Enterprise-level Agile Project Management

Making Agile Work at an Enterprise Level

Enterprise-level Challenges – Differences in Enterprise-level Agile Practices

Enterprise-level Agile Project Implementation

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Hi, with this lesson, we're going to start a new section on Enterprise-level Agile Project Implementation

Enterprise-level Agile Project Implementation

Differences in Enterprise-level Agile Practices

Reinterpreting Agile Manifesto Values and Principles

Project Governance

Project Governance Example

The Role of a Project Management Office (PMO)

Here's a brief summary of the topics we will talk about in this section:

- We're going to start with an overview of what's different about implementing Agile at an enterprise level including some key challenges that are different at an enterprise level
- We're then going to talk about the need to reinterpret the Agile Manifesto Values and Principles in a very different context at an enterprise level
- We're then going to talk about Project Governance and how it is implemented in an Agile environment
- And, finally, we're going to talk about the role of a Project Management Office (PMO) in an Agile environment.

Enterprise-level Challenges
Differences in Enterprise-level Practices

In this lesson, we're going to discuss how some Agile practices are different at an Enterprise level.

Enterprise-level Challenges – Customer Participation

Typical Small Agile Project	Typical Enterprise-level Implementation
The customer is integral to the team	The customer may be remote or may not have the skills or time available to participate directly in the Agile team. • The "customer" may also consist of a number of different users and stakeholders • A Business Analyst (BA) on the team may be needed to help analyze complex requirements and manage the customer interface

Leffingwell, Dean C. *Scaling Software Agility*, Addison-Wesley, 2007

The first area of difference is customer participation. This slide shows a few of the key differences and challenges in an enterprise-level Agile implementation related to Customer Participation:

In a typical small Agile project, the customer is integral to the team; however, in a typical large enterprise-level implementation:

- The customer may be remote or may not have the skills or time available to participate directly in the Agile team.
- The "customer" may also consist of a number of different users and stakeholders.
- A Business Analyst (BA) on the team may be engaged to help analyze more complex requirements and manage the interface to the customers; however, if a BA is involved, he/she should not restrict direct communications to the customers any more than necessary

Enterprise-level Challenges – Development Team Organization

Typical Small Agile Project	Typical Enterprise-level Implementation
Developers, product owners, and testers are collocated and not separated by time zones and language barriers	It is likely that many team members may be in different countries and different time zones and perhaps even speak different languages
Development teams are self-organizing teams of equals	Many times (particularly with offshore teams) it is necessary to build teams of a number of more junior-level developers led by a more senior-level Tech Lead who can provide some level of guidance and direction to the rest of the team

Leffingwell, Dean C. *Scaling Software Agility*, Addison-Wesley, 2007

This slide shows a few of the key differences and challenges in an enterprise-level Agile implementation related to the Development Team Organization**:**

In a typical small Agile project, it is generally much easier to collocate developers, product owners, and testers; however in a typical large, enterprise-level implementation:

- It is likely that many team members may be in different countries and different time zones and perhaps even speak different languages.

In a typical small Agile project, it is also easier to create self-organizing teams of equals; however, in typical large, enterprise-level implementation:

- Many times (particularly with offshore teams) it is necessary to build teams of a number of more junior-level developers led by a more senior-level Tech Lead who can provide some level of guidance and direction to the rest of the team.

Enterprise-level Challenges – Application Architecture

Typical Small Agile Project	Typical Enterprise-level Implementation
In a small scale Agile project, the application architecture is expected to emerge as the project progresses "The best architectures, requirements, and designs emerge from self-organizing teams"	At an enterprise level, there is a huge risk associated with just letting architecture "emerge from self-organizing teams" • The solution will also need to integrate with other enterprise-level software and conform to whatever standards the organization uses to ensure that it is interoperable with other applications • Because the solutions are typically much larger and more complex, there is much greater risk associated with having to redesign and/or refactor the solution after the design is in progress

Leffingwell, Dean C. *Scaling Software Agility*, Addison-Wesley, 2007

This slide shows some additional differences and challenges associated with an enterprise-level Agile implementation related to application architecture:

In a typical small Agile project, the application architecture may be expected to emerge as the project progresses; however in a large, enterprise-level implementation:

- The costs and difficulty of refactoring the design as the project progresses to accommodate changes in the architecture make it essential in many cases to do more upfront architectural planning and design in the project.
- Large scale system designs typically require breaking up the design into components and without having sufficient architecture defined, it becomes difficult, if not impossible, to know how to allocate the work to teams.
- The solution will also need to integrate with other enterprise-level software and conform to whatever standards the organization uses to ensure that it is interoperable with other applications. That will typically require some planning and design reviews early in the project.
- Another consideration is that because the solutions are typically much larger and more complex, there is much greater risk associated with having to redesign and/or refactor the solution after the design is in progress because the level of effort required may be much larger.

Enterprise-level Challenges – Requirements Management

Typical Small Agile Project	Typical Enterprise-level Implementation
The Agile development effort can take place one story at a time and the design incrementally evolves over the duration of the project	• The requirements can be a lot more complex and more upfront analysis of the requirements may be needed to determine the most appropriate solution and the optimum architecture • In large enterprise-level implementations, a more integrated approach may be required to coordinate the development of the stories to ensure that they all really work together to produce releasable functionality that fulfills the business need

Leffingwell, Dean C. *Scaling Software Agility*, Addison-Wesley, 2007

This slide shows some additional differences and challenges associated with an enterprise-level Agile implementation related to requirements management.

In a typical small Agile project the Agile development effort can potentially take place one story at a time and the design incrementally evolves over the duration of the project. In a typical large enterprise-level implementation, in some cases, there is a need for more upfront planning of requirements at an enterprise level for a number of reasons:

- Architecture and requirements are intimately related, and it's impossible to define architecture without some idea of what the requirements are. If there is a need to define the architecture prior to development to reduce the risk, it will probably be essential to define more of the requirements up front in a typical enterprise-level Agile project.
- The requirements can be a lot more complex, and more upfront analysis of the requirements may be needed to determine the most appropriate solution and the optimum architecture as well as understanding interdependencies.
- There are typically a larger number of stakeholders involved in the development of the requirements. For example, a support group will many times have a key role in determining supportability requirements.
- In large enterprise-level implementations, there is also a need for a more integrated approach for requirements management to coordinate the development of the stories to ensure that they all really work together to produce releasable functionality that fulfills the business need.
- A technique called "functional decomposition" is often used to breakdown requirements into a logical organization. Functional decomposition is also a useful way of understanding how the requirements are aligned with supporting the business objectives of the system.

Enterprise-level Challenges – Release to Production

Typical Small Agile Project	Typical Enterprise-level Implementation
The process for releasing a new application to production may not require extensive planning and coordination	A much higher level of planning and coordination may be needed to release applications to production, particularly if they are mission-critical and potentially have a significant impact on the company's business operations • The process for performing integration testing may be much more complex and difficult • Much more coordination may be needed with groups that are impacted by the release • User training may also need to be considered

Cobb, Charles, Managed Agile Development – Making Agile Work for Your Business, Outskirts Press, 2013

The process for releasing applications to production can be another major consideration at the enterprise level.

In a typical, small Agile project, the process for releasing a new application to production may not require extensive planning and coordination

At an enterprise level, a much higher level of planning and coordination may be needed to release applications to production, particularly if they are mission-critical and potentially have a significant impact on the company's business operations.

- The process for performing integration testing may be much more complex and difficult
- Much more coordination may be needed with groups that are impacted by the release
- User training may also need to be considered

Enterprise-level Challenges – Project Portfolio Management

Typical Small Agile Project	Typical Enterprise-level Implementation
Typical Agile projects do not provide a mechanism for higher-level integration to fulfill typical corporate needs for portfolio management of a large set of Agile projects	• It can be very difficult to integrate a number of Agile projects into a typical enterprise-level project portfolio management approach; however, some level of integration and management is necessary to make portfolio management decisions • This will many times require adopting a hybrid approach to provide the necessary balance of predictability, control, and agility

Leffingwell, Dean C. *Scaling Software Agility*, Addison-Wesley, 2007

This slide shows some additional differences and challenges associated with an enterprise-level Agile implementation related to project portfolio management:

Typical small Agile projects do not provide a mechanism for higher-level integration to fulfill typical corporate needs for portfolio management of a large set of Agile projects. In a typical large enterprise-level environment, there is typically a much greater need for some form of overall project portfolio management:

- It can be very difficult to integrate a number of Agile projects into a typical enterprise-level project portfolio management approach; however, some level of integration and management is necessary to make portfolio management decisions.
- This will many times require adopting a hybrid approach to provide the necessary balance of predictability, control, and agility.

Next Lecture…
Enterprise-level Challenges
Reinterpreting Agile Manifesto Values and Principles

In the next lesson, we're going to continue talking about Enterprise-level Challenges and talk about the need to reinterpret Agile Manifesto Values and Principles in a much broader context at an enterprise level.