

Agile Project Management

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PMG 622
Master of Project Management

Lecture 07



Hybrid life cycles: Designing and Customizing Agile and Traditional Lifecycles

Lecture 7

PMG 622

Agile Project Management

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Learning Objectives

- Determine the Need for Hybrid Project Management Methodologies
- Identify when to use Hybrid Project Management
- Define the main Hybrid Project Management Methods
- Determine the challenges facing Hybrid Project Management
- Determine steps to implement Hybrid Project Management
- Identify tools needed for Hybrid Project Management
- Learn the main Enterprise Hybrid Project Management Methodologies

Key Points from Previous Lecture

Scrum has very minimal documents (product Backlog, Sprint Backlog) and uses many visual tools (Kanban Board, Burndown Charts, Velocity Charts)

Scrum is characterized by fast problem solving and decision making in sprint planning, daily scrum, sprint review and retrospective

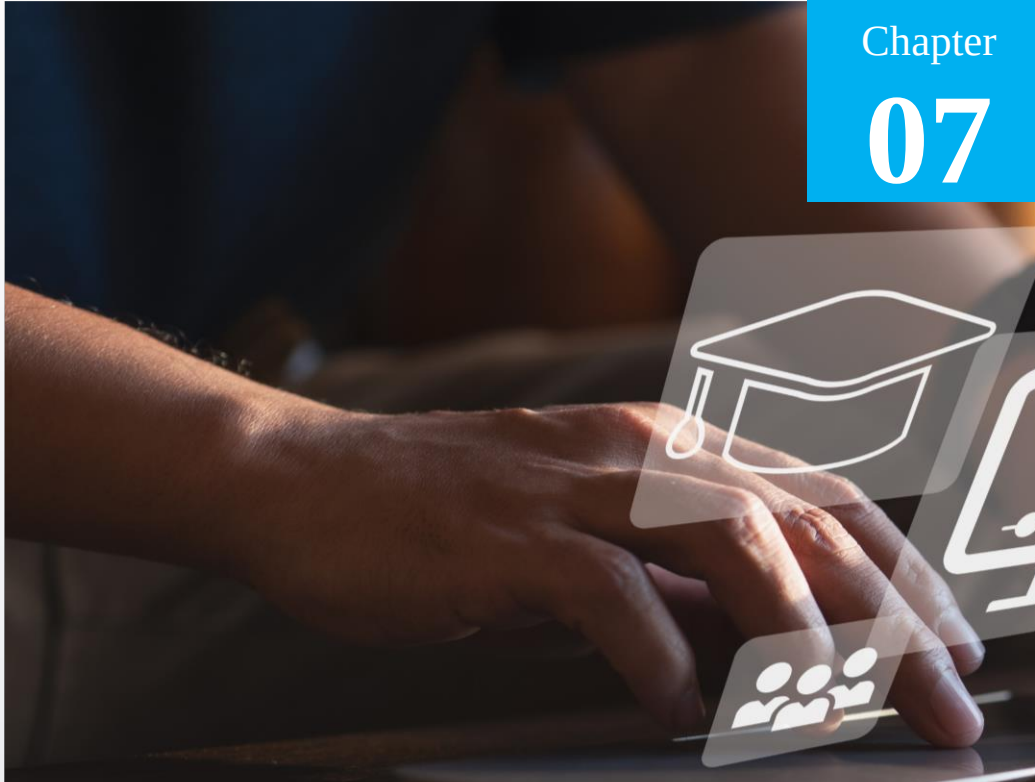
As all Agile frameworks, Scrum is flexible and adapts to changing needs

Scrum involves the customer and focus on delivering high priority, high value features first

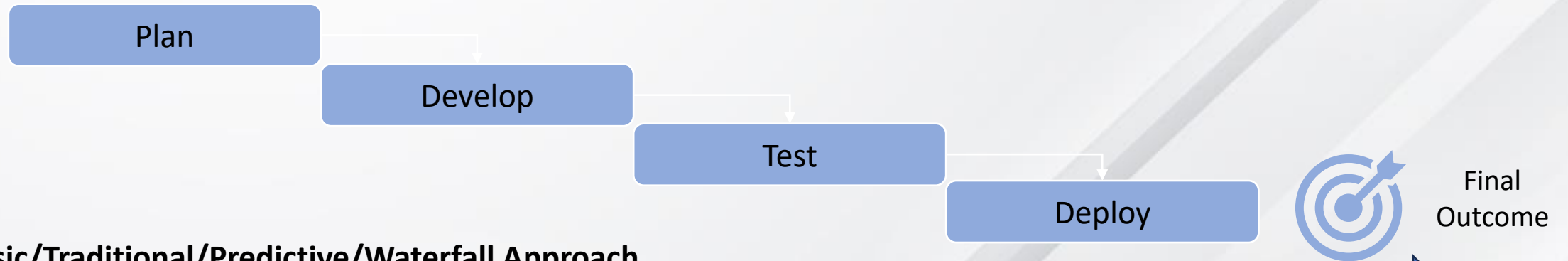
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Hybrid Project Management Overview



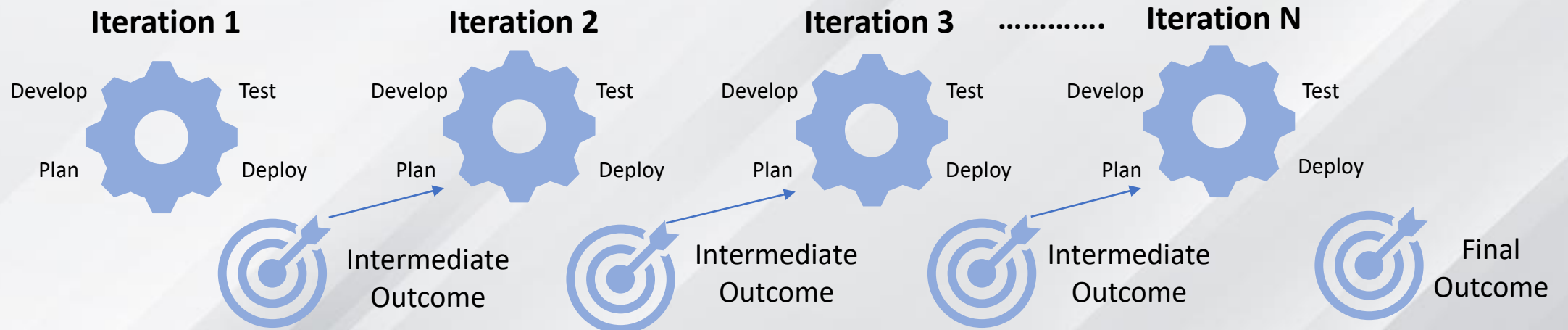
Agile vs Waterfall Approaches



Classic/Traditional/Predictive/Waterfall Approach

Project Timeline

Agile/Incremental/Adaptive Approach



“something (such as a power plant, vehicle, or electronic circuit) that has two different types of components performing essentially the same function.”

Merriam-Webster Dictionary

Hybrid Project Management

- Hybrid project management is a combination of two or more project management methodologies, such as waterfall and agile.
- It is a flexible approach that allows teams to tailor their project management process to the specific needs of their project.
- By blending the best features of the waterfall and agile methodologies, organizations can capitalize on the strengths of each approach while mitigating their weaknesses, and
- Create a flexible and adaptable approach that is well-suited for a variety of projects.

Hybrid Project Management

“The goal of project management is to produce business value in the best possible way given the current environment. It does not matter if that way is Agile or Predictive.

The question to ask is: How can we be most successful?”

Adapted from: Project Management Institute, *Agile Practice Guide*, Project Management Institute Inc., 2017, Page 29.

The Need for Hybrid PM Methodologies (1/2)

Addressing Methodology Limitations

- Traditional: Rigidity and limited adaptability
- Agile: Potential lack of structure for certain projects

Flexibility in Project Adaptation

- Projects have diverse characteristics and requirements
- A one-size-fits-all approach may not be suitable

Tailored Solutions for Varied Projects

- Hybrid approach combines the best of both worlds
- Customizable to meet the specific needs of each project

Adaptability to Changing Requirements

- Projects often face evolving priorities and scope
- Hybrid model enables adjustments without compromising control

The Need for Hybrid PM Methodologies (2/2)

Efficient Resource Utilization

- Optimizes resource allocation throughout the project lifecycle
- Maximizes the benefits of both predictive and adaptive methodologies

Faster Response to Stakeholder Demands

- Evolving stakeholder expectations require agile responses
- Hybrid approach facilitates continuous communication and collaboration

Balancing Control and Flexibility

- Provides structure while allowing for iterative development
- Enables project managers to maintain control over project outcomes

Effective Management of Project Complexity

- Suitable for projects with varying levels of uncertainty
- Addresses challenges posed by dynamic project environments

When to use Hybrid PM Methodology



**Projects with a mix of
well-defined
requirements and
uncertain requirements**



Complex projects

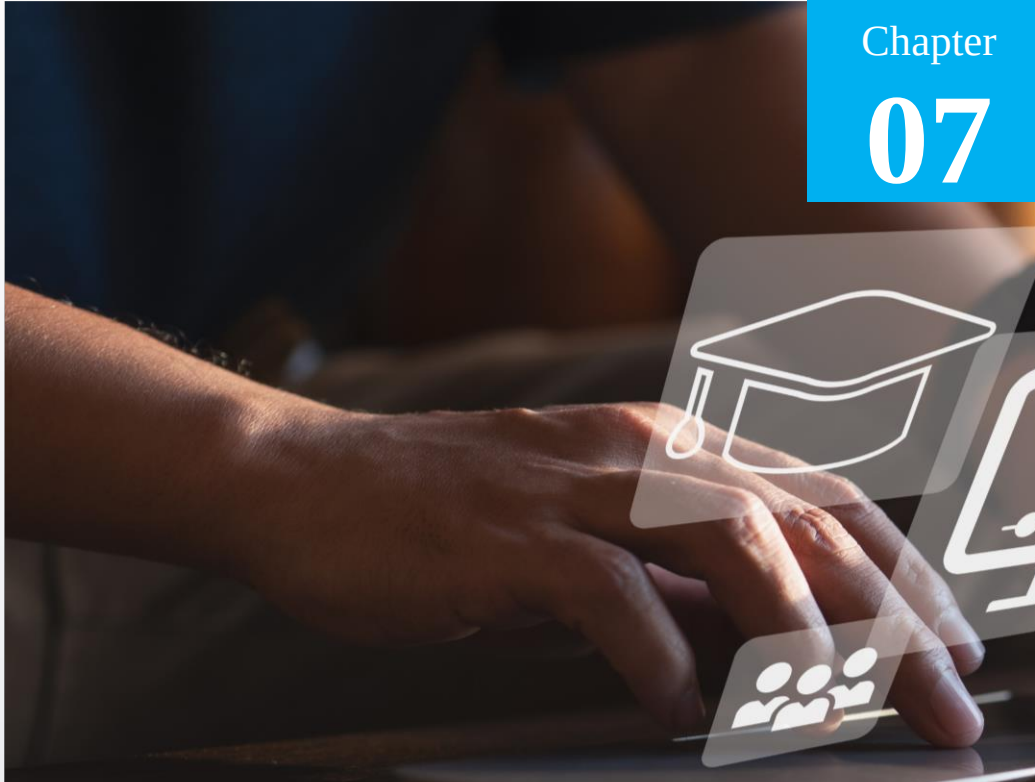


**Projects with a High
degree of Risk**

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Hybrid Project Management Methods



1. Agile followed by Waterfall

- Early processes utilize agile then followed by Waterfall.
- Used when there is uncertainty, complexity, and risk in the earlier portion of the project, and then a more defined and repeatable portion of the project.
- Ex. Developing a high-tech new product then rollout and train many users.

Agile

Agile

Agile

Waterfall

Waterfall

Waterfall

Adapted from: Project Management Institute, *Agile Practice Guide*, Project Management Institute Inc., 2017, Page 26.

2. Combined Agile and Waterfall Simultaneously

- Most Used Hybrid method, used when incrementally transitioning from Waterfall to Agile.
- Some Agile approaches like short iterations, daily standups, retrospectives, with other Waterfall aspects as upfront estimation, work assignment, and progress tracking.
- Ex. Project planned as Waterfall for the whole project with each Work Package done in a Sprint Style and apply all sprint process tools and techniques.

Agile

Agile

Agile

Waterfall

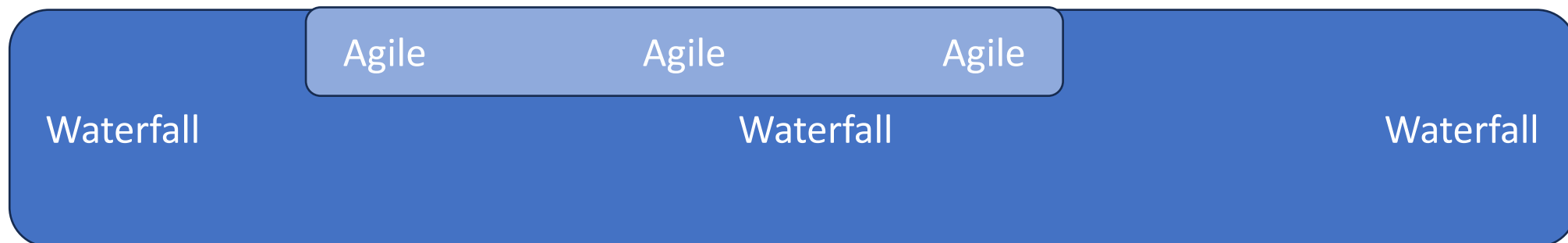
Waterfall

Waterfall

Adapted from: Project Management Institute, *Agile Practice Guide*, Project Management Institute Inc., 2017, Page 26.

3. Largely Waterfall With Agile Components

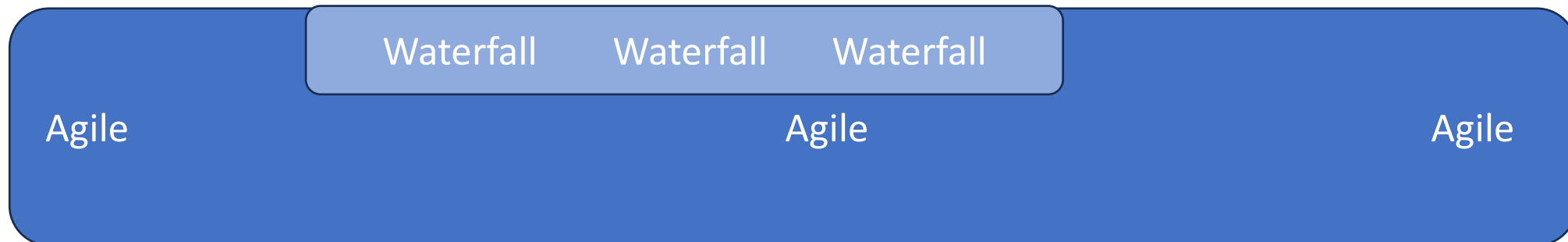
- Portions of the project with uncertainty, complexity, or unclear scope is being tackled in Agile, but the remainder is being managed using Waterfall approaches.
- Ex. An engineering company that is building a facility, with one component of it using new material and technology not tested before.



Adapted from: Project Management Institute, *Agile Practice Guide*, Project Management Institute Inc., 2017, Page 27.

4. Largely Agile with Waterfall Components

- Used when a particular element is non-negotiable or can't be done using Agile approaches.
- Ex. Integrating an external component developed by a different vendor that cannot partner in a collaborative and Agile way.



Adapted from: Project Management Institute, *Agile Practice Guide*, Project Management Institute Inc., 2017, Page 27.

Comparing Hybrid vs. Agile vs. Waterfall

Element	Hybrid	Agile	Waterfall
Approach	Blends elements of traditional and Agile	Iterative and incremental	Sequential and linear
Flexibility	High	Very High	Low
Adaptability	High	Very High	Low
Documentation	Moderate	Minimal	Extensive
Stakeholder Engagement	Emphasized	High	Moderate
Iterative Development	Yes	Yes	No
Planning	Structured and adaptable	Adaptive and collaborative	Detailed and extensive
Risk Management	Balanced approach with risk mitigation	Emphasized	Addressed but less flexibility
Project Visibility	Moderate	High	Low
Recommended When	Projects with evolving requirements, high risk and complexity	Complex and uncertain projects	Well-defined and stable projects

Case Study: Achieving Stakeholder Expectations with a Hybrid Approach

- **Background:**

A large software development project aimed to create a new enterprise-level application for a multinational corporation. The project had complex requirements, involving multiple departments, stakeholders with diverse expectations, and a need for adaptability due to evolving industry standards.

- **Challenges:**

- **Diverse Stakeholder Expectations:** Stakeholders ranged from IT professionals to end-users, each with unique expectations. Traditional Waterfall approaches struggled to accommodate evolving demands and changes from various stakeholders.
- **Evolving Industry Standards:** The industry was undergoing rapid changes, with new standards and technologies emerging during the project. Adapting to these changes was crucial to ensure the final product remained competitive and aligned with industry best practices.
- **Need for Structure and Predictability:** The project required a structured approach to manage resources, timelines, and budgets. Stakeholders, particularly those from finance and project management, sought predictability in delivery schedules and costs.

Case Study: Achieving Stakeholder Expectations with a Hybrid Approach

- **Solution:** The project adopted a hybrid methodology, incorporating structured planning elements from Waterfall and the adaptability of Agile.
 - **Structured Planning Phase:** The project began with a comprehensive planning phase, where requirements were defined in detail. A project plan was established, providing stakeholders with a clear timeline, milestones, and resource allocation.
 - **Agile Iterations for Adaptability:** Once the planning phase was completed, the development phase embraced Agile iterations. Regular sprints allowed for continuous feedback from stakeholders, ensuring that their evolving needs were addressed promptly.
 - **Frequent Stakeholder Engagement:** Regular sprint reviews and demonstrations were conducted for stakeholders. This frequent engagement allowed stakeholders to visualize progress, provide feedback, and make necessary adjustments to the project scope.
 - **Real-Time Adjustments to Industry Changes:** Agile's flexibility facilitated real-time adjustments to industry changes. As new standards emerged, the development team could adapt the project scope and features to align with the latest industry requirements.

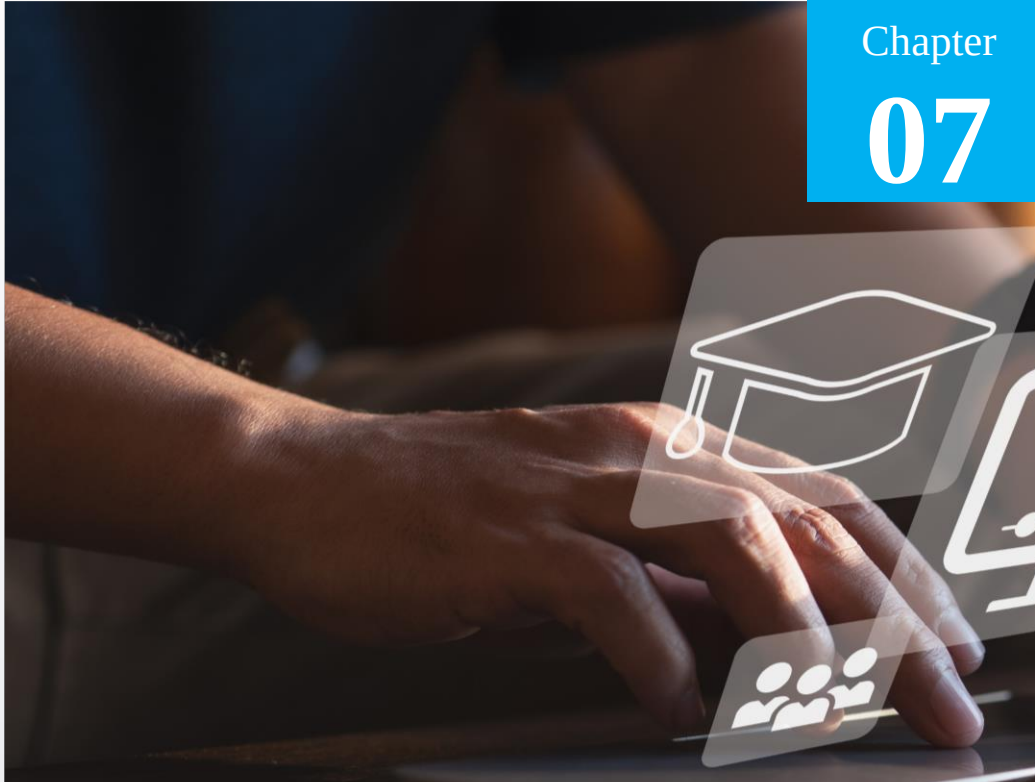
Case Study: Achieving Stakeholder Expectations with a Hybrid Approach

- **Results:**
- **Balanced Stakeholder Satisfaction:** The hybrid approach allowed for a balance between the structured planning desired by some stakeholders and the adaptability required by others. Finance and project management stakeholders were reassured by the structured planning, while end-users appreciated the ability to influence the evolving product.
- **Timely Delivery of Industry-Compliant Product:** The project remained on schedule despite industry changes. Agile iterations facilitated the timely integration of new standards and technologies, ensuring the final product was both up-to-date and delivered on time.
- **Enhanced Communication and Collaboration:** The hybrid approach fostered improved communication and collaboration among stakeholders. Regular engagements and feedback sessions created a transparent and inclusive project environment.
- **Project Success and Continued Adaptation:** The software was successfully launched and met stakeholder expectations. The hybrid methodology allowed the project team to adapt to post-launch feedback, ensuring ongoing success in the competitive market.

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How to implement Hybrid Project Management Methods



As a PM you define the Hybrid Process!

“ In Hybrid Project Management, you as a Project Manager select the right processes, tools, and techniques to from the different methodologies and when and where to implement them in your project.”

Adapted from: Project Management Institute, *Agile Practice Guide*, Project Management Institute Inc., 2017, Page 29.

Steps to Implement Hybrid Methodology



Tools for Hybrid Project Management (1/2)

Project Management Tools

Tools supporting both traditional and agile methodologies, ensuring integration.

Example: Jira - facilitates project planning, tracking, and release management.

Collaboration Platforms

Enhance team communication and collaboration, enabling real-time information sharing.

Example: Microsoft Teams - fosters communication, file sharing, and virtual collaboration.

Task and Workflow Management

Tools for effective task and workflow management, ensuring project progress visibility.

Example: Trello - facilitates task tracking, prioritization, and team collaboration.

Communication and Documentation Tools

Tools facilitating clear communication and effective documentation for knowledge sharing.

Example: Confluence - supports collaborative documentation and information sharing.

Resource Allocation and Tracking

Support optimal resource allocation and tracking throughout the project lifecycle.

Example: Monday.com - offers resource management features and real-time project tracking.

Tools for Hybrid Project Management (2/2)

Integrated Reporting Systems

Reporting systems provide insights into project performance and key performance indicators (KPIs).

Example: Tableau - enables data visualization for analytics.

Version Control and Integration

Version control tools manage changes in project deliverables and ensure seamless integration.

Example: Git - facilitates version control and collaboration

Risk Management Software

Software aiding in identifying, assessing, and mitigating project risks with real-time updates.

Example: RiskWatch - supports comprehensive risk management

Agile Development Tools

Tools supporting agile practices and adapting to changing project requirements.

Example: VersionOne - an tool for planning and tracking agile projects.

User Training and Support Systems

Training for tools and provide ongoing support for optimized usage.

Example: Udemy - offers training courses.

Benefits of using a Hybrid Methodology

Enhanced Flexibility

- Allows adaptable project execution.
- Adapts to changing project requirements.

Improved Collaboration

- Facilitates stakeholder collaboration.
- Enhances communication and goal alignment.

Efficient Risk Management

- Integrates robust risk strategies.
- Proactively identifies and mitigates risks.

Optimized Resource Utilization

- Efficient allocation throughout the project lifecycle.
- Maximizes benefits of predictive and adaptive methods.

Increased Transparency

- Enhances visibility into project progress.
- Facilitates clear communication and decision-making.

Challenges with Hybrid PM Methodology



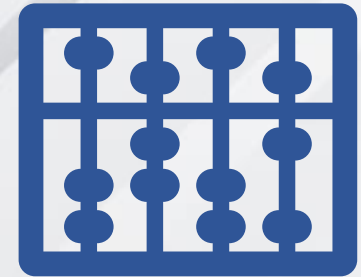
Balancing Flexibility with Structure

It can be difficult to find the right balance between the flexibility of the agile methodology and the structure of the waterfall methodology.



Coordinating Multiple Methodologies

It can be challenging to coordinate multiple methodologies and ensure that the team is working together effectively.



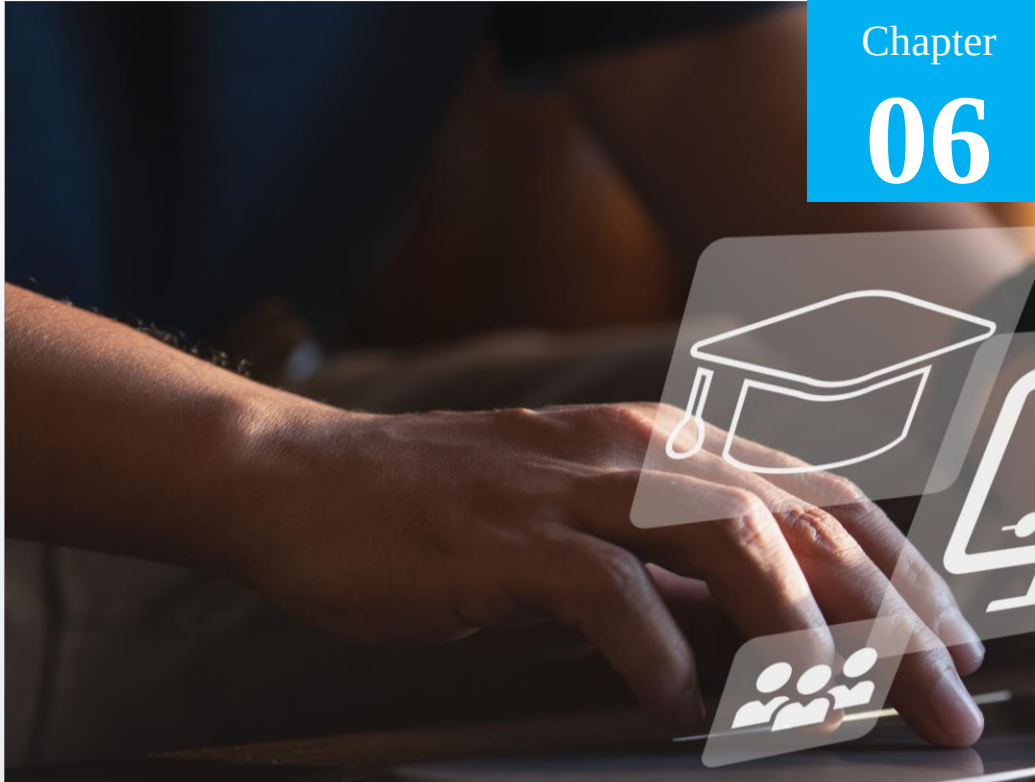
Managing Expectations

It is important to manage the expectations of stakeholders and ensure that they understand the hybrid project management methodology and its implications.

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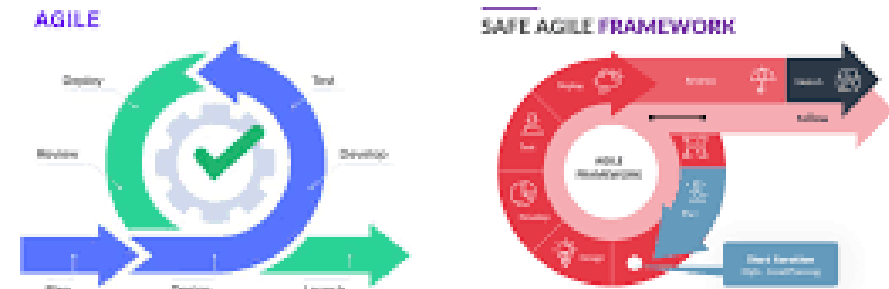
Enterprise Hybrid Methodologies



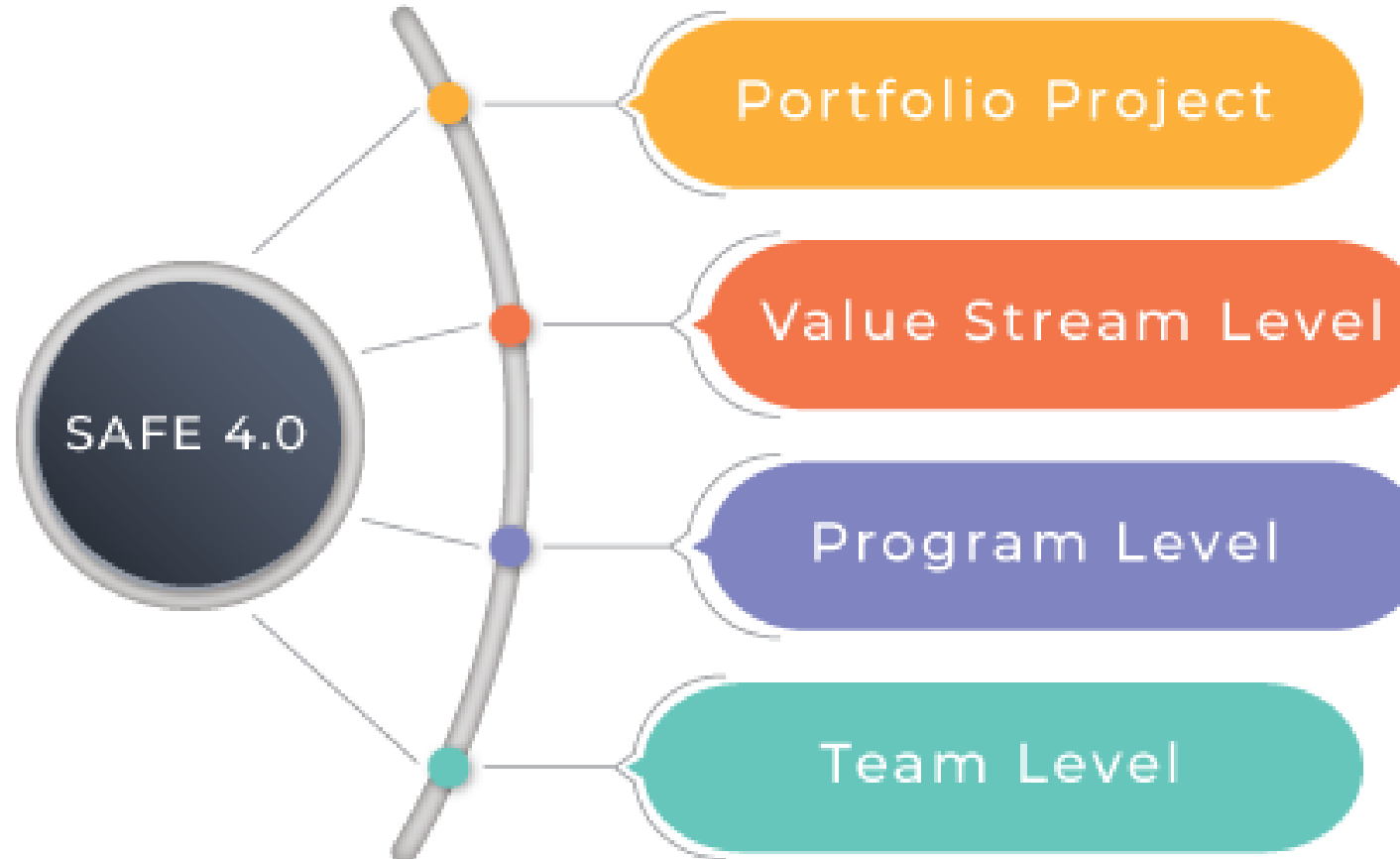
SAFe® Hybrid Framework

- Many larger organizations and projects are not suited to get the benefits of Agile development.
- Scaled Agile Framework (SAFe®) is a tool to help larger projects and enterprises implement Agile concepts.
- Scaled Agile Framework SAFe® takes the concepts of agile development and provides a “larger picture” methodology that allows you to use agile approaches across programs, portfolios and an entire company.

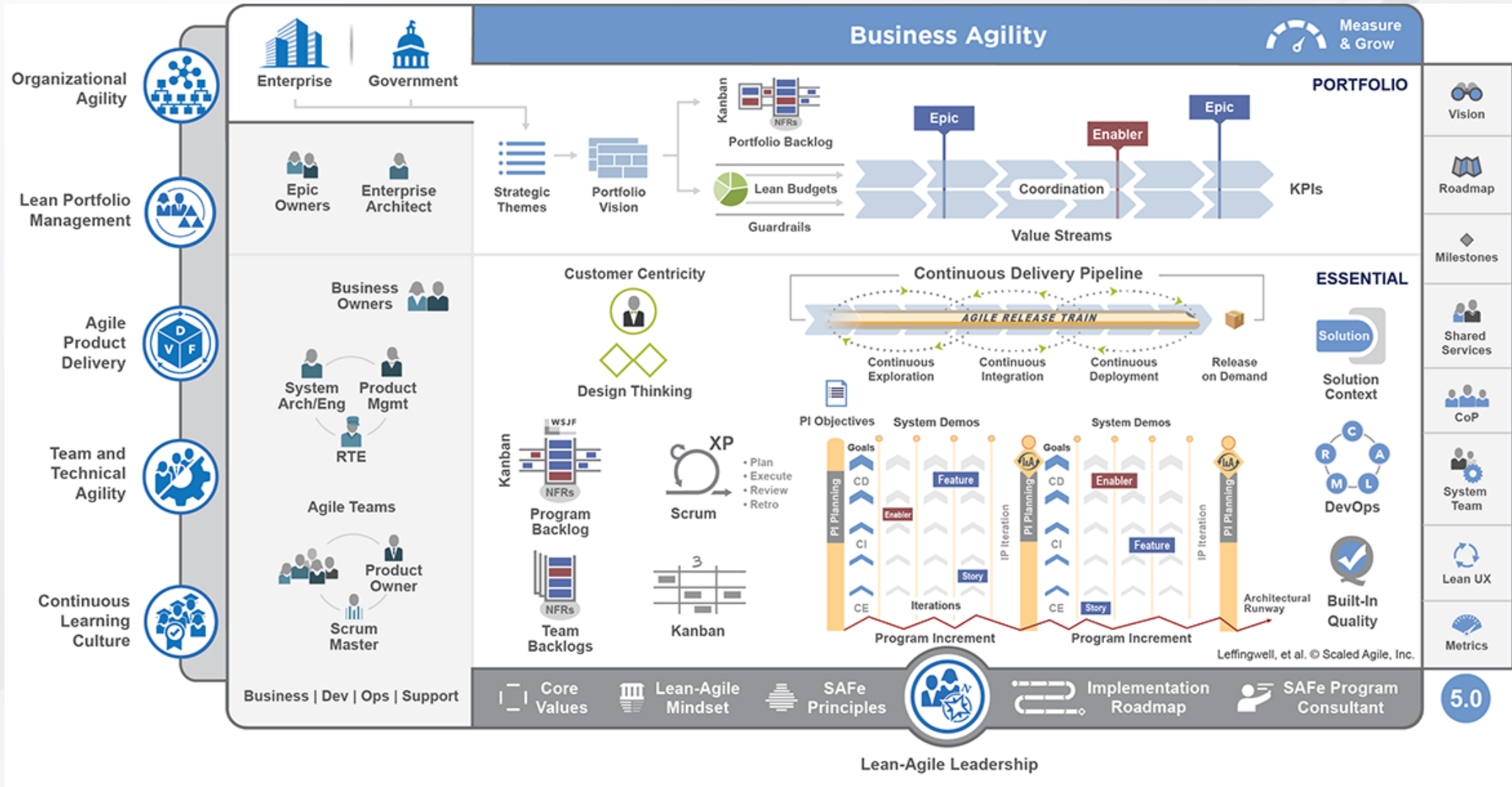
AGILE vs SAFe



SAFe® Hybrid Framework



SAFe®



Disciplined Agile® (DA™) Framework

- Disciplined Agile (DA) is a hybrid tool kit that uses Agile, Lean, and traditional strategies to guide the best Way of Working (WoW) for a team or organization.
- DA is context sensitive; rather than prescribing a collection of "best practices," it guides how to choose and evolve a fit-for-purpose WoW that is best for you given the situation you face.
- The DA tool kit provides guidance to help organizations streamline their processes based on project needs, providing a solid foundation for business agility.



Disciplined Agile® (DA™) Framework

Four Layers

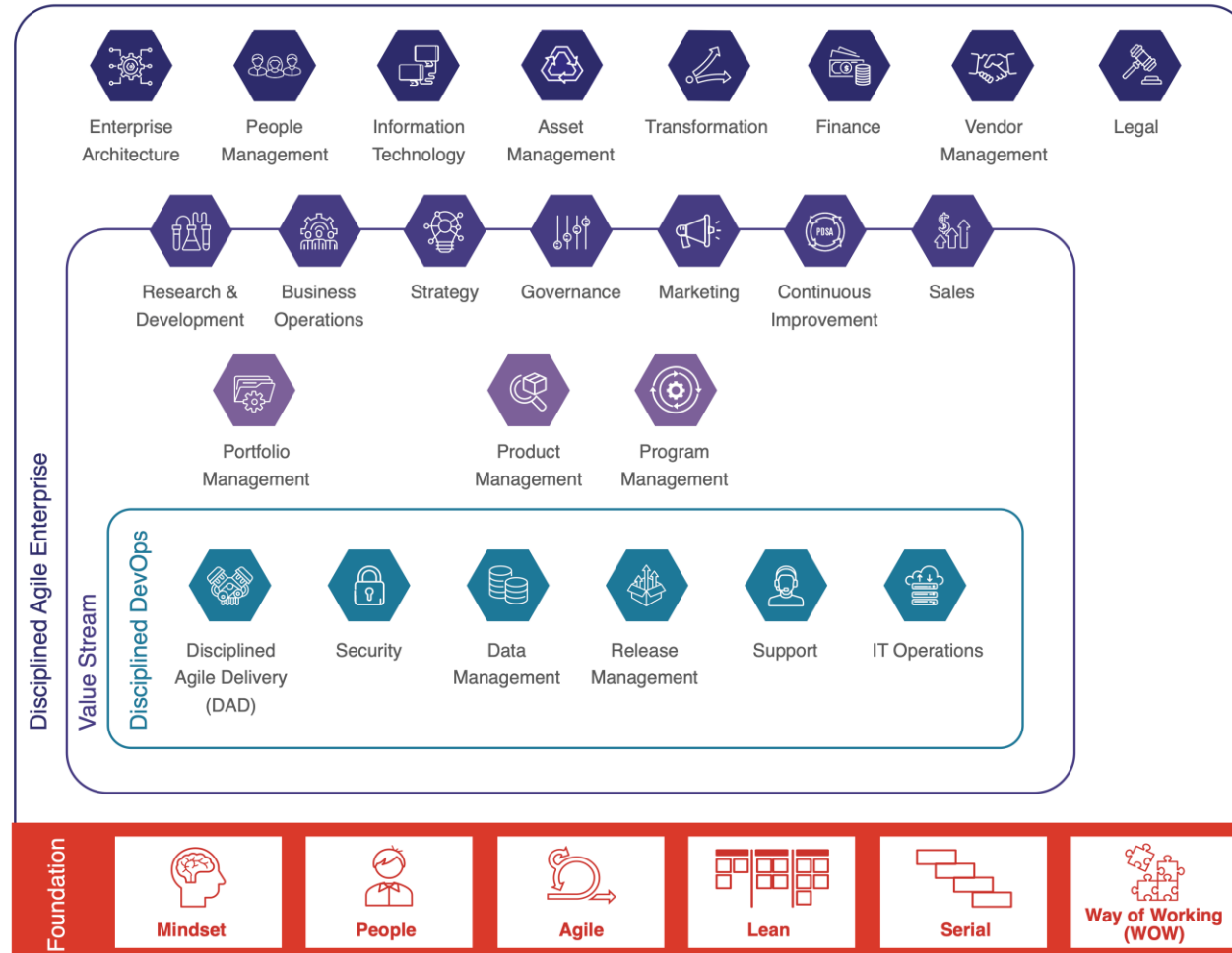
Foundation

Disciplined
DevOps

Value
Streams

Disciplined
Agile
Enterprise

Disciplined Agile[®] (DA[™]) Framework



Key Points

Hybrid Methods bring the best of both worlds (Agile and Traditional) to your project.

There are different methods for Hybrid PM

You customize your Hybrid methodology based on each project needs and requirements.

Hybrid PM brings more flexibility, better collaboration, more risk management, and efficient use of resources.

We can implement Hybrid and Agile on an enterprise level using SAFe® and DA™

Preparation for discussion panel:

- Watch the VIDEO [“Hybrid Project Management – What is that?”](#)
- Question:
What benefits do you see in applying Hybrid Project Management?



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For Discussion Panel

Before next lecture:

- Monitoring and Controlling Agile Projects
- Read the Article
["Risk Management in Agile: How To Control Risk In Agile"](#)
- Read the Article
["How to Manage Resources in Agile Project Management?"](#)



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For Next Lecture



Thank You