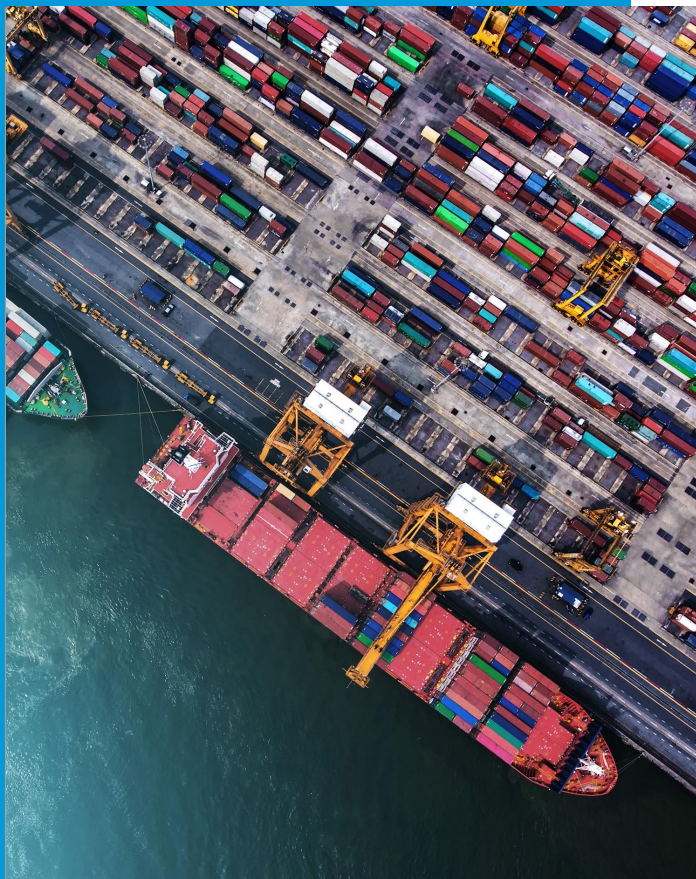


The Role of GitOps in IT Strategy v2

Schlomo Schapiro, 20.07.2022, StackConf 2022

Building the backbone of global trade,
to make shipping products as easy as sending emails.



About Forto

- Freight Forwarder
- “Unicorn” startup in Berlin
- Team of ~800 around the world
- Own transportation management system to run our business
- Everything in the cloud
- **We are hiring!**

GitOps

- | | |
|---|---|
| 1. The principle of declarative desired state | A system managed by GitOps must have its Desired State expressed declaratively as data in a format writable and readable by both humans and machines. |
| 2. The principle of immutable desired state versions | Desired State is stored in a way that supports versioning, immutability of versions, and retains a complete version history. |
| 3. The principle of continuous state reconciliation | Software agents continuously, and automatically, compare a system's Actual State to its Desired State. If the actual and desired states differ for any reason, automated actions to reconcile them are initiated. |
| 4. The principle of operations through declaration | The only mechanism through which the system is intentionally operated on is through these principles. |

Source: [OpenGitOps.dev](https://opengitops.dev)

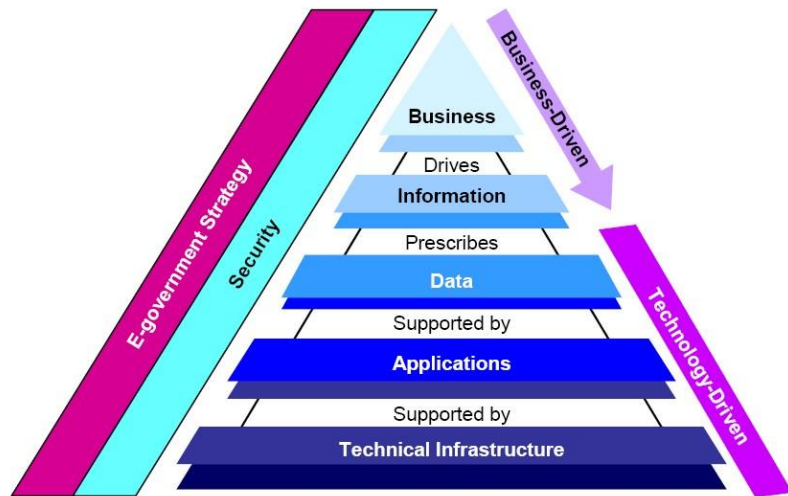
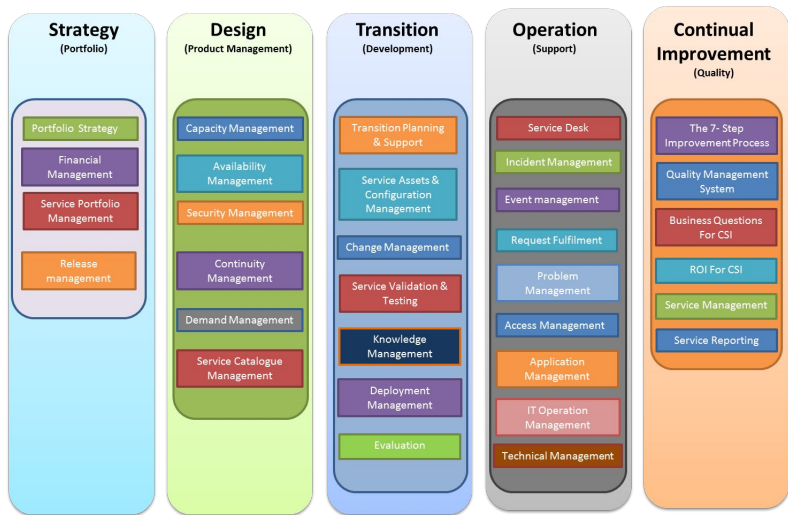


IT strategy

is the discipline that defines how IT will be used to help businesses win in their chosen business context.

Gartner

Buzzwords have some truth in them:



Business Goals



IT Strategy



Deployment Tools



IT Infrastructure

**How is this
related?**



DevOps

Happy DevOps Campers

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DevOps is

... if every person uses the same tool for the same job

... codified knowledge - everybody contributes his part to common automation

... if all people have the same privileges in their tooling

... if human error is equally possible for Dev and Ops

... replacing people interfaces by automated decisions and processes

bit.ly/5devops

... a result

The Problem

We want digitalisation, our IT Strategy calls for ...

- IT quota grows exponentially,
no problem can be solved without IT
- All IT processes are much more integrated and
networked, API first ...
- Growth factor of IT much bigger than increase in IT
staff → IT “production efficiency” must increase
- More IT in business units → decentralisation of IT
skills (BizDevOps)
- Increasing IT compliance requirements
- Utilise public cloud offerings to drive innovation –
have viable cloud exit strategy



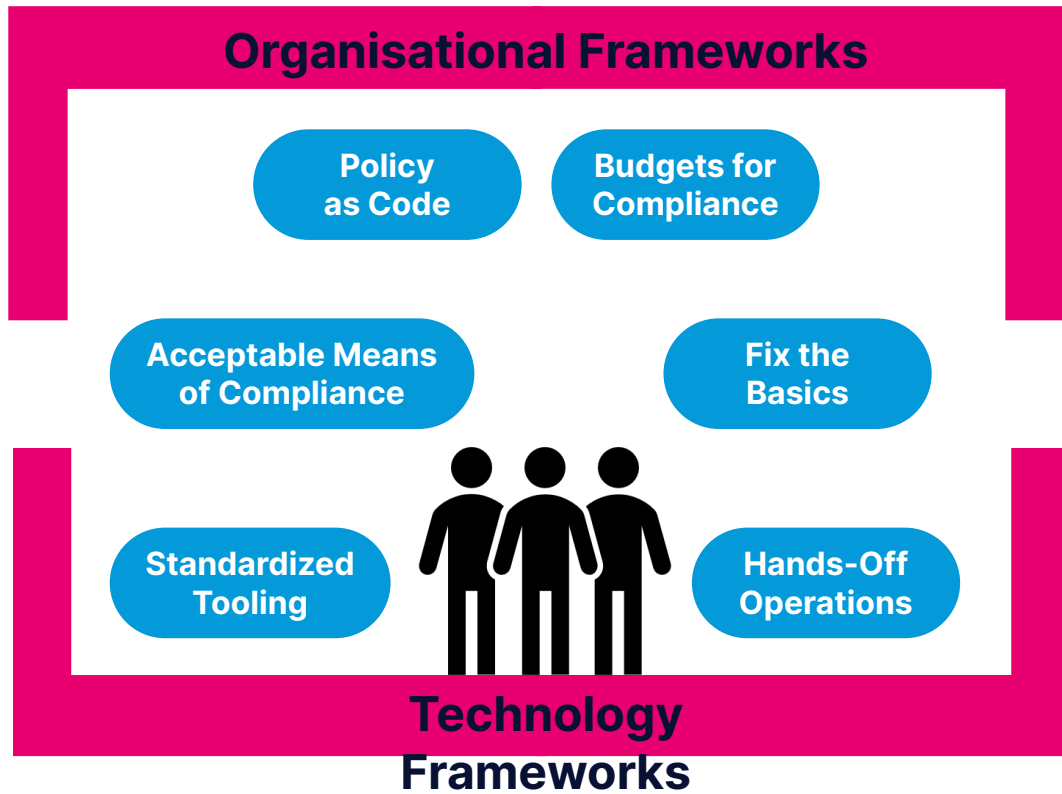
As an IT team we want ...



- Deliver great product/service
- Focus on our product/service
- Use good tools & platforms
- Know which internal processes to deal with
- Reduce overhead with internal processes
- Comply with company policies without pains
- Know about relevant company policies
- Use standard solutions for common problems
- No dependencies to other teams

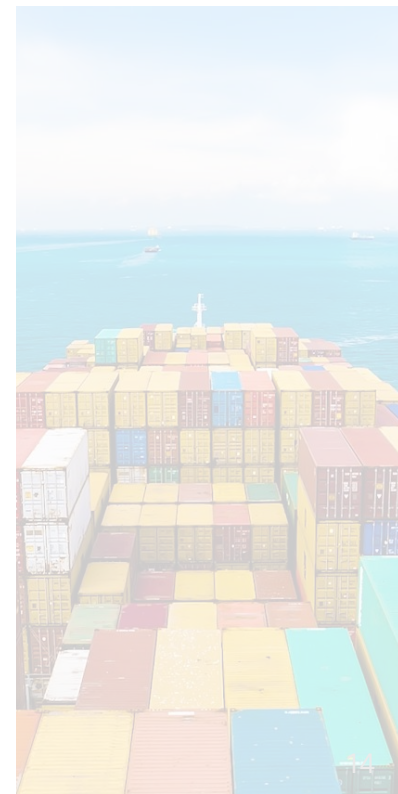
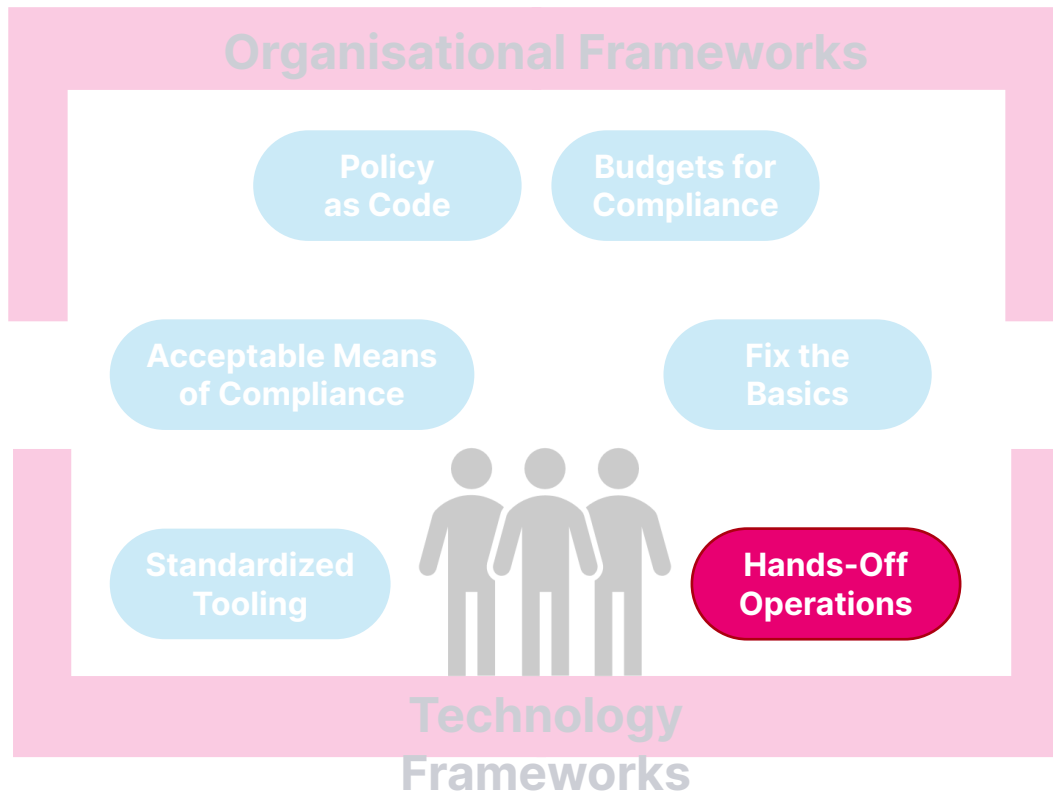
Solution Approach

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Solution Approach

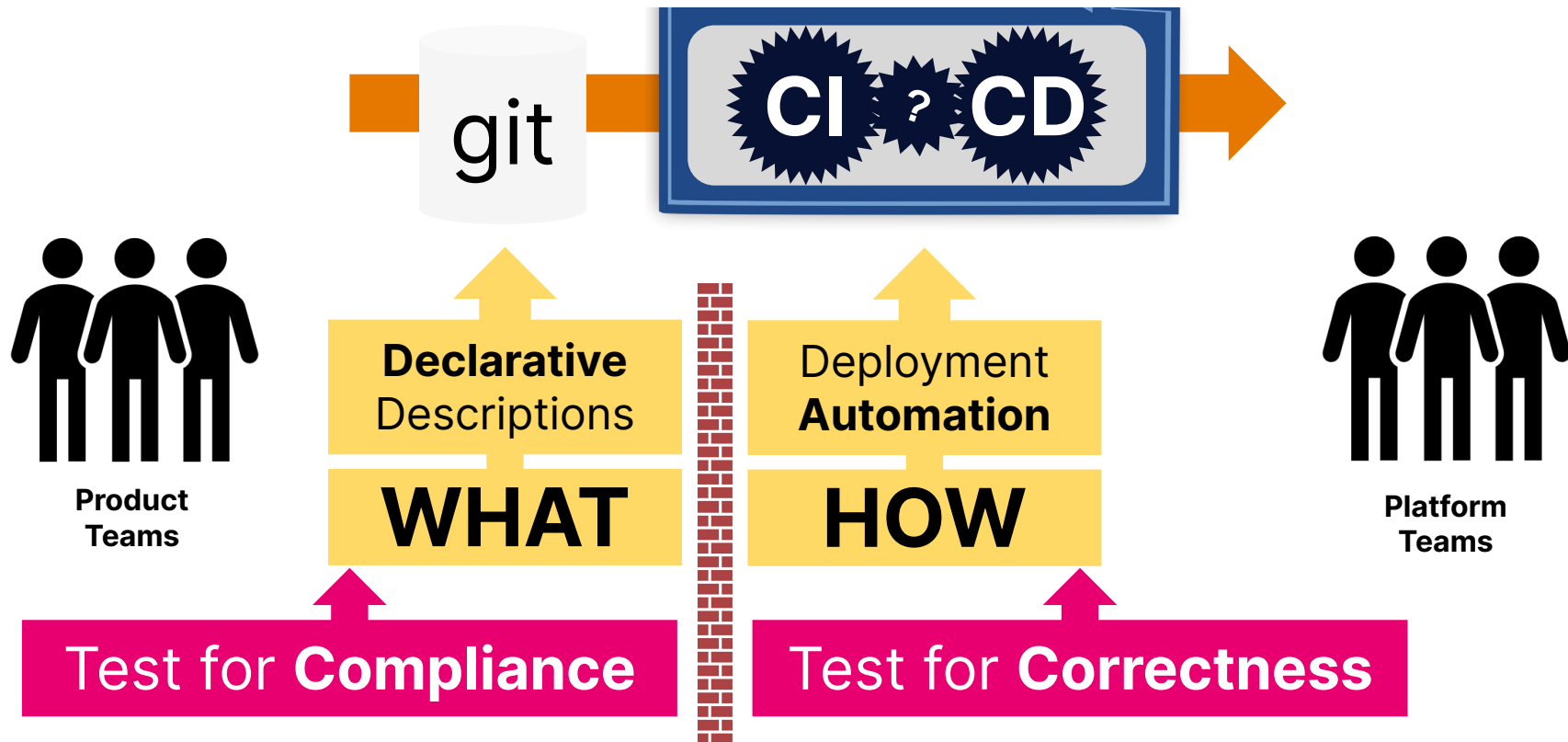
Goal: Hands-Off Operations



Declarative Descriptions

GitOps to the Rescue

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GitOps

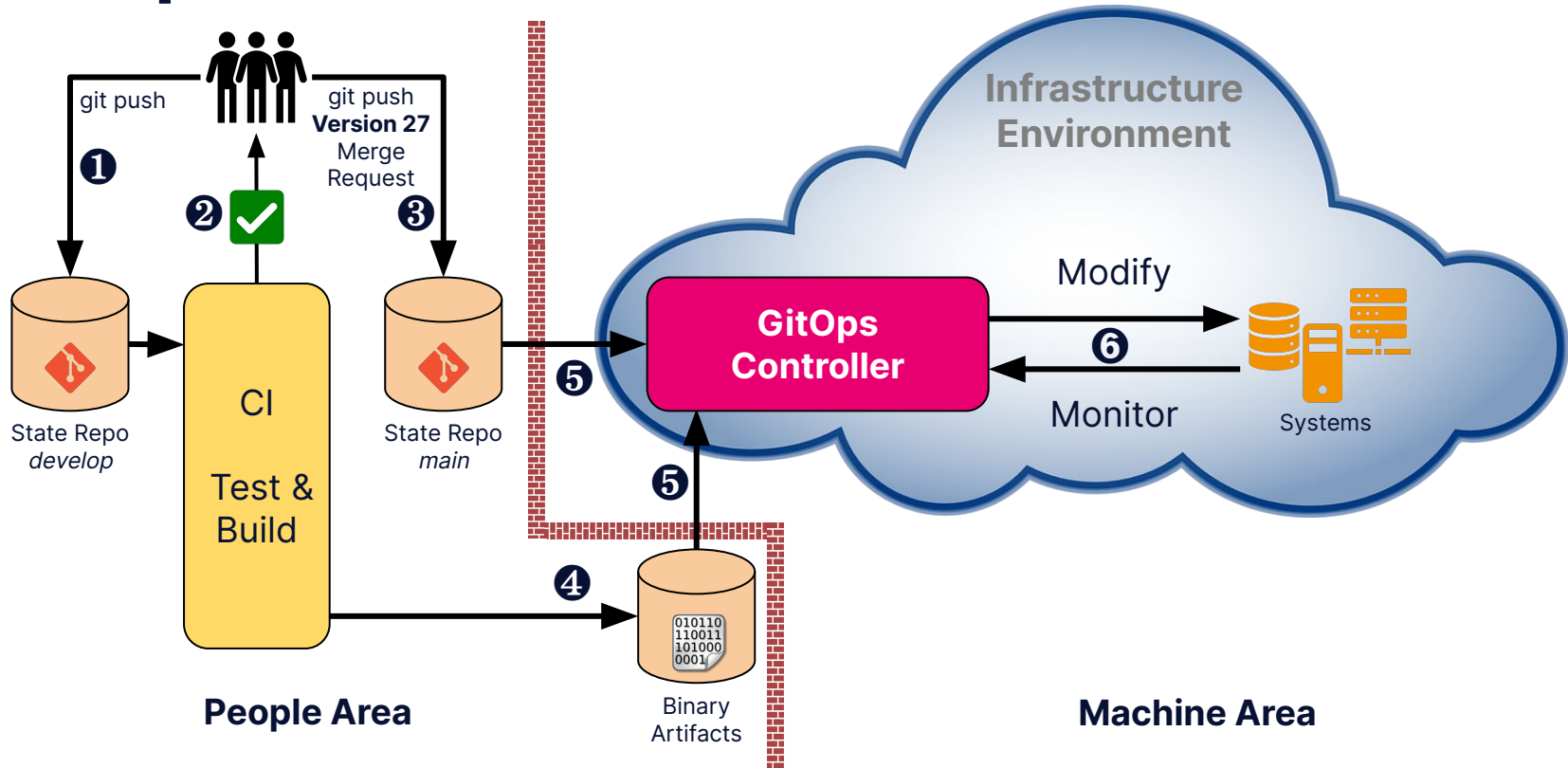
GitOps Tech

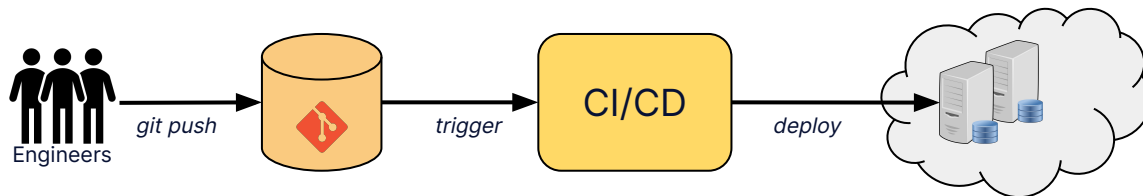
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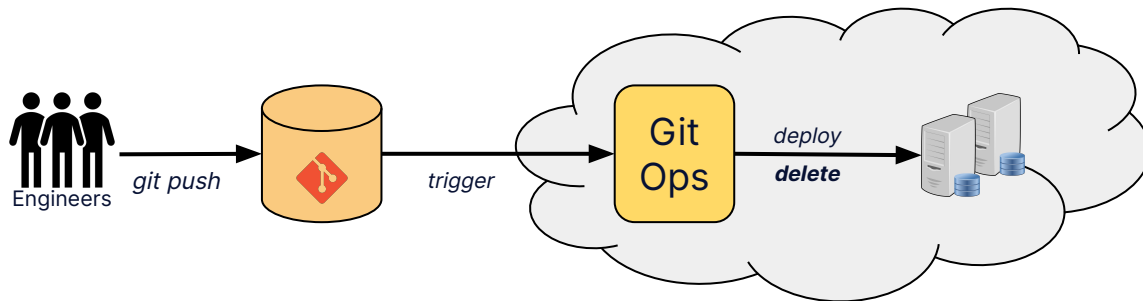
GitOps Tech

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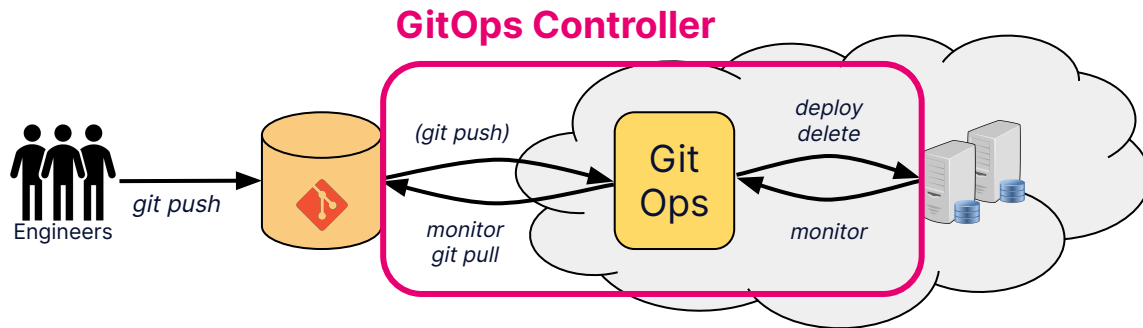




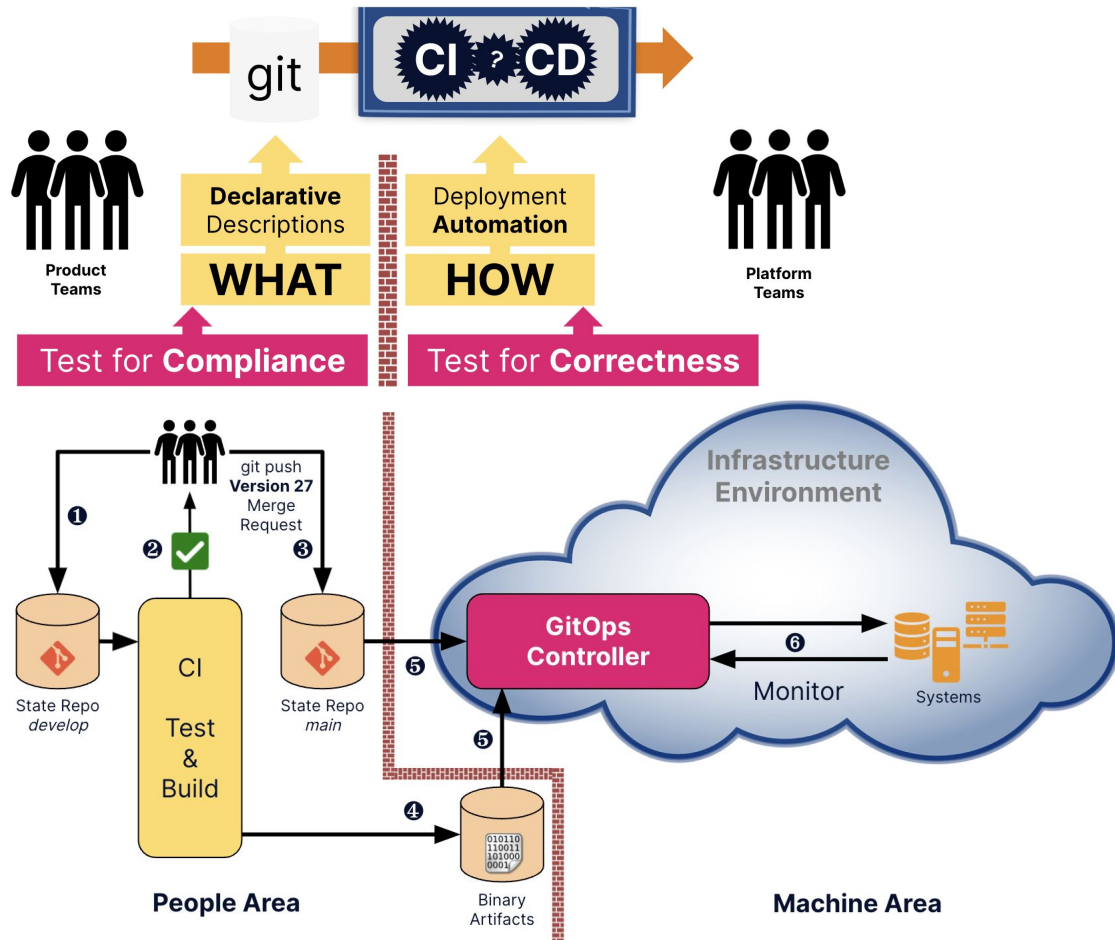
1. CI-Ops



2. Simple GitOps

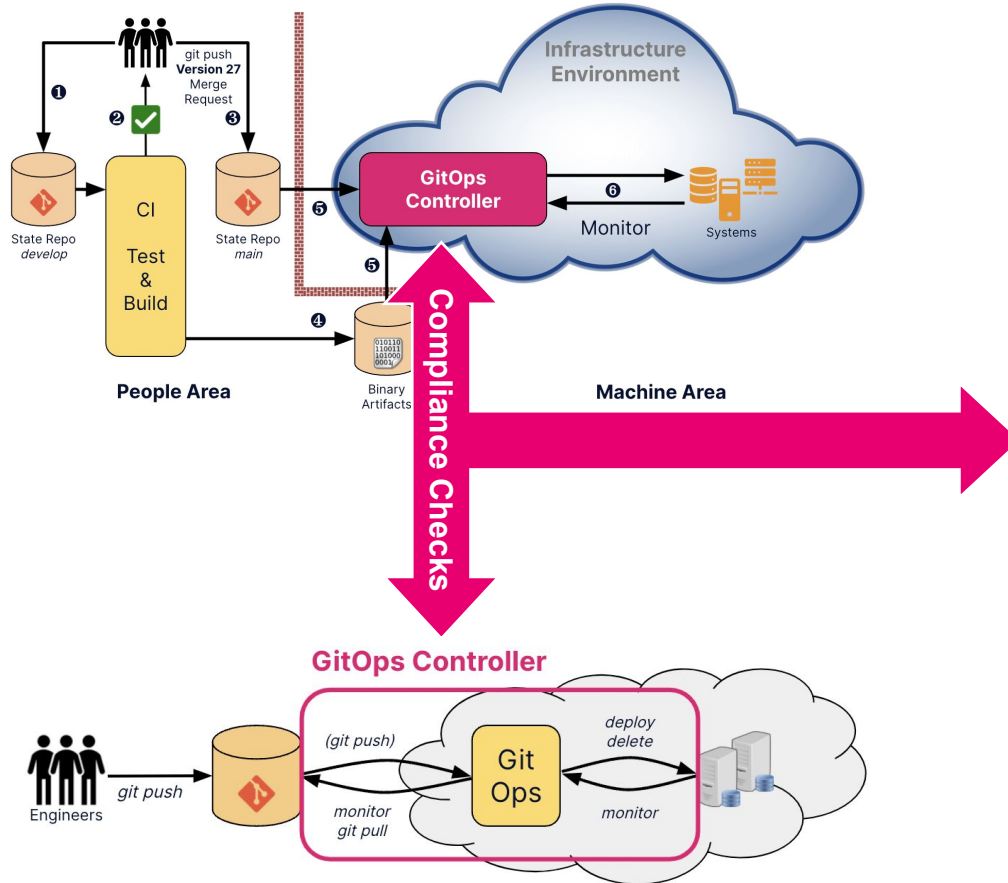


3. GitOps Controller



GitOps & Compliance Automation

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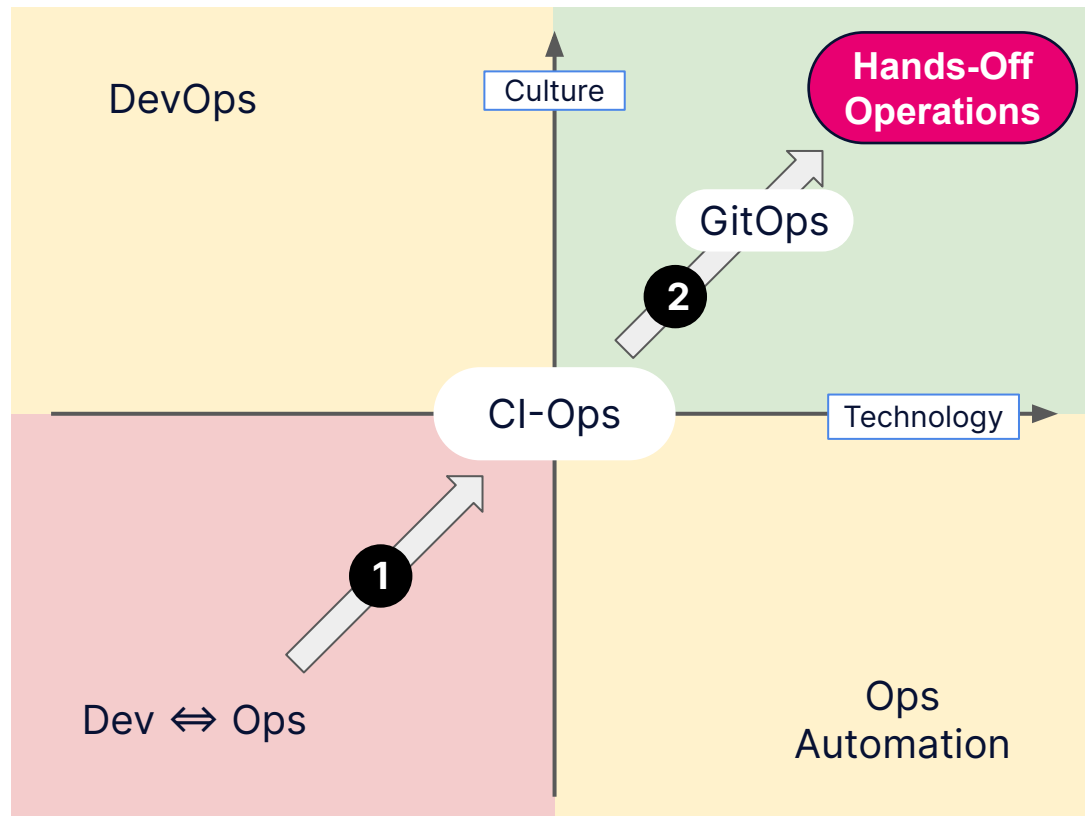
- GitOps Operations Model provides ideal interface for compliance automation:

A central place where every change passes by in a machine-readable format.

- GitOps enables true hands-off operations, reducing IT costs & efforts.
- Motivation to “Fix the Basics”.

IT Strategy

IT Evolution Big Picture



Hands-Off Operations

- No manual changes in production
- Dev & Ops have same permissions in production: None by Default
- Automate the **hard** stuff:
 - Compliance & governance
 - Distributed rolling upgrades
 - Consistent Backup & Disaster Recovery
 - Everything in your stack
- Test Driven Everything
- Standardized Tooling
- **Fix the Basics!**



GitOps

Why GitOps?



The Role of GitOps in IT Strategy

Adopting GitOps practices drives automation as the solution for many IT strategy requirements.

- schlomo.schapiro.org/2021/04/the-gitops-journey.html read & watch more about this
- schlomo.schapiro.org/p/5-devops-principles.html my DevOps definition
- forto.com/career join our vision:
"We are building the backbone of global trade, to make shipping goods as easy as sending emails."



@schlomoschapiro



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