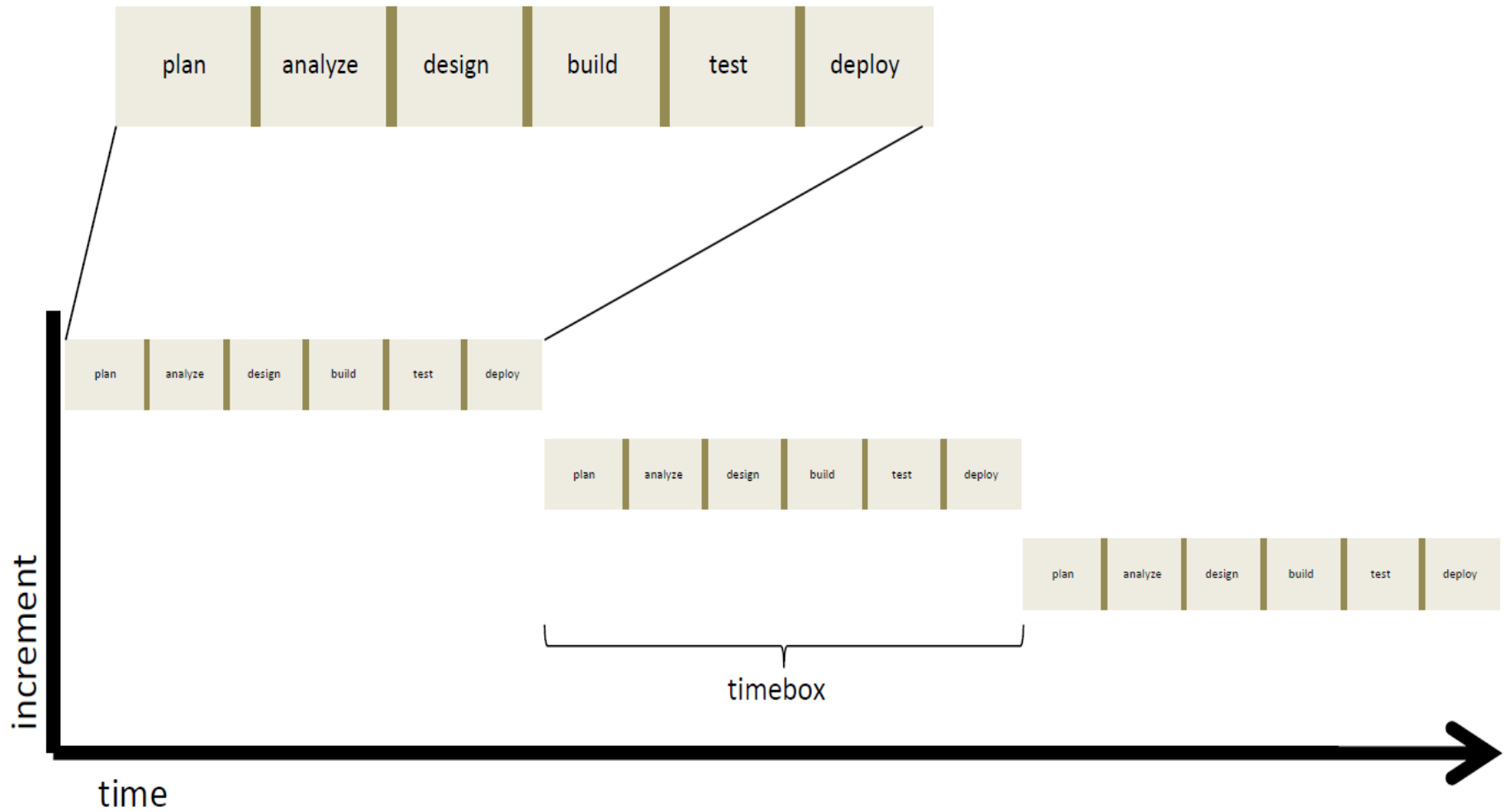


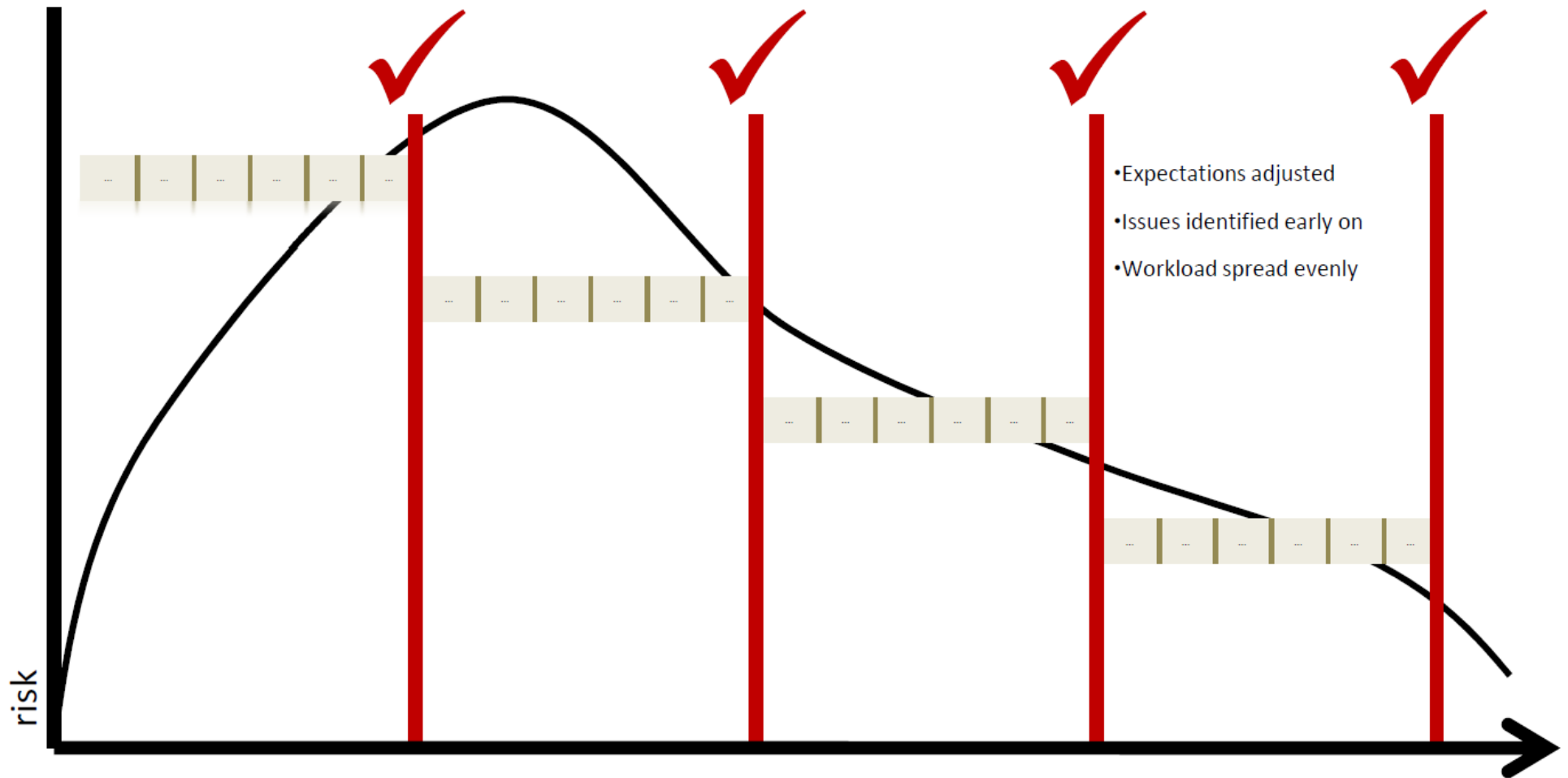
Agile Development Model

- An evolutionary, value-driven and time boxed development model
- Inspired by evolutionary and adaptive behavior
- Consists of several iterations of development cycles each contributing to an incremental growth of new capabilities
- An iteration consists of an entire cycle of plan, analyze, design, build, test, and deploy activities
- An iteration results in production-ready capabilities
- Iterations are time-boxed to a fixed duration

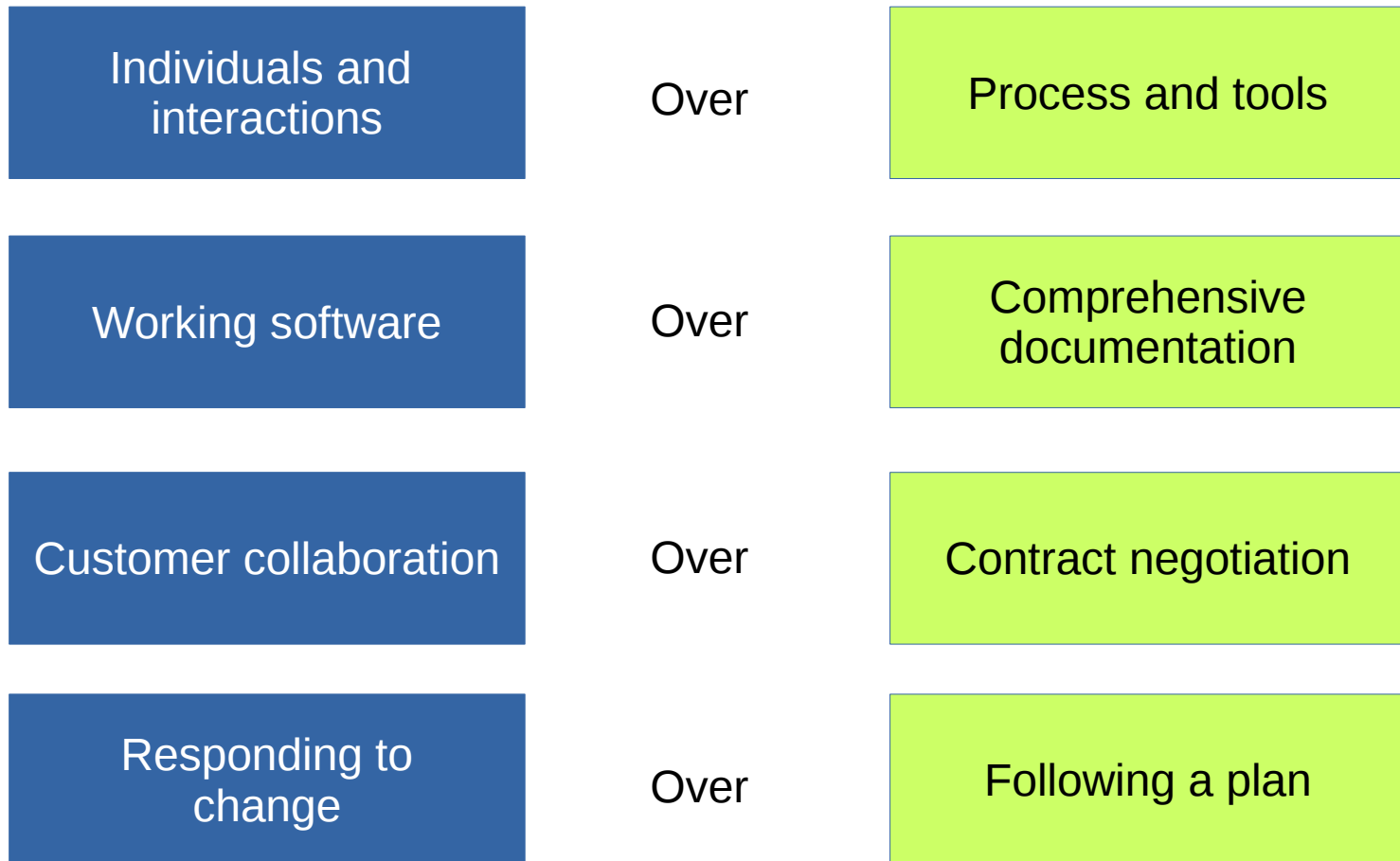
Agile Development Model



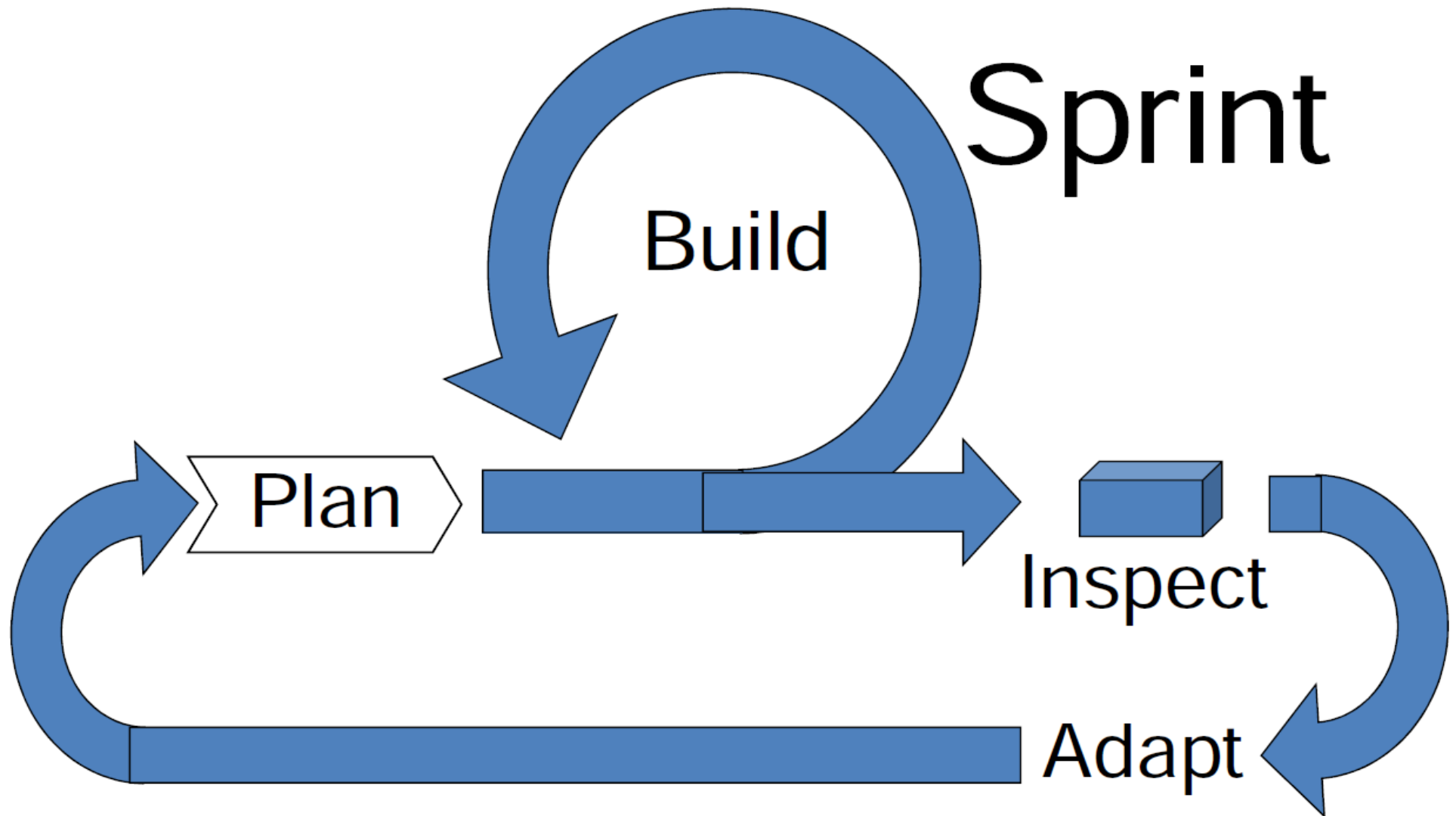
Agile Development Model



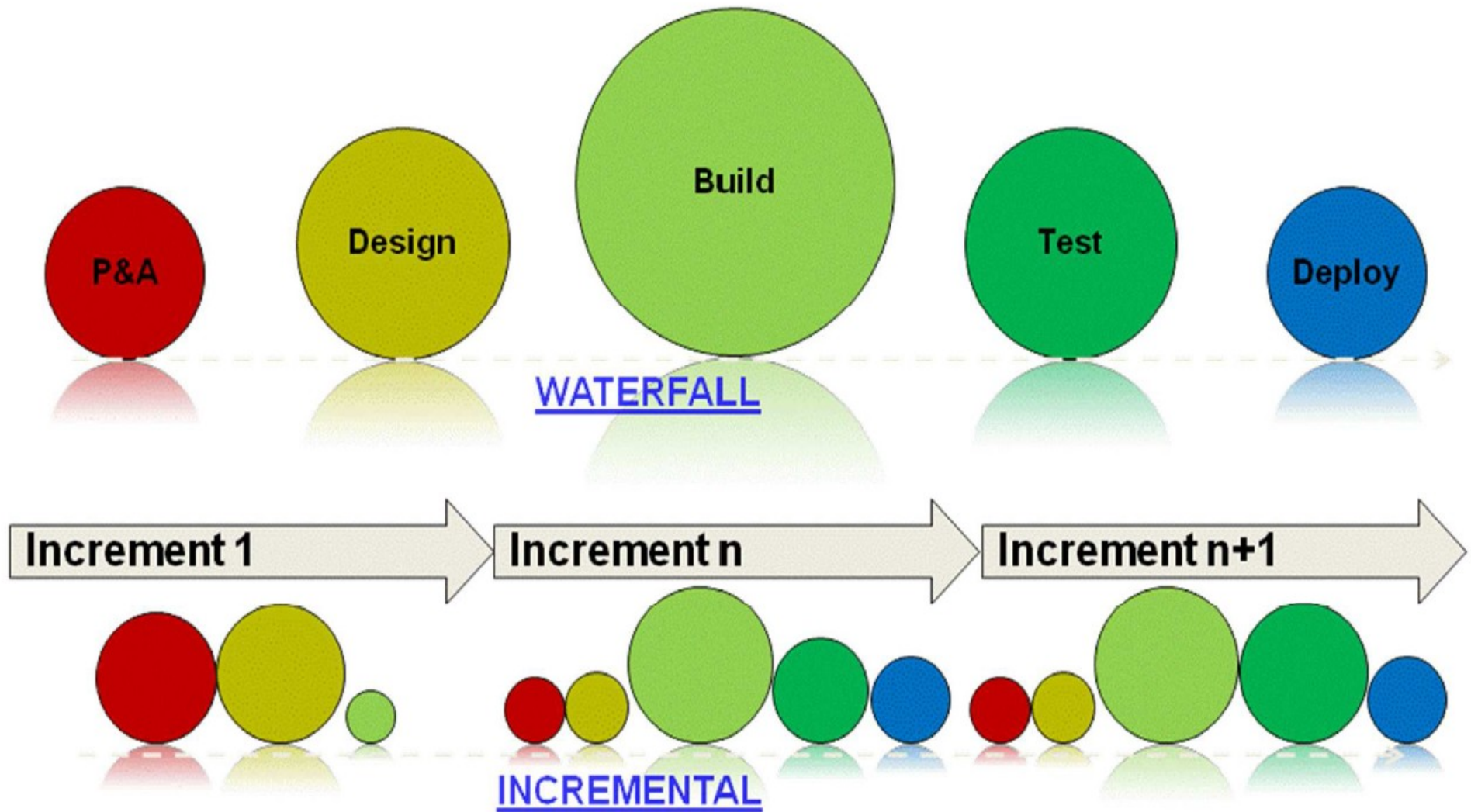
Agile Manifesto



Agile Development Model

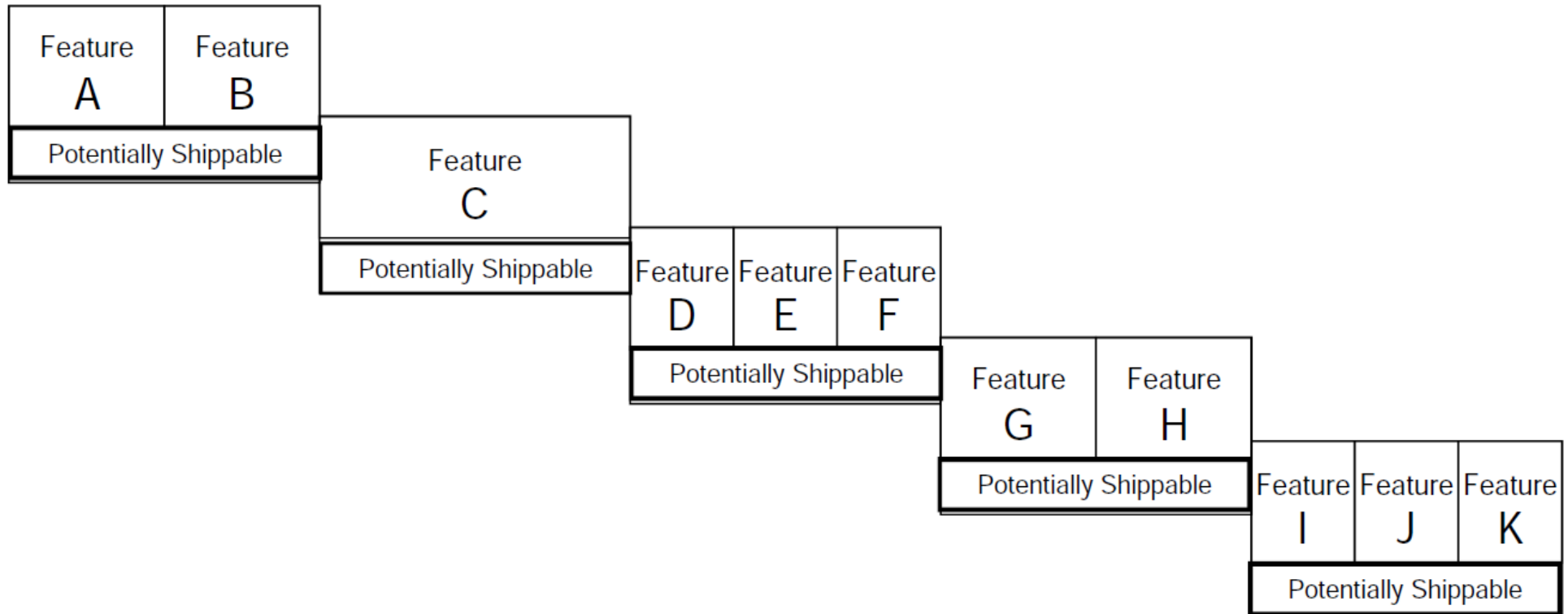


Agile Development Model



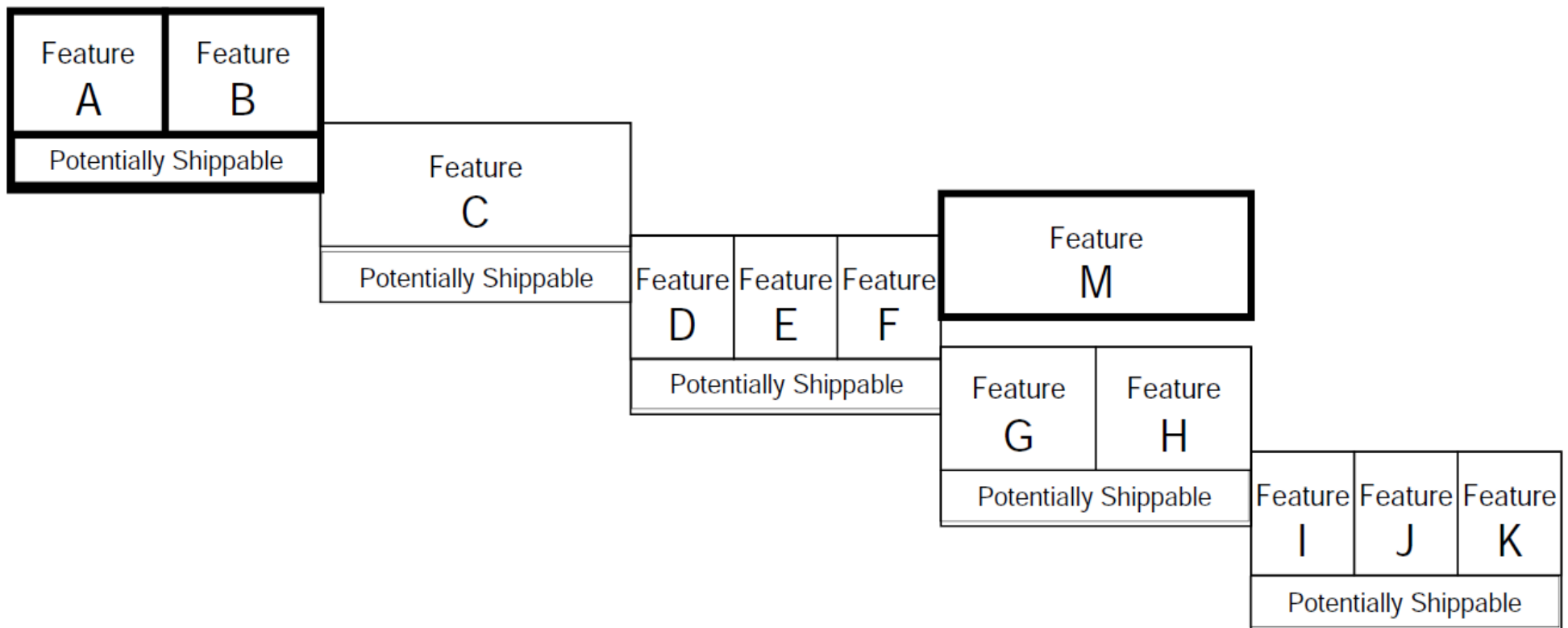
Agile Development Model

Cross-Functional Team (Design, Coding, Testing, Doc, UI, and other req'd skills in team)



Agile Development Model

- We can accommodate change during the development process.



Prioritizing work and Tracking Progress

- Requirements should be prioritized with the customer based on their value and risk profile.
- Project Progress should be measured.



Scrum

- Scrum roles
- Scrum Process
- Requirements
- Prioritising and Measuring Work

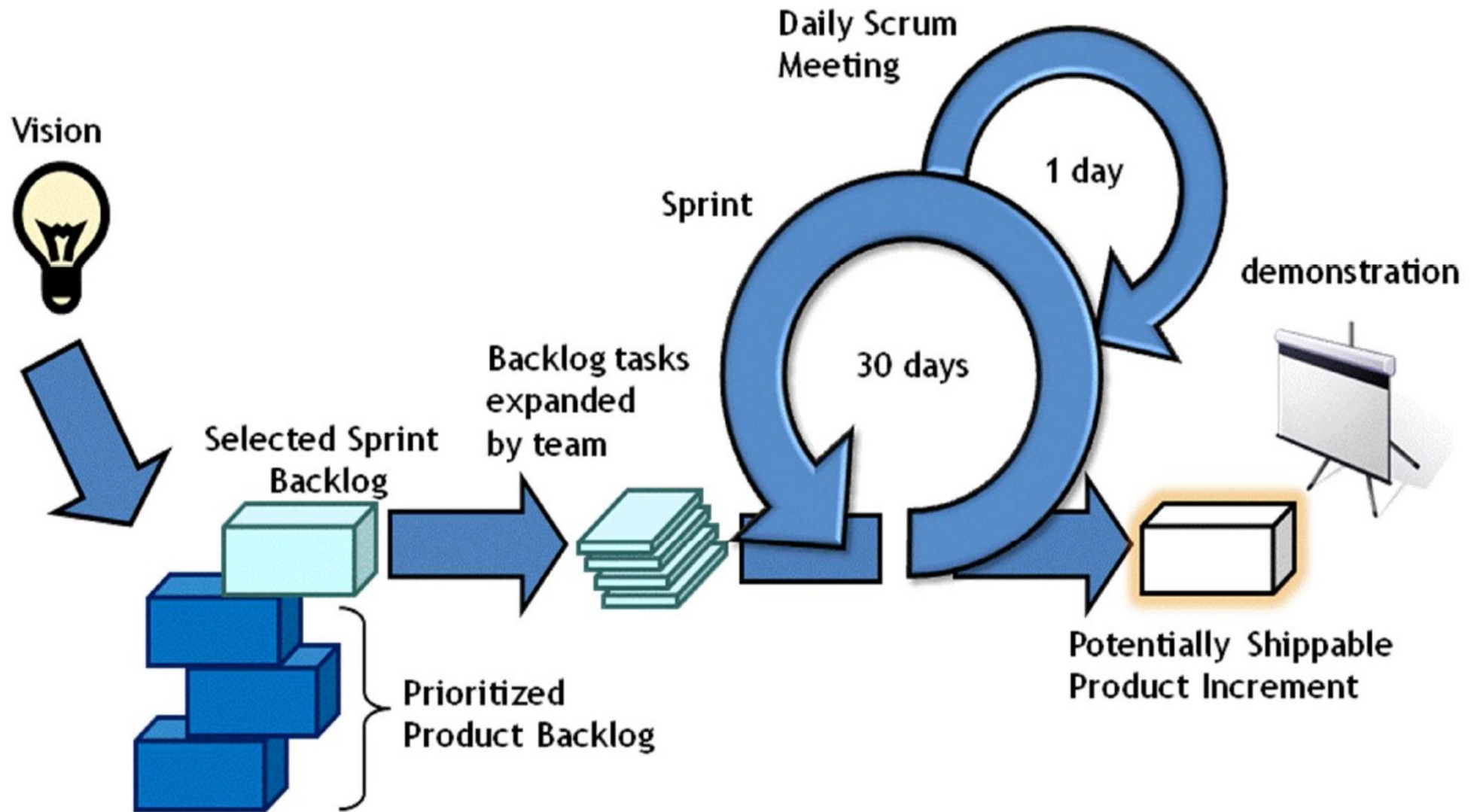
Scrum: An Overview

- SCRUM is an empirical process that deals with high complexity development
- Promotes empirical processes instead of defined processes
- Scrum is a simple but powerful framework for teams and customers to inspect and adapt as product is produced
- Promotes a high degree of clarity and transparency to everyone involved
- Scrum rapidly surfaces dysfunction, and enables teams and organizations to continuously improve their effectiveness
- Scrum exposes issues but does not provide the answers for fixing issues
- The Scrum framework can be used with technology specific implementation methodology

The Daily Scrum

- Allows the team to self-organize & synchronize on tasks
- Maximum 15 minutes
- Three questions to answer:
 1. What have you done yesterday?
 2. What are you working on today?
 3. What impediments are getting in your way?
- Things to avoid:
 - Telling the team what to do
 - Creating an atmosphere of fear
 - Have outsiders interfere
 - Providing direction without team involvement

Scrum



The First Increment

- May run a bit longer than subsequent increments to allow for sufficient preparation time but should be time boxed.
- Key activities include planning and analysis tasks as well as some key design tasks
- At the end of the first increment, requirements should be sufficiently detailed to support planning and scope management.
- Detailed requirements definition can be scheduled in increments.

Increment Length

- Shorter increments provide more frequent feedback but may increase overhead
- Most agile methodologies recommend an increment length between two weeks and one month.
- SCRUM recommends a 30 day increment length.
- Considerations for selecting an increment length:
 - Complexity of the solution
 - Highly complicated solutions may require more time to coordinate deployments.
 - Deployment automation is critical.
 - Maturity of the team
 - A team may need time to get used to fast paced development.
 - Shorter increments may increase pressure which can lead to a “throw it over the wall” mentality
 - Overall project timeline
 - If the development time is less than 6 months, it’s usually better to go with 2 week increments.
- Once you select an increment length, you should stick with it to establish a routine.

Scrum Roles

- Team
 - 7 +/- 2 People
 - Cross-functional
 - Self-organizing
 - 2 key freedoms, where possible
 - What to work on in a Sprint
 - Something familiar, something new...
 - How much time needed for a task
 - Line managers no longer imposing deadlines

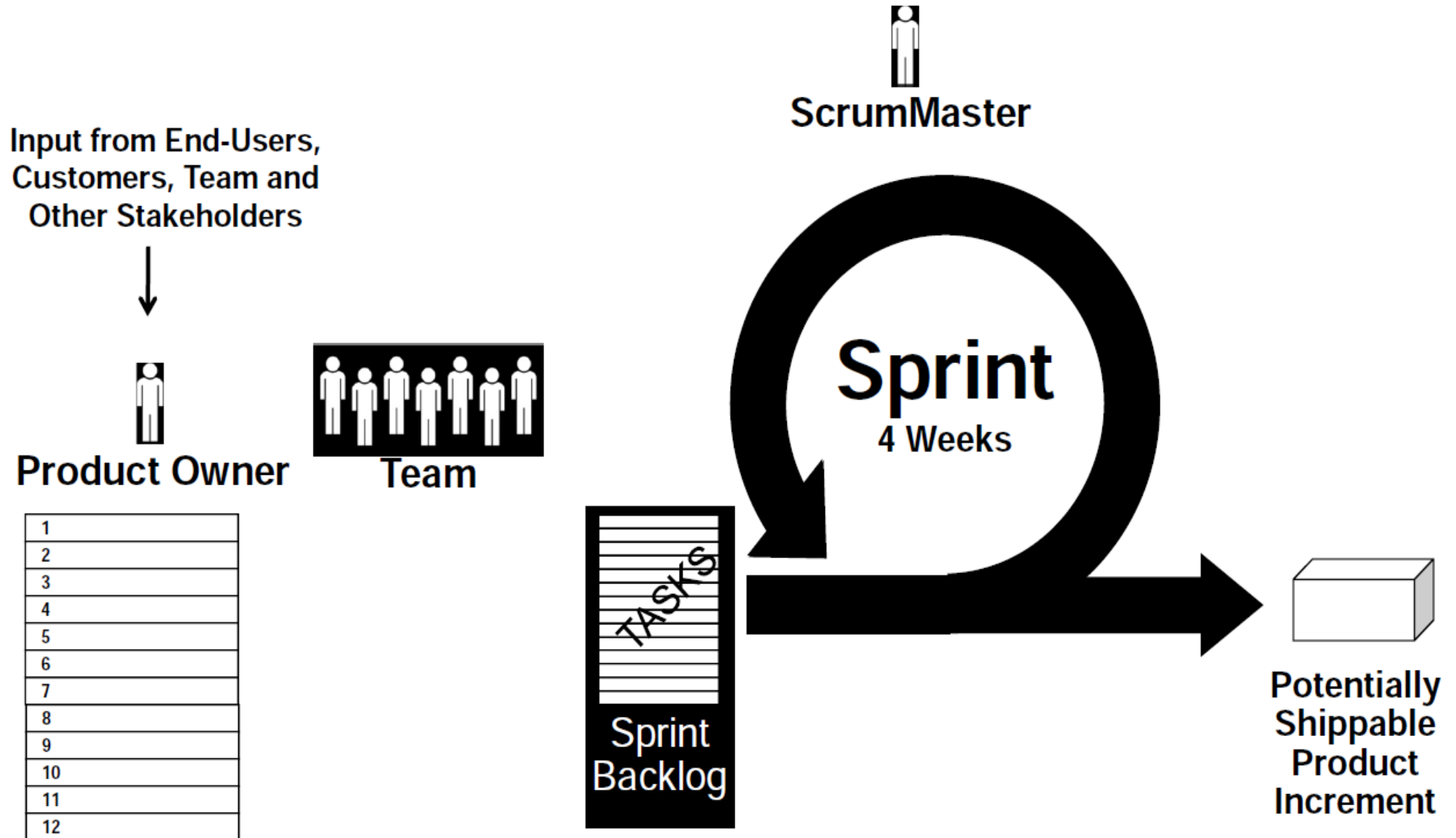
Scrum Roles

- Scrum Master
 - Responsible ensuring the Scrum process is understood and followed
 - 3 P's:
 - Process Owner
 - Teaches Scrum to Team, PO, and stakeholders
 - Coaches the Team, PO, and stakeholders to achieve maximum value and ROI using Scrum
 - Problem Solver
 - Helps remove Team's constraints and impediments ("blocks")
 - Protector
 - Protects the Team from disruption or interference

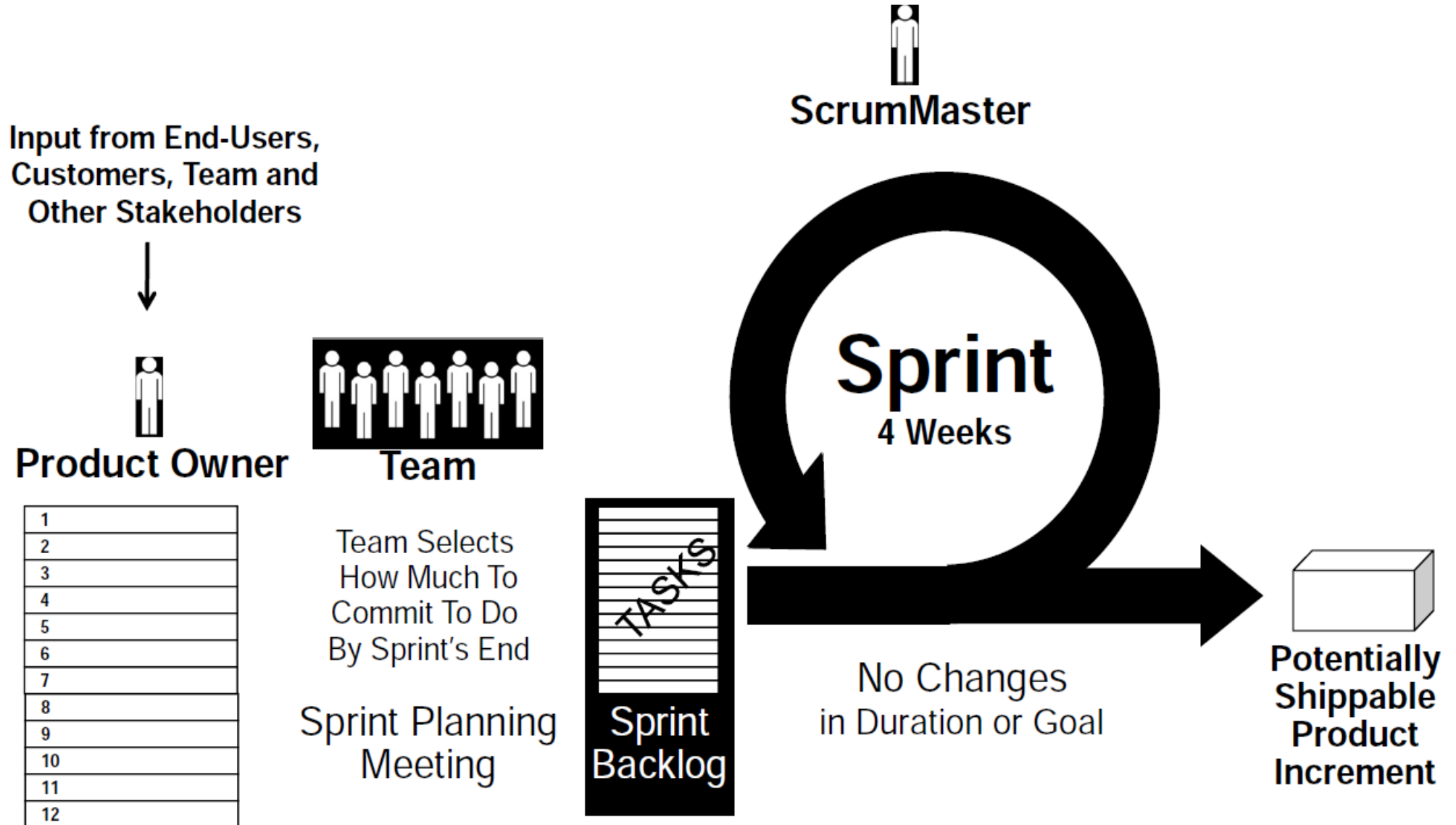
Scrum Roles

- Product Owner
 - Responsible for maximizing the value of the work that the Team does
 - Owns the vision and overall goals
 - Owns the prioritized list of what needs to be produced to achieve maximum value and ROI (the Product Backlog)
 - Decides when product is ready to ship

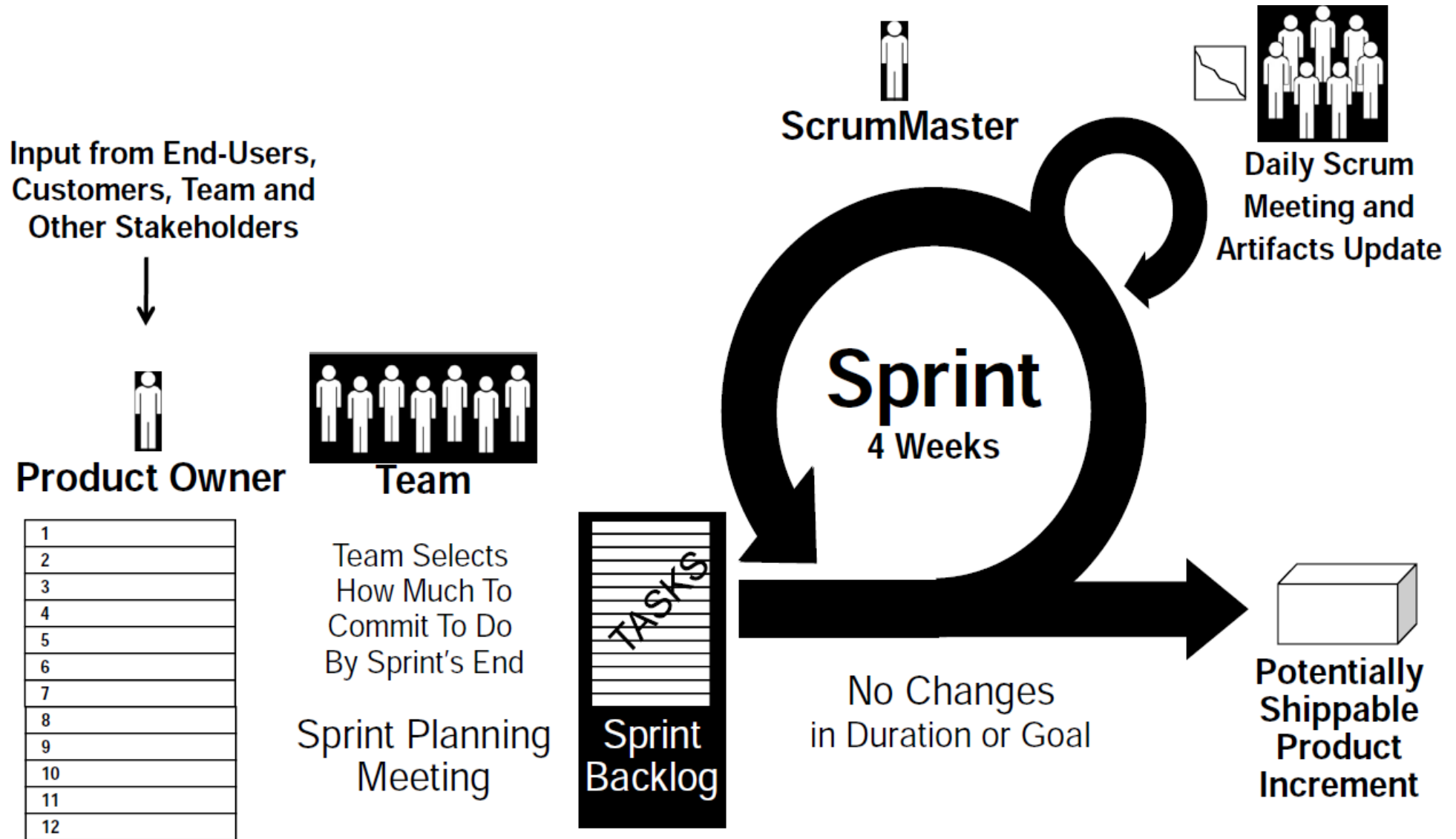
Scrum Process



Scrum Process



Scrum Process



Scrum Process

