



The Technology Value Stream: From Months to Minutes

A deep dive into how DevOps transforms traditional deployment cycles into efficient value delivery systems that benefit both organizations and customers.



The Technology Value Stream

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Introduction



The Technology Value Stream

Represents the journey of transforming business ideas into tangible customer value through technology implementation.



DevOps Core Focus

Accelerates value delivery by eliminating waste and optimizing flow throughout the entire technology pipeline.



Our Exploration Today

- Understanding the critical difference between lead time and processing time
- Examining why traditional deployments take months to complete
- Discovering how DevOps transforms months-long cycles into minutes

Lead Time vs. Processing Time

1	<p>Lead Time</p> <p>The total elapsed time from when a request is made until it's delivered to the customer.</p> <p>Includes all waiting periods, handoffs, approvals, and actual work.</p>
2	<p>Processing Time</p> <p>The amount of time spent actively working on the task.</p> <p>Represents the actual value-adding activities in the workflow.</p>

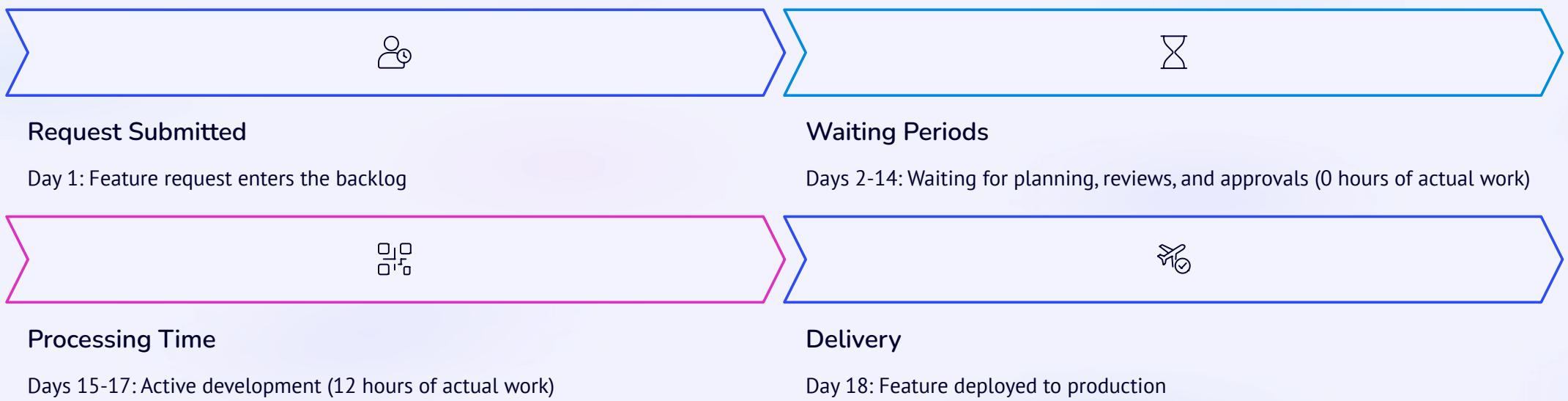


Optimize your time

The gap between lead time and processing time represents waste in the system—often in the form of waiting, context switching, and unnecessary handoffs between teams.



Visualizing Lead Time vs. Processing Time



In this example, the **lead time is 18 days**, but the **processing time is only 12 hours** – revealing significant opportunity for improvement.

The Old Way: Months-Long Deployments

Manual Reviews & Approvals

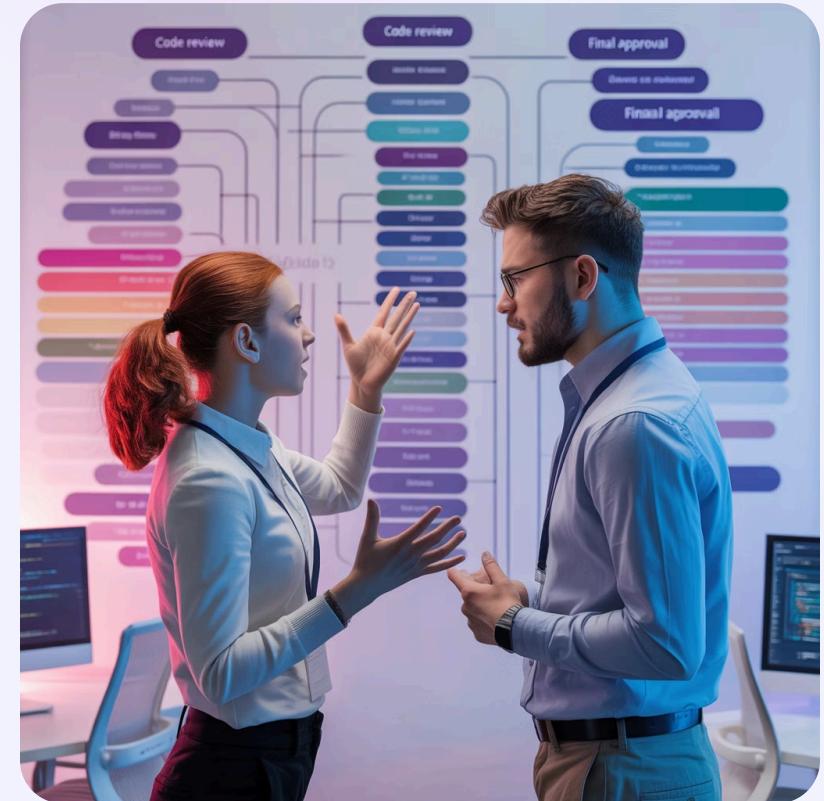
Lengthy change approval boards (CABs) and multi-level sign-offs create bottlenecks that can delay projects for weeks.

Testing Bottlenecks

Manual testing cycles performed at the end of development consume significant time and often uncover issues that require extensive rework.

Organizational Silos

Work passes sequentially through separate teams (Dev → QA → Ops) with lengthy handoffs and coordination delays between each group.



The result: Slow delivery, increased risk from large batch sizes, and frustrated teams dealing with mounting technical debt.

The DevOps Ideal: Minutes, Not Months



Continuous Integration (CI)

Developers merge code changes frequently—often multiple times daily—with automated testing to catch issues immediately.

Continuous Delivery (CD)

Software is always in a deployable state through automated build, test, and deployment pipelines.

Automated Testing

Comprehensive automated test suites verify code quality and functionality without manual intervention.

Cross-Functional Teams

Dev and Ops work together with shared responsibilities and objectives, eliminating handoff delays.

This approach delivers **quicker feedback loops**, **fewer errors**, and **higher quality software** while reducing organizational stress.

Traditional vs. DevOps Approach

Metrics	Traditional Way	DevOps Way
Deployment Frequency	Quarterly or monthly	Multiple times per day
Lead Time	Months to years	Hours to days
Change Failure Rate	20-60%	0-15%
Recovery Time	Days to weeks	Minutes to hours
Risk Profile	High risk, infrequent releases	Low risk, frequent small changes
Team Satisfaction	Lower, high-stress releases	Higher, sustainable pace

High-performing DevOps organizations deploy **3,000 times more frequently** than low performers, with **lead times 8,000 times faster**.

The Value Stream Flow

Idea Generation
Business needs are identified and translated into technical requirements.

Feedback
Customer usage data drives the next iteration of improvements.

Deployment
Changes are safely delivered to production environments.



Planning
Work is prioritized and sized for rapid, incremental delivery.

Development
Code is written with continuous integration ensuring quality.

Testing
Automated testing verifies functionality and performance.

The continuous flow eliminates waste at each stage, creating a virtuous cycle of constant improvement and value delivery.

Key Takeaways



Lead Time = Customer Wait

The entire duration customers wait for their requested value—a critical competitive differentiator in today's market.



Processing Time = Real Work

The actual value-adding activities that typically make up less than 15% of the total lead time in traditional environments.



Traditional IT = Long Delays

Months-long deployment cycles caused by handoffs, manual processes, and organizational silos.



DevOps = Speed + Safety

Automated pipelines enable safe, reliable deployments in minutes rather than months.

Shorter lead times create a **virtuous cycle** of faster learning, better quality, increased customer satisfaction, and improved business outcomes.

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