## **Project Monitoring and Control**



A How-To with Scrum

### **Agenda**

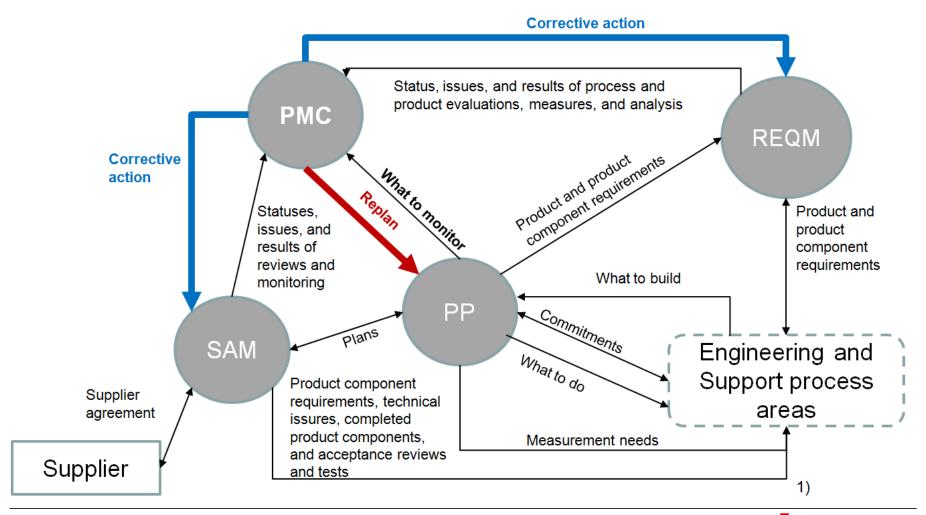


- Introduction
  - 1. Big Picture
  - What does Scrum look like
  - 3. Combining CMMI with Scrum
- Specific Goal: Monitoring the project against plan Specific Practices I VII
- Specific Goal: Manage corrective action to closure Specific Practices I III



### **Big picture**





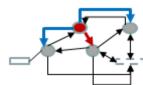
## **Overview of PMC Specific Practices**



Monitor Project Planning Parameters **SP 1.1** 

**Monitor** Commitments SP 1.2

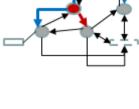
Monitor Project Risks **SP 1.3** 



**Monitor Data** Management SP 1.4

Monitor Stakeholder Involvement **SP 1.5** 

**Conduct Progress** Reviews **SP 1.6** 



**Conduct Milestone** Reviews SP 1.7

> Analyse Issues SP 2.1

Act Plan Check

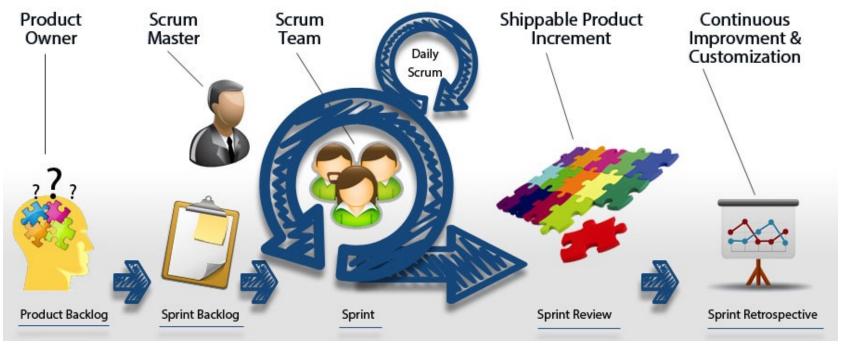
**Take Corrective Actions** SP 2.2

**Manage Corrective Actions SP 2.3** 



### What does Scrum look like?



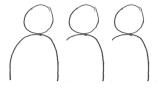


2)



### Possible integration in Scrum





**Development Team** 

**Monitor Project** Planning Parameters SP 1.1

Monitor Project Risks SP 1.3

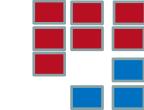


**Monitor** Commitments SP 1.2

**Monitor Data** Management SP 1.4

**Conduct Progress** Reviews SP 1.6





Monitor Stakeholder Involvement **SP 1.5** 

**Conduct Milestone** Reviews SP 1.7

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#### **CMMI** Practice

#### Scrum Practice



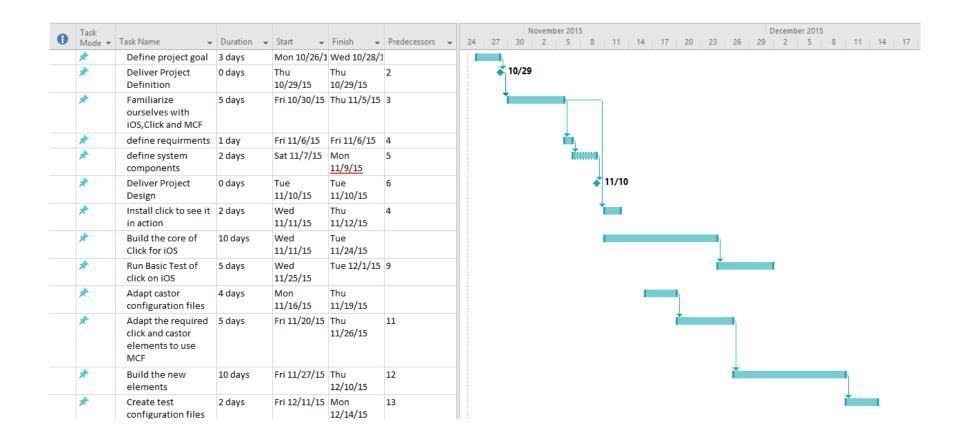
Monitor actual value of project planning parameter against the project plan

- progress
- costs
- attributes of work products and tasks
- resources provided and used

- Sprint burndown chart that tracks the effort remaining
- Release burndown chart









#### **CMMI** Practice

#### Scrum Practice



Monitor Commitments to the plan

- regularly review commitments
- identify those that are not satisfied or at significant risk
- document results of commitment reviews

Discussions on team commitments at the:

- Daily Scrum meeting
- Sprint review meeting

Possible documentation in a check-list







Daily meetings with status identified as:

- Planned
- in progress
- done
- bugs

3)



### **CMMI** Practice

#### Scrum Practice



### Monitor Project Risks

- periodically review documentation of risks in current context
- revise documentation as additional information becomes available
- communicate risk status to relevant stakeholders

- Sprint Planning meeting
- Risk logs at release plan/ Product level





#### Risk Log

Reference	Description	Date	Likelihood	Impact	Risk Category	Countermeasure	Contingency	Owner
1	The main supplier cannot deliver on time because of other commercial commitments.	21/03/11	Likely	High	High	Include financial penalties in contract; build contingency into the schedule; monitor contractor performance.	Revise project schedule.	Annie Proulx
2	The lead time for the leased line exceeds 90 days.	21/03/11	Unlikely	Medium	Medium	Order line earlier than necessary; incur additional rental fees.	-	Jim Harrison
3	Release of the new system is delayed because user acceptance testing commences after planned start.	23/03/11	Very likely	High	High*	Build eight week contingency into schedule.	Employ temporary staff to free up resources for testing; revise project schedule.	Mark Spragg
4	There is insufficient capacity to create additional database instances for data migration and testing.	18/04/11	Very unlikely	Medium	Low	Give advanced notice; monitor SAN usage.	Prioritise projects; temporarily remove alternative development instance.	Jim Harrison
5	Load testing fails to identify problem prior to system release.	20/04/11	Unlikely	High	Medium	Phased introduction of new system users.	Manage system access; remove high-load features; initiate Incident management process.	Kent Haruf

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#### **CMMI** Practice

#### Possible Practice



### Monitor Data Management

- periodically review **DM** activities against description in
   project plan
- identify and document significant issues and impact
- document results of DM activities

- establish internal and external platforms (documents and sprint backlog/ ticketing system)
- secure these exchange platforms
- only post summaries/ relevant data into the external repository





ВΙ		No.	Date	Updated	Alert Level ▼	Priority	Status	Populart Tyre	Client	Request Detail	Tech	Escalation	Latest Notes
	•	No.			Name and Address of the Owner, where the Owner, which is the Owner,			Request Type	Client	Request Detail			Latest Notes
		13	1/24/08 9:14 am	1/24/08 10:08 ani	Not completed	High	Open	IT Request  • Software Support  • Microsoft Windows  • Upgrade Request		Reimage Computer Lab: Update main image on server and run NetInstall.	J. Admin 🖂	Level 3	
	Θ	17	1/24/08 9:30 am	1/25/08 9:34 ani	Not completed	High	Open	IT Request  Hardware Support  Telecom Phones	Demo Client ⊠	Create Phone Extension: New Employee	J. Admin 🖂	Level 1	
		8	1/23/08 1:48 pm	1/24/08 10:07 ani	Not completed	Medium	Open	IT Request  • Software Support  • E-Mail  • Repair Request	Demo Client ⊠	E-mail Attachments: I can't add attachments to messages. Please help.	J. Admin 🖂	Manager	K. Hammond: Sorry there is a 5MB attachm
		4	1/23/08 12:01 pm	2/5/08 1:14 pri	Not completed	Medium	Pending	Legal Dept Request • Trademark / Copyright	Terry (client) Siddall	Can I: Can I let a customer of ours display our Corp Logo on their website?	J. Admin 🖂	Manager	G. Washington: Let me do a bit of backgr
													Widget, Inc.
		3	1/23/08 11:58 am	10/17/04 4:06 pri	Not completed	Medium	Open	IT Request Software Support E-Mail Repair Request	Terry (client) Siddall	E-Mail Outage Reported: Enduser unable to send or receive e-mail.	J. Admin 🖂	Level 2	T. Siddall: Incident reported by Technic
													T. Siddall: Incident reported by Technic
	Θ	37	3/16/11 11:36 am	3/16/1 <sup>1</sup> 11:37 ani	On schedule	Low	Open	Facilities Request  Maintenance  Light Bulb  Replacement		Lightbulb Outage Reported: Please replace the Lightbulb reported in the area mentioned in	J. Admin 🖂	Level 1	Reported and reassigned to Facilities.
	0	39	3/16/11 12:35 pm	3/16/1 12:37 pm	On schedule	Medium	Open	IT Request  • Hardware Support  • Desktop  • Repair Request	Demo Client ⊠	computer won't boot: boots to screen with error	J. Admin 🖂	Manager	
		6	1/23/08 1:07 pm	2/5/04 1:14 pm	On schedule	Low	Open	Facilities Request  • Maintenance  • Light Bulb Replacement	Terry (client) Siddall	Lightbulb Outage Reported: Please replace the Lightbulb reported in the area mentioned in	J. Admin 🖂	Level 1	FYI - It is actually broken! Looks like some h
													T. Siddall: Kev, I think
		5	1/23/08 12:23 pm	2/5/04 1:13 pm	On schedule	Medium	Assigned	Facilities Request  • Maintenance  • Fixture/Office/Cubical Repair	Terry (client) Siddall	Office Shelf fell off: One of the shelves in my office just fell apart on my cabinet	J. Admin 🖂	Level 1	FYI - the shelving unit is a Hon, if you have a
													Office #48 on the 11th Floor. Thanks!!! Ter

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#### **CMMI** Practice

#### Scrum Practice



### Monitor Stakeholder Involvement

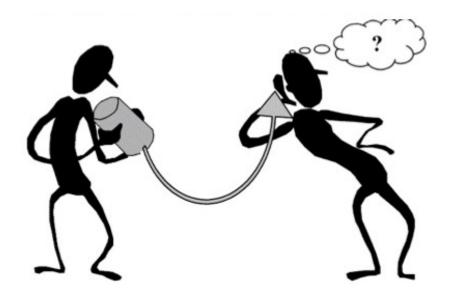
- periodically review status of stakeholder involvement
- identify and document significant issues and impacts
- document results of stakeholder involvement status reviews

#### Discussions at the:

- Daily scrum meeting
- Sprint review meeting







- Stakeholder meetings every second week
- Minutes of stakeholder meetings
- History for stakeholder meetings
- Contact via email or Skype to talk about important issues

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#### **CMMI** Practice





### Conduct Progress Reviews

- regularly communicate status on activities and work products to relevant stakeholders
- review results of collecting and analyzing measures for controlling project
- identify and document significant issues and deviations from plan
- document change requests and problems
- · document results of reviews
- track change requests and problem reports

#### Discussions at the:

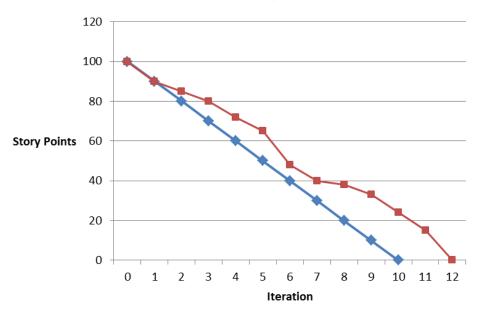
- Daily scrum meeting
- Sprint review meeting

Sprint burndown chart





#### **Burn Down Chart**



- Used in agile software development
- Shows significant progress with deviations

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----Expected

Actual



#### **CMMI** Practice

#### Scrum Practice



#### **Conduct Milestone Reviews**

- with relevant stakeholders at meaningful points in schedule
- review commitments, plans, status, and risks
- identify and document significant issues and impacts
- document results
- track action items to closure

Sprint review meeting of accomplishments and results





)	•	Task Mode	Task Name	Duration	Start	Finish	Predecessors	21   24   27   30	November 2015 2 5 8 11 14
1	•	*	Secure Routing Protocol for iOS	105 days	Sun 10/25/15	Thu 3/17/16			
2		*	Define project goa	3 days	Mon 10/26/	1Wed 10/28/	1		
3		*	Deliver Project Definition	0 days	Thu 10/29/15	Thu 10/29/15	2	10/29	•
4		*	Familiarize ourselv with iOS,Click and MCF	es 5 days	Fri 10/30/15	Thu 11/5/15	3	_	
5		*	define requirment	1 day	Fri 11/6/15	Fri 11/6/15	4		illin,
6		*	define system components	2 days	Sat 11/7/15	Mon 11/9/15	5		-
7		*	Deliver Project Design	0 days	Tue 11/10/15	Tue 11/10/15	6		11/10
8		*	Install click to see i action	t in 2 days	Wed 11/11/15	Thu 11/12/15	4		1
9		*	Build the core of C for iOS	ick 10 days	Wed 11/11/15	Tue 11/24/15			
10		*	Run Basic Test of con iOS	lick 5 days	Wed 11/25/15	Tue 12/1/15	9		
11		*	Adapt castor configuration files	4 days	Mon 11/16/15	Thu 11/19/15			
12		*	Adapt the required click and castor elements to use M		Fri 11/20/15	Thu 11/26/15	11		
12			click and castor		Fri 11/20/15			1 External Tasks	
			Split			Manual Task		External Milestone	• •
		· · · · · · · · · · · · · · · · · · ·	Milestor	ne	<b>*</b>	Duration-only		Deadline	•
		ojectPlan. 1/28/16	mpp Summa	у			Manual Summary Rollup		
Jace.	mu	1/20/10	Project	Summary	0 0	Manual Summ	nary	Manual Progress	
			Inactive	Task		Start-only	Е		
				Inactive Milestone		Finish-only	3		

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## SG 2: Manage corrective action to closure



#### **CMMI** Practice

#### Scrum Practice



### Analyze issues

- gather issues for analysis
- collected from reviews and execution of other procresses
- analyze issues to determine the need for corrective action

#### Notes from:

- Daily scrum meeting
- Sprint review meeting



## SG 2: Manage corrective action to closure



#### **CMMI** Practice

#### Scrum Practice



#### Take corrective action

- determine and document the appropriate actions needed to address identified issues
- review and get agreement with relevant stakeholders on the actions to be taken
- negotiate changes to internal and external commitments

#### Actions from:

- Daily scrum meeting
- Sprint review meeting



### SG 2: Manage corrective action to closure



#### **CMMI** Practice

#### Scrum Practice



### Manage corrective actions

- monitor corrective actions for their completion
- analyze results of corrective actions to determine their effectiveness
- determine and document appropriate actions to correct deviations from planned results to performing corrective actions

Traking of actions from:

- Daily scrum meeting
- Sprint review meeting



### Source materials



- 1) Taken from *Chrissis/Konrad/Shrum*, CMMI for Development®, Guidelines for Process Integration and Product Improvement, 3<sup>rd</sup> Edition, Addison-Wesley Professional, 2011.
- 2) http://www.scrum.as/academy.php?show=0&chapter=1
- http://www.luxoft.com/upload/main/57f/720x360xagile\_simulator\_05.jpg.pagespeed.ic.j32RWzzCy.jpg
- 4) http://www.leadershipthoughts.com/wp-content/uploads/2013/06/risklog-1-01\_mini
- 5) http://www.webhelpdesk.com/webhelpdesk/media/images/screen-sla-track3.png
- 6) http://www.content-killer.com/kommunikation/kommunikation-im-digitalen-zeitalter/
- 7) https://ixquick-proxy.com/do/spg/show\_picture.pl?l=deutsch&rais=1&oiu=http%3A%2F %2Fblog.caplin.com%2Fwp-content%2Fuploads %2FFig12.png&sp=471a5d5f57b9cb9d9fee78f77998f799

## Any questions?







# Thank you for your attention!