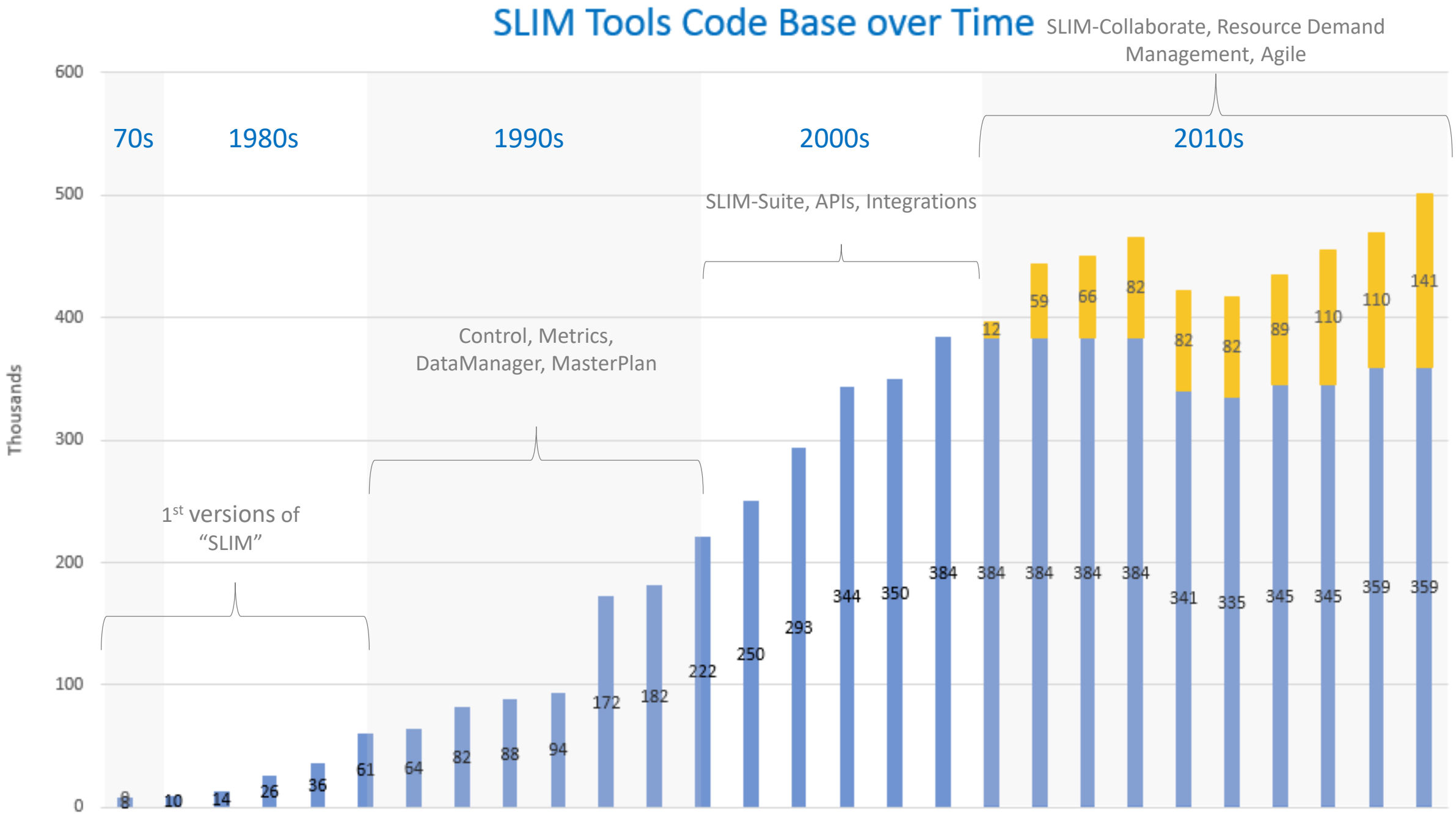
The Evolution of SLIM® Tools

Celebrating Four Decades of Innovation

Overview

- PAST: product development timeline, by decade – 1978-2018
- PRESENT: Current SLIM-Suite of tools:
  - SLIM Desktop and SLIM-Collaborate
  - Leveraging SLIM APIs
  - Agile Adjuster
  - Resource Demand Management, PPM Framework, SLIM PPM Connector for CA PPM
  - Extension Menu Items (SLIM desktop) and External Calls (SLIM-Collaborate)
- FUTURE: Upcoming releases. What features would you like to see?


SLIM Tools Code Base over Time
SLIM-Collaborate, Resource Demand Management, Agile
70s
1980s
1990s
2000s
2010s
SLIM-Suite, APIs, Integrations
Control, Metrics, DataManager, MasterPlan
1st versions of "SLIM"
Thousands
600
500
400
300
200
100
0
8
10
14
26
36
61
64
82
88
94
172
182
222
250
293
344
350
384
384
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341
335
345
345
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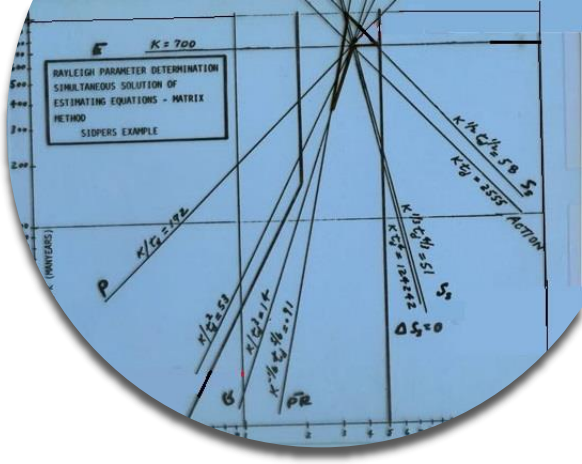
359
12
59
66
82
82
82
89
110
110
141

The 1970s



- **1975** Larry Putnam, Sr. develops **software equation**

- **1978 QSM, Inc.** is formed

- **1979 SLIM DEC 20** – 1st timeshare version of SLIM-Estimate hosted on DECSYSTEM 20 mainframe
  - Written in Fortran, 8000 SLOC
  - Monte Carlo risk simulation, linear programming

The 1980s

- 1980 SLIM HP 80 series (DOS/Basic)
  - 1st commercial, standalone desktop estimation tool

- 1984 SLIM for IBM PC (DOS/BASIC)
  - Rayleigh defect model introduced

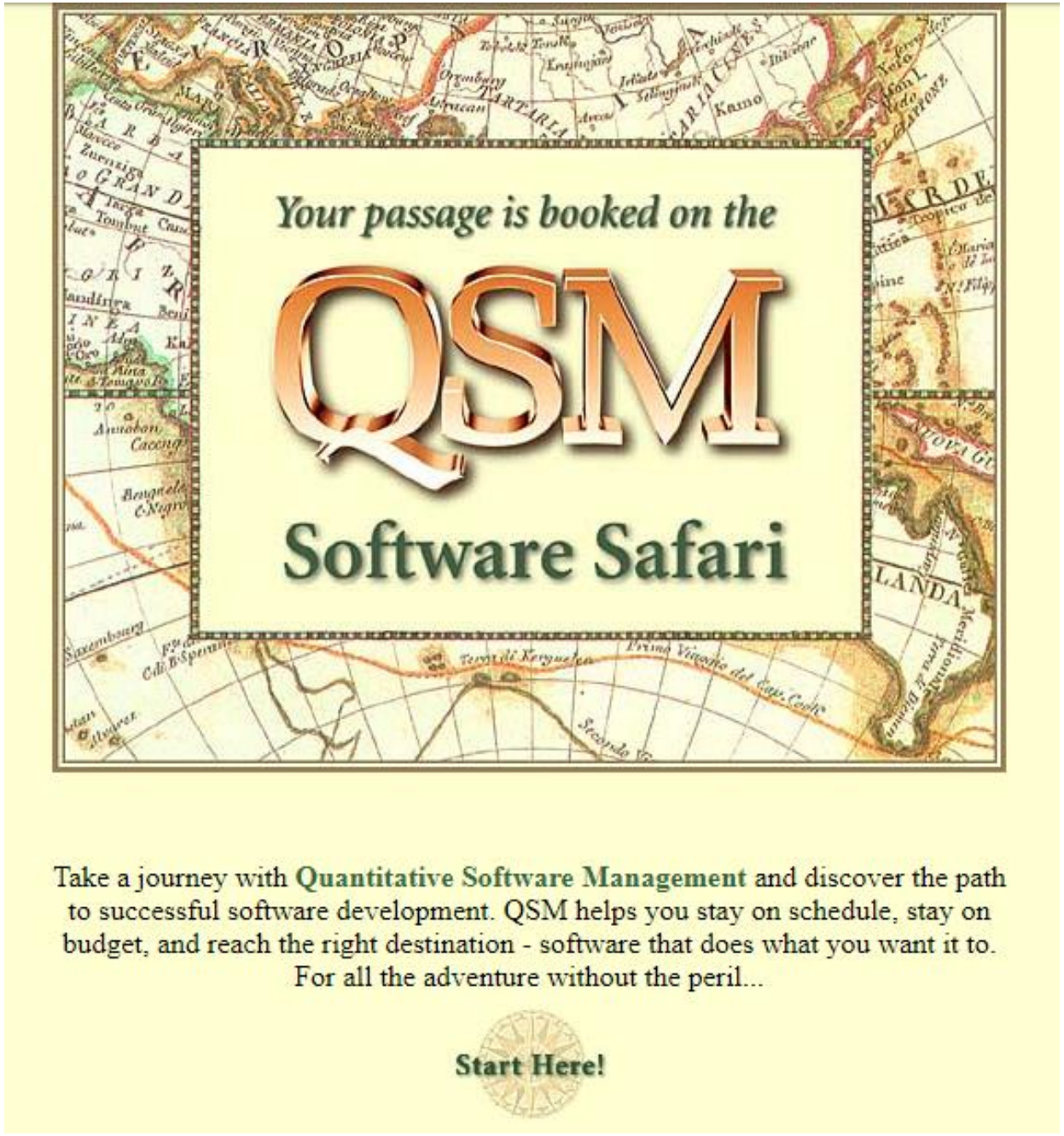
- 1986 PADS module - historical data collection/ calibration (BASIC/Assembler)
- 1987 Size Planner (great-granddaddy of Size Calculator)

The 1990s

- 1990 SLIM-Control 1.0 - project tracking & forecasting
- 1992 SLIM-Estimate for Windows on IBM PC (C/C++)
  - Graphical controls, risk gauges, multiple estimation views
  - Measures for Excellence published
- 1994 SLIM-Metrics/DataManager 1.0
- 1998 SLIM-MasterPlan

It's a Jungle Out There!

The QSM web site in 1997



The 2000s

- SLIM-Suite 5.0 - all 5 SLIM-Suite tools released at same time.
- APIs for SLIM-Estimate, SLIM-DataManager, and SLIM-Control.
- Integrations with MS Project, MS Office, IBM Rational RTC and Rational Portfolio Manager/Rational Method Composer.
- SLIM-MasterPlan enhanced (task dependencies)

QSM Web Site in 2001

Recognize anyone?

QSM The Intelligence Behind Successful Software Projects

Products | Services | Training | Support | Downloads | Resources | Contact Us

- Get Demo Disk
- SLIM-Estimate
- SLIM-Control
- SLIM-Metrics
- SLIM-MasterPlan
- QSM Database
- About QSM
- QSM Clients
- What's New?
- Users Conference

Quantitative Software Management has assisted clients with all aspects of software project management since 1978. We offer **Software Lifecycle Management (SLIM)** methods and tools for:

- **schedule & cost estimation**
- **in-progress tracking & adaptive forecasting**
- **benchmarking/process improvement analysis**

The SLIM Methodology is based on a solid foundation of on-going research and analysis, with over 20 years of experience supporting our clients in the field. The result: a proven suite of tools and services designed to support you at every stage of the software lifecycle.

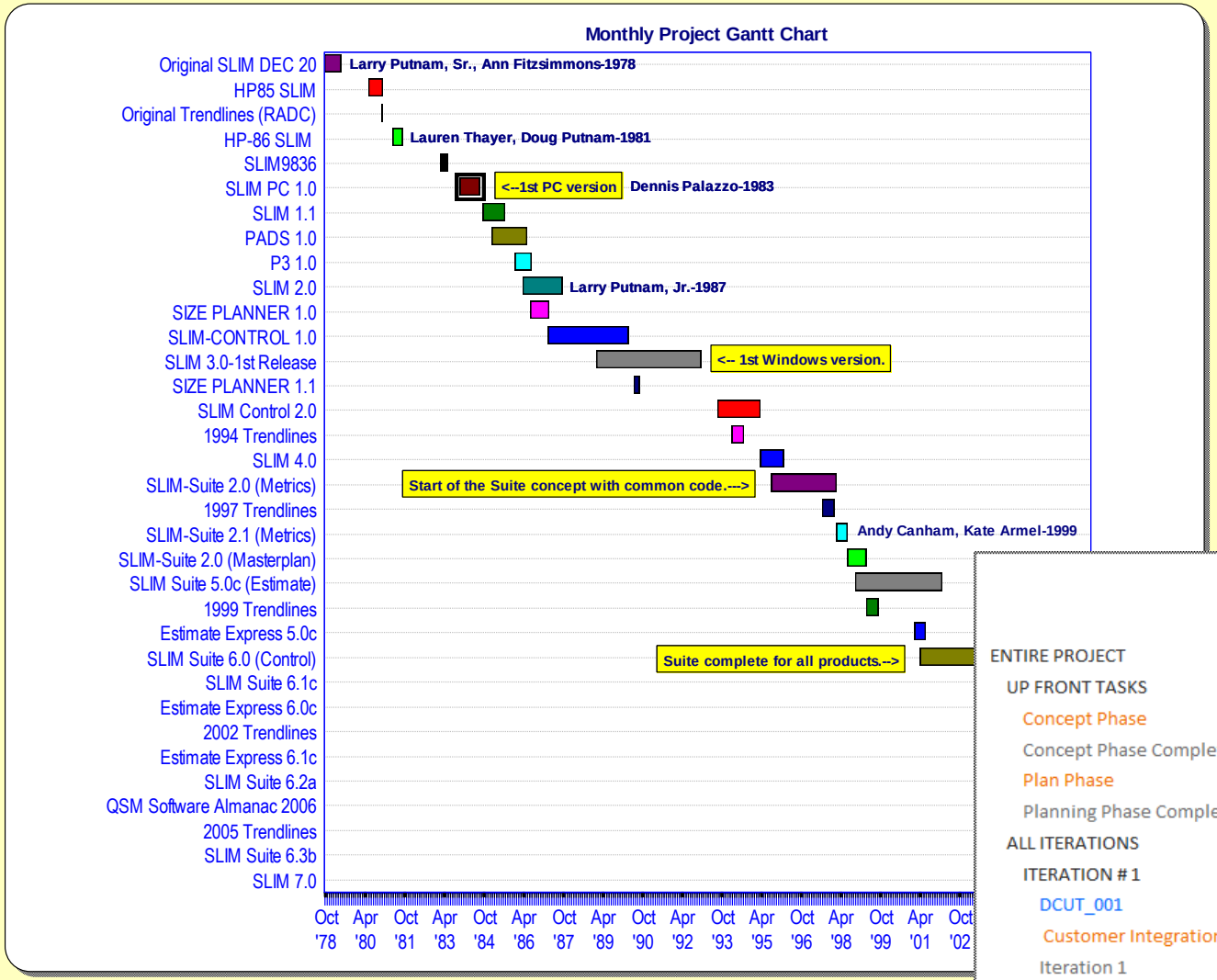
SLIM

Products

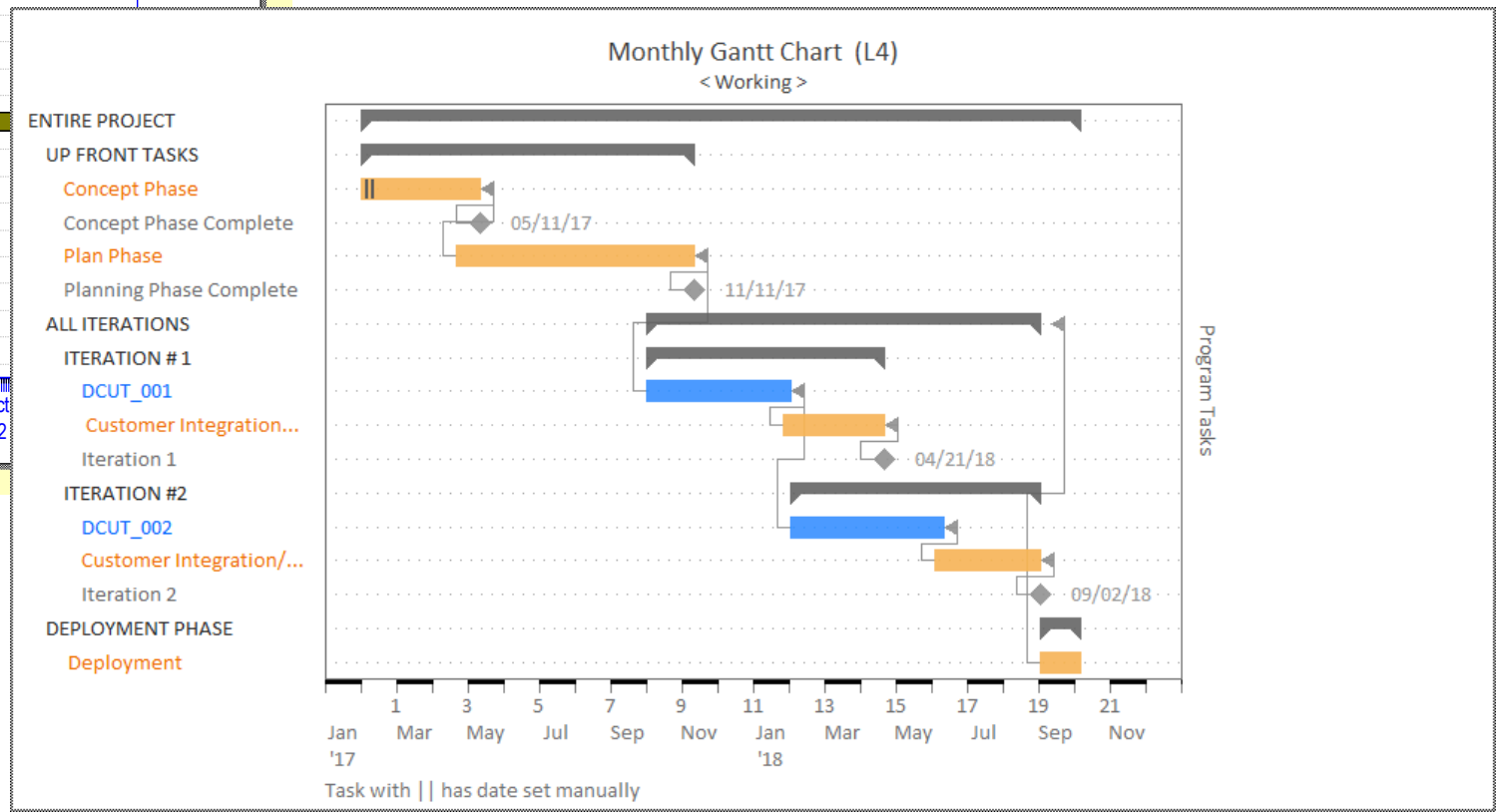
Services

Training

QSM Product timeline in SLIM-MasterPlan 6.3 (circa 2006)



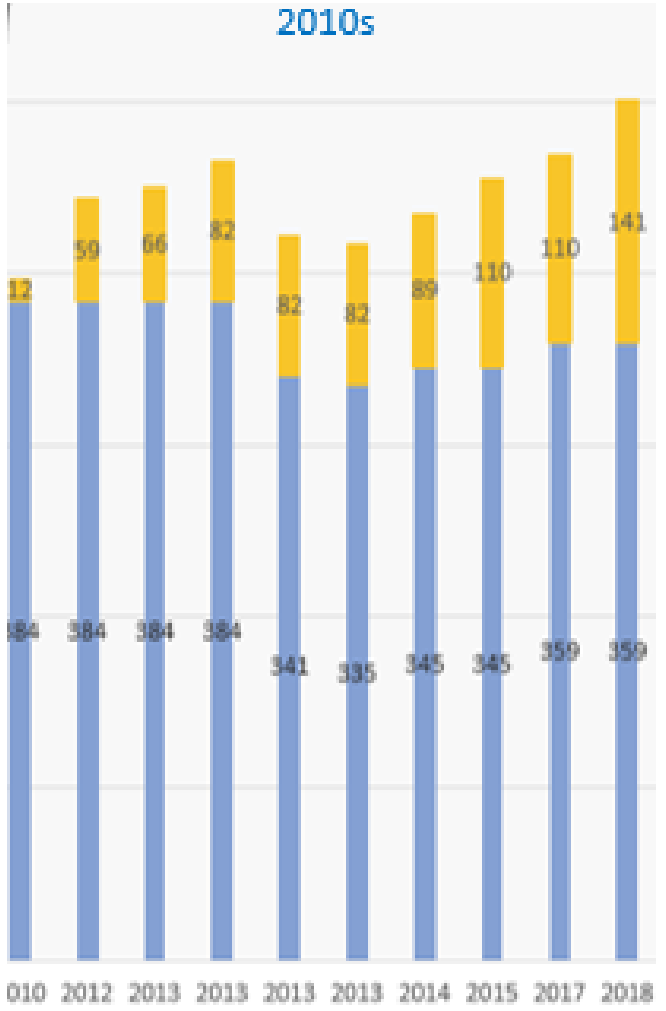
Screen snap from SLIM-MasterPlan 10.1



The 2010s

- SLIM-WebServices 1.0 (now, SLIM-Collaborate) released.
- SLIM-Collaborate 2.0 - Round Trip integration with SE added to Collaborate.
- SLIM-Collaborate 3.0 - SLIM on the Server integrates SLIM-Collaborate with SLIM-desktop
  - Skills breakouts available in Collaborate!
- Coming soon! Risk modeling in Collaborate 3.1.

- SLIM-Estimate 8.2 - detailed effort breakouts for resource demand capacity planning
  - SmartSheets, Agile Adjuster, Skills utilities
- SLIM-Suite 9.0 – improved database management, analysis
  - PPM Connector framework for integrating with PPM tools
  - Clarity adapter
- SLIM 10.0 - Skills added to SLIM-Control and MasterPlan
  - Quadrant charts



QSM Web Site 2013

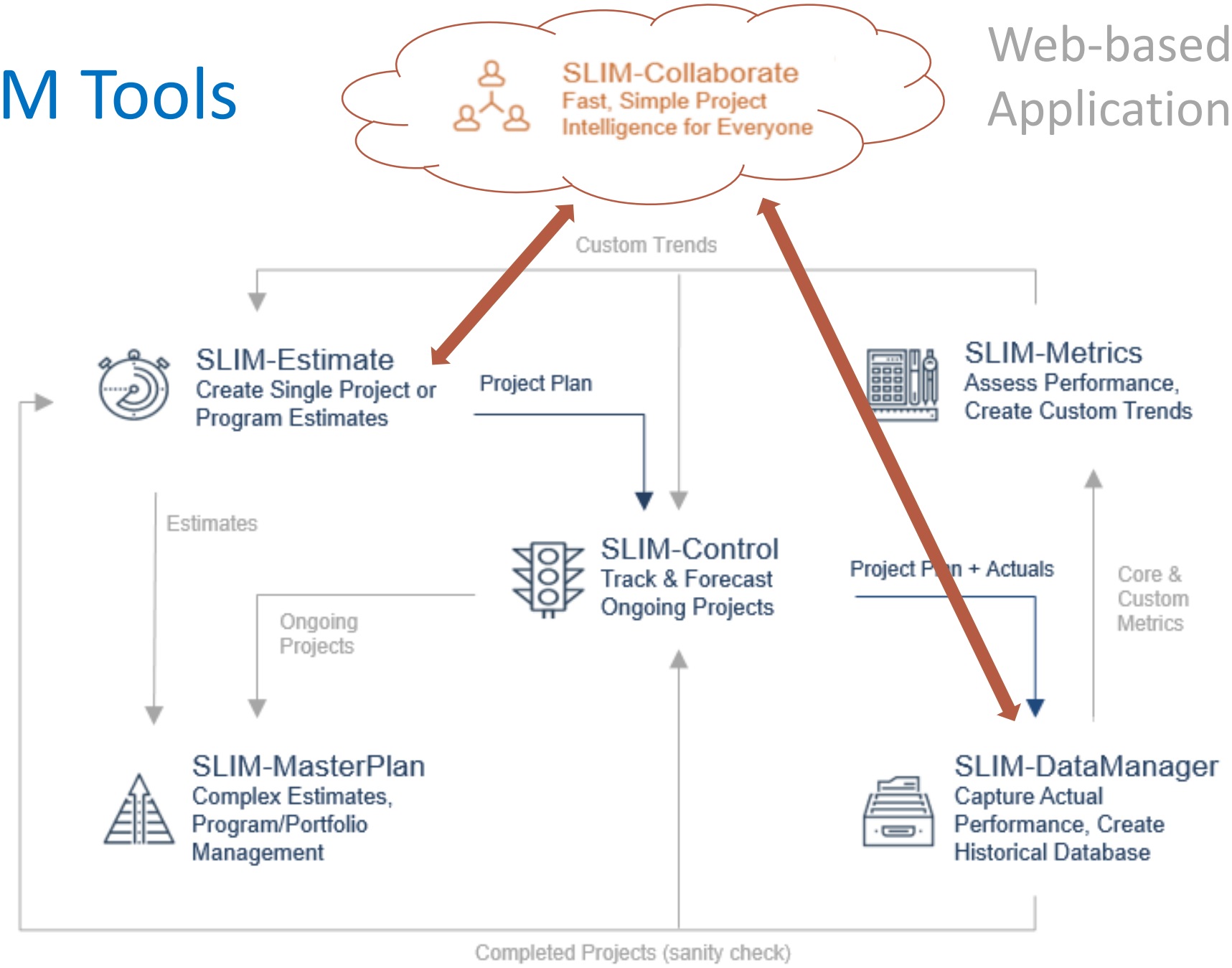
Announcing SLIM-WebServices (now, SLIM-Collaborate)

Extending SLIM Tools

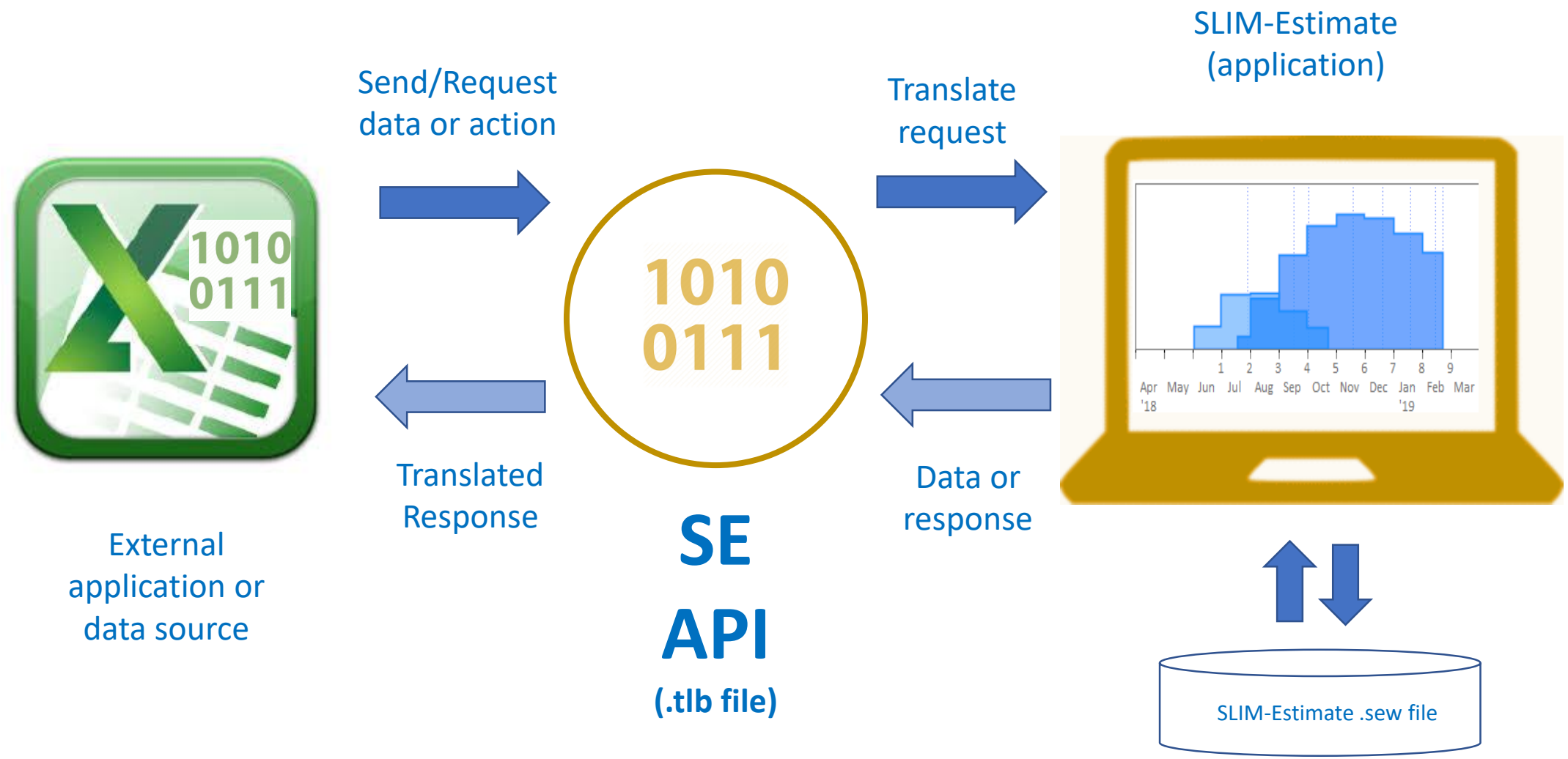
Leveraging APIs, Utilities, and Integrations

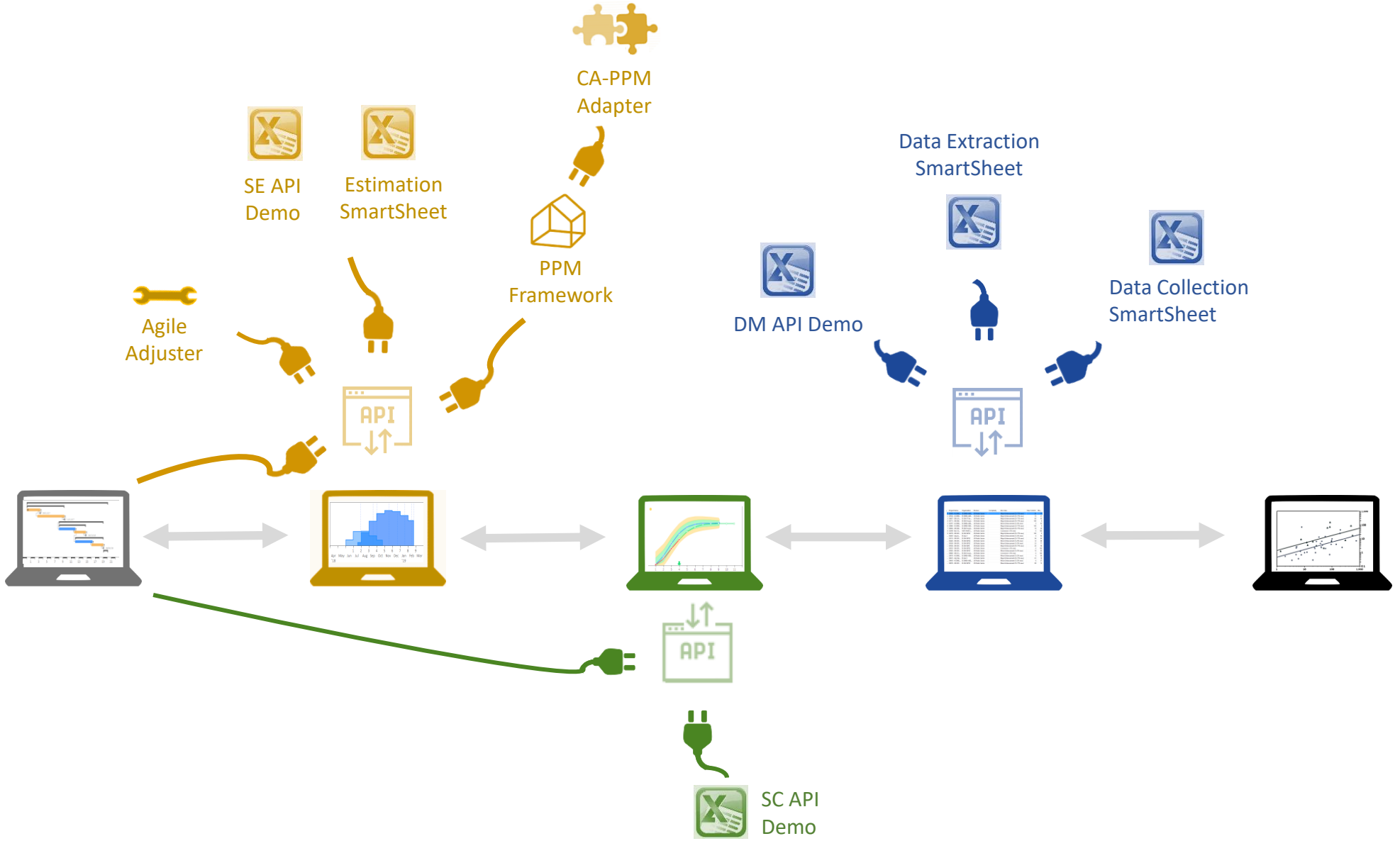
Desktop Applications

Web-based Applications



What's an API?


SLIM-Estimate
(application)
Send/Request
data or action
Translate
request
1010
0111
Translated
Response
Data or
response
External
application or
data source
SE
API
(.tlb file)
Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar
'18
'19
SLIM-Estimate .sew file


CA-PPM
Adapter
SE API
Demo
Estimation
SmartSheet
PPM
Framework
Agile
Adjuster
API
Data Extraction
SmartSheet
DM API Demo
Data Collection
SmartSheet
API
API
SC API
Demo

What Do I Need to Leverage the APIs?

- All APIs Included with Tools (.tlb files)
- Object model, user documentation, and code samples available on QSM web site

- If writing custom code:
  - Mid-level VB or other developer (2-3 years experience recommended).
  - Experience w/ Office Automation helps
  - SLIM-Suite Training also helpful

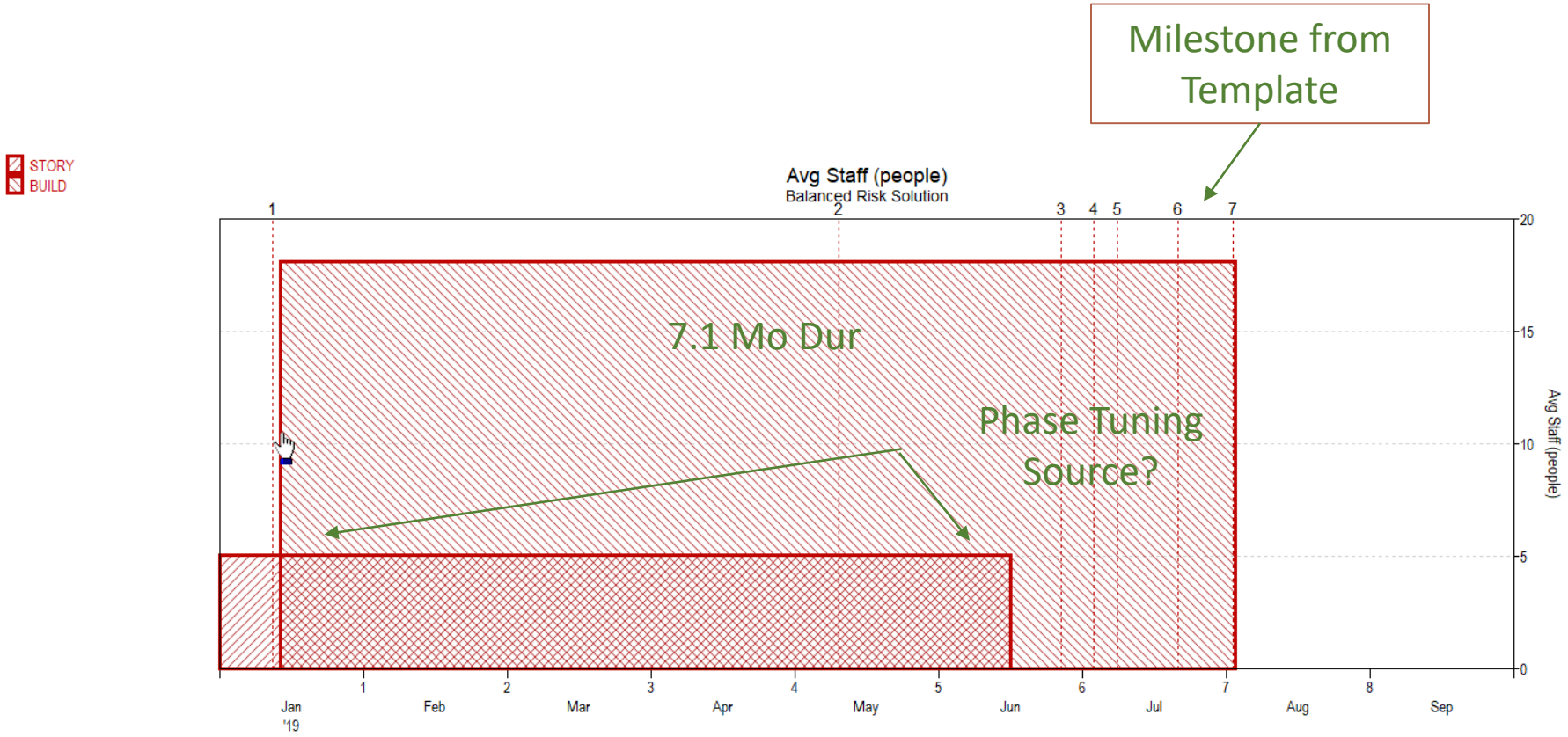
Where Can I Learn More About APIs?

- Download API Demos and documentation from the QSM web site.
- Explore SLIM-Estimate and DataManager SmartSheets.
  - Spreadsheet implementations of SLIM-Estimate and DataManager APIs
    - Run estimates from an Excel spreadsheet with built-in sizing data.
    - Collect completed project data using Excel and import into DataManager.
    - Export completed project data from DataManager to Excel.
- Watch this webinar to see how other QSM clients are using our APIs.
- Read how QSM tailored SLIM-Estimate to calculate SAFe program increments.
- Contact QSM support with questions or requests for assistance.
  - support@qsm.com

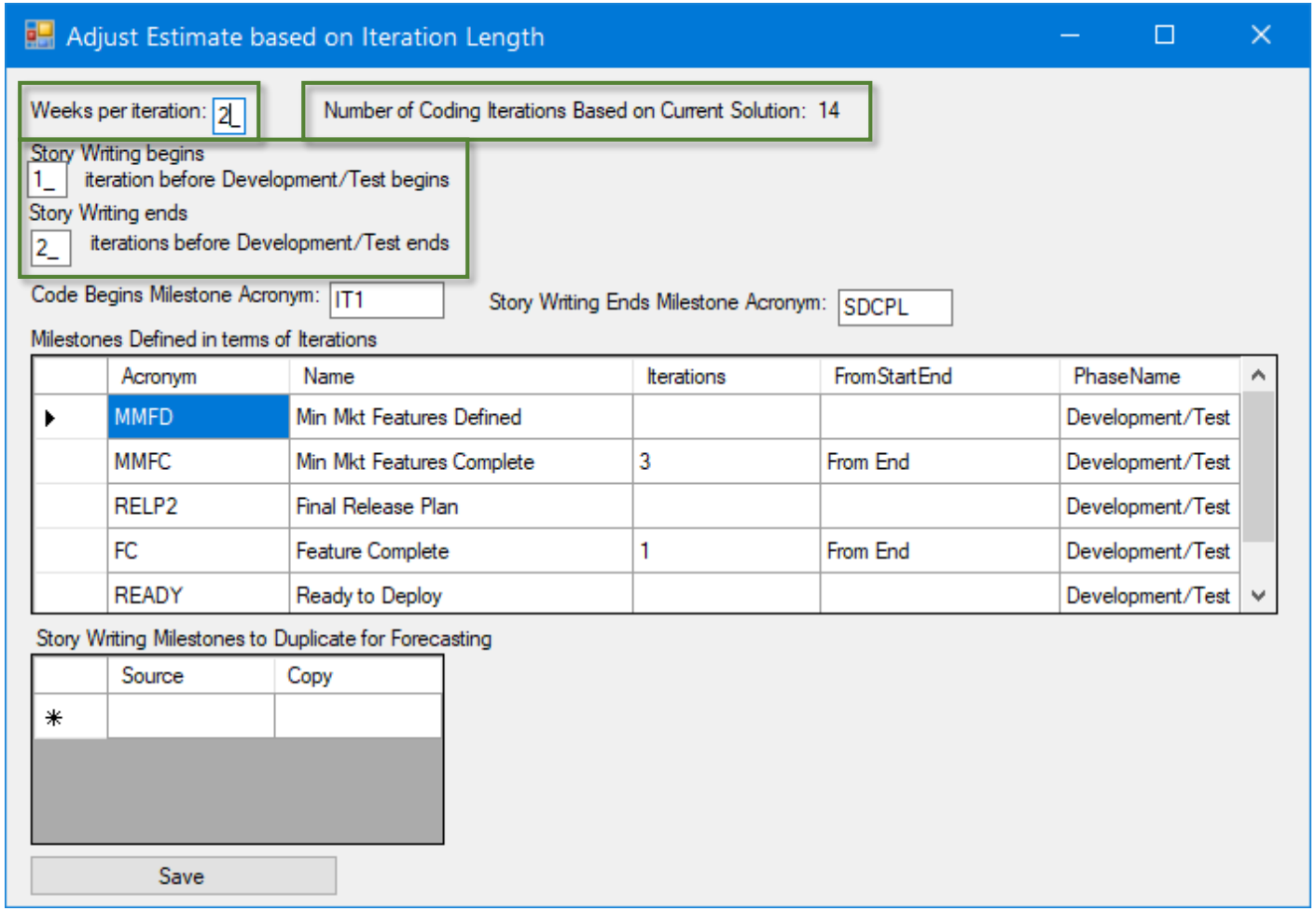
Agile Adjuster

SLIM-Estimate API Utility

SLIM-Estimate Life Cycle Settings



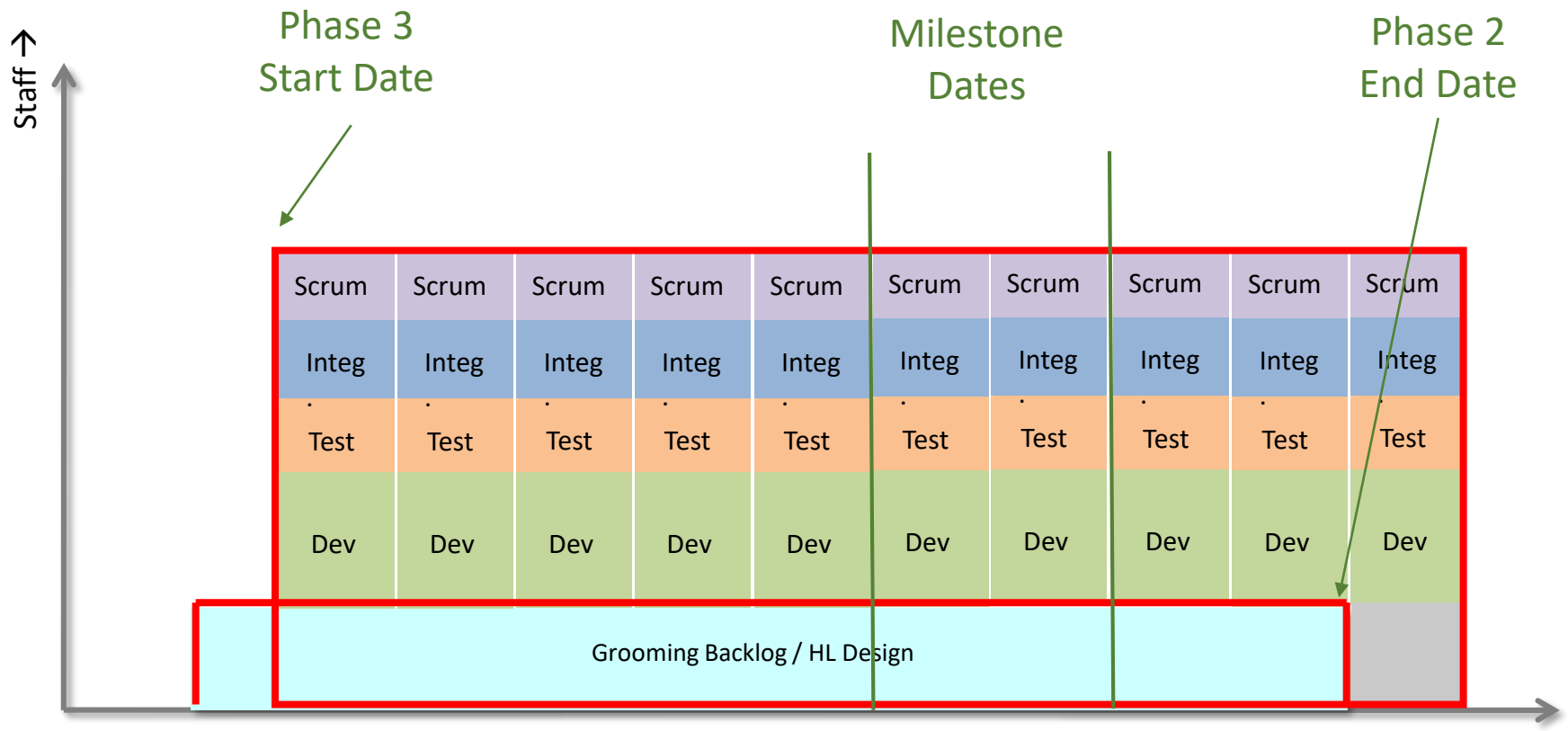
Agile Adjuster User Interface



Agile Adjuster Aligns Key Events to Sprint/Iteration

- Inputs
  - # weeks/iteration
  - Iteration story writing begins
  - Iteration story writing ends
  - Milestone coding begins
  - Milestone story writing ends
  - Other milestone occurrences by iteration
- Outputs
  - # ITERATIONS IN Phase 3 (whole number)
  - % dur of an iteration – used to calc phase tuning
  - Phase 2 Start and end dates
  - Phase 3 start date (overlap)
  - Milestone dates

Adjusted Solution – What Changed?



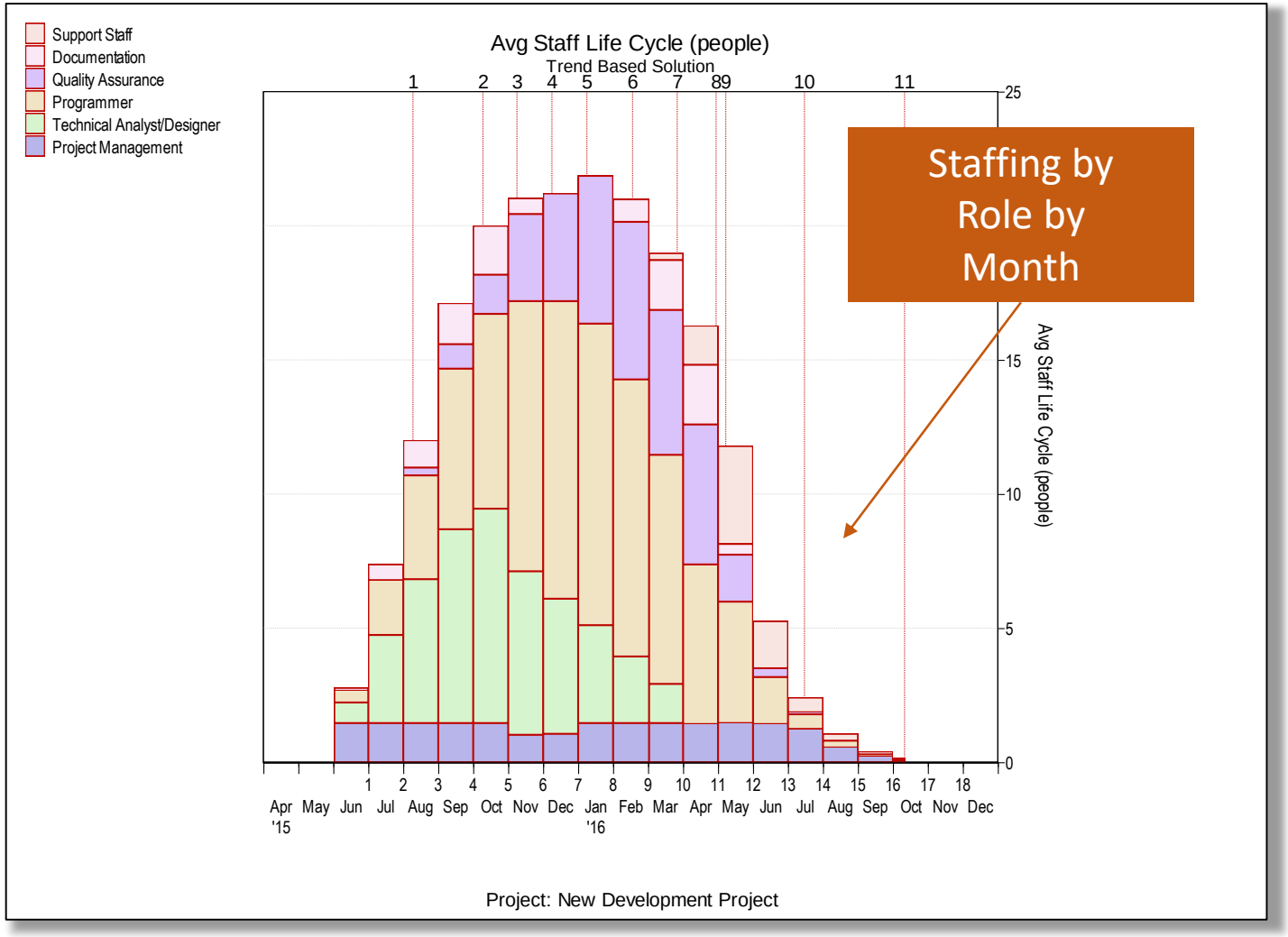
Download Agile Adjuster

- Available on QSM Support | Downloads page, Utilities section
  - Select version of your SLIM-Suite installation
- Package contains Installation & User Guides
- Need Admin rights to your computer
- Contact QSM Support for assistance – quicker ☺

SLIM PPM Connector

SLIM-Estimate API Utility

Resource Demand Plan

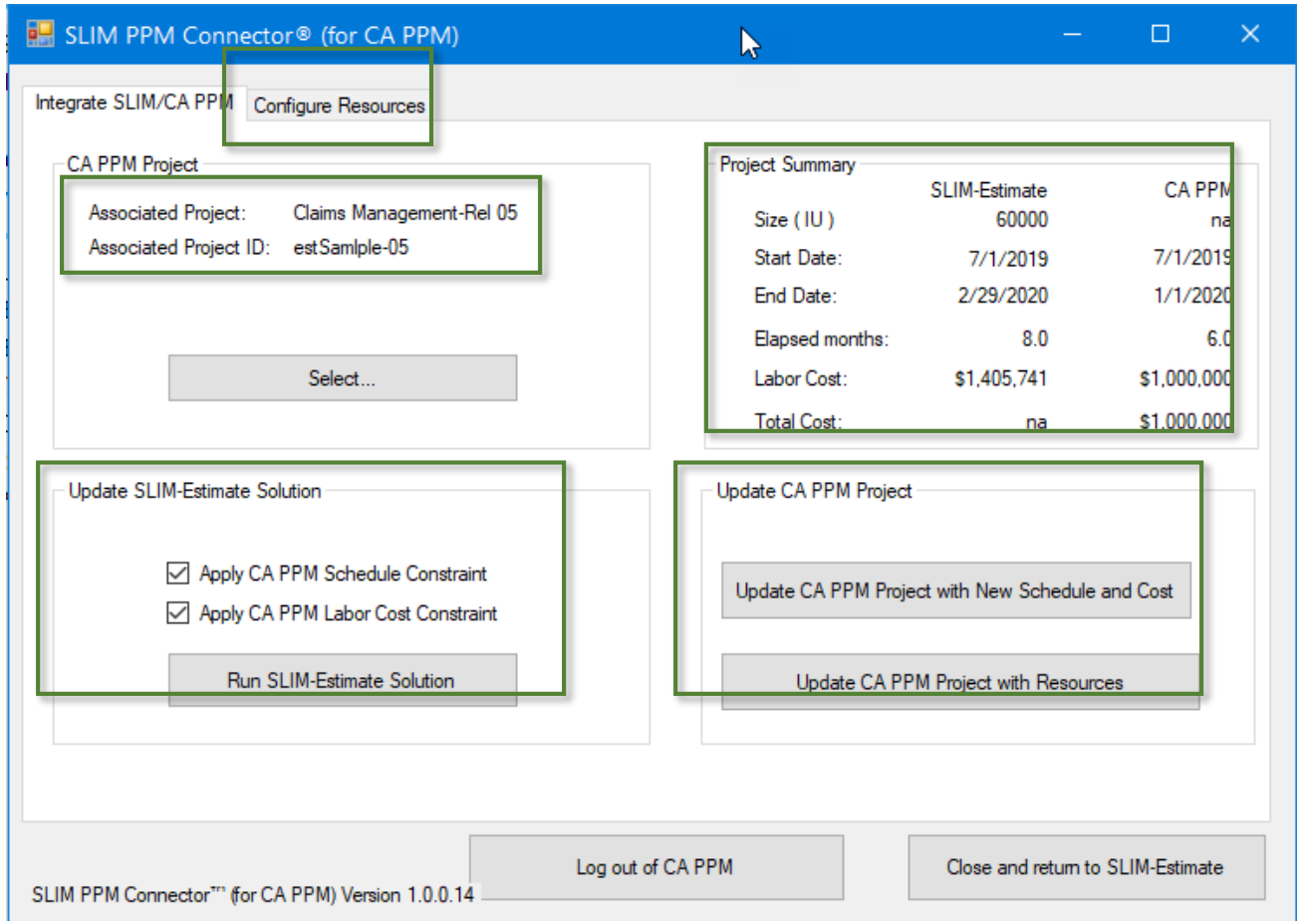


Skill Categories Allocated to Time Slices

Skill Category	Phase 1		Phase 2		Phase 3												Phase 4	
	0		1		2		3		4		5		6		7		8	
Project Management	1.00	F	1.50	F		%		%	1.50	F	1.50	F	1.50	F	1.50	F	1.50	F
Technical Analyst/Designer	100	%	55	%	40	%	25	%	25	%	15	%	10	%		%		%
Programmer		%	35	%	40	%	55	%	55	%	55	%	50	%	40	%	45	%
Quality Assurance		%		%	10	%	20	%	20	%	30	%	30	%	35	%	10	%
Documentation		%	10	%	10	%		%		%		%	10	%	15	%		%
Support Staff		%		%		%		%		%		%		%	10	%	45	%

- Each column is a Time Slice – 6 in Phase 3
- Specify Fixed and Variable Resources
  - Full-Time Equivalents (FTEs)
  - Percentages
- Set maximum monthly percentage to be allocated to FTEs

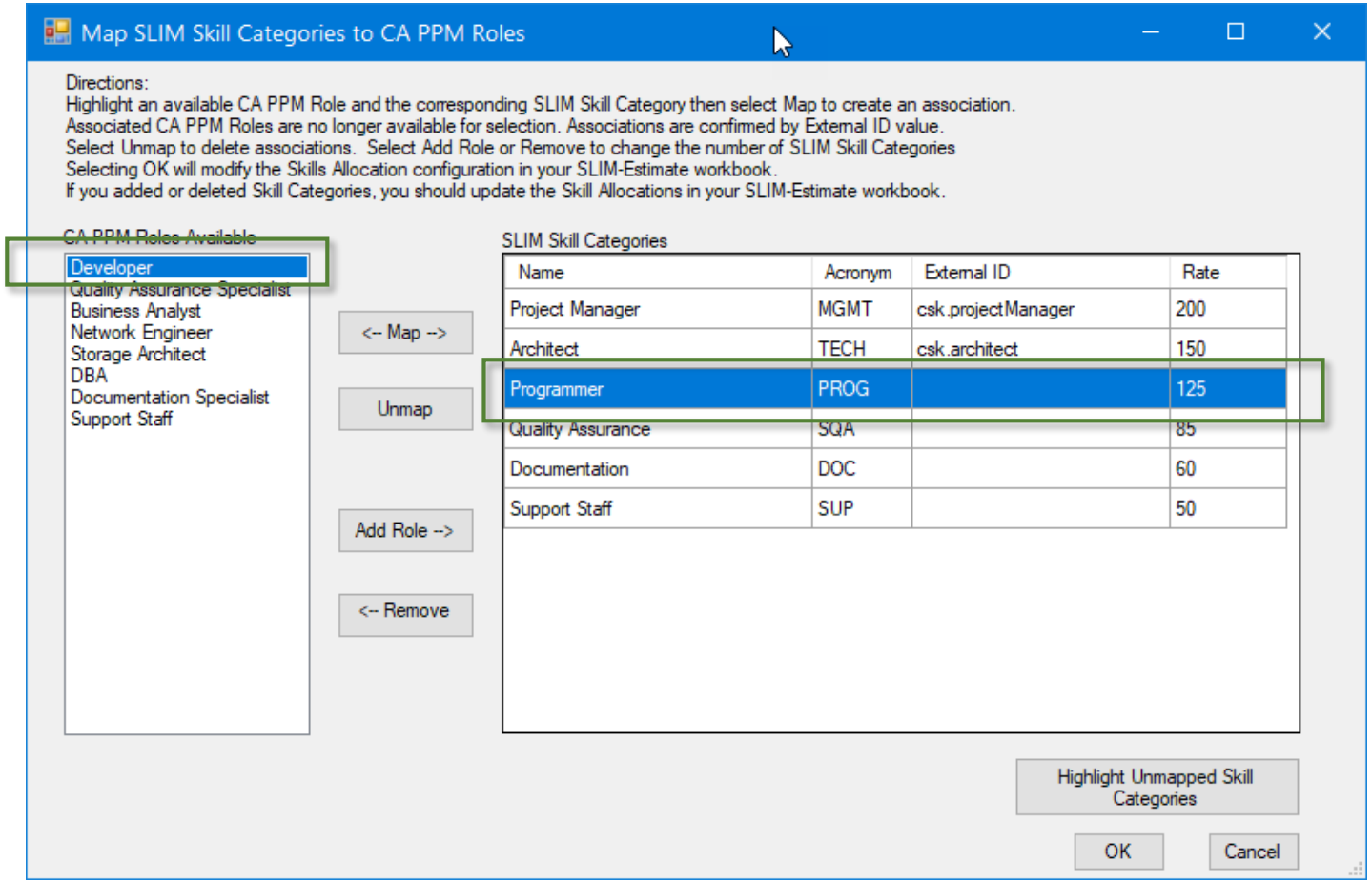
Link SLIM-Estimate Workbook to CA PPM Project/Idea



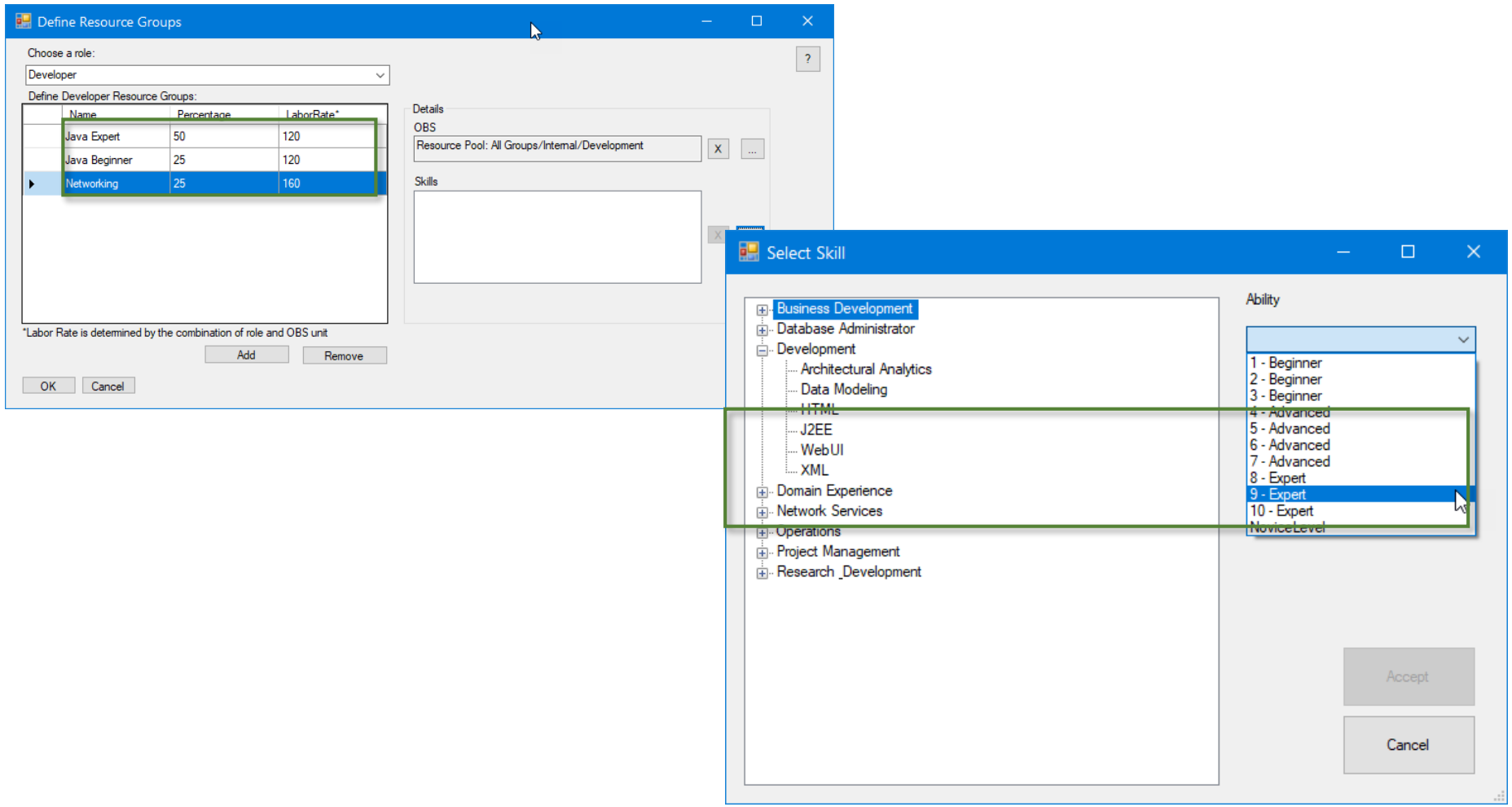
4 Configure Resources options:

1. Skill/Role Mapping
2. Strategic (Roll on/off)
3. Characteristics (subskills)
4. Non-labor Costs

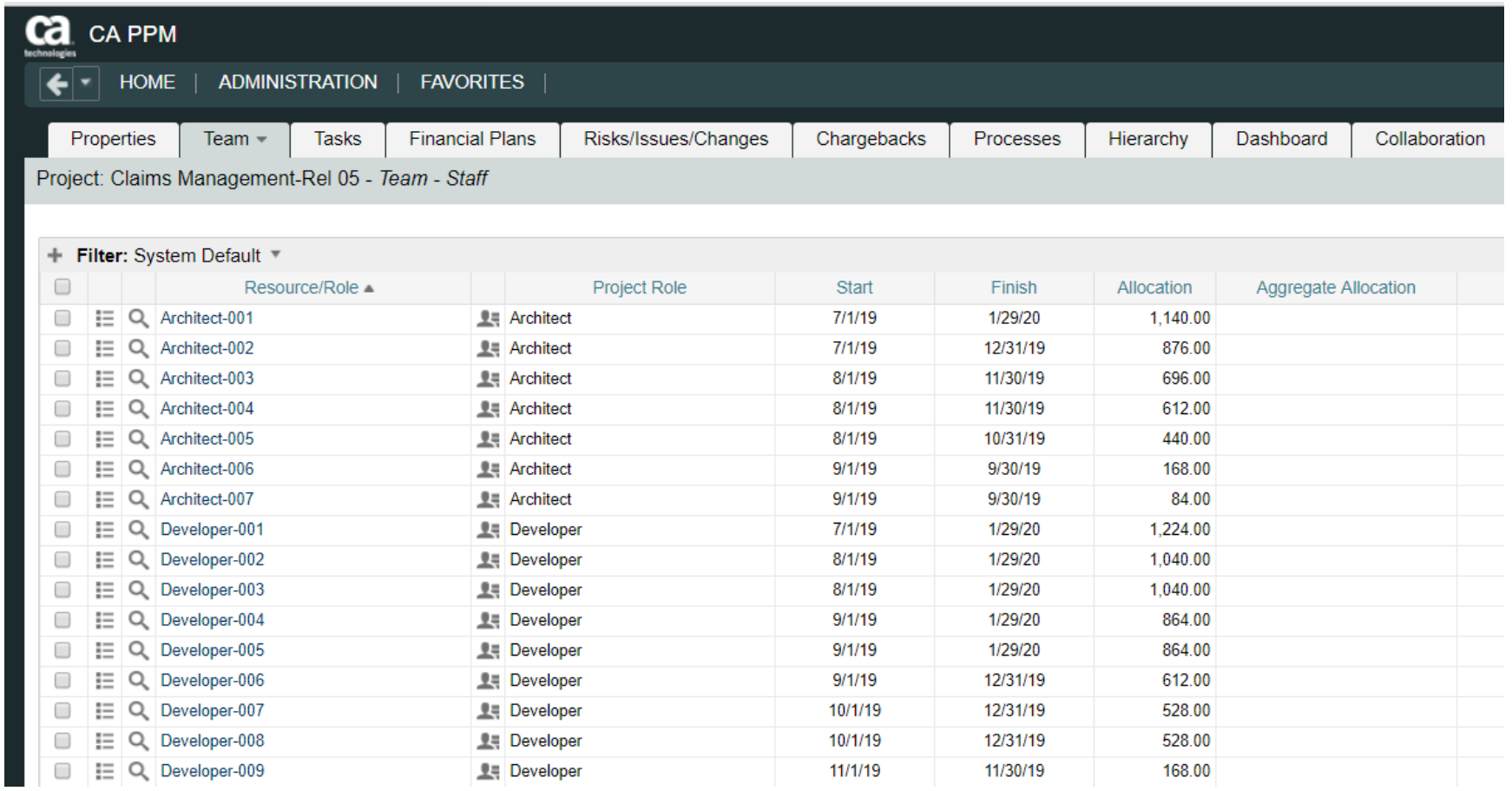
Map CA PPM Roles to Estimate Skill Categories



Create Subskills with Resource Characteristics



Project Resource Demand on Team Tab



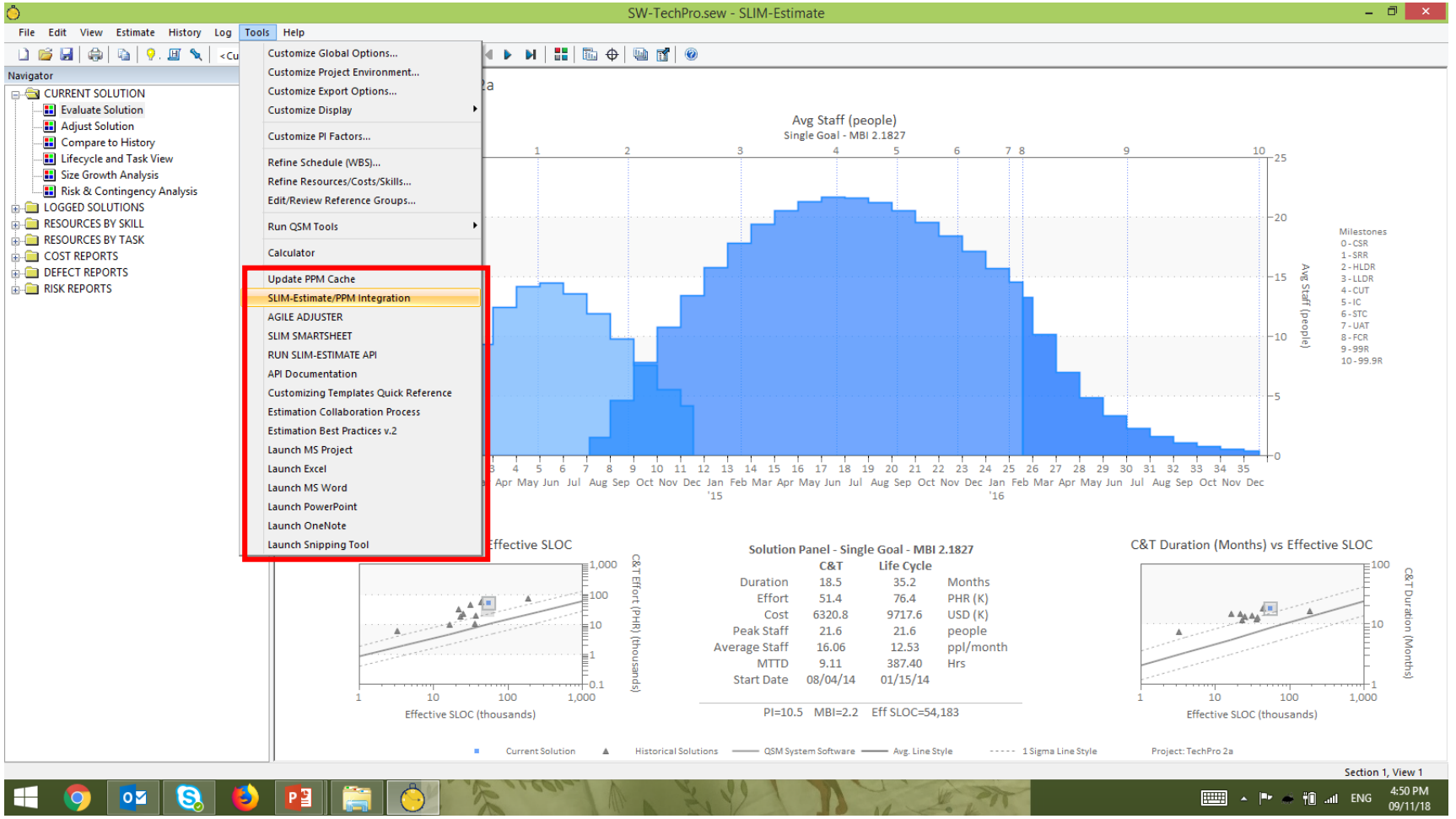
Resource/Role	Project Role	Start	Finish	Allocation	Aggregate Allocation
Architect-001	Architect	7/1/19	1/29/20	1,140.00	
Architect-002	Architect	7/1/19	12/31/19	876.00	
Architect-003	Architect	8/1/19	11/30/19	696.00	
Architect-004	Architect	8/1/19	11/30/19	612.00	
Architect-005	Architect	8/1/19	10/31/19	440.00	
Architect-006	Architect	9/1/19	9/30/19	168.00	
Architect-007	Architect	9/1/19	9/30/19	84.00	
Developer-001	Developer	7/1/19	1/29/20	1,224.00	
Developer-002	Developer	8/1/19	1/29/20	1,040.00	
Developer-003	Developer	8/1/19	1/29/20	1,040.00	
Developer-004	Developer	9/1/19	1/29/20	864.00	
Developer-005	Developer	9/1/19	1/29/20	864.00	
Developer-006	Developer	9/1/19	12/31/19	612.00	
Developer-007	Developer	10/1/19	12/31/19	528.00	
Developer-008	Developer	10/1/19	12/31/19	528.00	
Developer-009	Developer	11/1/19	11/30/19	168.00	

Contact Sales Rep to Obtain SLIM PPM Connector

- Requires a separate License
- License email contains download instructions
- Package contains Installation & User Guides
  - Several installation options
  - Requires CA PPM account access
- Need Admin rights to your computer
- Contact QSM Support for assistance – quicker ☺
  - Can work with your CA PPM professional to customize

Custom Extension Menu Items

Launch process or reference documents, utilities/APIs, or external applications right from the Tools menu of any SLIM-Suite application!

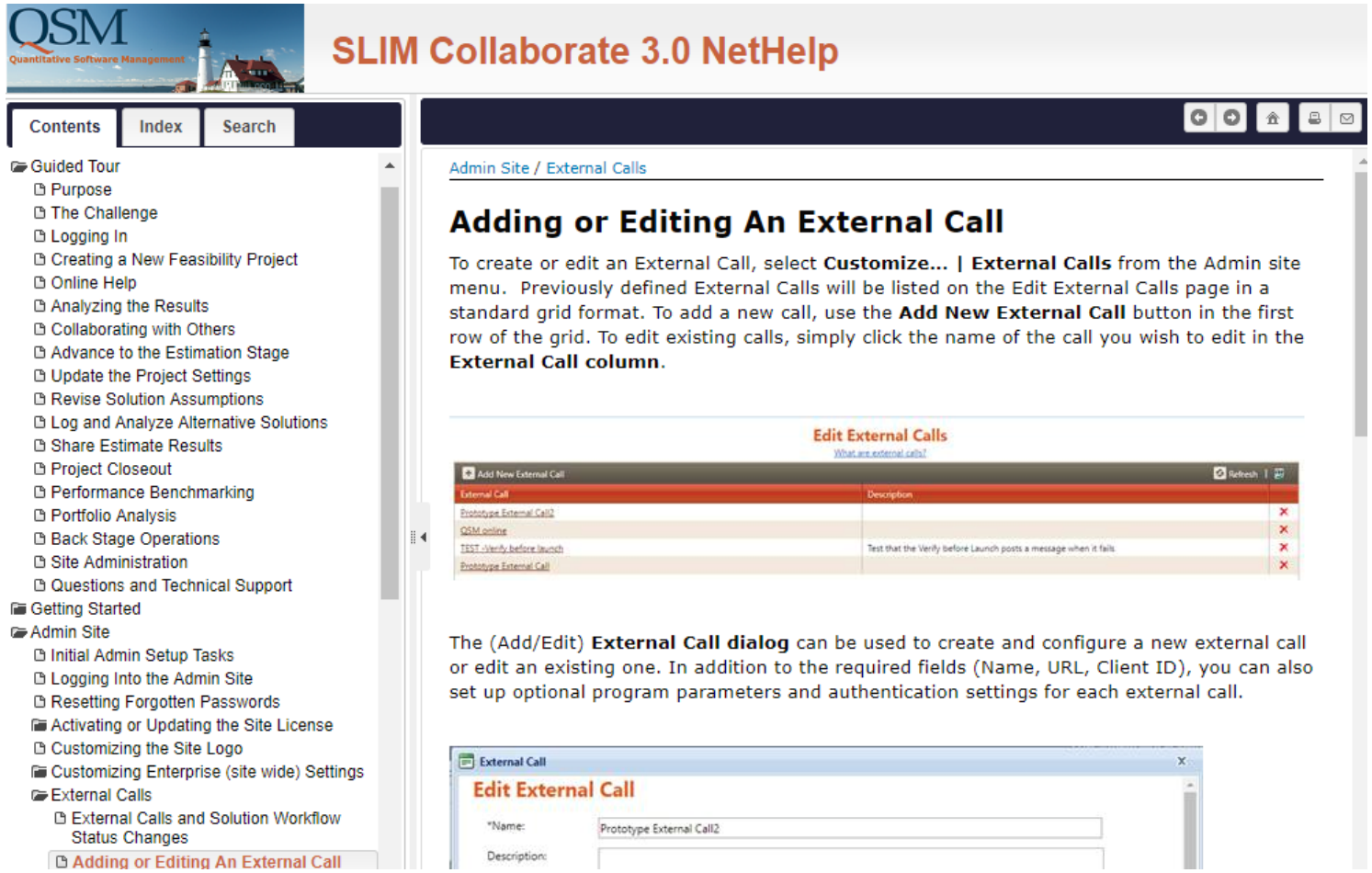


Where Can I Learn More about Extension Menu Items?

- Extension Menu Items chapter, SLIM-Suite online help.
- Step by step instructions on QSM blog.
- Contact QSM support with questions or requests for assistance.

SLIM-Collaborate External Calls

- Set up by Site Admin.
- Triggered by predefined changes in a project's status workflow stage.
- Can open, send data to, and request actions from other applications installed on the same server.

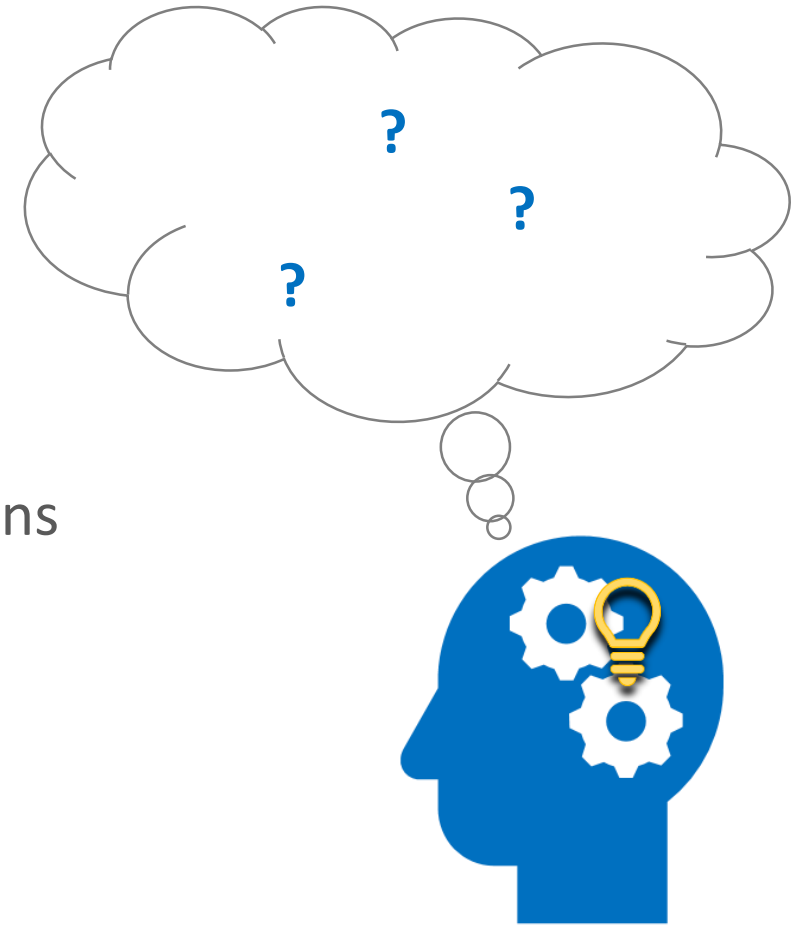


Upcoming Releases

- SLIM-Collaborate 3.1 (coming soon!)
  - Probability-based risk buffering – similar to SLIM-Estimate
  - Fixed contingency profiles
- SLIM-Suite 10.1 (coming soon!)
  - Graphics upgrade
- SLIM-Collaborate 3.2
  - Simplify, streamline Estimation
  - More solution methods
  - Redesign project pages

Questions?

- BOLO for replay of today's Q & A session

- Email Kate and/or Laura with:
  - Additional questions, comments, or suggestions
  - Help downloading/configuring/using APIs, utilities, integrations
  - Enhancement requests

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