

CMMI Level 1 to 3 in 15 Months: AIM for a performance upgrade

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Introductions

•David Martin

Gene Miluk

•Some questions for you

- SEPG
- Appraisers
- Partners
- Large Organizations
- SME



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commitment™



March 2011

AIM Implementation Pilot Projects

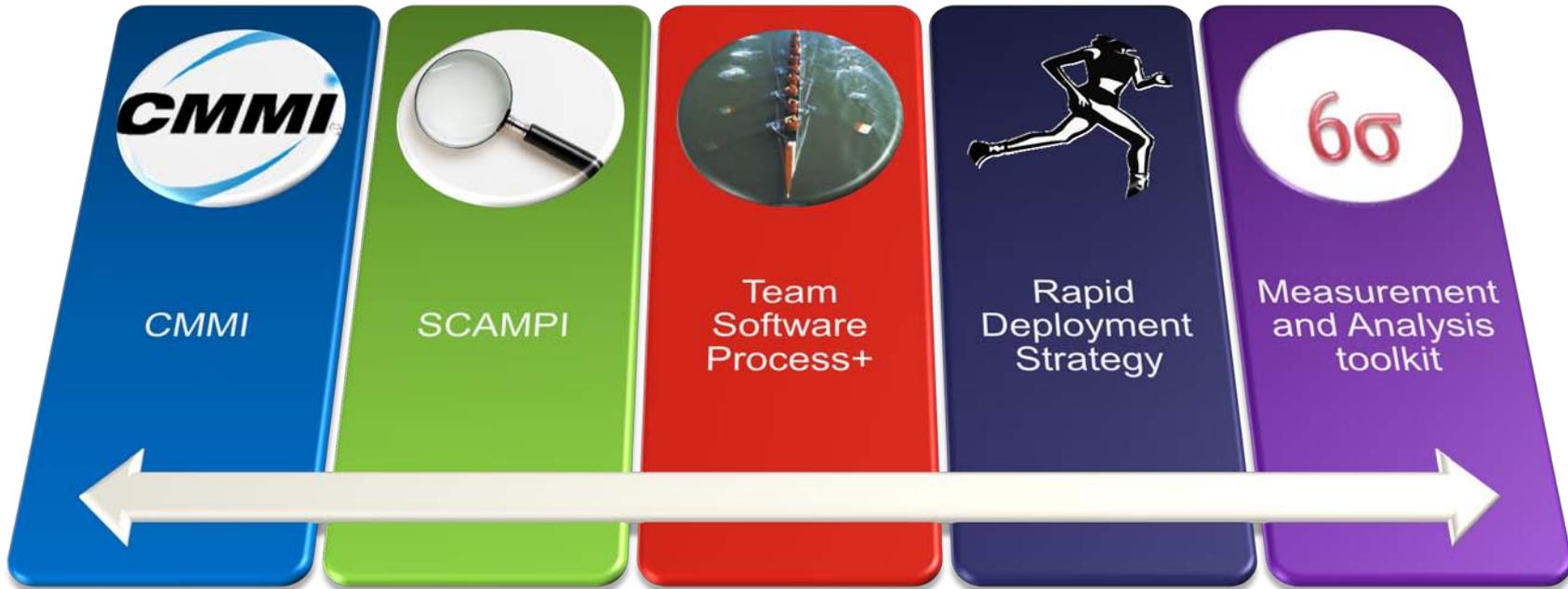
Presenter:
David Martin

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Accelerated Improvement Method (AIM)

Accelerated Improvement Method (AIM)

Integrates and leverages TSP+ to achieve high-maturity and high-performance with an agile, “right-weight” implementation.



Who is CGI?

- A global leader in IT, business process, and professional services, CGI partners with federal agencies to provide end-to-end solutions for defense, civilian, and intelligence missions
- Acquired Stanley Associates, Inc. in August 2010
- This CGI Business Unit division has provided software services for our government customer at this site for over 30 years
- This CGI Business Unit division has participated with its government customer in process improvement since 1991.

Organizational goals

- Improve existing software development processes and software team performance
- Improve software quality
- Enhance process performance
 - Estimations
 - Consistency
 - Schedule
- Be prepared to conduct SCAMPI ML3 appraisal in 18 months or less

Organizational Scope and Team Composition

Software Contracts Using CGI SEID Processes

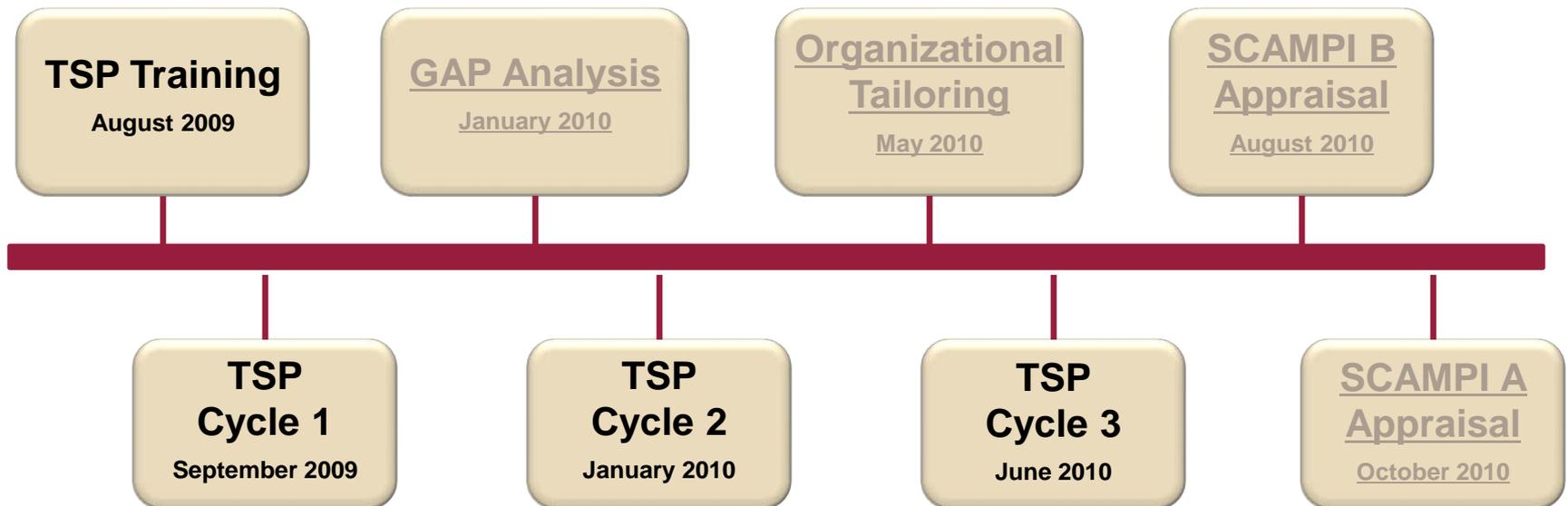
- Team A**
- 1 Team Lead
 - 3 Engineers
 - 2 Tester/Analysts
 - 1 Process Advisor

- Team B**
- 1 Team Lead
 - 2 Engineers
 - 1 Tester/Analysts
 - 1 Process Advisor

Appraisal Preparation

- Traditional Teams
 - Engineering Projects
 - Process Group
 - Management
 - PPQA
 - Org. Support Roles
 - Training
- Major impact to other functions within the division
- TSP Team
 - TSP Projects
 - Process Group
 - Management
 - Function Roles (filled by PG or TSP Project Members)
- Minimal Impact on other functions within the division

CGI Implementation Timeline



Team A – Gap Analysis Results

	SG 1							SG 2								SG 3					GG 2										GG 3	
	SP 1.1	SP 1.2	SP 1.3	SP 1.4	SP 1.5	SP 1.6	SP 1.7	SP 2.1	SP 2.2	SP 2.3	SP 2.4	SP 2.5	SP 2.6	SP 2.7	SP 2.8	SP 3.1	SP 3.2	SP 3.3	SP 3.4	SP 3.5	GP 2.1	GP 2.2	GP 2.3	GP 2.4	GP 2.5	GP 2.6	GP 2.7	GP 2.8	GP 2.9	GP 2.10	GP 3.1	GP 3.2
REQM	G	G	G	Y	G																R	G	G	G	G	Y	G	G	Y	G	G	Y
PP	G	R	G	G				G	G	Y	G	G	R	G		G	G	G			G	G	G	G	G	G	G	G	R	G	G	Y
PMC	G	G	G	Y	Y	G	G	G	G	G											Y	G	G	G	G	G	G	G	G	G	G	Y
CM	Y	G	G					G	G							Y	G				G	G	G	G	G	G	G	Y	Y	G	G	Y
RD	Y	Y						Y	Y	R						R	G	Y	G	G	R	G	G	G	G	Y	G	G	Y	G	R	Y
TS	Y	Y						R	G	G	Y					G	G				R	G	G	G	G	Y	G	G	Y	G	R	Y
PI	G	G	G					G	G							G	G	G	G		R	G	G	G	G	Y	G	G	Y	G	G	Y
VER	G	G	G					G	G	Y						G	G				R	G	G	G	G	Y	G	G	Y	G	G	Y
VAL	Y	G	G					G	G												R	G	G	G	G	Y	G	G	Y	G	G	Y
IPM	G	Y	Y	G	G	R		G	G	G											R	G	G	G	R	R	G	G	Y	G	R	R
RSKM	Y	Y	G					G	G							G	G				R	G	G	G	G	Y	G	G	Y	G	G	Y
DAR	G	Y	Y	Y	Y	Y															R	Y	Y	Y	G	Y	Y	Y	Y	Y	G	R

Team B – Gap Analysis Results

	SG 1							SG 2								SG 3					GG 2										GG 3	
REQM	SP 1.1	SP 1.2	SP 1.3	SP 1.4	SP 1.5	SP 1.6	SP 1.7	SP 2.1	SP 2.2	SP 2.3	SP 2.4	SP 2.5	SP 2.6	SP 2.7	SP 2.8	SP 3.1	SP 3.2	SP 3.3	SP 3.4	SP 3.5	GP 2.1	GP 2.2	GP 2.3	GP 2.4	GP 2.5	GP 2.6	GP 2.7	GP 2.8	GP 2.9	GP 2.10	GP 3.1	GP 3.2
REQM	R	G	Y	R	G																R	R	Y	G	Y	Y	Y	G	Y	Y	G	Y
PP	G	R	G	G				G	G	Y	G	G	R	G		G	G	G			G	G	G	G	G	G	G	G	R	G	G	Y
PMC	G	G	G	Y	Y	G	G	G	G	G											Y	G	G	G	G	G	G	G	G	G	G	Y
CM	R	Y	G					R	Y							G	R				G	Y	G	Y	Y	Y	Y	G	R	Y	Y	Y
RD	Y	Y						Y	Y	Y						Y	G	R	G	G	R	G	G	G	Y	R	R	G	Y	G	R	Y
TS	Y	G						G	G	R	R					Y	G				R	G	G	G	G	R	G	G	Y	G	G	Y
PI	G	Y	Y					R	R							Y	G	Y	Y		R	G	G	G	R	R	R	G	Y	G	G	Y
VER	G	G	G					G	G	Y						G	G				R	G	G	G	G	R	R	G	Y	G	G	Y
VAL	G	Y	G					G	G												R	G	Y	G	G	R	R	G	Y	G	G	Y
IPM	R	Y	Y	Y	G	Y		G	G	G											R	G	G	G	G	R	R	G	Y	G	R	Y
RSKM	Y	G	G					G	Y							G	G				R	G	G	G	G	Y	G	G	Y	G	G	Y
DAR	G	Y	Y	Y	Y	Y															R	Y	Y	Y	G	Y	Y	Y	Y	Y	G	R

Organizational – Gap Analysis Results

	SG 1	SP 1.1	SP 1.2	SP 1.3	SP 1.4	SP 1.5	SP 1.6	SP 1.7	SG 2	SP 2.1	SP 2.2	SP 2.3	SP 2.4	SP 2.5	SP 2.6	SP 2.7	SP 2.8	SG 3	SP 3.1	SP 3.2	SP 3.3	SP 3.4	SP 3.5	GG 2	GP 2.1	GP 2.2	GP 2.3	GP 2.4	GP 2.5	GP 2.6	GP 2.7	GP 2.8	GP 2.9	GP 2.10	GG 3	GP 3.1	GP 3.2	
OPF		R	G	G						G	G									Y	Y	R	R			R	G	G	Y	G	R	Y	G	R	Y		R	Y
OPD		R	G	R	R	Y	Y																			R	G	G	Y	G	R	Y	G	R	Y		R	Y
OT		R	Y	Y	Y					Y	G	Y														Y	Y	Y	G	Y	R	Y	R	Y	Y		G	Y
M&A		Y	Y	G	G					G	G	G	Y													Y	G	G	G	G	G	G	G	Y	G		G	Y
PPQA		R	G							Y	G															G	G	G	G	G	Y	Y	G	G	G		G	Y

- Summary

- 326 Adequate Implementation of Mode Practice
- 171 Partial Implementation of Model Practice
- 81 Implementation Absent or Poorly Addressed

Gap Analysis Results

- Software Teams
 - Existing processes and toolsets such as TSP and version control systems added strength to team practices
 - Many tasks were being performed without generating artifacts necessary for CMMI
 - Organizational processes are weak
- Launch the Process Group as a TSP Team
 - Create New Organizational Processes
 - Track Appraisal Preparation Progress
 - Address Identified Weaknesses

Launching the Process Group

- Team Composition
 - Team Lead, 4 additional team members
 - All working on a part-time basis
- 252 corrective actions tracked as tasks by the PG

Organizational Tailoring

- Organizational processes were updated to allow for TSP to be used by software teams in addition to standard software practices
- TSP Documentation was updated to reflect CGI's processes as they are practiced

Organizational – SCAMPI B Results

	SG 1	SP 1.1	SP 1.2	SP 1.3	SP 1.4	SP 1.5	SP 1.6	SP 1.7	SG 2	SP 2.1	SP 2.2	SP 2.3	SP 2.4	SP 2.5	SP 2.6	SP 2.7	SP 2.8	SG 3	SP 3.1	SP 3.2	SP 3.3	SP 3.4	SP 3.5	GG 2	GP 2.1	GP 2.2	GP 2.3	GP 2.4	GP 2.5	GP 2.6	GP 2.7	GP 2.8	GP 2.9	GP 2.10	GG 3	GP 3.1	GP 3.2		
M&A		G	G	G	G					G	G	G	G												G	G	G	G	G	G	G	G	G	G	G	G	G	G	
PPQA		G	G							G	G														G	G	G	Y	G	G	Y	G	G	G	G	G	G	G	
OPF		G	G	G						G	G								G	G	G	G			G	G	G	G	G	G	G	G	G	G	G	G	G	G	
OPD		G	G	G	G	G	G																		G	G	G	G	G	G	G	G	G	G	G	G	G	G	
OT		G	G	G	G					R	G	G													G	G	G	G	G	G	G	G	G	G	G	G	G	G	Y

- Summary

- 574 Adequate Implementation of Mode Practice
- 4 Partial Implementation of Model Practice
- 2 Implementation Absent or Poorly Addressed

CGI SCAMPI A Practice Ratings

	REQM	PP	PMC	M&A	PPQA	CM	RD	TS	PI	Ver	Val	OPF	OPD	OT	IPM	RSKM	IT	ISM	DAR			
Specific Goal 1																						
SP 1.1	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	
SP 1.2	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	
SP 1.3	FI	FI	FI	FI		FI		FI	FI	FI	FI	FI	FI	FI	FI	FI	FI			FI	FI	
SP 1.4	FI	FI	FI	FI									FI	FI	FI					FI	FI	
SP 1.5	FI		FI										FI		FI					FI	FI	
SP 1.6			FI																	FI	FI	
SP 1.7			FI																		FI	FI
Specific Goal 2																						
SP 2.1		■	■	■	■	■	■	■	■	■	■	■			■	■	■	■	■			
SP 2.2	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI			FI	FI	FI	FI	FI	FI	FI	
SP 2.3	FI	FI	FI	FI			FI	FI		FI		FI			FI	FI			FI	FI	FI	
SP 2.4	FI		FI					FI				FI							FI	FI	FI	
SP 2.5	FI																		FI		FI	
SP 2.6	FI																				FI	
SP 2.7	FI																				FI	
Specific Goal 3																						
SP 3.1		■					■	■	■	■	■				■	■						
SP 3.2	FI						FI	FI	FI	FI	FI				FI	FI						
SP 3.3	FI						FI	FI	FI	FI	FI				FI	FI						
SP 3.4								FI		FI												
SP 3.5								FI														
Specific Goal 4																						
SP 4.1																						
SP 4.2																						
SP 4.3																						
Generic Goal 2																						
GP 2.1	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	
GP 2.2	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	
GP 2.3	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	
GP 2.4	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	
GP 2.5	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	
GP 2.6	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	
GP 2.7	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	
GP 2.8	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	
GP 2.9	FI	FI	FI	FI	LI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	
GP 2.10	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	
Generic Goal 3																						
GP 3.1		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
GP 3.2	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	
GP 3.2	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	FI	

Process Area Profile

	Managed
●	
●	Configuration management
●	Process & product quality assurance
●	Measurement & analysis
○ (NA)	Supplier agreement management
●	Project monitoring & control
●	Project planning
●	Requirements management

	Defined
●	
●	Decision analysis & resolution
●	Risk management
●	Integrated project management
●	Organizational training
●	Organizational process definition
●	Organizational process focus
●	Validation
●	Verification
●	Product Integration
●	Technical solution
●	Requirements Development

- satisfied
- not satisfied
- (NA) not applicable
- (NR) not rated
- OS Out of Scope

Accelerated Improvement Method (AIM) Implementation Timeline

CGI Federal, TPG, SEID

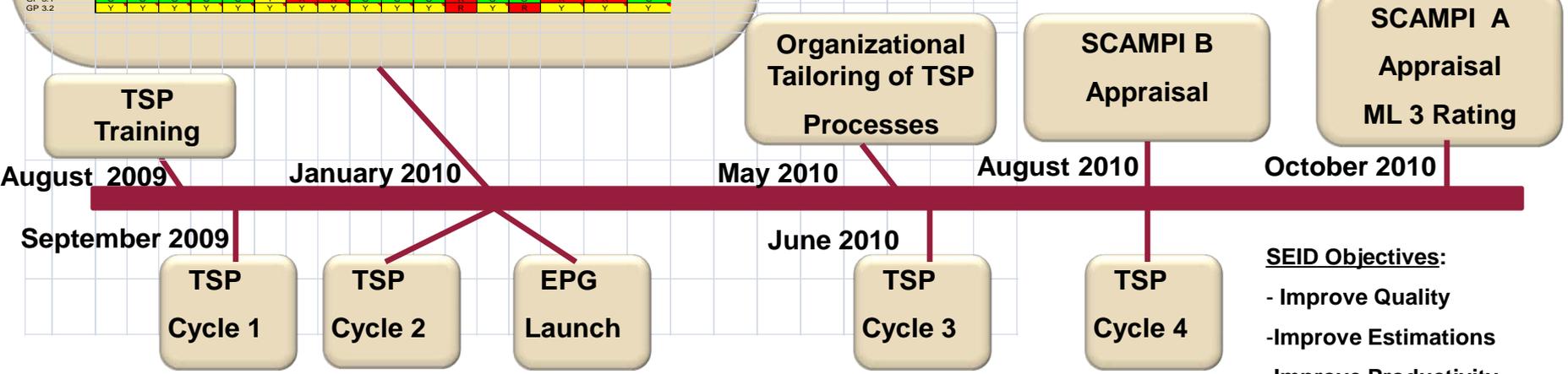
Project Performance Pilot vs Pre-TSP

Initial GAP Analysis

Class B Appraisal:
Dates 1/22/2010

	Req M	PP	PMC	M&A	PPQA	CM	RD	TS	PI	Ver	Val	IPM	Rsk M	DAR	OPF	OPD	OT
Specific: Goal 1																	
SP 1.1	R	G	G	Y	R	R	Y	Y	G	G	Y	R	Y	G	R	R	R
SP 1.2	G	R	G	G	G	Y	Y	Y	Y	G	Y	Y	Y	Y	G	R	Y
SP 1.3	Y	G	G	G	G	Y	Y	Y	Y	G	Y	Y	Y	Y	G	R	Y
SP 1.4	G	G	Y	G													Y
SP 1.5	G	G	Y	G													Y
SP 1.6	G	G	G														Y
SP 1.7	G	G	G														Y
Specific: Goal 2																	
SP 2.1		G	G	G	Y	R	Y	Y	G	R	G	G	G	G	G		Y
SP 2.2		G	G	G	G	Y	Y	Y	G	R	G	G	G	G	G		G
SP 2.3		Y	G	G	G		R	R	Y	Y	G	G	Y	Y	G		Y
SP 2.4		G	G	Y			R	R			Y						
SP 2.5		G	G														
SP 2.6		R	G														
SP 2.7		G	G														
SP 2.8		G	G														
Specific: Goal 3																	
SP 3.1		G	G			Y	R	Y	Y	G			G		Y		
SP 3.2		G	G			R	R	G	G	G			G		Y		
SP 3.3		G	G			R	R	G	G	G			G		Y		
SP 3.4		G	G			R	R	G	G	G			G		Y		
SP 3.5		G	G			R	R	G	G	G			G		Y		
Generic: Goal 2		R	G	Y	Y	G	G	R	R	R	R	R	R	R	R	R	Y
GP 2.1	R	G	G	G	G	Y	G	G	G	G	G	G	G	G	Y	Y	Y
GP 2.2	R	G	G	G	G	Y	G	G	G	G	G	G	G	G	Y	Y	Y
GP 2.3	Y	G	G	G	G	G	G	G	G	G	Y	G	G	Y	G	G	Y
GP 2.4	Y	G	G	G	G	Y	G	G	G	G	G	G	G	Y	Y	Y	Y
GP 2.5	Y	G	G	G	G	Y	G	G	G	G	G	G	G	Y	Y	Y	Y
GP 2.6	Y	G	G	G	Y	Y	R	R	R	R	R	R	R	Y	Y	R	R
GP 2.7	Y	G	G	G	Y	Y	R	R	R	R	R	R	R	Y	Y	Y	Y
GP 2.8	Y	G	G	G	Y	Y	R	R	R	R	R	R	R	Y	Y	Y	Y
GP 2.9	Y	G	G	G	Y	Y	R	R	R	R	R	R	R	Y	Y	Y	Y
GP 2.10	Y	G	G	G	Y	Y	R	R	R	R	R	R	R	Y	Y	Y	Y
Generic: Goal 3																	
GP 3.1	G	G	G	G	G	Y	R	R	G	G	G	R	G	G	R	R	G
GP 3.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	R	Y	R	Y	Y	Y

- ★ Productivity Increased by 35%
- ★ Estimated Time on Task Variance Reduced from 18% to 7%
- ★ Defects Found in Validation Testing Reduced by 50%
- ★ Schedule Variance Reduced to Less than 10%

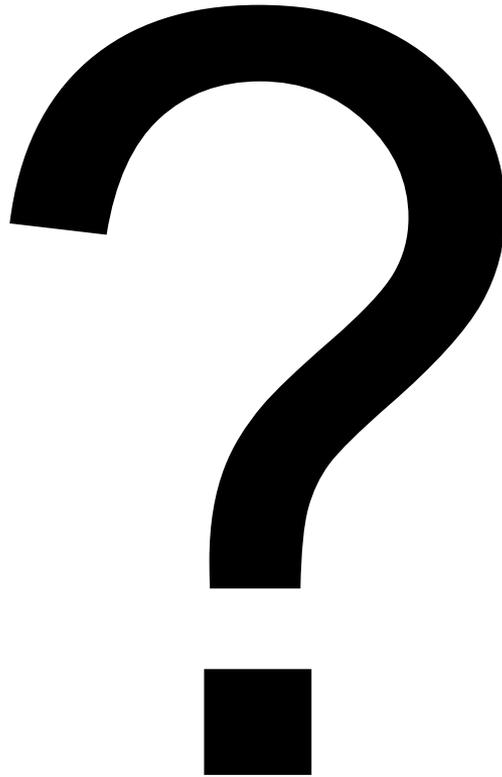


SEID Objectives:

- Improve Quality
- Improve Estimations
- Improve Productivity



Questions/Comments



Agenda

- Introductions
- AIM Overview
- Experience/Insight
- Questions

