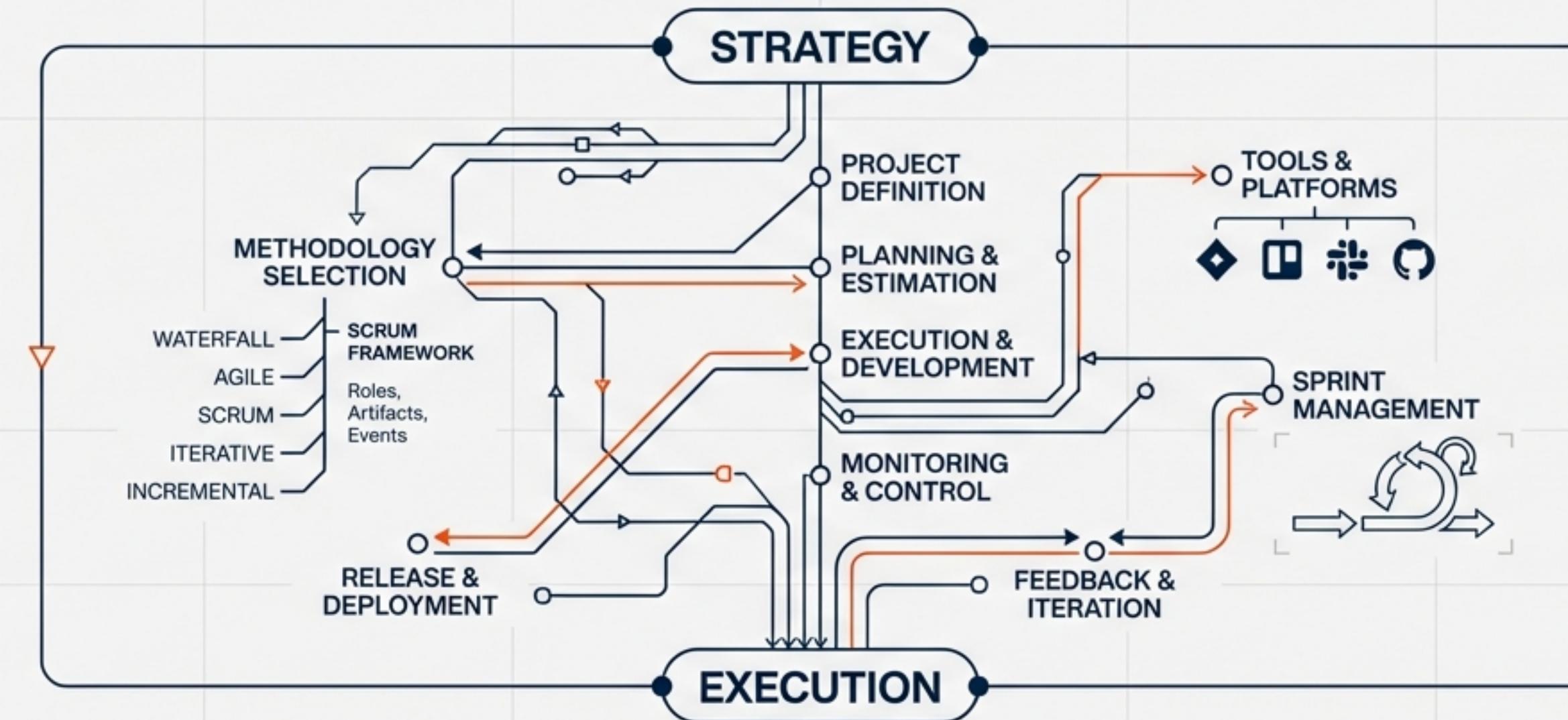


MASTERING SOFTWARE PROJECT MANAGEMENT

Methodologies, Frameworks, and Tooling



The Discipline of Coordination and Control

Project Management is the discipline of planning, executing, and overseeing software development projects. It involves coordinating resources, tasks, and timelines to ensure successful project outcomes while managing constraints.

Iron Triangle: Project Constraints



Structured and Linear Development Models

1. Waterfall Model



Linear, sequential approach where each phase must be completed before the next begins.

ADVANTAGE	DISADVANTAGE
Simple to manage.	Inflexible to changes.

2. Incremental / Iterative Models



Develops the system in small, manageable portions or through repeated cycles.

ADVANTAGE	DISADVANTAGE
Early delivery of parts.	Can lead to scope creep.

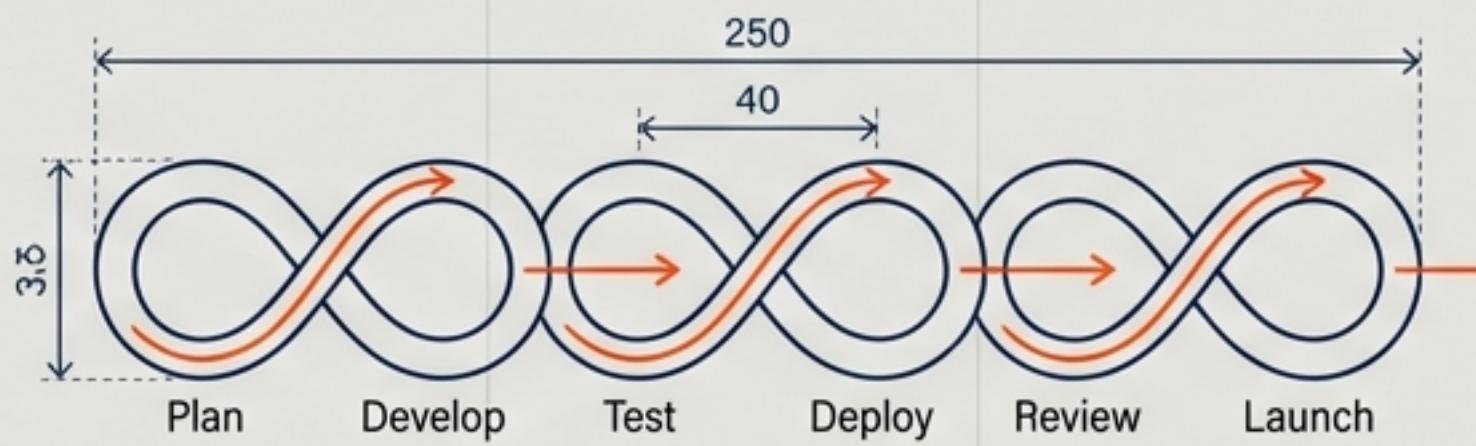
Adapting to Risk and Change



3. Spiral Model

Combines iterative development with a focus on risk analysis to ensure project stability.

Use Case:
Best for large, high-risk projects.

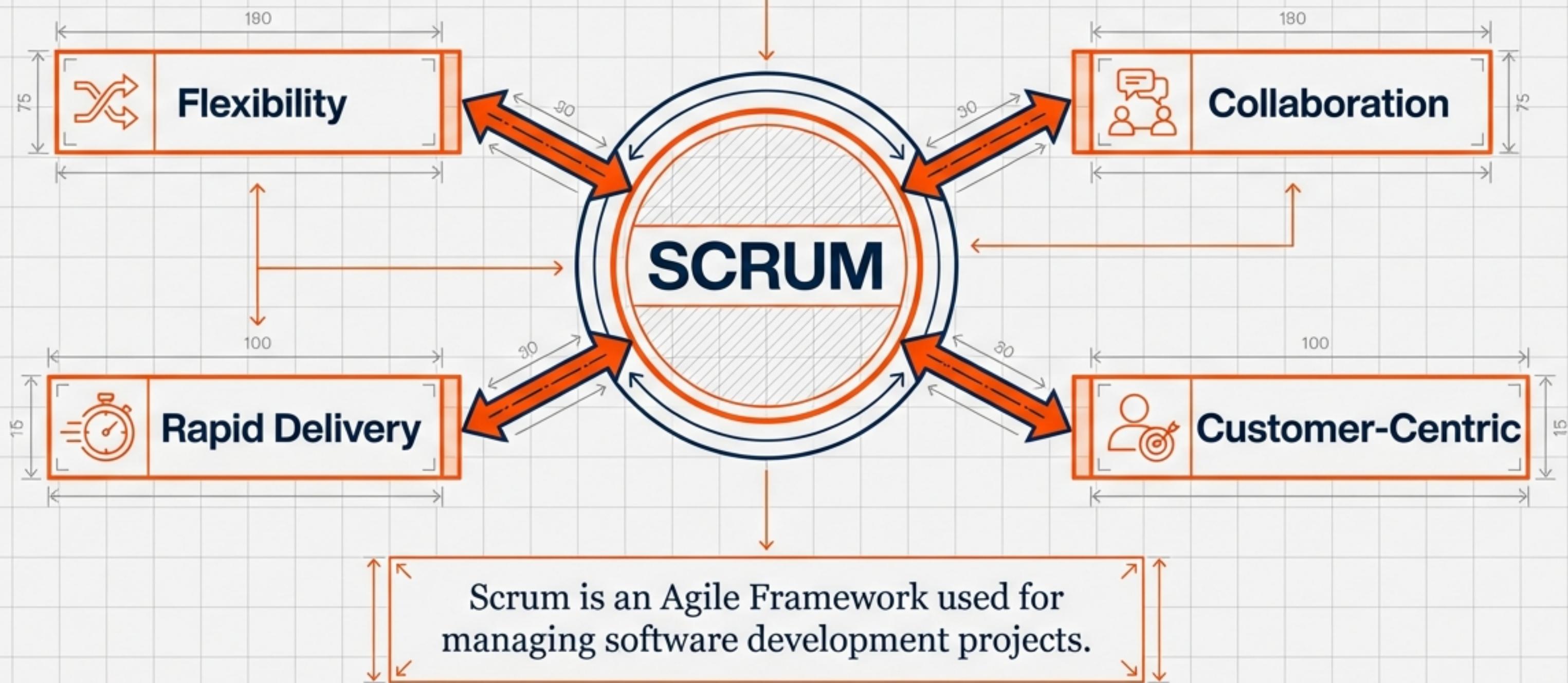


4. Agile Model

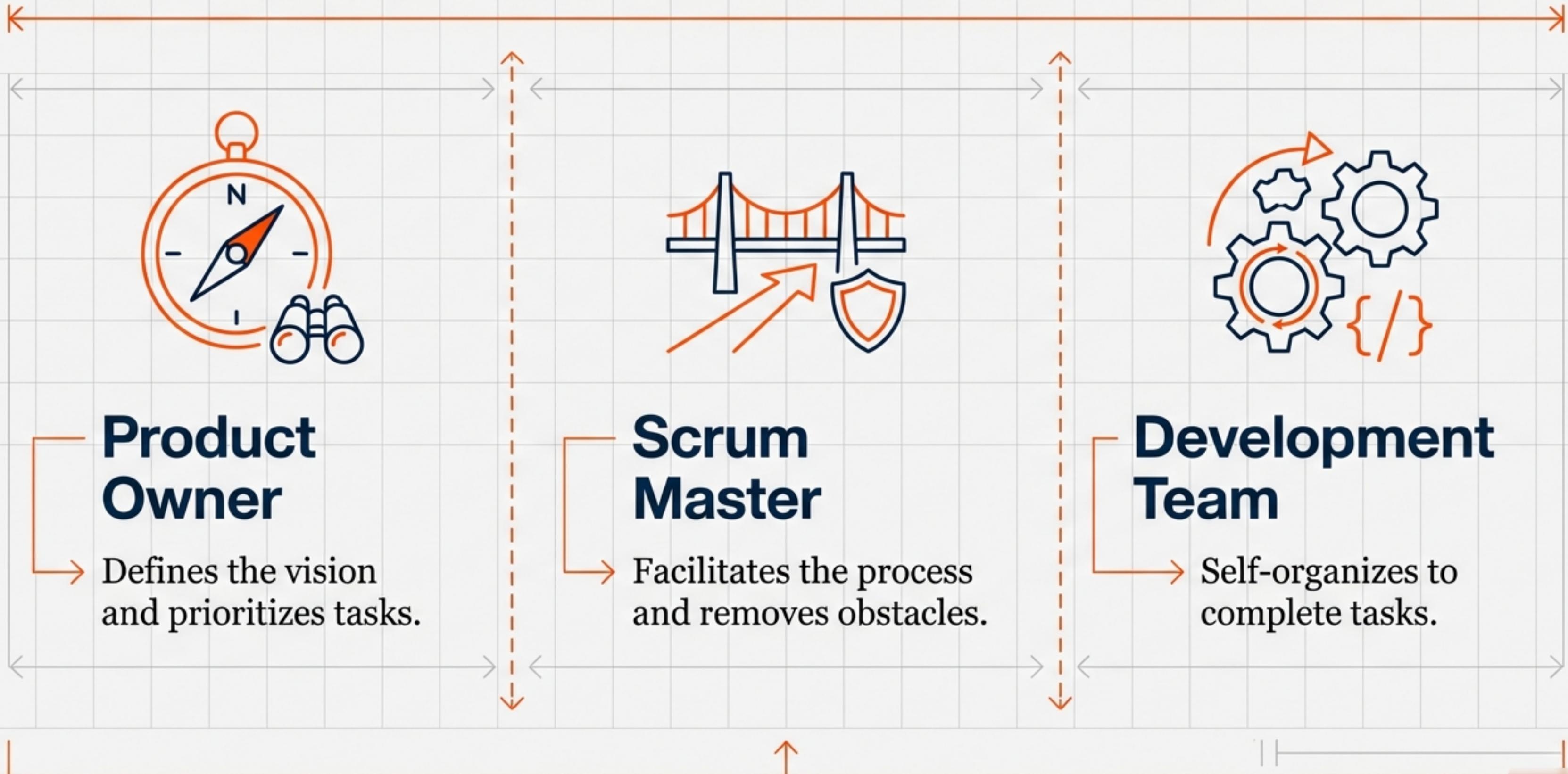
Iterative and incremental approach focused on flexibility, customer collaboration, and rapid delivery.

Key Attributes: Customer satisfaction, Continuous delivery, Responds to change

Scrum: The Agile Framework

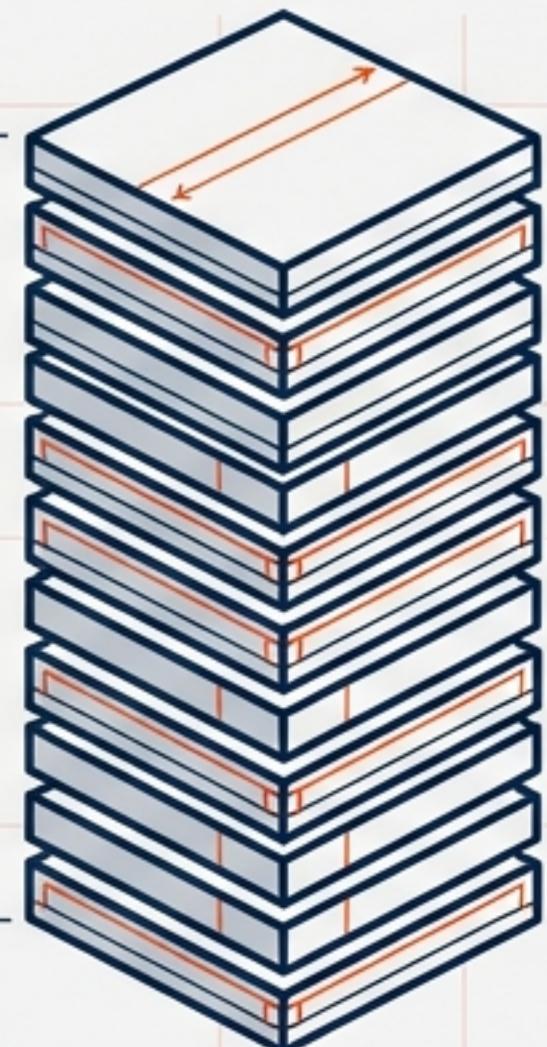


The Scrum Team Structure



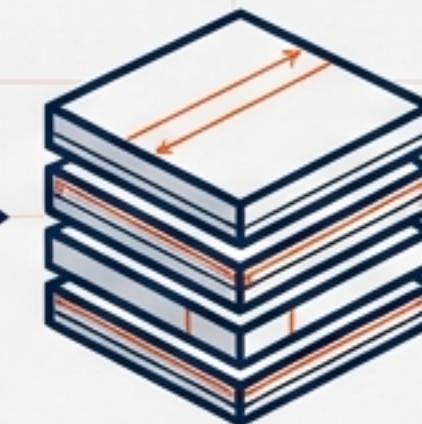
Artifacts of Development

Product Backlog

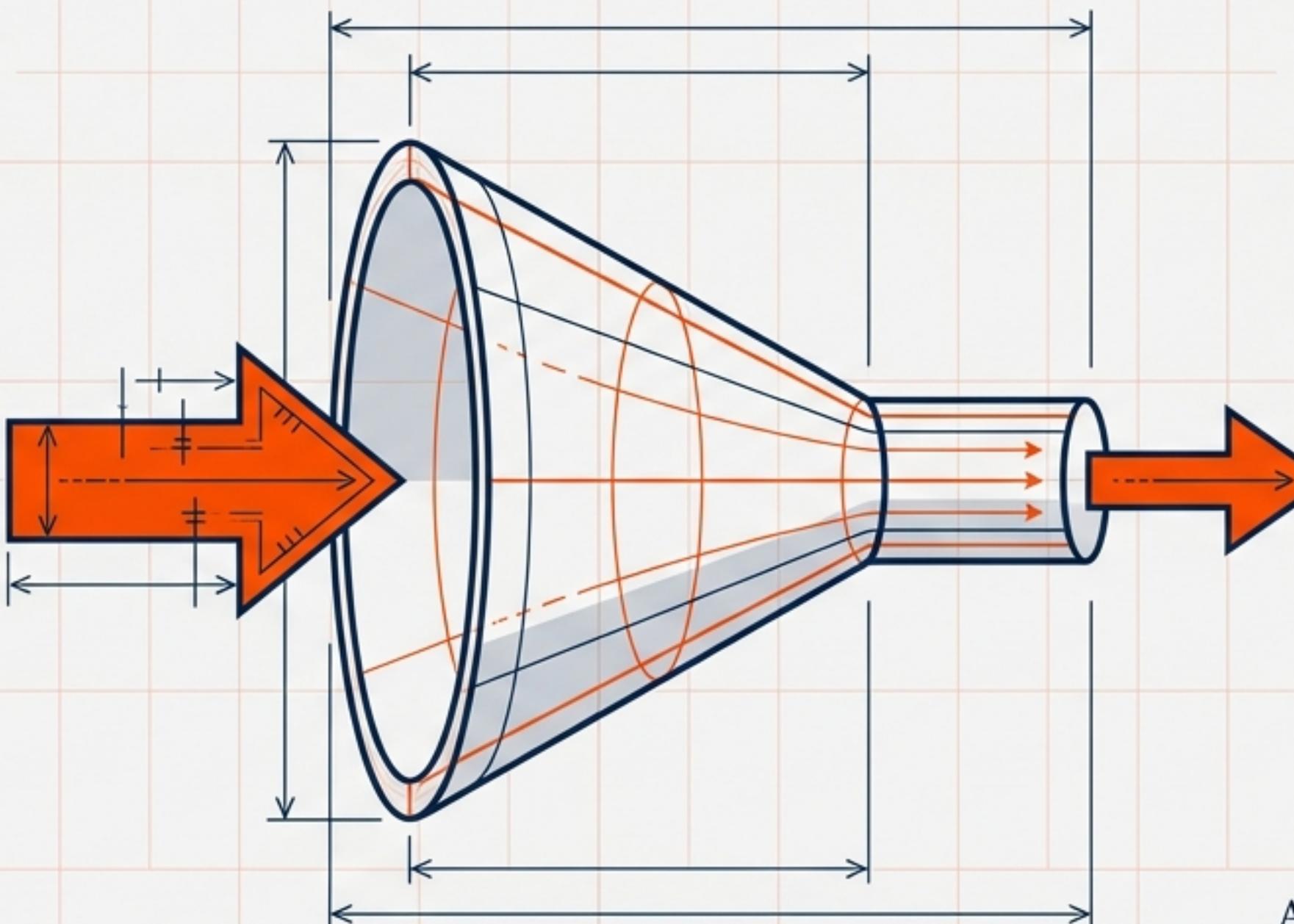


A prioritized list of work items or features.

Sprint Backlog



A subset of items selected for the current sprint.



The Rhythm of the Sprint

Sprint Retrospective

Reflect and improve processes.

Sprint Review

Show completed work to stakeholders.



Sprint Planning

Deciding what to work on.



Daily Scrum

Daily sync of progress.



Based on the Sprint Events framework.

The Sprint: A Time-Boxed Commitment



Focus:

Teams concentrate on delivery.



Time-boxed:

Regularity and predictability.

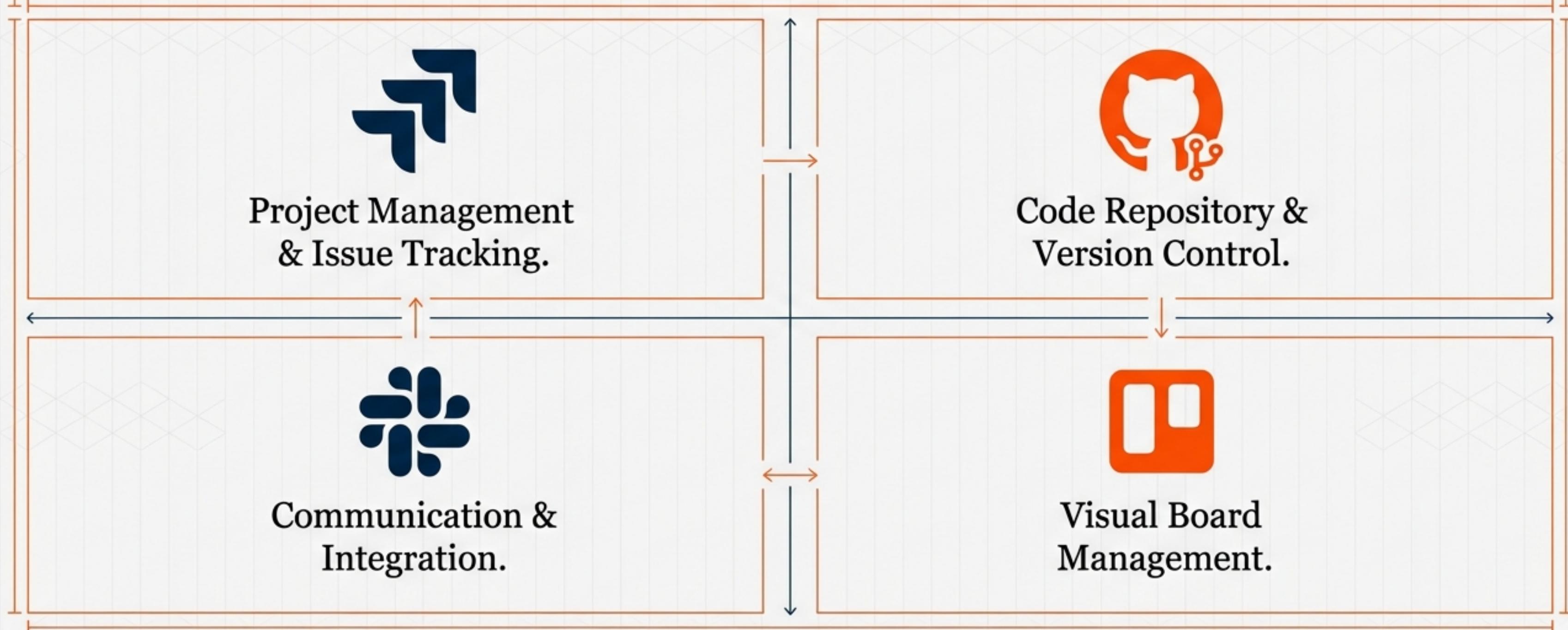


Incremental Delivery:

Usable software features.

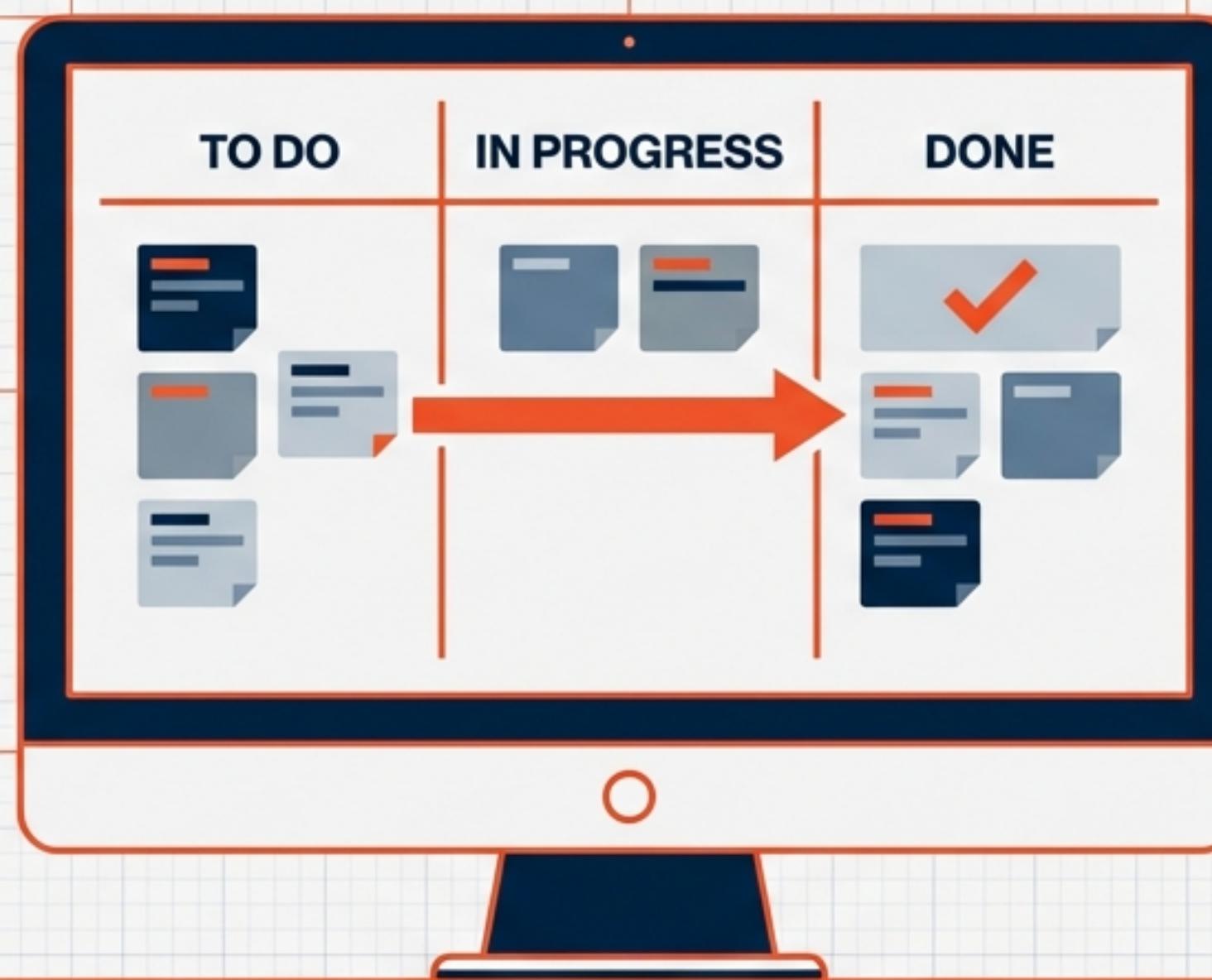
The Software Ecosystem

Essential Tools for Agile Development and Collaboration



Visualizing Work with Kanban

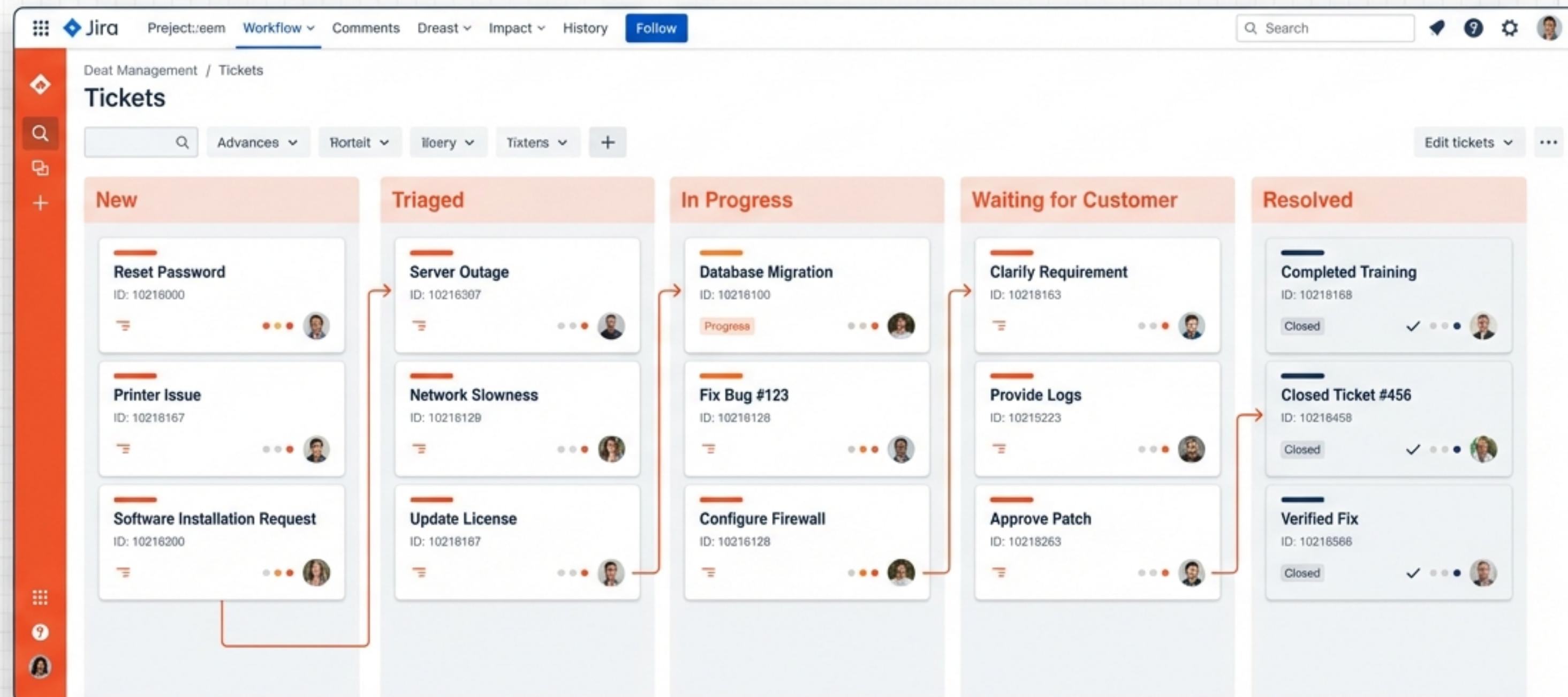
Goal: Make the flow of work visible and manage capacity.



Conceptual illustration of a Kanban Board tool, as used for agile project management.

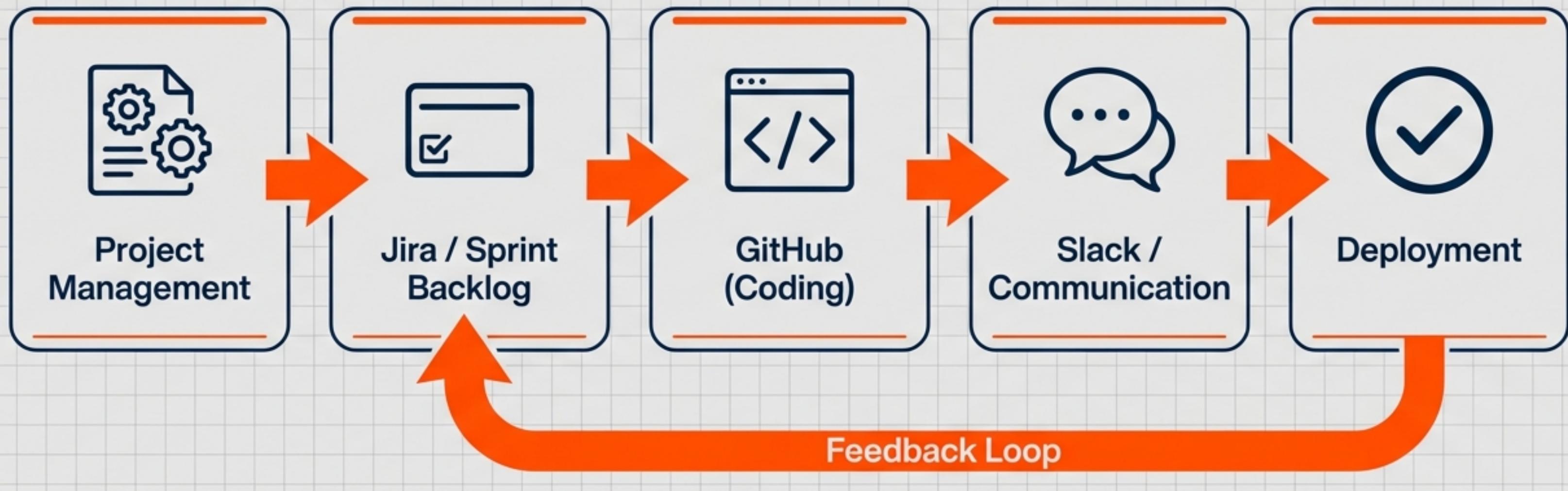


Application: The IT Support Workflow



New: Submitted | Triaged: Prioritized | In Progress: Working | Waiting: Cust. Action | Resolved: Closed

The Integrated Development Flow



Why This Approach Works

Adaptability

Rapid response to changes via Agile.



Predictability

Fixed delivery dates via Time-boxing.



Quality

Regular reviews and shippable increments.



Transparency

Clear visibility through artifacts and visual boards.



Resources & Continuous Improvement



Access the complete toolkit and templates.

- Resources Download
- Anonymous Feedback Gathering

Reflect, Adapt, Deliver.