



Risk Management in an Agile Lifecycle

Agenda

- The goals and practices of traditional risk management
- The goals and practices of Agile risk management
- Pros and cons of both approaches
- Can the two risk management methods be used together?

A Review of Traditional Risk Management

Risk Defined

“Anything that could prevent or marginalize project success – if it comes to fruition.”

*Related, an **Issue** is when a **Risk** materializes.*

Frequent Risks

- The stakeholder requirements could be in conflict with each other.
- The estimate is not based on historical throughput.
- Team members are allocated to multiple projects.
- The project was approved without team buy-in.
- A 3rd party may not deliver their part.

Frequent Risks

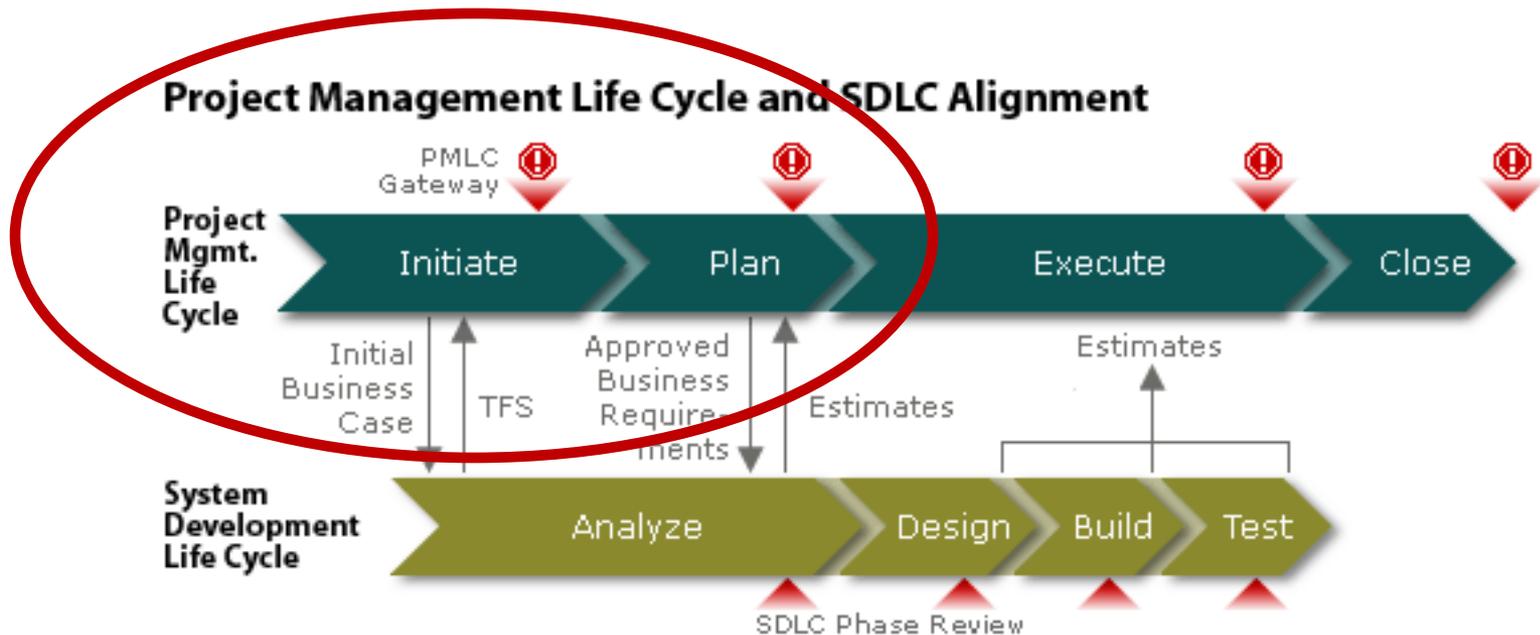
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 - Example - Hardware – bad weather in Asia could delay equipment



Traditional Risk Management Steps

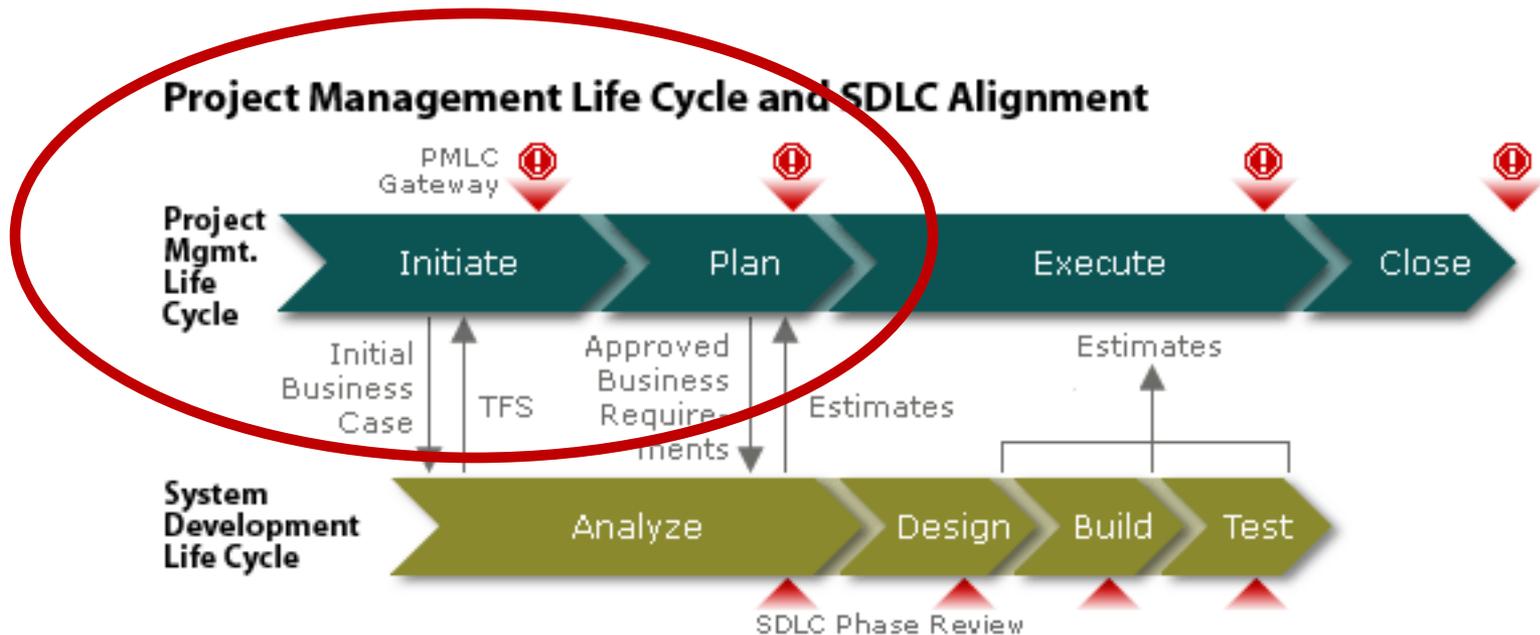
1. Identify
2. Quantify Impact
3. Quantify Probability
4. Create contingencies for high impact - high probability risks
5. Manage highest scoring risks

When do we identify risks?



In our PMLC - usually once to ***Initiate*** the project, then revisit and update the risks after ***Planning***.

When do we identify risks?



In our PMLC - usually once to *Initiate* the project, then revisit and update the risks after *Planning*.

We can call this **BURP** – Big Upfront Risk Planning.

What Do We Identify?

Project Name:	Online Auction System	Target Start Date:	06/30/11
Project Number:	22880	Target End Date:	08/30/11
Program Name:	0	Company Number:	1
Sponsor:	Jim Traylor	Cost Center:	3573
Business Owner:	Anne Archy	Created Date:	03/08/11
Project Manager:	Greg Smith	Revision:	39492

Risk Assessment

Risk ID Number	Risk Categories	Risk Description	Severity of Impact (1-5)	Likelihood of Occurring (in %)	Risk Rating	Contingency Plan Required (Yes/No)	Risk Approach	Risk Response Summary	Risk Owner
B5	Project Execution	Insufficient resources to successfully complete the project.	5	0.75	3.75	Yes	Risk Avoidance	On Technology side, resources are involved with Core platform.	Nathan or Greg:

What Do We Identify?

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Risk Assessment		
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1. The potential risk

What Do We Identify?

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2. The impact if the risk happens
3. The likelihood the risk will occur
4. Ultimately a Risk Rating

We Usually Have Risk Categories

RISK CATEGORIES		
RISK CATEGORY	DEFINITION	SAMPLE QUESTIONS
Business Continuity	Includes risk associated with the duration, or impact, of an interruption of critical business processes and their associated people, vendors, systems, technology,	<ul style="list-style-type: none"> • Will the introduction of a new product or service cause an interruption to existing business processes? • Is there a Business Continuity Plan? • Has the Business Continuity Plan been updated to reflect changes?
Compliance	Includes risks introduced to the company either during the project, or as a result of the project, associated with failure to meet regulatory requirements.	<ul style="list-style-type: none"> • Is this a new process, product or business model that the Company has not had significant experience in implementing? • Has this project, product or process resulted in a customer impact resolution in the past? • Is this project in response to a new statute, regulation or comment from a regulator?
E-Commerce Risk	Risks associated with Internet interfaces	<ul style="list-style-type: none"> • Is web site privacy adequately protected? • Is the website and session security appropriately handled? • Is the access to data via web site adequately protected? • Is there protection in place to prevent hackers, denial of service attacks, website defacement, etc.? • Is the web site privacy adequately protected?
Financial	Includes operational risks associated with theft or misuse of Company or customer assets or information,	<ul style="list-style-type: none"> • Is the forecast of the financial performance of the project adequate? • Describe the assumptions used in this forecast and the risks to achieving them. • Are financial tracking requirements clearly documented? Are there changes to accounting practices?
Fraud/Theft	Includes risks introduced to the company either during the project, or as a result of the project, associated with theft or misuse of Company or customer assets or information,	

...and we have Risk Response categories

RISK RESPONSE APPROACHES	
Risk Avoidance	Eliminating the threat of a risk by eliminating the cause.
Mitigation (Controlling)	Reducing the consequences of a risk by reducing its severity of impact or likelihood of occurring.
Acceptance	Accepting the risk if it occurs.
Share or Transfer (Allocation)	Assigning the risk to another party by purchasing insurance or subcontracting.

When Done We Have a Scored List.

Risk ID Number	Risk Categories	Risk Description	Severity of Impact (1-5)	Likelihood of Occurring (in %)	Risk Rating	Contingency Plan Required (Yes/No)	Risk Approach	Contingency Plan Summary	Risk Owner
BUSINESS RISKS									
B1	Business Continuity	Incomplete migration of materials from vendor sites.	1	0.25	0.25	No	Acceptance	(none)	
B2	Compliance	Regulatory noncompliances related to inconsistent policies and procedures.	3	0.75	2.25	Yes	Exploit	Include as a KPI in business case - repeat survey question for Benefits Realization stage.	Jan Borgelt
B3	Human Resources	Publishers may not be competent in use of ecomm platform and tools.	3	0.5	1.5	No	Mitigation	Training & follow-up	
B4	Legal	Liability and/or reduced benefits arising from errors in termination of existing vendor contracts.	3	0.25	0.75	No	Risk Avoidance	(none)	
B5	Project Execution	Insufficient resources to successfully complete the project.	5	0.75	3.75	Yes	Risk Avoidance	On Technology side, resources are involved with Core platform. Gabby starts another project on 9/24. Publishing department resources may not be available. We may draft Business representation to continue working on	Greg: Technology; Larry: Business and overall budget
B6	Project Execution	Anticipated project benefits could be reduced due to slow development, implementation, and migration. [immediate benefits]	3	0.75	2.25	Yes	Mitigation	Increase involvement of Business Owner and Sponsor.	Ann Archy
B7	Vendor Management/Outsourcin	A vendor may persuade a business manager not to end their relationship.	3	0.25	0.75	No	Acceptance	(none)	
B8	Human Resources	Negative employee perception of project related to vendor management and contract termination issues.	1	0.5	0.5	No	Acceptance	(none)	
B9	Vendor Management/Outsourcin	Reduced savings due to vendor-related issues.	3	0.25	0.75	No	Acceptance	(none)	
B10	Other	Employee perception of project failure related to unclear communications	3	0.75	2.25	Yes	Mitigation	Communication: Address through communications plan	Abby

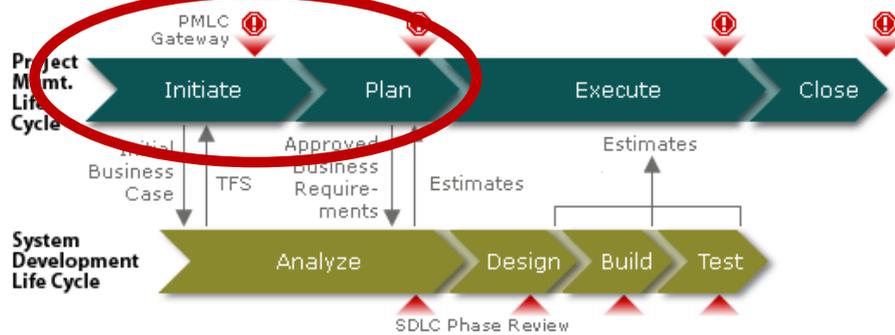
We create Contingency Plans for Risks with a High Rating

Traditional Risk Management – Pros and Cons

Pros	Cons
Risks identified before major investment	Usually done at the start but not throughout a project
Early analysis can help with a go/ no decision	May be performed on projects where there is no value add
Contingency planning that avoids waste	Often done without examination of specific requirements
Risks exposed to the team at large	Often done by a small group – not the entire team
Lessens chance of mid-project surprises	No correlation to project specific processes to identify and minimize risk

How is Agile different?

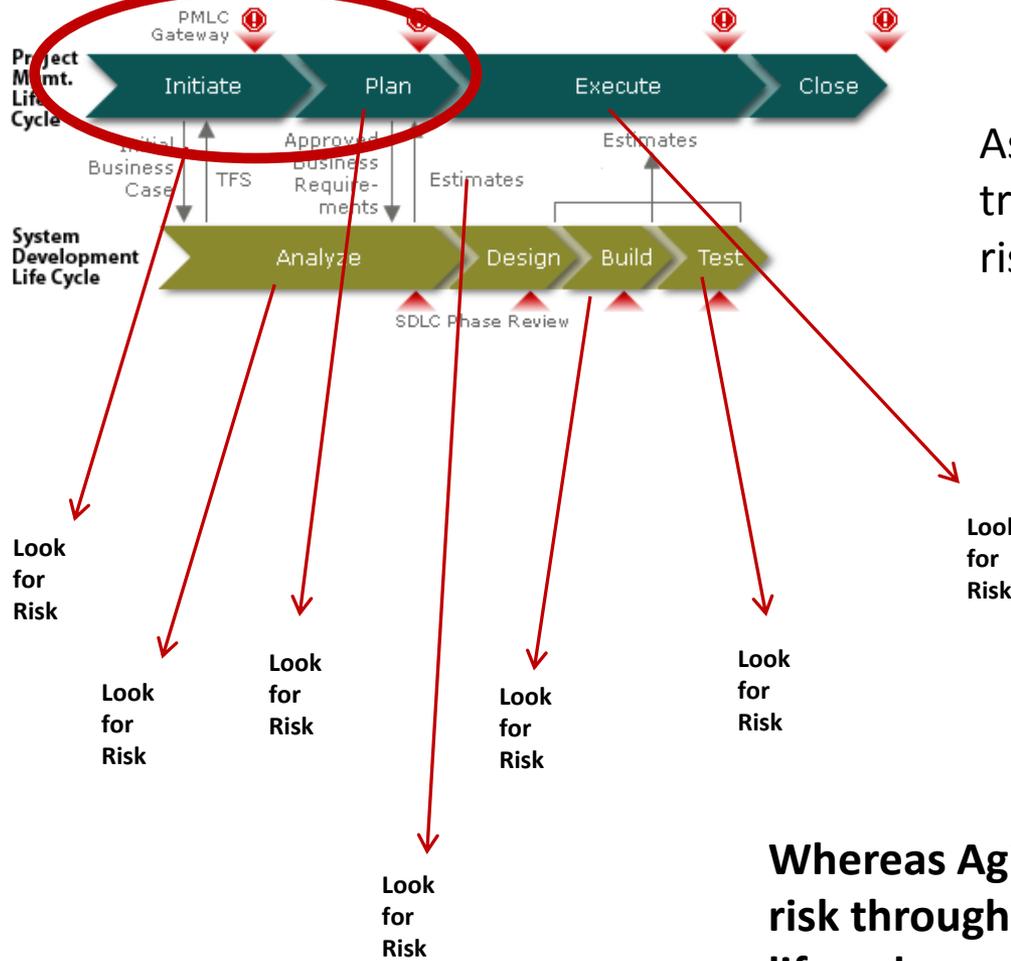
Project Management Life Cycle and SDLC Alignment



As we mentioned, traditional planning does risk management upfront.

How is Agile different?

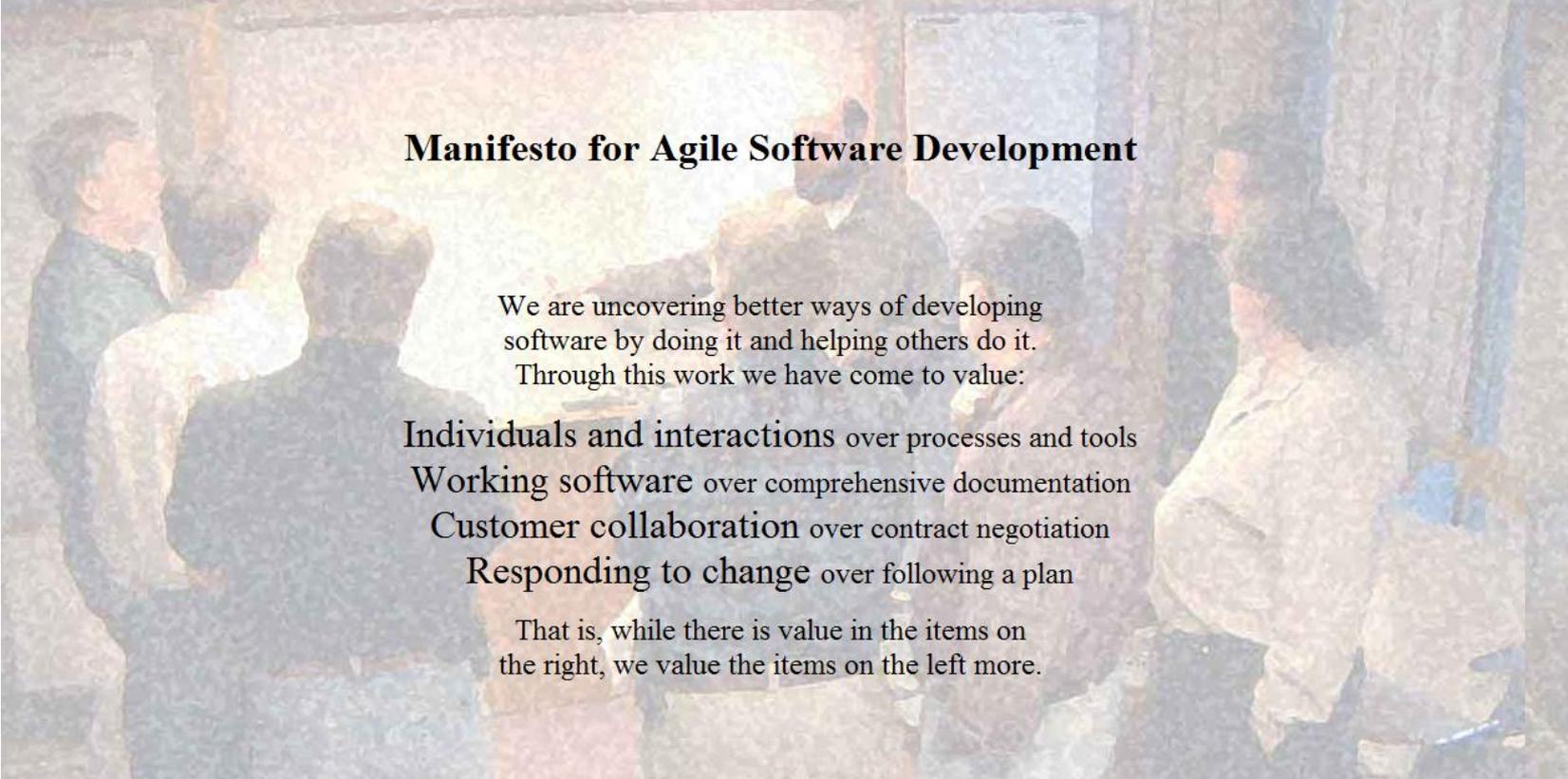
Project Management Life Cycle and SDLC Alignment



As we mentioned, traditional planning does risk management upfront.

Whereas Agile looks for risk throughout the lifecycle.

How Does Agile Address Risk?

A painting of a group of people in a meeting, with text overlaid. The scene is dimly lit, with a bright light source in the background. Several people are gathered around a table, looking at something on the wall. The style is impressionistic, with visible brushstrokes and a focus on light and shadow.

Manifesto for Agile Software Development

We are uncovering better ways of developing software by doing it and helping others do it.
Through this work we have come to value:

Individuals and interactions over processes and tools

Working software over comprehensive documentation

Customer collaboration over contract negotiation

Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.

Agile Principles Address Risk

Transparency – Expose everything we are doing so we can see risks early

Collaborative planning – Harness the knowledge of the entire team and see more risks

Customer involvement – Mitigate customer risk by involving them throughout the lifecycle

Project *Envisioning* Practices

Envisioning the product with the customer

- The team and customer are synchronized on the need
- Less risk of delivering the wrong product



Quantifying the value with the customer

- Less risk of the team not supporting the project

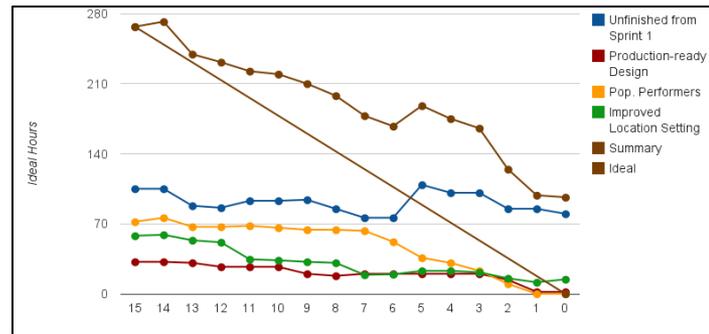
PROJECT ELEVATOR STATEMENT

- For:** Internet Retailers
- Who:** Would like to sell their items locally within an auction framework
- The:** Acme Auctionator
- Is a:** Local Online auction system
- That:** Allows the selling of goods without a commission
- And Unlike:** Craigslist
- Our:** Product allows the seller to put an item up for bid, as opposed to selling at a fixed price

Project *Planning* Practices

Estimation based on history

- Risk of estimate inaccuracy reduced since constants are involved in estimation



Work reviewed at the feature level for more detailed risk evaluation:

- Less chance of missing a risk since features are examined separately for technical risk

Story ID: 2
Story Name: Ability to view seller information

Requirements Uncertainty: (H,M,L): Low

Technical Uncertainty: (H,M,L):: Low

Usage Frequency: (Daily, Weekly, Monthly, Other): Daily

Requirements Uncertainty: (H,M,L): Low

Technical Uncertainty: (H,M,L):: Low

Dependencies w/other stories: Ability to post seller feedback

Acceptance: Bidder can see seller information summarized on items seller has for bid.

Assumptions:

- Available to unregistered users
- No text on feedback, only star ratings

Development/Implementation Practices

Daily Standup Meetings

- Agile teams meet every 24 hours
- Which mean risks are exposed every 24 hours



Product Demos Every 2 to 4 weeks

- Constant exposure to the customer
- Minimizes the risk of building to the spec but not to the need



Project Tracking Risk Practices

Don't Manage Based on % of Plan Complete

- Percentages are misleading
- There is a risk that 1% takes as long as 99%

	% Com ▾	Task Name ▾	Duration
	75%	Save as draft	10 days
	50%	Submit to legal	10 days
	99%	Discard Changes for iteration 1	10 days
	57%	[-] Backoffice Integration	10 days
	47%	Fetch Data from CRM	10 days
	100%	Fetch Data from DWH	10 days
	32%	Fetch data from AD	10 days
	50%	Integration of web service - phase 1	10 days
	60%	[-] ID Numbers	10 days
	20%	Create Main Contract ID	10 days
	100%	Create Sub Contract ID	10 days
	58%	[-] Associated Documents	10 days
	45%	Upload - before submit to legal	10 days
	37%	Upload to library when submit to legal	10 days
	92%	Display associated docs in term sheet	10 days
	41%	[-] Look and feel	3 days
	41%	Casey Design provides first pass on UI	3 days
	37%	[-] Versioning	24 days
	37%	Design approved	10 days
	37%	Versioning in place	10 days

New Tasks : Auto Scheduled

Project Tracking Risk Practices

STORIES	Functional Requirements	Code Written	Unit Tested	System Integration	Functional Testing	Customer Approval	Load Test	DR Code Release	Production Code Release
Iteration 1									
Ability to register on the site	✓	✓	✓	✓	✓	✓	N/A		
Ability to place an item up for bid	✓	✓	✓	✓					
Ability to bid on an item	✓	✓	✓	✓	✓				
Auction Engine Logic									

Instead manage by binary attributes

- Complete or not complete
- Less risk of overrun on construction tasks

Can I use Traditional Risk Management on My Agile Project?

Yes – Please Do!



Work Breakdown Structure	Team customer interview
Formal requirements	Agile estimating
Detailed task estimates	Burn down charts
Customer signature	Daily stand up meeting
One delivery	Iterative delivery
Microsoft Project Plan	Daily customer interaction
Formal Risk Management	Iteration retrospective

But – Make the Call on Each Project

*Do Traditional Risk Management
when Project:*

*Probably Skip, or do lightly,
when Project:*

Has technology never used by the team

Is a simple release on existing platform

Is expensive

Only runs a few days

Has many touch points

Schedule is tight and extended risk
planning could jeopardize delivery

Longer than a few weeks

We have a lot of experience with this
type of project

Is required to be compliant

We can leverage an existing risk plan

Summary

- Traditional Risk Management and an Agile lifecycle are complimentary
- Traditional Risk Management is done up front and tries to envision what could go wrong all the way to the end of the project
- Agile Risk Management is done more by practices then envisioning. Many Agile practices look to identify and mitigate risk throughout the project.
- The level of traditional risk management performed should correlate to complexity, duration, and experience with the type of project being pursued.

Contact Info



Greg Smith

greg@gssolutionsgroup.com