



ABN·AMRO



The background of the slide features a close-up photograph of interlocking puzzle pieces. The visible text on the puzzle pieces includes 'automation', 'process', 'continuous', and 'integration'. A large teal rectangular overlay covers the bottom left portion of the image, containing the title text.

DevOps for Adults: How to Scale Your DevOps Initiative Beyond its Awkward Teenage Years

- DOES 2018
- London 26th June 2018
- Stefan Simenon

Introduction



- Stefan Simenon
- Head of IT Tooling & Software Development
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- Studied Physics & Information Technology
- 20+ years IT experience in various roles
- Currently responsible for Tooling, Software Quality & CI/CD in ABN AMRO IT department
- Speaker at several software conferences like Jenkins World, XebiaLabs DevOps Leadership Summit, AllDayDevOps, Software Quality conferences

ABN AMRO is a leading bank in Europe

22,000 internal employees servicing retail, private and corporate finances worldwide

Headquartered in Amsterdam

5,000 associates working in IT

300+ agile teams

DevOps journey ABN AMRO: CICD awareness



2015

Successful
CICD tooling
pilot

CICD
awareness

Challenges Faced at ABN AMRO

Long lead time for software delivery

Software quality issues found at a late stage

Many manual handovers and approvals

Code merging happening at a late stage

Inefficient cooperation between DEV and OPS

Big non-frequent releases to Production

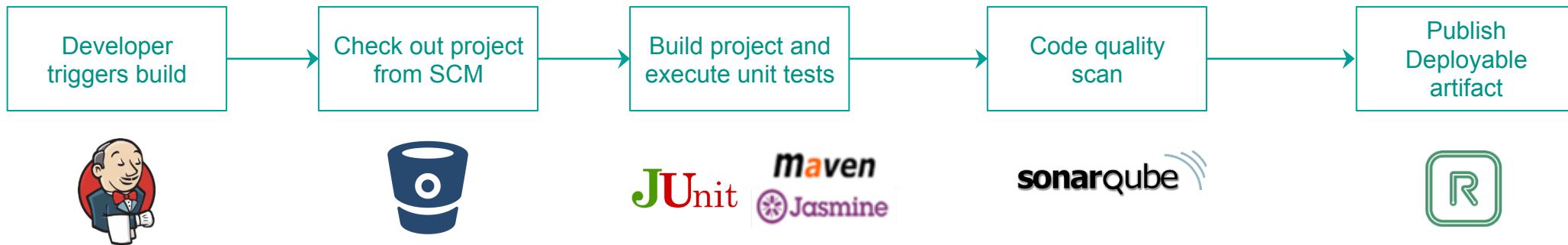
Financial services market is growing fast, on multiple fronts

DUTCH FINTECH SCENE



Successful CI pilot conducted

- Initial CI pipeline implemented



- CI pipeline used by 5 eager Java/Front End teams
- Benefits made visible and shown to senior management
- Decision by senior management to start program to implement CICD across organization



DevOps journey ABN AMRO: CICD strategic theme

2016

CICD
program

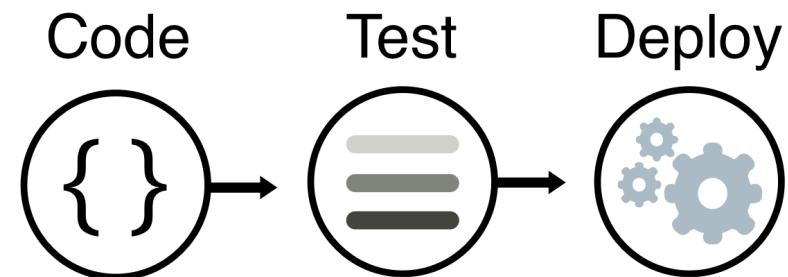
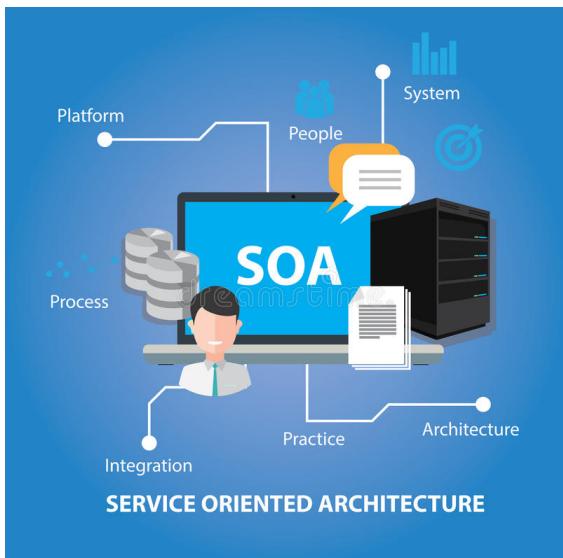
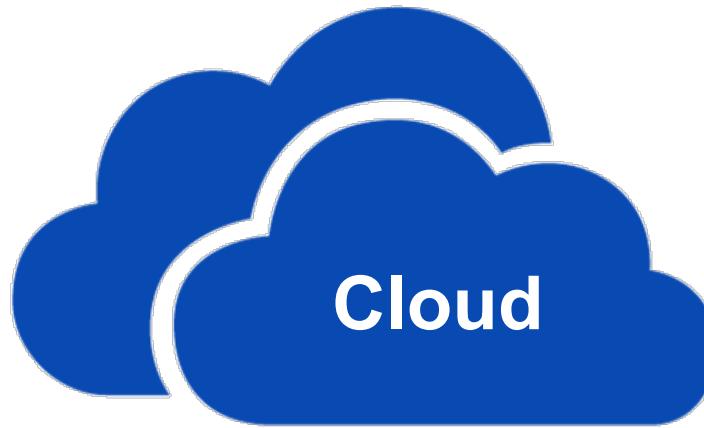
Improve
pipelines

CICD
strategic
theme

Successful
CICD tooling
pilot

CICD
awareness

CICD: 1 of our 4 strategic themes



**Continuous Integration
Continuous Delivery**

CICD program: Set-up

PAVE THE WAY

Tooling

Infra prerequisites

Integration

Pipelines

Move to
ET

Automated
production
release

MAKE IT HAPPEN

Change Management

Mindset & Behaviour

Simplify processes

Coaching for agile teams

Extend
techno-
logies

Mature
in UT/ST

Start CICD
in UT/ST

Front
end,
Java



ABN·AMRO

Difficult ways lead to
beautiful destinations

CICD awareness program to help us grow



Various communities set up
Internal meetings & hackathons
Celebrating successes
Sharing failures
External speakers

CICD coaching
CICD E-Learning
Knowledge sharing
Best practice sharing
70:20:10 methodology



CICD summer boost
Leadership events
Advocate CICD
Changed WoW

DevOps journey ABN AMRO: Scaling and becoming mature

2017

IT4IT
organisa-
tion

Hybrid
cloud

Mature
CICD
pipelines

Dev
Sec
Ops

Improve
pipelines

CICD
Program

CICD
strategic
theme

Successful
CICD
tooling pilot

CICD
awareness



ABN AMRO

Required tools have been implemented



- JIRA/Confluence agile toolset being defined and implemented
- Standard Way of Working defined and roll out in progress
- From 2000 to 10000+ users in 2,5 years



- All tools required for CICD implemented and rolled out
- Various Continuous Integration pipelines defined and implemented



- SonarQube for code quality, Fortify for secure coding, Nexus Life Cycle for OSS library management
- Build breakers defined and roll out incl. governance in progress



- Tools implemented to enable automated testing
- Test Service Virtualization rolled out
- Automated test data management and governance implemented and roll out in progress
- Automated Test framework defined and implemented

XebiaLabs DevOps Platform provided framework to mature



Technical implementation

- Tooling for release and deployment management selected: XL Release and XL Deploy
- Release & Deployment management WoW defined and roll out in progress
- Test & Production environments for XL Release and XL Deploy delivered, installation process has been fully automated
- Standard CD pipeline for Java/WebSphere, Open Banking and IIB delivered and connected to standard CI pipeline.

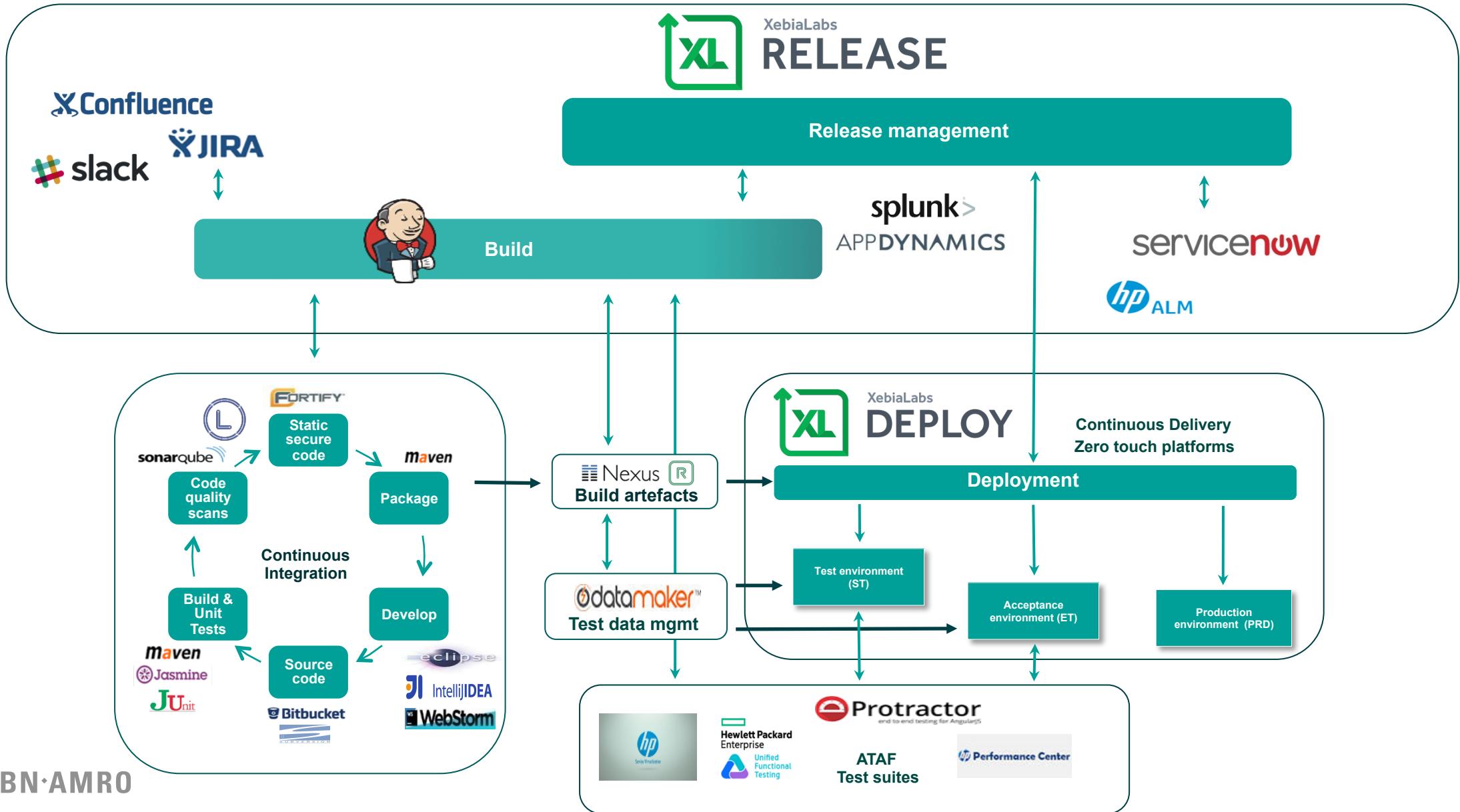
Number of users

- > 100 applications onboarded for automated deployments
- > 1000 XL Release users

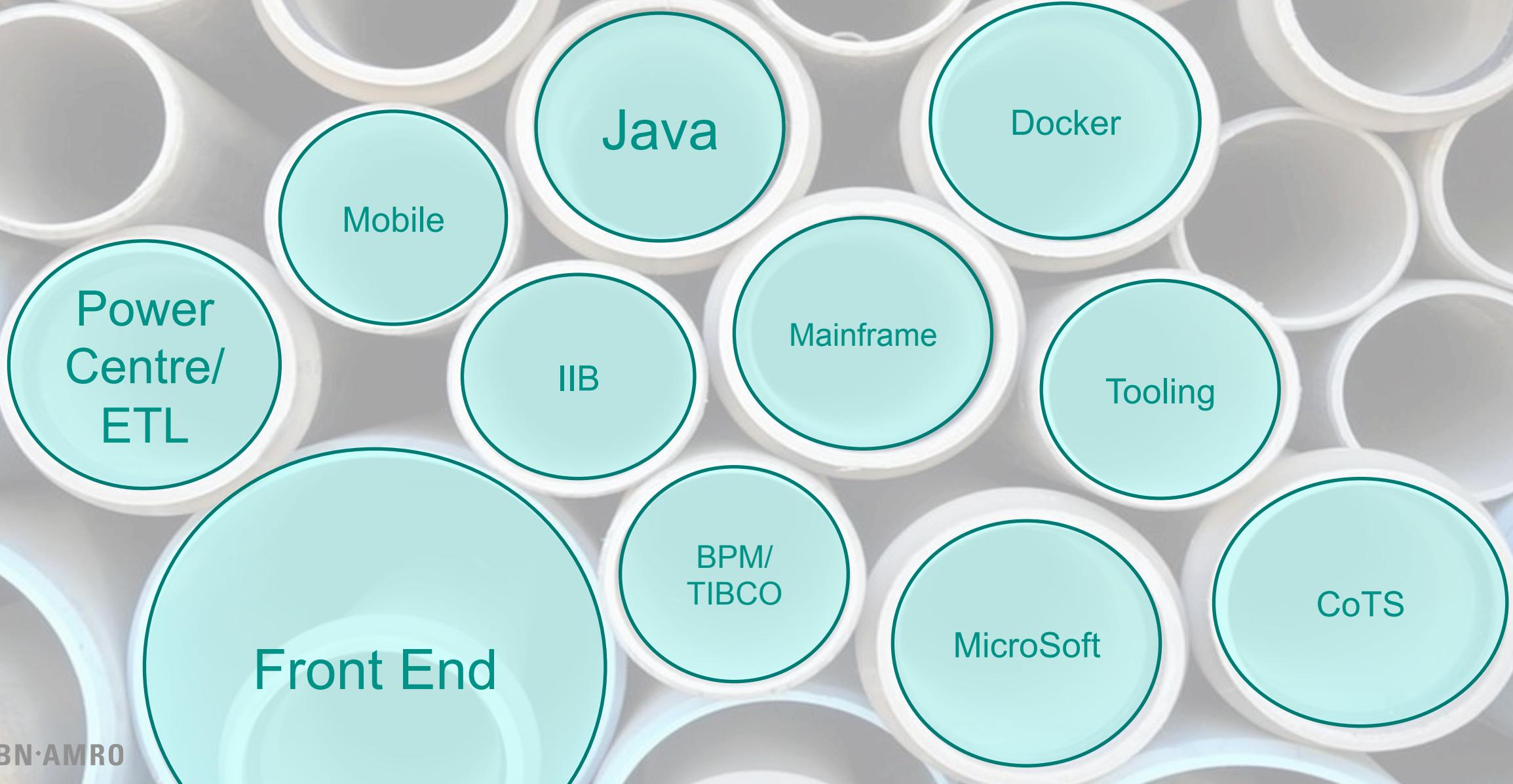
Benefits

- Manual activities become visible
- 20 – 40% decrease in release lead times achieved
- Improved security
- Improved time to market

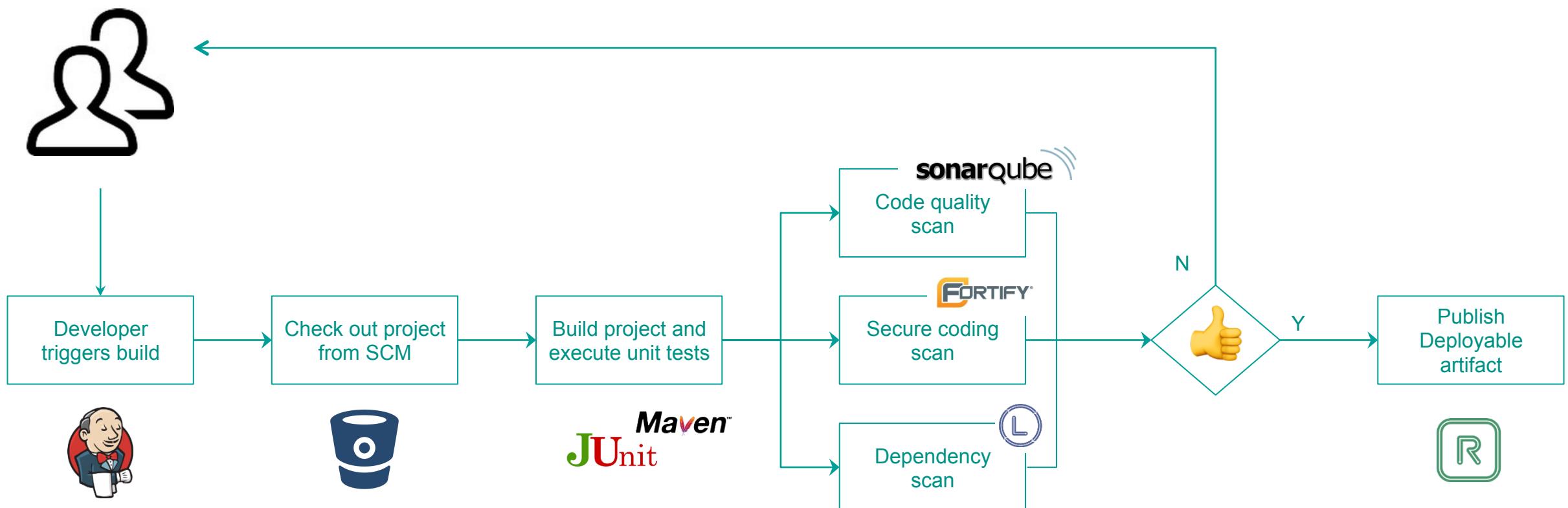
Midrange Build & Delivery pipeline: orchestration



Pipelines within ABN AMRO



DevSecOps: Standard CI pipelines and build breakers



Growing awareness of key principles next to pipelines

1.

Run pipeline locally

2.

Integrate quickly and often

3.

Practice test driven development

4.

Keep changes small

5.

Get continuous feedback

6.

Decomposition

7.

Have a fast pipeline

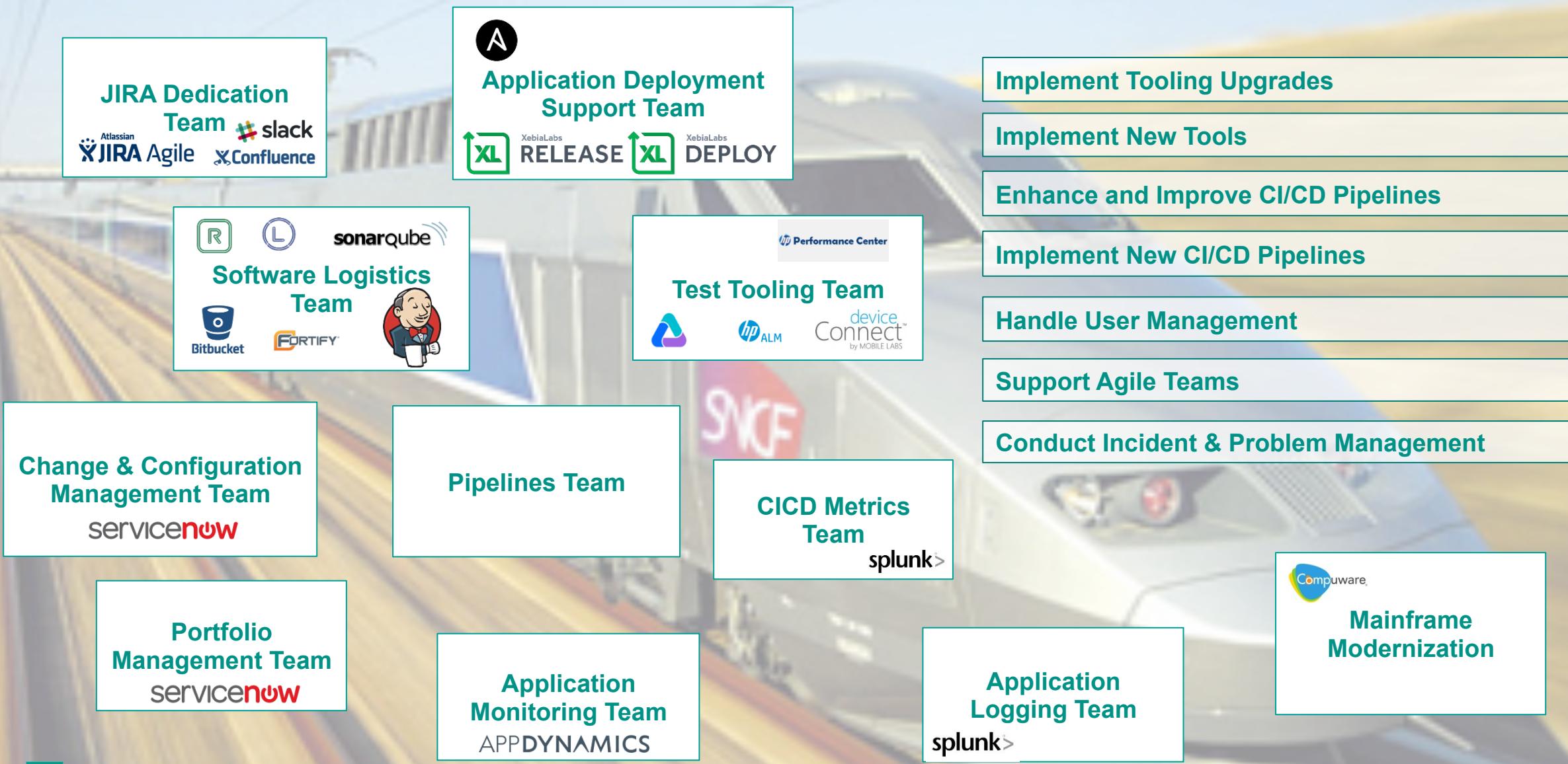
8.

Automated unit testing

9.

Trunk based development

IT4IT Organisation Set Up to Enable CI/CD Implementation



Hybrid Cloud set up



Private Cloud (IBM CMS)

- Consists of hardware deployed within ABN AMRO data centres
- ABN AMRO controls the underlying infrastructure, IBM manages CMS
- IaaS solution, provisioning of Virtual Machines (VM)
- Limited PaaS
- Currently majority of applications run on CMS



Public Cloud (AWS, Azure)

- Offers advanced PaaS, IaaS
- Increased developer productivity due to large suite of out of the box technologies and services
- Delivers an automated and native platform for Agile and DevOps
- Pay as you go: pay only for the used services
- 50-100 applications will land on Public Cloud in 2018

Realised benefits within ABN AMRO

Test environment uptime improved

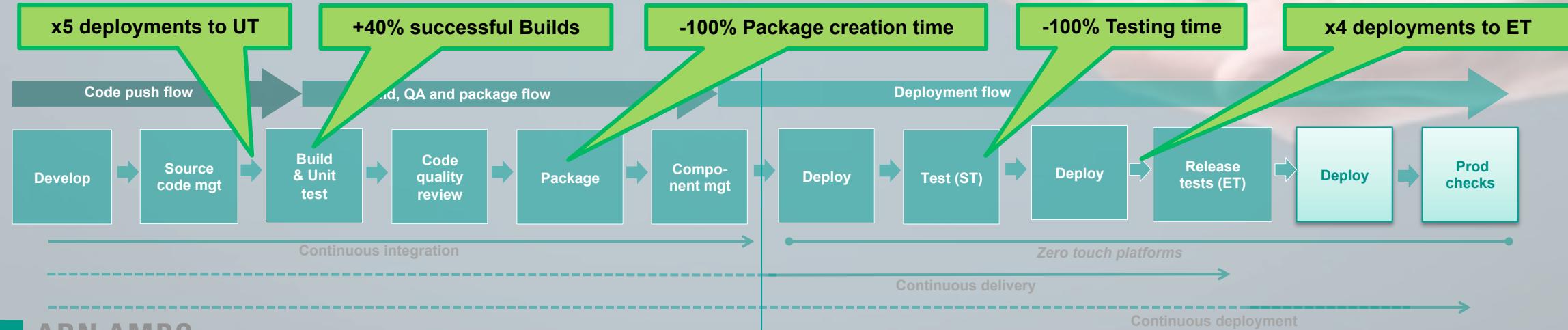
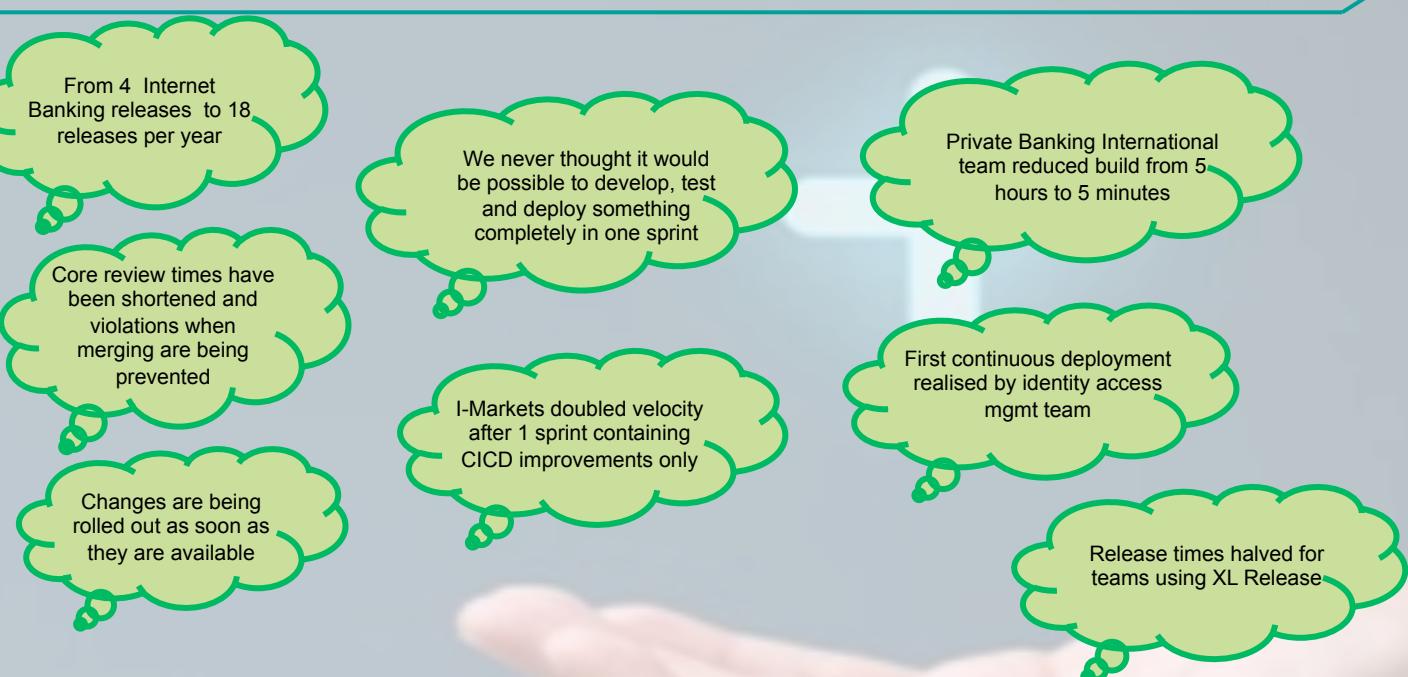
Improved code quality & secure coding

Improved cooperation across stakeholders

Improved time to market

Improved development processes

Increased velocity



Advice for growing up



Senior management commitment & involvement

Invest in reducing technical debt

Create a safe environment (failing is ok)

Do not focus on tooling only

Do not underestimate the journey and complexity

Do not focus on long term milestones



Way forward

Automate and improve tooling pipelines

Further transform to DevSecOps

Improve WoW and Mindset & Behaviour

Facilitate increased team autonomy

Focus on Public cloud

Database automation

CICD metrics

Questions

