Taking Software Estimation & Planning to a Higher Level

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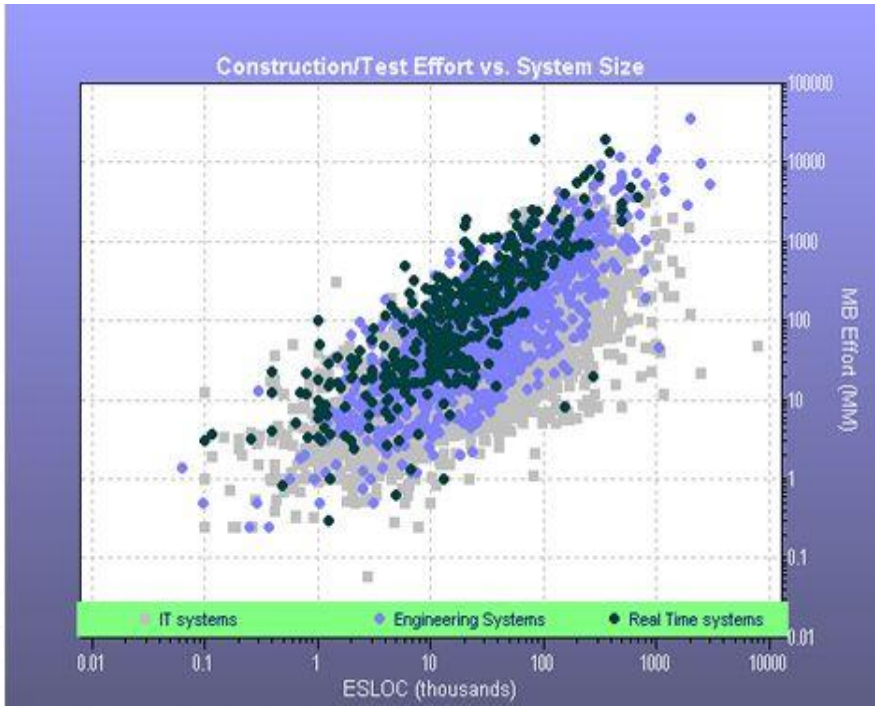
QSM – Who We Are

Celebrating our 42 Year Anniversary!

- Experts in the Field of Project & Portfolio Estimation & Metrics
  - Pioneers in the software industry with a 42 year track record of innovation and success
  - Developers of the SLIM-Suite of estimation and metrics products
  - Leading product & services company, thought leader, and research provider
  - We help our clients plan and negotiate their project cost, duration, & quality targets more effectively, saving big money and time
  - We focus on top-down estimation, leveraging empirically based models, industry analytics & historical data to figure out the “big picture” first, before detailed planning takes place

The QSM Industry Database - Over 42 years of Research

- Industry-leading research that validates the SLIM estimation model, over 13,000 completed projects
- Gives us a good understanding of the fundamental relationships
- Provides the latest information on software cost, duration, effort, reliability, team size, and scope, which we leverage to help our clients
- The data comes from our client partnerships, people that we are working with and supporting
- Strict validation process, only information that is consistent and complete is included in the research



Software Delivery Challenges

- Short time frame to make decisions
- Minimal information available
- Unrealistic cost & schedule targets
- Demand goals are not balanced with capacity
- Political sensitivities
- No “big picture” analysis available

Meet Challenges with Top-Down Estimation Best Practices

Step 1. Analyze data if available and leverage industry analytics

Step 2. Develop early release estimates based on the data, use models to manage uncertainty

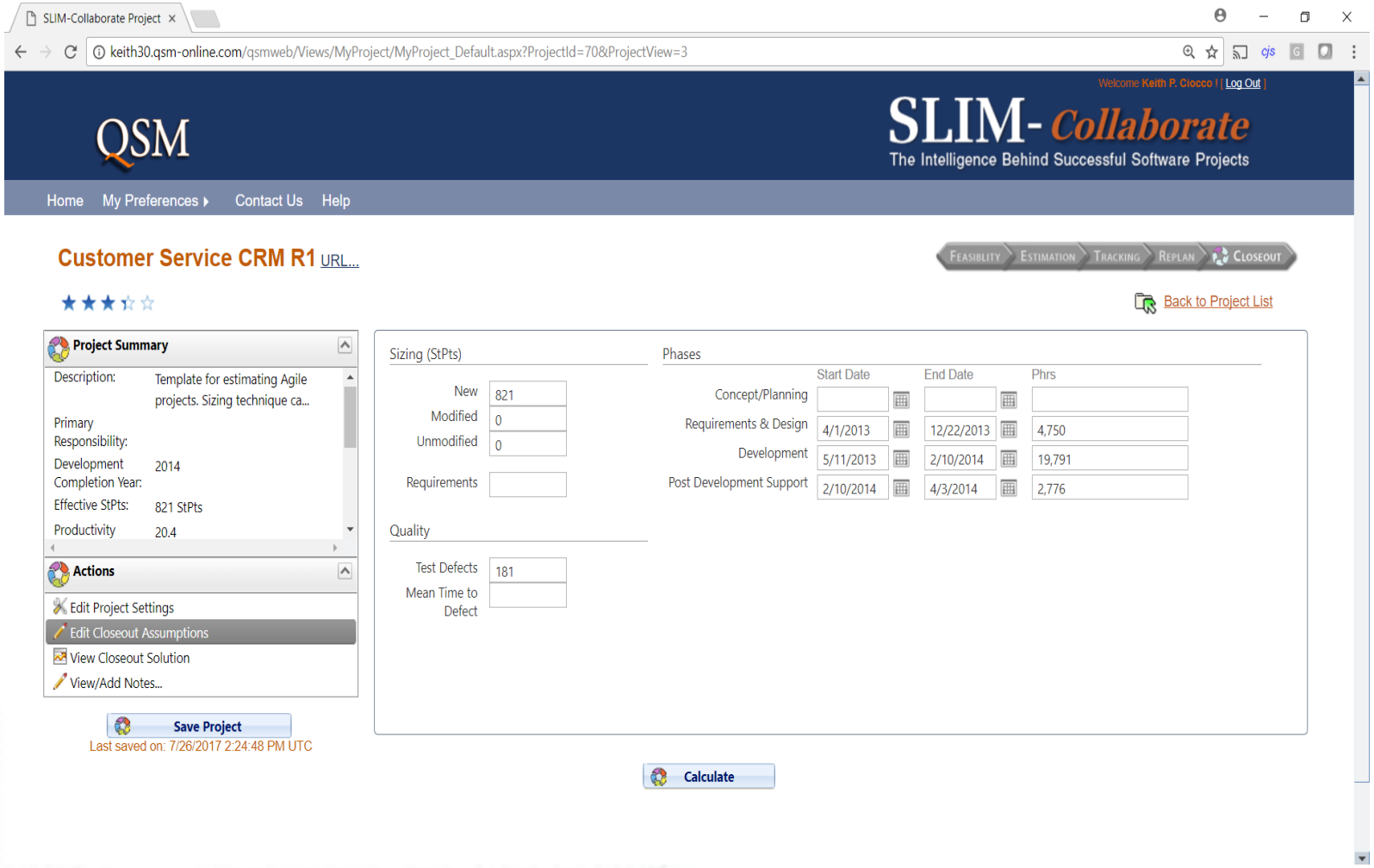
Step 3. Portfolio Assessment - aggregate estimates into a portfolio view and analyze:

- Initial planned portfolio
- The portfolio adjusted for risky projects
- And finally the portfolio adjusted for resource capacity or financial constraints

Step 1: Data Analysis

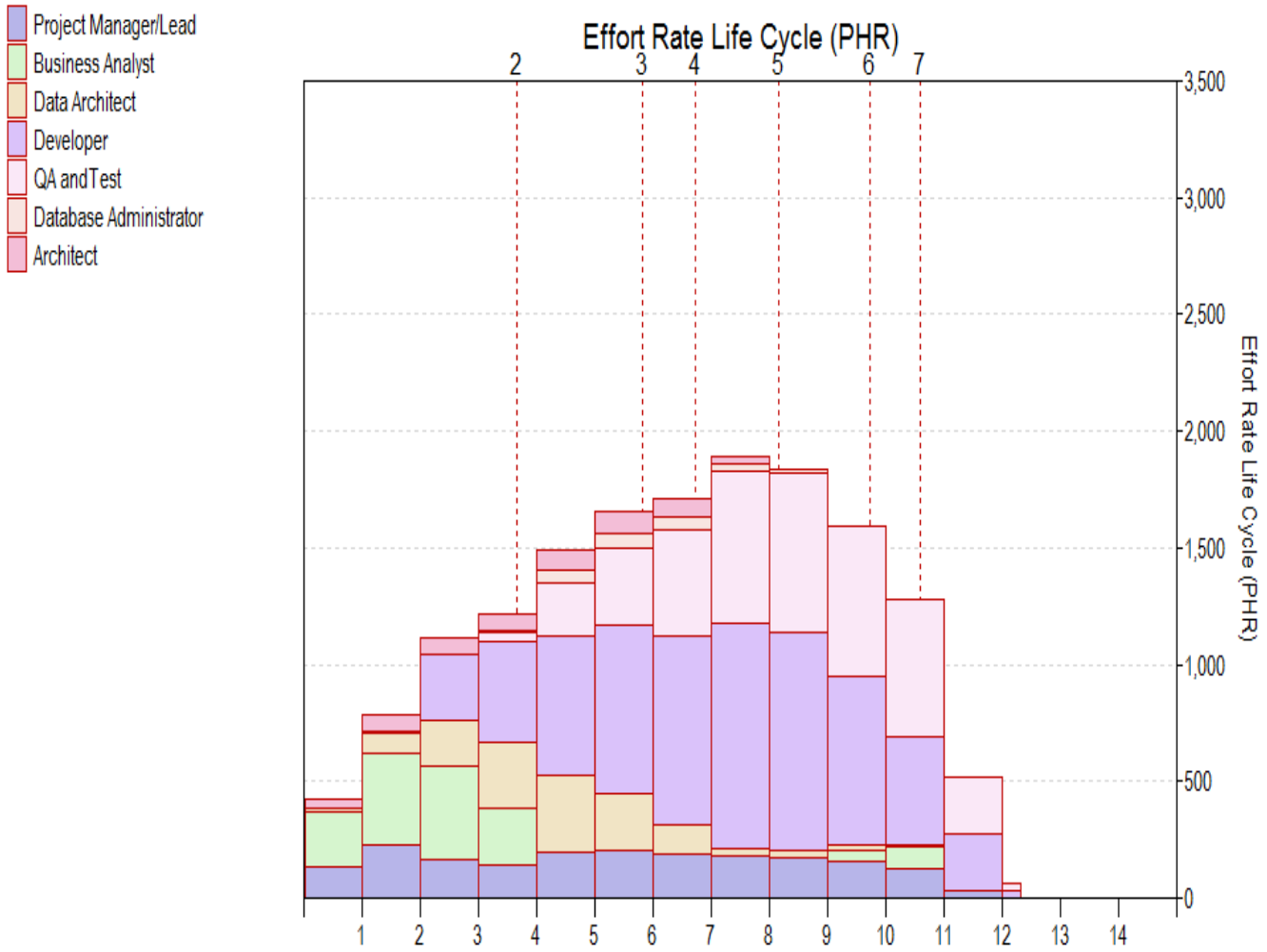
Historical Data Analysis

- Collect data from recently completed projects, target 8 – 15
- Make the estimation & planning process as objective as possible



Analyze Resource Allocation Data

Need to understand how the resources will be allocated for any given development methodology



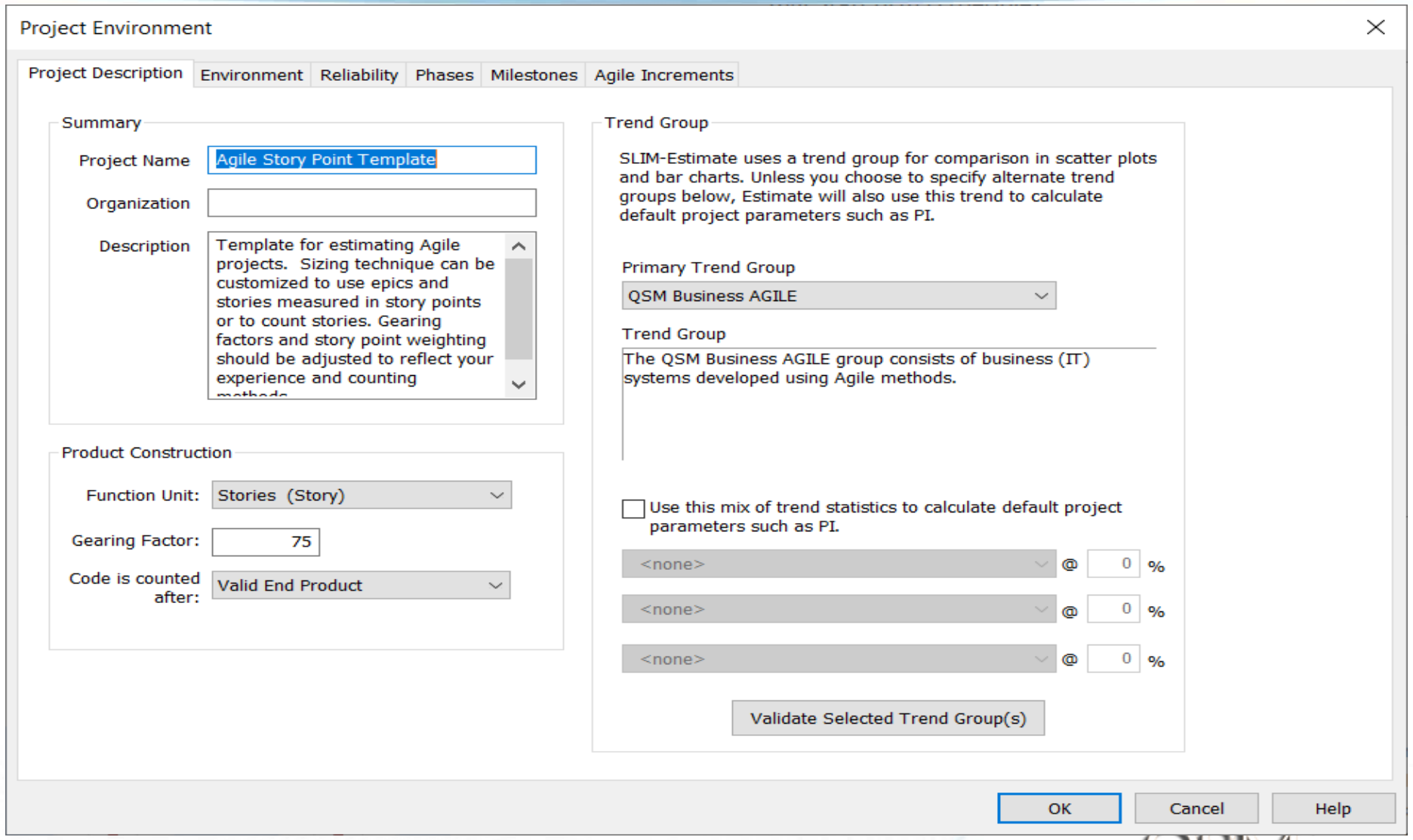
Leverage Sizing Data if Available

Collect size artifacts early in the planning process

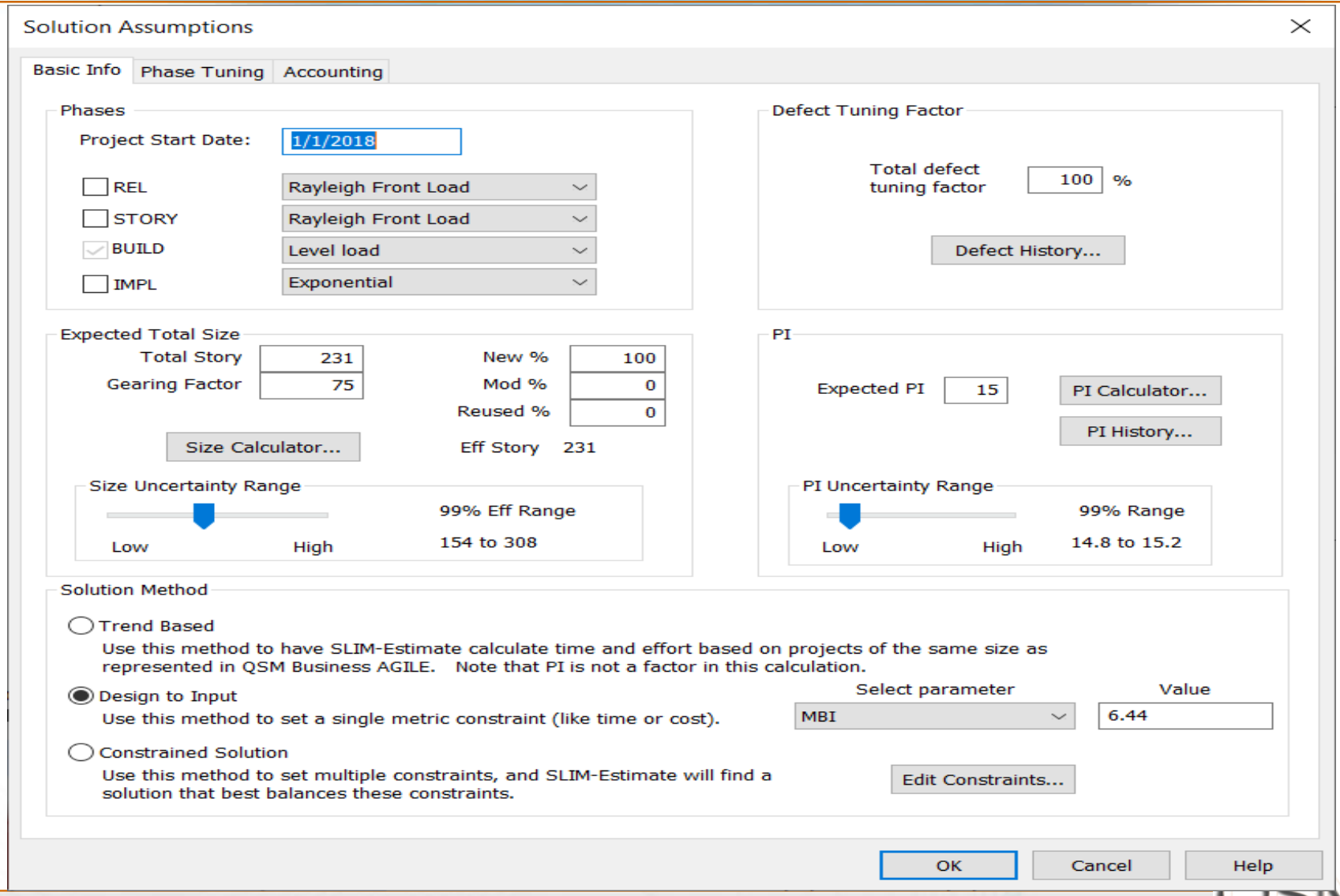
- User Stories
- Features
- Business Requirements
- Epics
- Technical Requirements
- Use Cases
- Function Points
- SLOC / Implementation Units

Step 2: The Release Estimates

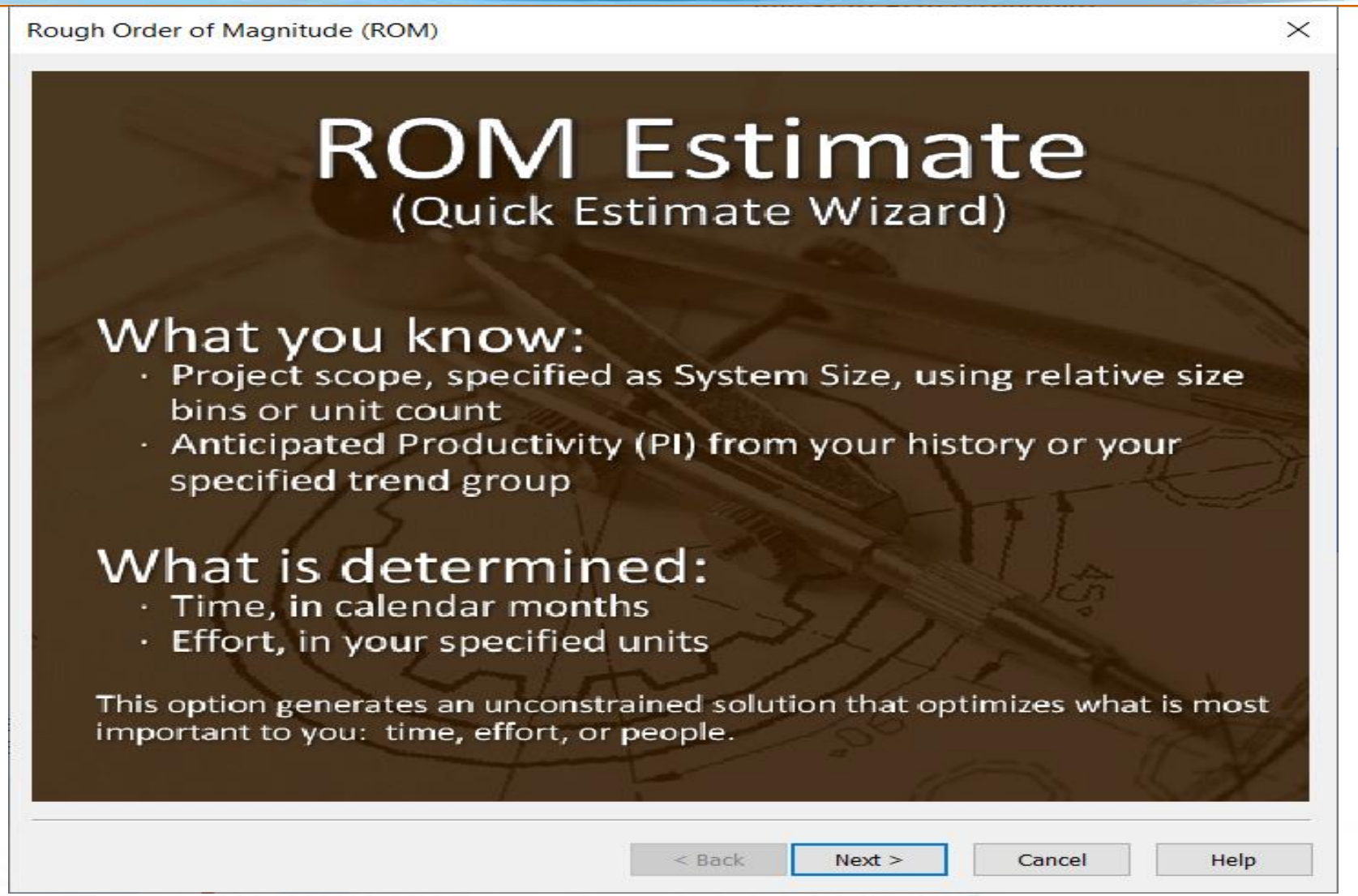
Customize the Estimates to Your Project Environment



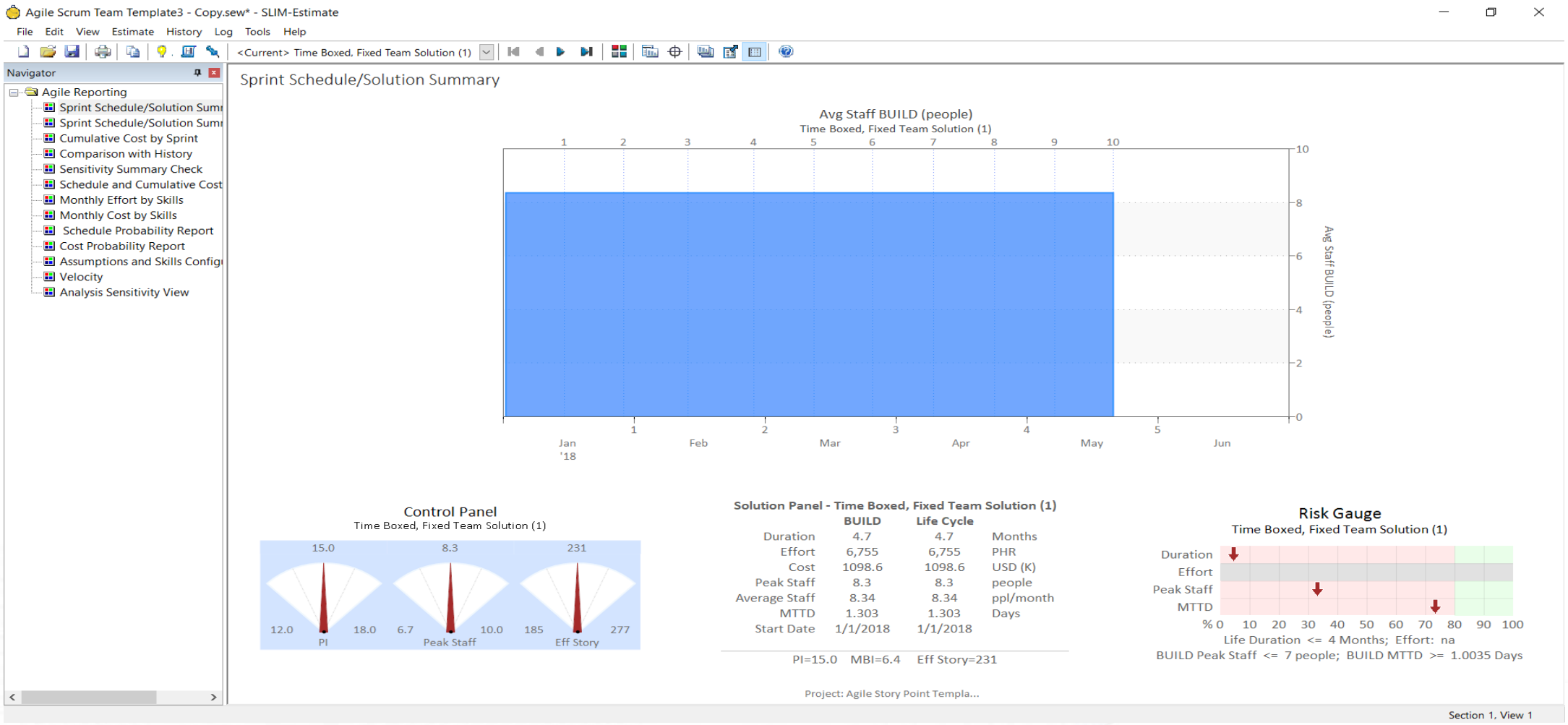
Leverage Available Resource, Scope & Productivity Information



Use ROM Approaches if Needed



Generate the Release Level Estimates

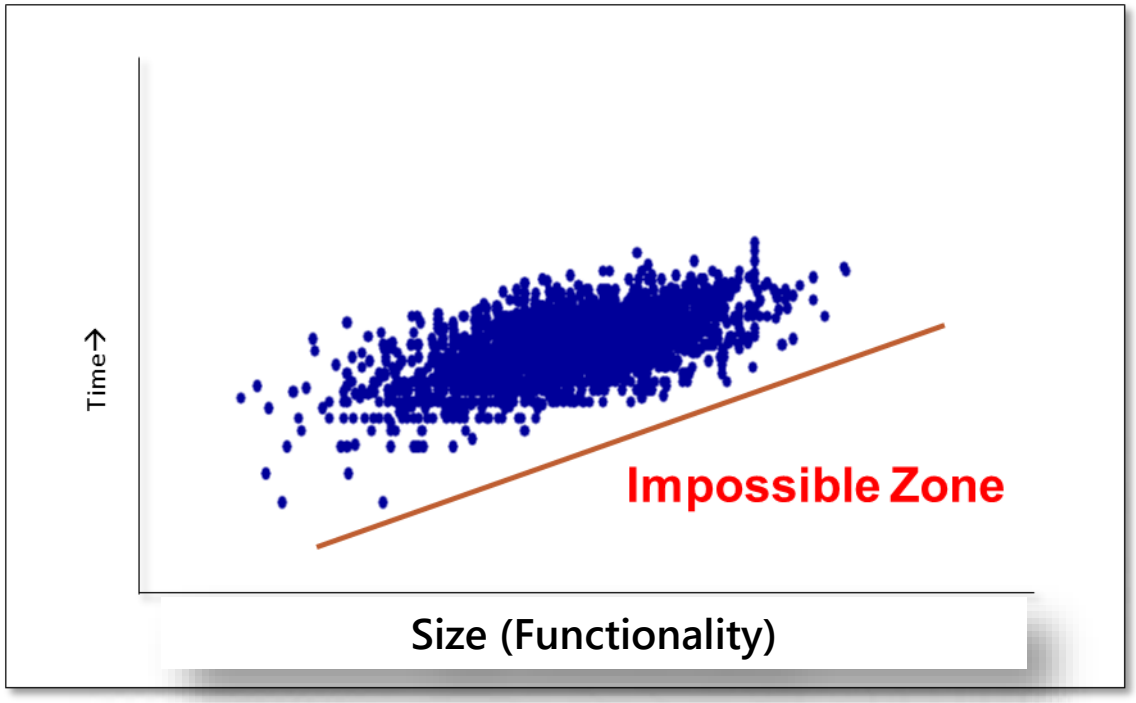


Use the Estimates to Help you Negotiate

- Management & stakeholders come together to discuss and negotiate project targets
- Analyze multiple estimation scenarios
- Sanity check with historical data & industry trends

Understand the “Impossible Zone”

Avoid signing up to the “Impossible Zone” when negotiating



Step 3: The Portfolio Assessment

Portfolio Assessment

- Analyze the initial portfolio that is submitted; look for release estimates that are risky
- Make adjustments for the risk and waste and re-plan releases that are outside of the “Target Zone”
- Make changes again if necessary to optimize the portfolio and to adjust for the enterprise capacity and financial constraints

Initial Portfolio Shows Risky Releases

The Intelligence behind Successful Software Projects

IT Portfolio - Copy.sea* - SLIM-MasterPlan

File Edit View MasterPlan Log Tools Help

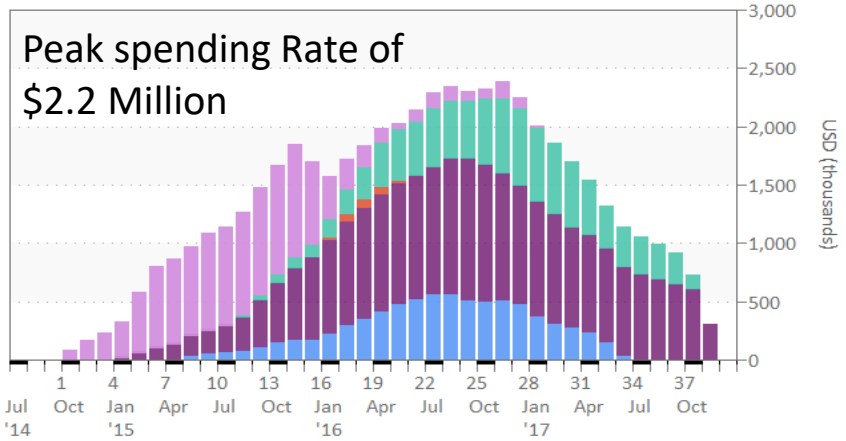
<Current> As submitted budgeted Projects

Portfolio Cost and Risk Profile by Product Line

IT Tranformation Program
Back Office
MISC
Package Implementations
Work Flow Automation

Monthly Spend Rate (L1)

Peak spending Rate of $2.2 Million



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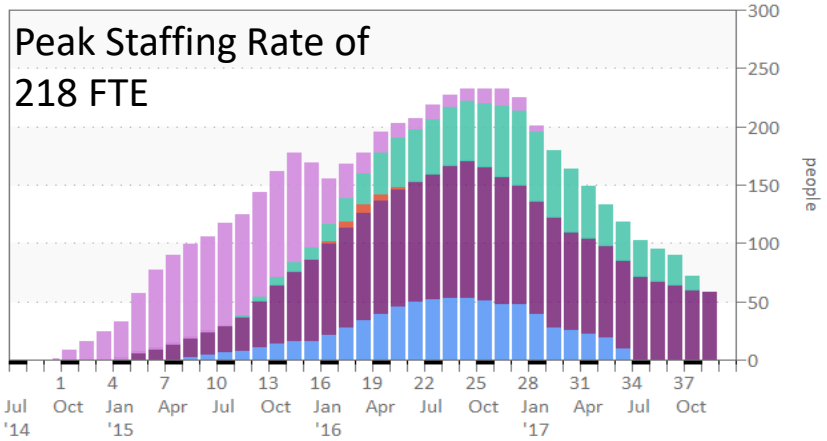
Monthly Staffing (L1)

Peak Staffing Rate of 218 FTE



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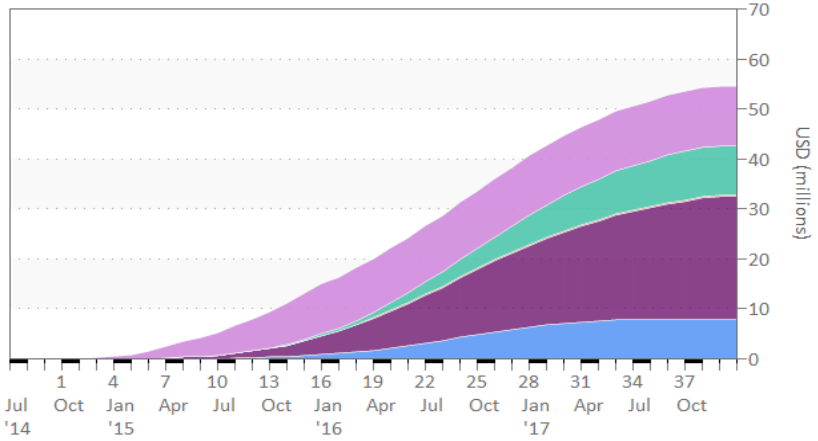
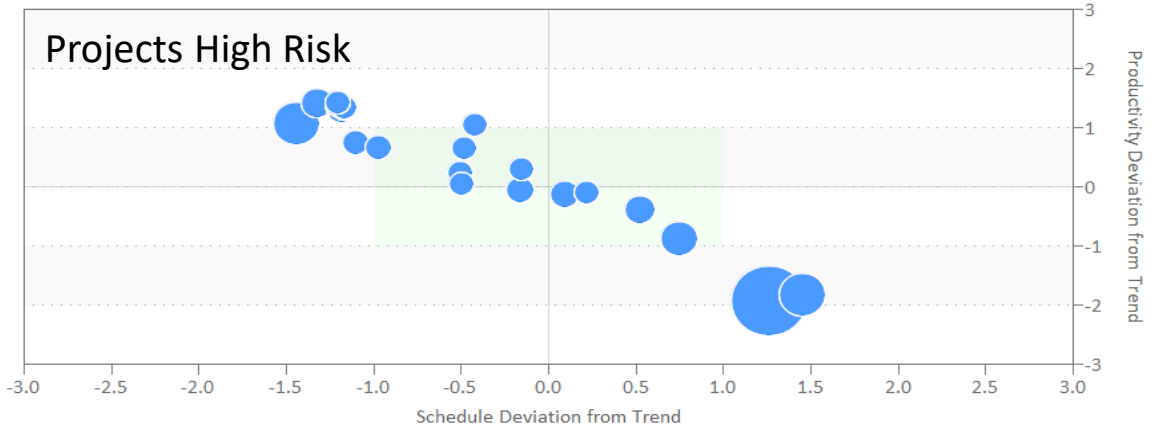
Cumulative Cost (USD) (L1)



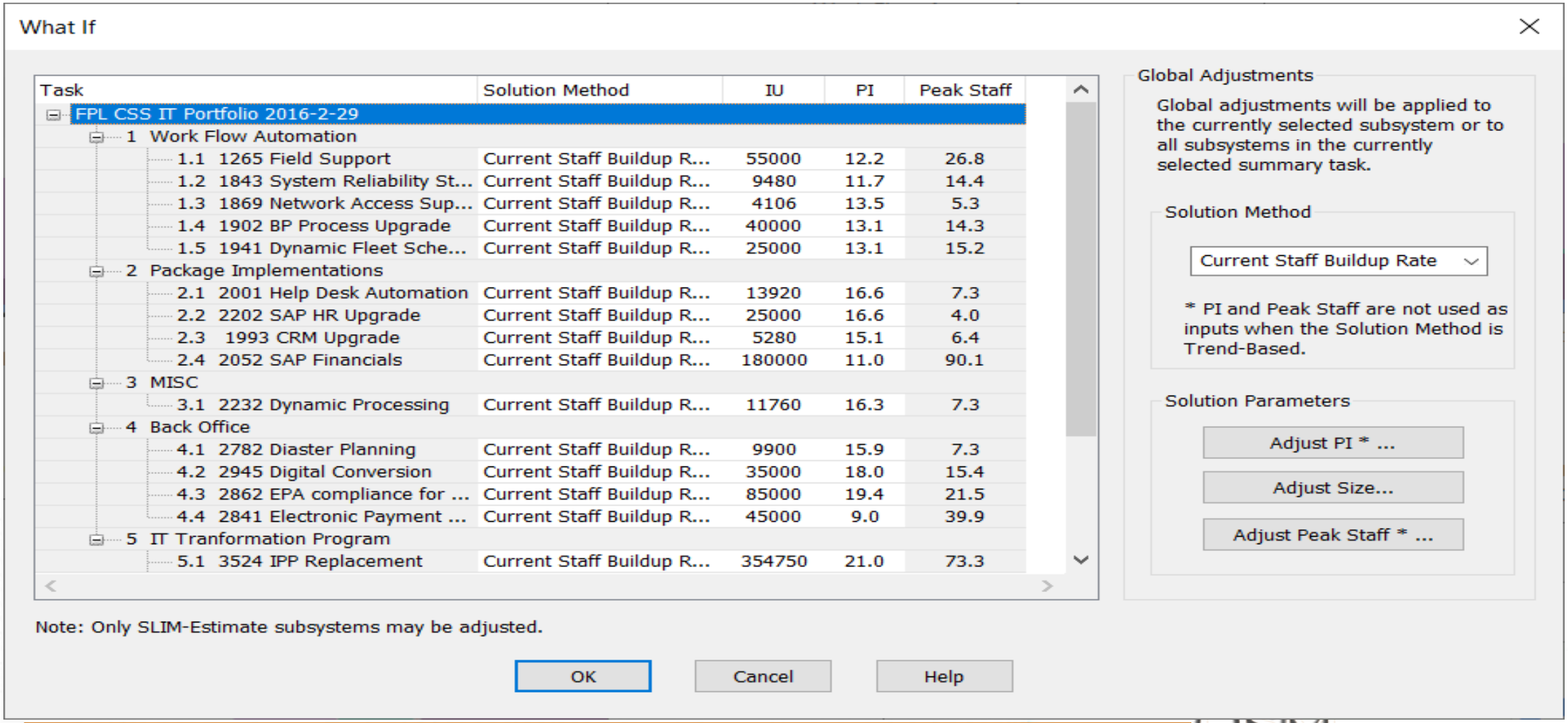
IT Projects Productivity Assumption verses Schedule Months

Deviations from Average Customer Trend

Projects High Risk



Initial Release Adjustments Are Made



Unfortunately Initial Adjustments Drive Spending & Resources Past Portfolio Capacity

IT Portfolio - Copy.sea* - SLIM-MasterPlan

File Edit View MasterPlan Log Tools Help

<Current> All adjustments at one time

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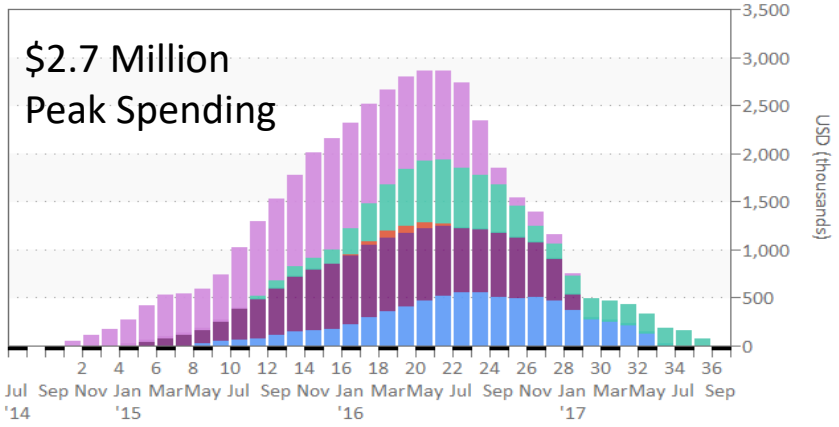

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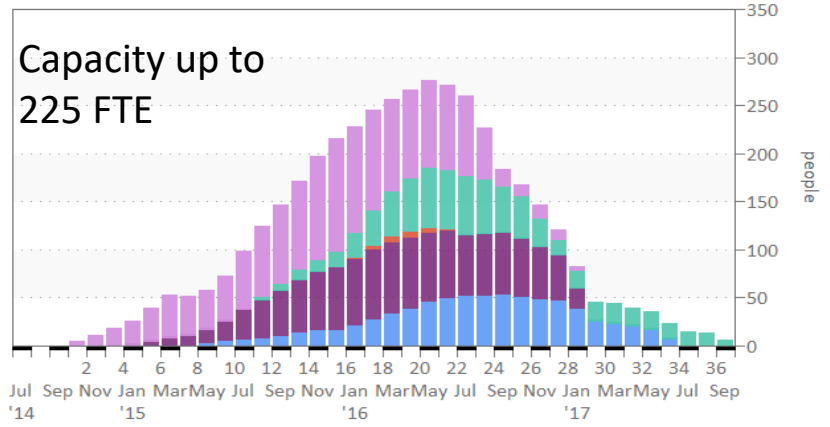
Monthly Staffing (L1)



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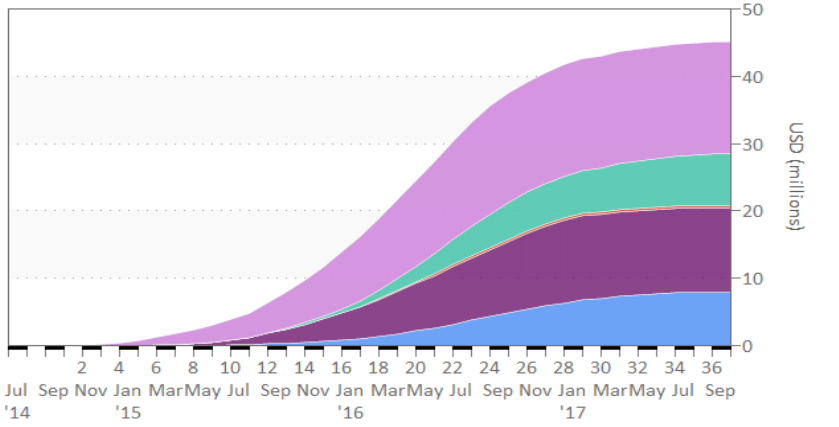
Cumulative Cost (USD) (L1)



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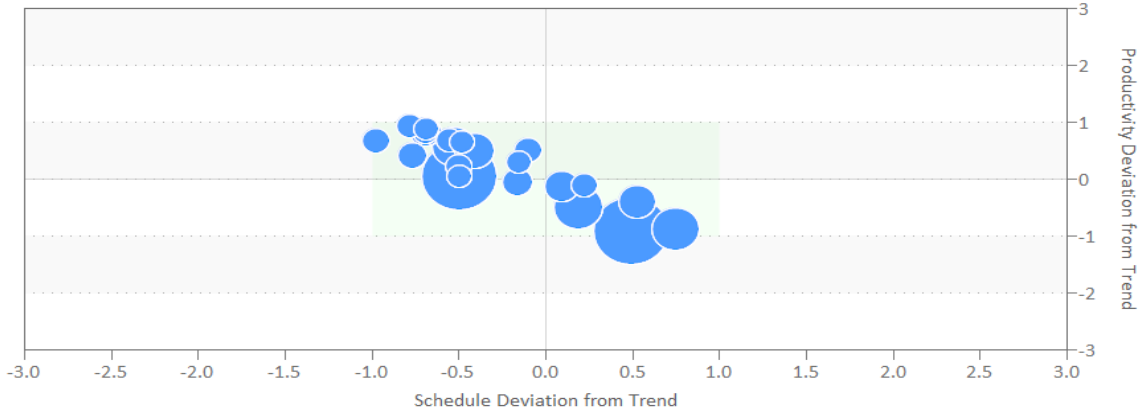
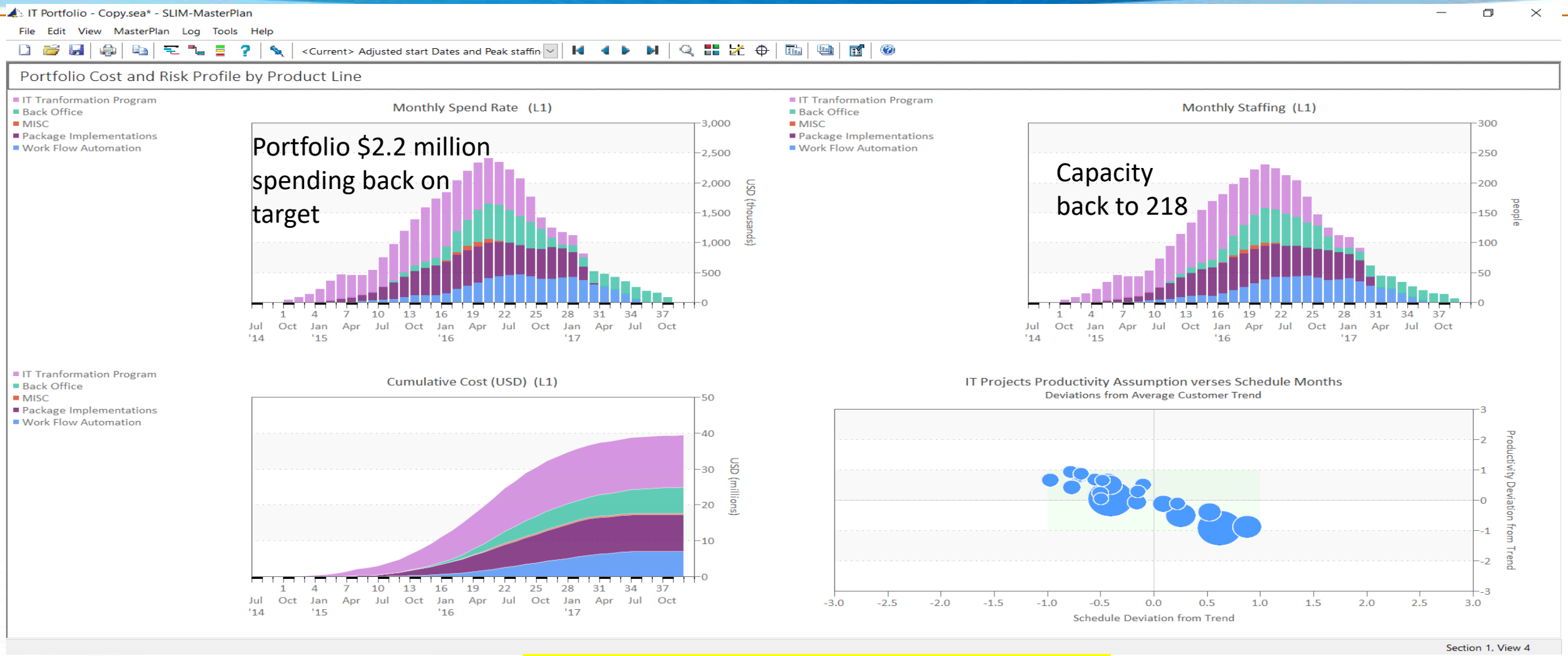


Consider Additional Adjustments to Stay within Capacity

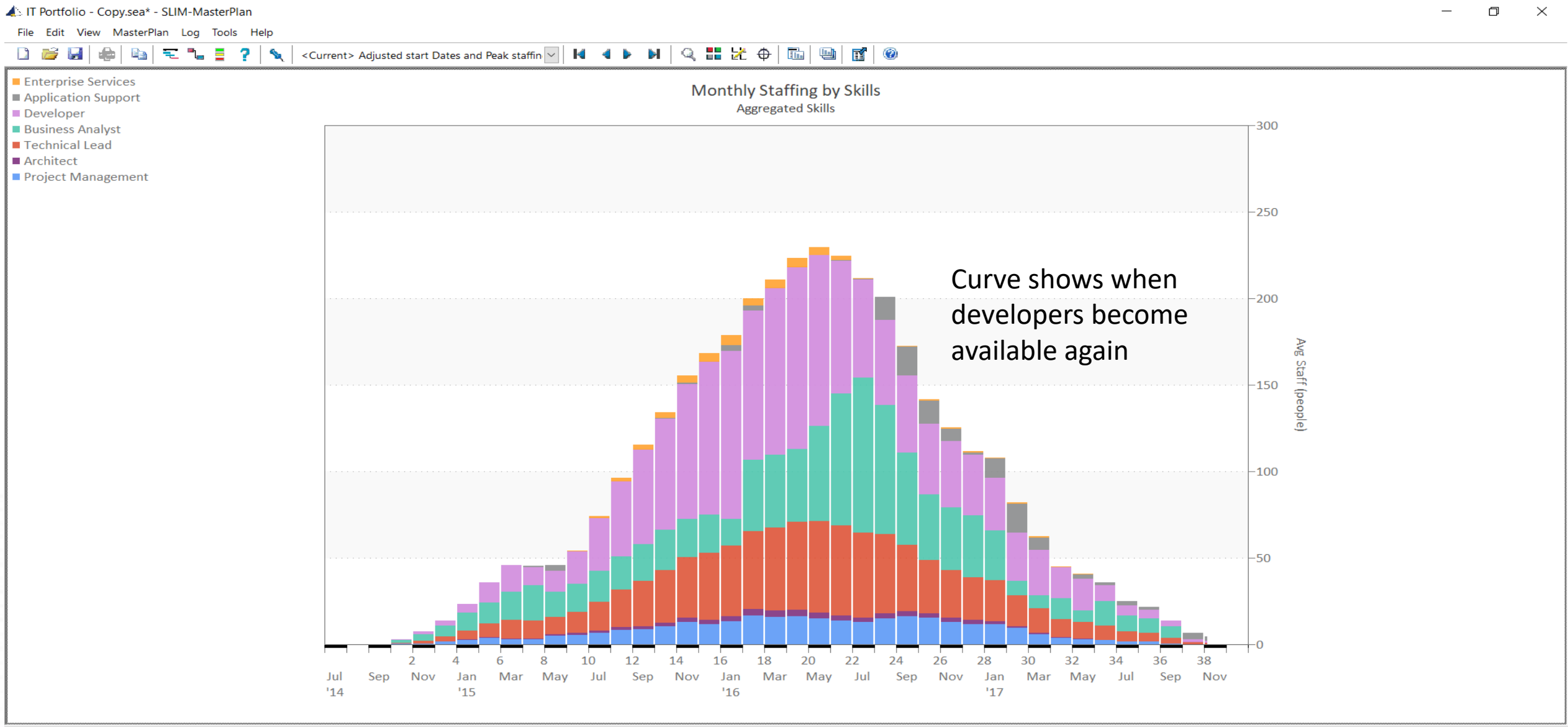
- Eliminate Projects
- Slip start date
- Adjust staffing up or down
- Negotiate scope & cost
- Lean on the data to make your decisions and to communicate your decisions effectively

Confirm Adjustments that Enable Us to Meet Capacity



Release targets corrected & capacity limit met
- 5 projects were delayed by 3 months
- 3 projects required modest staff reductions

Demand Management View



Benefits of Top-Down Estimation

- Helps balance demand with capacity
- Provides the right cost, duration, effort, reliability & scope targets
- Saves time and accuracy
- Allows for early decision making, when only minimal information is available, to avoid going down the wrong path
- Provides major risk mitigation capabilities
- Takes into account integration, overhead & non-linear relationships that aren't modeled well with bottom-up spreadsheets
- Objective data driven process with complete transparency
- Allows for rapid trade-off analysis & negotiation

Questions?

Please feel free to contact me with any questions. Thank you!

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