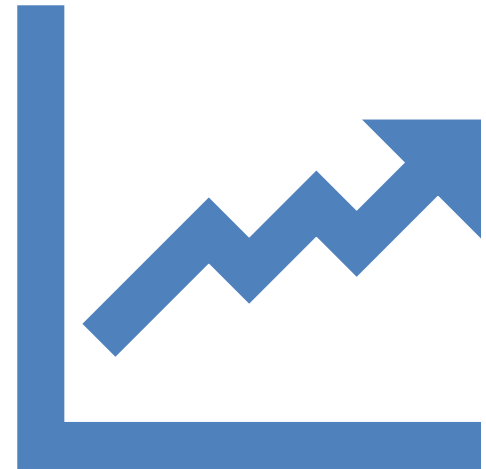CSD 380-A311 DevOps
Module 1.2 Assignment
Usiel Figueroa
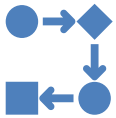May 25, 2025

The Technology Value Stream

What is the Technology Value Stream?

- A series of steps required to convert a business hypothesis into a technology-enabled service or product.
- Key Components: Development, Testing, Deployment, Operations
- Reference: Prakash (n.d.)

Value Stream Mapping and Management

Value Stream Mapping: Visual representation of every step in the work process.

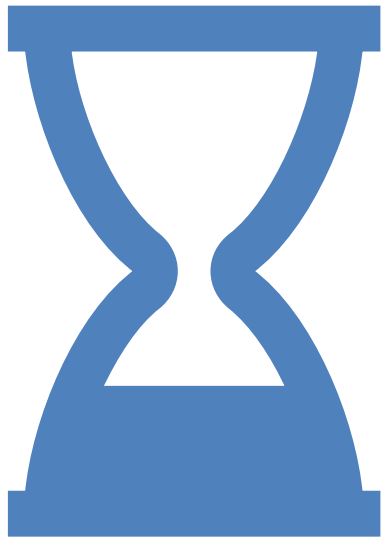Goal: Identify inefficiencies, delays, and bottlenecks.

Value Stream Management: Real-time governance and continuous improvement.

Reference: Shariff (2022)

Lead Time vs. Processing Time

- Lead Time: Total time from request initiation to delivery.
- Processing Time: Actual time spent working on the request.
- Example: A feature might have 5 days of processing time within a 30-day lead time.
- Reference: Kim (2021), Lawrence (2020)
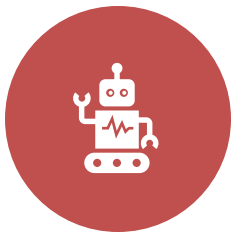
Common Scenario – Long Deployment Lead Times

Traditional IT Deployments: Lead times of weeks or months.

Causes: Manual approvals, lack of automation, siloed teams.

Consequences: Delayed feedback, high risk of failure.

Reference: Kim (2021),

Walsh (2025)

DevOps Ideal – Short Deployment Lead Times

DevOps Goal: Deployment lead times of minutes.

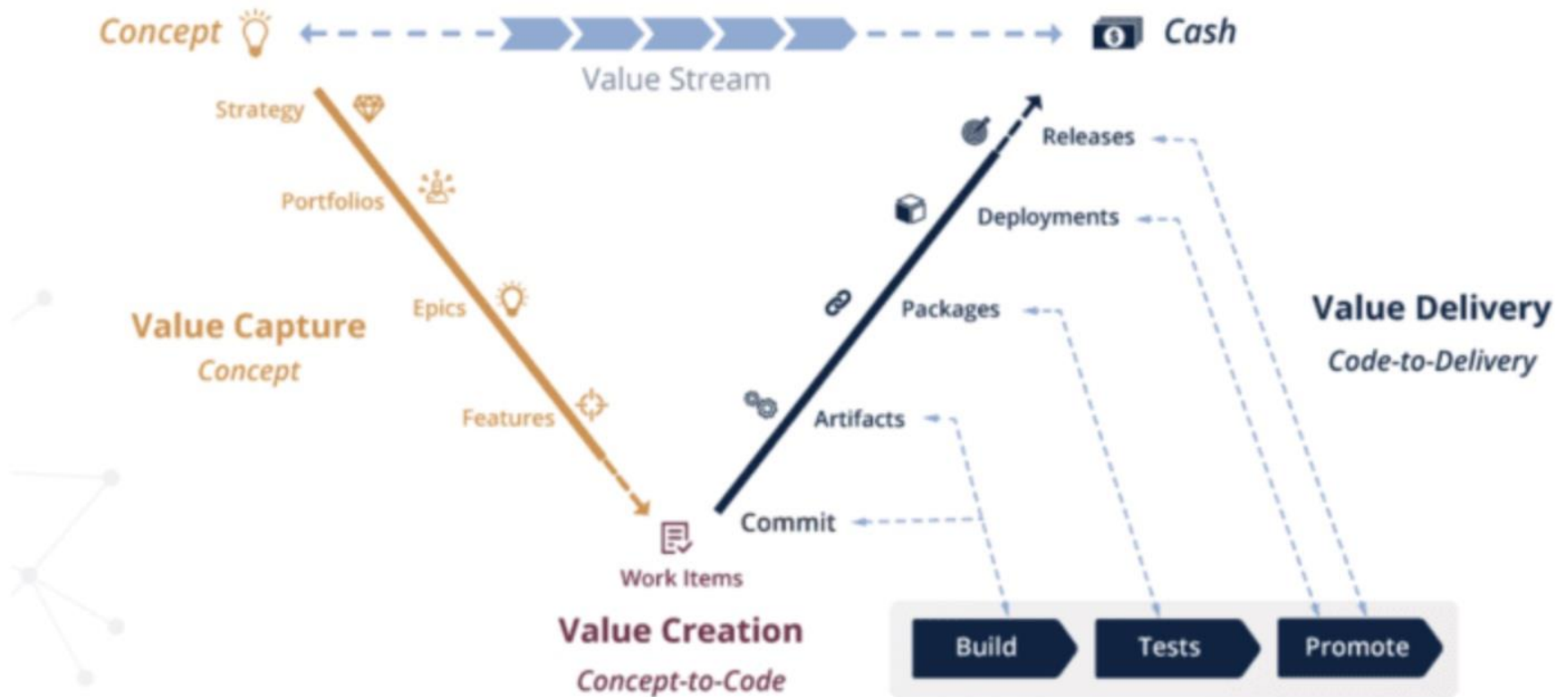Achieved Through: CI/CD pipelines, automation, small batch changes.

Benefits: Faster innovation, reduced risk, better customer satisfaction.

Reference: Kim (2021), Walsh (2025)

Visual – The Technology Value Stream

Hughart, N. (2024). *What is Value Stream Management?* [Photograph]. Buildfire.
https://buildfire.com/value-stream-management/

Key Takeaways

Understanding the value stream helps identify delays and improve flow.

DevOps aims to reduce lead time and increase efficiency.

Value stream mapping and management are critical for continuous improvement.

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