




Presented to
VANQ
May 29, 2008

Increasing Test Effort Estimation Effectiveness

Silverpath Technologies Inc.
Trevor.Atkins@silverpath.com



What is an Estimate?

- ❖ “An approximate calculation of quantity or degree or worth.”
 - ❖ <http://wordnet.princeton.edu/perl/webwn?s=estimate>
- ❖ “An assessment of the likely quantitative result. Usually applied to project costs and durations and should always include some indication of accuracy (+/- x percent).”
 - ❖ Project Management Institute, PMBOK 3rd Edition

©2008 Silverpath Technologies Inc. 2

What is an Estimate For?



- ❖ An agreed estimate sets the scene for a successful project plan & schedule with appropriate contingency
 - ❖ Vision vs. Capacity
 - ❖ Choices vs. Consequences
 - ❖ Risk vs. Strategy

©2008 Silverpath Technologies Inc.

3

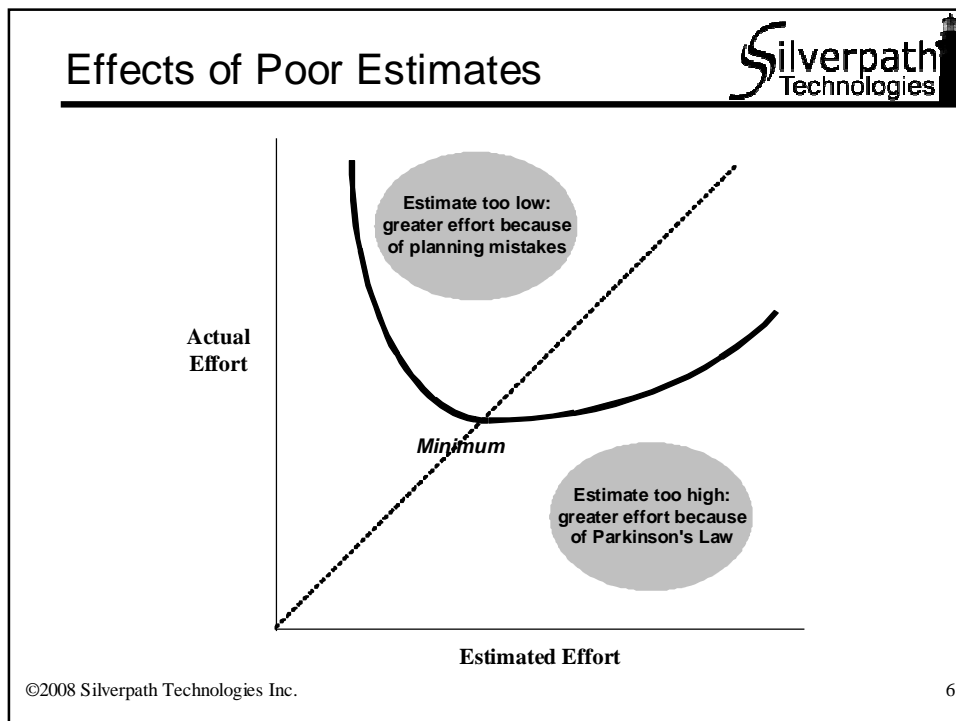
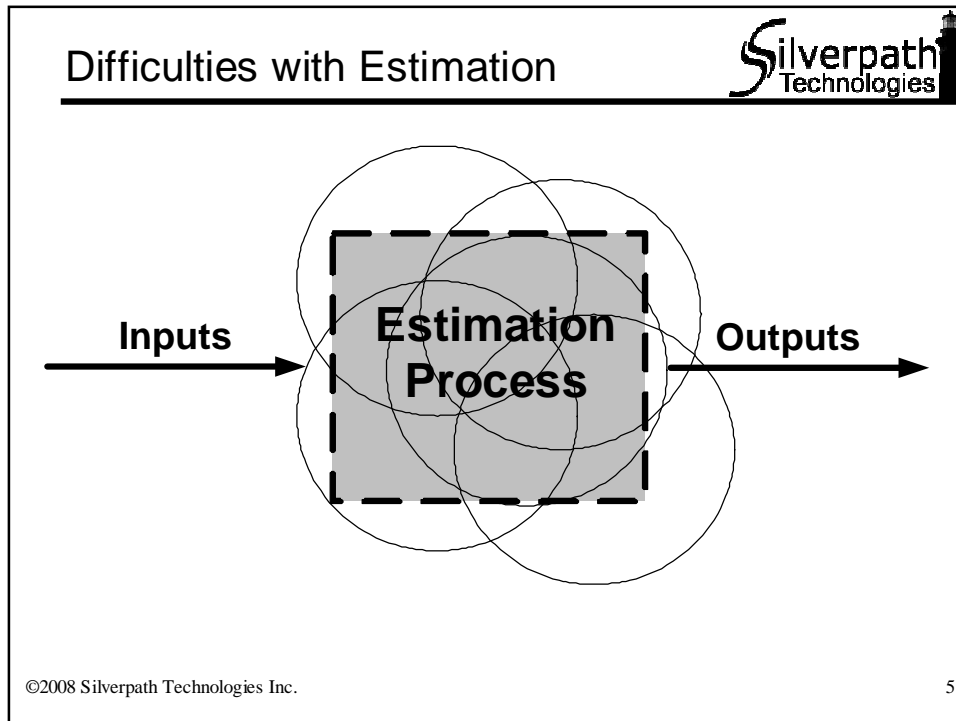
State of the Estimation Practice

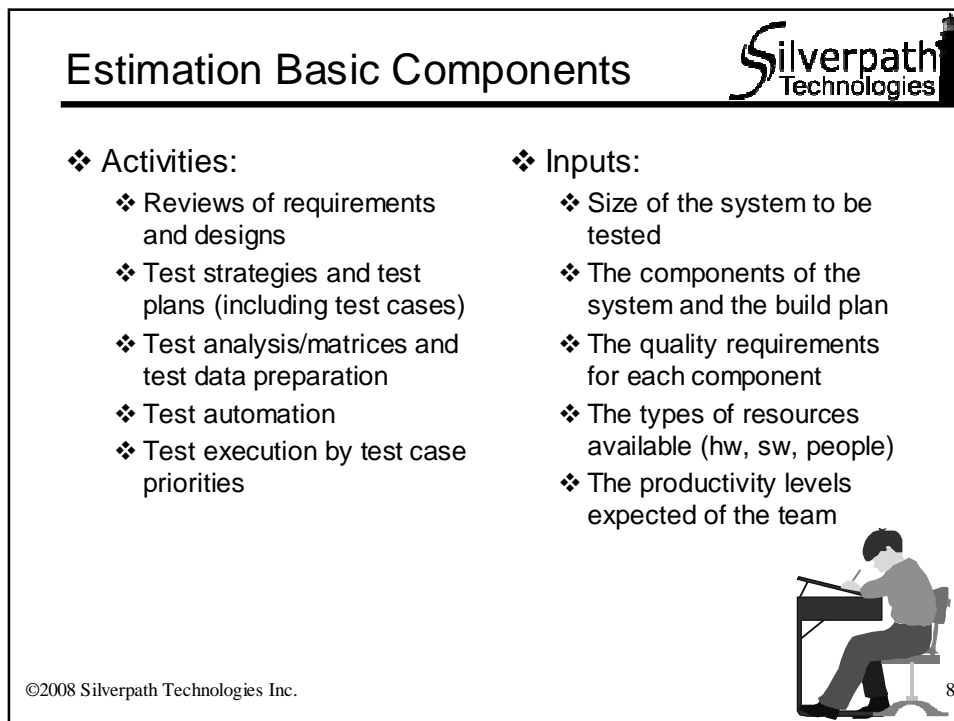
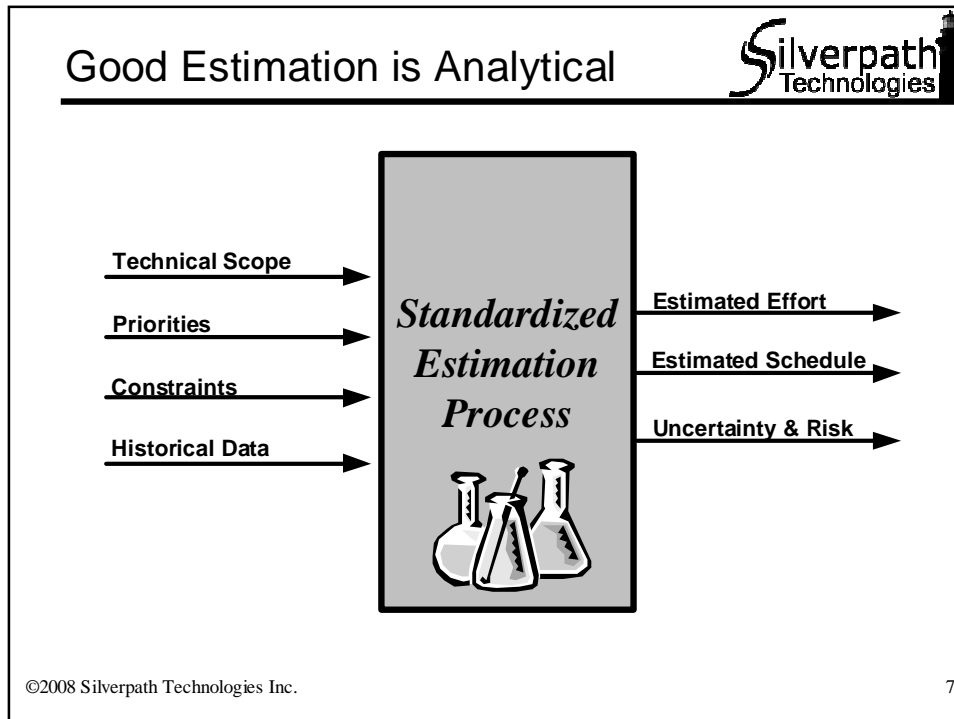


- ❖ *“It is very difficult to make a vigorous, plausible, and job-risking defense of an estimate that is derived by no quantitative method, supported by little data, and certified chiefly by the hunches of the managers.”* Fred Brooks, Mythical Man Month

©2008 Silverpath Technologies Inc.

4





Estimation Multipliers



- ❖ How many builds are planned to be delivered to testing? (What if there are additional builds required or what if one is delayed?)
- ❖ How many deployment configurations are to be supported and need to be tested? (Do all of them need to be tested to the same degree?)
- ❖ How many human languages are to be supported? (Are special skills required for this type of testing?)
- ❖ What non-functional testing is required or planned?

©2008 Silverpath Technologies Inc.

9

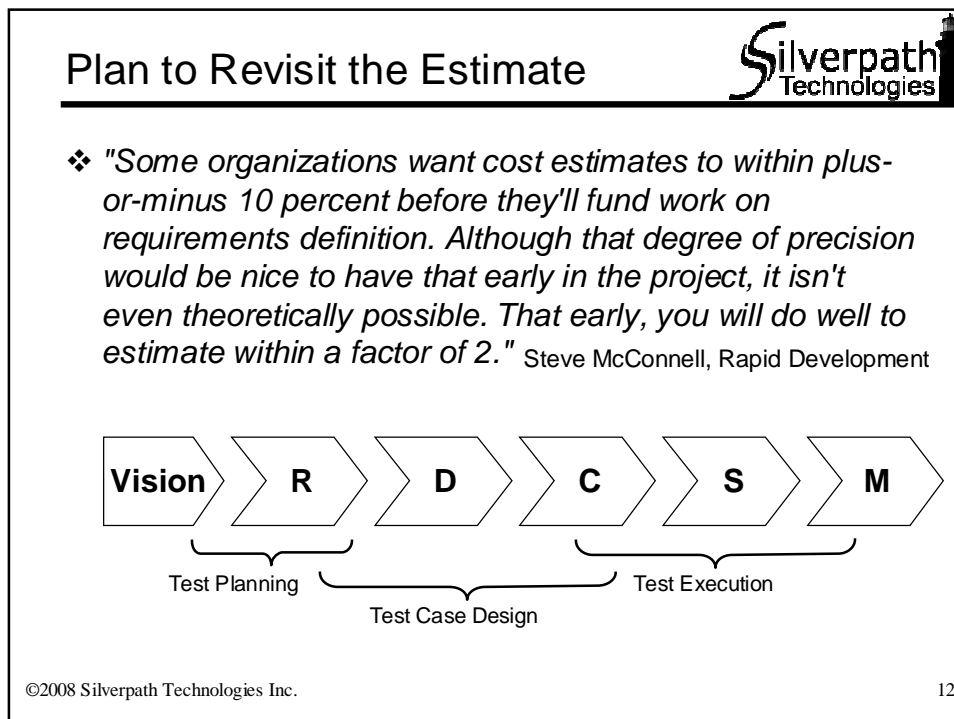
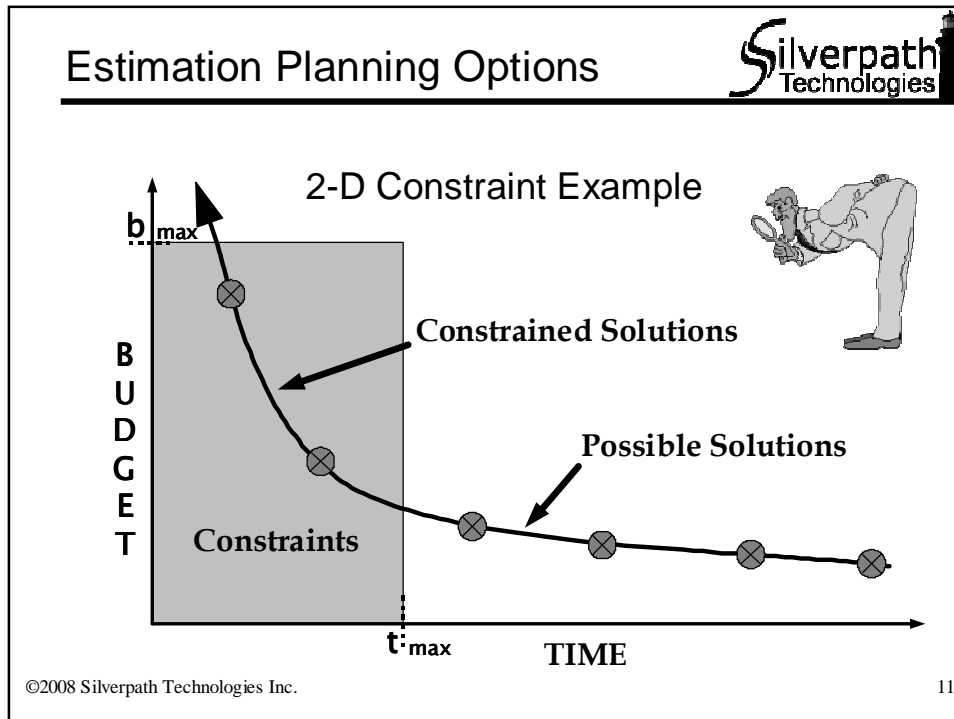
Estimation Uncertainty Influences




- ❖ Are requirements, designs, plans, and so forth available and are these documents clear, concise, and accurate?
- ❖ Are there solid change control processes for project and test plans, requirements, designs, and code?
- ❖ Are there clearly defined milestones during the project for testing? (eg: Alpha, Beta, Gold or Phase 1, Ph2, Ph3)
- ❖ Can test assets from previous projects be re-used?
- ❖ Does the project team have the skills, experience, and tools needed for this project?
- ❖ Have meetings, reporting, vacations, and sick times been accounted for in the schedule?

©2008 Silverpath Technologies Inc.

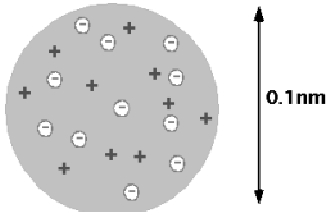
10



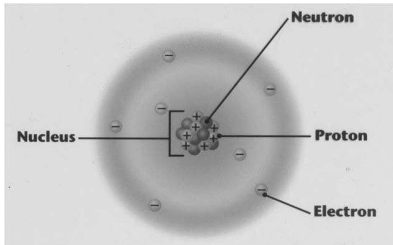
Building an Estimation Calculator



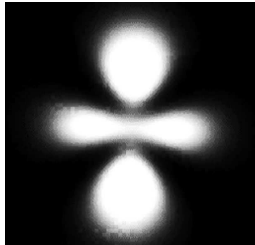
Billiard Ball - 1803 - Dalton



Plum Pudding - 1897 - Thomson



Solar System - 1908/13 - Rutherford/Bohr

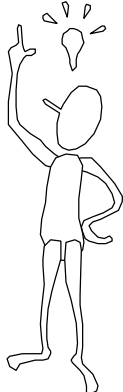


Electron Cloud - 1920's - de Broglie/Schrodinger/Heisenburg

©2008 Silverpath Technologies Inc. 13

Estimation Tips

- ❖ Avoid off-the-cuff estimates
- ❖ Avoid single-point estimates
 - ❖ present a range: minimum – realistic – maximum
 - ❖ assign confidence factors to estimates
- ❖ Use data from previous projects
- ❖ Estimate at a “task” level of detail
- ❖ Don’t overlook common tasks
- ❖ Include contingency buffers
 - ❖ Schedule people for only up to 80% of their time
- ❖ Have those closest to the work do the estimating
- ❖ Document the process!



Adapted from Karl Wiegers, Software Estimation Overview

©2008 Silverpath Technologies Inc. 14

About Silverpath Technologies



- ❖ Silverpath Technologies is founded on the principle vision to provide high value to software companies by raising the quality of their software systems and teams while simultaneously driving down the total costs to achieve that quality.
- ❖ Within this vision, Silverpath seeks a highly collaborative relationship with each customer, providing results-centric consulting and training services, where each focus is driven by the emphasis on improving the effectiveness and efficiency of quality and testing activities across the software development lifecycle through the application or modification of processes, techniques and tools.
- ❖ Visit <http://www.silverpath.com> for more information.