Case Study Conrad Electronic

From a Static Infrastructure to Continuous Delivery and the Cloud in One Step

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loodse

About us

DevOps Engineer
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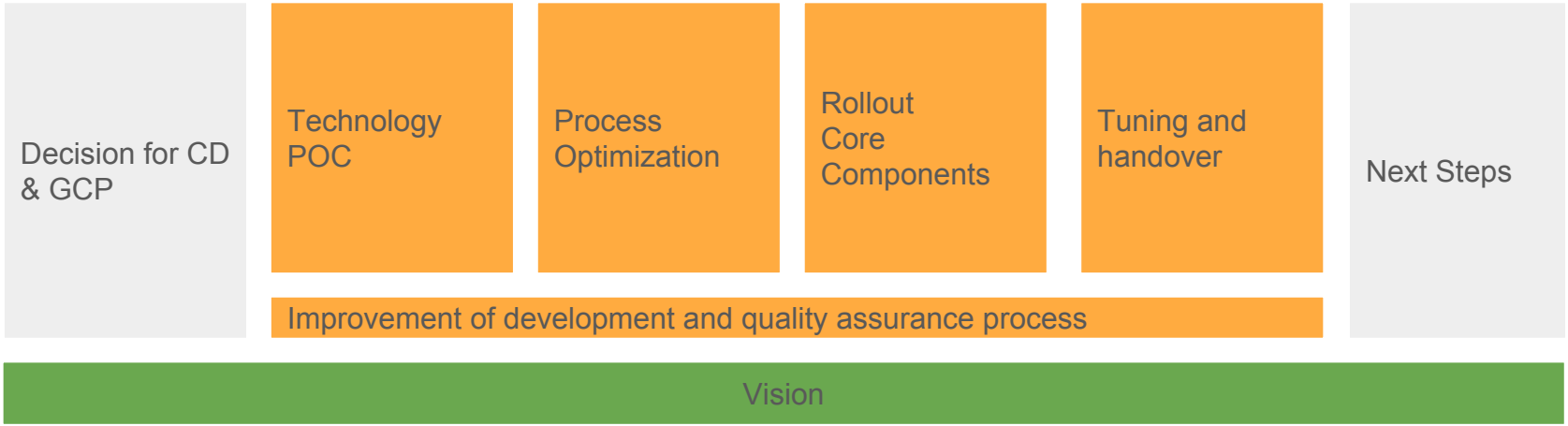
@Loodse

Context

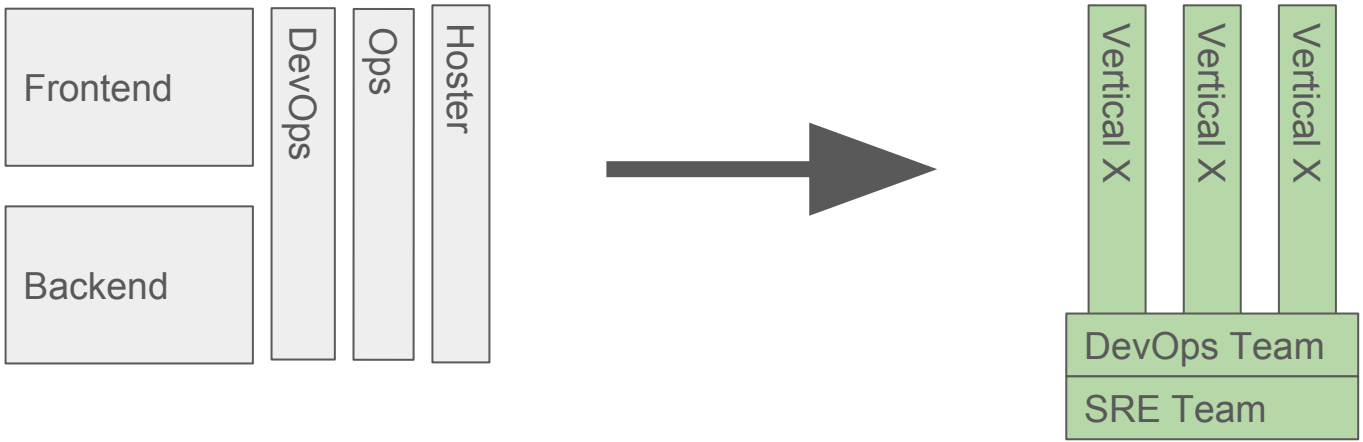

Decision for CD & GCP
Technology POC
Process Optimization
Rollout Core Components
Tuning and handover
Next Steps
Improvement of development and quality assurance process
Vision

Vision

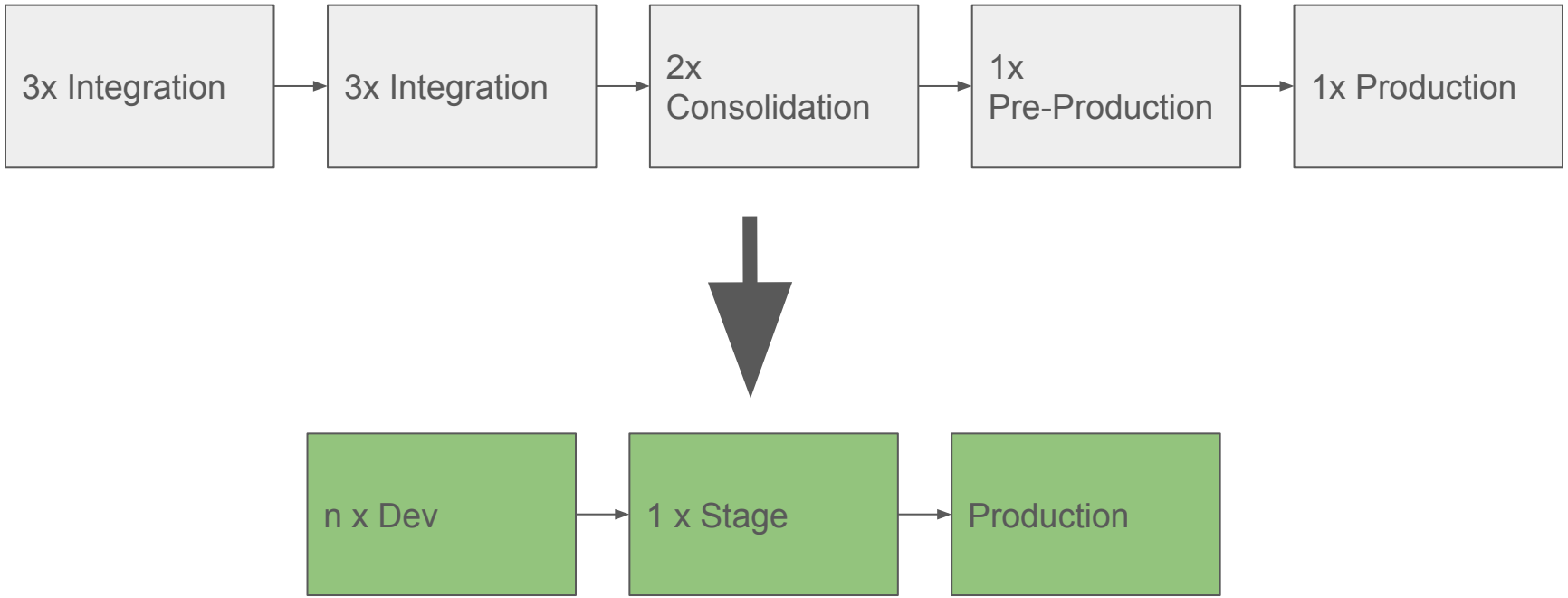
- Adopt business processes continuously
- Act instead of react
- Scale responsibility and know-how for operations
- Support verticals and agile development
- Fully automate infrastructure and application provisioning
- Reduce operational overhead
- Be cloud-native

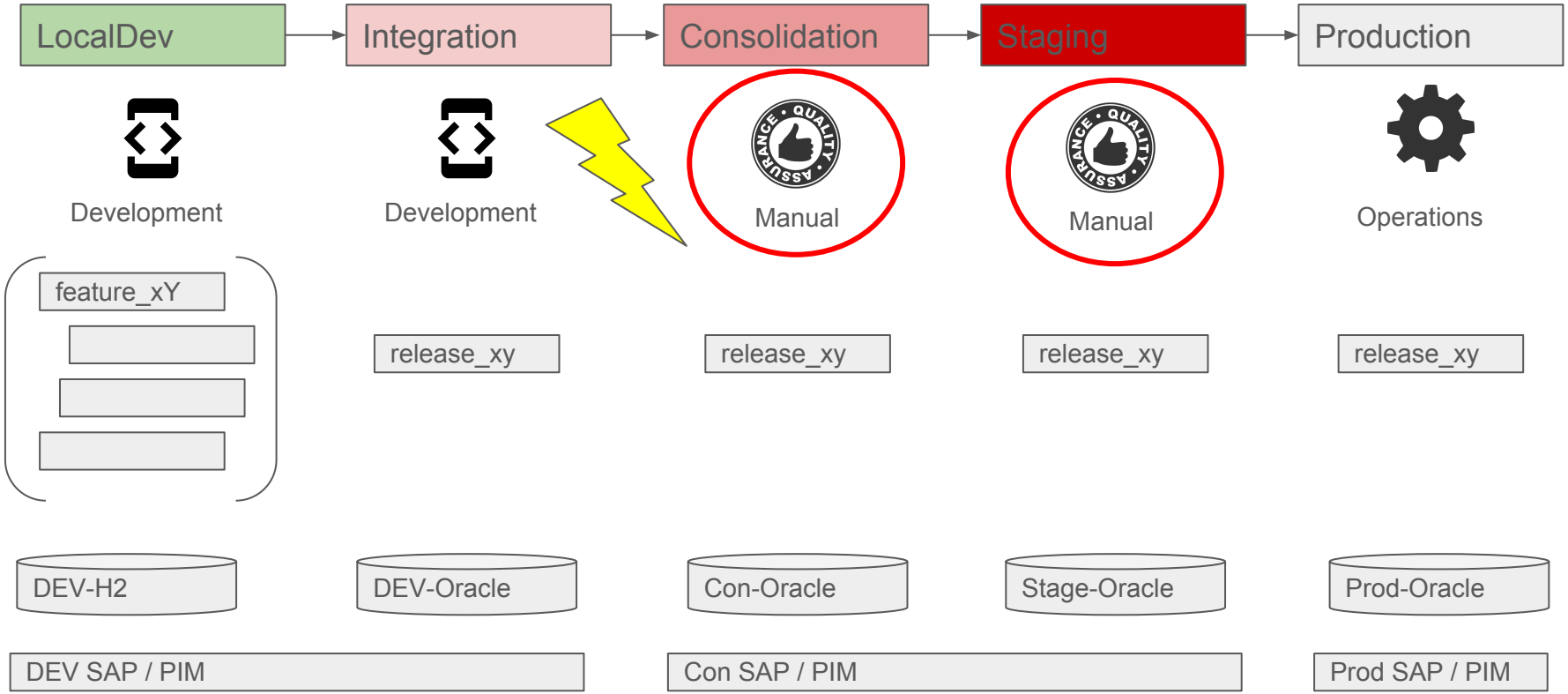
How we optimize our processes

Change dev organization (still in progress)

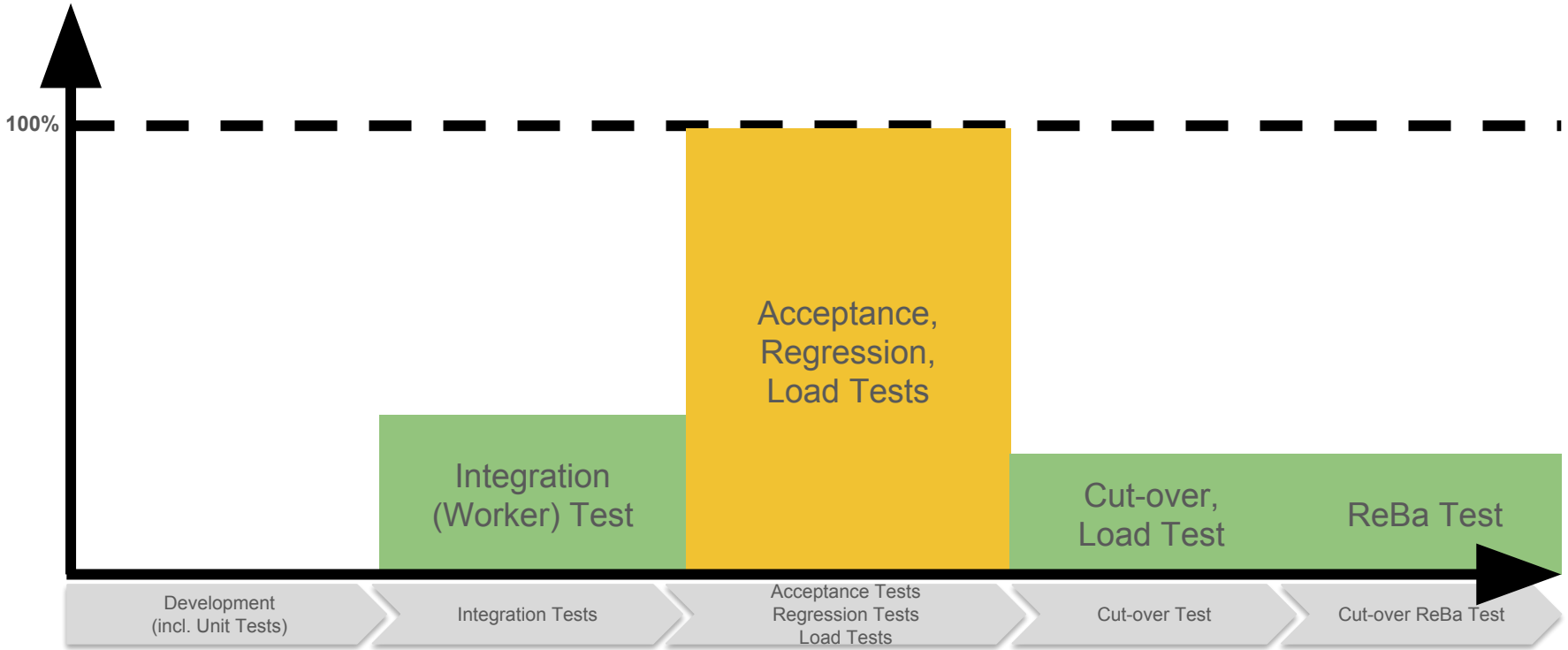


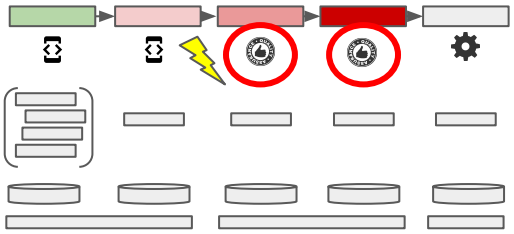
Optimize, automate and simplify environment (partly done)

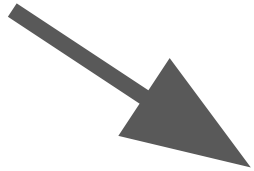


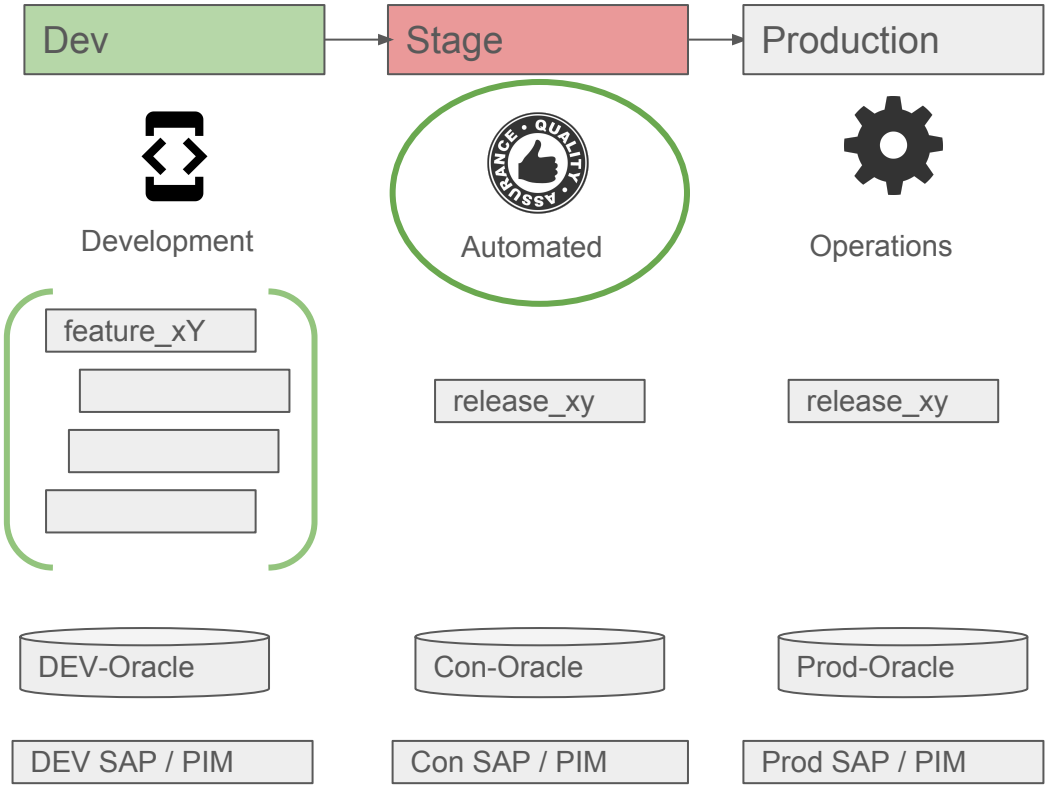

LocalDev
Integration
Consolidation
Staging
Production
Development
Development
Manual
Manual
Operations
feature_xY
release_xy
release_xy
release_xy
release_xy
DEV-H2
DEV-Oracle
Con-Oracle
Stage-Oracle
Prod-Oracle
DEV SAP / PIM
Con SAP / PIM
Prod SAP / PIM

Release Test Effort 1.0

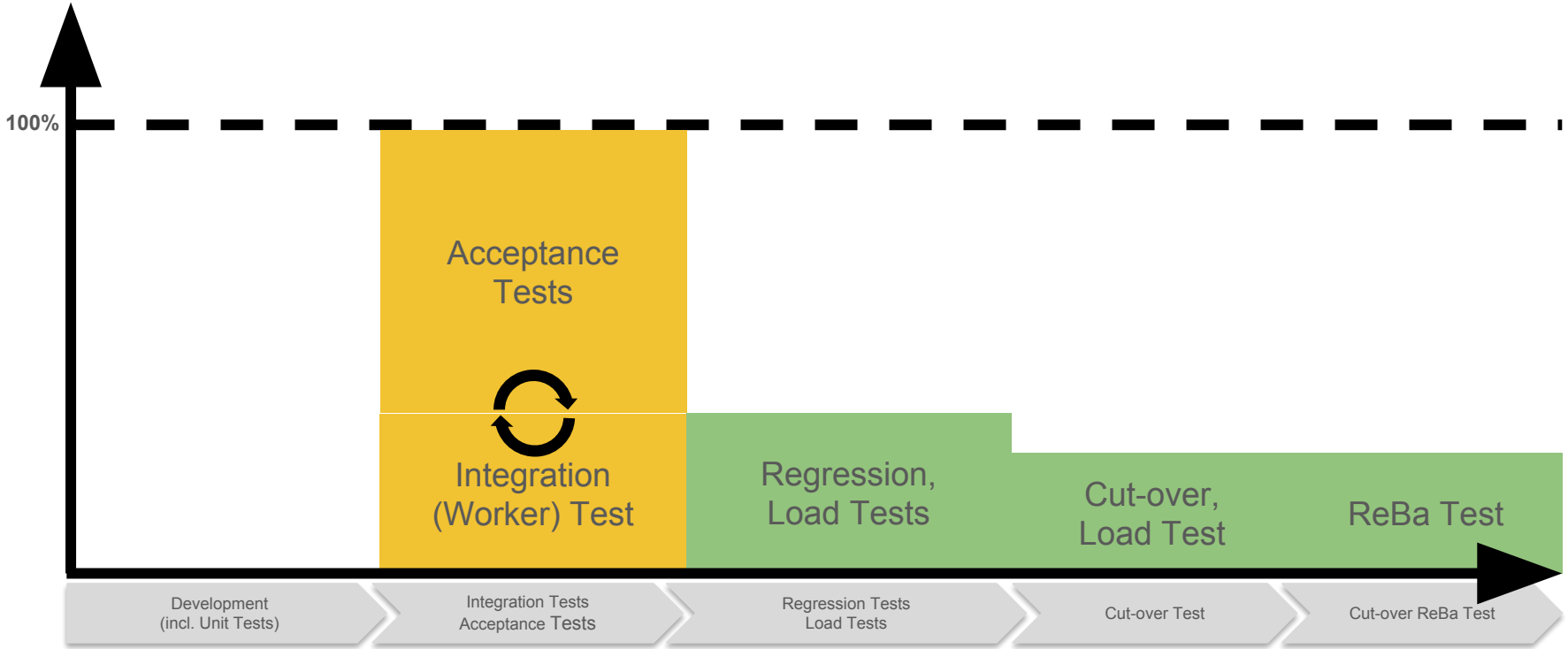







Dev
Stage
Production
Development
Automated
Operations
feature_xY
release_xy
release_xy
DEV-Oracle
Con-Oracle
Prod-Oracle
DEV SAP / PIM
Con SAP / PIM
Prod SAP / PIM

Release Test Effort 2.0



Automate and optimize QA process

QA Team ~10 FTE

Basic smoke tests for one only shop and the main process

QA Team ~3 FTE

Testautomation Team (2 internal, 8 external)

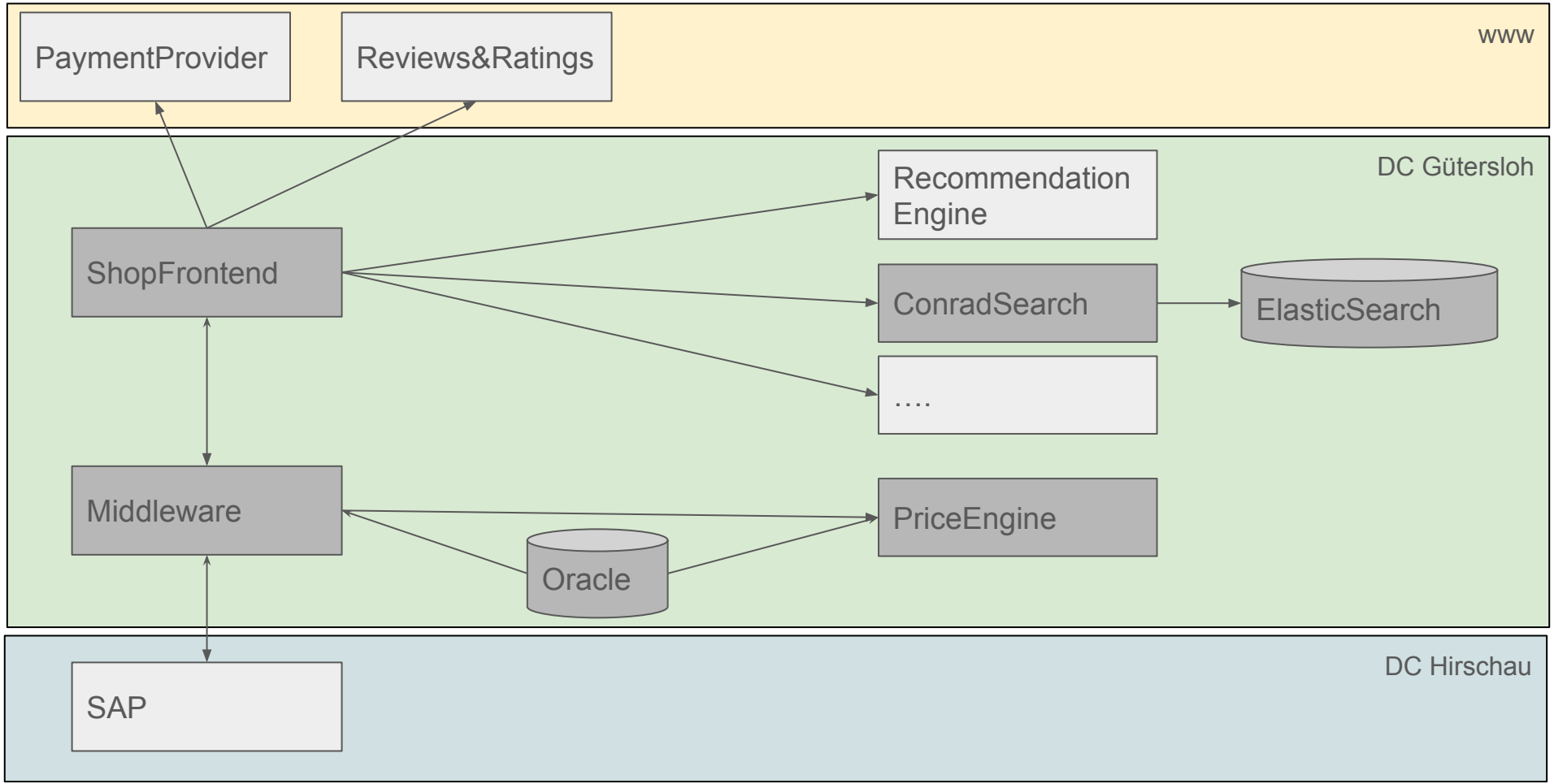
Easy to understand

Testautomation Tool (Wiki-Syntax)

Comprehensive load tests

Comprehensive integration tests for services

How does this look like?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PaymentProvider
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DC Gütersloh
Recommendation Engine
ShopFrontend
ConradSearch
ElasticSearch
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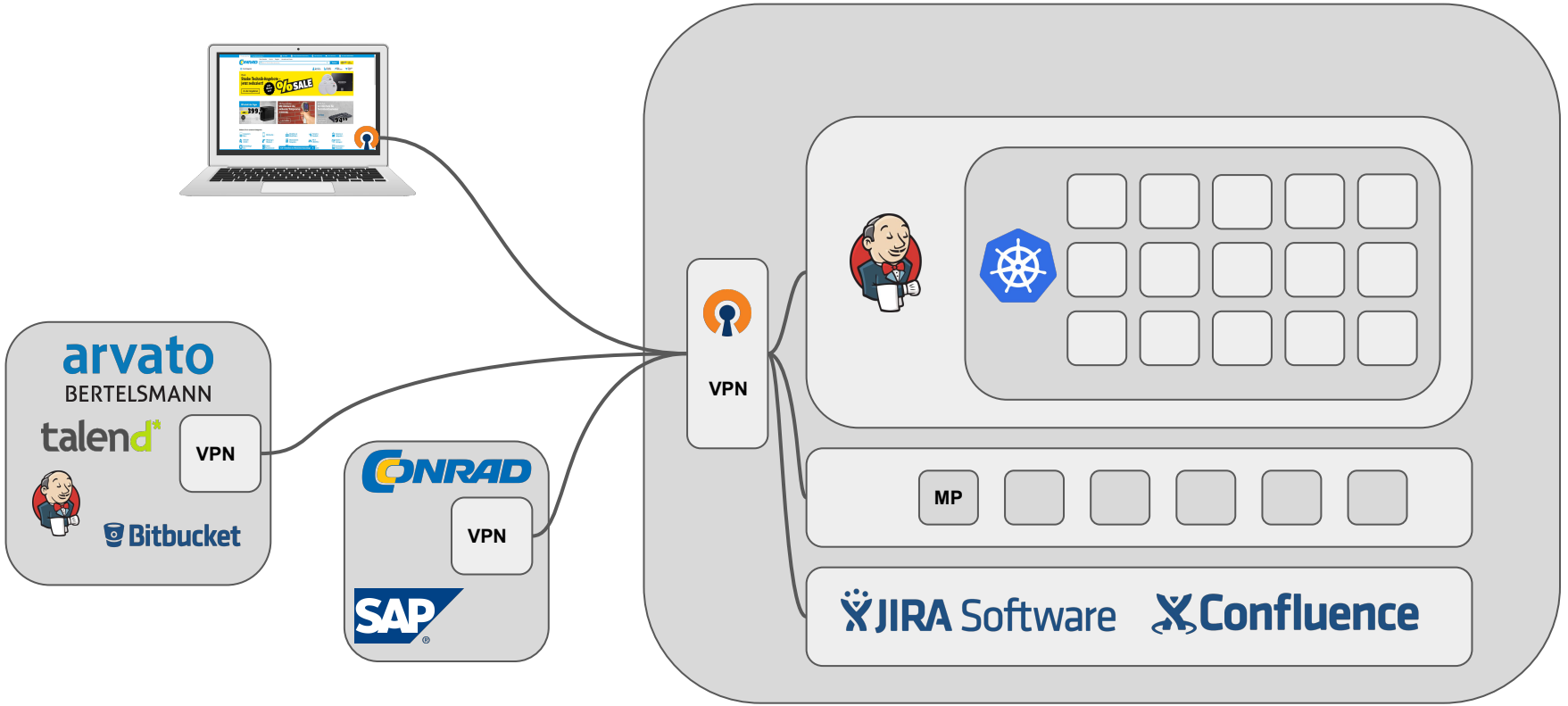
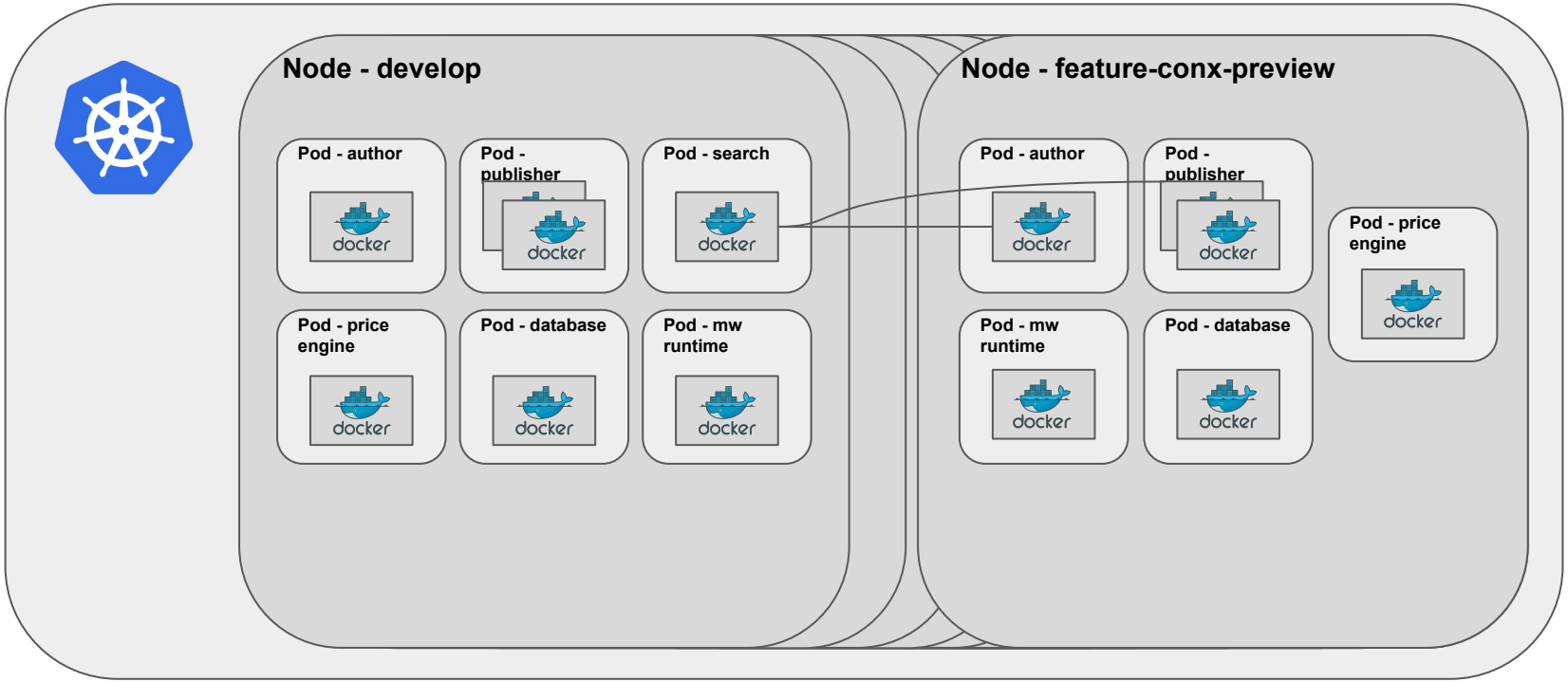
Middleware
PriceEngine
Oracle
DC Hirschau
SAP

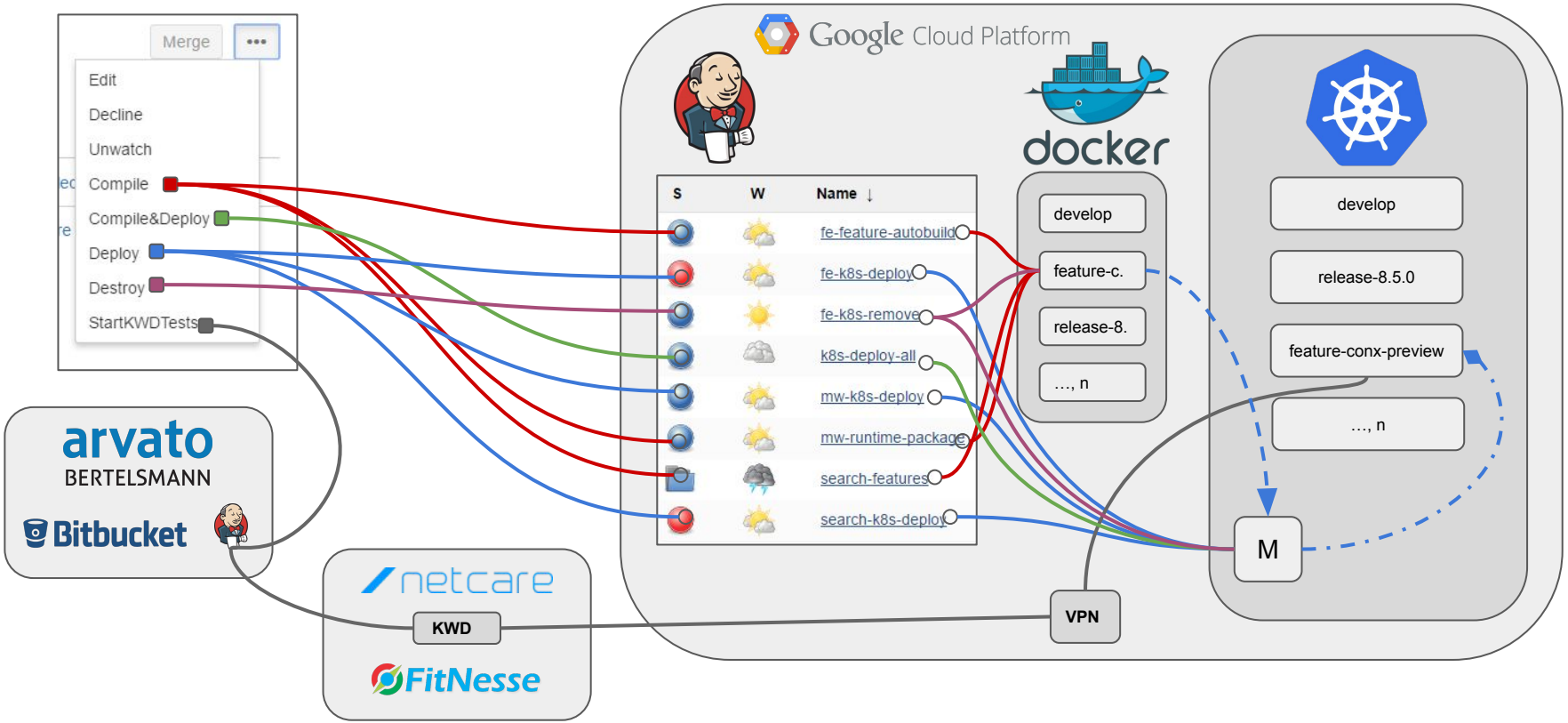
Continuous X – Network Setup



Continuous X – Cluster Setup



Continuous X – Delivery Pipeline



Demo time!

QA!

Much of a help!

- State of the art tool-chain
- Database versioning tool (liquibase) for schema and data extraction
- Defined macro architecture (HTTP, REST, ...)
- Unified technology stack (JAVA)
- Operations know-how
- Experienced partner with know-how of cloud technology & Kubernets & Docker
- Experienced developer (or maybe DevOps'ler)
- Backing from Google
- Attention and understanding from management & organization

Our hacks

- Client VPN on Jenkins for accessing BitBucket & Nexus
- NginX as Reverse Proxy for accessing backend systems
- OracleXE for test environment with reduced dataset

Our learings

- Network & connectivity not to be underestimated
- AEM is pain
  - Huge Repo-Size
  - Build a new repo > 8h due to stored assets
- Secure Networking via Open VPN => automated
- By use of GoogleContainer registry use a local mirror