The DevOps Journey in an Enterprise

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DEVOPS ENTERPRISE SUMMIT

got this.

DEVOPS ENTERPRISE SUMMIT
AN IT REVOLUTION EVENT

Anders Lundsgård

1ε37	2021	Cloud Solutions Architect
		Cloud Solutions & Security Architect
	2015	Cloud & Delivery Engineer
		Solution Architect
SCANIA	2008	Developer & Release Engineer
NFI	2004	Developer & Instructor

1ε37 we've got this.

Anders Lundsgård

DEVELOPERS

Try to make engineers much more productive than I've ever been

DEV ♥ OPS

Try to teach developers to operate
Try to teach operations how to code

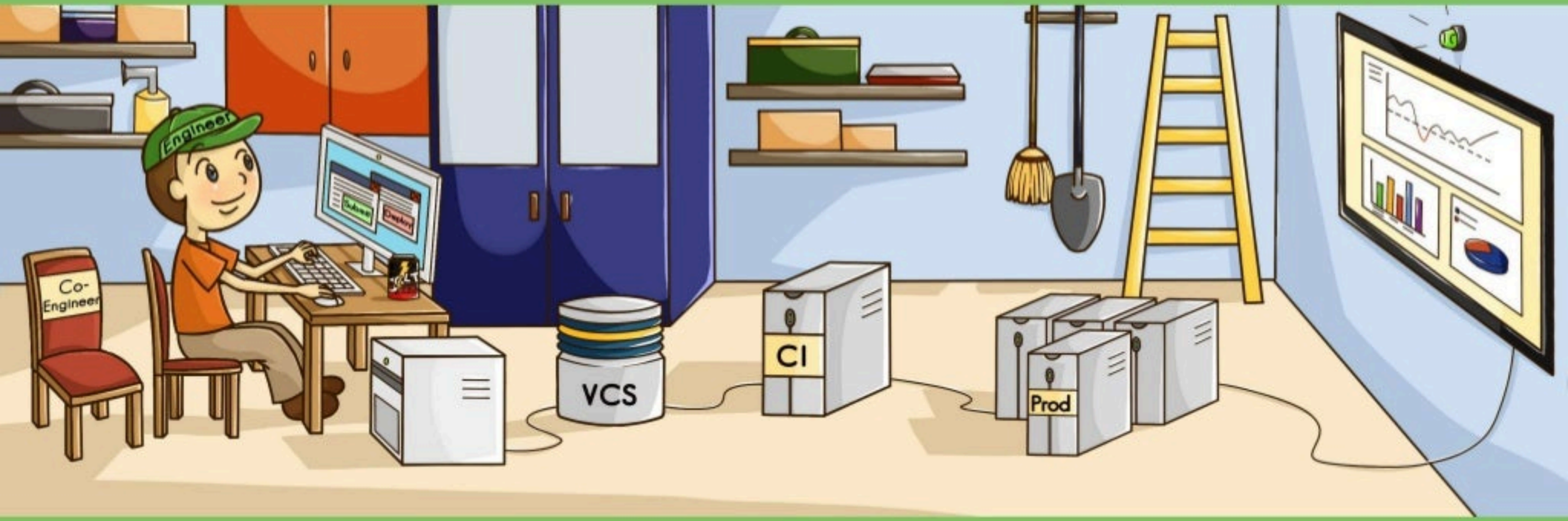
CLOUD

The gift from above to achieve my first two goals

Disclaimer

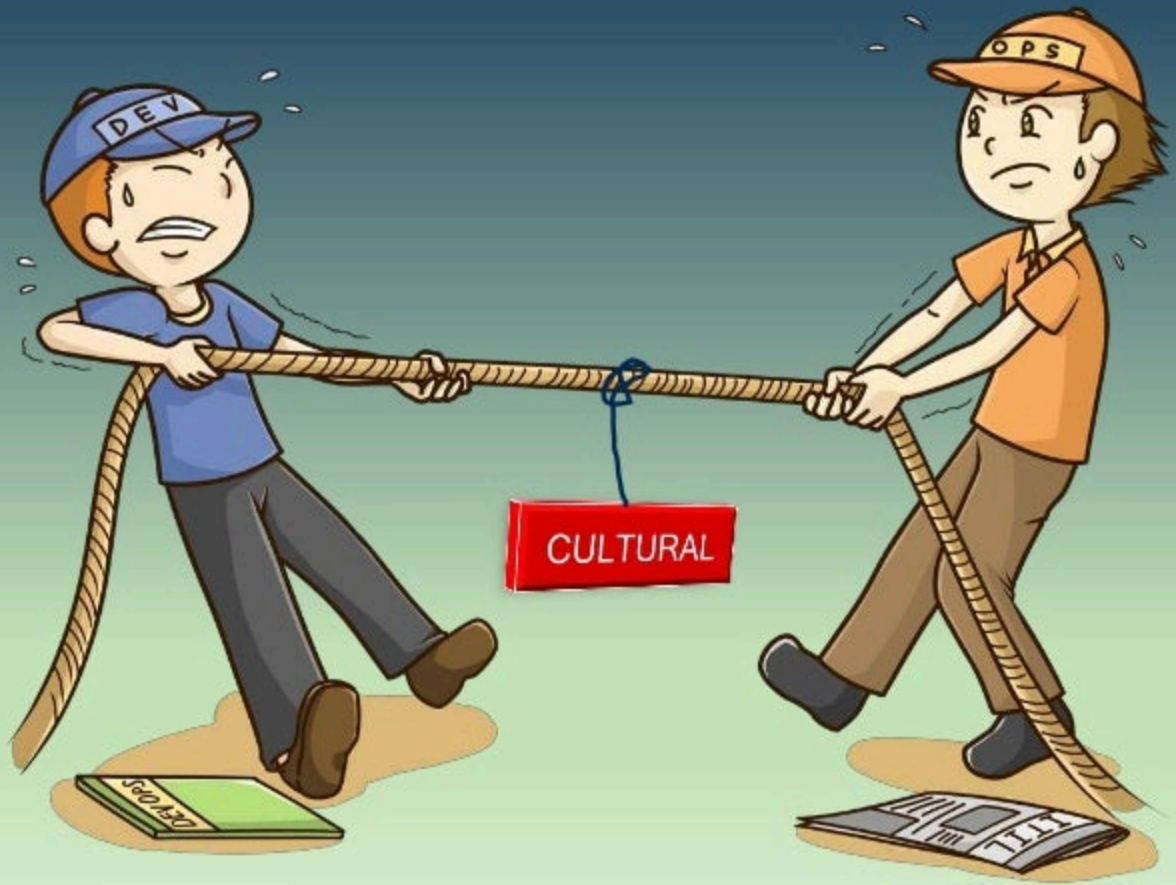
There is no official “DevOps manifest definition”.

DevOps in this presentation is only one view of DevOps based on the presenters experience in building, deploying and operating software.



Startup

ENTERPRISE



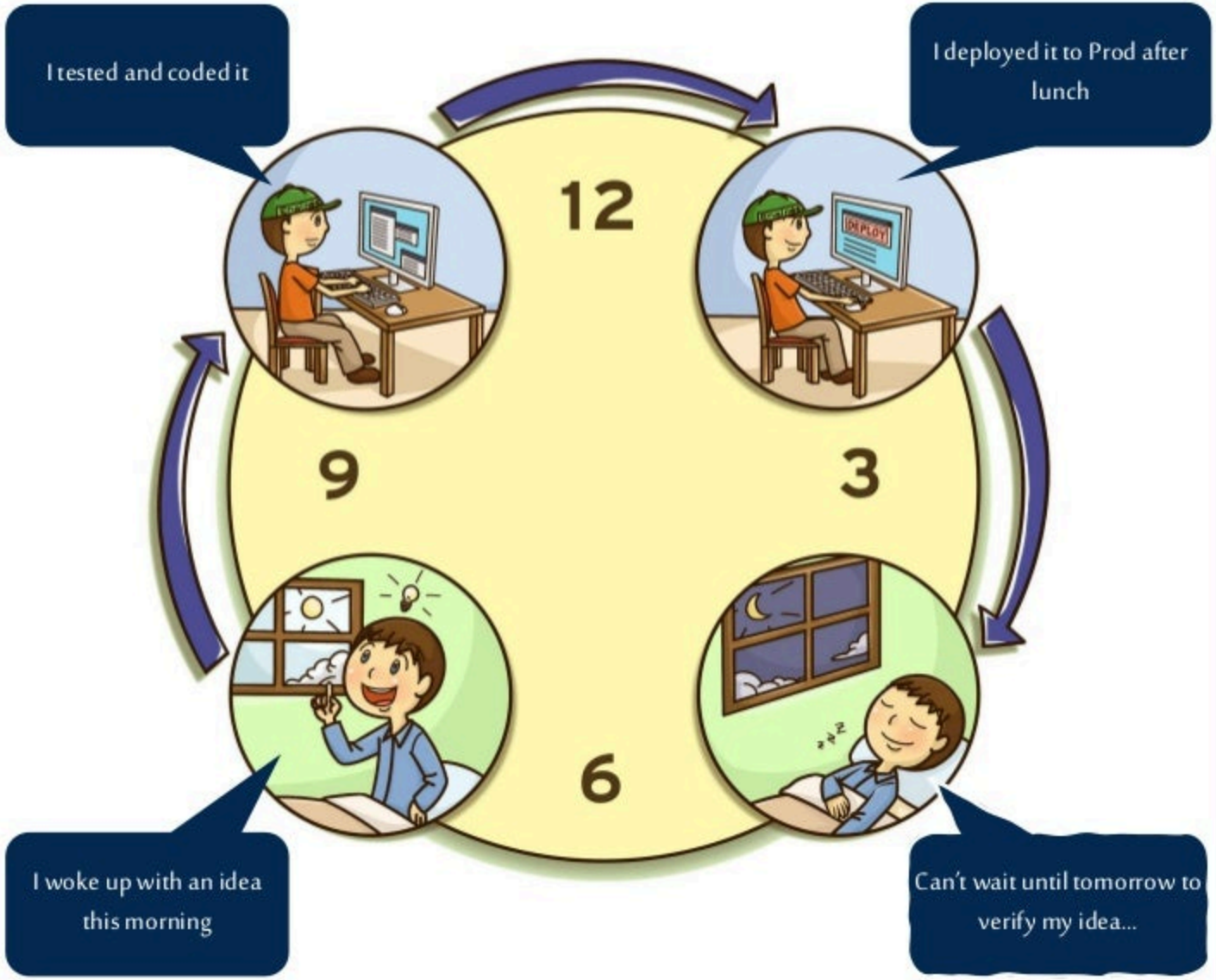
Manual Deployments

Prior to 2015, me and other engineers went into the office for quarterly/monthly manual releases.

Not DevOps

A non-DevOps situation where Dev blame Ops for being slow and Ops blame Dev for being stupid

Me Today



Vision

Idea to Prod the same day

Continuous Integration

- Version Everything*
- Automation
- Trunk based development
- Claim over Blame

*except secrets

Deploy frequency

Scania Connected Services

2011
Software projects
- 2-3 in parallel
- 3 deploys per year

2015
Agile teams
- 12 deploys per year

Continuous Integration

2016
Autonomous Teams
- Continuous Delivery
- **30+ deploys per day**

(Still On-Prem)

1. Microservice Architecture
2. Challenged and improved infra related processes
3. Trust and courage from management

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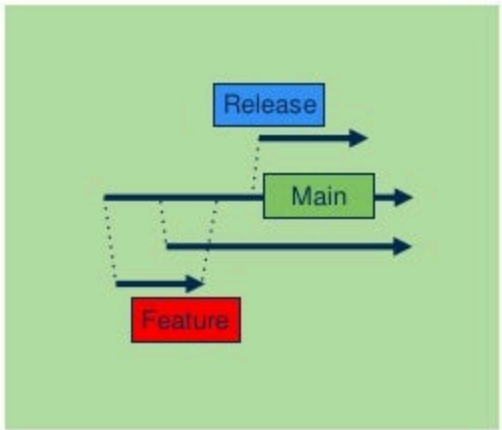
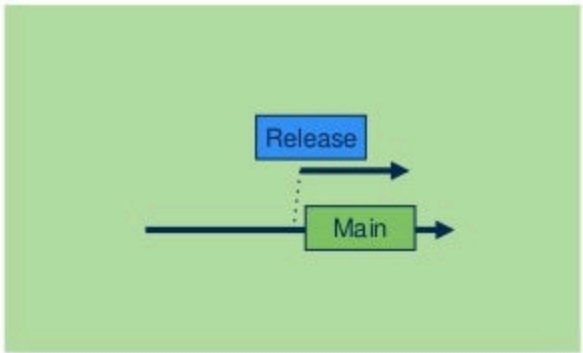
Branch strategies



50+ developers per code repository



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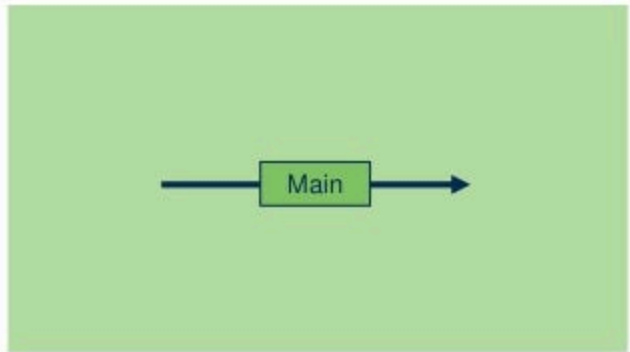


5 developers per code repository

Autonomous teams

Autonomous teams can have their own pace without affecting other.

Autonomous teams

With independent teams, all teams are not affected if one team experience problems.

Zero Downtime

Enables engineers to be present when their code goes live

Immutable Production

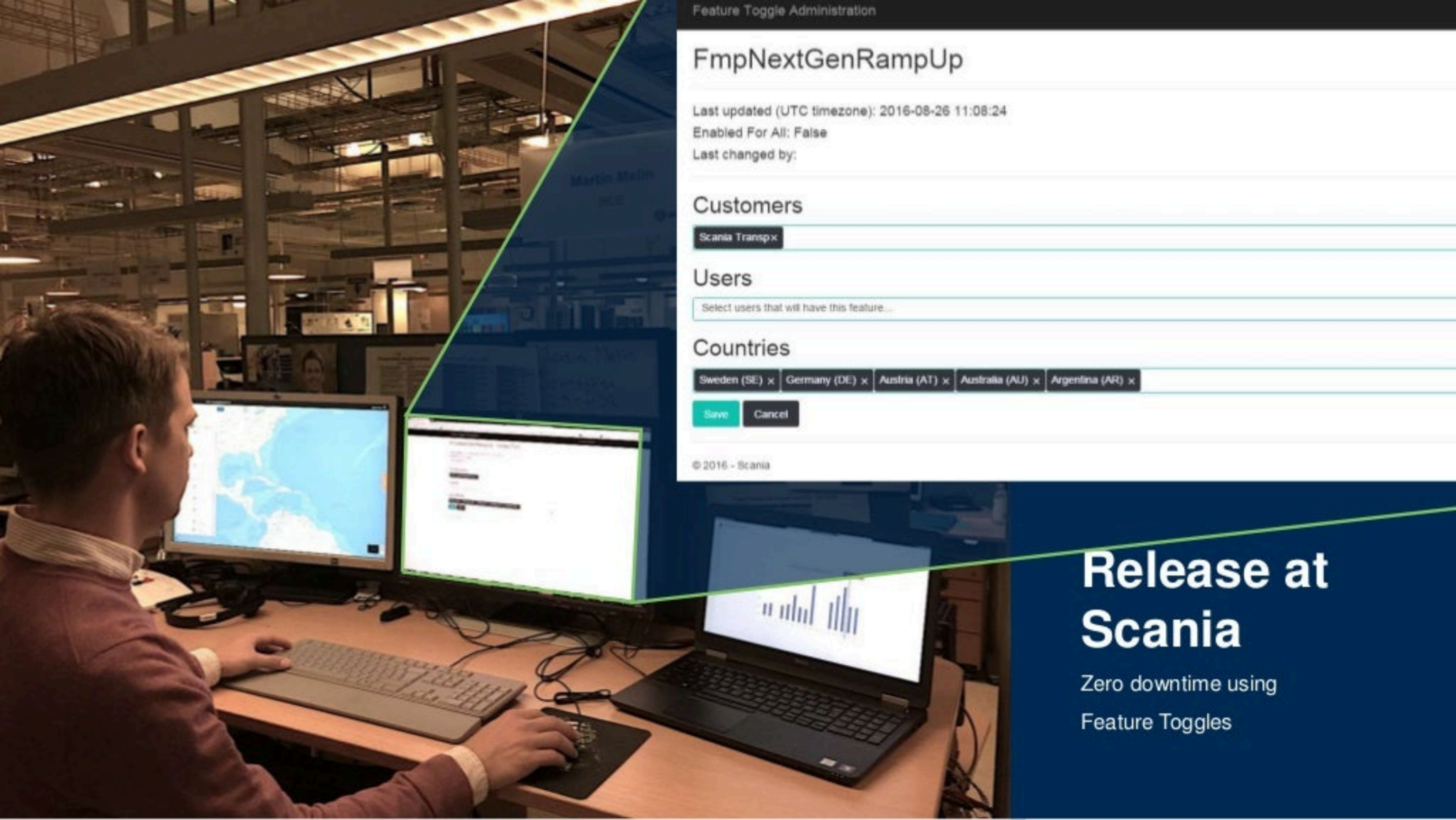
Developers should not log in to production servers!

Operations should not log in to production servers!

Remove Handovers

Avoid sub optimize in organizational silos

Deploy != Release
Development Team Concern
Business Decision



Release at Scania

Zero downtime using

Feature Toggles

Tilda 4 releasing to production

Tilda releases the new Fleet Management Portal for Great Britain market (2016-09-01).

Affinity

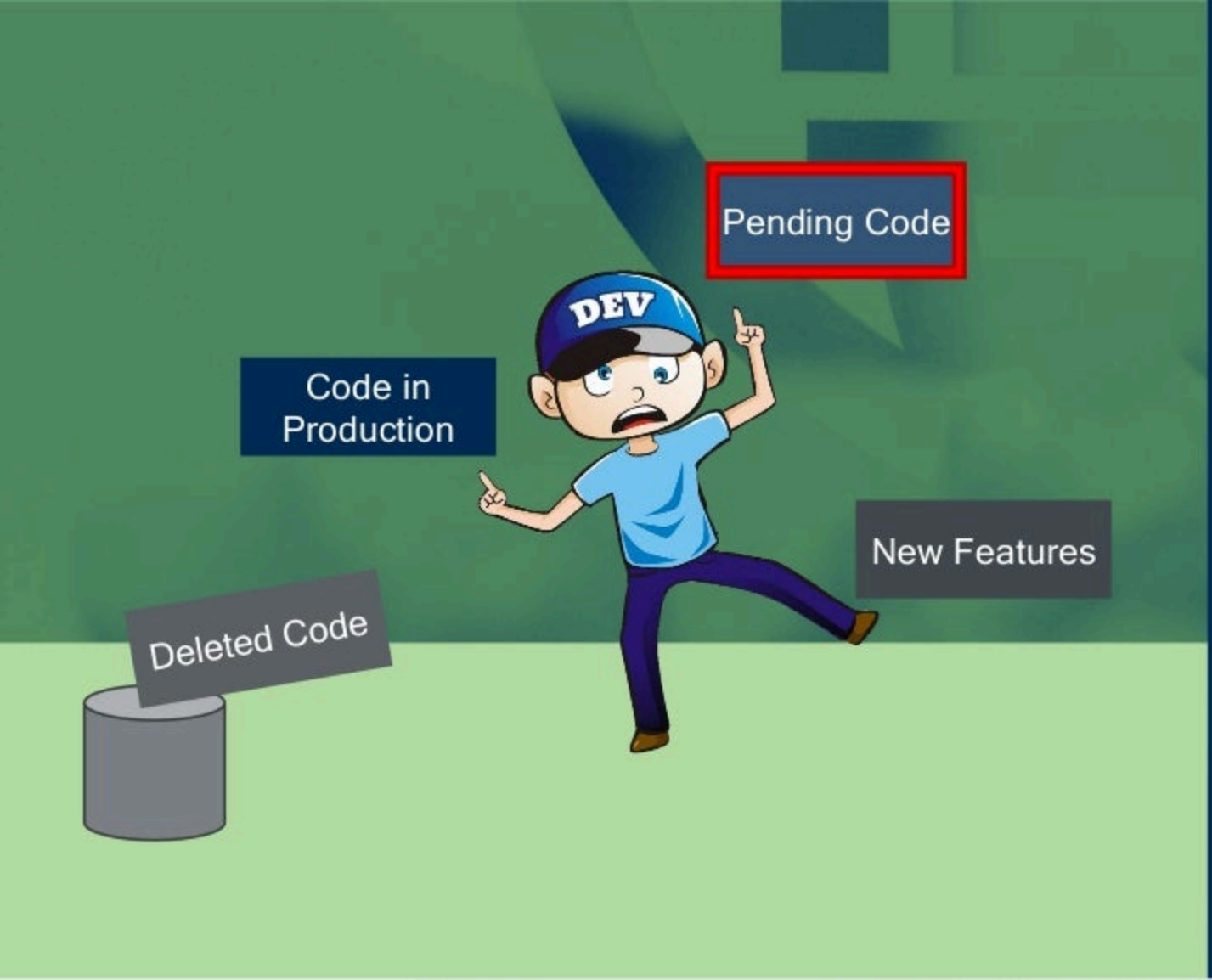
Maintaining infrastructure is very complex

Durability

Capacity

Availability

Security



Affinity

Maintaining different state of code is very complex

DEV
OPS

The shift to Infrastructure as Code

```
Resources:
  ElasticLoadBalancer:
    Type: AWS::ElasticLoadBalancing::LoadBalancer
    Properties:
      SecurityGroups:
        - !Ref LoadBalancerSecurityGroup
      Subnets:
        - !ImportValue: PublicSubnet1A
        - !ImportValue: PublicSubnet1B
      Listeners:
        LoadBalancerPort: 443
        InstancePort: 8080
        Protocol: HTTPS
        SSLCertificateId: !ImportValue CertificateId
      HealthCheck:
        Target: 'HTTP:80/'
        HealtyThreshold: 2
        UnhealtyThreshold: 3
        Interval: 20
        Timeout: 10
```

Cloud Security Team - Principles

Cloud Native Security

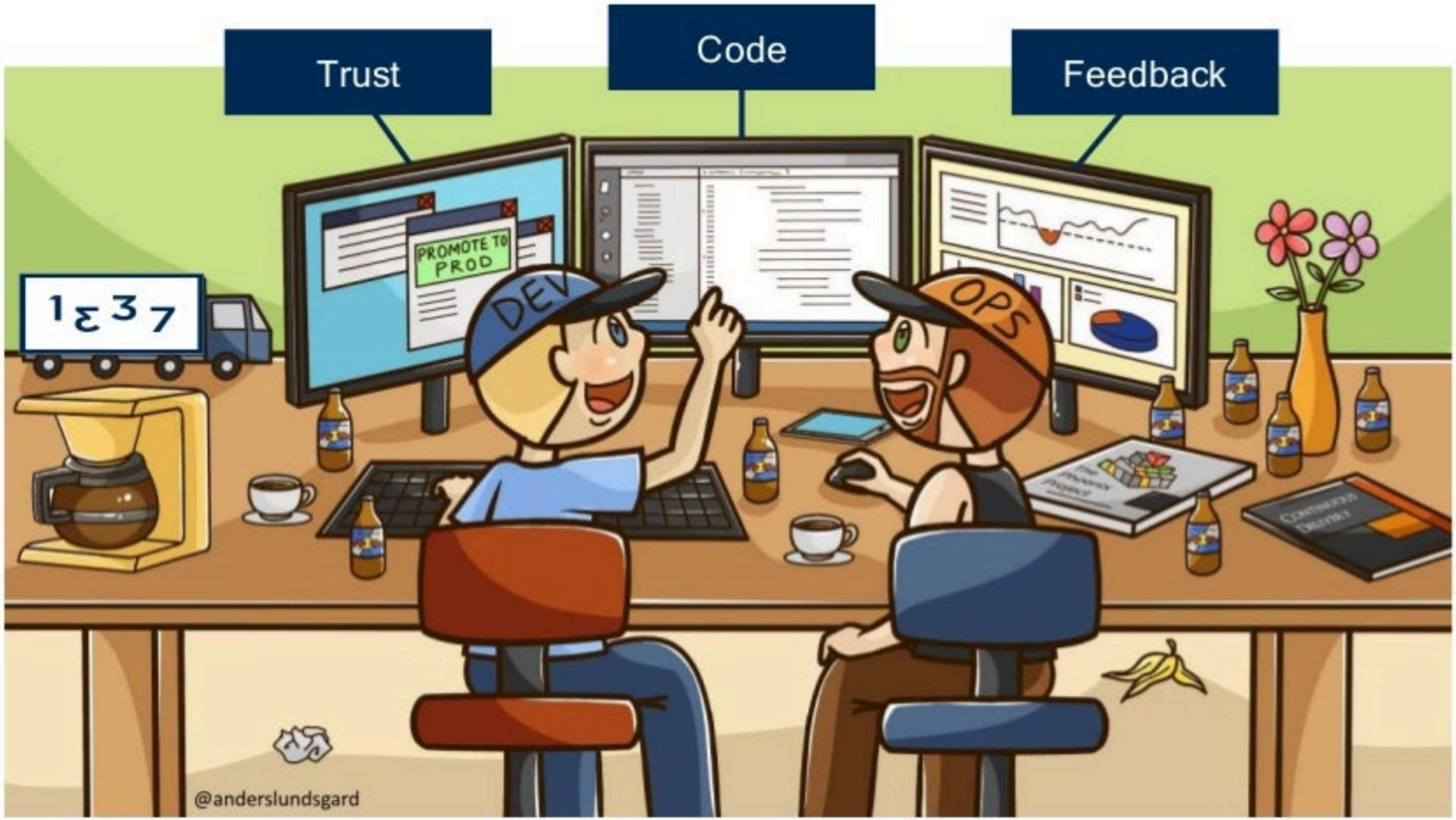
Gamifying Security

Share failures

Ubiquitous encryption

Get out from the cave

Don't just say "NO"



1337 **we've got this.**

Here is how YOU can help...

Here is how YOU can help...

we've got this.

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