

Composing an Agile Estimating Process

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Agenda

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- Developing Agile Processes
- Developing Estimating Processes
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 - Analyze Project Data for Estimating Heuristics
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- Resources

Introduction

- What is an agile estimating process?
 - Estimate at some point in the life cycle
 - Estimate agile or traditional development
 - Estimation process itself is agile
- Why is it desirable?
 - Agile projects need to be estimated
 - All estimating engagements benefit from agility
 - The requirements of the estimate are volatile
 - The estimate needs to be developed quickly

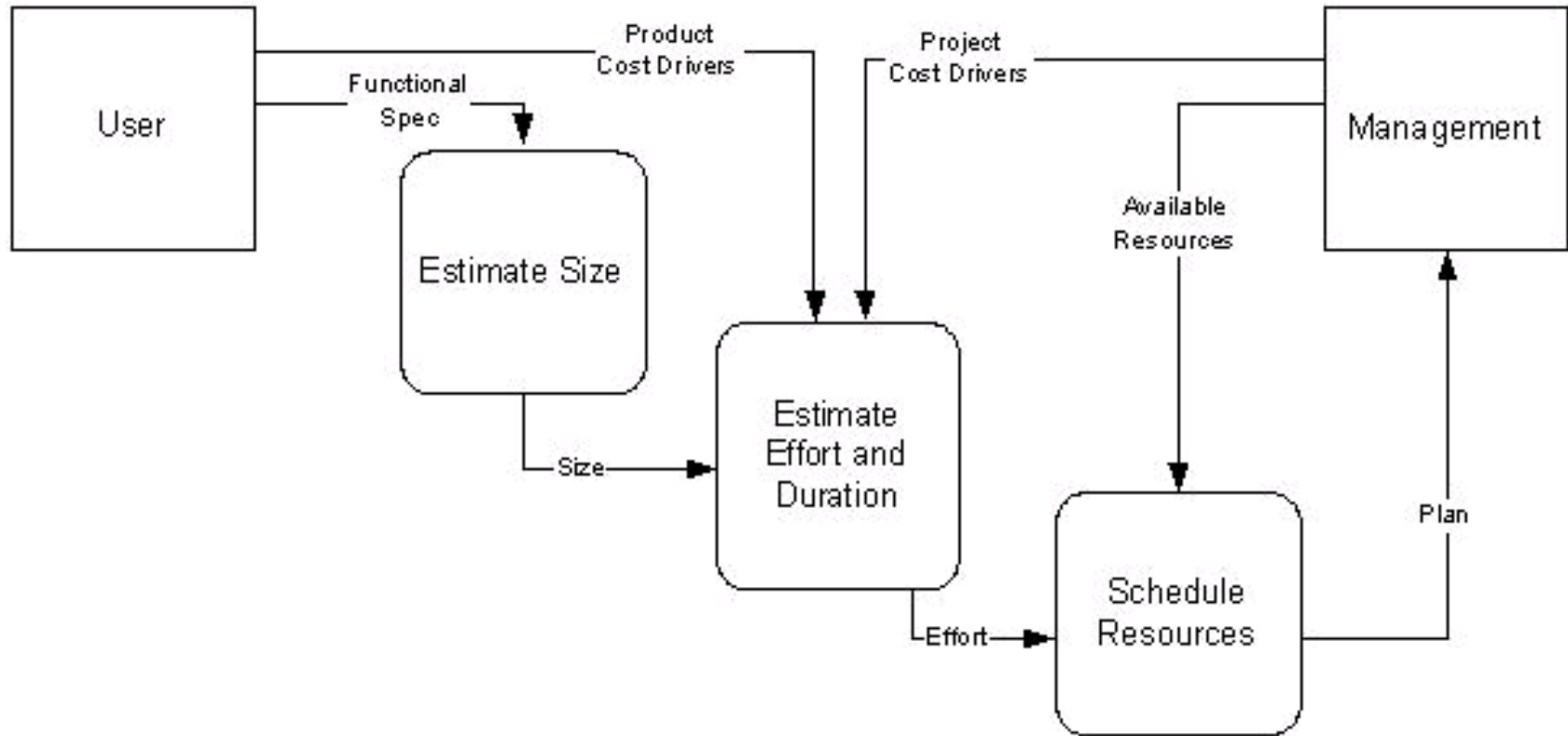
Developing an Agile Process

- About a Dozen Software Development Methodologies – XP, SCRUM, etc.
- Agile Principles Applied to SEI CMMI
 - Nelson Parez in CrossTalk Magazine
 - Deb Johnson in Accelerating Process Improvement Using Agile Techniques
- Pace University
 - Michael Homeyer – general business processes
 - Robert Zandoli – outsourcer selection process

Developing an Estimating Process

- John Bailey and Victor Basili in 1981
 - Presented a Meta-Model for Organizations
 - Statistical Procedure
 - Transformed Measures into Estimating Equations
 - Uses Functional Size and Other Factors
- Victor Basili is also known for developing Goal/Question/Metric Paradigm
- Raymond Boehm Presented Early Version of This Work at Agile 2007

Composing an Agile Estimating Process



Select Measures, Models and Algorithms

- Choice of Measures Based on:
 - Predictive Power of Measure
 - Point in Life Cycle Where Estimate is Performed
 - Software Development Methodology
 - Required Accuracy of the Estimate
 - The Funding for the Estimate
- Models Might be COCOMO, SLIM or Another
- Algorithms Might Transform or Schedule

Design Estimating Process: Constraints

- Ongoing Projects Must be Monitored
- Estimates May Need to Develop Into Measures
 - This Will Make Subsequent Estimates Better
 - Might be Required for Outsourcer Governance
- Existing Measurement and Estimating Tools Might be Used
 - E&QFP Uses Different Weights Than Standard FPs
 - ELFE Can Be Stored in FPW or Scope

Design Estimating Process: Recast Agile Values

- Individuals and interactions over processes and tools
- Concentrate on producing an estimate, not ancillary documentation
- Collaboration will lead to a better estimate; negotiation makes people hide details or inflate estimates
- Estimates will certainly change over time

Design Estimating Process: Recast Agile Principles

- From Agile Manifesto: deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
- Recast: The initial estimate must be deliverable more quickly, usually in a matter of days. It must be capable of being effectively changed in a matter of hours.

Analyze Project Data for Estimating Heuristics

- Sources of Project Data
 - Your Own Organization's Data
 - International Software Benchmark Standards Group (ISBSG) Database
- Techniques for Analysis
 - Simple Descriptive Statistics
 - Regression Analysis
 - Data Mining
- Results Might Be Estimating Equations

Analyze Project Artifacts for Estimating Heuristics

- Possible Sources of Data
 - Story Cards or Requirements Documents
 - Use Cases and Design Documents
 - Function Point Counts
 - Test Plans and Test Cases
 - Project Plans and Time Sheets
 - Source Code
- Consider Point In Life Cycle Requiring Estimation

Design a Data Capture Procedure

- The best data capture procedure is no data capture procedure.
 - All data is available when needed
 - Tom DeMarco's Controlling Software Projects
- Otherwise Perform Gap Analysis
- Consider Mike Cohn's Planning Poker
 - www.PlanningPoker.com
 - Basis for Elf Poker

Resources

- Raymond Boehm
 - 732-566-2892
 - rayboehm@softcomptech.com
- www.AgileEstimator.com
 - Raymond Boehm's Blog
 - Category – Agile Processes
- Mike Cohn's Agile Estimating and Planning
 - Concentrates on Planning
 - Describes Planning Poker