The Technology Value Stream

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Module 1

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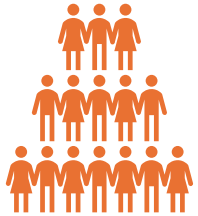
What is VSM?



A set of rules to help teams deliver valuable, efficient, and quality code to customers.

Focuses on:

How fast features requested by customers are built and delivered.

Ensuring customers receive value from updates.

VSM helps unify teams and align them with meeting customer expectations.

Defining Lead Time vs Processing Time

Lead Time:

Represents what customers experience while waiting for the product.

A key measure of performance in value streams.

Long lead times can negatively impact customer satisfaction.

Processing Time:

Starts when the team begins working on the project.

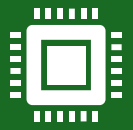
Ends when the project is completed.

Deployment Lead Times

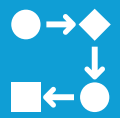
Software applications are inherently complex and demand significant effort, often resulting in lead times spanning several months. Tackling these objectives without a structured plan is rarely effective. Additionally, juggling too many tasks simultaneously can lead to inefficiency, which is where Work-In-Progress (WIP) limits become essential. Completing each task accurately is crucial, as mistakes can lead to substantial time lost in repairs and corrections.

Deployment Lead Times of Minutes

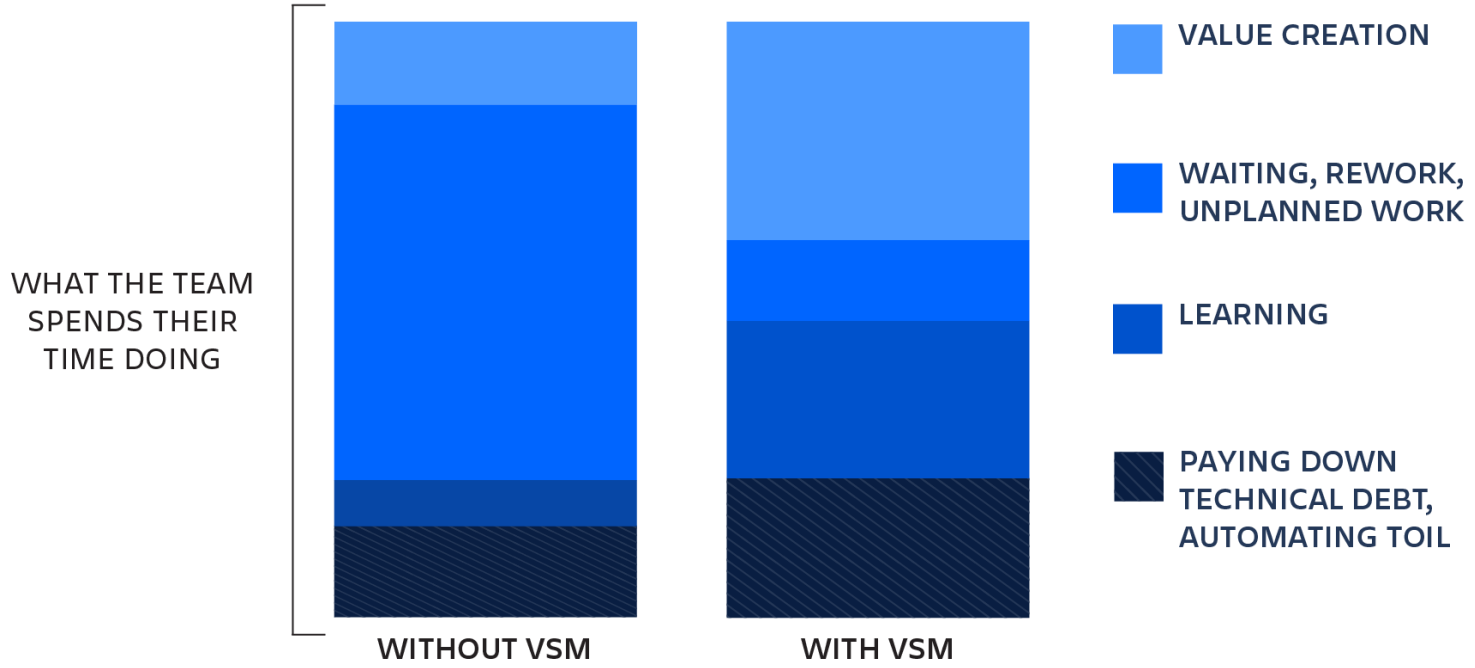
The primary goal of DevOps is to provide developers with immediate feedback on their tasks, fostering a faster and more efficient development cycle while ensuring the product aligns with customer expectations. This is accomplished through a process of continuous integration and delivery, where updates are frequently pushed to the project's repository.



Developers typically work within feature branches, where code is written and tested in isolation. These branches are subjected to automated and manual testing to identify bugs or issues early in the development process. Once the code passes all tests, it is merged into the main branch, ensuring that only stable and high-quality updates are incorporated into the final product.



This iterative approach allows for quick and manageable updates, reducing the risk of introducing large-scale errors. Any issues are contained within the feature branch, preventing them from impacting the live environment. Furthermore, by automating much of the testing and deployment processes, DevOps practices minimize delays and streamline workflows, making updates faster and more reliable

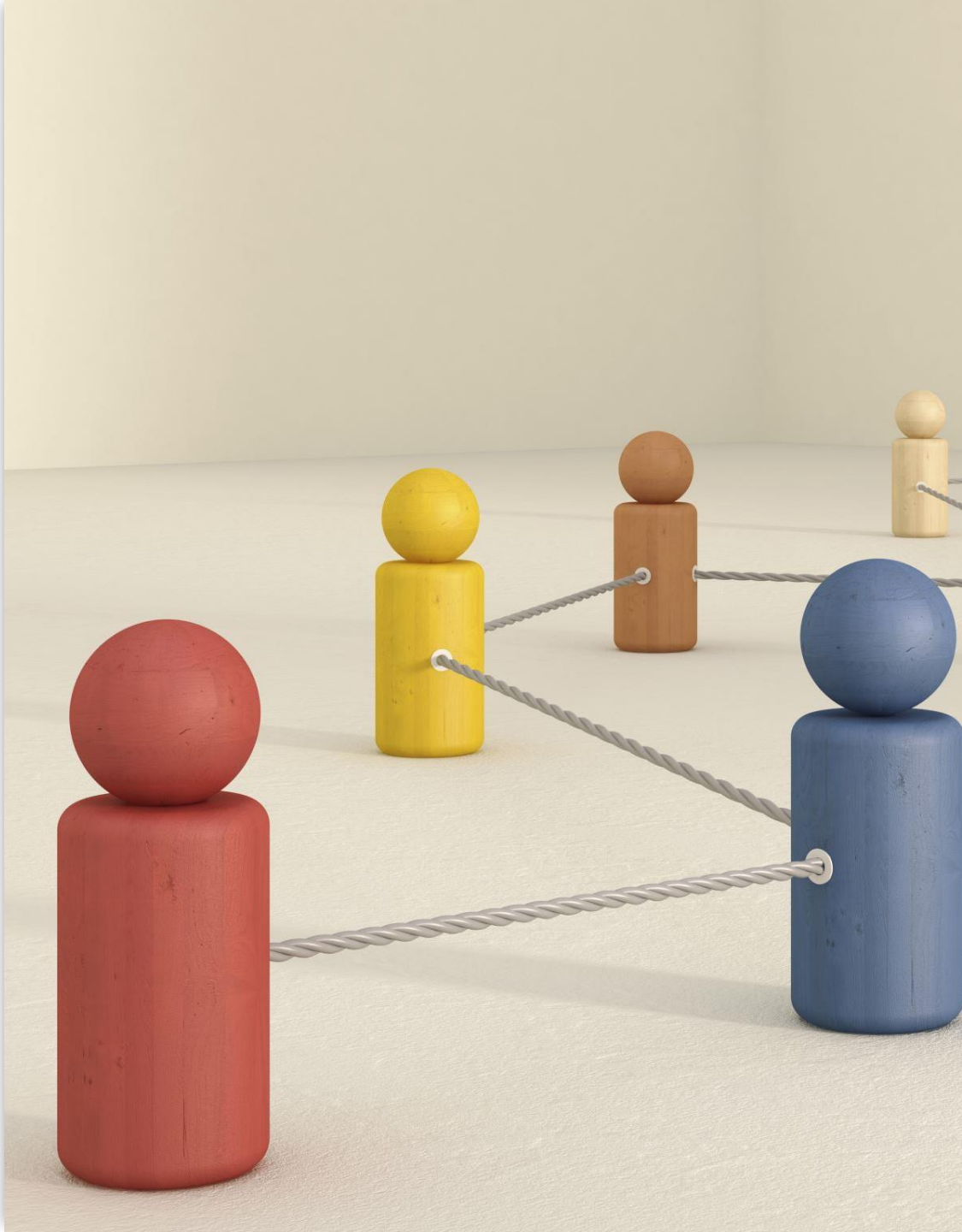


- Atlassian. (n.d.). *[Illustration of Artboard 1]*. Retrieved January 8, 2025, from https://wac-cdn.atlassian.com/dam/jcr:b673cac2-edb0-47bf-b8e3-7bbf1e8e1706/Artboard%201@2x.png?cdnVersion=2491

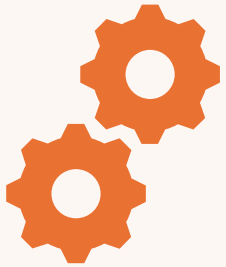
VSM vs No Vsm

Benefits of VSM in DevOps

- Improved collaboration across teams.
- Enhanced customer satisfaction through quicker and value-driven updates.
- Greater efficiency in addressing customer needs and expectations.
- Reduced lead times and streamlined processes.
- Facilitates continuous delivery and deployment.



Tools and Strategies for Successful VSM



Key Tools:

Kanban boards to manage WIP limits.

CI/CD pipelines for continuous integration and deployment.

Metrics dashboards for tracking lead and processing times.

Strategies:

Regular retrospectives to identify bottlenecks.

Clear communication across all teams involved.

Emphasize incremental improvements for sustained progress.

References

- Atlassian. (n.d.). *What is value stream management?* Retrieved January 8, 2025, from https://www.atlassian.com/agile/value-stream-management