



All aboard the DevOps train

Our journey towards DevOps at Dutch Railways

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Huub van der Wouden
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Let us take you to the Netherlands... the land of...



Introduction

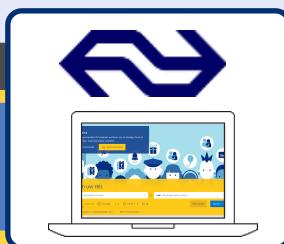
Huub van der Wouden

Program Manager Agile Transformation



Ard Westerik

DevOps Transformation Lead



NS at a glance



1.2 million
train journeys every day



17 ·bln

17 billion passenger
kilometres every year
410,000 times round the earth



9 million people travel on
NS trains every year



Amsterdam Centraal:
165,000 passengers
every day



6,830 kilometres of
railways
'from Utrecht to Tibet'



26,000 employees:
3,430 train drivers
and 2,950 conductors,
1,500 IT staff

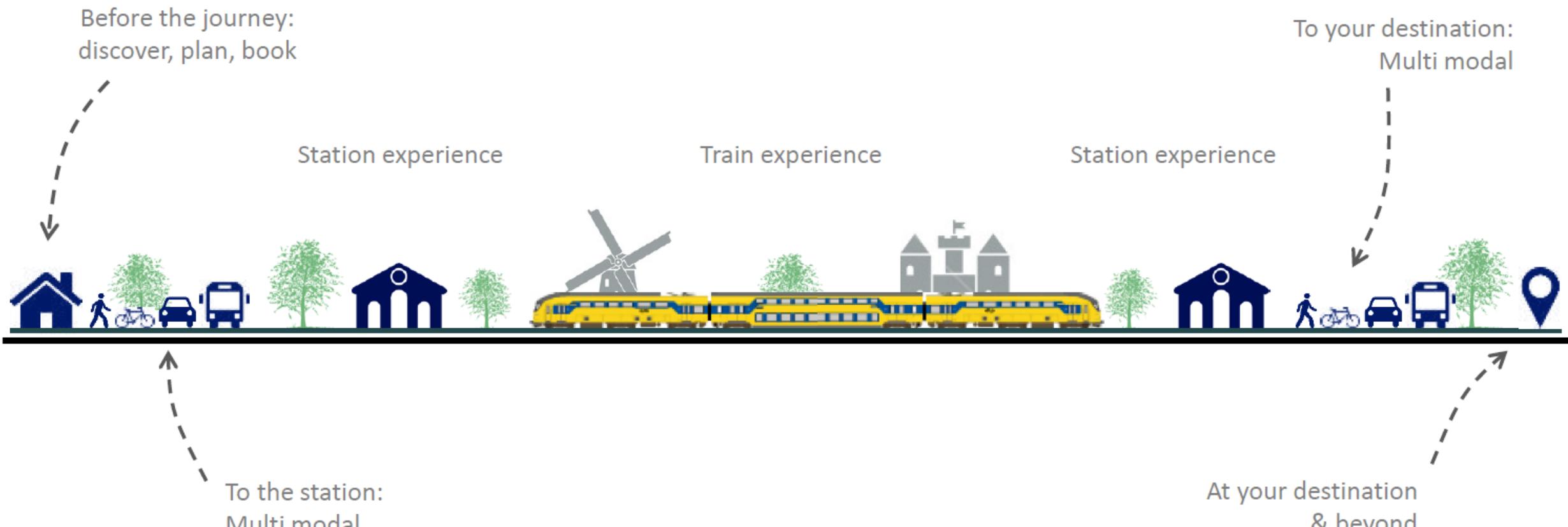


Revenue: € 5 bln
Profit: €120 mln

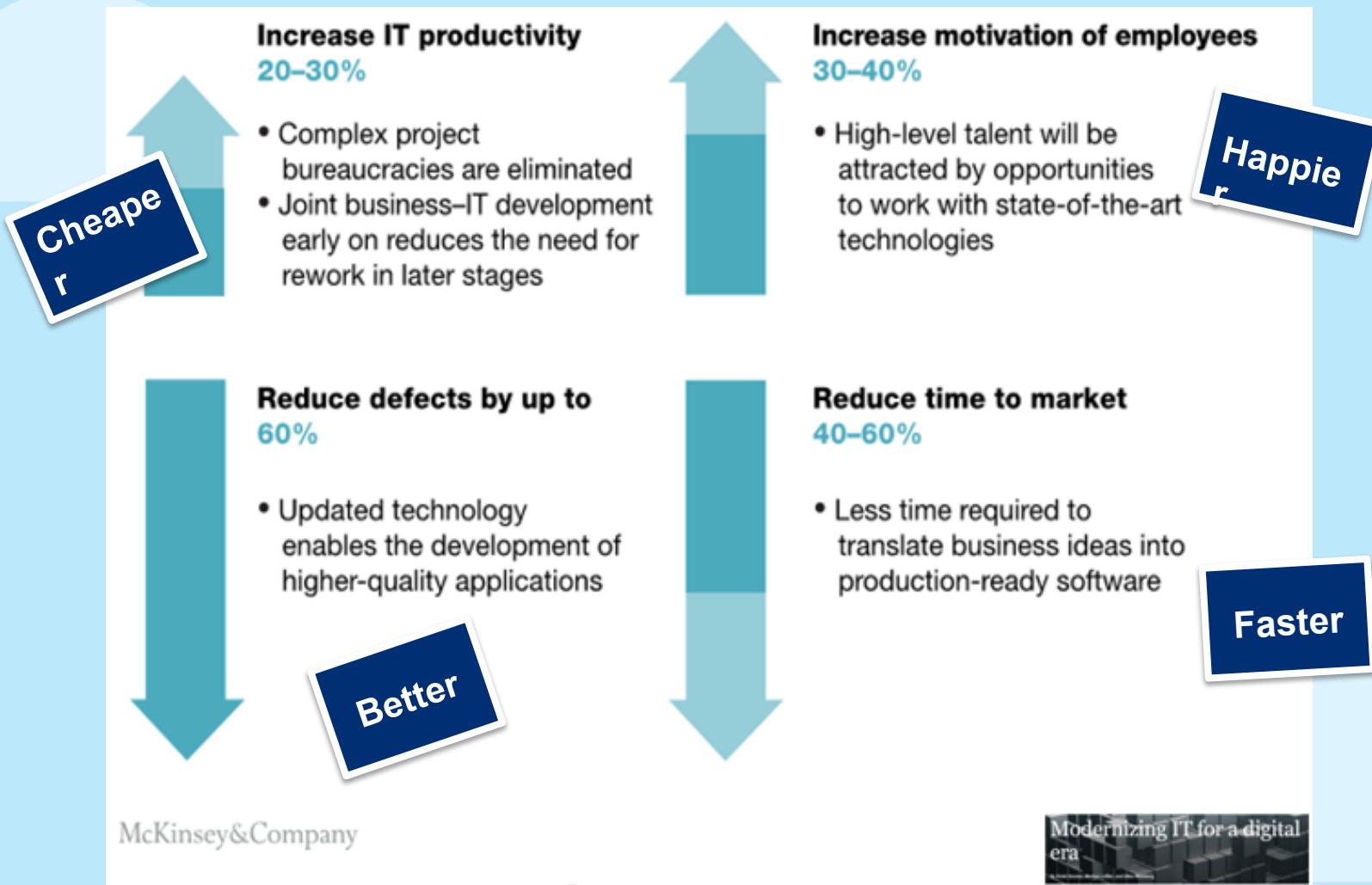


The world's busiest rail
networks
1. Netherlands
2. Switzerland
3. Japan

Our customer journey



Why agility matters for NS



Our plan...



Awareness



DevOps
workshop for
IT managers

Agile Safari at
RIGD Loxia



Pizza session with
Coolblue architect



Book club “the
Phoenix project”

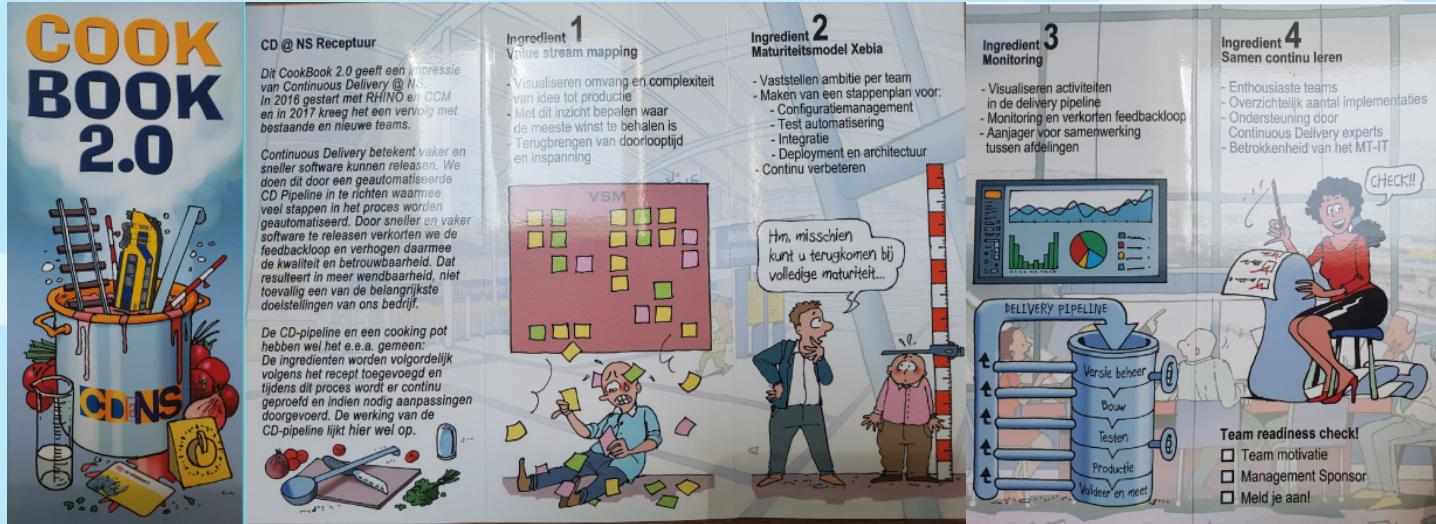


Dave Farley
teaches Continuous
Delivery



“CD of the Month”

Experiments



Value Stream Maps (VSM)

Maturity Model

Feedback Loops

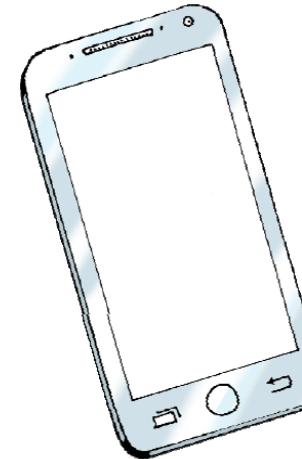
2016 Results

Team Competence Center Mobile

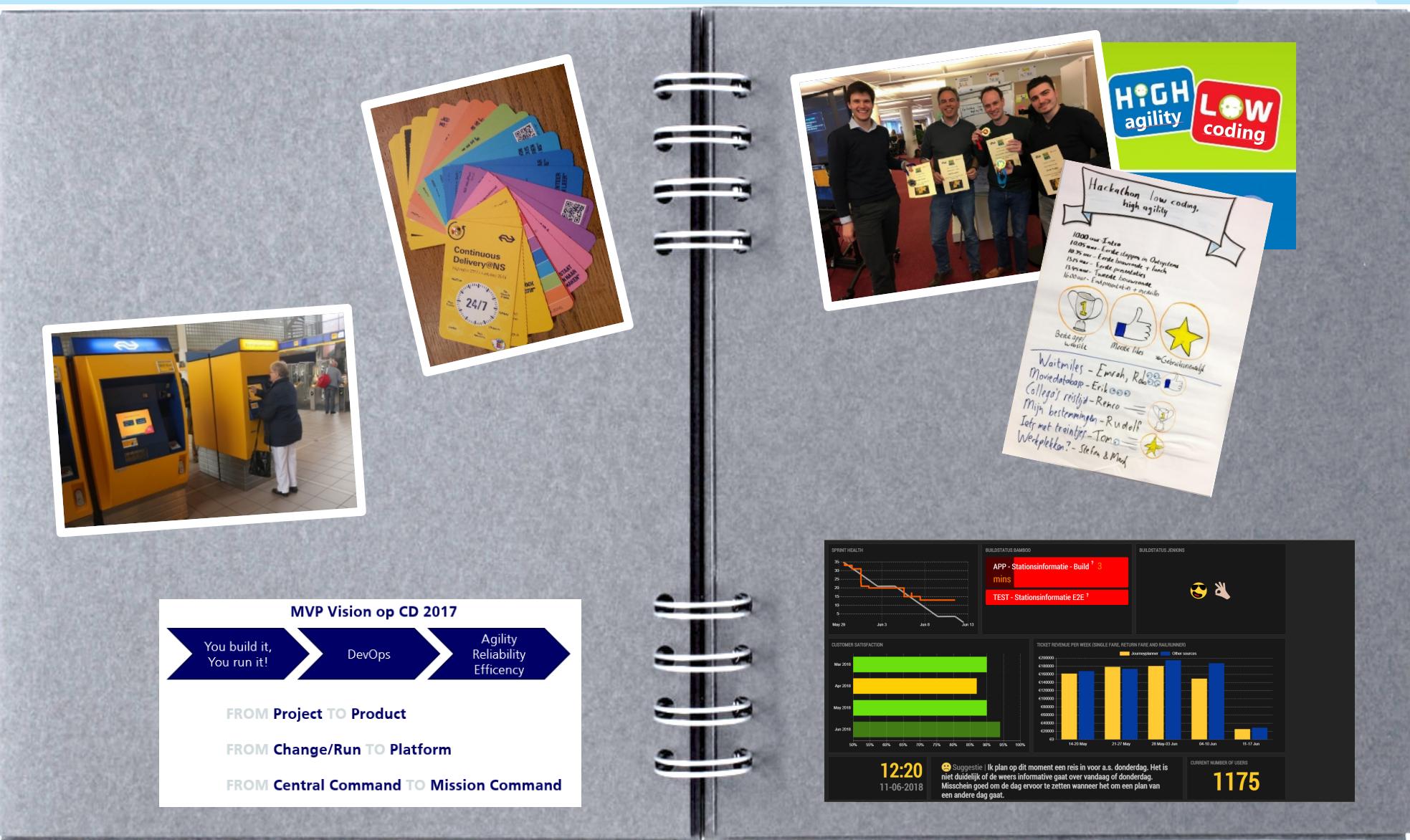
	Week 38 feedback na:	Week 50 feedback na:
GMA App	71 min	6,4 ~ 8,5 min
GMA Backend	86 min	2,9 ~ 4,1 min
GMA Portal	90 min	2,4 ~ 3,4 min
Ketentest	Weken	Uren
Team happiness	5	7
Mean Time To Repair	3 dagen	1 dag

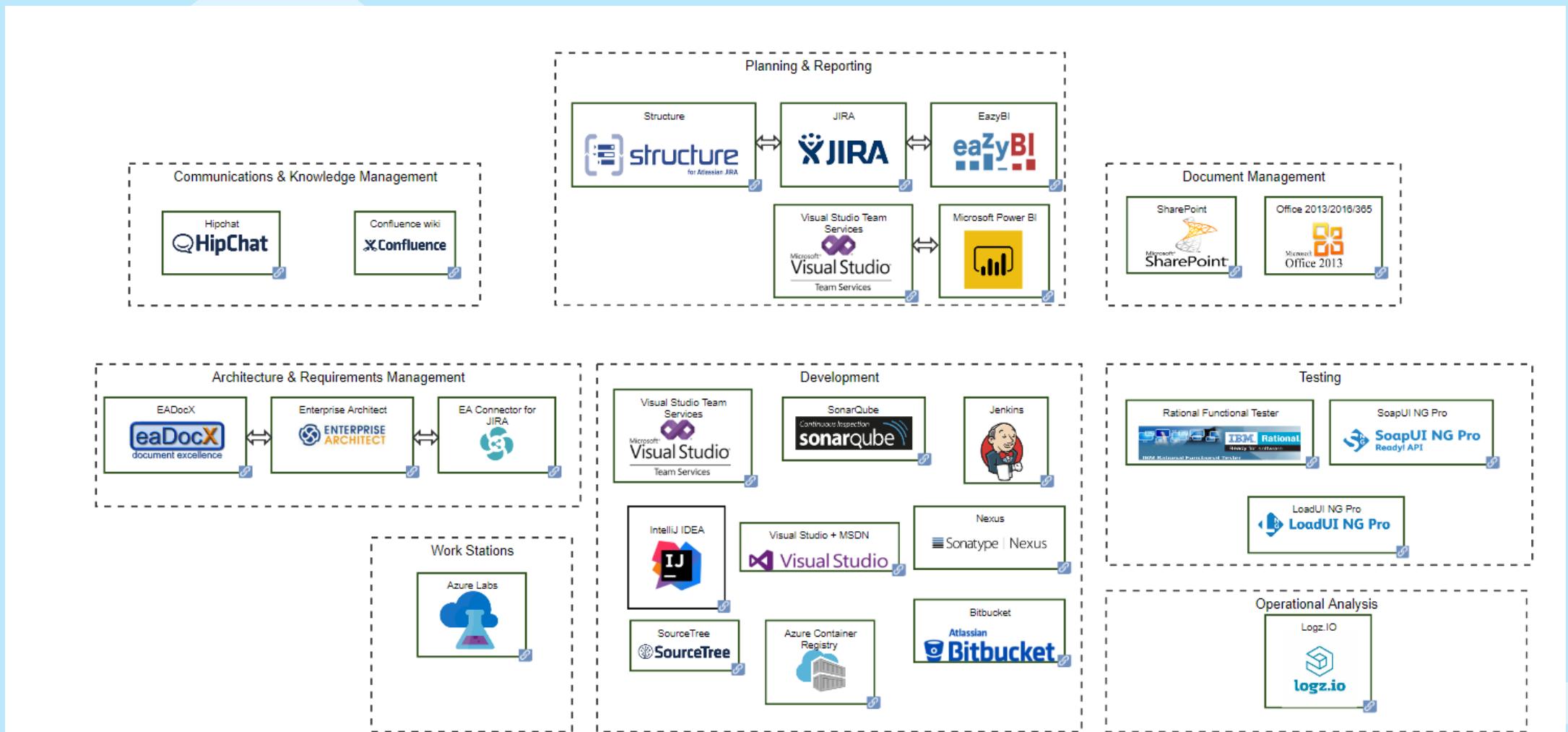
Team Rhino

	Begin	Nu
Wachten op andere teams	1 uur – 1 week	0
Wachten op eigen team	0 uur – 1 dag	0
Duur van testen	45 minuten	8-15 minuten
Team happiness	6,5	7,4
Doorlooptijd release in productie	minimaal 300 minuten	minimaal 180 minuten
Aantal vaste handmatige stappen	24	20



Experiments

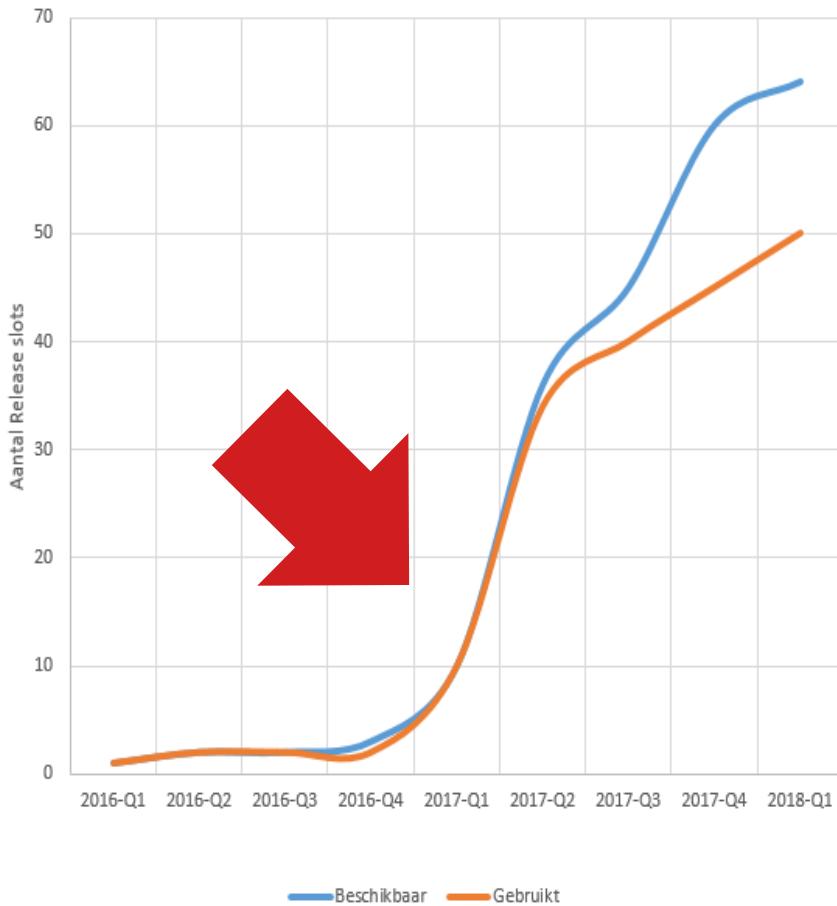




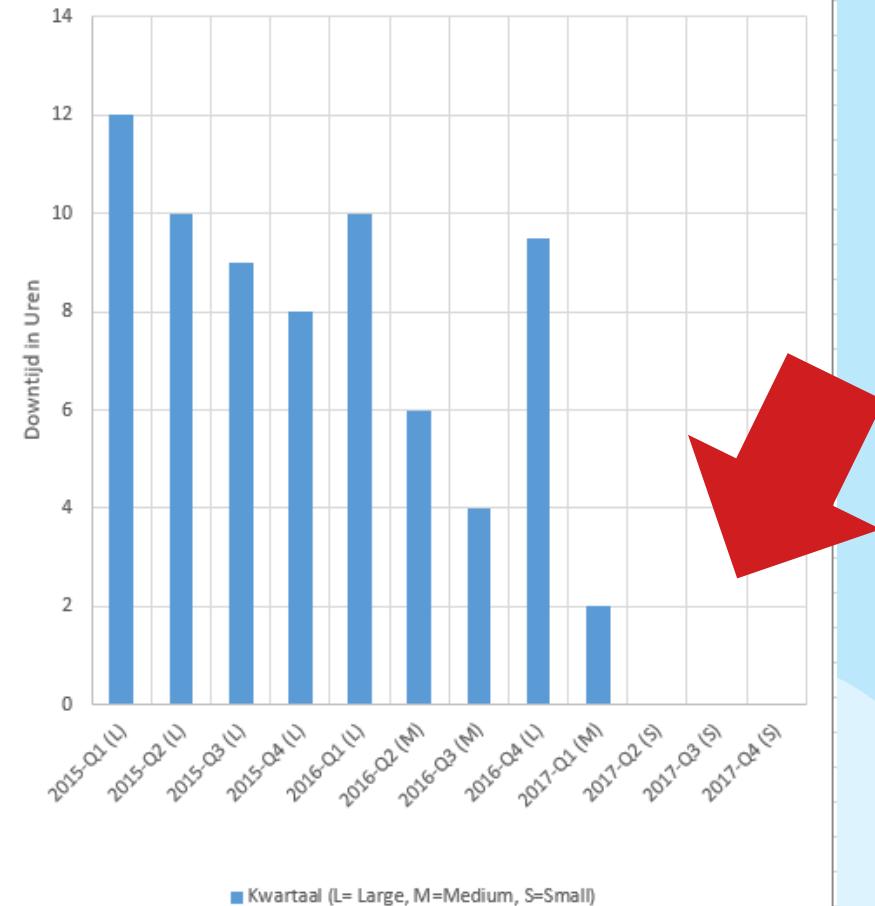
2017 Results

releases UP, Downtime close to ZERO

Aantal beschikbare & gebruikte release slots per kwartaal voor ITCO Bouw Centraal domein



Downtijd per gebruikte releaseslot per kwartaal voor ITCO Bouw Centraal domein



Experiments – lessons learned



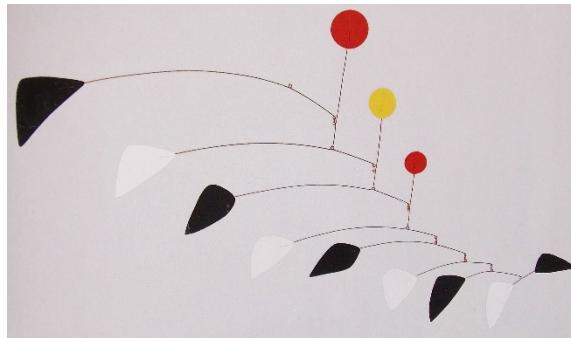
Small experiments
Feedback loops
IT perspective
Sharing knowledge



'Factory Paradigm'
External suppliers

Tell them WHY, be patient and get surprised

Engagement – participation in the transformation team



**Make our work
Better, Faster, Cheaper, and Happier
by applying
Lean, Agile, and DevOps principles**

M

O

B

I

L

Meten - Measure

Ondersteunen - Support

Borgen - Secure

Inspireren - Inspire

Leren - Learn

Engagement

The notebook has five visible pages, each featuring a photograph related to an engagement event:

- Page 1:** A group of people seated around tables in a workshop setting, engaged in discussion.
- Page 2:** A man standing and pointing at a whiteboard covered in numerous sticky notes during a planning session.
- Page 3:** A photograph of a whiteboard with a complex diagram and many sticky notes, showing a detailed planning or mapping exercise.
- Page 4:** A yellow banner titled "Welkom op het Continuous Delivery Event" listing speakers and sponsors, with small portraits of Björn Kuijpers and Chris Lukassen.
- Page 5:** Two men standing and presenting to an audience seated in front of them.

Text elements on the notebook pages:

- Page 1:** PI Planning event
Q1, May 2017
- Page 3:** PI Planning event
Q3, November 2017
- Page 4:** 2nd CD Event,
September 2017

Engagement in the transformation – lessons learned



**Energy
Cooperation**



**Working agile
Aligning quarterly results
Showing progress
Working part-time**

Problems that still remain, and themes to address

**Organisation
Governance, finance
Leadership
Our working environment**

But they are now in scope of the transformation







Thank you for
your attention.

Any
questions?