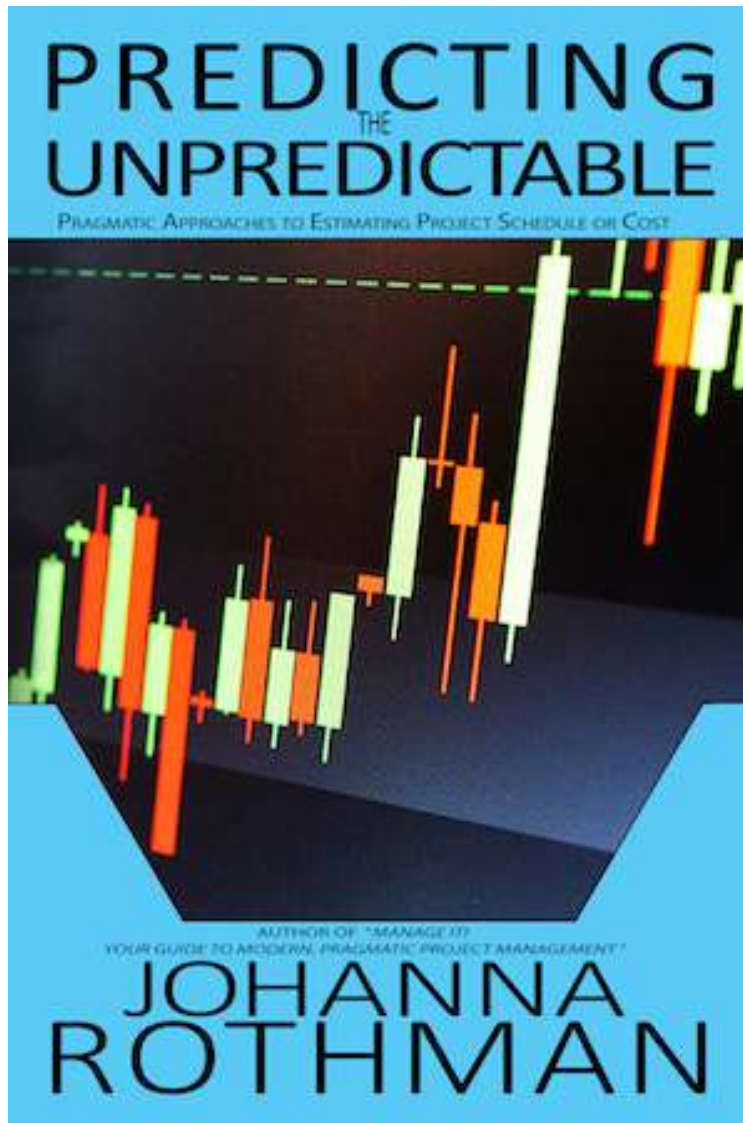


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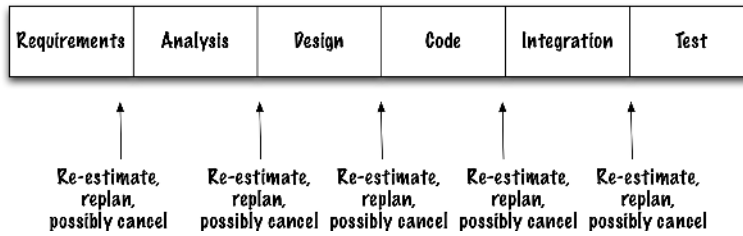


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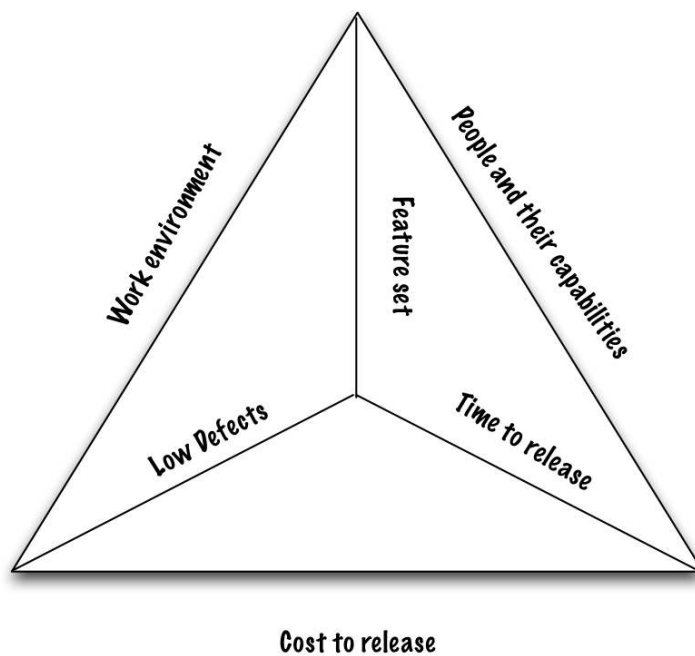
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### **Role of Estimation in a Serial Life Cycle**

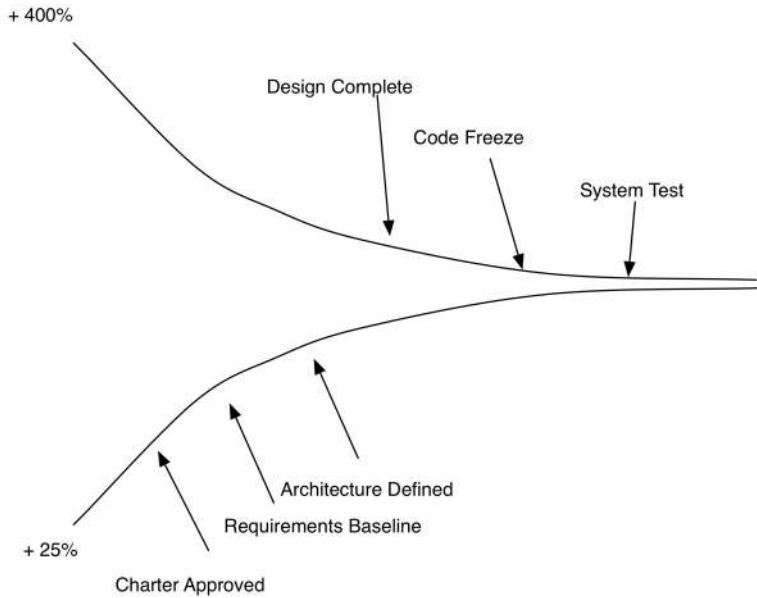


### **Project Pyramid**



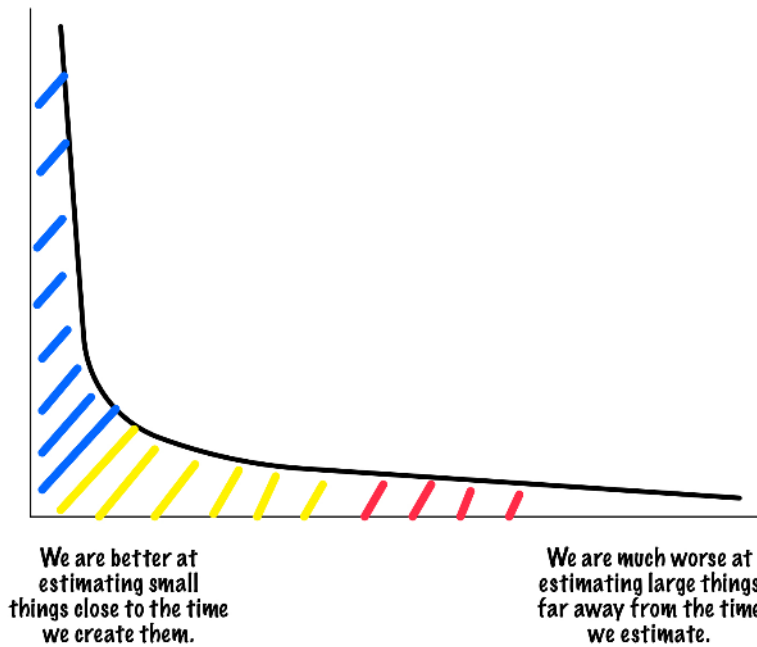
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**Cone of Uncertainty**

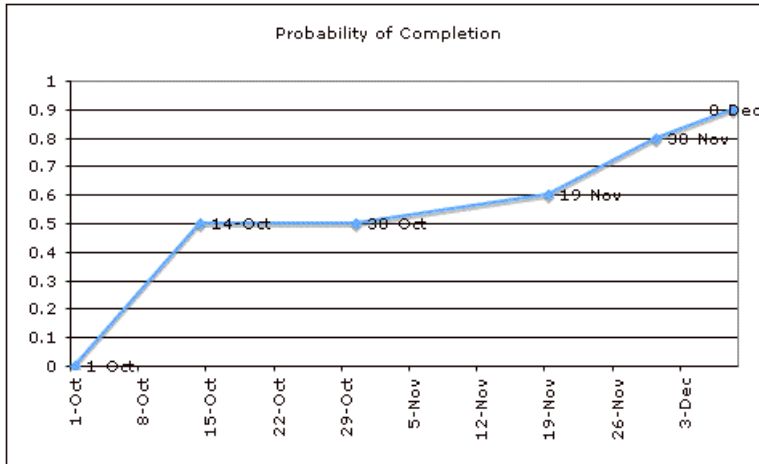


**Power Law Distribution**

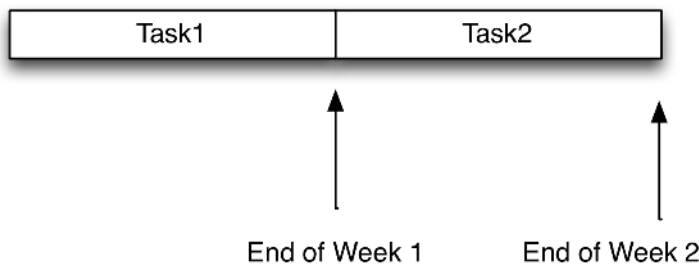
Power Law Distribution: Example for Estimation



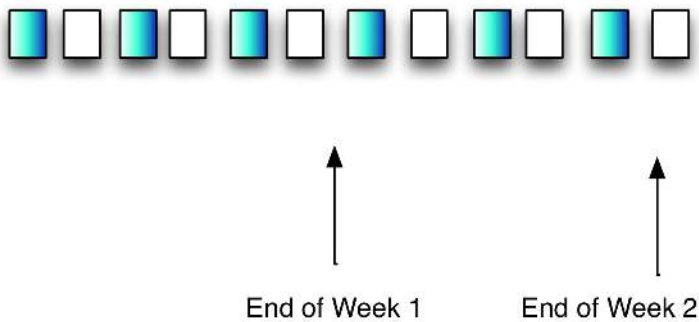
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**Probable Completion**



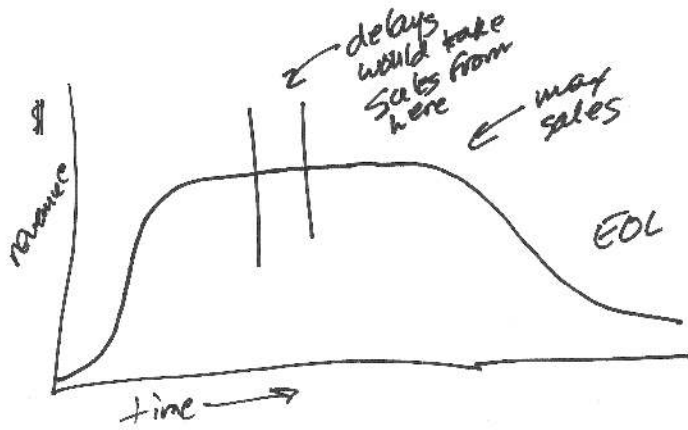
**Two Tasks or Projects**



**Effect of Multitasking Delay to Delivery**



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**Cost of Delay**



## **Glossary**

**Agile:** You work in small chunks, delivering working software that is valuable to the customer in the order the customer specifies. The value of working in an agile way is that you have the ability to change feature ranking (what you do when) fast.

**Backlog:** A ranked list of items that need to be completed for the product.

**Burnup Chart:** A chart that tracks progress towards completion.

**Done:** How you know a feature is complete and ready to release.

**Estimate:** Literally, “guess.” How long or how much you think the project will take for date and/or cost.

**Estimation Quality Factor:** Feedback on how good your estimates are.

**Fault Feedback Ratio:** The ratio of bad fixes to good fixes.

**Inch-pebble:** Inch-pebbles are one-to-two day tasks that are either done or not done.

**Incremental or Incremental Life Cycle:** A project approach in which you work by feature or feature set, finishing them as you proceed.

**Iteration:** A timebox in Scrum. The team completes and releases work at the end of the iteration.

**Iterative Life Cycle:** An approach where you continually refine the features.

**Kanban:** Literally the Japanese word for “signboard.” A scheduling system for limiting the amount of work in progress at any one time.

**Lean:** A pull approach to managing work that looks for waste in the system.

**MVP:** Minimum viable product. What is the minimum you can do, to create an acceptable product? This is not barely good enough quality. This is shippable product. However, this is minimal in terms of features.

**NoEstimate:** A hashtag on Twitter that refers to the team's ability to maintain a stream of releasable work, so you don't need estimates. The estimates don't provide value; the work does.

**Pairing:** When two people work together on one task.

**Phase-gate:** A serial life cycle. When you use phases and gates, you have specific decision points. At each point, you are supposed to re-estimate the entire project so you know if it's useful to continue. The difference between this approach and an agile approach, is that in traditional phase-gate projects, you have documents at each milestone, not finished features.

**Preconditions:** What you need to know before you can estimate.

**Serial Life Cycle:** A waterfall or phase-gate approach. You proceed with requirements, analysis, design, implementation, code, and test, in that order.

**Spike:** A timebox where the team investigates and learns more of the details of the feature or story.

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Stories: An agile feature, used to describe the requirements of a product. It's called a story because each story describes the value or benefits the team proposes to deliver to the user.

Swarming: When the team works together to move a feature to done — all together.

Target: A project end date or cost that someone picks for you.

Technical Debt: A metaphor referring to the inadequacy of the current system. Some people also call *incomplete work* technical debt. We use the metaphor because the debt will cost us more to fix later.

Timebox: A specific amount of time in which the person will attempt to accomplish a specific task.

Waterfall: Serial life cycle. A sequential design process. You proceed with requirements, analysis, design, implementation, code, and test, in that order.

WIP or Work in Progress: Any work that is not complete. When you think in lean terms, it is waste in the system. You want to eliminate waste wherever you discover it. Note that you do not get credit for partially completed work in agile.

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I consult, speak, and train about all aspects of managing product development. I provide frank advice for your tough problems. I'm more interested in helping you become more effective than I am in sticking with some specific approach. There's a reason my newsletter is called the "Pragmatic Manager"--that's because I am!

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Johanna