# The Technology Value Stream

*The time it takes to deliver technology services to the customer*

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# Lead Time Vs Processing Time

What does **Lead** time cover?

From when customer makes request

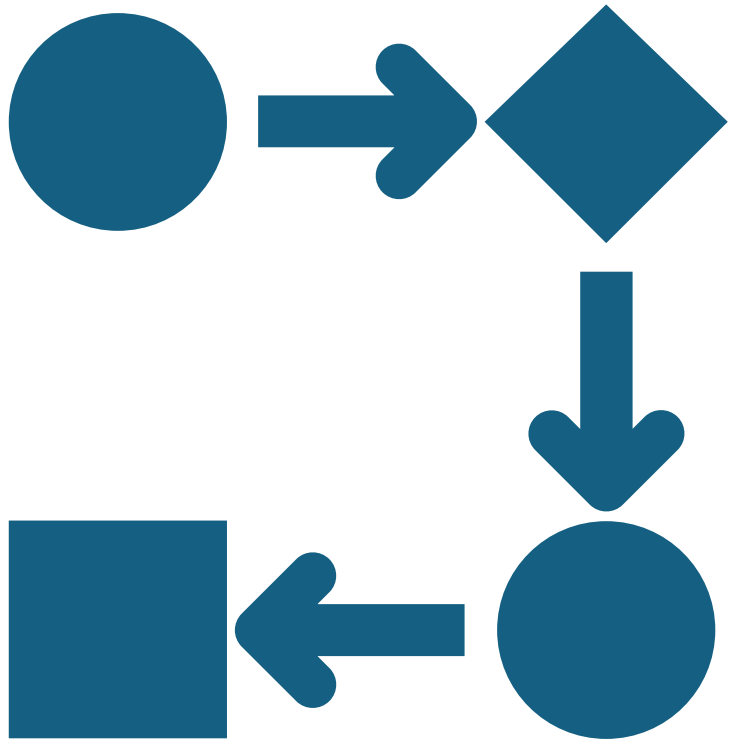
---> until customer has final product

A shorter lead time= reaches customer faster which is the goal in the technology value stream

**Processing Time**= the time working on the tasks, not waiting for any approvals, but the time specifically working on the development work only.

# The Common Scenario: Deployment Lead Times Requiring Months

Before DevOps, development and operations were often separate, which led to longer lead times, sometimes taking months just to approve into the next steps. Now, with the technology value stream focusing on shorter lead times, the old way of doing things is considered outdated. DevOps brings IT, testing, and development together, helping teams cooperate and work at the same time to get approvals faster. This prevents delays that used to cause long lead times, making the process quicker and more efficient, which is the ultimate goal.



# DevOps Ideal: Deployment Lead Times of Minutes

DevOps was introduced to lessen the long lead times under the original common scenario leading to months of development waiting for approvals and teams and processes, which was not as efficient.

**Devops ideal**: In this approach, the development operations are combined meaning the IT team as well as testing teams are also involved so that this collaboration makes the process quicker and the wait times are much less and updates are naturally faster.

With automated continuous testing and collaboration real time collaboration between all the teams makes software releases more efficient and reliable.

# Graph Visual

Here is a visual representation of Dev ops in practice and it's clear to see how the theory around it is all about fluidity, and this is the buildup that we are aiming for, and that is to have all processes work together, simultaneously, where planning, monitoring, building, coding, operating, deploying, testing and releasing are not sent to different teams, but occur within the same framework. So this gives an insight into how this is meant to work more quickly as opposed to the common scenario route.

# Main Takeaways

**Lead Time vs Processing Time**

Start to end completion, with processing time only accounting for work time. Lead time accounts for the entire process.

**The Common Scenario**

Before DevOps, development could take months, which might not sound long until it is realized that much of this time was spent waiting on approvals, causing delays. This created a bottleneck effect, with a lot of work piling up but limited time to handle each part separately.

**DevOps Ideal**

In an ideal DevOps setup, development, IT, and testing teams work together to get approvals faster, with the help of automation tools like continuous testing. This collaborative and automated approach can reduce update times to minutes. This is shown as a continuous loop, instead of the original setup that used a more rigid order of events.

# Resources


- Kim, G., Humble, J., Debois, P., Willis, J., & Forsgren, N. (2021). *The DevOps Handbook, Second Edition*. IT Revolution.

- (2024). Devopsinstitute.com. https://www.devopsinstitute.com/value-stream-management-explained-in-plain-english/

- *What is value stream management? Why it's important*. (n.d.). CIO. https://www.techtarget.com/searchcio/definition/value-stream-management