



Project Plan for the Software Project Benchmark System

CSSE 372, Fall 2010
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Simptrix

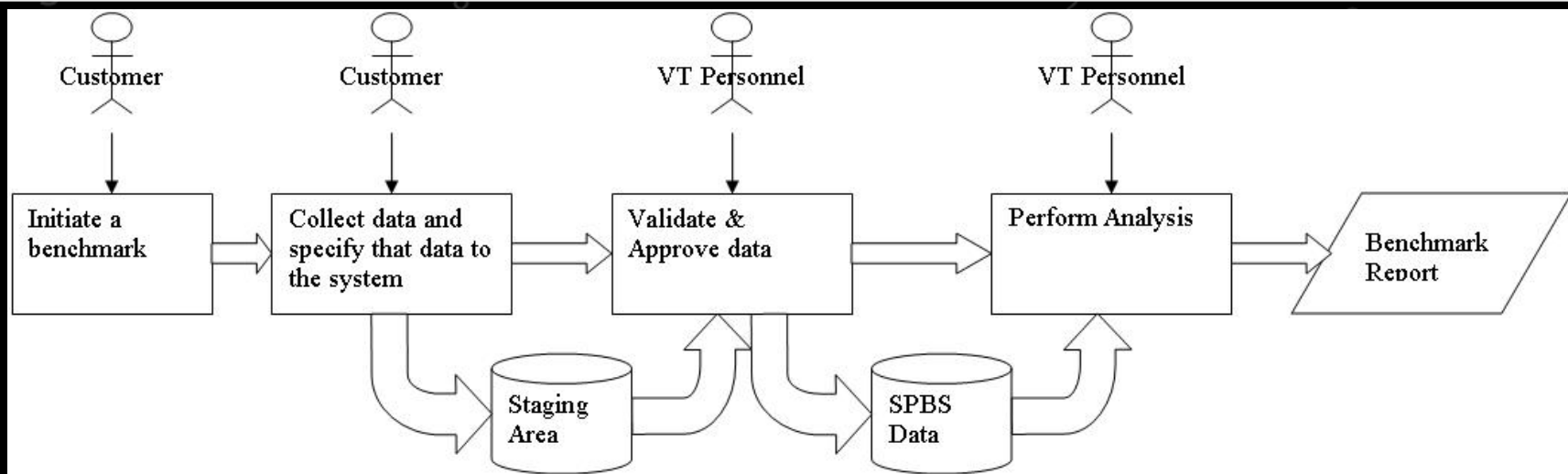
- 1999 – Homer changes his image and creates Simptrix in Terre Haute, IN
- Teams with Marge – background in metrics and process improvement
 - Collects metrics on every project - 5 year history
 - Acquires Bart, a budding new developer
- 7 people and growing – mostly seasoned, versatile developers
- Specialize in any and all applications



Agenda

- Team and Product Overview
- Project Management Approach
- Estimates
- Risks
- Schedule of Deliverables
- Current Status

Product Overview






- SPBS is a software development metric repository
- Permits authorized organizations to add data to repository and to request benchmark reports.
- 2 kinds of reports – automatic (free) and manually generated (charged)
- Allows authorized students access to data for research.



Project Management Approach

- Iteration & Incremental with WinWin Spiral Model^[1]
- Startup & Initial Planning
- 3 Iterations
 - 1 - Infrastructure, Core functionality, Security
 - 2 - Membership, Projects, Metrics Input, Security
 - 3 - Validation, Review, Reports, Security
- Each iteration
 - Stakeholders discuss project status, goals and requirements for current iteration, Build functionality,
 - Stakeholders evaluate executable baseline, including documentation
- CCPM safety buffers
 - Absorbs overruns
 - Provides health indicator

Members & Burdened Labor Rate

Staff	Title	Responsibility
	Software Engineer III Salary (year): \$96,664	Project Manager Architect
	Software Engineer II Salary (year): \$81,439	Process and Metrics SQA Engineer Developer
	Database Analyst II Salary (year): \$73,310	DBA Developer

Members & Burdened Labor Rate

Staff	Title	Roles
	Programmer II Salary (year): \$47,385	Programmer
	Interface Designer Salary (year): \$74,061	Web Designer Programmer
Average Salary (Monthly) : \$ 6,214.31 (plus 50% overhead)		Burdened Labor Rate: \$ 9,321.47

Process-Based Estimate

Bottom-Line

Startup	1.25
Iteration 1 & Buffer	4.91
Iteration 2 & Buffer	9.19
Iteration 3 & Buffer	7.01
Project Buffer	1.68
SUBTOTAL	24.04
20% reduction for Reuse	-4.81
TOTAL (in months)	19.23
TOTAL Cost, BLR = \$9,321.47	\$179,251.87

Bottom Line – Estimation Results

Cost	Hardware:	\$ 6,886
	COCOMOII Cost Estimate:	\$ 180,900
	Total:	\$ 187,786
Effort	18.33 staff months	
Duration	4-5 months (with a 5 person team)	

Risk Management

- Analyze risk at the beginning of every iteration
 - Weekly risk evaluation
- 8 key risks identified
 - Vulnerable security
 - Third-party payment system fails
 - Estimation is wrong
 - Staff turnover
 - Reliance on open source software
- Top Risk: Security Vulnerability
 - Probability: 30% Impact: Catastrophic
 - Threat Model: mitigate probability from 70% → 30% → 1%
 - Risk-based testing strategy
 - Put hardware in secure room
 - Emphasis on security during development

Project Deliverables Schedule

Iteration	Iteration Complete	Deliverables/Milestones	Milestone Complete
Startup and Initial Planning	9/08/00	Project Plan Risk Management Plan	9/08/09 9/08/09
Iteration 1	01/06/09	Life-Cycle Objectives Life-Cycle Architecture Initial Operational Capability	9/17/04 10/21/09 10/30/09
Iteration 2	02/11/10	Life-Cycle Objectives Life-Cycle Architecture 2nd Operational Capability	11/30/09 01/6/09 02/11/09
Iteration 3	05/21/10	Life-Cycle Objectives Life-Cycle Architecture Final Operational Capability	03/8/10 04/1/10 05/21/10
Project Complete	05/27/10		



Any Questions?