

# Implementing MSF to drive Competitive Advantage

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## Agenda

- Why Process?
- MSF for Agile Software Development
- MSF for CMMI Process Improvement
- Trustworthy Transparency
- Continuous Improvement
- Implementing MSF

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## Knowledge workers in the 21<sup>st</sup> Century

Barry Boehm

Poor management can increase software costs more rapidly than any other factor.

Working harder not smarter!

## Project Success Rate

	Failed	Challenged	Succeeded
<b>2004</b>	<b>15%</b>	<b>51%</b>	<b>34%</b>
<b>2000</b>	<b>23%</b>	<b>49%</b>	<b>28%</b>

Source: The Standish Group International, *Extreme Chaos*, The Standish Group International, Inc., 2004

- Average cost overrun: 45%
- Time overrun: 63%
- Functionality delivered on average: 67%

Standish Group

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To avoid being late...  
...employ heroes!

# Project Management in Software Engineering Today – 2006!



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**Mistake #1**  
Tampering

Interfering micromanager

**Avoid**

**Mistake #2**  
Lack of Seriousness

Sloth who doesn't take action when required



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## Our Approach

### Focus on People, Process and Tools

#### People

- Visibility at every level
- Real-time flow of information
- Quality mindset
- Team of peers

#### Process

- Customizable
- Lightweight
- Patterns and practices
- Agile and CMMI built-in

#### Tools

- Highly integrated
- Productive
- Quality tools for everyone
- Extensible
- Low admin

Successful IT organizations build application development capabilities through continuous improvement (Kaizen).

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## The Problem with Process

Productive

Predictable  
Repeatable

- Complex
- Disconnected
- Hardened

Challenges

- Getting people to know about it
- Getting people to use it

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## Process & Tools Integration

```

graph LR
    VSTS[Visual Studio 2005 Team System] -- enacts --> MSF[Microsoft Solutions Framework]
    MSF -- guides --> VSTS
  
```

- How VSTS enables MSF?
  - ▣ Productivity tools & processes
  - ▣ Integrated tools & processes
  - ▣ Extensible tools & processes

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## The Origin of MSF

Microsoft Worldwide Products Groups

Microsoft Consulting Services

Microsoft Information Technology Group

Microsoft Partners

➔

Proven Practices

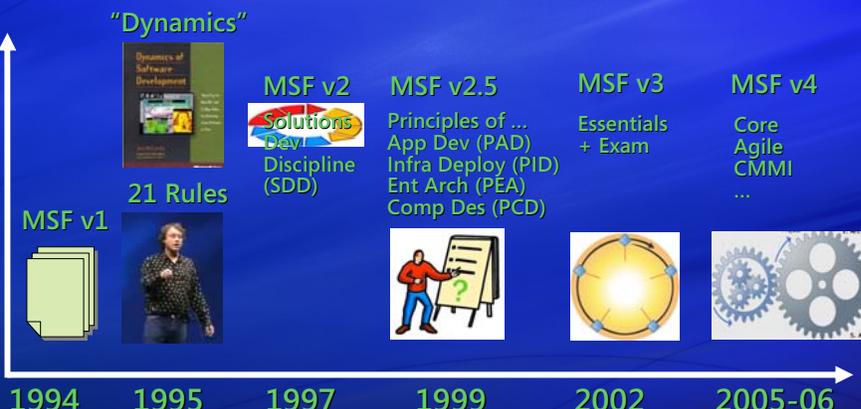


- Results from project teams and product groups are analyzed
- Analyzed results are contrasted with industry practices and methods
- Combined results are then organized and consolidated into "people and process"

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## A Brief History

MSF Offering



Year	MSF v1	MSF v2	MSF v2.5	MSF v3	MSF v4
1994	Stack of papers icon				
1995	21 Rules (with person icon)				
1997		Solutions Play Discipline (SDD) (with play button icon)			
1999			Principles of ... App Dev (PAD) Infra Deploy (PID) Ent Arch (PEA) Comp Des (PCD) (with person at whiteboard icon)		
2002				Essentials + Exam (with globe icon)	
2005-06					Core Agile CMMI ... (with gears icon)

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## MSF for Agile Software Development

- MSF for Agile Software Development is an iterative, scenario-driven, context-based software development process for building .NET, Web, Web Service, and other object-oriented applications.

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## Essence of Agile

- Embraces Agile Manifesto, and...
- Enacts process in VSTS
- Full-lifecycle Agile Process
  - Business Analyst and Tester
  - Embraces Architecture
  - Designed to fit typical mid-size IT department
  - Builds on MSF v3
    - Team Model

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**MSF for Agile Software Development - Microsoft Internet Explorer**

Address: C:\Documents and Settings\jander\My Documents\MSF\MSF Agile\January\_100\_2\Build 100\_2\Process Guidance\Supporting Files\Scenario\_StatesandTransitions.htm

**MSF for Agile Software Development**

Overview | Roles | Work Items | Views | Index

Project Portal > **Scenario**

About Work Items

Scenario

Quality of Service

Requirement

Task

Bug

Risk

Work Item Database

Overview

States and Transitions

Fields

Process Guidance

Activities

Workstreams

**Scenario States and Transitions**

A scenario is a type of work item, recording a single path of user interaction through the system. As the persona attempts to reach a goal, the scenario records the specific steps that they will take in attempting to reach that goal. Some scenarios will record a successful path; others will record an unsuccessful one. When writing scenarios, be specific as there are many possible paths.

**New**

Scenarios can be created in the quality of scenarios list found in the requirements folder in the document library or by using the Team Explorer.

**New to Active**

New [ ] A scenario is activated as a new scenario when it is first created.

**Active**

Scenarios begin in the Active state. The business analyst creates the scenario, provides a descriptive title, and fills in the Description field with as much detail as possible about the scenario. When the scenario is fully written, the business analyst assigns it to a lead developer. The Split field is set to Yes, and the scenario remains in the active state while it is being implemented. The lead developer coordinates efforts with other developers to implement the scenario.

**Active to Resolved**

Completed	A scenario is resolved as Completed when the development team completes writing code for the scenario. The lead developer assigns the scenario to a tester.
Split	A scenario is resolved as Split when further review indicates that the scenario is too large, or that it needs more granular definition. When splitting a scenario, create the new scenarios and link them from the original scenario.
Deferred	A scenario is resolved as Deferred if it cannot be implemented in the current Iteration. A scenario could be deferred because the team does not have enough time, or because blocking issues were discovered. Update the Iteration field to the correct Iteration in which the scenario will be implemented. If the scenario is deferred to the next software product release version, leave the Iteration field blank. Be sure to include a detailed description of why the scenario was deferred, and when it is planned to be implemented.
Removed	A scenario is resolved as Removed if it is no longer deemed necessary to implement. When removing a scenario, check the Issue, and Exit Criteria fields. Typically these fields should be set to No for a removed quality of service scenario.

The states of a scenario work item.

```

    graph TD
      Active --> Resolved
      Resolved --> Active
      Resolved --> Closed
      Resolved --> Deferred
      Resolved --> Split
      Resolved --> Removed
      Resolved --> Reactivated
      Reactivated --> Active
      Deferred --> Active
      Split --> Active
      Removed --> Active
  
```

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# Principles and Mindsets



Mindsets (individual approach)	Principles (govern team decisions)
1. Focus on Business Value	1. Partner with Customers
2. Advocate for Appropriate Constituencies of Risk	2. Work Toward a Shared Vision
3. Take Pride in Workmanship	3. Deliver Incremental Value
4. Deliver on Commitments	4. Invest in Quality
5. Look at the Big Picture	5. Empower Team Members
6. Foster a Team of Peers	6. Establish Clear Accountability
7. Practice Good Project Citizenship	7. Learn from All Experiences
8. Learn Continually	8. Foster Open Communications
9. Internalize Qualities of Service	9. Stay Agile, Adapt to Change

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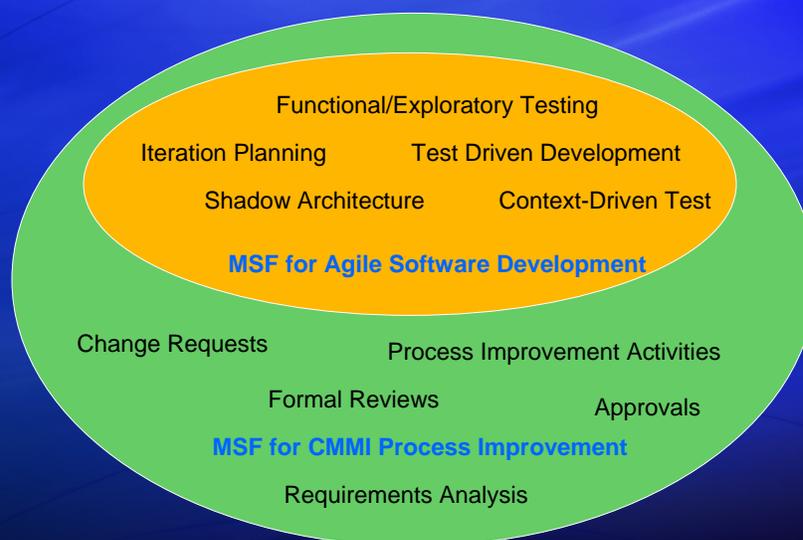
## MSF for CMMI Process Improvement

- The first truly agile CMMI process implementation. Based on MSF for Agile Software Development
- Delivers on the original vision for CMM (1987) to implement the teachings of W. Edwards Deming on Quality Assurance for software engineering
- Process activities and artifacts mapped directly to CMMI Appraisal evidence
- Accelerates achievement of CMMI Level 3

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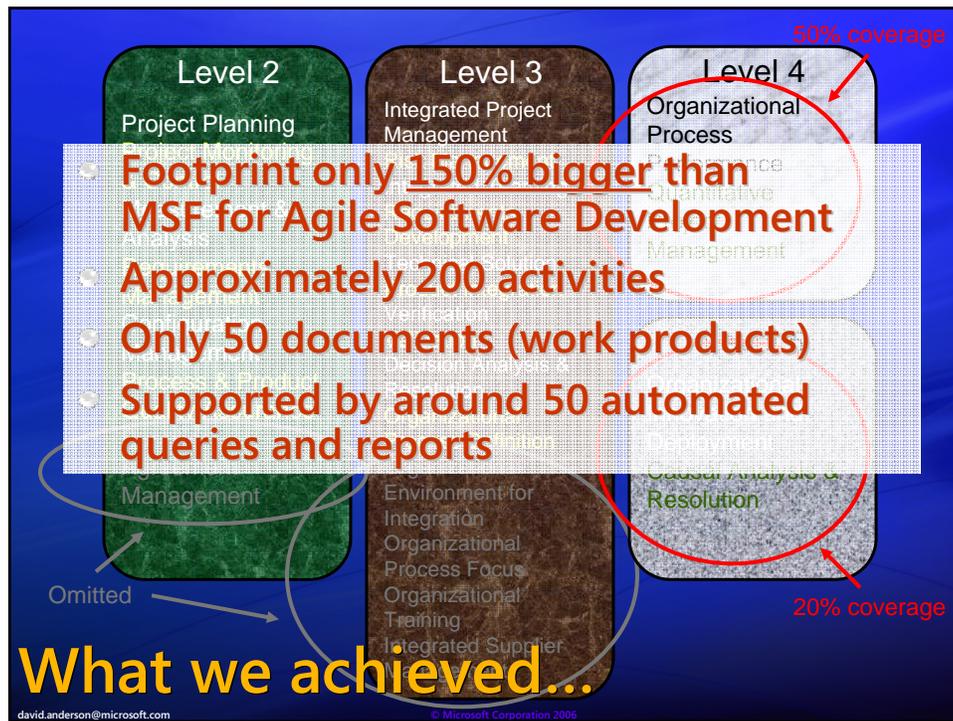
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## Agile or CMMI?



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## OTOH, CMMI without MSF...

- Often overly bureaucratic and heavyweight
- Lots of manual data collection
- Appraisals are time consuming and expensive
- Requires forming SEPG or PMO process function
  - Lots of training from SEI
  - Often poor interpretation of CMMI specification
  - SCAMPI appraiser in consulting role

• **Why do this when MS has done it for you?**

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**MSF for CMMI Process Improvement**

Overview Roles Work Items Views CMMI Index Glossary

Project Portal > **Estimate Project (2 : PP : 1 : 1.1) (2 : PP : 1 : 1.2)**

**Activity:**  
**Estimate Project**

**Entry Criteria**

- Vision Statement**  
The vision for the product.
- Business Case**  
The case justifying the project.
- Quality of Service Requirements**  
A list of non-functional requirements or constraints on the functionality of the system is available.

**Sub-Activities**

- Identify End-to-End Scenarios
  - Hold a focus group and identify a list of end-to-end product scenarios which deliver the essence of the product vision and enable the business case when brought to market.

**Responsible:** User Experience Architect  
**Business Analyst**  
**Accountable:** Project Manager  
**Consult:** Any  
**Informed:** All

**Highlighted text:** CMMI cross reference Level 2 Project Planning Goal 1 Specific Practice 1 & 2

**Process Improvement**

Overview Roles Work Items Views CMMI Index Glossary

**CMMI Process Area:**  
**Project Planning**

**Workstreams referenced by CMMI Goal 'Establish Estimates'**

Key	Analysis	Establish Project Process	Implement a Development Task	Plan an Iteration	Plan Project
<input checked="" type="checkbox"/> Activities used	Design and Development Analysis	Select Project Process Template	Cost a Development Task	Select Iteration Backlog	Determine Risk Sources and Categories
<input checked="" type="checkbox"/> Activities not used	Test Planning	Tailor Project Process	Design	Iteration Analysis	Define Risk Parameters
	User Experience Work Breakdown Analysis	Review Project Process	Create or Update system or Verification Test	Plan Knowledge and Skills	Determine Risk Management Strategy
	User Education Work Breakdown Analysis	Establish Meas...	Prepare for Design Review	Plan Iteration Resources	Plan Project Resources
			Design Review	Form Iteration Team(s)	Plan Project Knowledge and Skills
			Write or Update a Unit Test	Define Iteration Roles and Responsibilities	Plan Project Knowledge and Skills
			Write Code	Identify Iteration Stakeholders	Form Project Team
			Refactor Code Analysis	Plan Iteration Stakeholder Involvement	Establish Project Team Charter
			Refactor Unit Test	Estimate Iteration	Define Project Roles and Responsibilities
			Refactor Code	Prepare for Code Review	Define Iteration Budget and Schedule
					Define Project Life Cycle

**Highlighted text:** Highlighted activities provide SCAMPI evidence for CMMI appraisal Process Area: Project Planning; Goal: Establish Estimates

MSF CMMI Reference (2).xls [Read-Only]						
	A	B	C	D	E	F
	Workstream	Activity	Level	PA	Goal	Prac
76			3	IT	2	2.1
79		Develop Lifestyle Snapshot	3	RD	1	1.1
80			3	RD	3	3.1
81		Review Vision Statement	3	IPM	2	2.1
82			3	VER	2	2.2
83						
84		Close a Bug				
85		Verify a Fix	3	VER	3	3.1
86		Close a Bug				Perform Test
87						
88		Create a Quality of Service Requirement				
89		Brainstorm Quality of Service Reqs	2	REQM	1	1.1
90			3	RD	1	1.1
91			3	RD	1	1.2
92		Prioritize Quality of Service Req	3	RD	3	3.4
93		Write Quality of Service Req	3	RD	3	3.1
94		Validate Quality of Service Req	3	RD	3	3.5
95		Write UAT	3	VAL	1	1.3
96						Develop Requirements
97		Create a Scenario				
98						Understanding Requirements, Elicit Needs,
99		Brainstorm Scenarios	2	REQM		Establish Operational Scenarios
100			3	RD		
101			3	RD		
102		Prioritize Scenarios				
103		Write Scenarios				
104						
105		Storyboard Scenarios				
106						
107		Validate Scenarios				
108		Write User Acceptance Tests				
109						
110		Create Product Requirements				
111		Allocate Product Component Requirements	3	RD	2	2.2
112		Define Interface Requirements	3	RD	2	2.2

Use the MSF CMMI Reference.xls spreadsheet in the General Documents folder for the official cross reference on CMMI implementation and SCAMPI evidence generation

MSF CMMI Reference (2).xls [Read-Only]												
	A	B	C	D	E	F	G	H	I	J	K	L
	Level	PA	SG	SP	Title	Gap	Workstream	Activities	Direct Evidence	Indirect Evidence	Notes	M
288	3	RSKM	1	1.1	Determine Risk Sources and Categories		Plan Project	Determine Risk Sources and Categories	Risk sources and categories (work product)	Risk taxonomy (process guidance), Risk management database (Risk V/s)		
290	3	RSKM	1	1.2	Define Risk Parameters		Plan Project	Define Risk Parameters	Process Guidance	Risk management database (Risk V/s)		
291	3	RSKM	1	1.3	Establish a Risk Management Strategy		Plan Project	Establish Risk Management Strategy	Process Guidance, Process template and enactment	Process Guidance, Risk monitoring activity (Task V/s)		
292	3	RSKM	2		<b>Identify and Analyze Risks</b>							
293	3	RSKM	2	2.1	Identify Risks		Risk Management	Identify Risks	Risk V/s	Risk Analysis activities (Task V/s)		
294	3	RSKM	2	2.2	Evaluate, Categorize, and Prioritize Risks		Risk Management	Analyze Risks	Risk V/s with priority and history			
295	3	RSKM	2				Risk Management	Prioritize Risks				
296	3	RSKM	3		<b>Mitigate Risks</b>							
297	3	RSKM	3	3.1	Develop Risk Mitigation Plans		Risk Management	Select Risks for Mitigation	Risk V/s - mitigation plan field	Risk V/s - history		
298	3	RSKM	3				Risk Management	Plan Risk Mitigation				
299	3	RSKM	3	3.2	Implement Risk Mitigation Plans		Risk Management	Implement Risk Mitigation Plans	Task V/s - linked to Risk V/s	Task and Risk V/s - history		
300	3	IT	1		<b>Establish Team Composition</b>							
301	3	IT	1	1.1	Identify Team Tasks		Plan an Iteration	Form Iteration Team	Task V/s (by team member knowledge and skill product)	V/s status (by team) Report	It would be good if we could track team assignments. How can we get the necessary report?	
302	3	IT	1	1.2	Identify Needed Knowledge and Skills		Plan an Iteration	Identify Knowledge and Skills	Knowledge and product)	Training Records (work product)		
303	3	IT	1				Plan Project	Identify Knowledge and Skills	Team assignment against requirements	Task V/s with history and time recording		
304	3	IT	1	1.2	Assign Appropriate Team Members		Plan an Iteration	Form Iteration Team	Team assignment Chart	Task V/s with history and time recording		
305	3	IT	2		<b>Govern Team Operation</b>							
306	3	IT	2				Plan Project	Form Project Team			A bug has been added for the	
307	3	IT	2	2.1	Establish a Shared Vision		Capture Product Vision	Capture Product Vision				
308	3	IT	2				Capture Product Vision					
309	3	IT	2	2.2	Establish a Team Charter		Plan Project	Establish a Team Charter				
310	3	IT	2	2.3	Define Roles and Responsibilities		Plan Project	Define Roles and Responsibilities				
311	3	IT	2				Plan Iteration					
312	3	IT	2	2.4	Establish Operating Procedures		Plan Project	Establish Operating Procedures				
313	3	IT	2	2.5	Collaborate among Interfacing Teams		Plan Project	Collaborate among Interfacing Teams		Communication Plan		
314	3	IT	2				Plan Iteration	Establish Communication Plan		Communication Plan		

Columns J & K show the SCAMPI evidence used to appraise the maturity and capability of the specific practice, goal and process area.

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## Trustworthy Transparency

- *VSTS lets everyone see exactly what is happening to all the customer valued work on a project. That transparency is trustworthy because it comes from the same tool that is used to do the work. It necessarily has to reflect the working reality of the project.*

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# Friction-Free Data Collection

**Check In - Source Files - Workspace: PERSONID-BHTS3\_Test1\_v-jperez**

Comments:  
Changed the Web Service client call from Synchronous to Asynchronous.  
Adding new Build Verification Tests!

Name	Change	Folder
windows.sp.sp2.gn.testrunco...	add	c:\TL
windowsserver2003.testrunco...	add	c:\TL
Build Verification Tests.csproj...	edit	C:\TL\Build Verification Tests
Build Verification Tests.csproj...	edit	C:\TL\Build Verification Tests
Message.xml	add	C:\TL\Build Verification Tests
Register buildtest	add	C:\TL\Build Verification Tests
Teambook Unit Test.k		
TeambookWPTest.k		
TheApplicationTest.c		
TLAboutTest.cs		
TLAboutTest.cs		
TLProjectFolderTest.c		
TLProjectFolderTest.c		
TLReconnectingTest.c		
Teambook.csproj		
Teambook.csproj.vsp		
AuthoringTests.txt		
RegisterForAccount...		

**Check In - Work Items (Shareware Starter Kit/Team Queries/My Work Items)**

Query: My Work Items

Work Item ...	ID	Title	State	Check-in Action
<input checked="" type="checkbox"/>	6886	Web service client code needs to be async	Active	Resolve

Check In    Cancel

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## MSF for CMMI Process Improvement

Visual Studio Team System

Overview   Roles   Work Items   Views   CMMI   Index   Glossary

Project Portal >

Workstreams  
Activities  
Work Items  
Work Products  
**Reports**  
Queries  
How To's

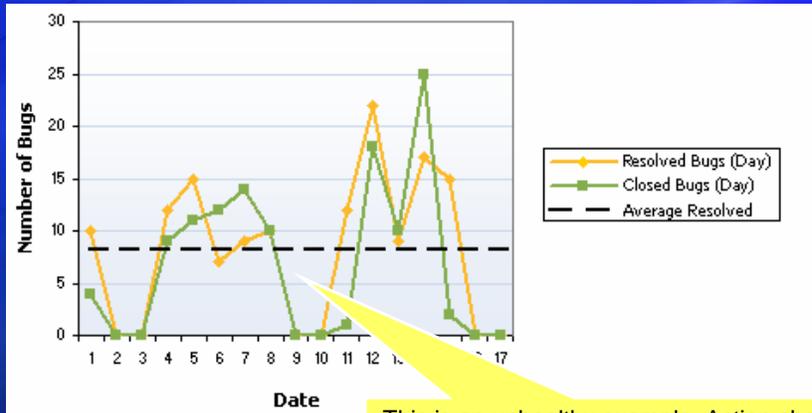
### Index Reports

Project health charts aggregate metrics from work items, source control, test results, and builds. They answer questions about the actual state of your project at many scales: for the days within an iteration, iterations within a project, or projects within a program. The questions are also relevant for many kinds of work items such as scenarios, quality of service requirements, tasks, and bugs.

- Actual Quality versus Velocity
- Bug Rates
- Bugs by Priority
- Builds
- Open Issues and Blocked Work Items Trend
- Quality Indicators
- Reactivations
- Regressions
- Related Work Items
- Remaining Work
- Requirements Test History
- Scenario Details
- Test Failure Without Active Bug
- Test Passing With Active Bug
- Triage
- Unplanned Work
- Velocity
- Work Items
- Work Items by Owner
- Work Items by State

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# Velocity

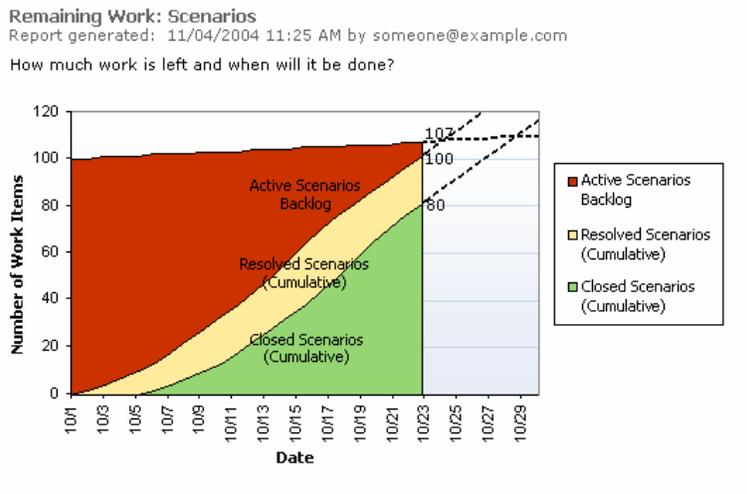


This is an unhealthy example. Action should be taken to resolve issues blocking work items and to change the working environment to reduce randomization of team members.

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# Work Remaining



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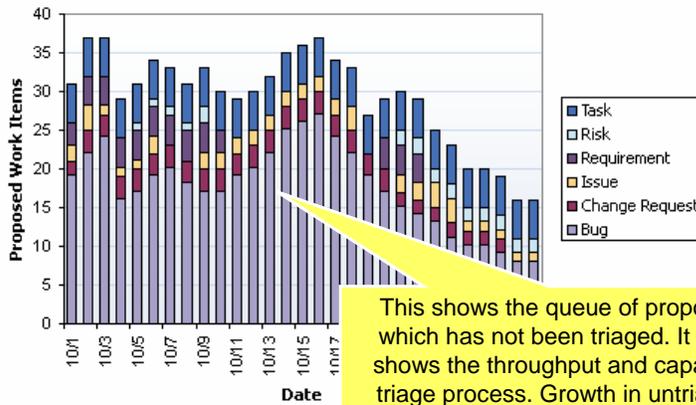
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# Triage

## Triage

Report generated: 11/04/2004 11:25 AM by someone@example.com

Which proposed work items have not yet been triaged?



This shows the queue of proposed work which has not been triaged. It effectively shows the throughput and capacity of the triage process. Growth in untriated work items may indicate more time and resources need to be spent on triage activities.

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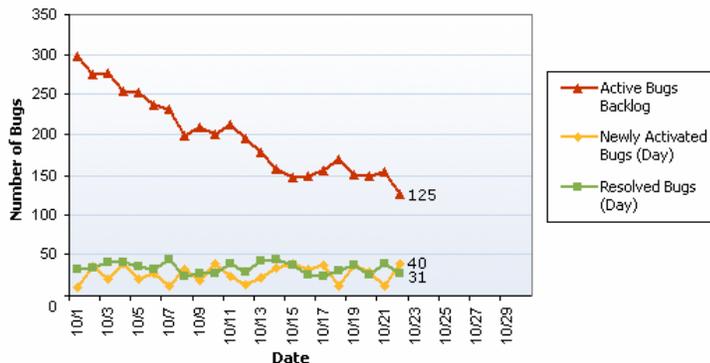
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# Bug Rates

## Bug Rates

Report generated: 11/04/2004 11:25 AM by someone@example.com

How effectively are we finding, fixing and closing bugs?



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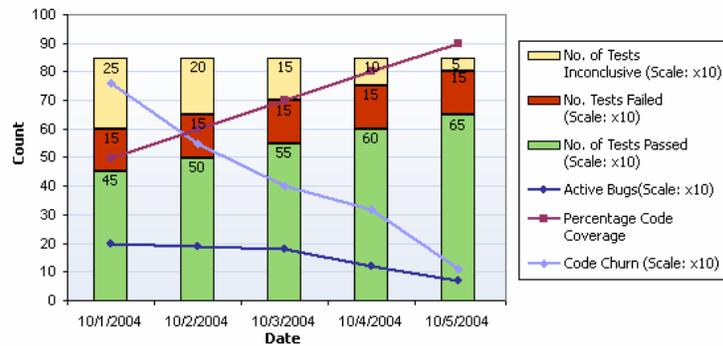
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# Quality Indicators

## Quality Indicators

Report generated: 11/04/2004 11:25 AM by someone@example.com

What is the quality of the software?



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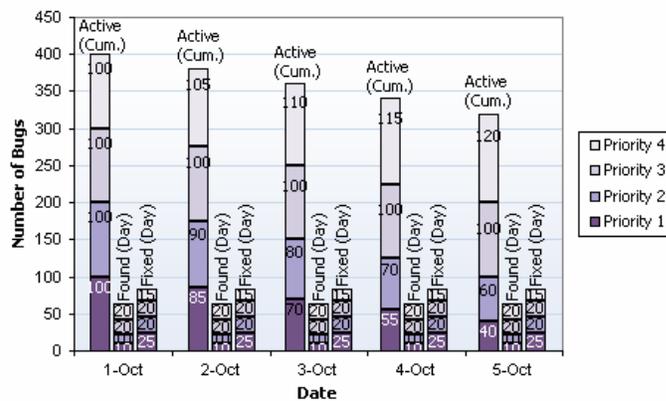
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# Bugs by Priority

## Bugs by Priority

Report generated: 11/04/2004 11:25 AM by someone@example.com

Are we finding and triaging the right bugs?



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# Builds

**Builds**  
 Report generated: 11/04/2004 11:25 AM by someone@example.com  
 Which builds are available and what are the build details for each?

Build ID	Build Quality	% Tests Passed	% Code Coverage	% Code Churn
41001.00	Failed	75%	42%	1.7%
Test Results: 4/4 test runs completed, 16/20 tests passed				
Test Run	Total Tests	Passed	Failed	Other Result
BVT_TPSv21_04110600	5	3	1	1
Test Name	Test Name	Category	Machine	Description
TestMethod01	Passed	Nightly	DevMachine-00	This is a description of the test.
TestMethod02	Passed	Nightly	DevMachine-00	This is a description of the test.
TestMethod03	Passed	Nightly	DevMachine-00	This is a description of the test.
TestMethod04	Failed	Nightly	DevMachine-00	This is a description of the test.
TestMethod05	Inconclusive	Nightly	DevMachine-00	This is a description of the test.
BVT_TPSv21_04110601	5	4	1	0
BVT_TPSv21_04110602	5	4	1	0
BVT_TPSv21_04110603	5	4	1	0
Code Coverage Results: 42% lines covered, 49% lines not covered, 9% lines covered				
Assembly	Covered (Lines)	Not Covered (Lines)	Partially Covered (Lines)	Date
CurrencyConverter.dll	330	600	70	04/15/2005
StoreInventory.dll	600	480	120	04/15/2005
Code Churn Details: 25990 Total LOC, 450 Churned LOC, 89 Deleted LOC				
Relative Code Churn Measure	Value			
Churned LOC/Total LOC	.017			
Deleted LOC/Total LOC	.003			
Churned LOC/Deleted LOC	5.056			
41001.01	Failed	72%	50%	1.7%
41001.02	Failed	70%	50%	1.7%

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# Tests Failing Without Bugs

**Tests Failing Without Active Bugs**  
 Report generated: 11/04/2004 11:25 AM by someone@example.com  
 Are there failing tests that don't have associated active bugs?

Test Name	Category	Machine	No. of Bugs	Description
TestMethod01	Nightly	DevMachine-001	5	This is a description of the test.
Bug ID State Title				
1176	Resolved	Credit card validation delays the checkout		
1190	Resolved	Security settings notification when cookies are disabled		
1203	Resolved	Tab order incorrect		
1204	Resolved	Required fields need correct background color		
1205	Resolved	Do not cache credit card information on checkout page		
TestMethod02	Nightly	DevMachine-001	2	This is a description of the test.
TestMethod03	Nightly	DevMachine-001	1	This is a description of the test.
TestMethod04	Nightly	DevMachine-001	1	This is a description of the test.
TestMethod05	Nightly	DevMachine-001	4	This is a description of the test.

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# Tests Passing with Active Bugs

Tests Passing With Active Bugs  
 Report generated: 11/04/2004 11:25 AM by someone@example.com

Are there passing tests that do have active bugs?

Assigned To	Total Tests
<input type="checkbox"/> Brian Cox	5

Test Name	Category	Machine	Total Bugs	Description
<input type="checkbox"/> TestMethod11	Nightly	DevMachine-00	4	This is a description of the test.
<input type="checkbox"/> TestMethod12	Nightly	DevMachine-00	6	This is a description of the test.
<input type="checkbox"/> TestMethod13	Nightly	DevMachine-00	5	This is a description of the test.
<input type="checkbox"/> TestMethod14	Nightly	DevMachine-00	5	This is a description of the test.
<input type="checkbox"/> TestMethod15	Nightly	DevMachine-00	3	This is a description of the test.

Bug ID	State	Title
<a href="#">1176</a>	Active	Client timeout when checking product availability
<a href="#">1190</a>	Active	Welcome page not picking up user ID
<a href="#">1203</a>	Active	Adding a new column to the catalog table sheet triggers exception

<input type="checkbox"/> Doris Krieger	8
<input type="checkbox"/> Fernando Sousa	11
<input type="checkbox"/> Judy Lew	10
<input type="checkbox"/> Martin Weber	7

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# Requirements Details

Scenario Details  
 Report generated: 11/04/2004 11:25 AM (GMT -08:00) by someone@example.com

Are we making progress with our scenarios?

Rank	Scenario	Specified	Overall Status
1	Browse products by category	Yes	
	<input type="checkbox"/> Architecture Tasks	45 Closed	Completed
	<input type="checkbox"/> Development Tasks	12 Closed	Completed
	<input type="checkbox"/> Test Tasks	37 Closed	Completed
	<input type="checkbox"/> Test Cases	82 Passed, 82 Run	
2	Order for in-store pickup	Yes	
	<input type="checkbox"/> Architecture Tasks	22 Closed	Completed
	<input type="checkbox"/> Development Tasks	3 Active, 2 Resolved, 1 Closed	In Progress
	<input type="checkbox"/> Test Tasks	10 Active, 12 Resolved, 14 Closed	In Progress
	<input type="checkbox"/> Test Cases	45 Passed, 65 Run	
3	Search local inventory	Yes	
	<input type="checkbox"/> Architecture Tasks	4 Active, 5 Resolved, 45 Closed	In Progress
	<input type="checkbox"/> Development Tasks	4 Active, 2 Resolved, 1 Closed	In Progress
	<input type="checkbox"/> Test Tasks	23 Active, 5 Resolved, 10 Closed	In Progress
	<input type="checkbox"/> Test Cases	3 Passed, 4 Run	

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## Agenda

- Why Process?
- MSF for Agile Software Development
- MSF for CMMI Process Improvement
- Trustworthy Transparency
- Continuous Improvement
- Implementing MSF

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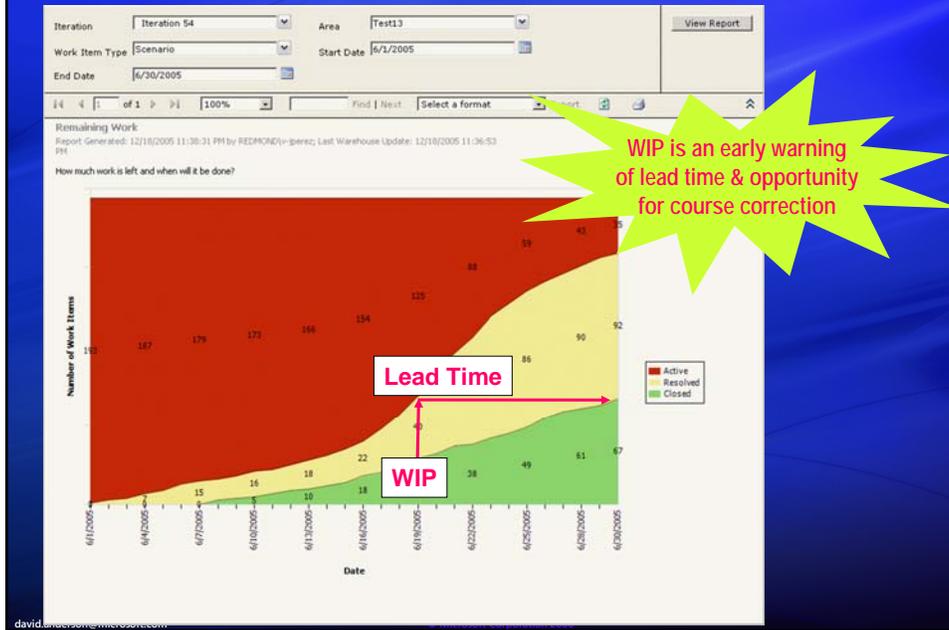
## Continuous Improvement

- MSF enables Lean Thinking, Constraints Management, and Six Sigma for IT

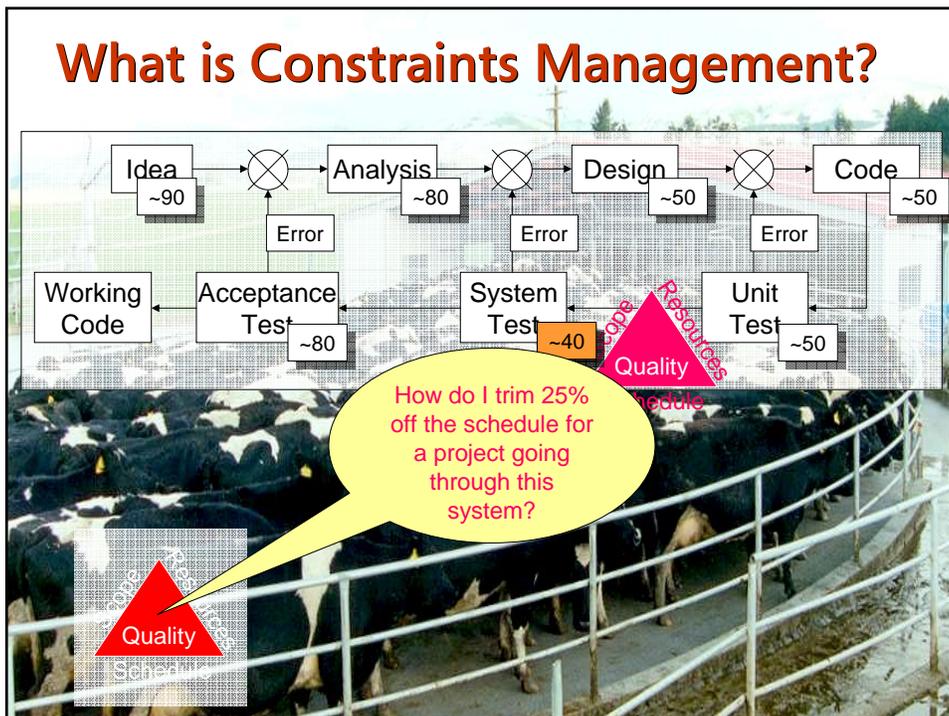
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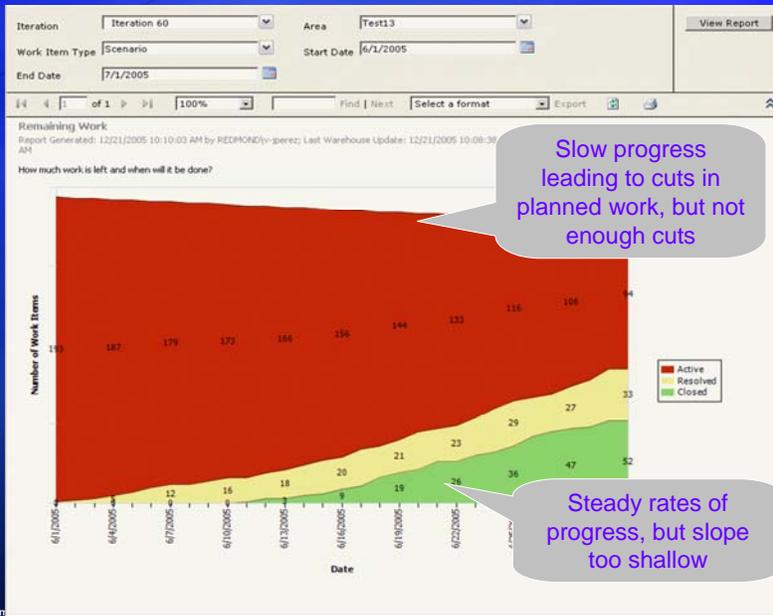
# Lean: Managing with Queues



## What is Constraints Management?



# Constraints Become Visible



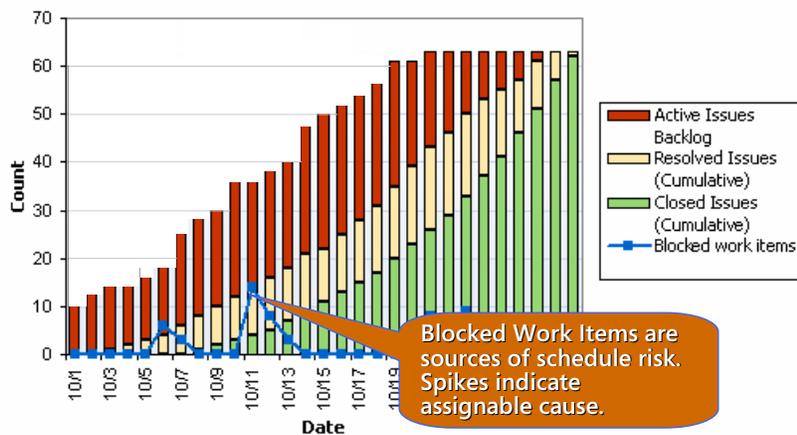
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# Removing Unforeseen Causes of Risk

## Issues and Blocked Work Items

Report generated: 11/04/2004 11:25 AM by someone@example.com

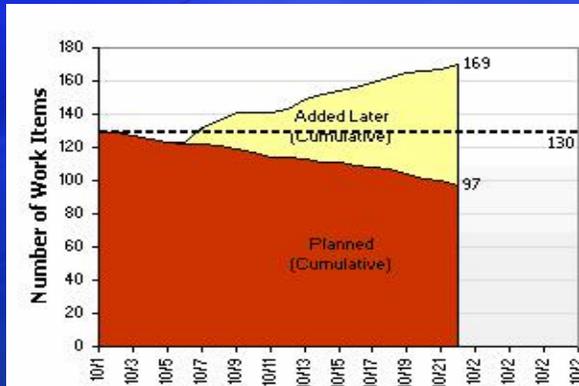
Are issues causing work items to block?



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# Unplanned Work Report

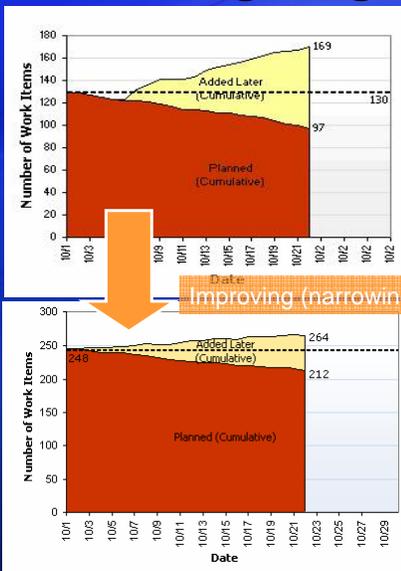


Three types of unplanned work:  
 Bugs (Defects),  
 Dark Matter  
 Change Requests

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# Reducing Engineering Variation



Improving (narrowing) over time

- Over a series of iterations improve accuracy of planning through better analysis
- Requires a Kaizen or Six Sigma event (management intervention) to change the engineering method

**CMMI  
 Level 4 & Beyond**

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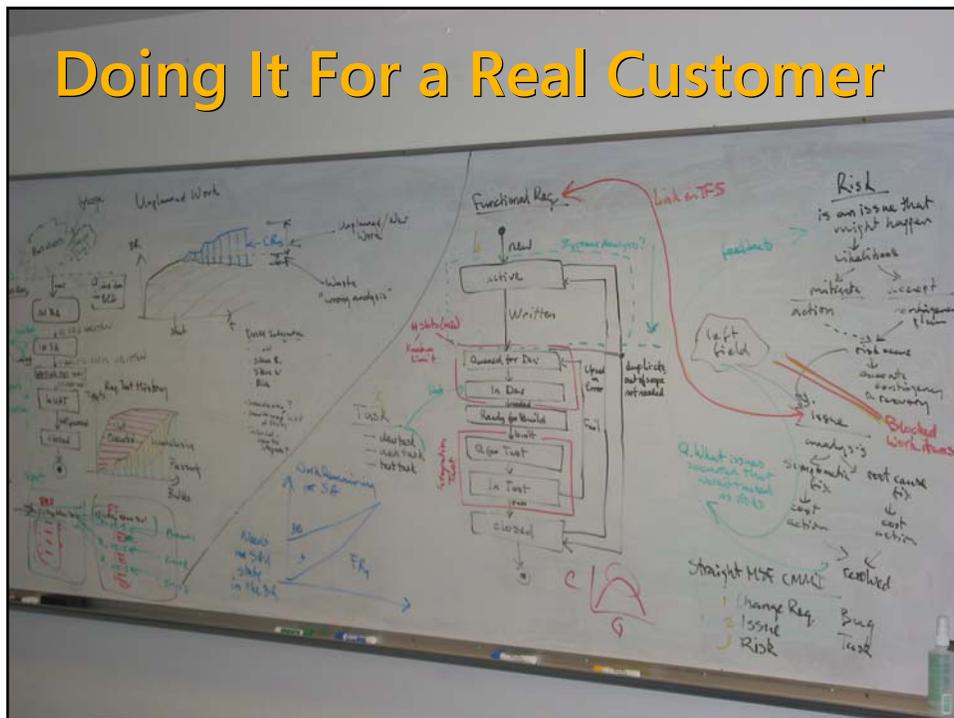
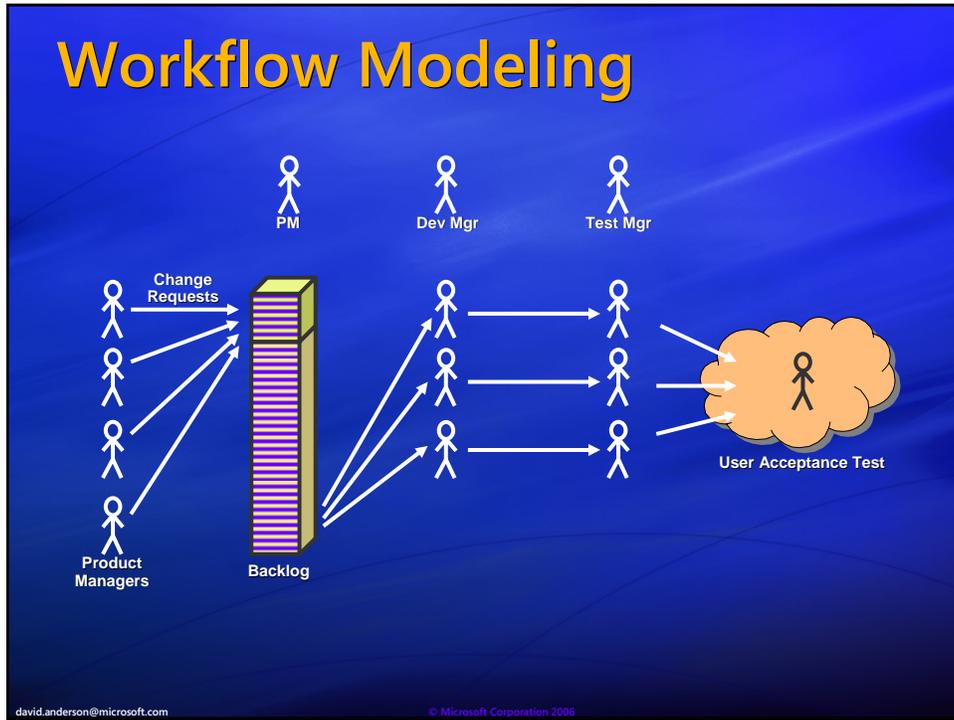
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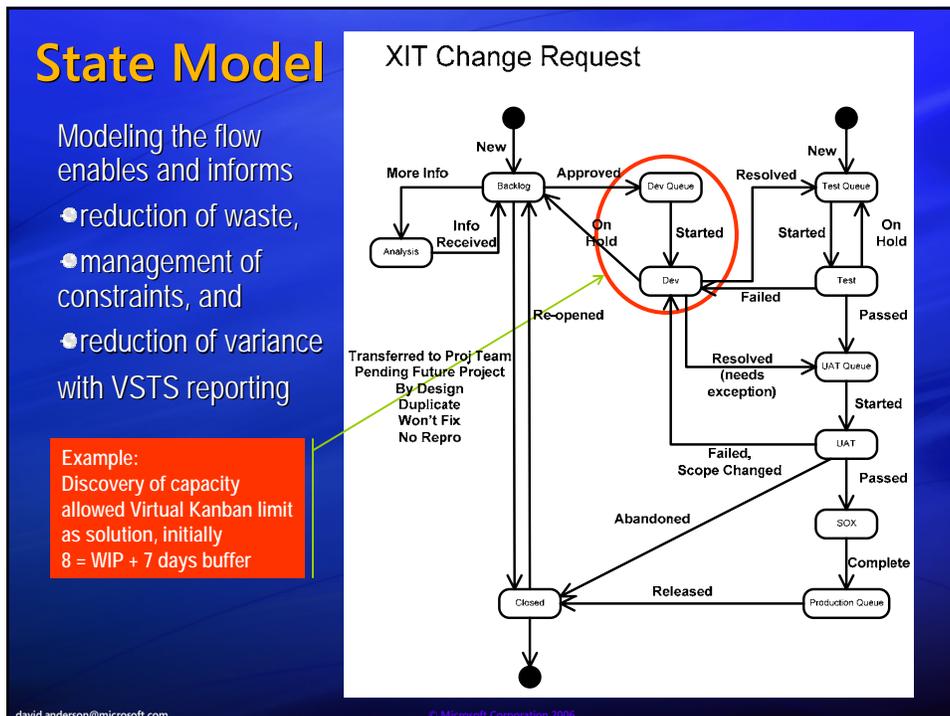
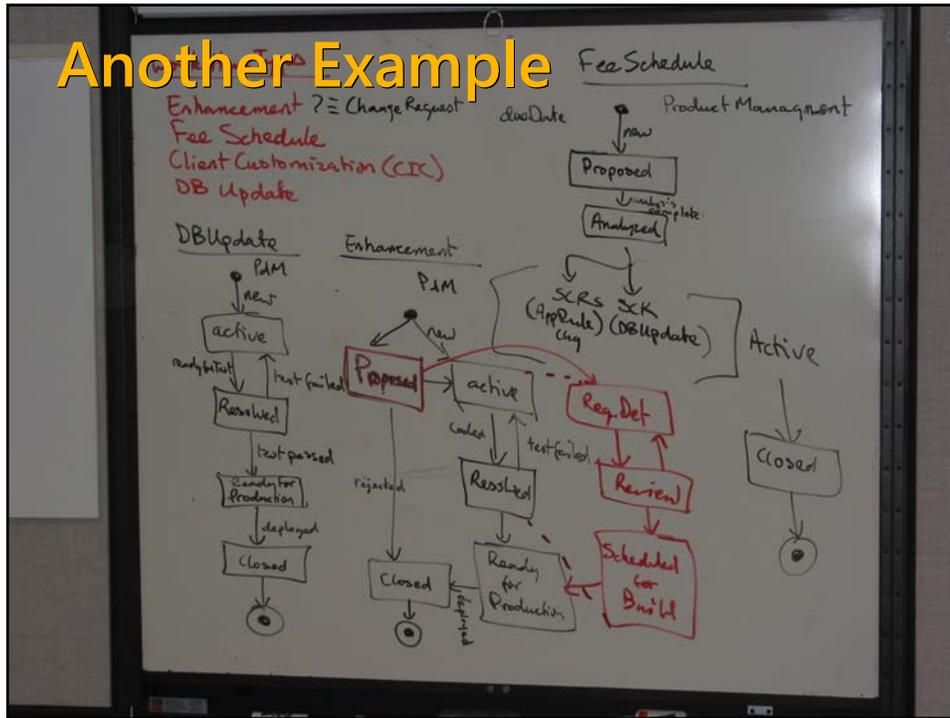
## Implementing MSF

- Start with Workflow Modeling - Design Work Item Types for Team Foundation Server to enable reporting in context

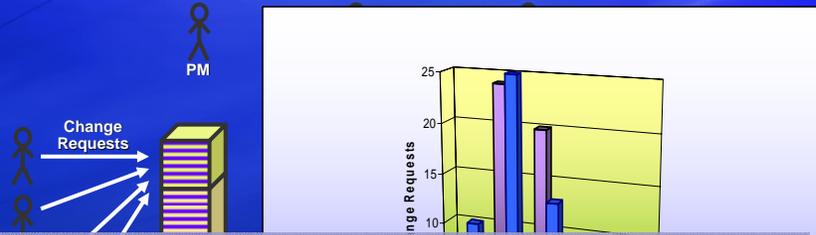
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# How much waste is there in the process?

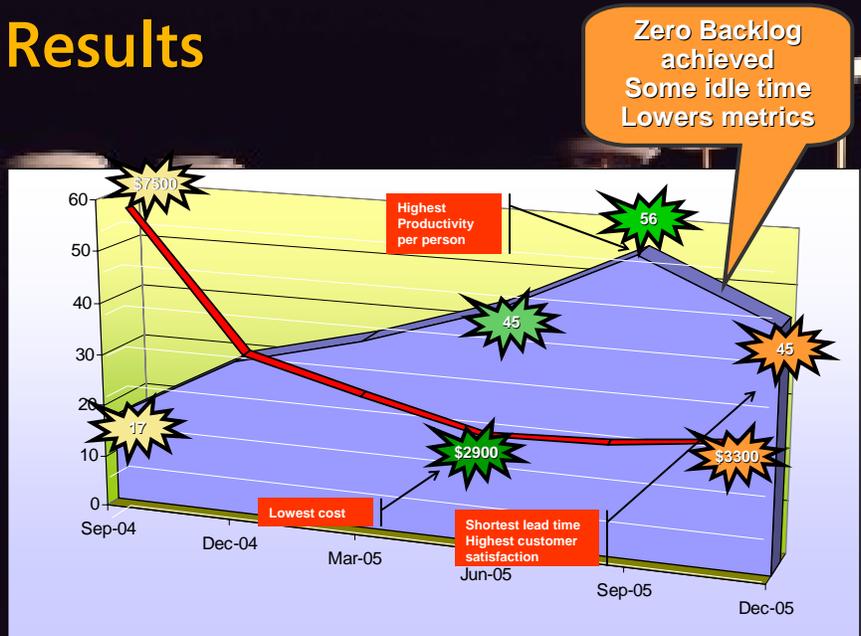


- Touch time mean was 11 days
- Distribution (spread) is tight
- But, Lead Time was 155 days
- **Touch Time : Lead Time Ratio < 1 : 10**
- At least 90% of this process is waste

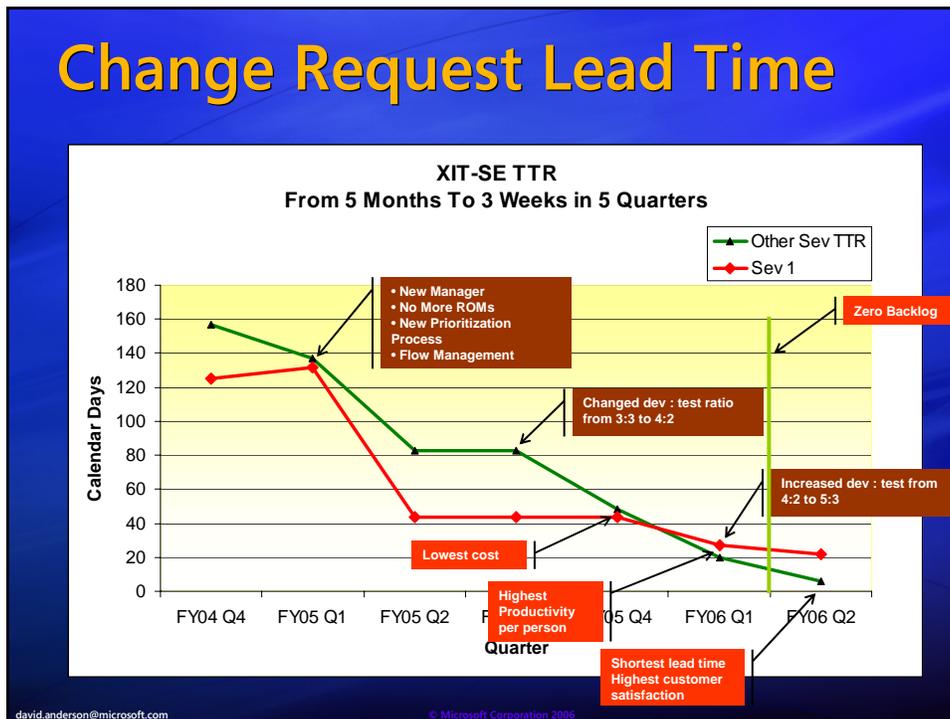
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# Results



## Change Request Lead Time



## Bottom Line

- Realize Your Potential
  - ▣ Model workflow
  - ▣ Enable reporting
  - ▣ Achieve Trustworthy Transparency
  - ▣ Drive positive cultural change
- Deliver Continuous Improvement
  - ▣ Agile
  - ▣ CMMI, Lean, Six Sigma

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## Agenda

- ✓ Why Process?
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agilemanagement
BLOG


Thoughts on Software, Management, Constraints and Agility

<http://www.agilemanagement.net/>

- Book published September 2003
- Winner - **Best Project Management Blog 2005** by readers of Inside Blogging
- Agile Project Leadership Network Founder <http://www.apln.org/>



APLN

AGILE PROJECT LEADERSHIP NETWORK

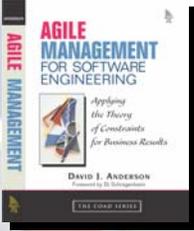


insideblogging.com

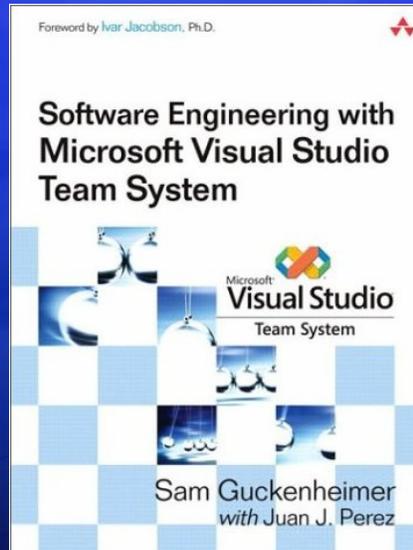


THE 2005 BUSINESS BLOGGING AWARDS

We can't let the online blabbers have all the fun.



## For More Information...



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## References

- **MSF Site**
  - [//msdn.microsoft.com/msf/](http://msdn.microsoft.com/msf/)
  - [//www.agilemanagement.net/](http://www.agilemanagement.net/)
  - CMMI Appraisers' workshop
  - [//msdn.microsoft.com/vstudio/teamsystem/msf/appraisers/default.aspx](http://msdn.microsoft.com/vstudio/teamsystem/msf/appraisers/default.aspx)
- **VSTS Content**
  - [//vsts/](http://vsts/)
- **Competitive Content**
  - [//evangelism/vs/compete/](http://evangelism/vs/compete/)
- **MSF Webcasts**
  - [Introducing Microsoft Solutions Framework for CMMI Process Improvement \(Level 100\)](#)
  - [Returning to the Roots of CMMI \(Level 200\)](#)
  - [Microsoft Solutions Framework for CMMI Process Improvement and the Standard CMMI Assessment Method for Process Improvement \(SCAMPI\) \(Level 200\)](#)

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