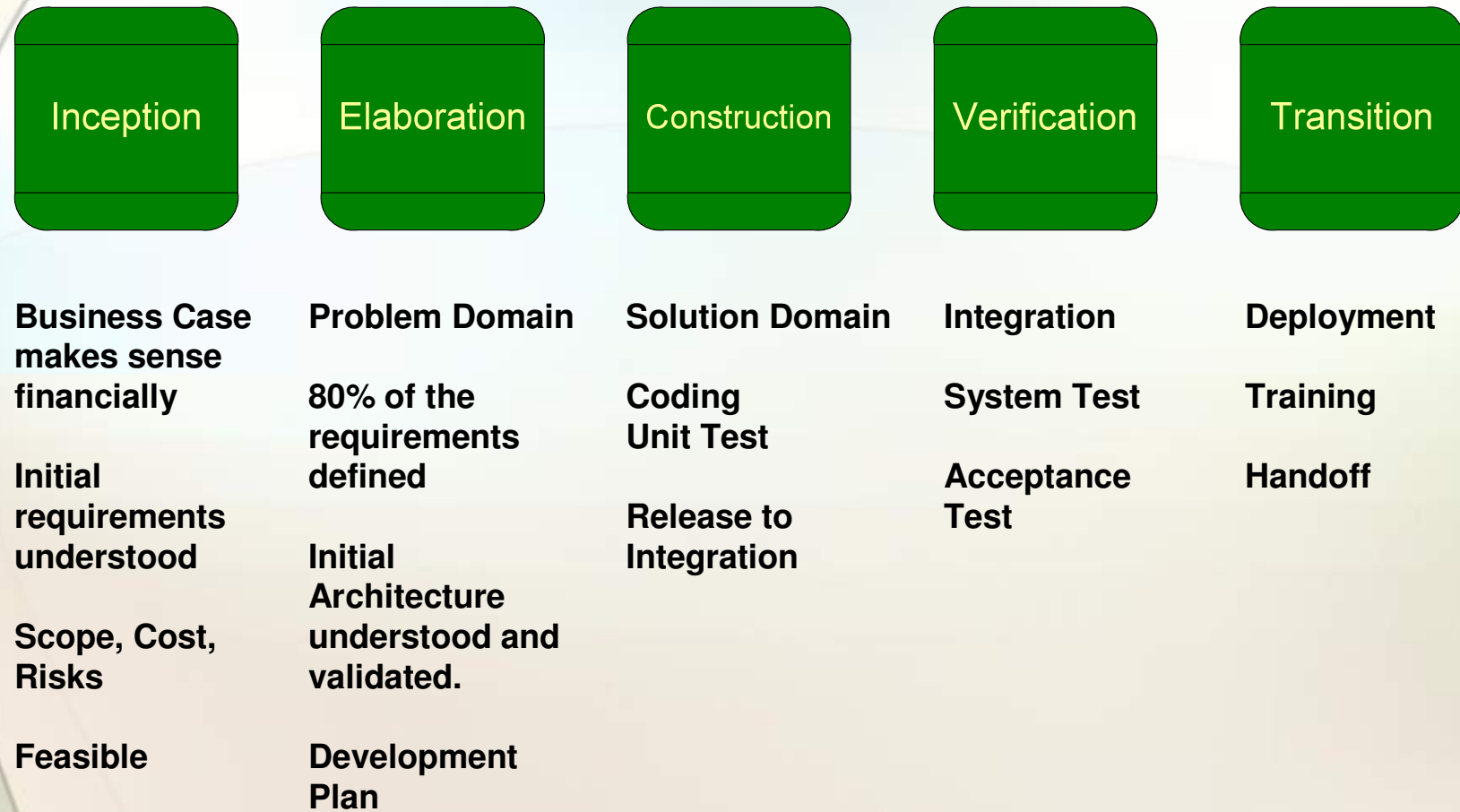


**Bonus
Practical Process
Tailoring**

Harvesting Process Assets

- Assume a Development Lifecycle Model (temporal maturation model)
- Identify Organizational Roles (who does what)
- Apply a Discipline Centric Taxonomy (the what's)
- Prepare a Process Asset Library Utilizing the Discipline Centric Taxonomy
- Pick Through Existing and Post Project Repositories Looking for Artifacts of Value

Lifecycle Phases



Organizational Roles

- Program Manager
- Quality Manager
- Product Manager
- Engineering Manager
- Systems Engineering
- Business Development
- Customer Support

Discipline Centric Taxonomy

- Requirements
- Analysis & Design
- Implementation
- Test
- Deployment
- Project Management
- Configuration Mgmt
- Environment

Disciplines (1/3)

- Requirements -All of the tasks that go into the scoping and definition of a new or altered system; requirements specification, CR's, customer deliverable list. [Problem Domain]
- Analysis and Design - design documents, architecture documents, high level designs, low level designs, prototypes, architectural proof of concepts, state diagrams, data flow diagrams, context diagrams. [Solution Domain]

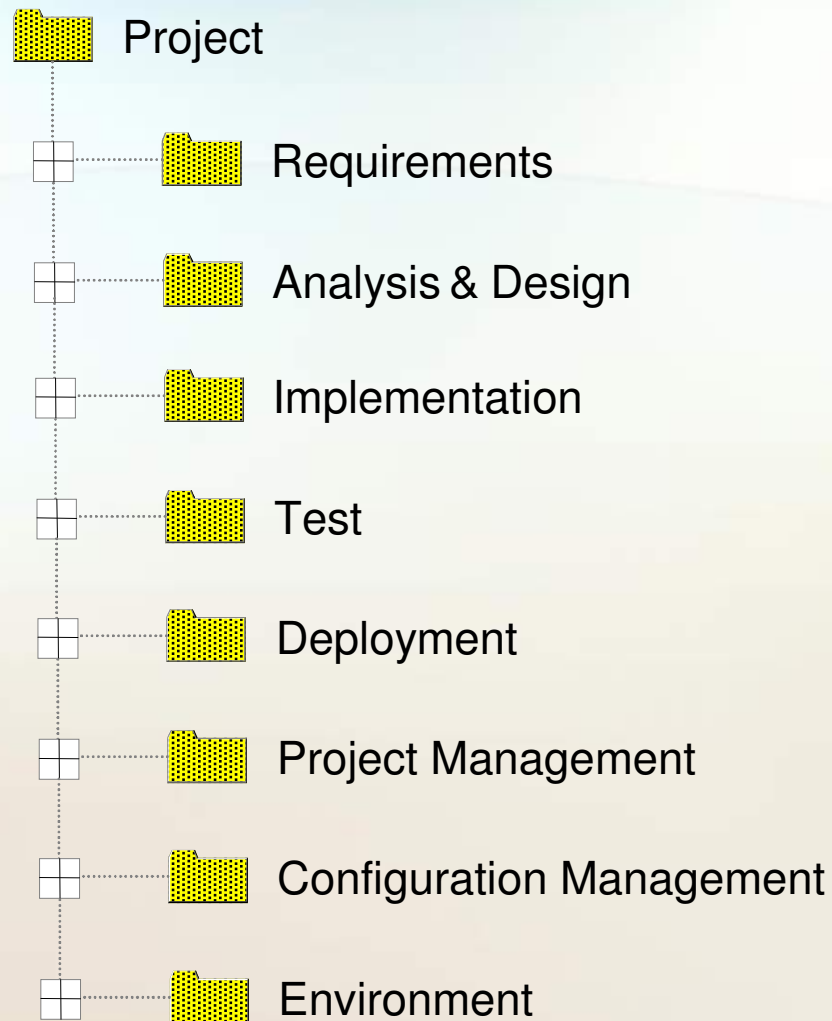
Disciplines (2/3)

- Implementation - Source code
- Test - Testware including: test cases, test scripts, test results, defect reports.
- Deployment - User guides, installation manuals, software packaging, training material.

Disciplines (3/3)

- Project Management - All plans, status meeting minutes, risk register, scope, WBS, project schedules, responsibility matrix, stakeholders.
- Configuration Management - Anything dealing with version control of source code, documents, bill of materials for deliverable products.
- Environment - Guideline, standards, developer machine configuration, build machine, test platform, action item tracker, defect tracker.

Discipline Centric Folder Structure



Unified Navigation



Project
Contract

Discipline
Centric

Process
Asset
Library

Discipline
Centric

Ready To Harvest

- Start Digging Through Project Archives
- Best Fit Document to a Discipline
- Copy Document to Discipline Folder
- Keep a Spreadsheet Containing the Document Filename and attributes:
 - Discipline
 - Lifecycle Phase of First Creation
 - Owner (based on Organizational Roles)

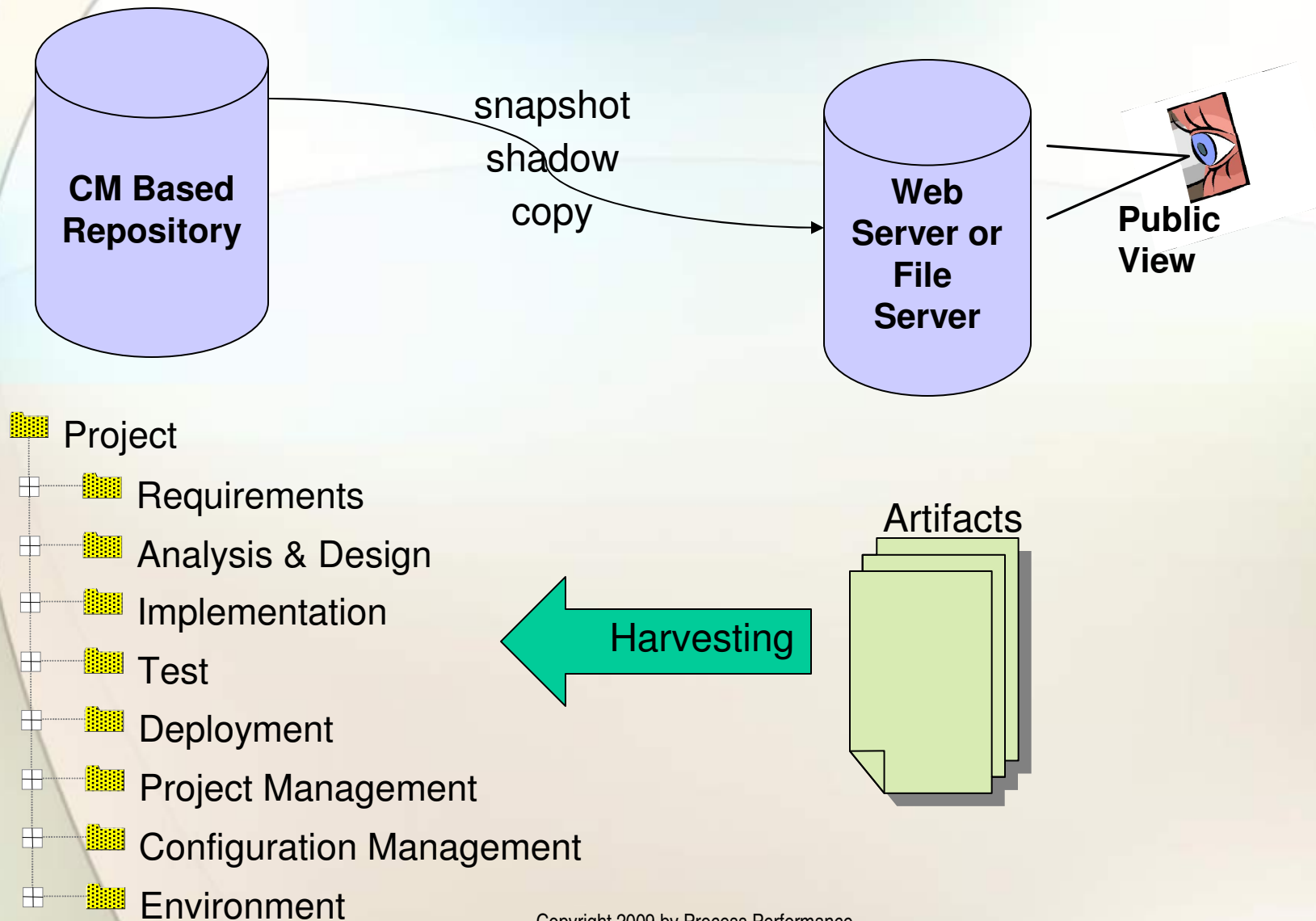
G.E.T.

Guideline, Example, Template

- Guideline: Short Description of the purpose of the artifact, the intended audience, when the document is created in the lifecycle, and if it can be optional.
- Example: Best in Class Example of the Artifact
- Template: Shell use to create the Artifact

G.E.T. is Another Attribute Associate With Each Process Asset to Help Classify the Artifact.

Content Managed Process Asset Library



Taking Inventory

- Harvested Artifacts
- Stored the Artifacts in a Discipline Centric Folder Structure Within a CM Tool (This is the PAL)
- Have Associated Attributes to Each Artifact for: Discipline, Lifecycle Phase, Artifact Owner, and G.E.T.
- Created an Automated Replication of the PAL to Either a Web-Server or File-Server

Organization Saves Time



What I Thought Then



Process Cartography Pros and Cons

Graphical Process Model

Pros

- Visual Process Representation
- Supports Flow Analysis
- Works well in Training Situations
- Excellent First Step for an Immature Organization

Cons

- Requires Considerable Real Estate to Capture Complex Processes
- Process is Spread Out, Managers want a One-Page View
- Requires Different Models for Different Sized Projects.
- Only Supports a Task View of the Process

Good Ideas From Down Under

Project Contract



- Menu of Potential Project Artifacts
- Contracts are Agreed to Between the Project Manager and QA at the Start of the Project
- Contracts are supported by one of more of the following, Guideline, Example, or Template (GET)

Project Contract

Contract by Discipline



Contract by Owner



Tool Demo



Recap

- Reuse of Process Assets Saves \$
- Getting Organized Supports Process Reuse
- Discipline Centric Topology Supports Artifact Classification
- Use Your Existing Configuration Management Tool as a Content Management System (No Need to Invest)
- Use the Power of Hyperlinks to Enable Accessibility
- Build Project Contracts to Meet Individual Project Needs

Questions



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