

Technology Value Stream

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Introduction to the Technology Value Stream

- The procedures and actions involved in providing value to clients through technology are all included in the Technology Value Stream. From the first request to the last software or solution deployment, it covers every phase.
- Helps to detect inefficiencies in the processes.
- gives information about areas that could use improvement to cut costs and speed up delivery.
- A value stream that is well-optimized ensures greater consistency with both organizational objectives and consumer needs.

Defining Lead Time vs. Processing Time

- Lead Time:

The entire amount of time that passes between a request being made and its fulfillment (includes all waiting periods, processing times, and delays.)

- Processing time:

the total amount of time spent on the request, excluding idle and delay periods.

For example, lead time for a client request begins when the request is received and concludes with the delivery of the solution. The part of that lead time that is dedicated to active work is called the processing time.

While processing time optimization increases labor productivity, lead time reduction increases overall efficiency.



Long Deployment Lead Times

In typical setups, deployment lead times sometimes stretch months because of:

- Manual procedures for deployment and testing.
- Cycles of development and release are not automated.
- Ineffective team communication.

Leads to:

- delayed release of new features and updates.
- increased expenses as a result of process inefficiencies.
- Delays in resolving problems or introducing new features leading to disappointed consumers.





Deployment Lead Times: From Months to Minutes

By implementing newer DevOps techniques, deployment lead times can be shortened from months to minutes.

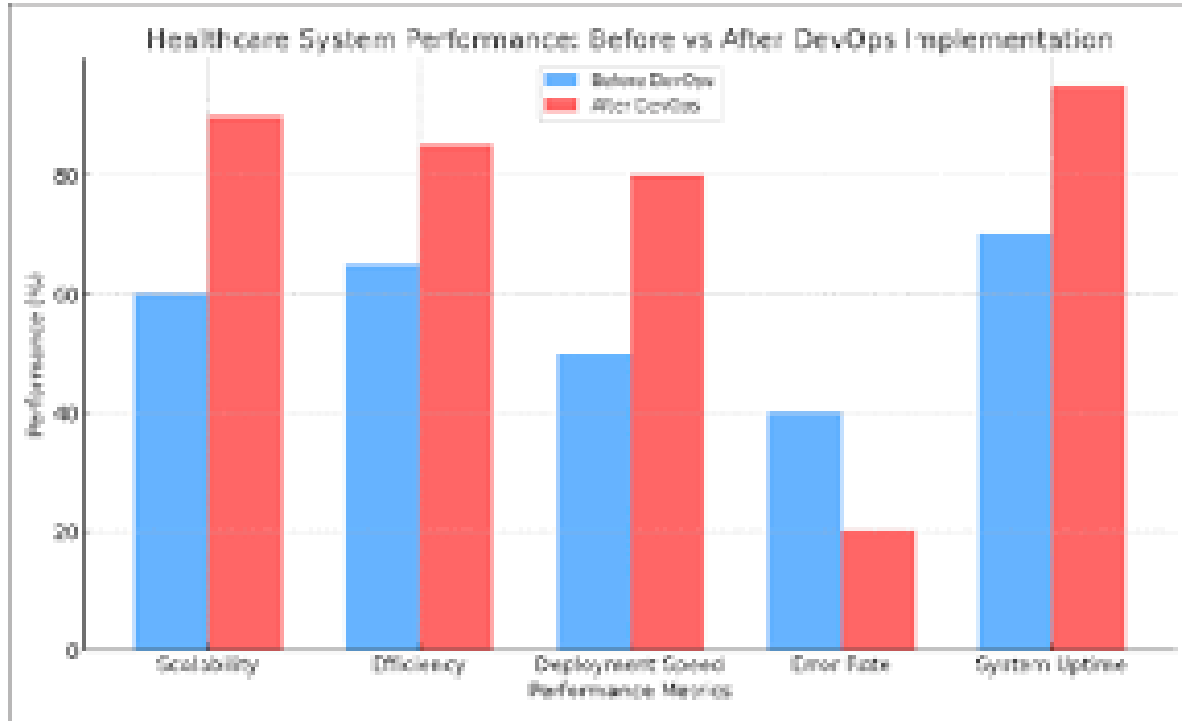
How to Make It Happen:

- Automate testing and deployment procedures with Continuous Integration/Continuous Deployment (CI/CD) pipelines.
- Divide complicated upgrades into smaller portions and deploy them frequently.
- Encourage cooperation between the operations and development teams.

Benefits

- quicker feedback loops for problem detection and resolution.
- higher customer satisfaction as a result of products and repairs being delivered more quickly.
- smaller, more gradual modifications that lower the chance of mistakes.

Traditional vs. DevOps Lead Times

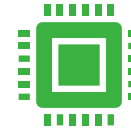


Traditional Deployment:

Lead times for deployment, expressed in months.

Reliance on manual approvals and testing.

Teams operating independently in compartments.




DevOps deployment:

Lead times for deployment have been lowered to minutes.

Use automated CI/CD workflows.

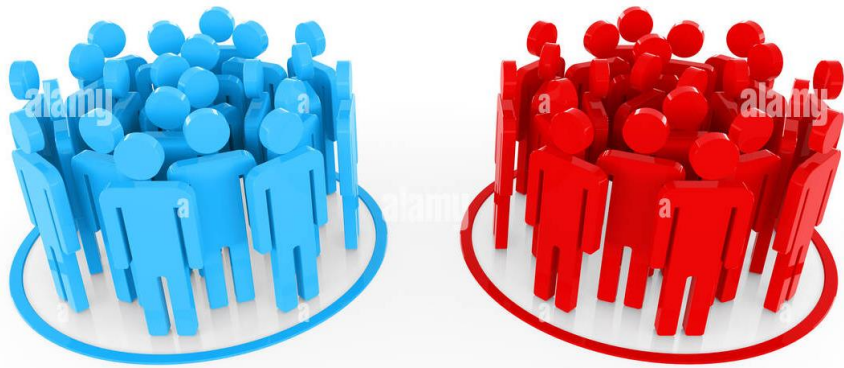
procedures that prioritize collaboration and shared responsibilities.



Methods for Improving the Value Stream

- Incorporate lean and agile principles:
- Concentrate on reducing waste and providing value in a continuous manner.
- Automate Procedures:
- To make testing and deployment more efficient, use solutions like Azure DevOps, GitLab CI/CD, or Jenkins.
- Track and Examine Metrics:
- To find bottlenecks, monitor important performance metrics including cycle time, throughput, and error rates.
- Encourage cooperation:
- Improve communication and efficiency by dismantling the divisions that separate the development, operations, and quality assurance teams.
- Spend money on training:
- To guarantee seamless deployment, teach teams DevOps recommended practices.

Difficulties with Technology Value Stream Optimization



Common Difficulties:

- **Opposition to Change:** In traditional settings, teams may be reluctant to embrace new procedures and technologies.
- **Separate Teams:** Inefficiencies can occur from the development, operations, and quality assurance teams' not working together.
- **Tool Overload:** It can be very difficult to choose and integrate the best automation tools.
- **Incomplete Metrics:** Missed chances for improvement can result from failing to monitor key performance metrics.

Sources

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