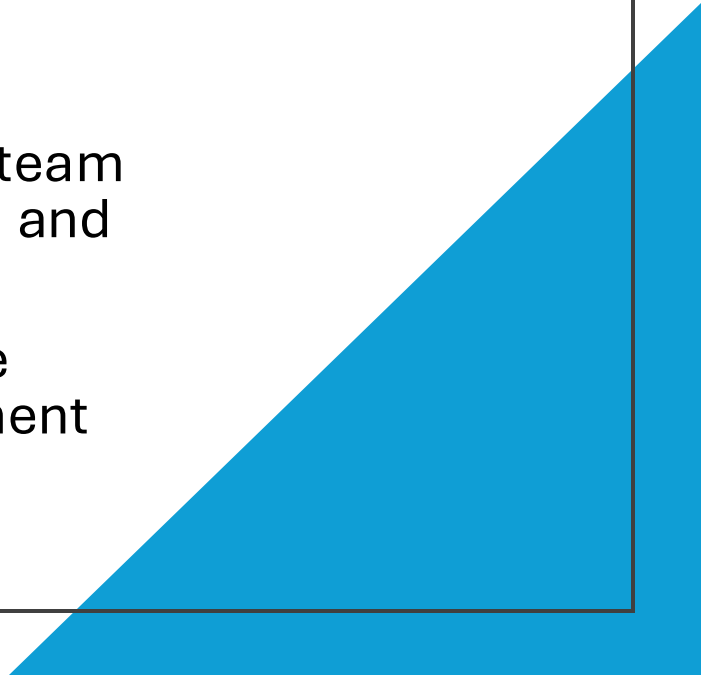# The Technology Value Stream

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Module 1.2

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What is Value Stream?
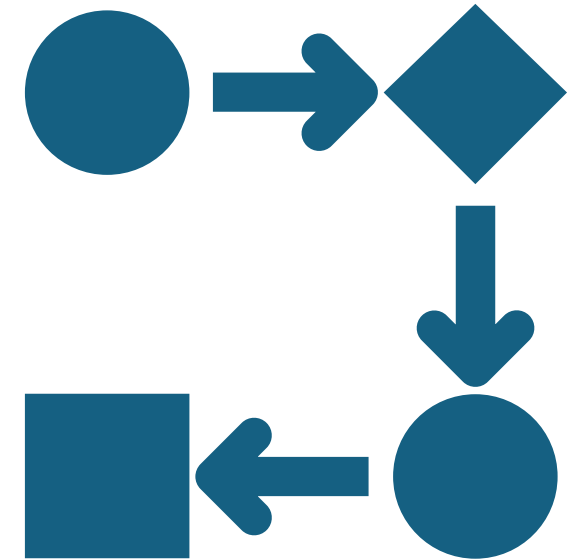
"The sequence of activities an organization undertakes to deliver upon a customer request" or "the sequence of activites required to design, produce, and deliver a good or service to a customer, indluding the dual flows of information and material". (DevOps Handbook n.d.)

- Value Streams is like a map of how work-flows through a team from start to finish and it focuses on how value is created and then delivered to users.

- This is helpful to teams to be able to see bottlenecks (like delays and errors) and encourages continuous improvement by showing what is working and what is not working.

Value Streams in Software Development

- Value streams and DevOps are about working smarter and not harder.

- When teams think in terms of values streams, they look at how work moves from idea to the finished product. This helps them spot what is slowing things down quickly and figure out what will need to be fixed first.

- DevOps gives teams the tools and methods to make that process better. Focusing on making work flow more smoothly, teams can find problems faster and easier than before.

Benefits of the Technology Value Stream

Faster delivery of customer-centric products

Better customer experiences, which ultimately leads to better reviews and more referrals.

Better employee engagement
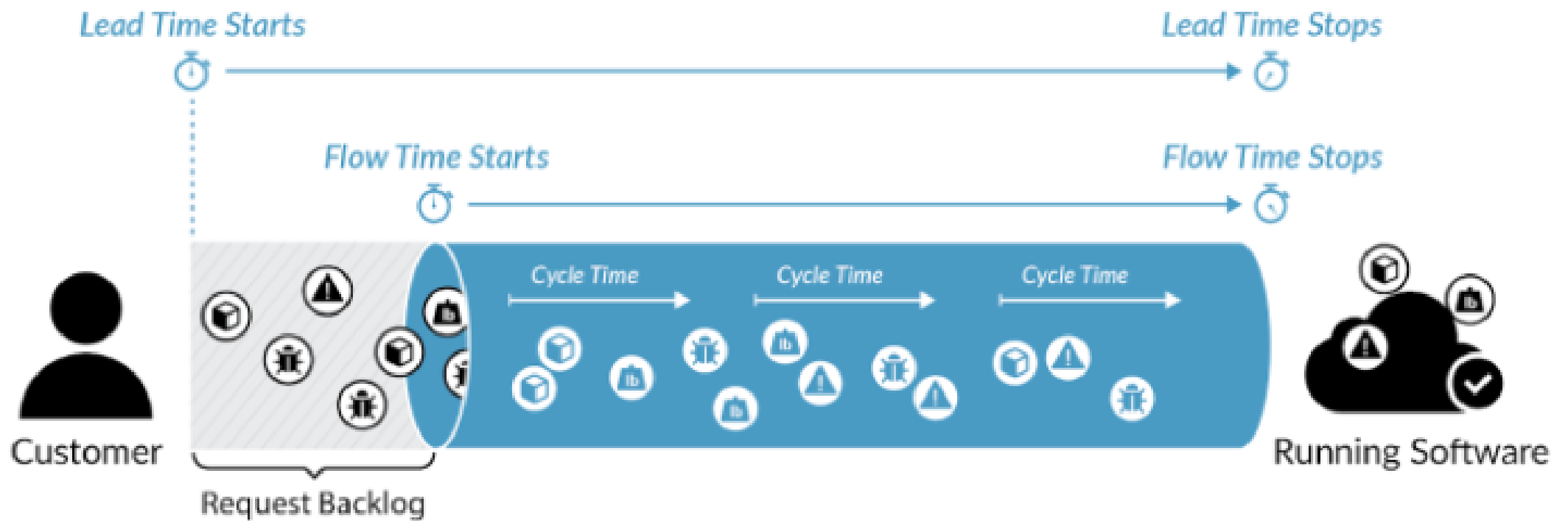
Data and insight driven decision making

Lead Time vs. Processing Time

Lead time will encompass all stages, including initial triage, prioritization, development, testing and deployment. This metric provides a customer centered view, focusing on the overall time taken to fulfill a request.

Lead time is the total time it takes for a product to travel through a value stream. From the initial customer order til the products delivery.

Processing time is the actual time it takes to perform the work on a product or service.

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The Common Scenario: Deployment Lead Times Requiring Months

- In bigger companies, new code or features being done for customers can take months. This happens when the systems are older or the projects are large. The testing is slower and often done by hand and its hard to find a place to test everything safely.

- Because of this everything becomes delayed.

- And often times when all the teams try to put their changes together it often breaks. Which can cause days, weeks, or even months to figure out what went wrong and repair. Unfortunately, even after all this work, it still may be not enough for the customer.

Our DevOps Ideal: Deployment Lead Times of Minutes

- Developers want quick feedback on their work. This will help with making quicker changes and to test things. Developers want to get their code into the live system as fast as they can wihout needing help from others.

- Developers make small code changes often and testing automatically while pushing updates to production as they go.

- Because the changes are small and tested quickly, teams can be confident that everything will work as needed. And in the case something does go wrong, its easier to catch and fix.

- This works best when the system is built in smaller separate parts.

- Updates can go live in minutes if not hours.

Observing %C/A as a Measure of Rework

- The third important metric in the technology value stream is percentage that is complete and accurate.

- This tells us how correct and usable the work is after each step in the process. In other words the quality of work being passed.

- Karen martin and Mike Osterling state that "the %C/A can be obtained by asking downstream customers what percentage of the time they receive work that is 'usable as is'. Meaning that they can do their work without having to correct the information that was provided."(DevOps Handbook n.d.)

References:

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