



Webinar

People + Process = ROI! - The Benefits of Improved Software Operations

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People + Process = ROI!

The Benefits of Improved Software Operations

Dr. Geoffrey J. Hewson

“We are pleased to extend our alliance with Company X to help customers further drive ROI throughout the IT environment”



“We are pleased to extend our alliance with Company X to help customers further drive ROI throughout the IT environment”

What does this mean?

How is the ROI achieved?

Why does this generate the expected ROI?

When will this ROI be of any significance?

What Is ROI?

ROI = Relatively Obscure Idea...

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Where can significant ROI be achieved by improving your software processes?

Software Operations: Huge ROI Potential

	1994	1998	2004
Succeeded	16%	26%	29%
Failed	31%	28%	18%
Challenged	53%	46%	53%

www.standishgroup.com



Succeeded: The project was completed on time and on budget, with all features and functions originally specified.

Failed: The project was cancelled before completion or is never implemented.

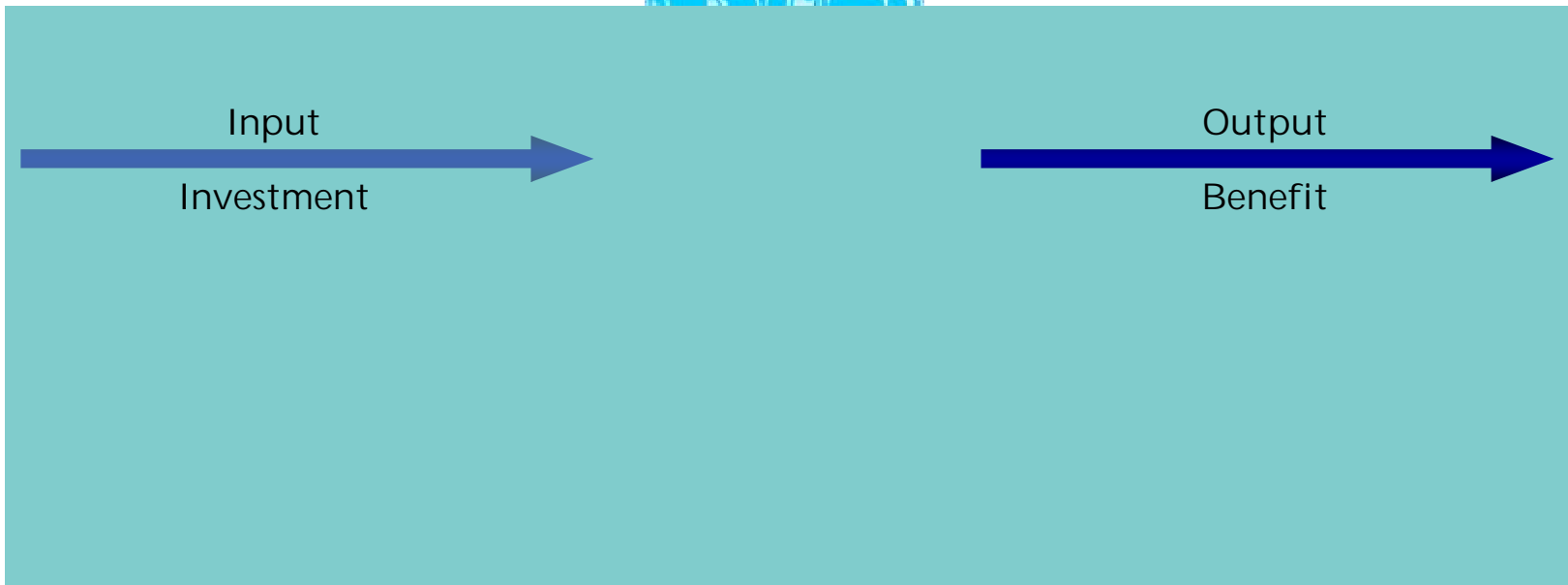
Challenged: The project was completed and the product operational, but delivered over budget and over time estimates, and with less functionality than originally specified.

Where Is The ROI? – Myths

- **ROI is only about controlling costs**
- **ROI is only relevant as an up front cost justification**
- **Tools inevitably create positive ROI**
- **Process models like CMM and CMMI have guaranteed ROI**

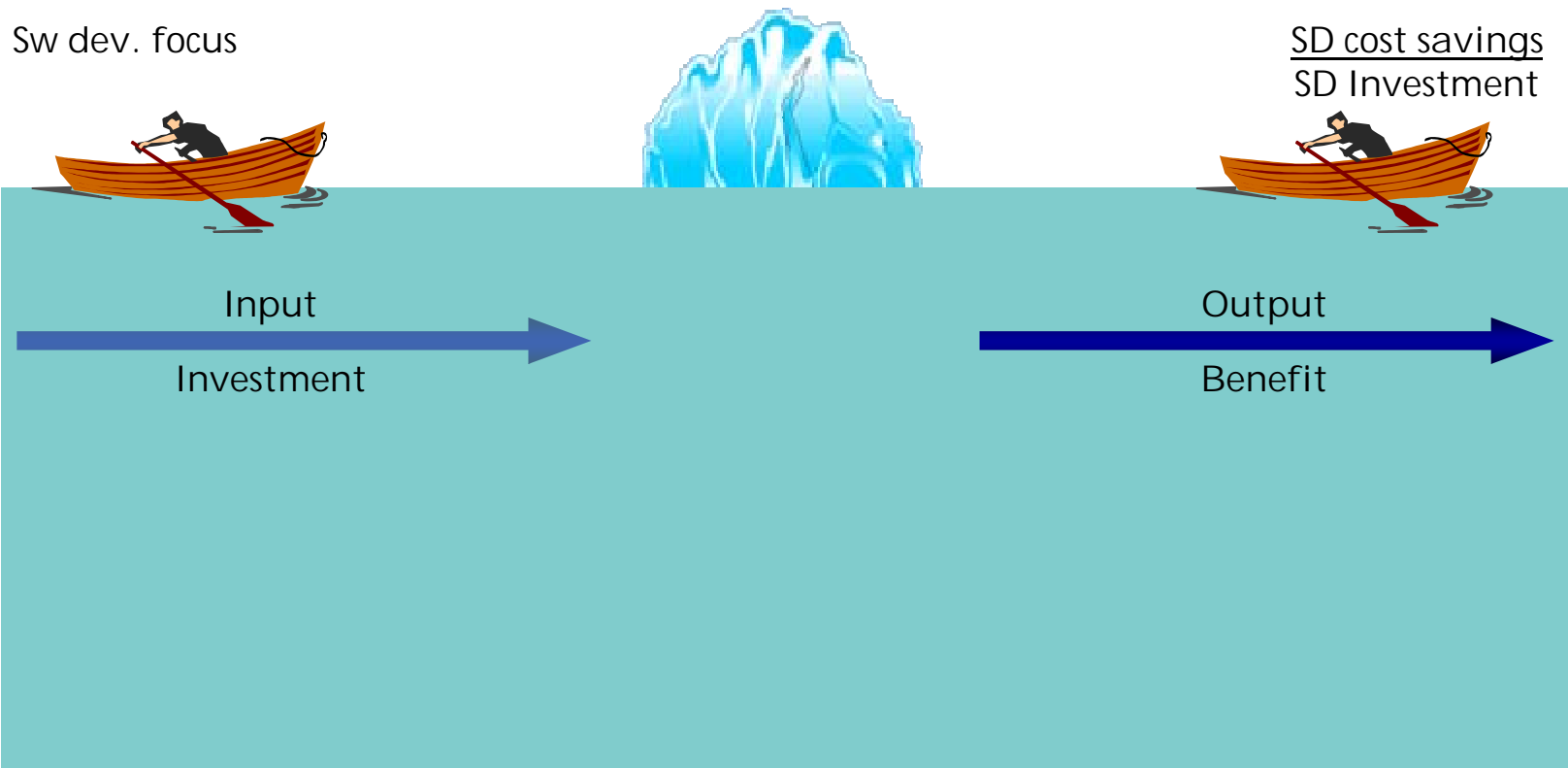
Reality: The True ROI Is At The Corporate Level

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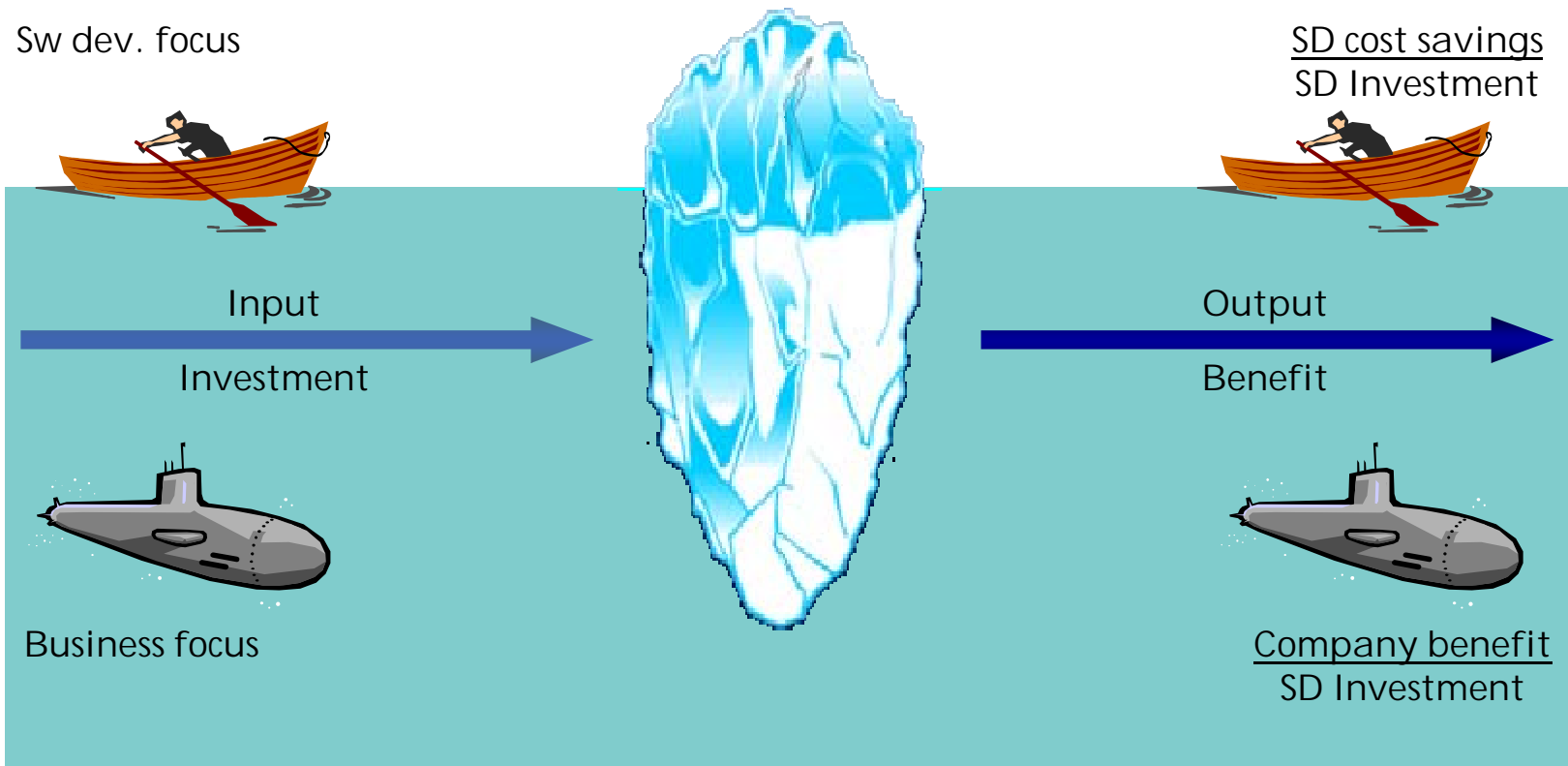


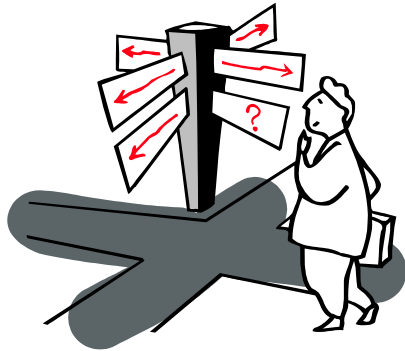
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Reality: The True ROI Is At The Corporate Level



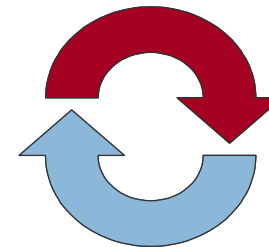


Successful solutions are aligned with core business goals...

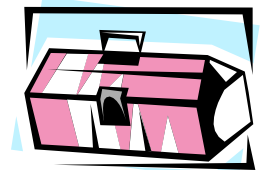
Successful solutions integrate processes, tools and trained staff



People



Process



Tools

Business Goals

Accelerate Time to Market

Increase Feature Set

Reduce Maintenance Cost

Increase Customer Sat

Increase Product Life

Increase Staff Utility

Align With Business Goals

Business Goals

Accelerate Time to Market

Increase Feature Set

Reduce Maintenance Cost

Increase Customer Sat

Increase Product Life

Increase Staff Utility

Impr. Targets

Productivity

Productivity

Quality

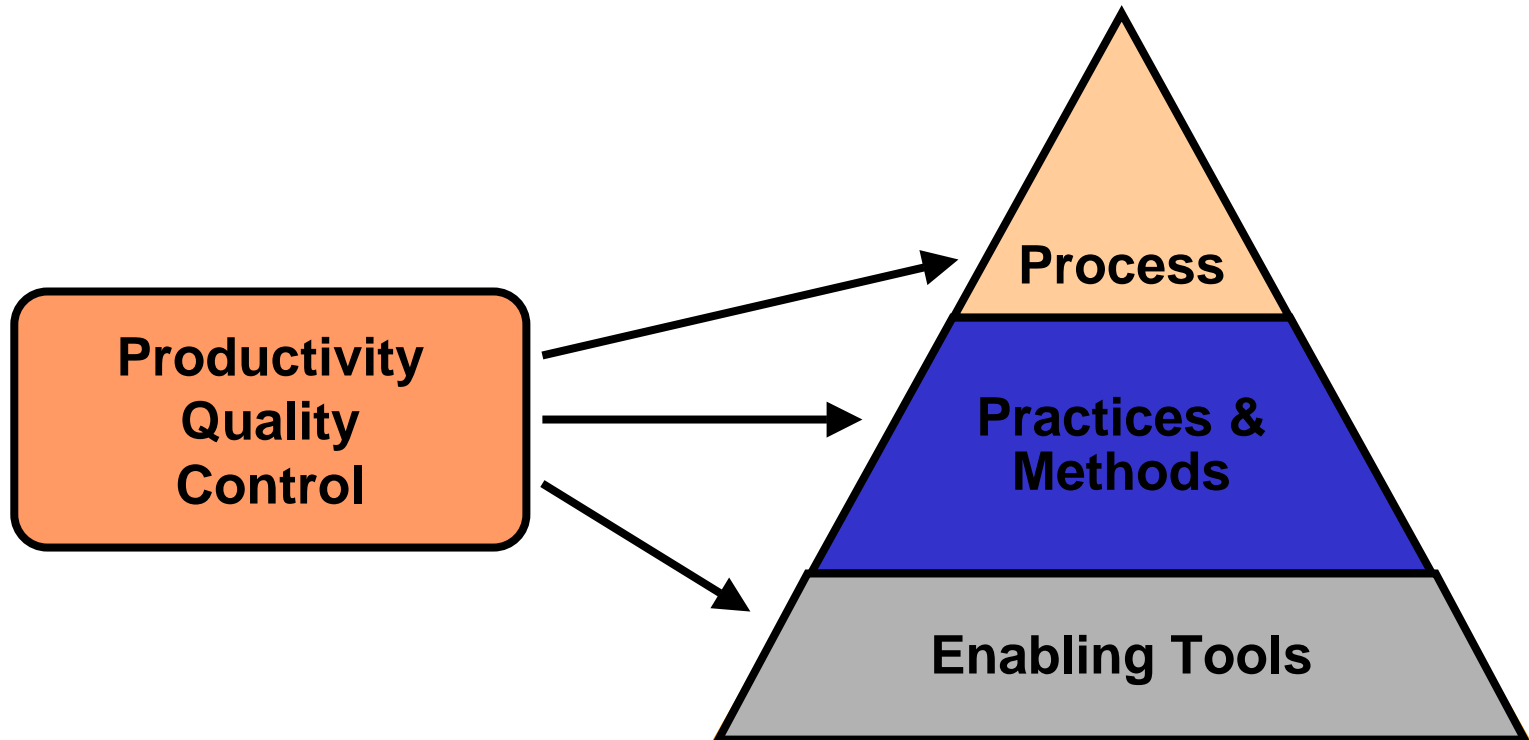
Quality

Architecture

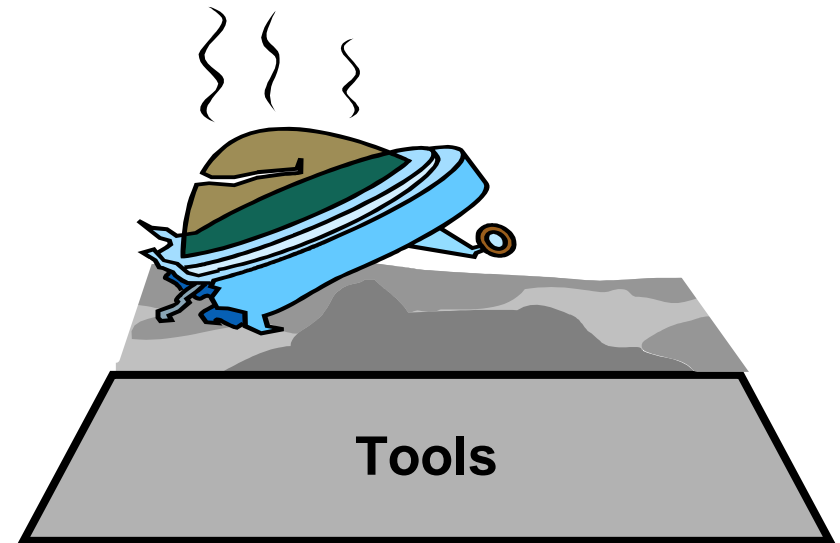
Training, Process



Process ≠ Practices

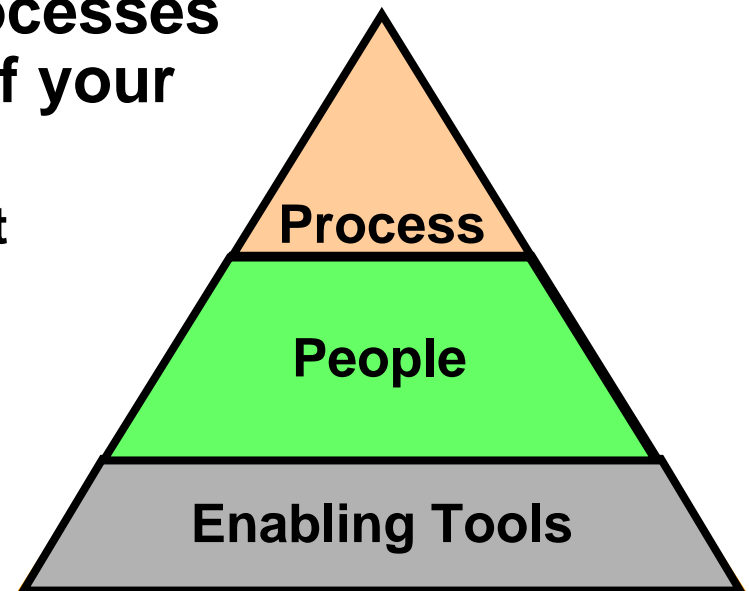


- **Unfortunately there are no silver bullet tools**



- **Tools are best used to increase the efficiency and consistency of processes through automation and enforcement of business rules**

- **The success of your processes depends on the ability of your team to perform them:**
 - **Management commitment to stay the course**
 - **Familiarity with new or improved processes**
 - **Knowledge and experience in new or improved practices**
- **Training, coaching and management support are key**



Demonstrating The ROI

- **Demonstrating ROI requires measurements...**
 - To baseline the current state
 - To compare future improvements
- **The measurements you choose are dependent on your business goals**

Cost Measures

- **Improvement effort**
- **Tool costs**
- **External consultants**
- **Training costs**

Scope Measures

- **Req't's, Use Cases**
- **SLOC, FP, UI features**
- **Defects**

Benefit Measures

- **Increased revenue**
- **Customer satisfaction**
- **Reduction in cycle time**
- **Development cost/schedule reduction**
- **Reduced maintenance cost**
- **Lower staff turn-over**
- **Predictability (actual vs. estimate)**

Let's look at a few examples:

- **Requirements**
- **Configuration and Change Management**
- **Testing and Quality Assurance**



- **Motivation**
 - Planting the right seeds for whole development effort
 - Development AND testing depend on it
 - Outsourcing depends critically on tight requirements
- **Methods and Tools**
 - Professional requirements capture and definition (Process)
 - Peer review (QA practice)
 - Requirements management tools
 - Change management tools

Consulting & Customer Effort:	\$60k
Productivity Improvement:	144%
6 Months Benefit: (15 Team Members)	\$648k

$$\frac{\text{Benefit} - \text{Cost}}{\text{Cost}} = \frac{\$648\text{k} - \$60\text{k}}{\$60\text{k}} = 9.8 \text{ (ROI)}$$

- **Motivation**
 - Consistent, effective, repeatable testing process
 - Cycle time reduction through early test involvement
 - Test automation to increase test productivity
 - Disciplined defect tracking and change management

- **Methods and Tools**
 - Professional test process, test plans, test scripts
 - Test automation tools
 - Defect tracking data base tied into change tracking, CM
 - Quality criteria incorporated into software release decision-making

Consulting & Training Effort: \$200k

Customer Effort: \$415K

Business Productivity Improvement: 25%

12 Months Benefit: \$2.1M

(175 business staff)

$$\frac{\text{Benefit} - \text{Cost}}{\text{Cost}} = \frac{2.1\text{M} - 415\text{K}}{415\text{K}} = 4.06 \text{ (ROI)}$$



What's Possible? - Configuration & Change Management

- **Motivation**
 - Tracking issues and changes
 - Ability to roll back to stable states
 - Maintaining multiple versions
- **Methods and Tools**
 - Professional change management process
 - Change control board
 - Change management tools

What's Possible Configuration & Change Management



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License, Consulting & Staff Costs:	\$600K
3 Year Benefit:	\$12.1M
Annualized benefit:	\$4.03M

$$\frac{\text{Benefit} - \text{Cost}}{\text{Cost}} = \frac{4.03 - 0.6}{0.6} = 5.71 \text{ (ROI)}$$

- **Significant ROI is possible through improving your software processes**
- **Highest ROI derives from a focus on business benefits rather than cost controls**
- **Align improvement strategies and ROI targets with business goals, and select techniques acceptable to your culture**
- **Make sure to have sound process before introducing new tools.**
- **Plan improvements in small increments and measure (input, output) to demonstrate ROI**
- **Look to the high leverage areas first (e.g. requirements, change mgmt & CM, testing)**

Improving software operations is not only about cutting costs:

- Added value to the business**
- Increased competitiveness**
- Increased market share**
- Reduced maintenance/operations costs**
- Keeping up with other parts of the business**



Process Automation

Sammy Wahab
Osellus Inc.

$$\text{ROI} = (\text{Benefit} - \text{Cost}) / \text{Cost}$$

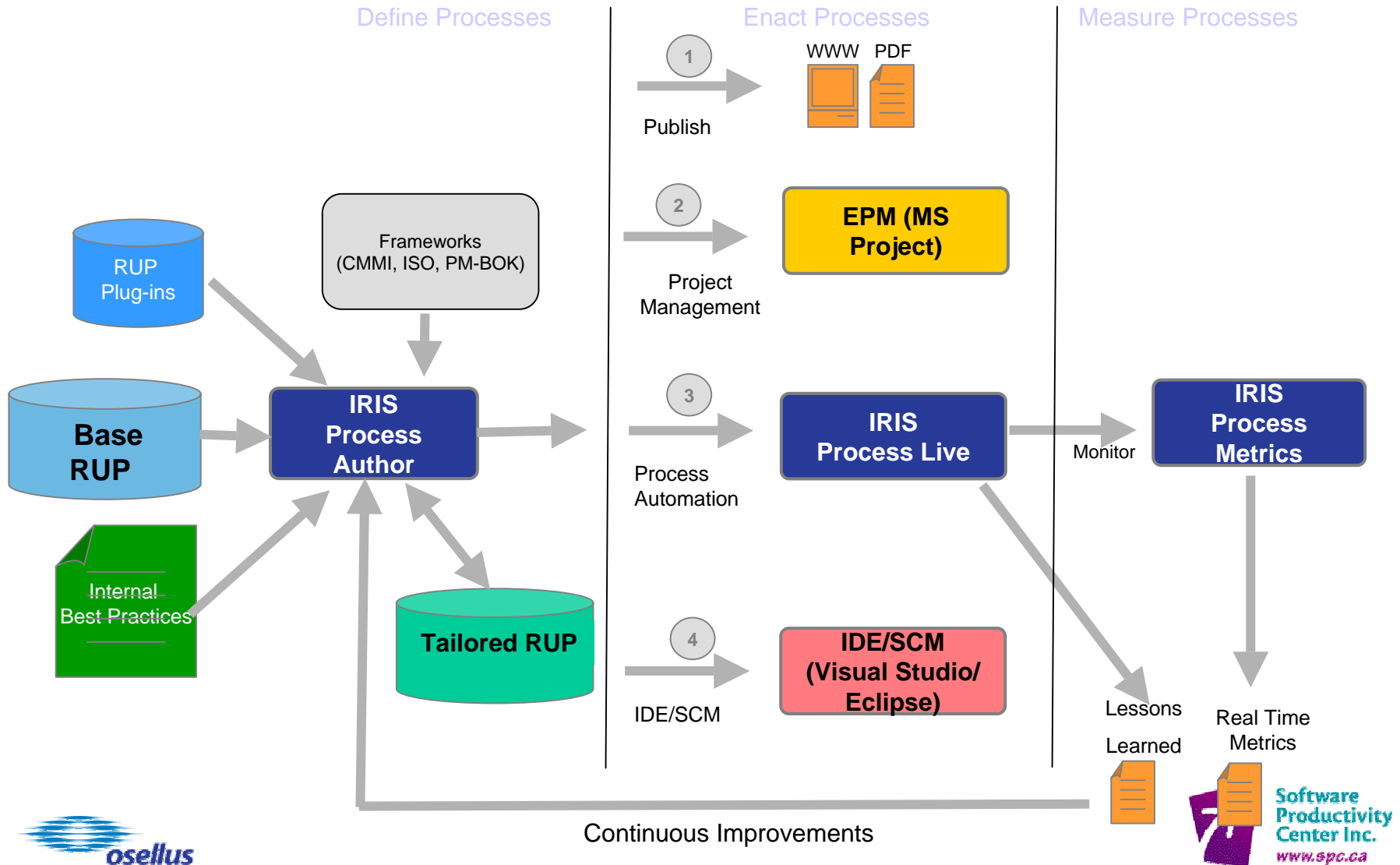
* includes cost of manual process deployment

- **How to define process that can be easily enacted?**
 - Enactable process models are key for automation

- **How do you know the defined processes are followed?**
 - Process are effective only if they are deployed effectively

- **How do you know if the processes are effective?**
 - Automate process monitoring and metrics collection
 - Lessons learned and process enactment from projects information is key to improving the processes

Process Automation



Define Process















Process Author Home Page

This is the Process Author Home Page. All the Libraries you have Modeling rights to are listed below. To begin, select a Library to work on, or search for a specific Process Model.










Access	Library Name	Description
	Application Maintenance (Funds Management Applications)	Application Maintenance Processes for Funds Management Applications
	Application Maintenance (Retail Banking)	Application Maintenance for Retail Banking
	CMMI (Integrated) Lib.	Integrated CMMI Lib. - approved and audited.
	CMMI Process Library	CMMI Process Library
	Client Server Development	Client Server Development Library (PowerBuilder, VB with Oracle)
	Legacy Development & Maintenance	Legacy Application Development and Maintenance processes
	MSF 4.0 (Agile)	MSF 4.0 Agile standard library
	OPS Process Library	This library includes processes for OPS services - both internal as well as external (client services).
	Offshore Development Library	Offshore new application development and maintenance processes
	Product Development (.NET)	New .NET product development
	SPI Six Sigma	SPI Six Sigma
	Small C/S Development Library	Client Server Development for small to mid-size projects
	Small Web Projects	Tailored Processes for Web Development

Package Details

Element Catalog

-  Lifecycle [0]
-  Phase [4]
-  Iteration [3]
-  WorkDefinition [26]
-  Activity [171]
-  WorkProduct [42]
-  ProcessPerformer [0]
-  ProcessRole [24]
-  Guidance [8]
-  Base RUP Framework
-  CMMI Package
-  J2EE Development
-  Offshore Development Process
-  PM-BOK (Project management)

This is a summary listing of all elements owned and imported by this process package. Click on a row to see a detailed listing. Additional filters are available in the detailed listing view.

Element Type	Total	% Imported
 Lifecycle	0	0%
 Phase	4	0%
 Iteration	3	0%
 WorkDefinition	26	0%
 Activity	171	0%
 WorkProduct	42	0%
 ProcessPerformer	0	0%
 ProcessRole	24	0%
 Guidance	8	0%
All Work Breakdown Elements	204	0%
All Elements	278	0%

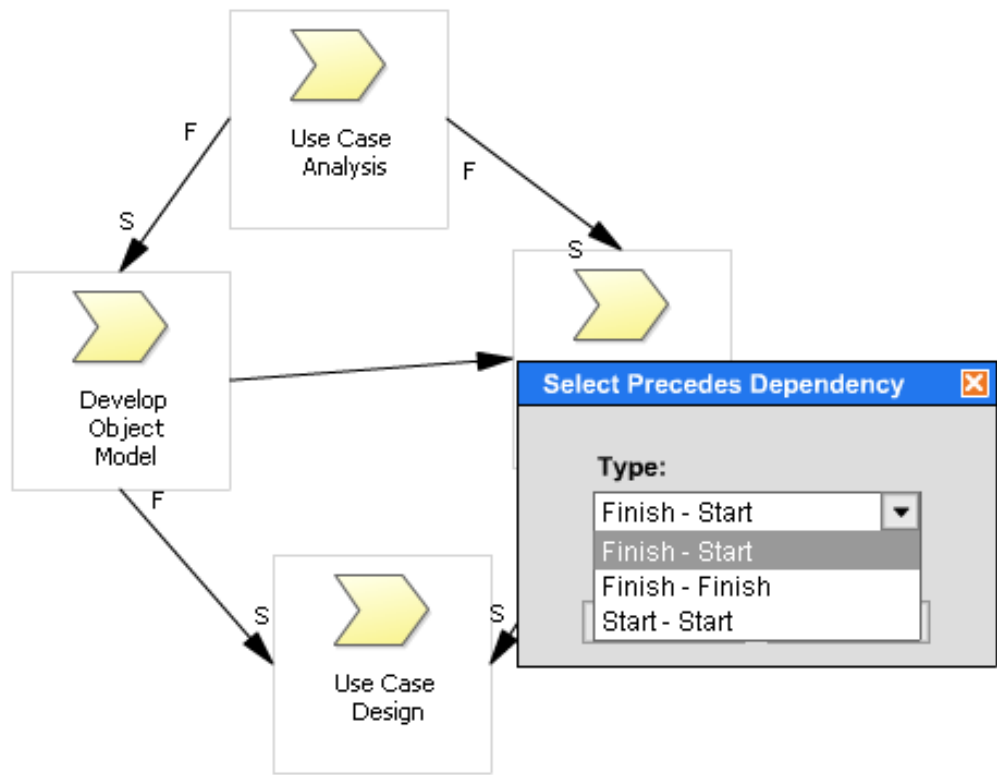


Element Catalog

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Workflow Map

- J2EE-RUP for Offshore Development
 - Construction
 - Construction Iteration
 - Build Sub-System
 - EJB Implementation
 - Implement JSPs
 - Deployment
 - Revisit Requirements
 - Testing
 - Construction Phase Closeout



Enact Process

Package

- Package Contents
- View Package Details
- Edit Package Details
- Remove Package
- Delete Package
- Validate Package
- View Validation Log
- Clear Validation Log
- Search Lessons Learned
- Search For Package
- Publish Process Document
- Publish Online Process

Element

- WorkDefinition [26]
- Activity [171]
- WorkProduct [42]
- ProcessPerformer [0]
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Element Type **Supplier**

1 - 42 of 42

Name	Type	Imported From
Acceptance Plan	WorkProduct	
Bill of Materials (BOM)	WorkProduct	
Build	WorkProduct	
Class Design	WorkProduct	
Configuration Management Plan	WorkProduct	
Construction Iteration Plan	WorkProduct	
Data Model	WorkProduct	
Deployment Model	WorkProduct	
Deployment Plan	WorkProduct	
Deployment Unit	WorkProduct	
EJBs	WorkProduct	
Elaboration Iteration Plan	WorkProduct	
Glossary	WorkProduct	
Installation Scripts	WorkProduct	
Integration Build Plan	WorkProduct	
JSPs/Web pages	WorkProduct	
Measurement Plan	WorkProduct	
Object Model	WorkProduct	
Problem Resolution Plan	WorkProduct	
Proof Read - Revised	WorkProduct	
Release Candidate	WorkProduct	

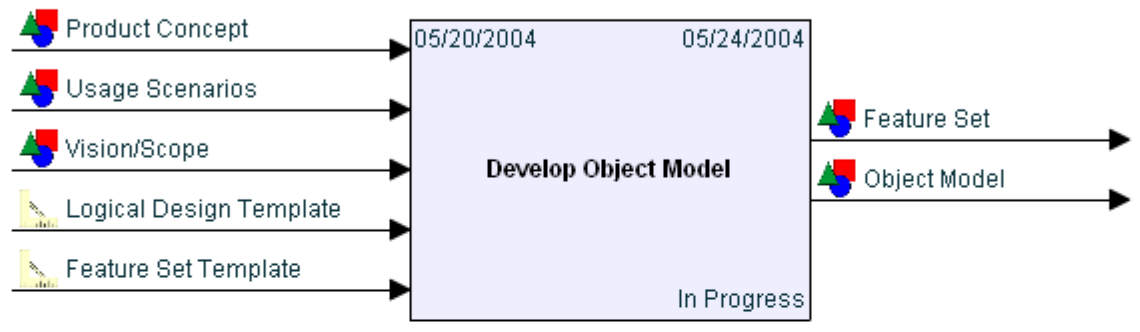


- CapSys v2
- Project Home
- Activities**
- Issues
- Schedule
- Work Products
- Supporting Documents
- Additional Information

View Activity

Return

Overview



Schedule Information

Owner	Start Date	End Date	Duration (days)	Activity Status	Expected Effort (hr)	Actual Effort (hr)
Ron Francis	05/20/2004	05/24/2004	5		14.0	120.0

My Role

Name	Activity Role	Allocation	Process Role	Work Status	Expected Effort (hr)	Actual Effort (hr)	Status / Effort Breakdown
Ron Francis	Owner	100%	Development	2%	2.0	120.0	[View] [Update]

Inputs and Outputs

-- For Selection --

0 rows selected

Project InformationProject Metrics

Project	Health	Timeline	Risks	Issues	Resources	Process
Broadvision/SAP Integration Project						J2EE RUP (CIT) - Internal proje
Call Center Manager v3.1 - Major Release Project	●	Ahead of Schedule	High	Medium		J2EE-RUP for Offshore Develop
CapSys v2	⊘	Ahead of Schedule	Low	Low		Small Internal Products
Currency Integration (FX & MM) v2.2	●	On Schedule	High	Low		Small Internal Products
Horus Release 2.0	●	Behind Schedule	Medium	Low		MSF Product Development Proo
Web Services interfaces for SCM 2.0						Small Internal Product Develop

Current Activities

Project	Name	Owner	Risk / Issue	Status	State	Effort (hr)
<input type="radio"/> Call Center Manager v3.1 - Major Release Project	Update Deployment Plan					
<input type="radio"/> Call Center Manager v3.1 - Major Release Project	Sub-System Design	Chiyo Izumi				
<input type="radio"/> Call Center Manager v3.1 - Major Release Project	Use Case Design					
<input type="radio"/> CapSys v2	Develop Object Model	Ron Francis				14.0
<input type="radio"/> CapSys v2	Create Test Plan	Misha Dudanev				
<input type="radio"/> Currency Integration (FX & MM) v2.2	Elaborate Usage Scenarios	Ron Francis		100%		5.0
<input type="radio"/> Currency Integration (FX & MM) v2.2	Develop Product Concept	Sean Young				9.0
<input type="radio"/> Horus Release 2.0	Develop Product Concept	Allan Brunette	1/0	5%		30.0

Call Center Manager
v3.1 - Major Release
Project

Project Home

Setup

Schedule

Resources

Activity
Assignments

Activities

Risks

Issues

Work Products

Lessons Learned

History

Supporting
Documents

Search History

Search Criteria

Organization



Process Role

Action Type

Phase

Work Definition

Activity

Date From



Time From

 am

User

Action Performed

Iteration

Discipline

Work Product

Date To

Time To

Search Result

Time Stamp	User Code	First Name	Last Name	Organization	Action Type	Element Code	Element Name	Practi Code
03/02/2004 at 10:12 PM	919358	Amy	Valdovinos	Osellus Inc	Activity		Develop Deployment Model	



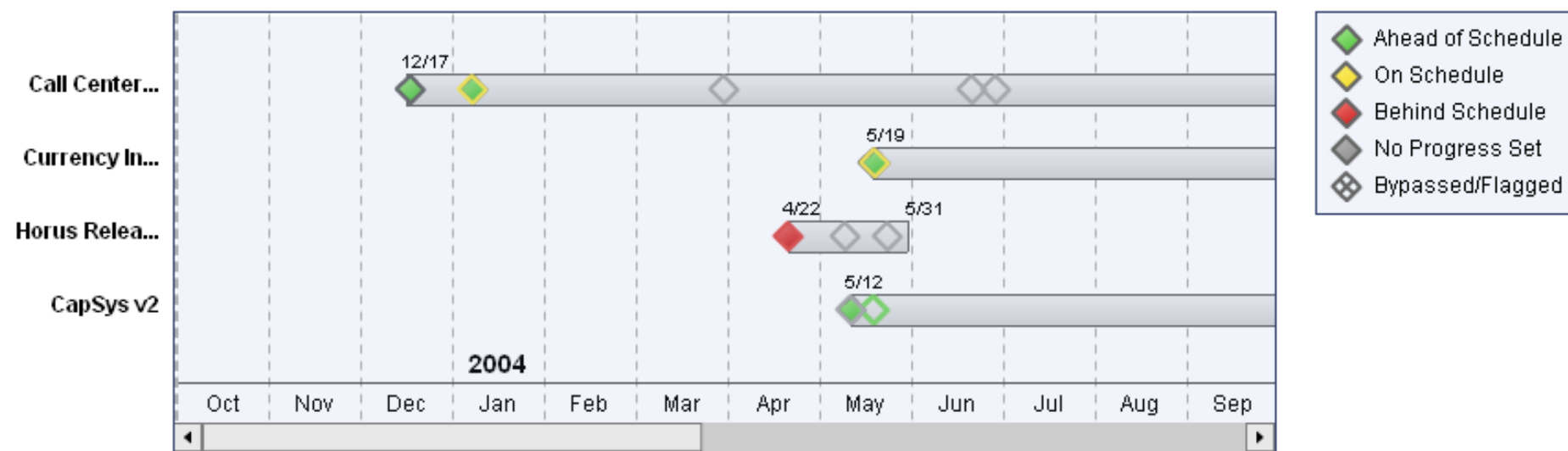
Measure Process



Project Summary

Project	Health	Timeline	Risks	Issues	Resources	Process
Call Center Manager v3.1 - Major Release Project	●	Ahead of Schedule	High	Medium		J2EE-RUP for Offshore
Currency Integration (FX & MM) v2.2	●	On Schedule	High	Low		Small Internal Product
Horus Release 2.0	●	Behind Schedule	Medium	Low		MSF Product Development
CapSys v2	○	Ahead of Schedule	Low	Low		Small Internal Product

Project Timeline



Project Risks and Issues

End of Presentation

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For additional information please visit
<http://www.osellus.com/resources.html>

Or contact info@osellus.com