

# DevOps Culture & Lean Development

Food for thought

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# What is DevOps?



# Often seen as

## Infrastructure as Code

- Setup and provisioning of Infrastructure via Code (Ansible, Chef, Terraform, ...)

## Measurements/Metrics

- How is my infrastructure doing?

## Automation

- Automated Builds
- Automated Tests
- CI/CD
- Automated Infrastructure scaling

## a "Title"

- e.g. DevOps Engineer

# What is DevOps?

A photograph of a grand, ornate wooden double door set within a stone archway, flanked by large columns. The text "Is this all?" is overlaid in the center. The door is made of dark wood with intricate carvings and a central decorative panel. The archway is made of light-colored stone with a decorative keystone. The columns are fluted and support the arch. The overall scene is a detailed view of a classical architectural entrance.

**Is this all?**

An open book with a pair of glasses resting on it, symbolizing reading and learning. The text is centered over the book's pages.

**A short story about  
how my journey started...**

# DevOps Enlightenment

A short story about how my journey started...

1

## DevOps meant for me

Ops doing “development” by writing Infrastructure as Code, spinning up servers, configuring CI Tools, creating scripts to maintain things, and so on...

2

## I got asked a question

*“I hope only what you are writing is off and not your view about DevOps ... this is so wrong ....”*

3

## My DevOps Journey started

What I learned so far is:

- DevOps is more a process and a culture
- it is a processual approach to optimize the flow of work through a system
- it affects the whole company and not just IT
- its goal is to maximize value and minimize waste

# Work

What types of work can be identified?

## What work does IT do?

- Bugfixes
- Maintenance
- Development
- Investigation and Concepts
- Firefighting
- Stakeholder communication
- Configuration
- Support
- ...

## What types of work are there?

1

**Business projects** - Features that are needed by PM or Management to satisfy customers, increase sales, etc.

2

**Internal IT projects** - Updating/Creating infrastructure, improve configurations, increase amount of servers, ...

3

**Changes** - Change a behaviour/system ⇒ mostly driven by Business and Internal projects

4

**Unplanned Work** - Emergencies, Recovery, Firefighting

A large, multi-masted wooden sailing ship is shown from a rear-quarter perspective, sailing on a calm sea. The sky is filled with soft, golden light from a setting or rising sun, with wispy clouds. Several birds are seen in flight against the sky. The ship's rigging and masts are silhouetted against the bright background.

**Work is done, when it is in  
production!**

**Everything else is:  
Work in Progress!**

# Work in Progress

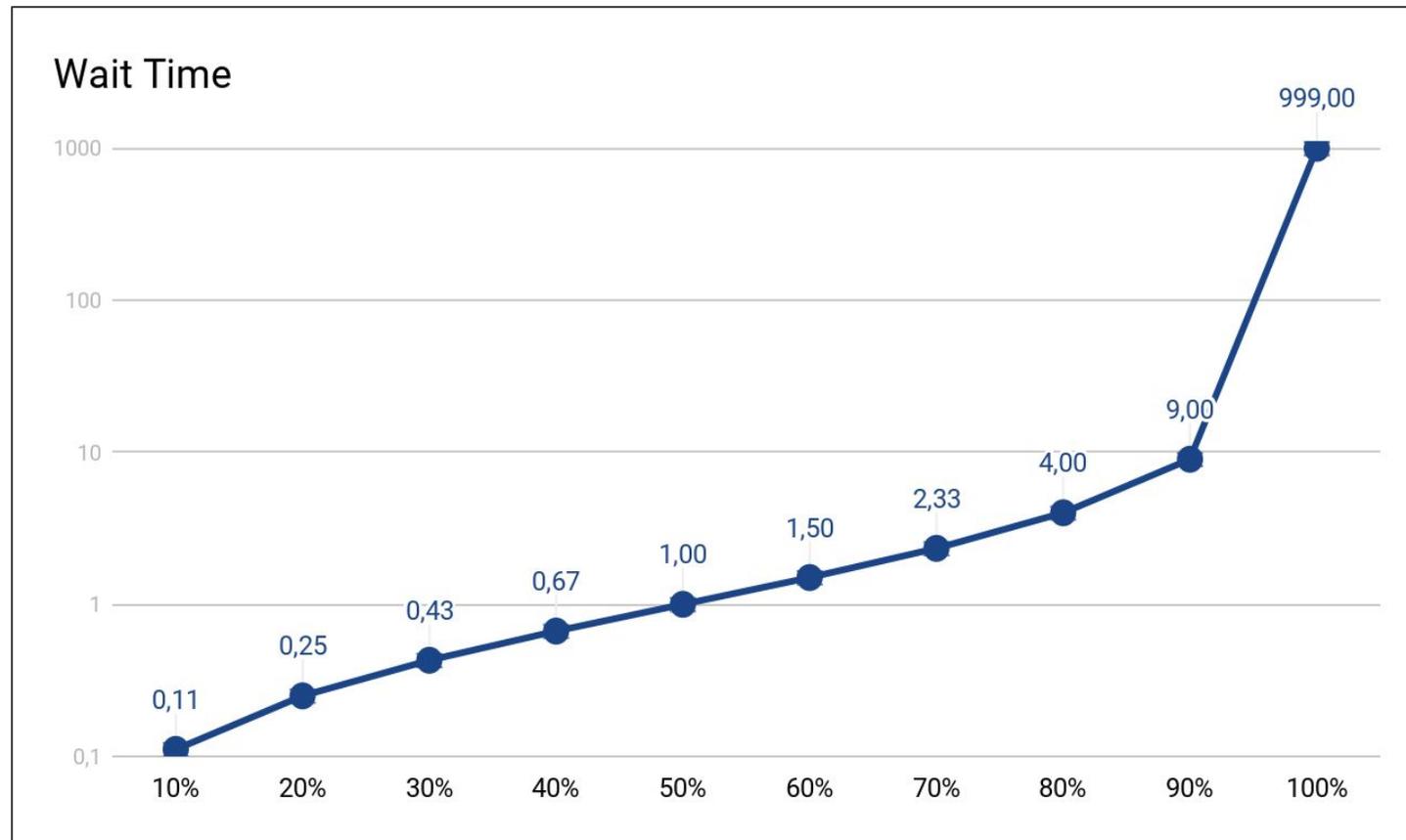
How long does a piece of work wait until it is done?

## Waiting time definition

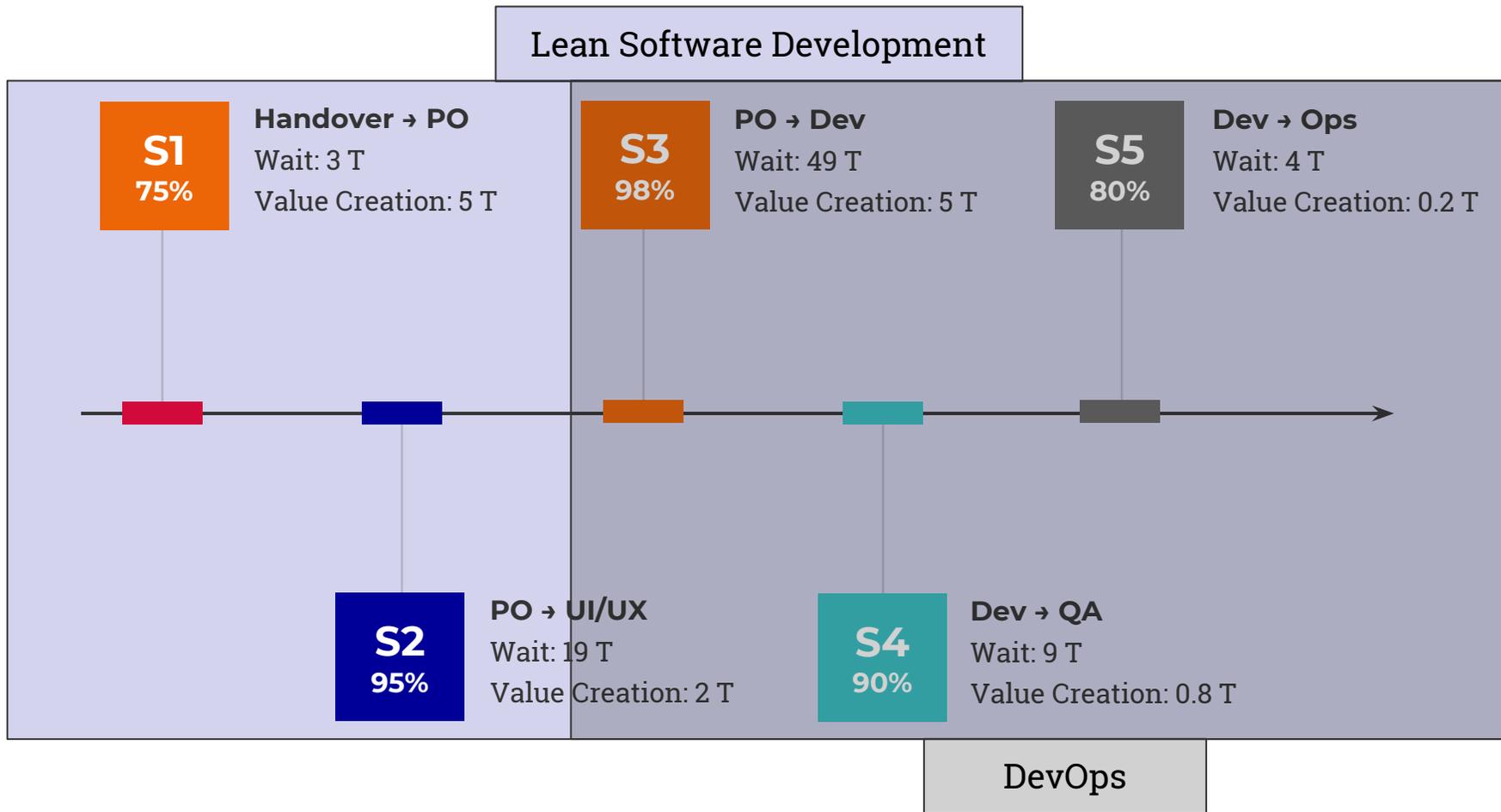
- Work must wait if a Worker is busy
- Waiting Time is defined as:

$$\frac{\text{Workload in \%}}{\text{Freetime in \%}}$$

- leads to exponential waiting times behaviour from ~80% workload on



# Value Stream Map - 5 Stations

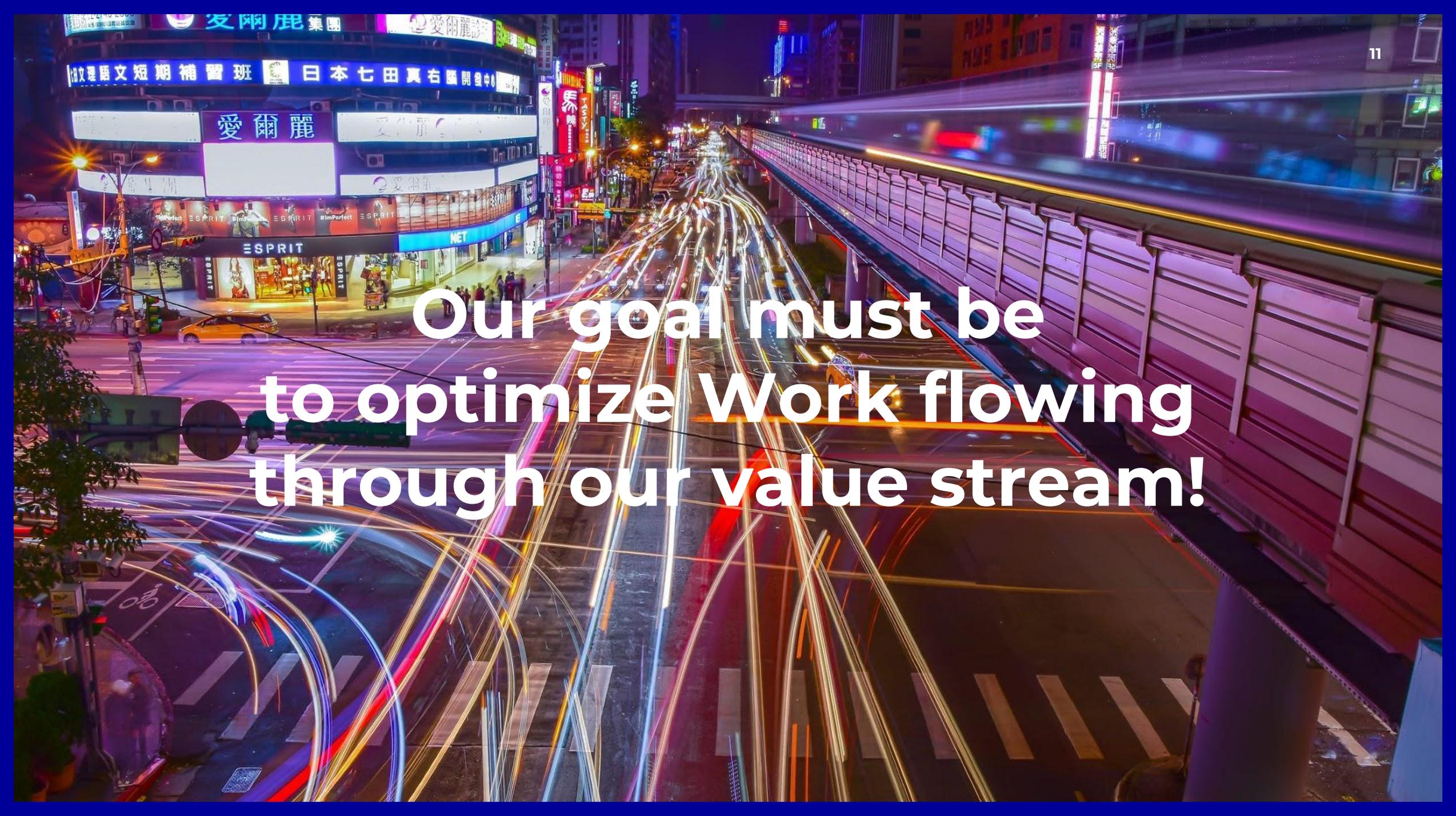


## Summary:

- Value Creation: **14 T**
- Waiting: **84 T**
- Total: **98 T**

**Task waits ~85% of the time**

**Our goal must be  
to optimize Work flowing  
through our value stream!**





**How can we do this?**

# How to avoid waste?

Optimizing the flow

1

Have no hidden/invisible work.

2

Analyze the Value Stream and optimize it by starting with the biggest bottleneck.

3

Don't handover incomplete/low quality work.

4

Use small batches and small iterations that pass the whole chain much faster.

5

Prevent switching Tasks to often.

6

Create exactly the amount of code necessary.

Project A

# Contact with me



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