

Agile Requirements at Scale: Context Counts

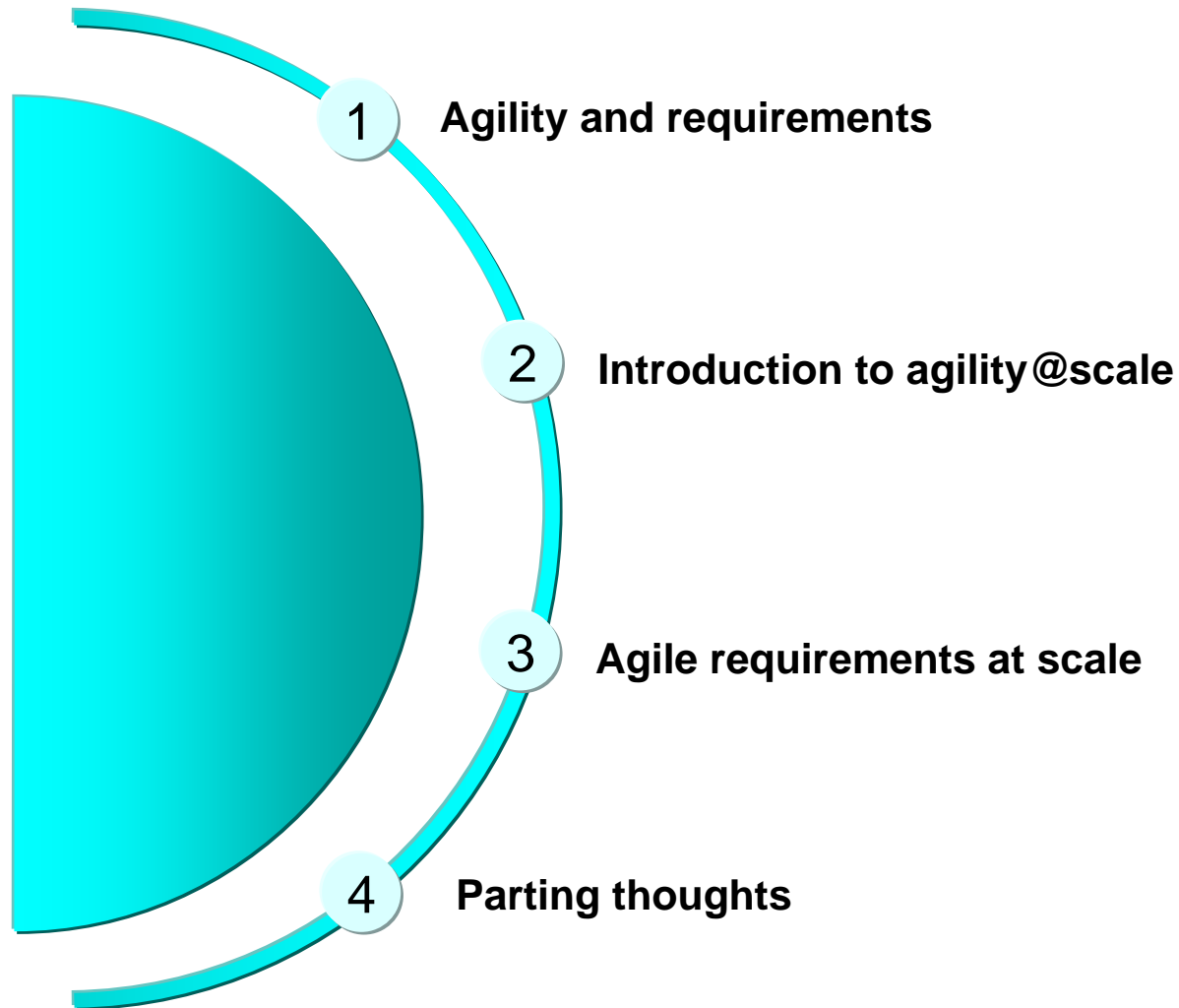
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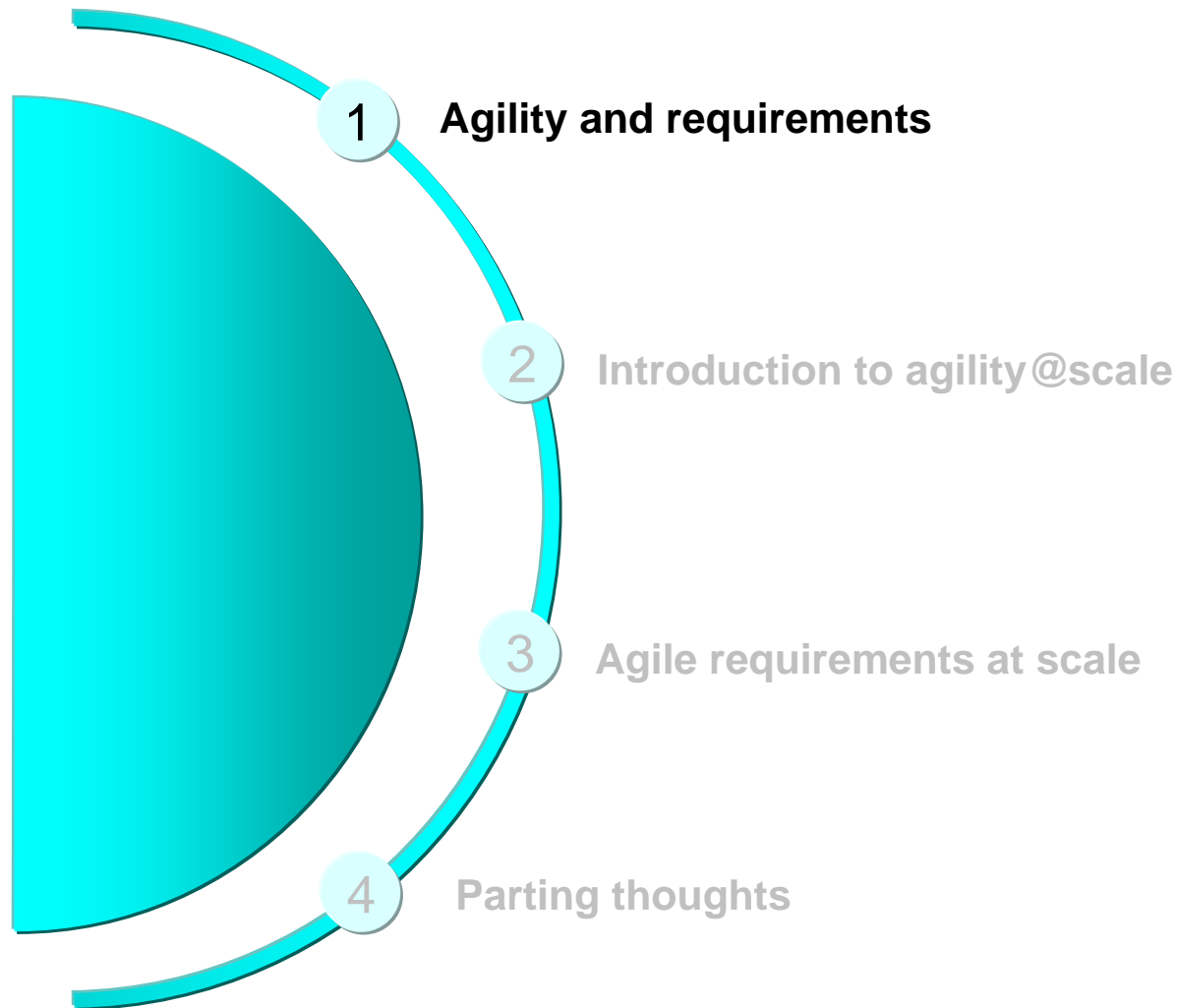
My Goals

- To challenge your beliefs regarding requirements practices
- To share industry data with you
- To explore how to scale agile requirements practices
- To show that context counts, that one “process size” does not fit all

Agenda



Agenda

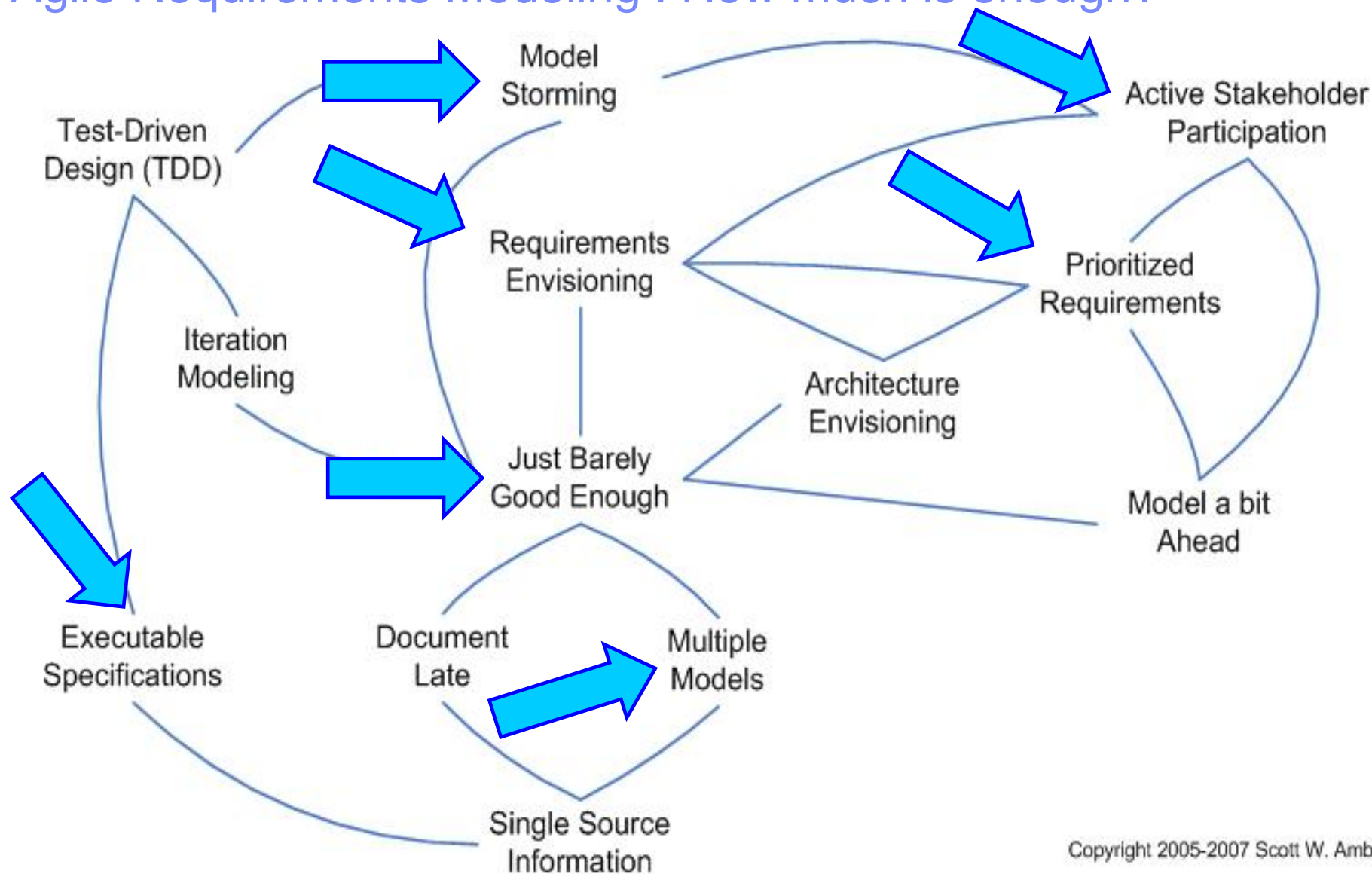


Requirements strategies are changing

- Continual customer involvement
 - ▶ Product owner represents the stakeholders
- Shared vision
 - ▶ Understand business needs
 - ▶ Focus on stakeholders goals
- Requirements elicitations
 - ▶ Conversations, agile modeling, workshops
- Requirements analysis
 - ▶ Performed “just in time”
- Requirements documentation
 - ▶ User stories, storyboards, acceptance tests, agile models
 - ▶ Test your documentation effectiveness : “CRUFT” Measure
- Formality
 - ▶ Improvised, more relaxed approach



Agile Requirements Modeling : How much is enough?



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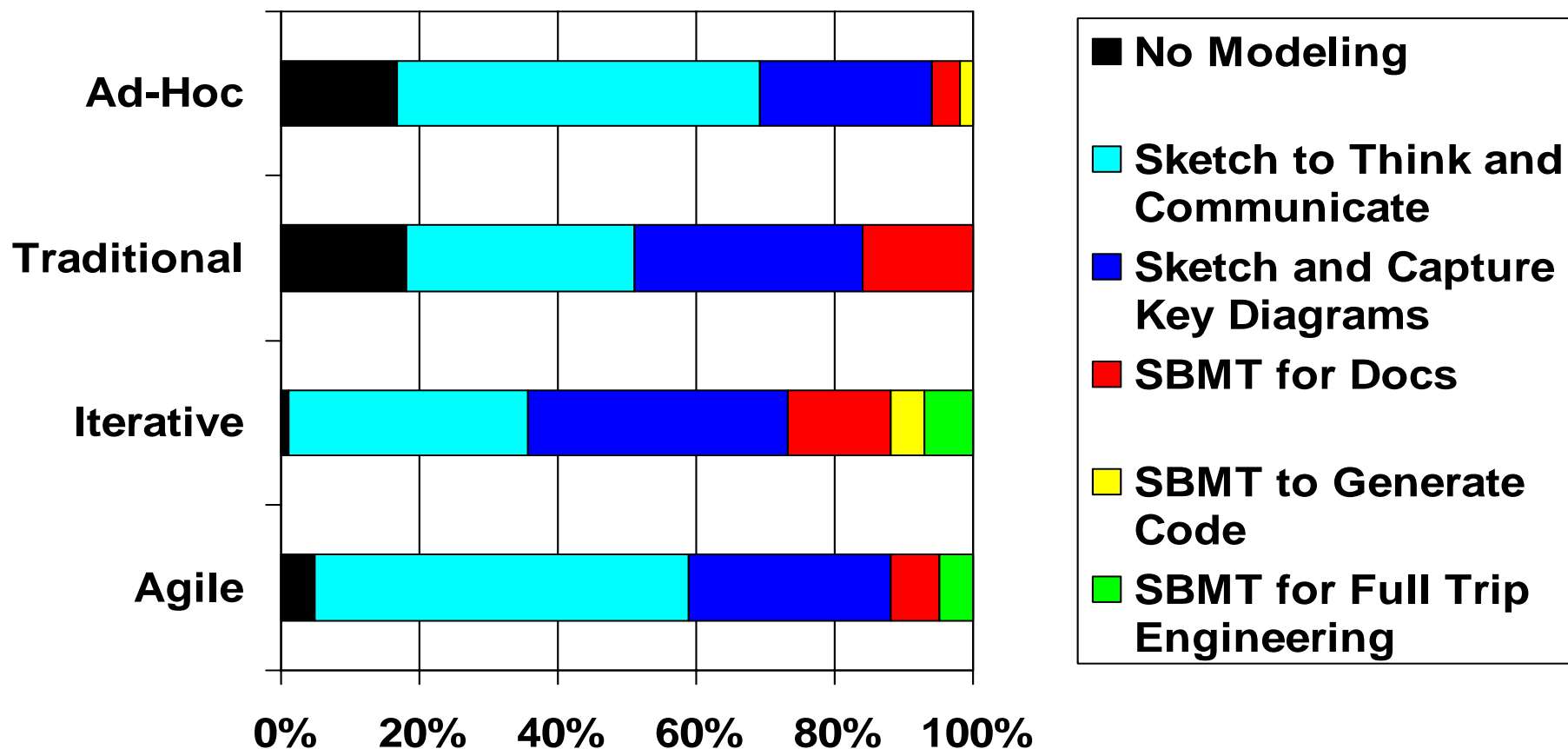
Agile Approach to Initial Requirements

76%	High-level initial requirements modeling
30%	Detailed initial requirements modeling
12%	Have initial requirements models supplied to them
10%	Use enterprise models as a reference
12%	Use industry models as a reference
88%	Do some sort of initial modeling or have initial models supplied to them
89%	Do some sort of initial modeling, or have initial models supplied, or leverage reference models

Source: Ambysoft 2009 Agile Project Initiation Survey

Agilists Model!

Their primary strategy for modeling

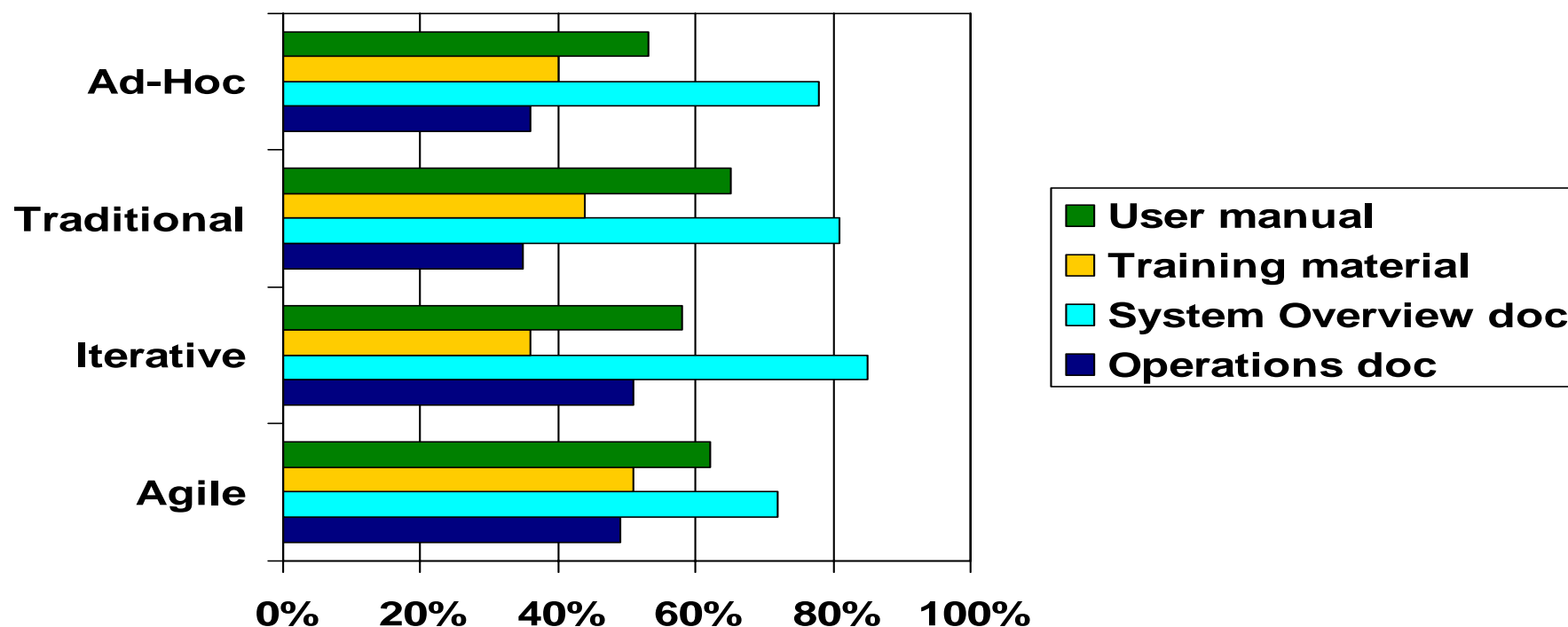


Source: Dr Dobb's 2008 Modeling and Documentation Survey

SBMT: Software-Based Modeling Tool

Agilists Write Documentation!

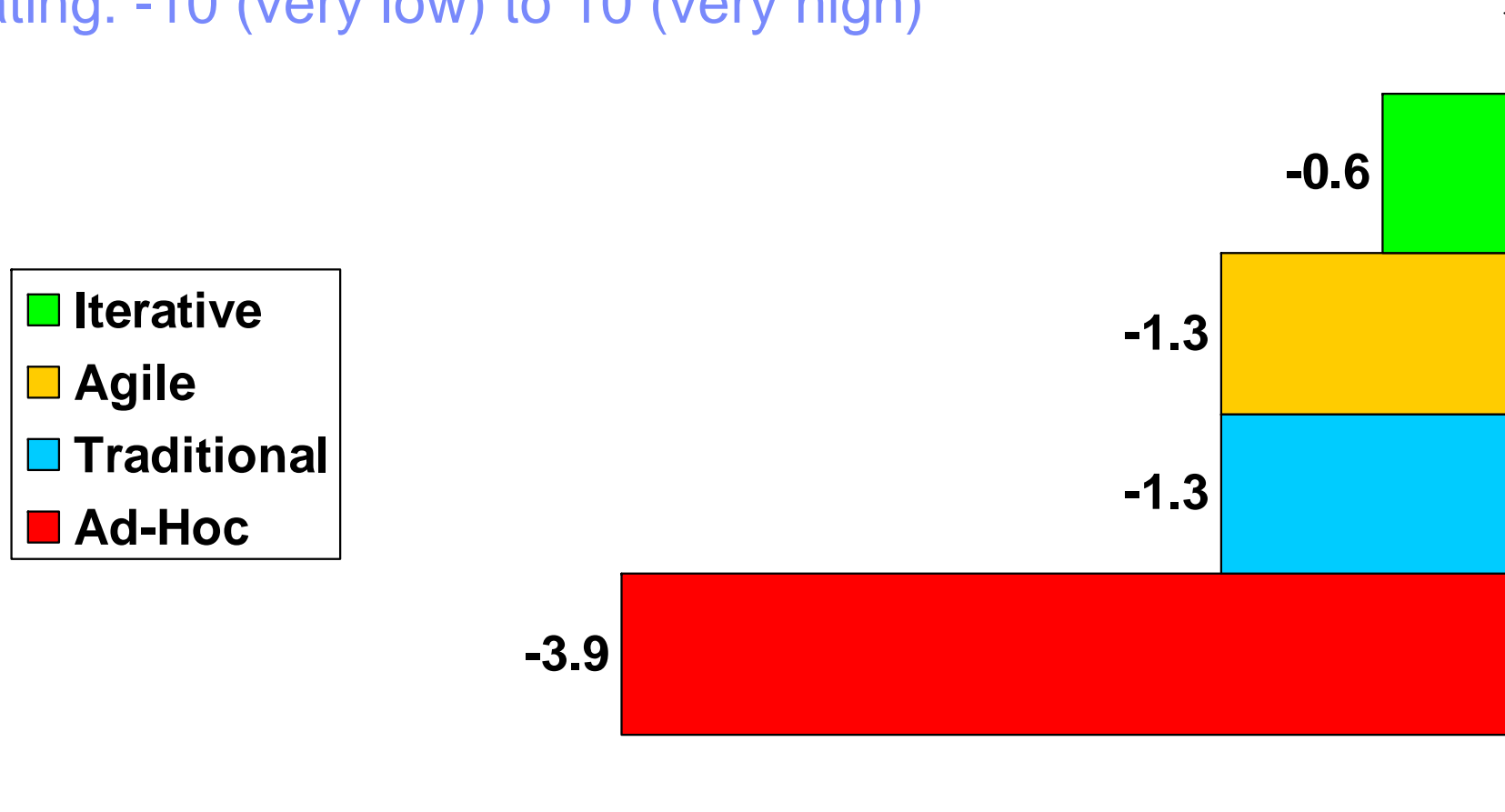
Percentage of teams creating deliverable documentation



Source: Dr Dobb's 2008 Modeling and Documentation Survey

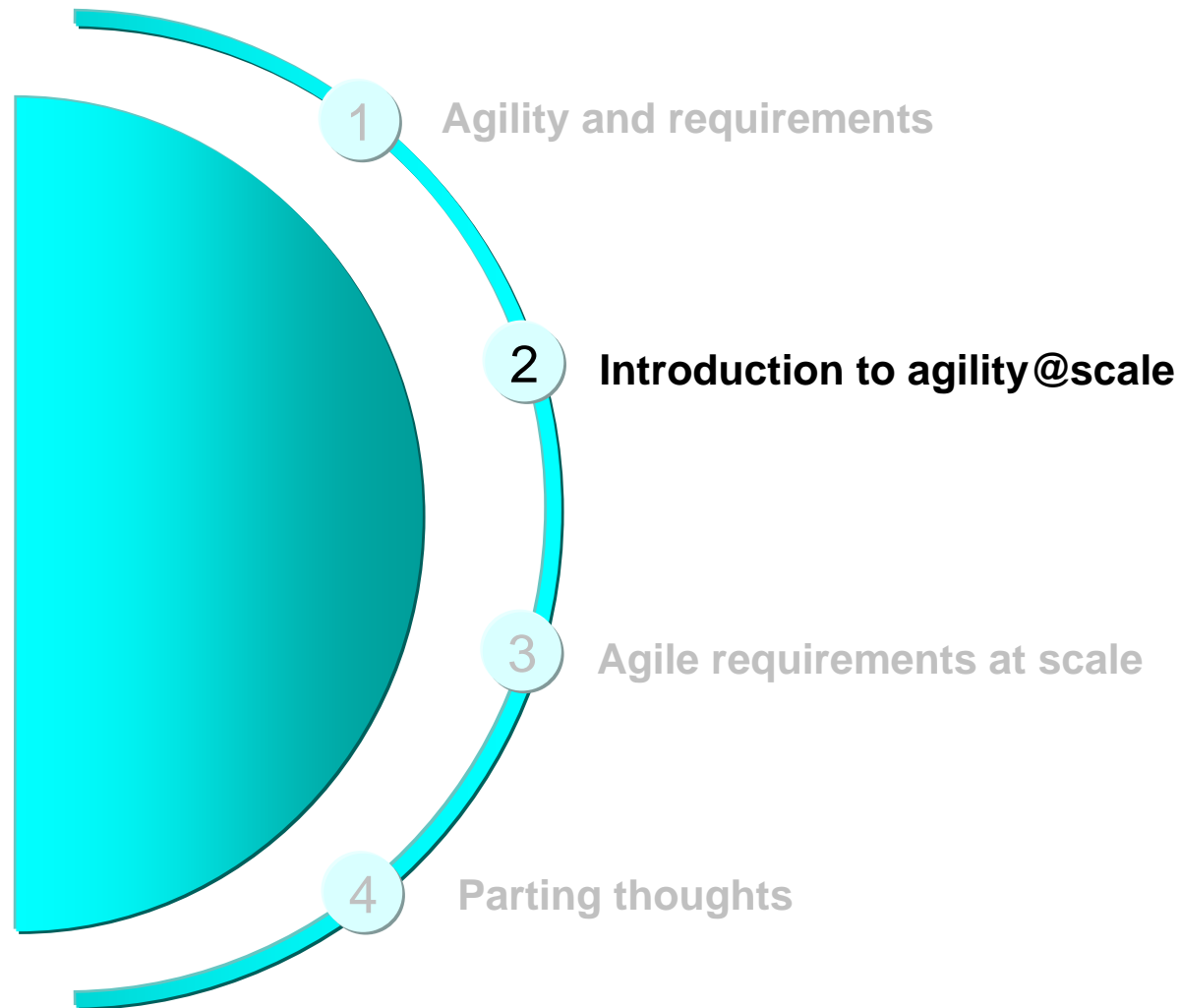
What is the quality of the deliverable documentation produced by a development team?

Rating: -10 (very low) to 10 (very high)

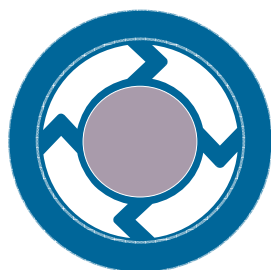


Source: Dr Dobb's September 2009 State of the IT Union Survey

Agenda



Agile Scaling Model (ASM)



Core Agile Development

- Focus is on construction
- Goal is to develop a high-quality system in an evolutionary, collaborative, and self-organizing manner
- Value-driven lifecycle with regular production of working software
- Small, co-located team developing straightforward software

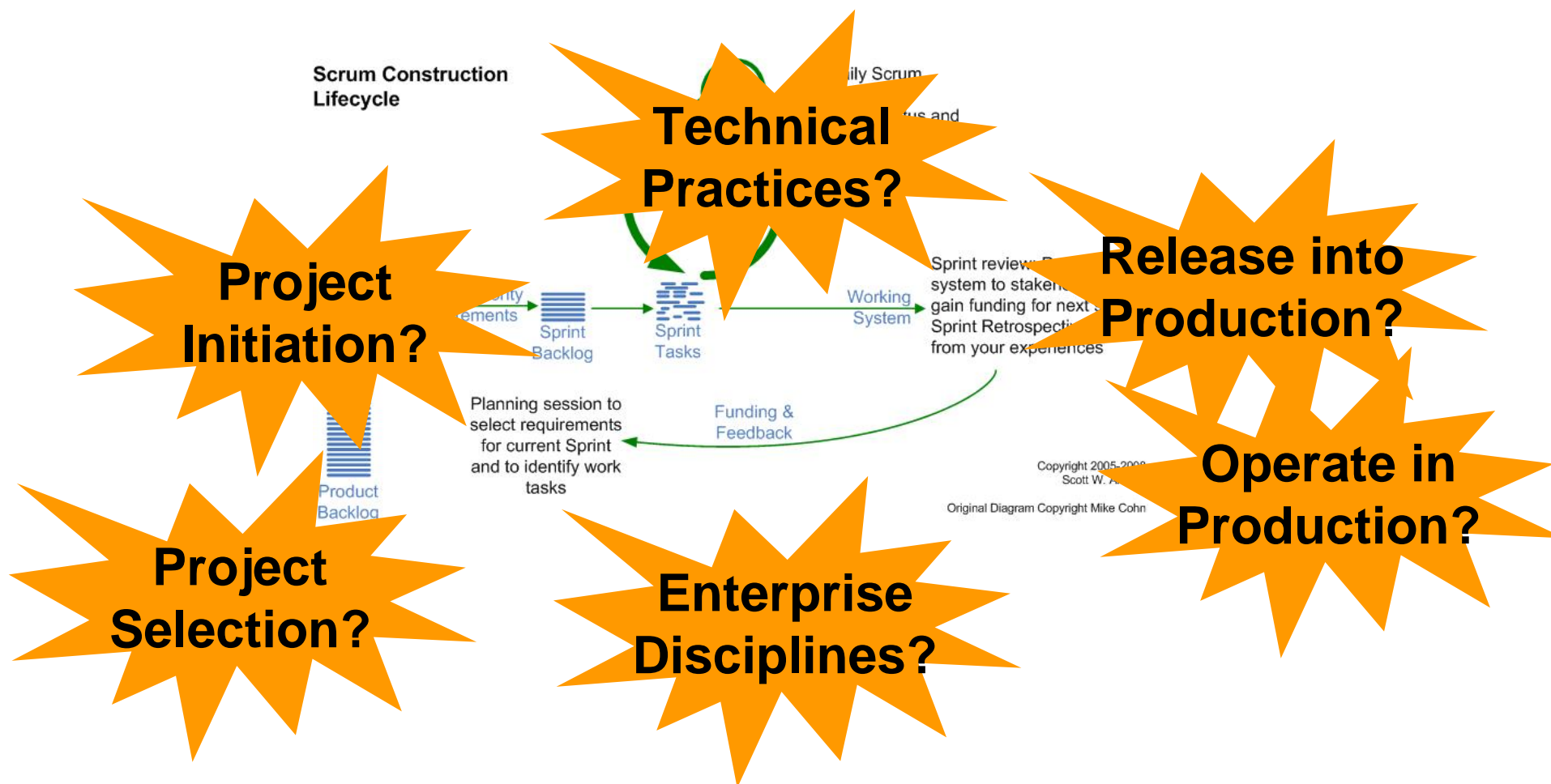
Disciplined Agile Delivery

- Extends agile development to address full system lifecycle
- Risk and value-driven lifecycle
- Self organization within an appropriate governance framework
- Small, co-located team delivering a straightforward solution

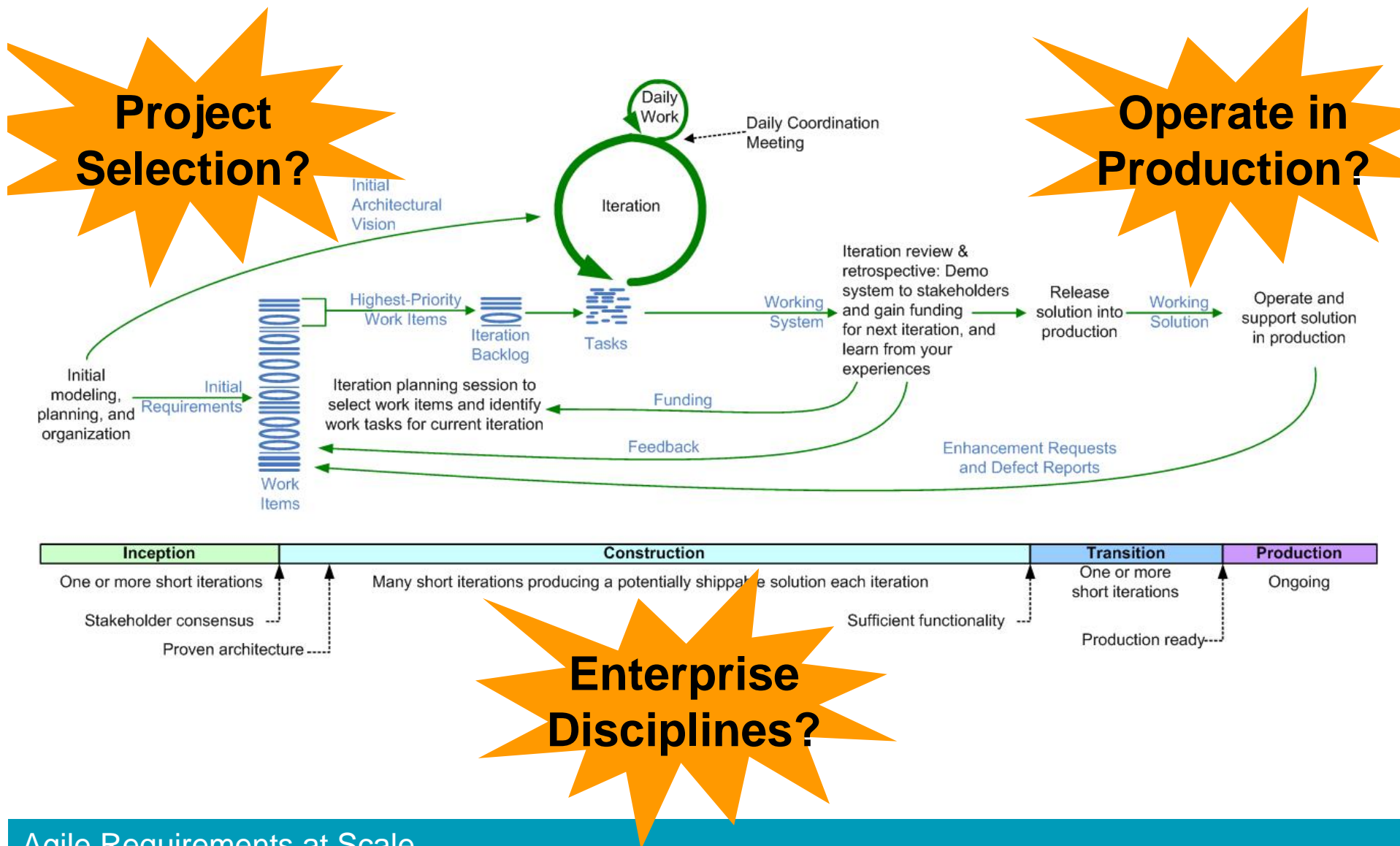
Agility at Scale

- Disciplined agile delivery and one or more scaling factors applies

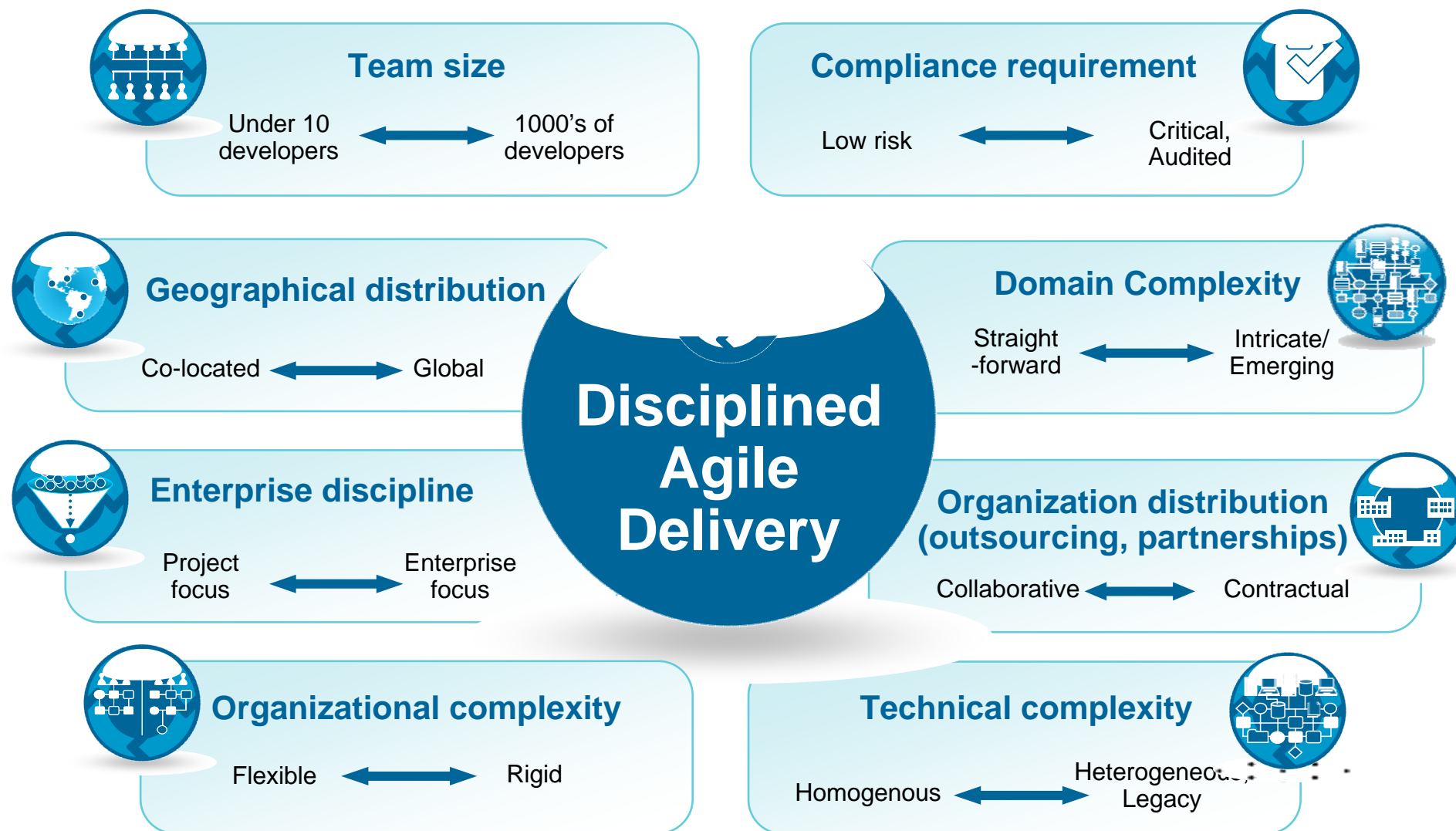
The Scrum construction lifecycle



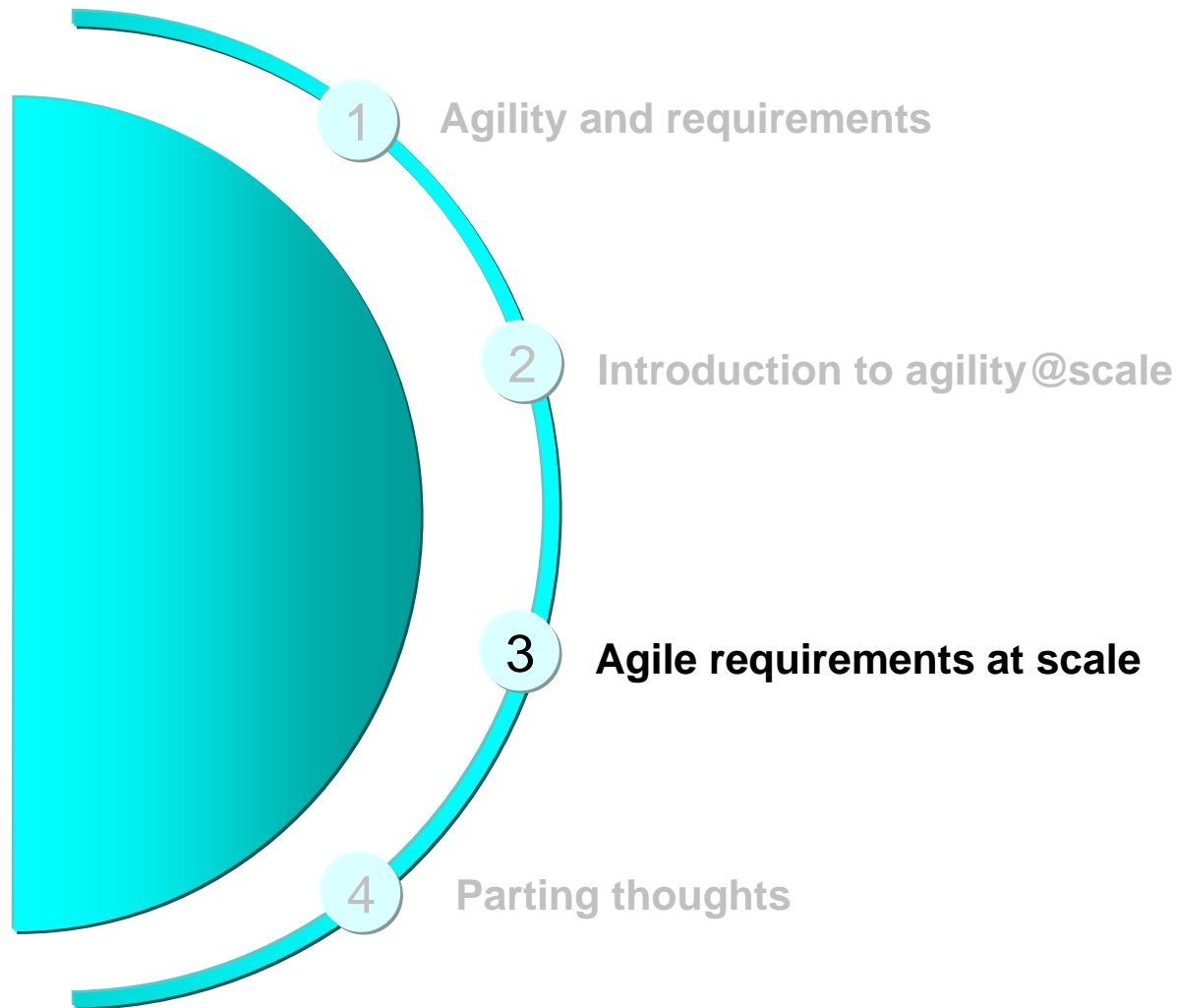
The disciplined agile delivery life cycle



Agile scaling factors



Agenda





Requirements and disciplined agile delivery

- Small, co-located team developing a straightforward solution
- Capture requirements using inclusive tools (paper and whiteboards)
- Planning can be done by displaying the cards on a corkboard or table
- Prioritization can be done by keeping the cards in a stack

- Use simple tools and strategies for simple situations!





Agile requirements and large teams

- Communication and coordination risk increases with large teams
- Initial requirements and architecture envisioning is critical
- Coordination of requirements between subteams is important
- Team organization, architecture, and requirements must reflect each other
- Re-enforce the usage of product backlog for scope management
- Use simple tools, apply some agile practices such as active participation of stakeholders

Iteration plan Interim Feature 1.0 v4.2.0 Iteration Plan [Interi] 1806: US - Expand the UI that was created in task

Story 1806

Summary: * US - Expand the UI that was created in [task 1804](#) such that a u

Not Done

Acceptance

Acceptance Test:

In this story the characteristics will only be applied at the summary level. You will not be able to drill down to the volume level.

After this has been completed you should be able to:

- Add DASD User Groups via the TEP interface (they will not persist across TEMS recycles at this point) using all attributes associated with the volume space and performance attribute groups.
- View these groups in the DASD User Group Summary workspace(s)
- Not see user groups defined by ICAT in the TEP interface.

Details

Type: Story

Story Points: 20 pts

Progress: Progress: 0 / 102 h Estimated: 67%

Created: Feb 3, 2009 12:26 PM

Created By: KEITH ROBERTSON

Team Area: OMEGAMON Storage Team / OM...qe

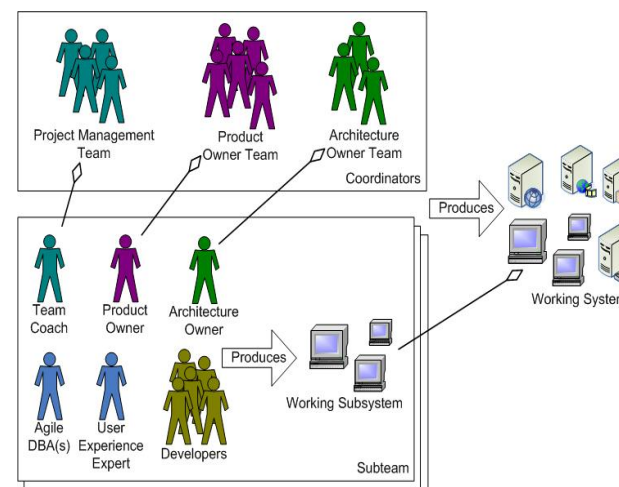
Filed Against: * OMEGAMON XE for Storage

Tags:

Agile requirements and geographically distributed development



- Geographically distributed teams incur significant communication risk
- Need a more “disciplined” agile requirements approach
 - ▶ One that can address risks
 - ▶ Automation is a “must” for requirements traceability, version control and collaboration
 - ▶ Requirements dashboards and reporting on certain important measures become necessary
- Large team considerations apply



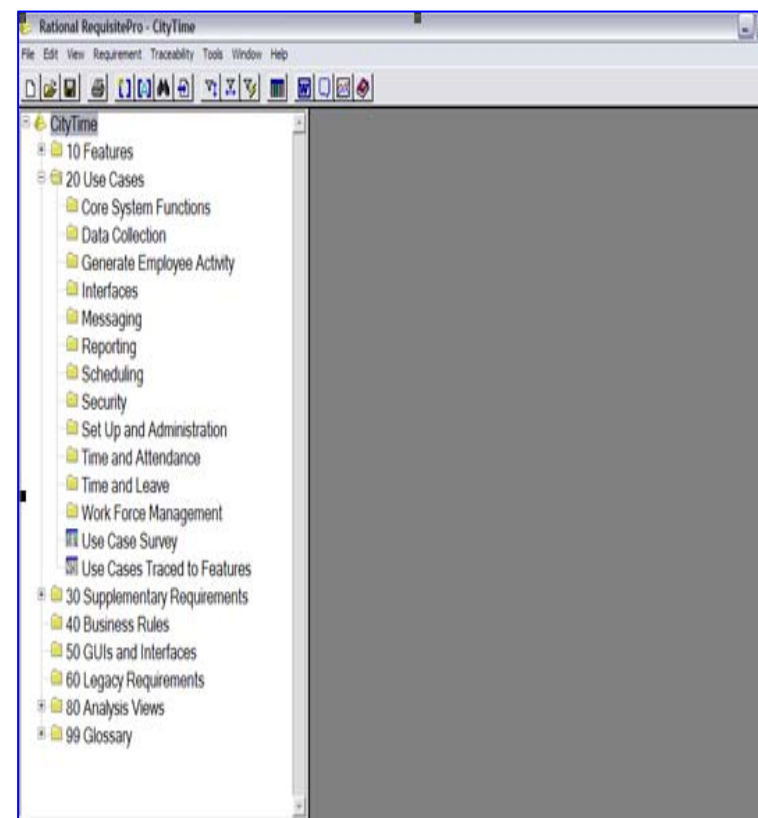
The screenshot shows a JIRA backlog for Iteration E1. The backlog is organized into sections: Plan, Execute, and Develop User Story. The Develop User Story section is expanded, showing a list of user stories with their IDs, descriptions, and priorities. An arrow points to the third user story in the list.

Section	Item	Priority	Estimate
Plan	Plan Iteration	Unassigned	455
	Plan Test Cycle	Unassigned	456
Execute	Identify and Refine Requirements	Unassigned	457
	Outline the Architecture	Unassigned	458
	Test	Unassigned	460
	Monitor and Control Test	Unassigned	461
Develop User Story	As a user, I want to be able to purchase items (mugs, posters, shirts), so that I can give personalized gifts to my friends	1 High	451
	As a user, I want to be able to find the lowest cost prints, so that I don't have to waste time searching the web	1 High	450
	As a site administrator, I want to be able to provide image copyright validation for images available for sale, so that Watson and it's users are legally protected from copyright infringement	1 High	448
	As a user, I want to be able to sell images to other members, so that I can profit from my images	1 High	447
	As a user, I want to be able to purchase images of other members, so that I can use them for commercial purposes	1 High	446
	As a user, I want to be able to invite other users to join my circle of friends so that I can expand my social network	1 High	444
	(Unlabeled)	1 High	445

Agile requirements and regulatory compliance



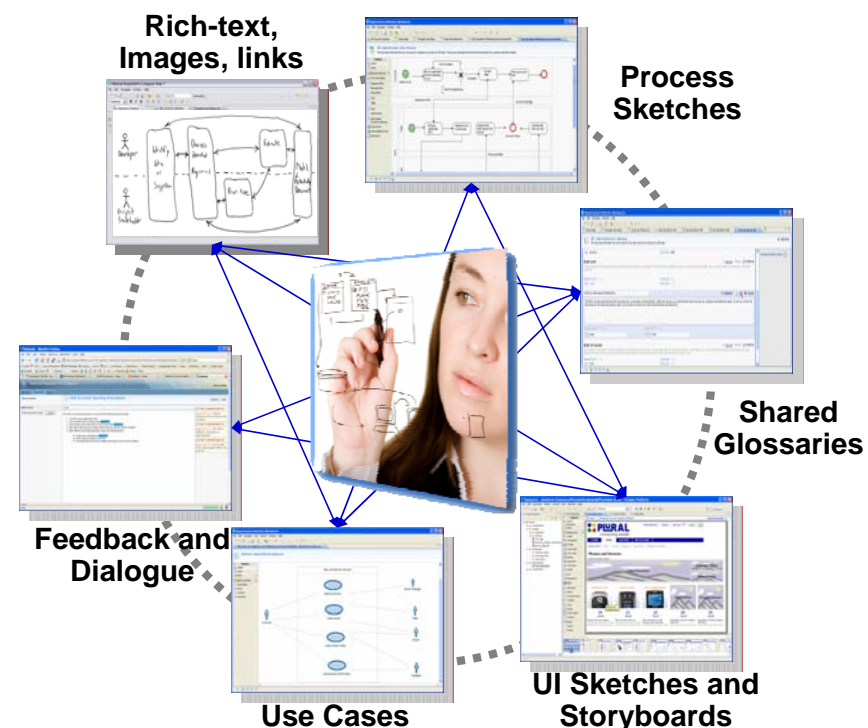
- You may need to adopt other requirements strategies, such as use cases or formal System Requirements Specifications (SRSs)
 - ▶ BUT... read the regulations, because they likely don't specify how, nor when, to capture the requirements
- Traceability is often a secondary, but important, part of the regulation
 - ▶ BUT... read the regulations, because they likely don't specify the level of detail required
- You will likely need to write more documentation, particularly business rules and requirements pertaining to sensitive data
 - ▶ BUT... read the regulations, because you only need to do this to the extent of the risk of the project
- You may need to hold reviews
 - ▶ BUT... read the regulations, because they seldom require formal reviews





Agile requirements and domain complexity

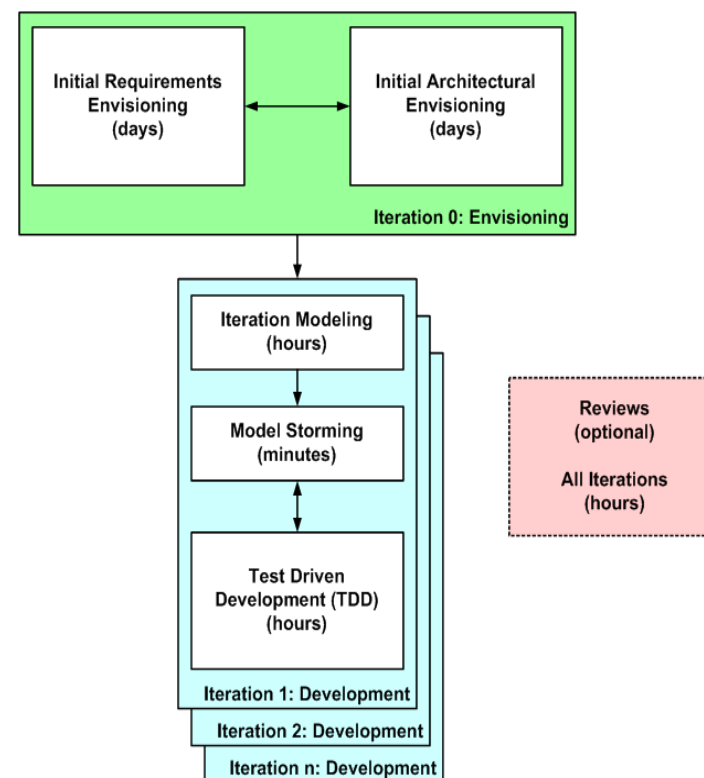
- Business process sketching may help understand the complex domain environment
- Might want to consider light-weight use cases instead
- Will likely need to do more user interface (UI) prototyping
- Active participation of stakeholders throughout the life cycle is crucial for you to understand their changing needs
- Important: Complex domains don't imply that you need detailed requirements speculations





Agile requirements and organization distribution

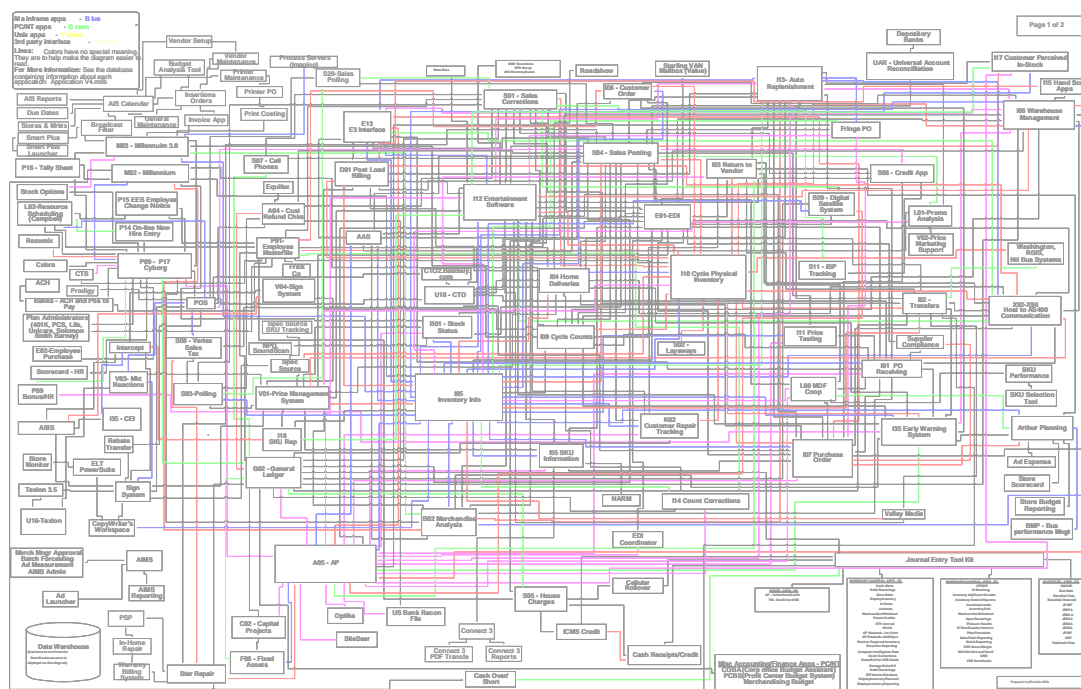
- When multiple organizations are involved:
 - ▶ Access control to portions of the work may become critical
 - ▶ You will need to negotiate access rights, particularly in secure situations
 - ▶ Intellectual property (IP) rights need to be negotiated up front
- Initial requirements and architecture envisioning are required to organize the work between the organizations





Agile requirements and technical complexity

- May want to consider more sophisticated strategies, such as light-weight use cases, instead of user stories
- Sizing of the individual requirements becomes difficult if the development teams doesn't understand the technology
- Adopt a Risk-Driven life cycle (e.g. a disciplined agile delivery strategy)

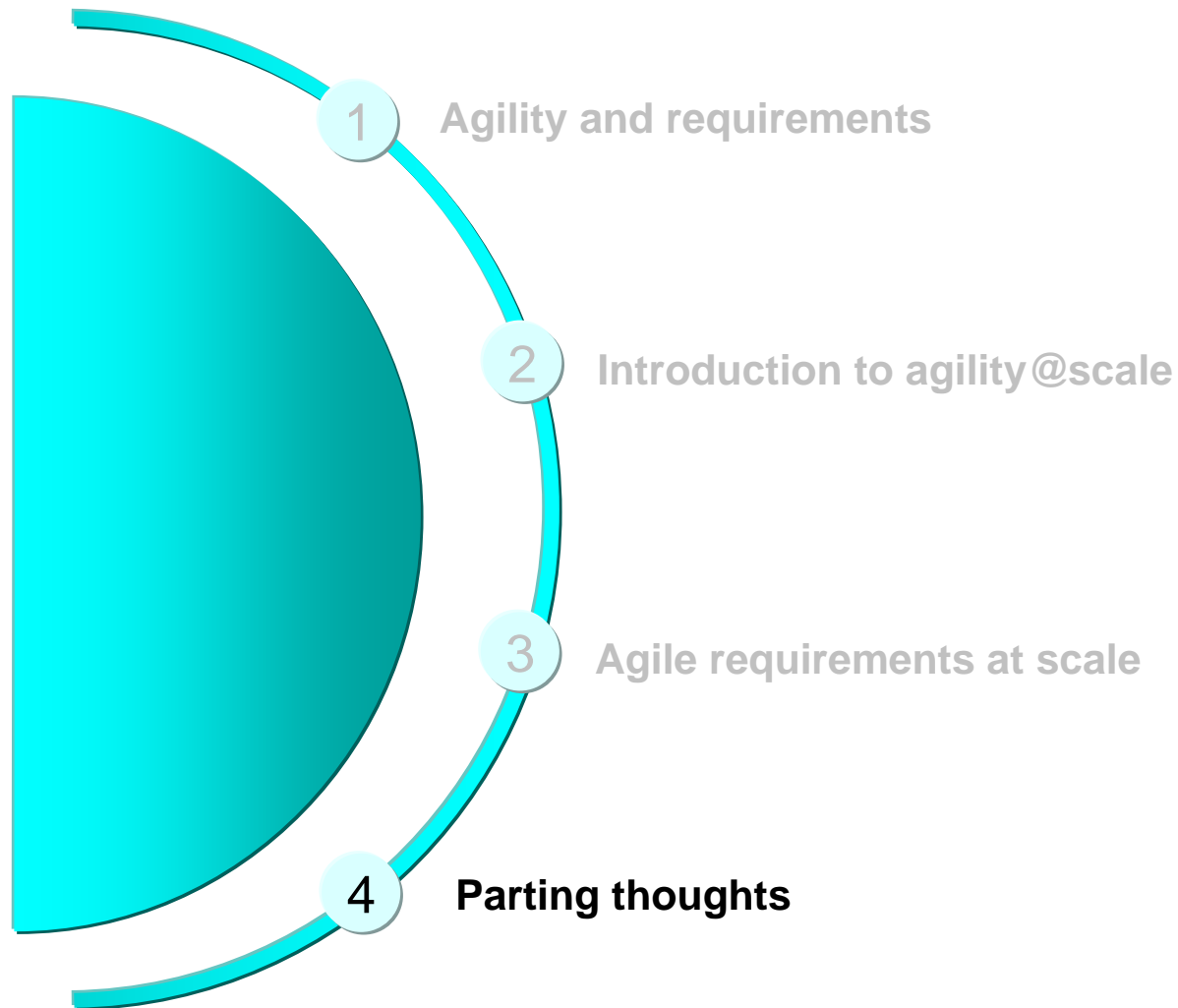




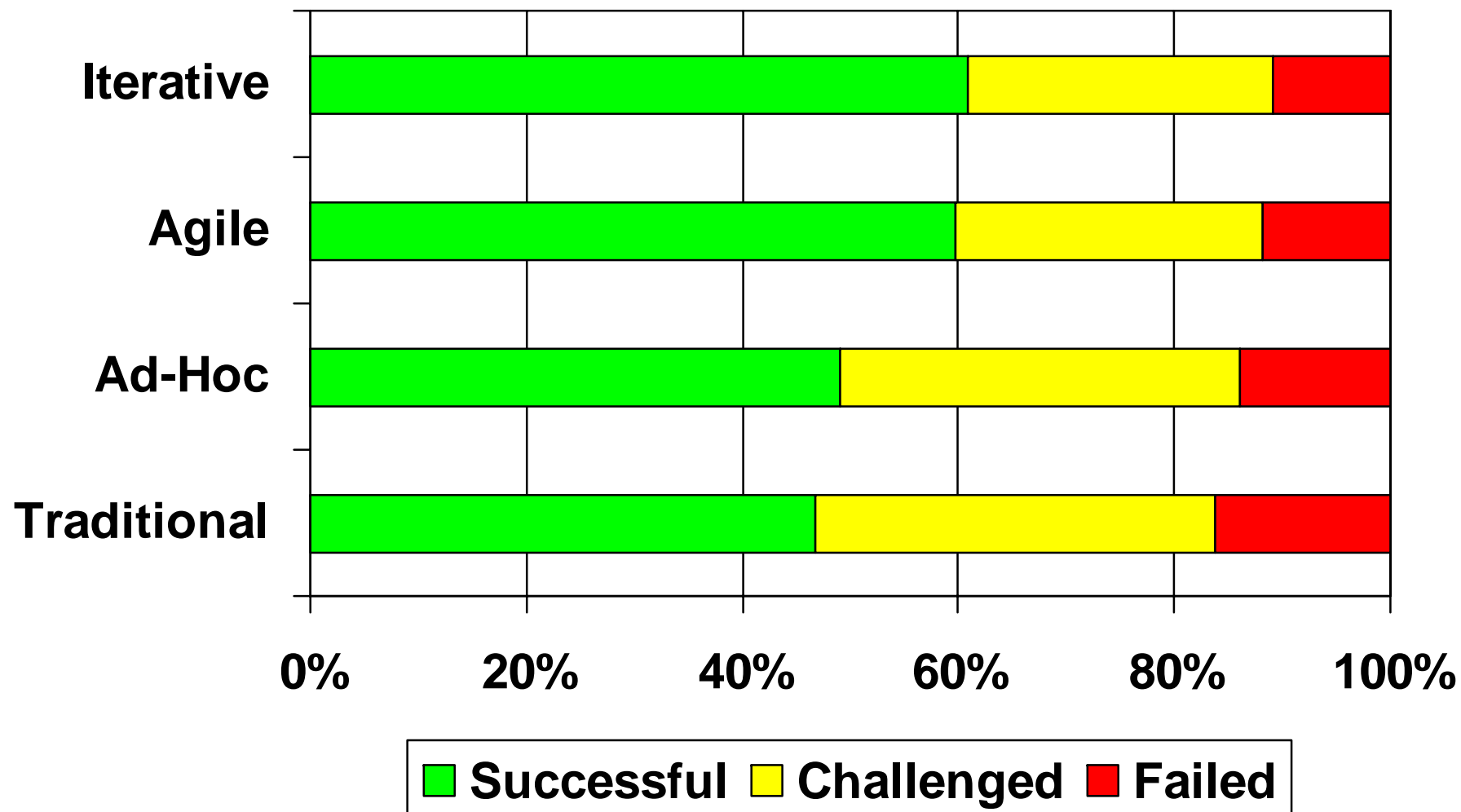
Agile requirements and enterprise discipline

- Enterprise disciplines, such as enterprise business modeling, portfolio management, and enterprise architecture can add complexity to project level activities
- Enterprise business modeling
 - ▶ Enterprise-level process and domain models very common
 - ▶ May need to trace stories back to these models, although perhaps a high-level trace from the project to these models is more effective
- Enterprise architecture (EA)
 - ▶ Technical stories which reflect the EA may be common
 - ▶ The EA will motivate non-functional requirements for user stories
- Enterprise portfolio management
 - ▶ Need to identify visions for potential products
 - ▶ Key user stories may help, but use cases or scenarios better options

Agenda

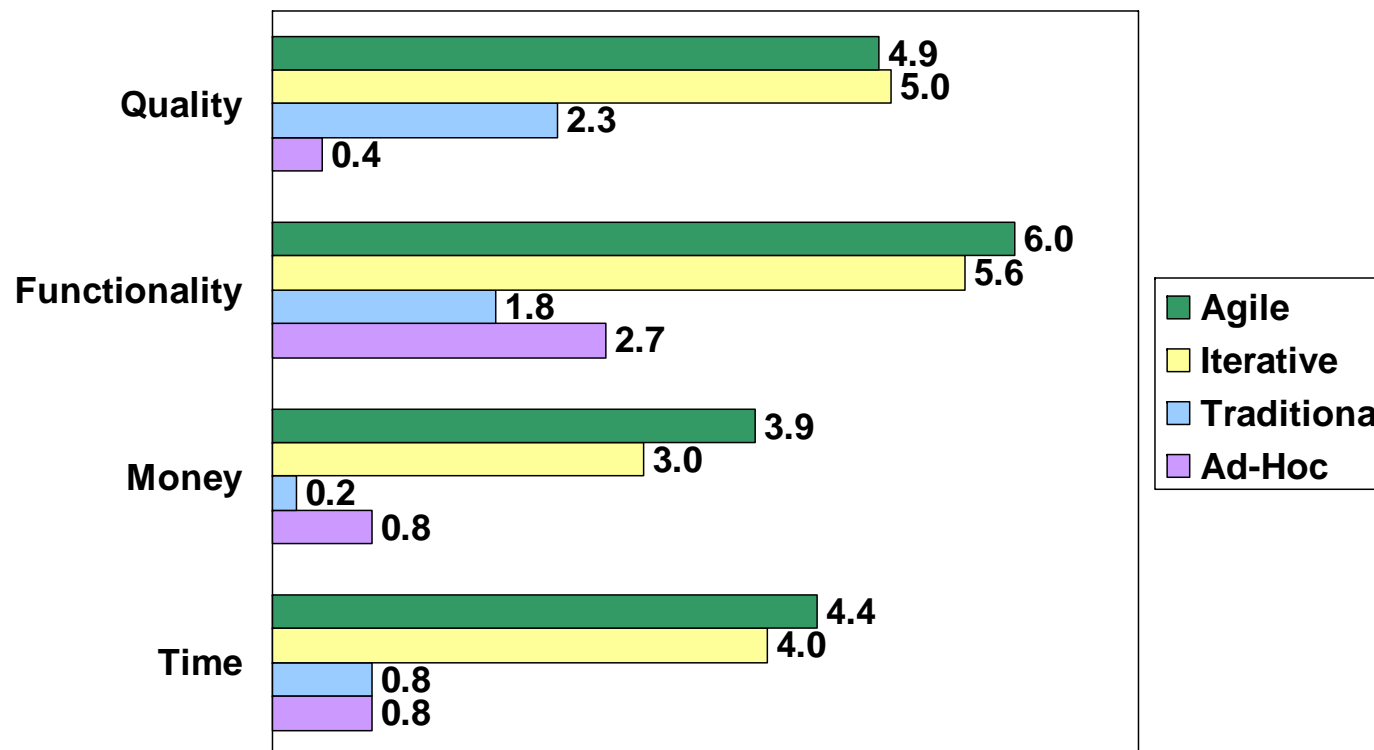


Why agile?



Source: 2010 Project Success Survey, www.ambysoft.com/surveys/

Why agile?



Agile teams produce higher quality work, are quicker to deliver, are more likely to deliver the right functionality, and more likely to provide greater ROI than traditional teams

Source: 2008 Project Success Survey, www.ambysoft.com/surveys/

Implications for Business Analysts

- Your goal is to build a shared understanding, it isn't to write detailed documentation
- A critical success factor is to use inclusive modeling techniques which enable active stakeholder participation
- Expand your horizons and become a generalizing specialist
- Learn how to perform acceptance TDD so that you can capture requirements as executable specifications
- Recognize that one process size does not fit all, that you will need to be flexible
- Your primary goals should be to:
 - ▶ Facilitate communication between stakeholders and developers
 - ▶ Put developers in direct contact with stakeholders wherever possible
 - ▶ Help developers learn better communication skills

Implications for Organizations

- Don't be fooled by the agile rhetoric
 - ▶ You still need to invest in modeling
 - ▶ You still need to invest in requirements management
- Don't be fooled by the traditional rhetoric
 - ▶ Detailed documentation adds risk to IT projects
- Individual teams find themselves in unique situations, so will have unique tailorings of your process
 - ▶ Don't sub-optimize around a "standard" process in a naïve attempt at IT governance



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