Agile Software Development

Lecturer: **Raman Ramsin**

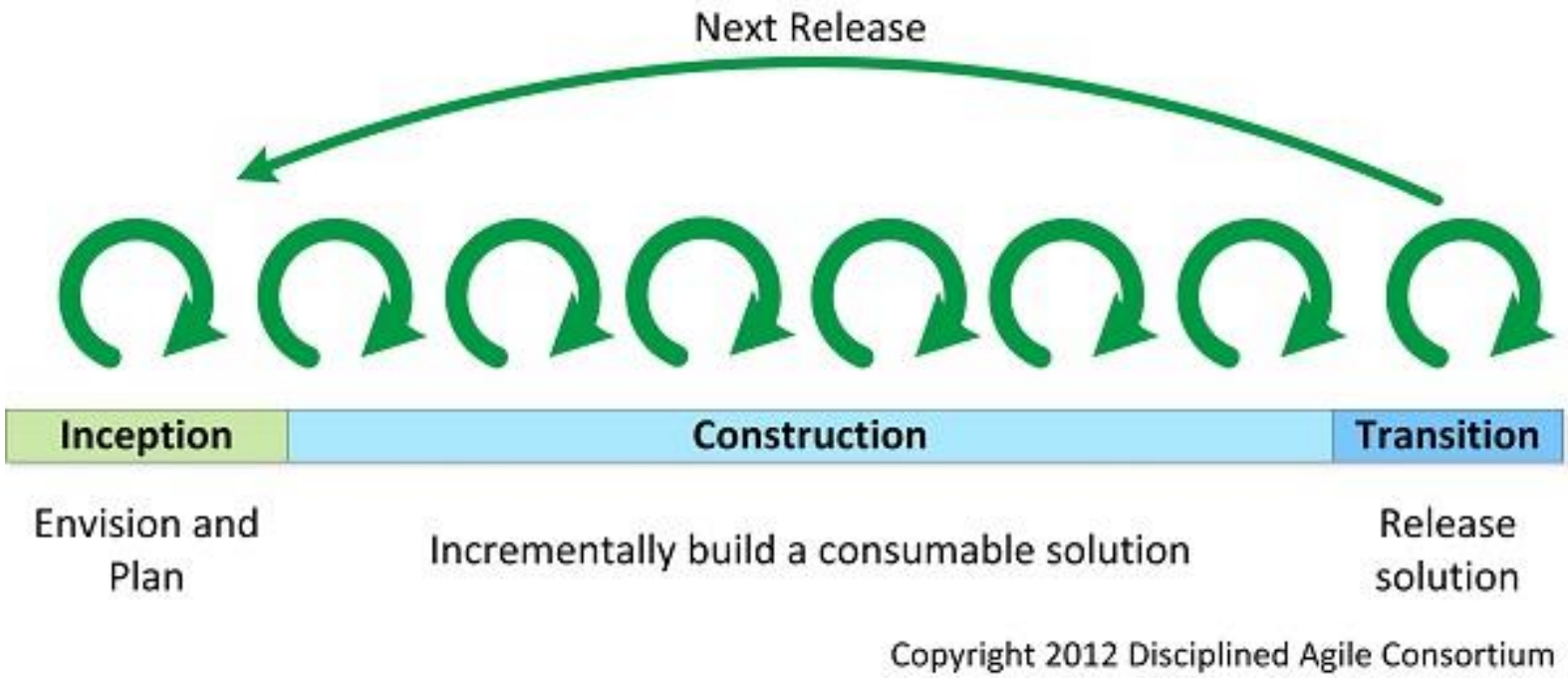
Lecture 2

DAD Framework

DAD: Disciplined Agile Delivery

- DAD is an agile process framework with the following characteristics:
  - People first: Supports a tailorable, robust set of roles, rights, and responsibilities.
  - Learning-oriented: Based on the lessons learnt during projects.
  - Hybrid: Integrates great ideas from various methodologies.
  - Full delivery lifecycle: Covers the full delivery lifecycle.
  - Support for multiple lifecycles: Supports six lifecycles.
  - Complete: Fully covers development, modeling, architecture, management, requirements/outcomes, documentation, governance and other strategies.
  - Context-sensitive: Tailored to effectively address the project situation at hand.
  - Consumable solutions over working software: Potentially shippable software is a good start but we need consumable solutions that delight our customers.
  - Self-organization with appropriate governance: Self-organizing teams work in an enterprise-aware manner, governed appropriately by senior leadership.

Generic Agile Project Lifecycle (as seen in DAD)

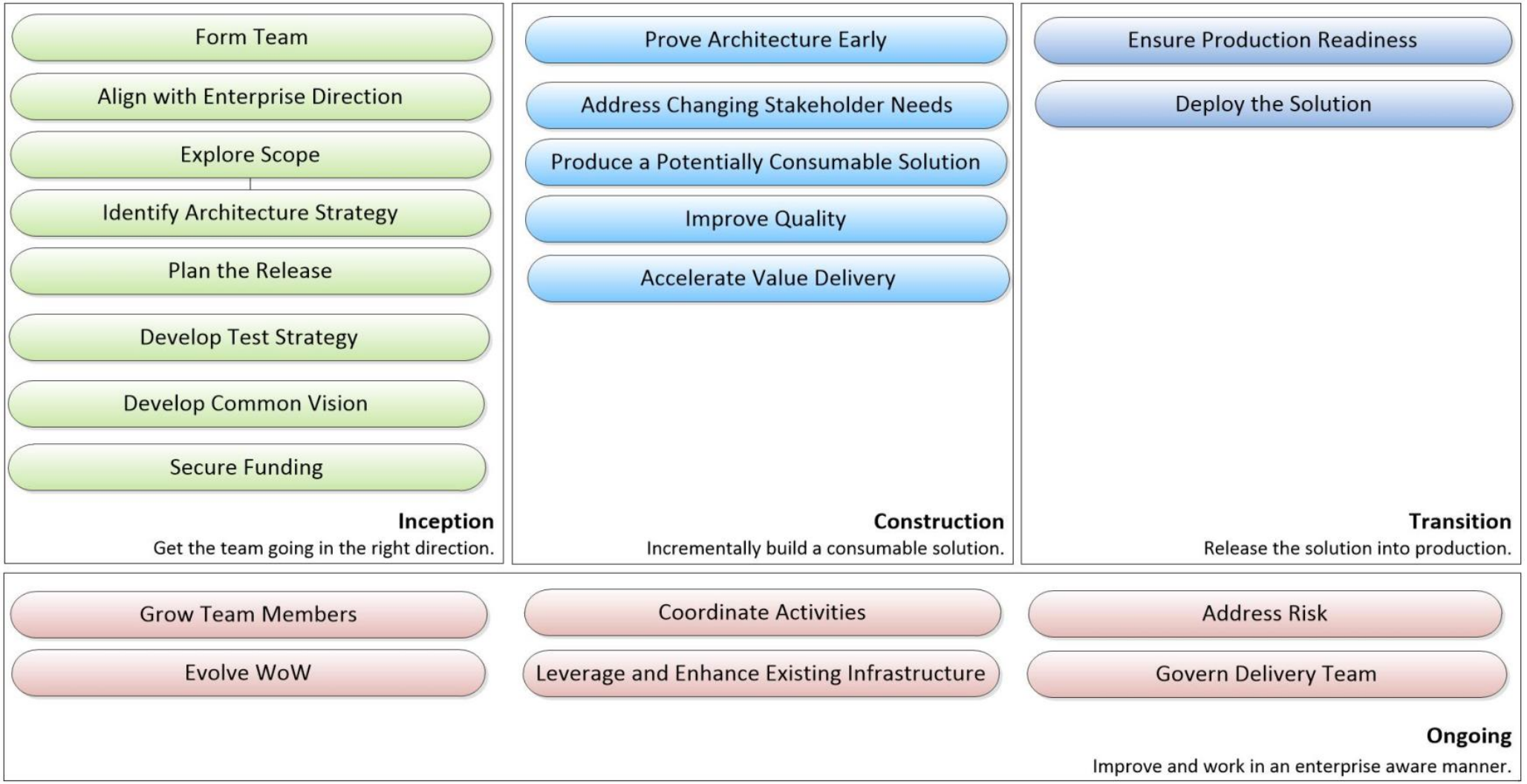


[Ambler & Lines 2020]

Generic Agile Project Lifecycle: Phases

- DAD sees the generic agile project lifecycle as consisting of three phases:
  - Inception: We do just enough to get organized and go in the right direction.
    - The team will form itself, perform initial requirements/architecture exploration, initial planning, alignment with the organization, and securing funding.
    - This phase should be kept as simple and as short as possible; the average agile/lean team spends 11 work days in Inception activities.
  - Construction: The aim is to produce a consumable solution with sufficient functionality, a Minimal Marketable Release (MMR), to Stakeholders.
    - The team will work closely with Stakeholders to understand their needs, build a quality solution, get feedback regularly, and then act on that feedback.
    - The team will be performing analysis, design, programming, testing, and management activities potentially every single day.
  - Transition: The aim is to successfully release the solution into Production.
    - The average agile/lean team spends 6 to 8.5 work days on Transition activities.

DAD: Process Goals



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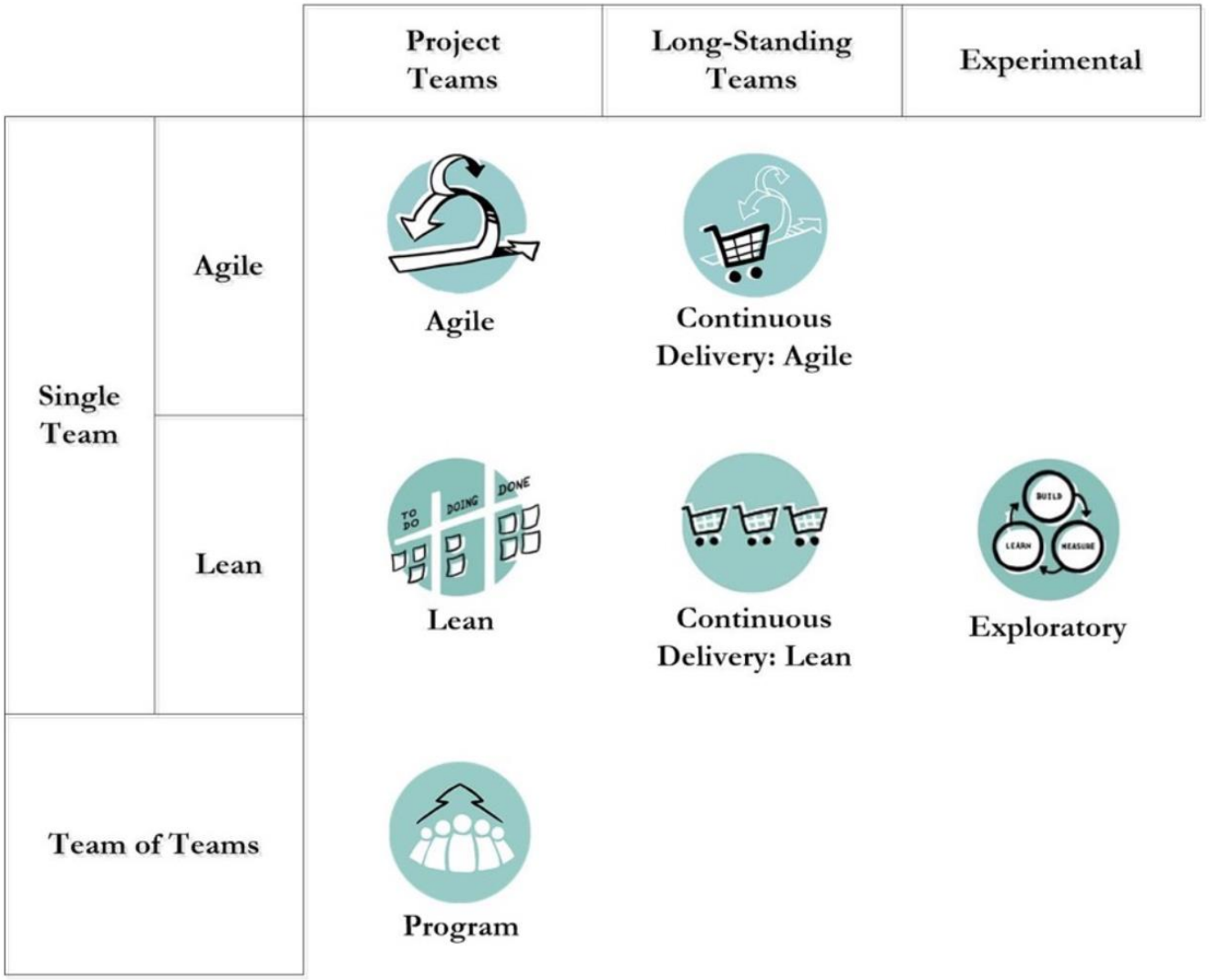
DAD: Lifecycles

- DAD supports six lifecycles for teams to choose from:
  - **Agile:** Based on the Scrum lifecycle, teams following this project lifecycle will produce consumable solutions via short iterations (aka sprints or time boxes).
  - **Continuous Delivery - Agile:** Teams work in very short iterations, typically one week or less; at the end of each iteration, the solution is released into production.
  - **Lean:** Based on Kanban, teams visualize their work, reduce work in progress (WIP) to streamline their workflow, and pull work one item at a time.
  - **Continuous Delivery - Lean:** Teams release their work into production whenever possible, typically several times a day.
  - **Exploratory:** Teams explore a business idea by developing one or more Minimal Viable Products (MVPs), to determine what potential customers actually want.
  - **Program:** A program is effectively a large team that is organized into a team of teams.

DAD: Six Lifecycles



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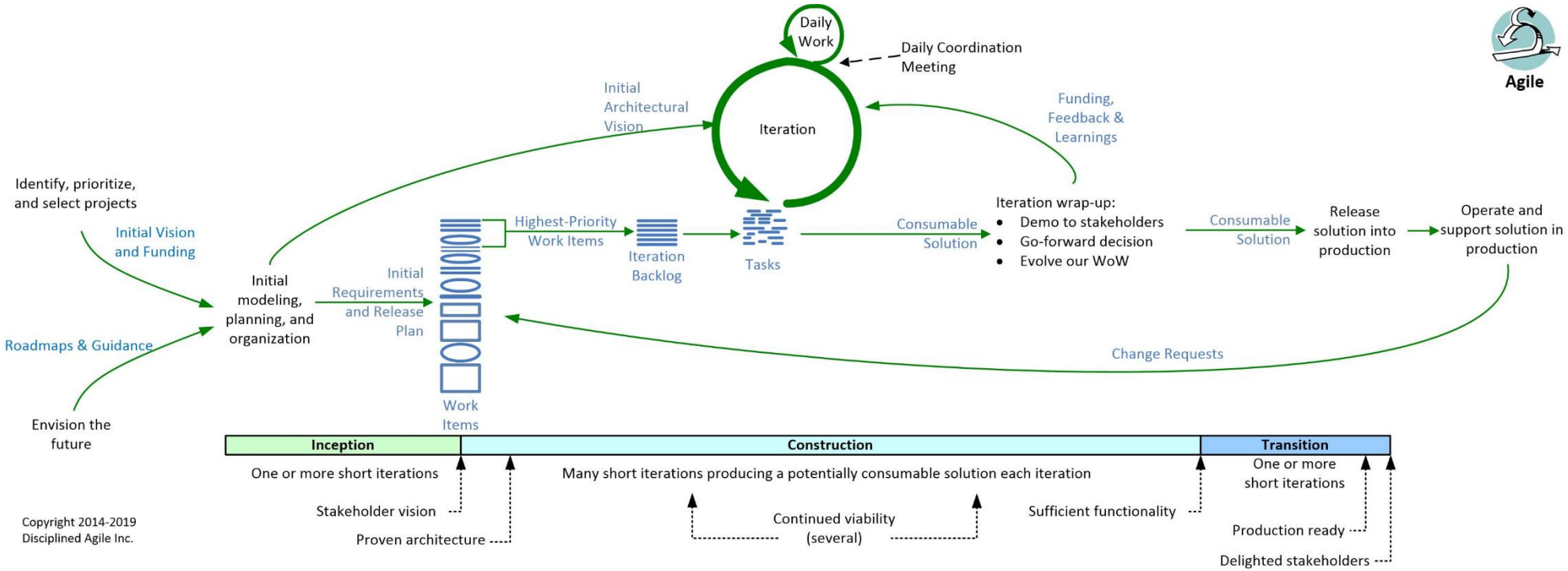
DAD Lifecycles: Agile



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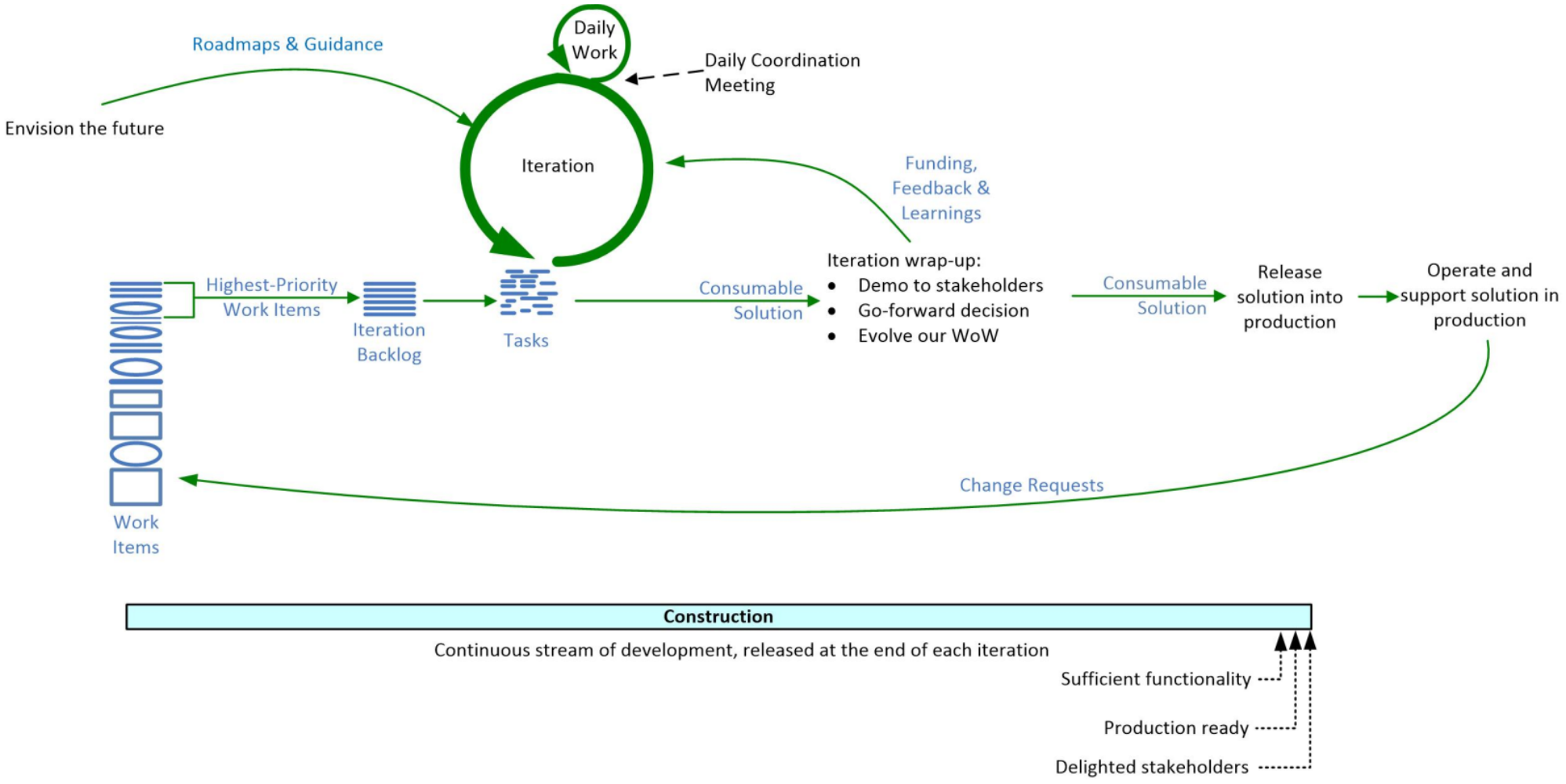
DAD Lifecycles: Continuous Delivery – Agile



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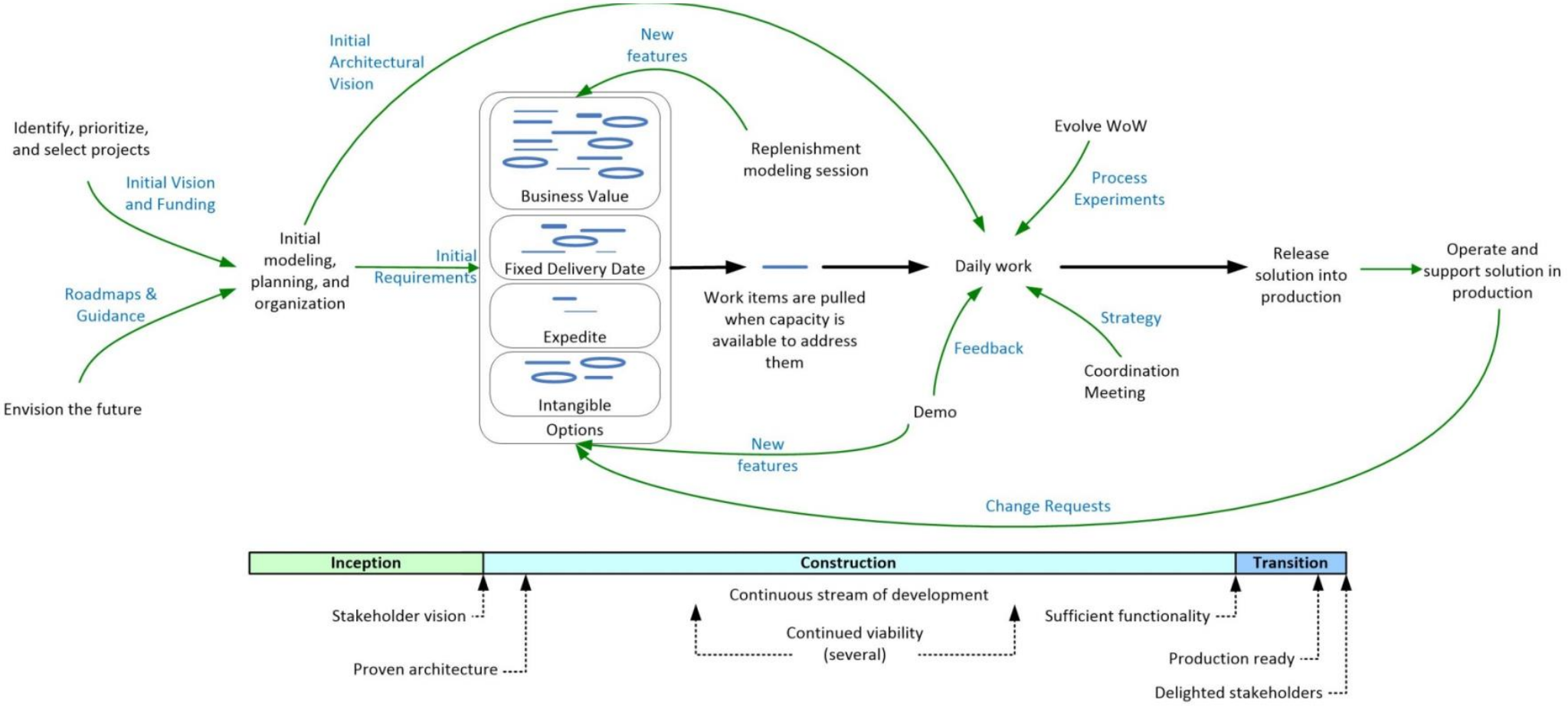
DAD Lifecycles: Lean



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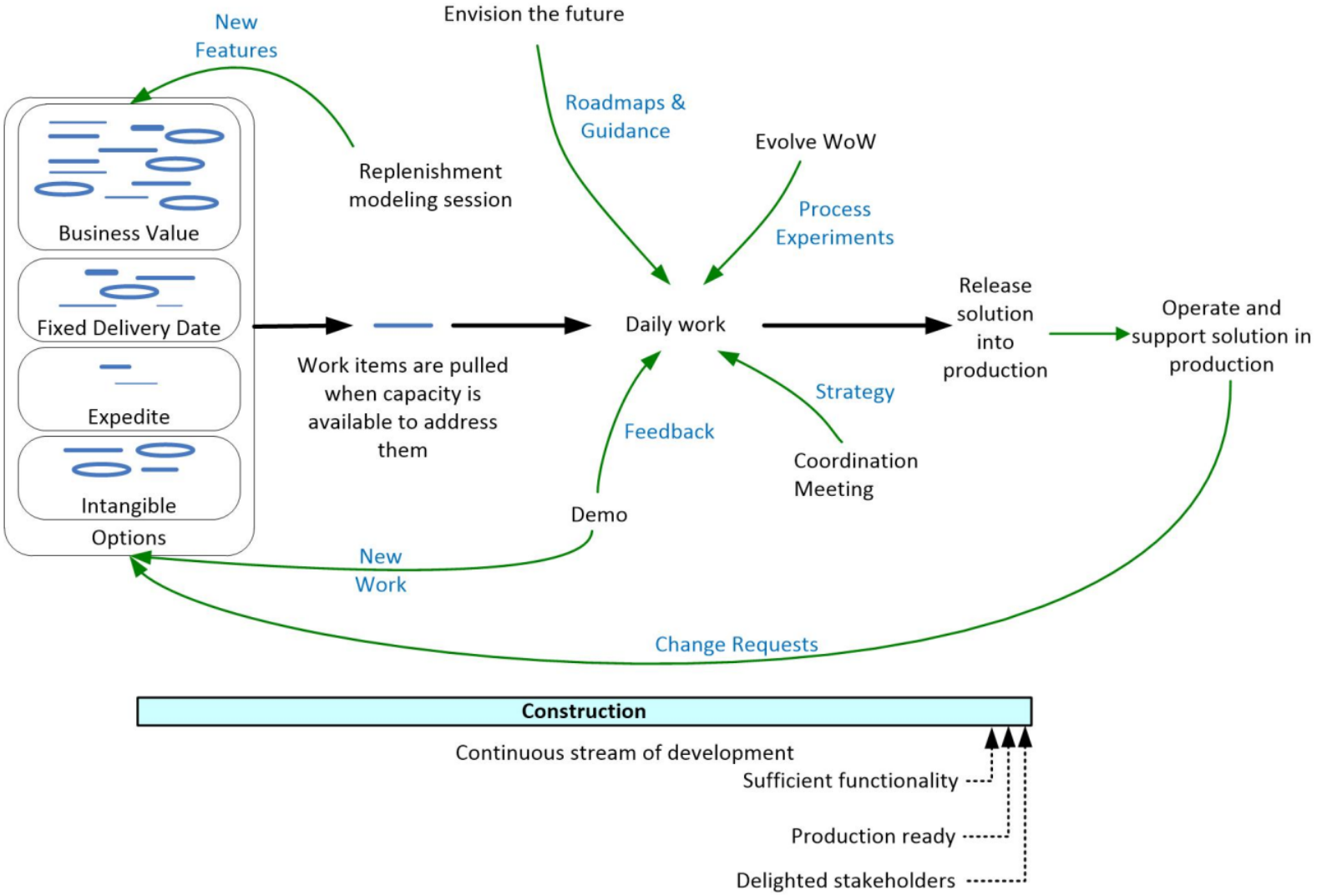
DAD Lifecycles: Continuous Delivery – Lean



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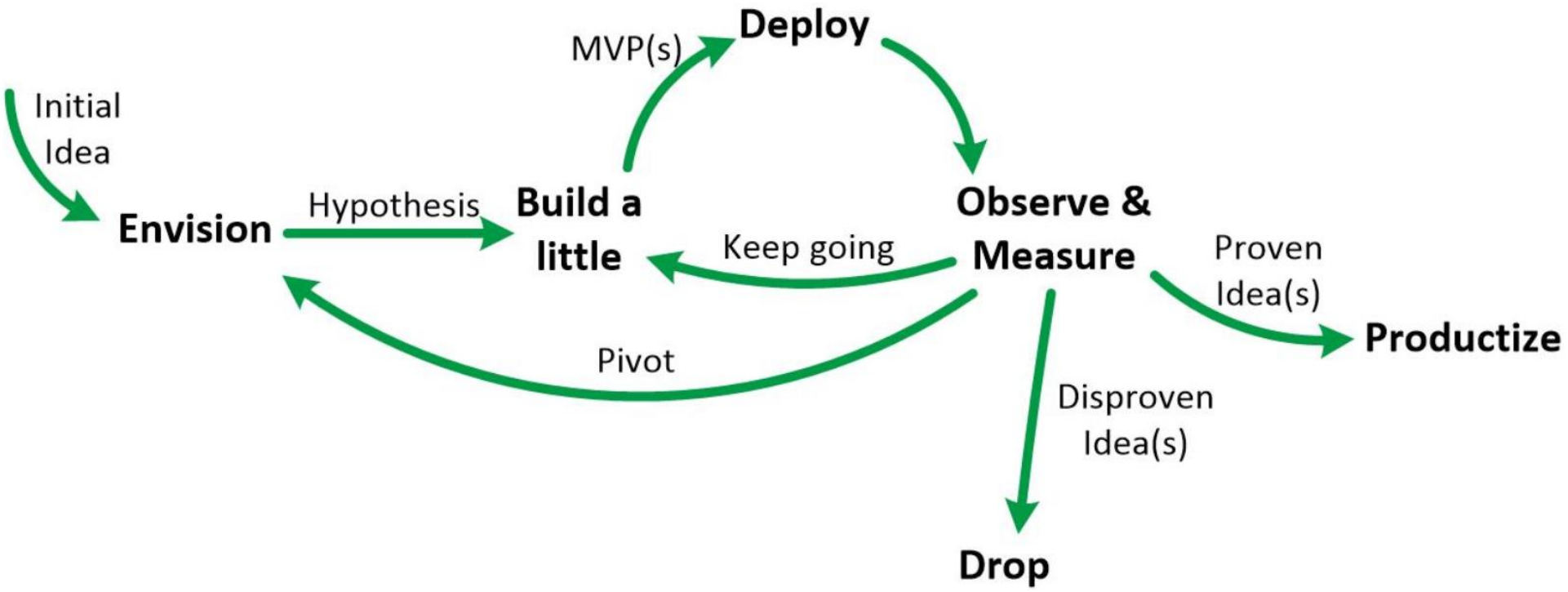
DAD Lifecycles: Exploratory (Lean Startup)



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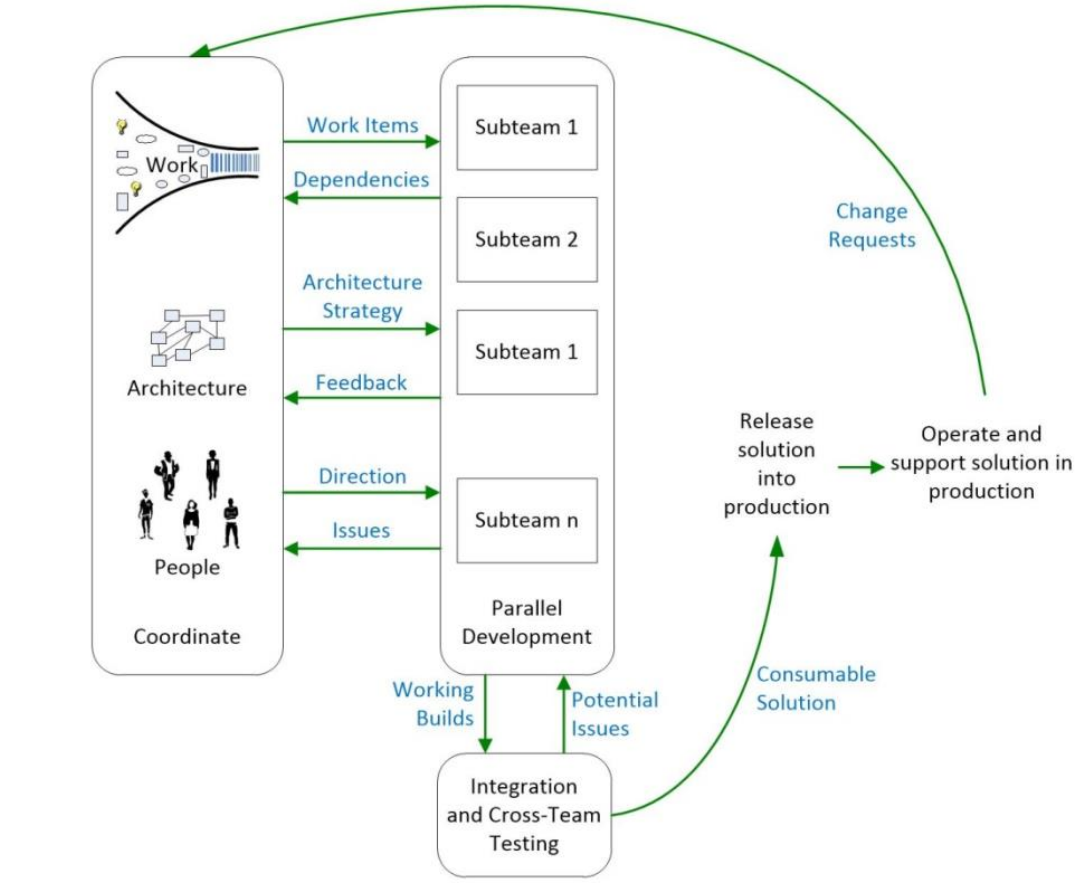
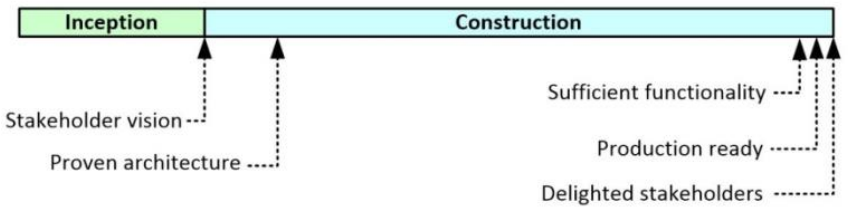
DAD Lifecycles: Program





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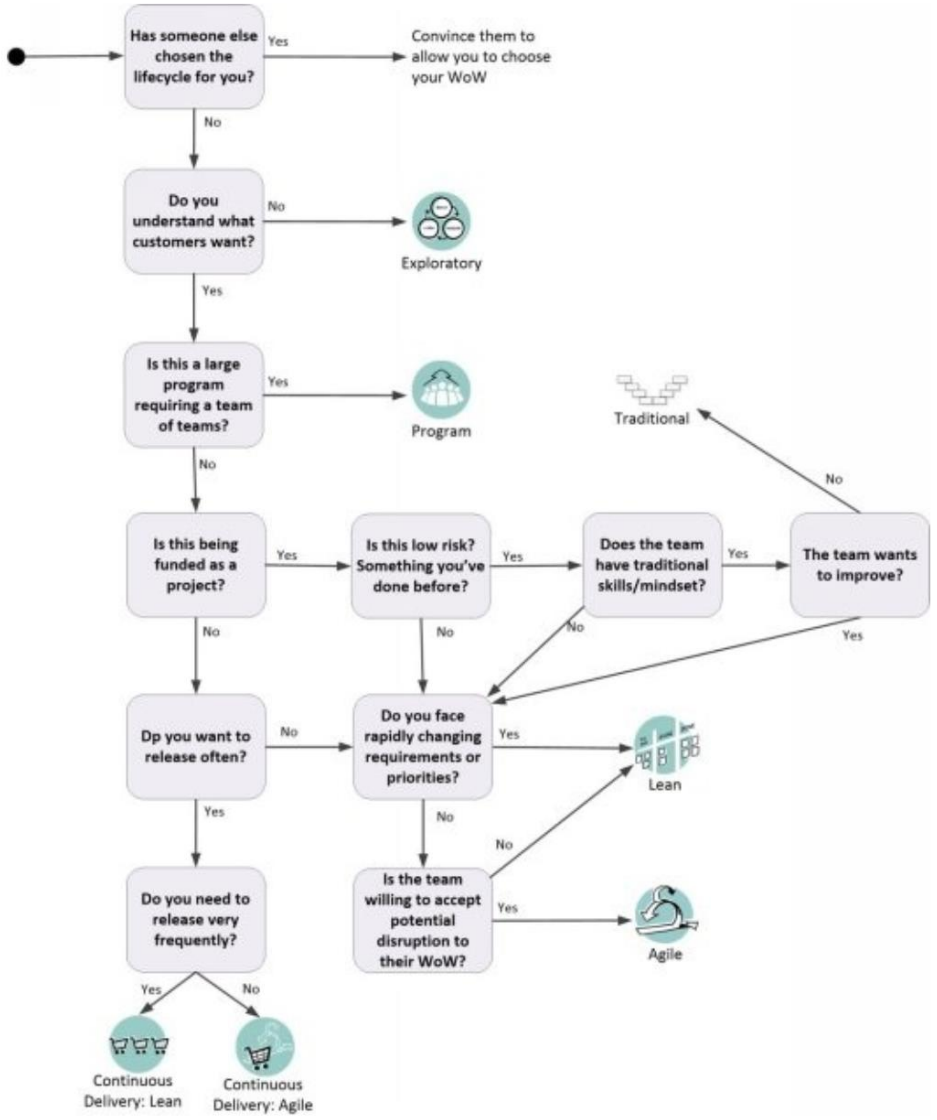
DAD: Choosing Your WoW (Way of Working)



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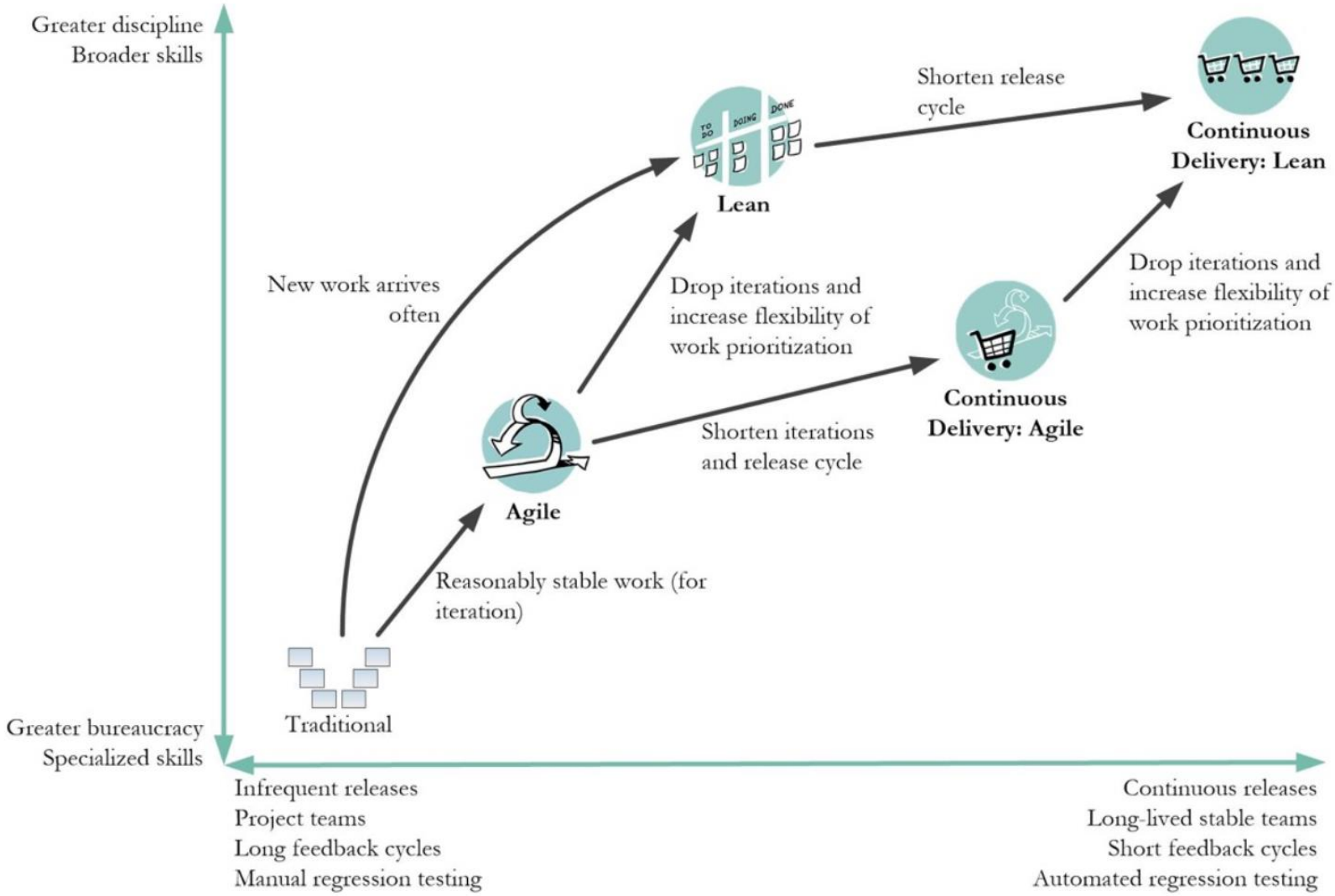
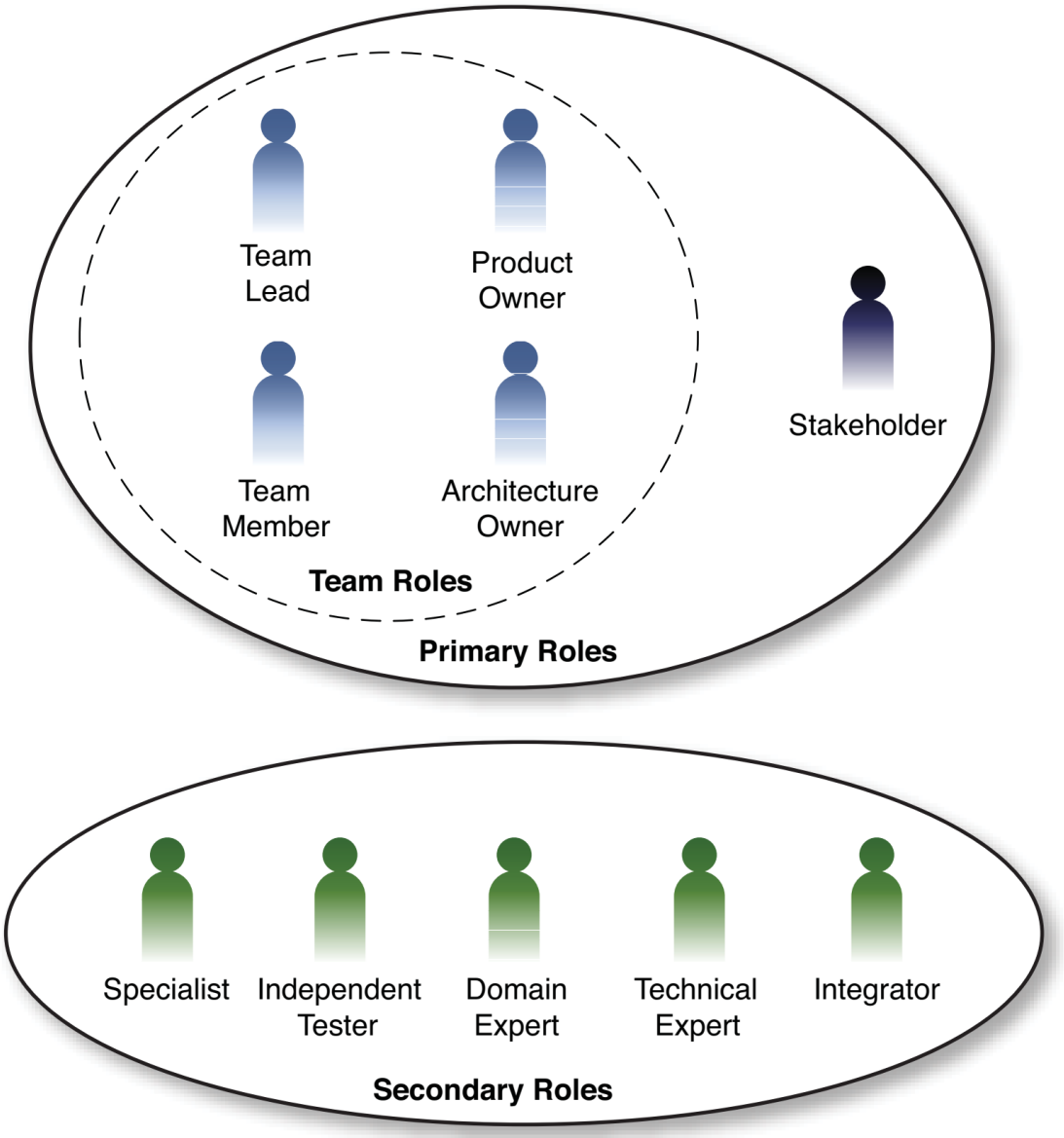
DAD: Evolving Lifecycles



[Ambler & Lines 2020]

DAD: Roles

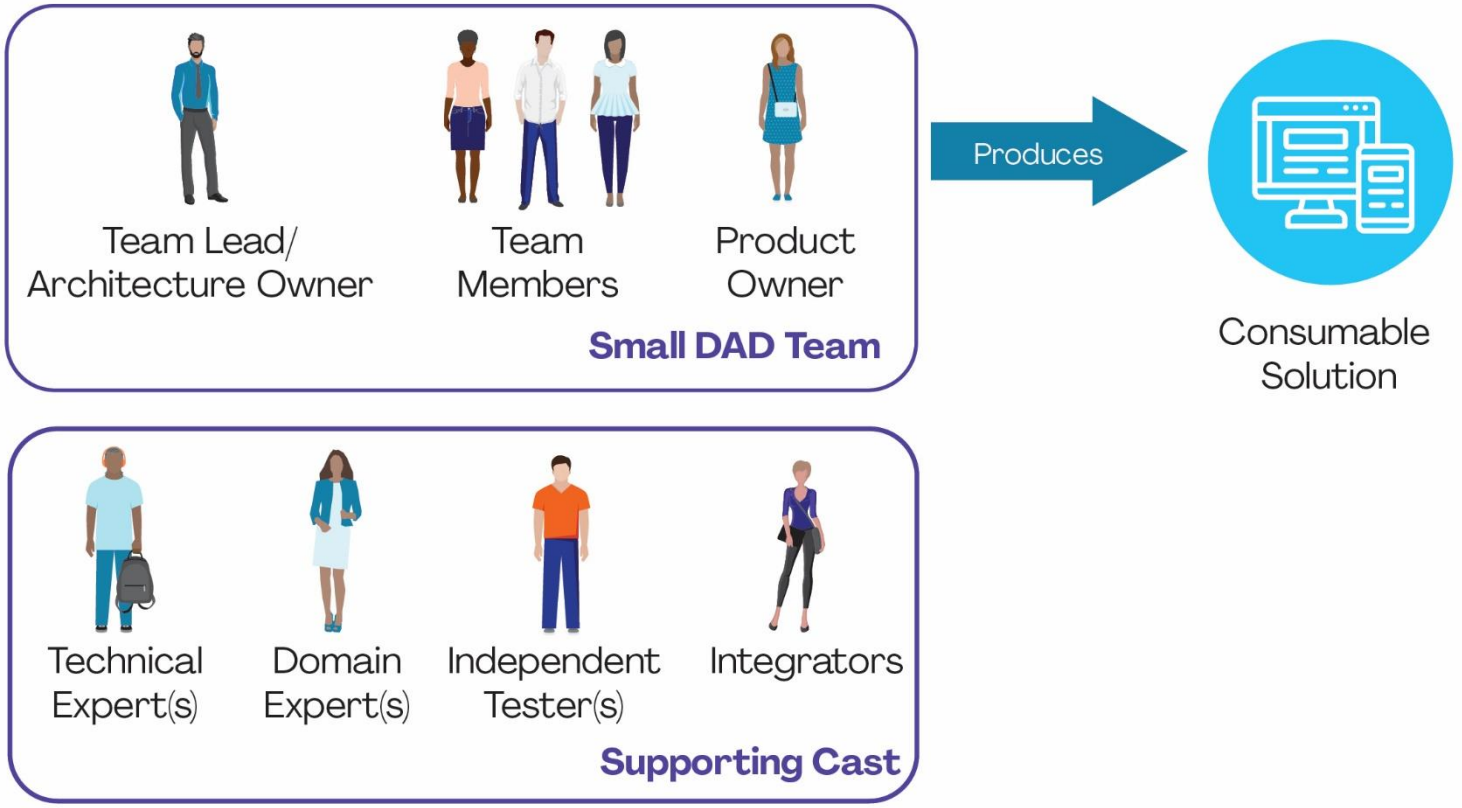


[Ambler & Lines 2012]

DAD: Teams

- DAD teams are typically small-to-medium sized.
  - DAD considers teams of 15 people or fewer to be small, and teams between 10 and 30 people to be medium-sized.
- For the Program lifecycle, there can be a Team of Teams:
  - Medium-sized (10 to 50 people)
  - Large (30+ people)
- DAD's advice is to reduce the project risk by keeping the teams as small and as geographically close as possible.

DAD: Structure of Small Teams



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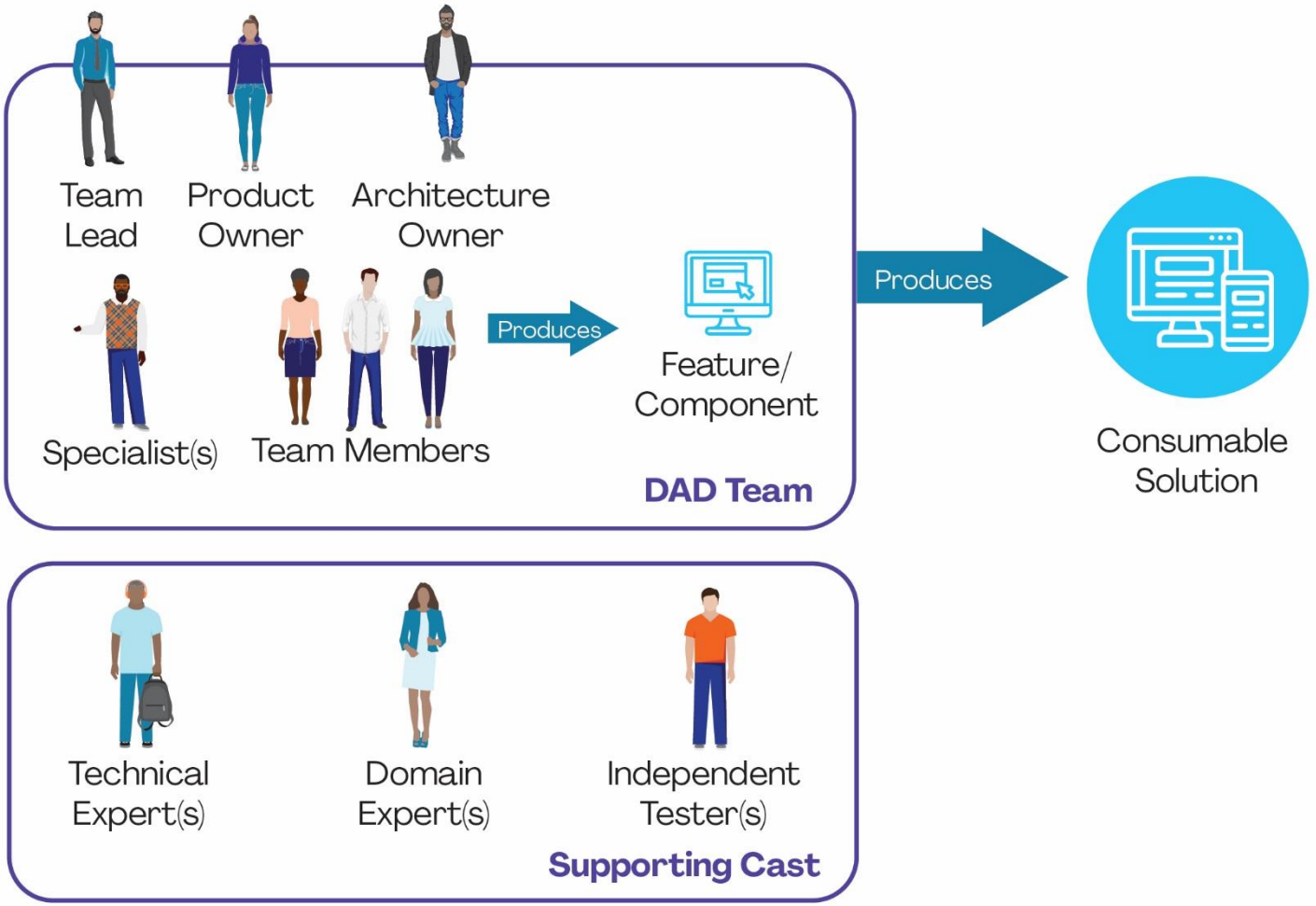
DAD: Structure of Medium-Sized Teams



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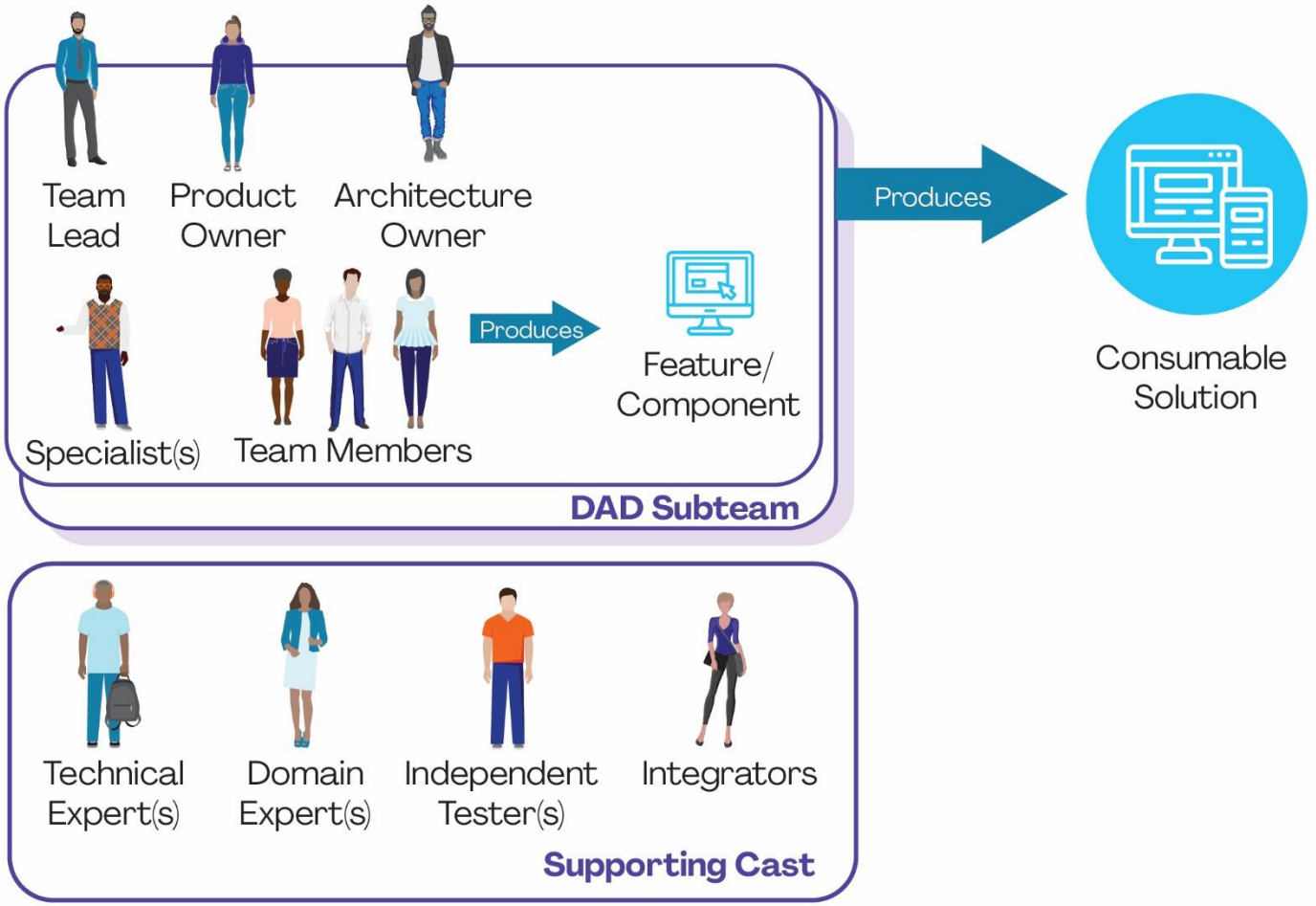
DAD: Structure of Medium-Sized Team of Teams



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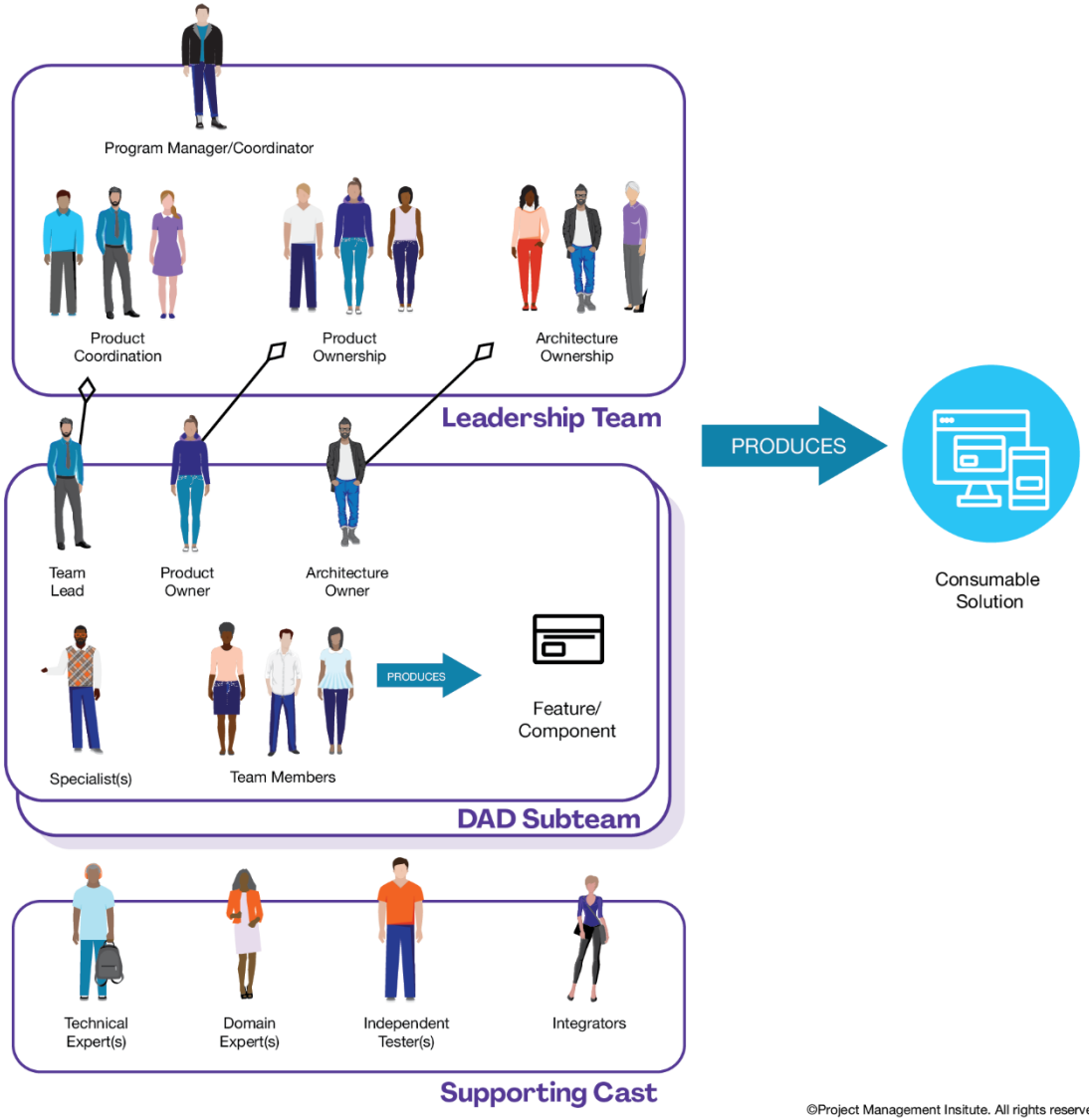
DAD: Structure of Large Team of Teams



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[Ambler & Lines 2020]

References

- Ambler, S.W., Lines, M., *Disciplined Agile Delivery*, IBM Press, 2012.
- Ambler, S.W., Lines, M., *Choose your WoW: A Disciplined Agile Delivery Handbook for Optimizing Your Way of Working,* Project Management Institute, 2020.