



Agile in a large
company working
with a large product



Who are we?



Name: Mats Eriksson

Role: Change Leader/Agile Coach

- Background:
- > 30 Years at Ericsson
- HW designer
- SW developer
- Project manager
- Line manager
- Agile coach
- etc



Name: Jimmy Nilsson

Role: SW Architect

- › Background
- 20 years at Ericsson
- SW designer
- Subsystem responsible (SW/HW)
- Team leader
- System designer
- SW Architect
- etc

Agile manifesto

4 values



Manifesto for Agile Software Development

We are uncovering better ways of developing software by doing it and helping others do it.
Through this work we have come to value:

Individuals and interactions over processes and tools

Working software over comprehensive documentation

Customer collaboration over contract negotiation

Responding to change over following a plan

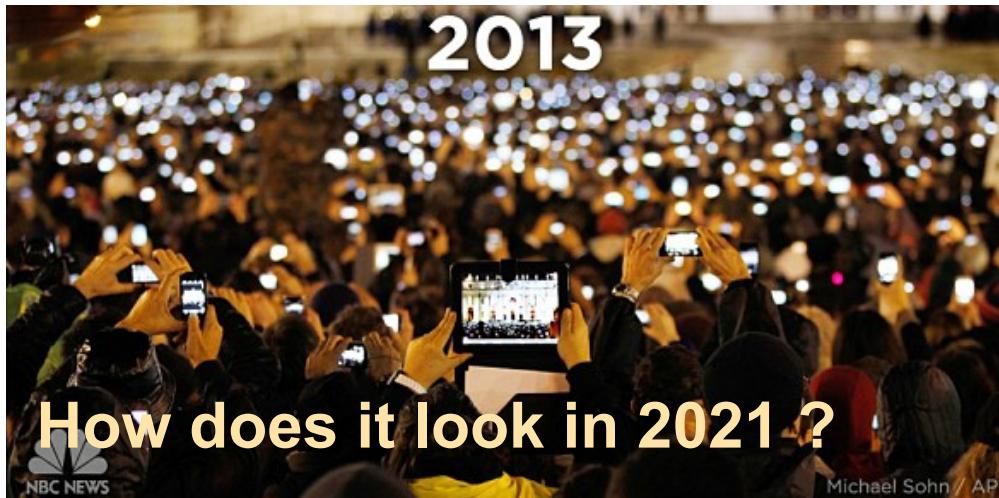
That is, while there is value in the items on the right, we value the items on the left more.

Lean and Agile





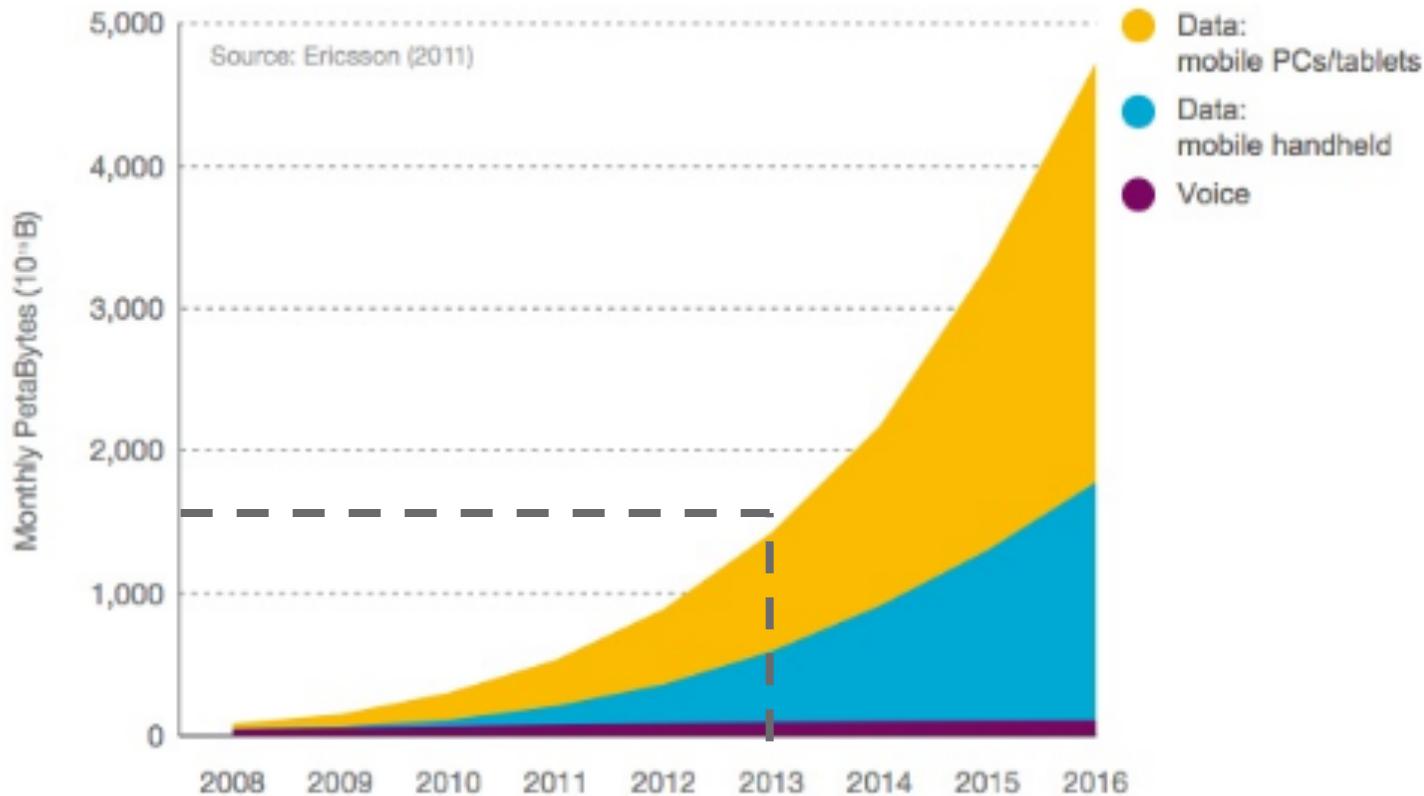
A new Pope is elected



Source: NBC



This has happened so far



"Traffic" refers to aggregated traffic in mobile access networks.
DVB-H and Mobile WiFi traffic have not been included.
M2M traffic not included.



What will It give us?



Competitive advantage



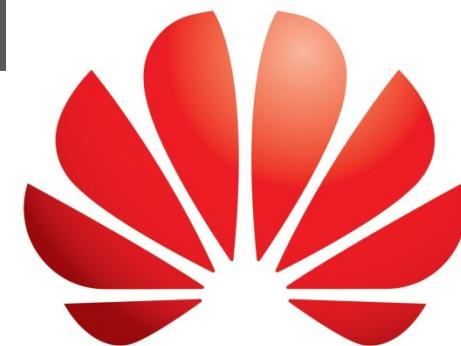
Great place to work



How about our competitors?



SAMSUNG



ZTE 中兴

Nokia Siemens
Networks



ORACLE®

Lean & Agile Transformation

Why change?





CHANGE FROM THIS...

Defined process control



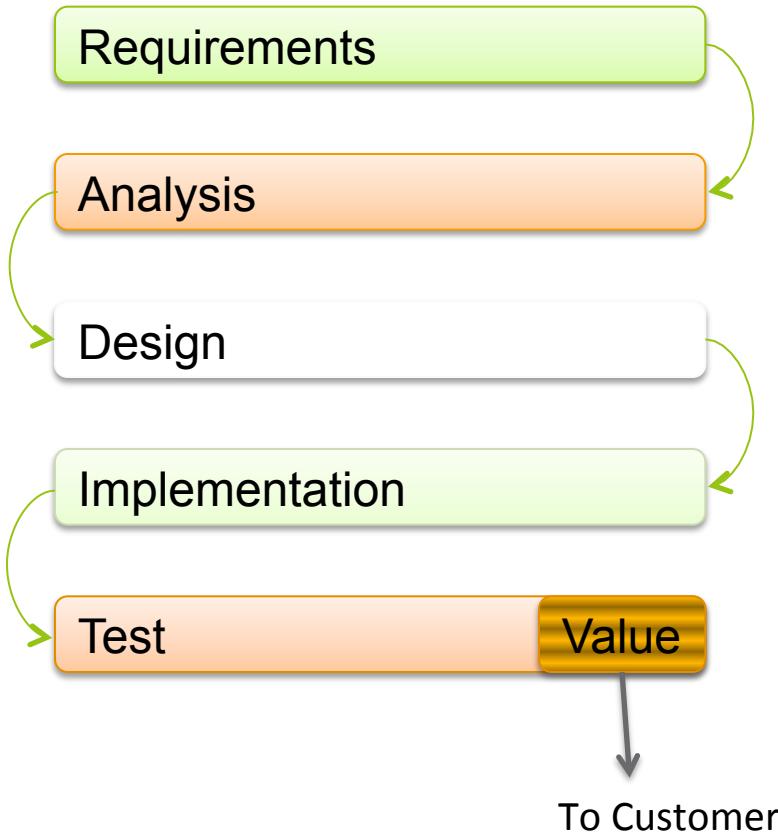
... TO THIS

Empirical process control

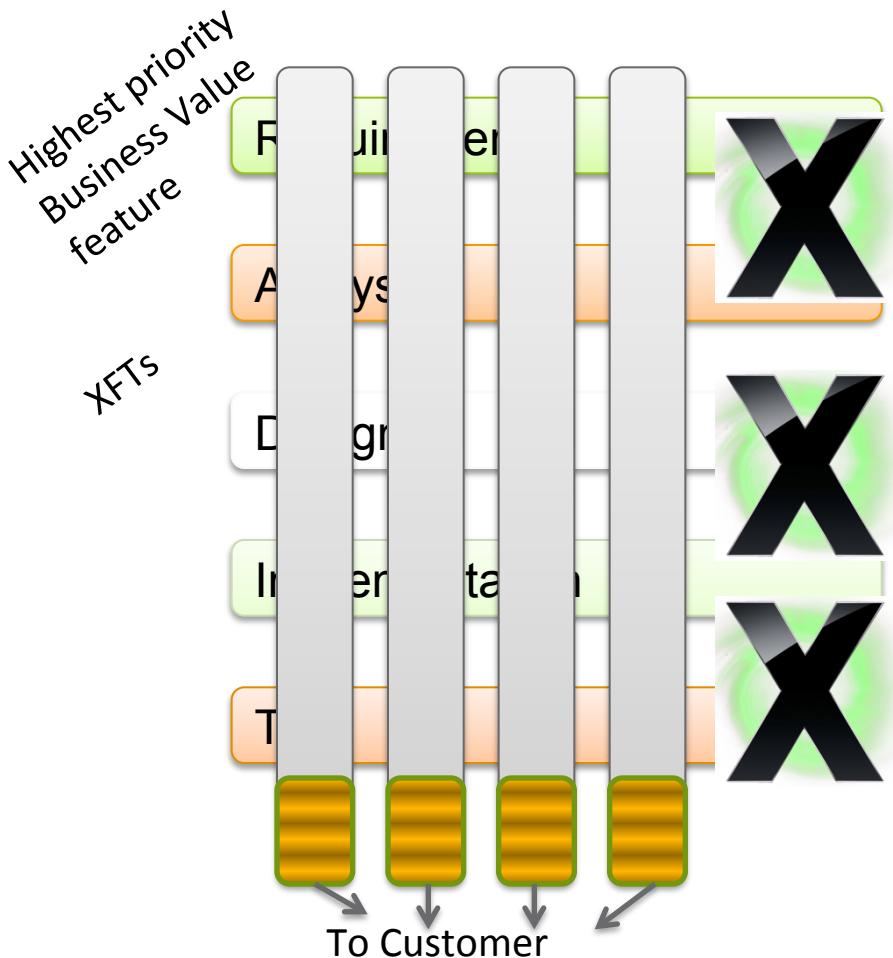
“Agile” puts the business in the driver’s seat



We go from “phased based” toll-gate schedules that delivers in months or years



... to “business value” slices of *real* product that delivers in weeks or months over and over again





Perform exercise

PRODUCTION GAME -----



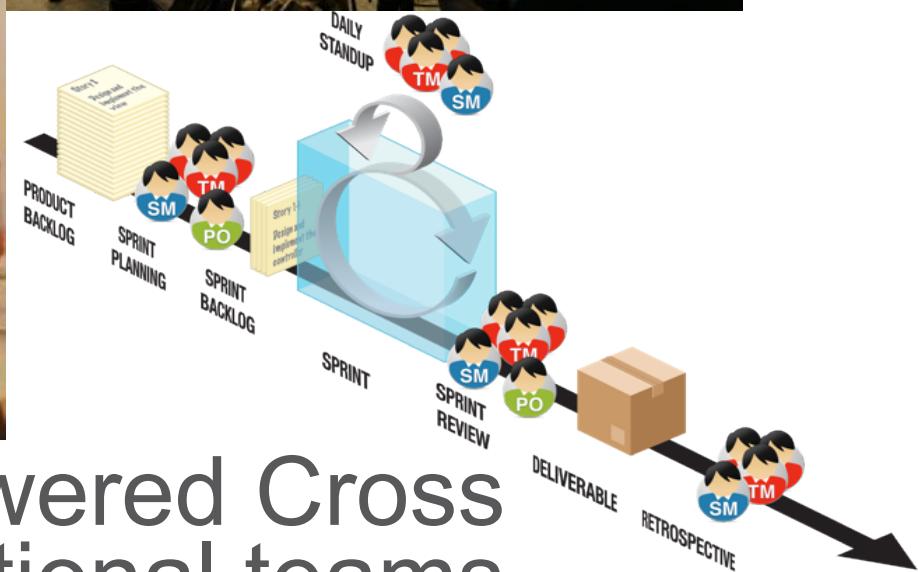
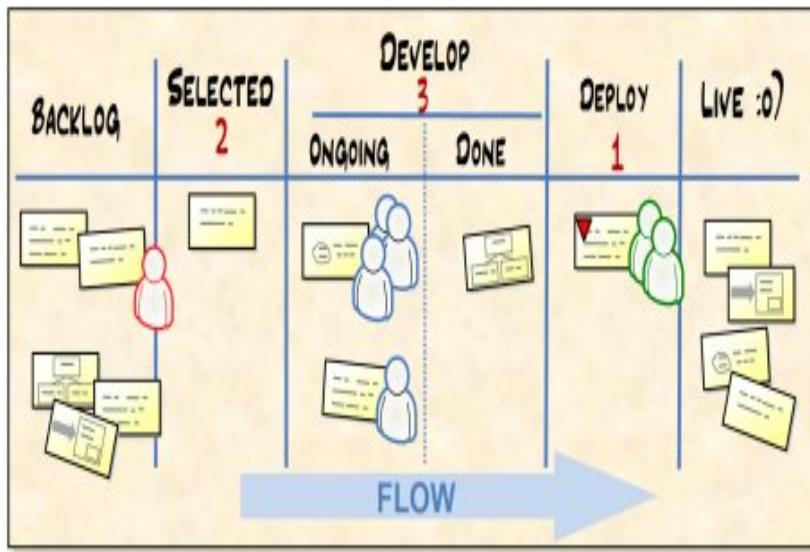
**Lean and Agile are
mindsets**



Supported by some key practices



often using scrum & kanban

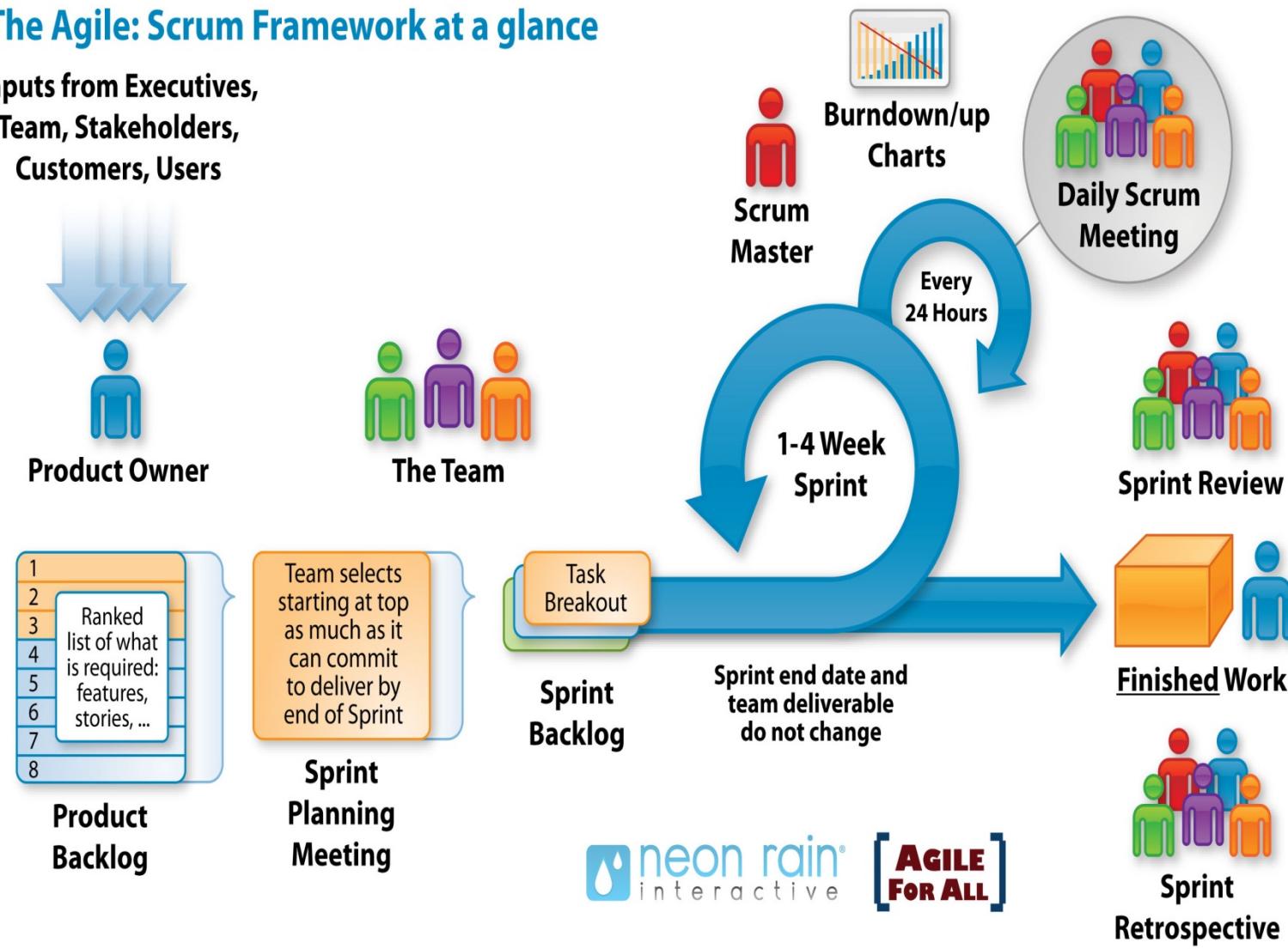


Empowered Cross Functional teams



The Agile: Scrum Framework at a glance

Inputs from Executives,
Team, Stakeholders,
Customers, Users





Large scale development



50+ products

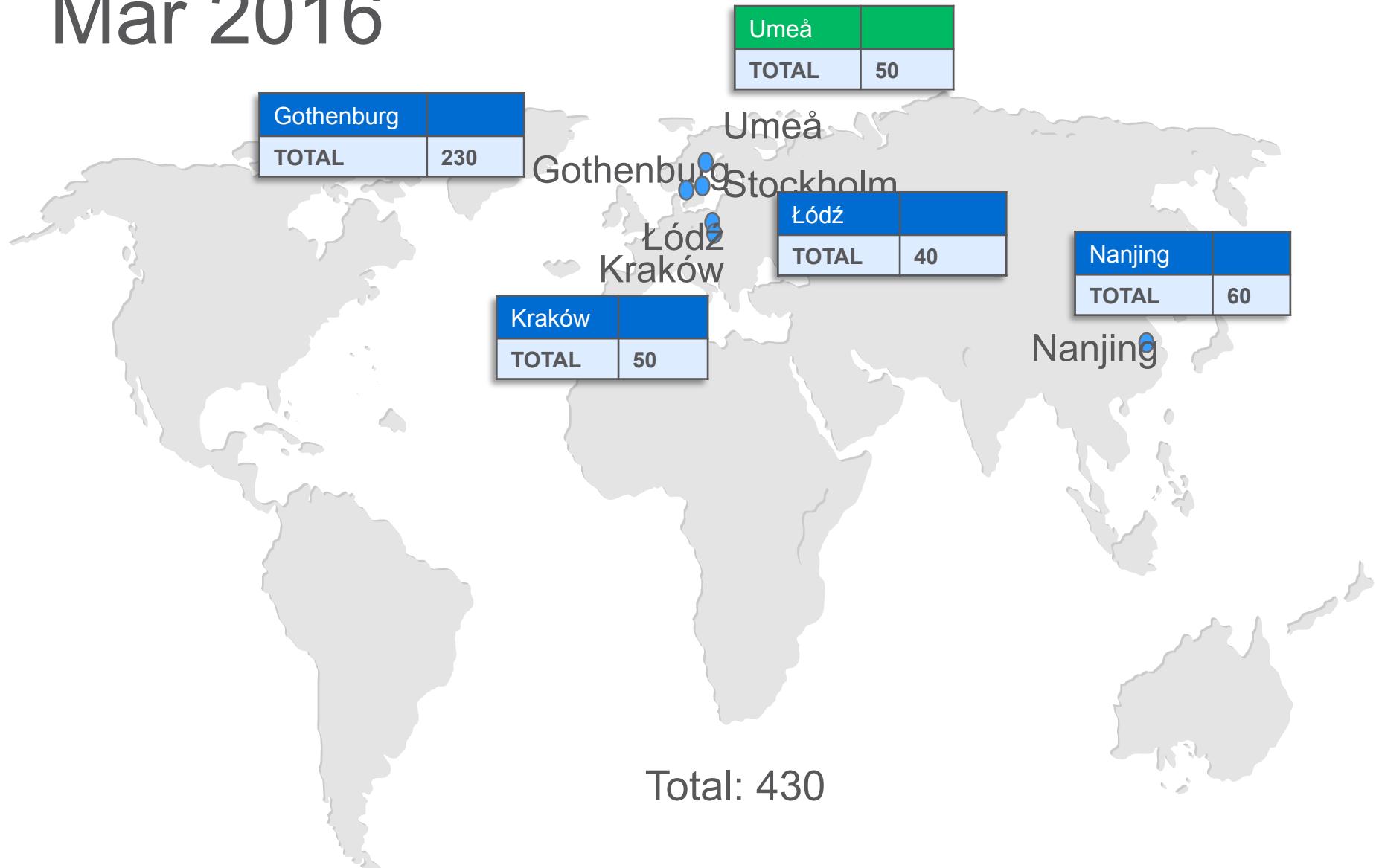
Large systems

20000 engineers

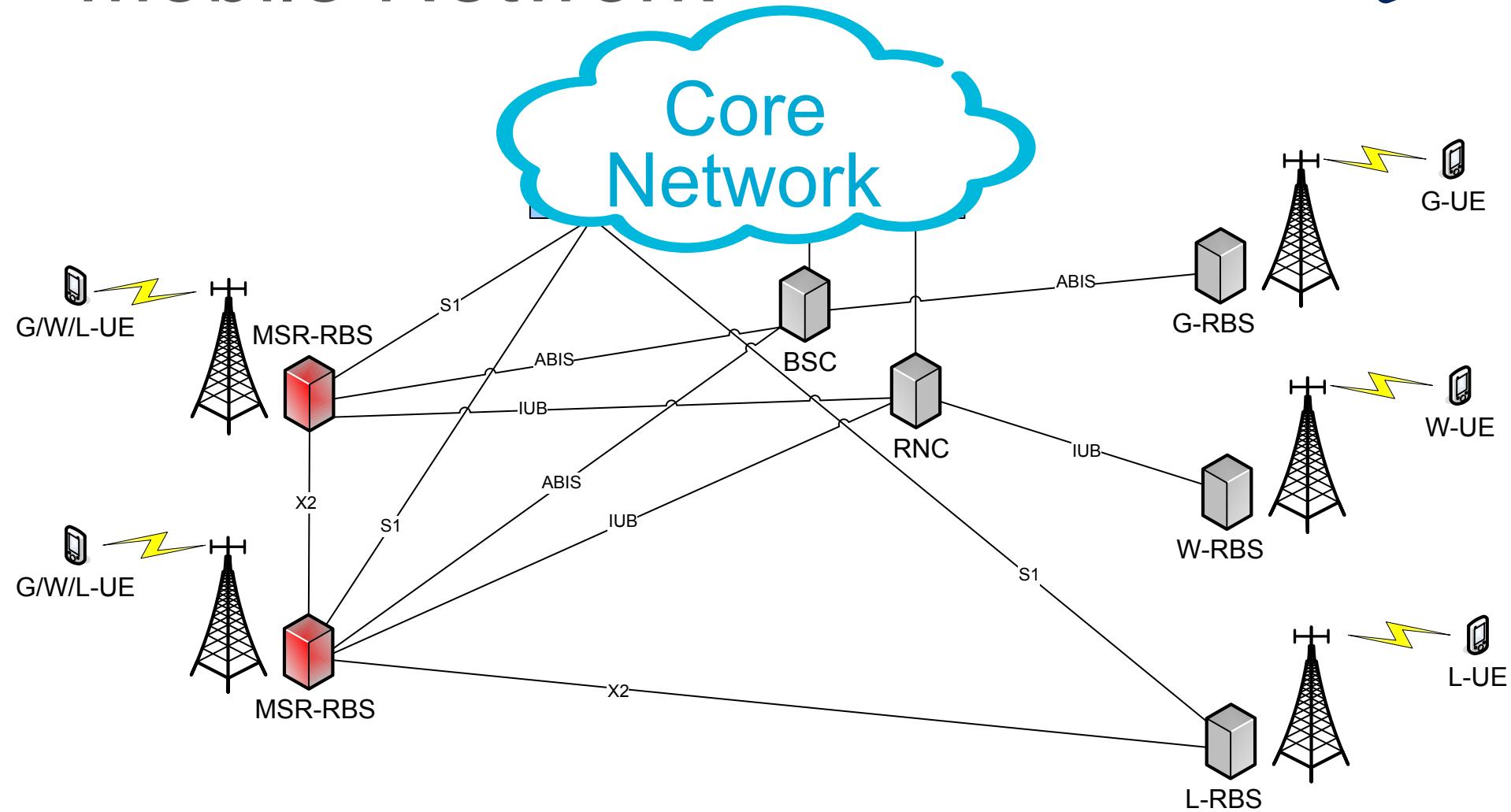
Global presence

CAT NC&APC locations

Mar 2016



Mobile Network



Architecture



Mobile Network

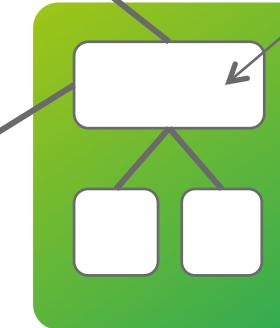
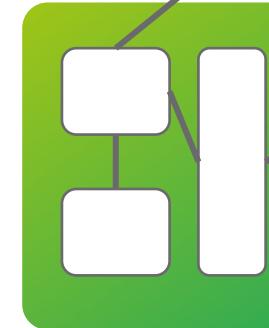
Operation and Maintenance



OS

Hardware

Radio Base Station



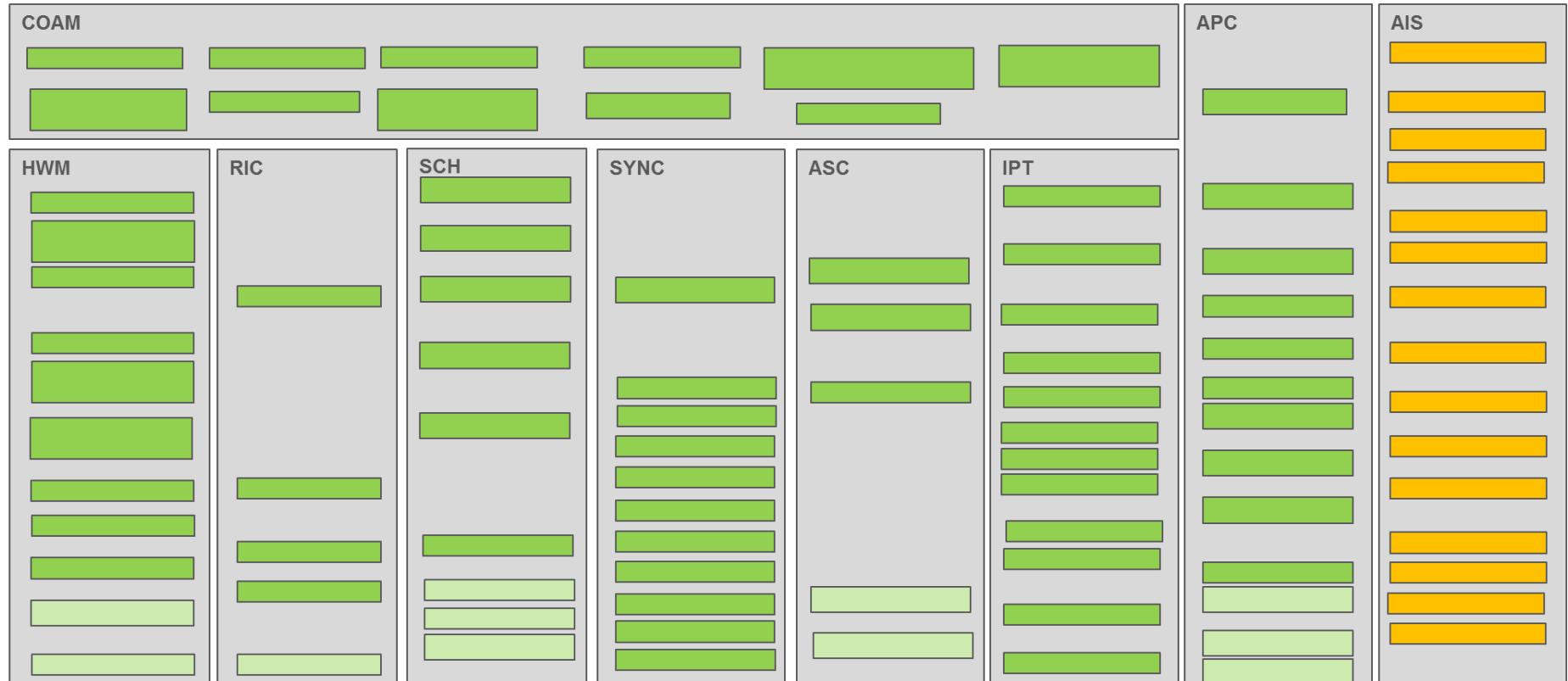
OS

Hardware

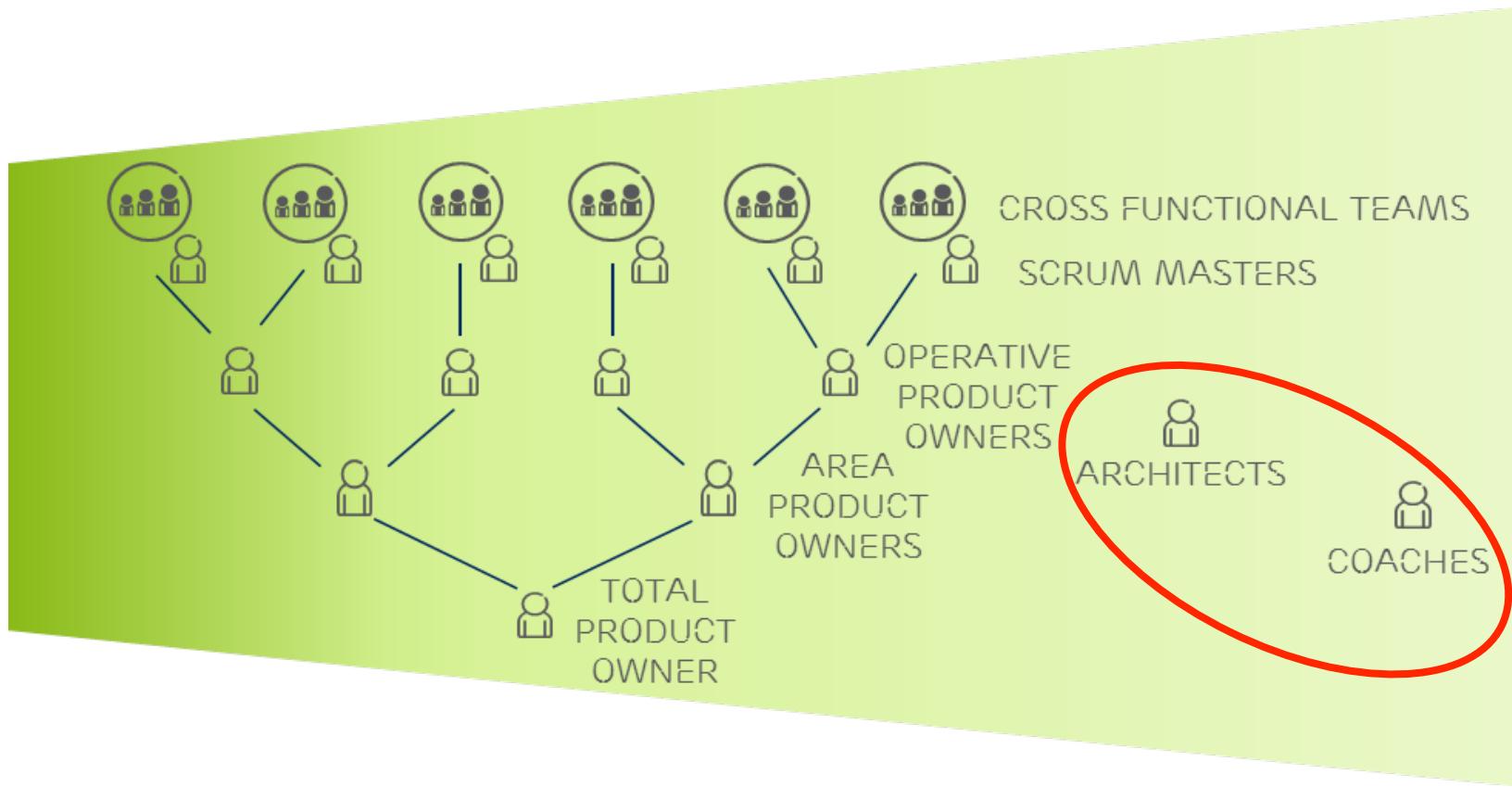
Feature / Team



Detailed view



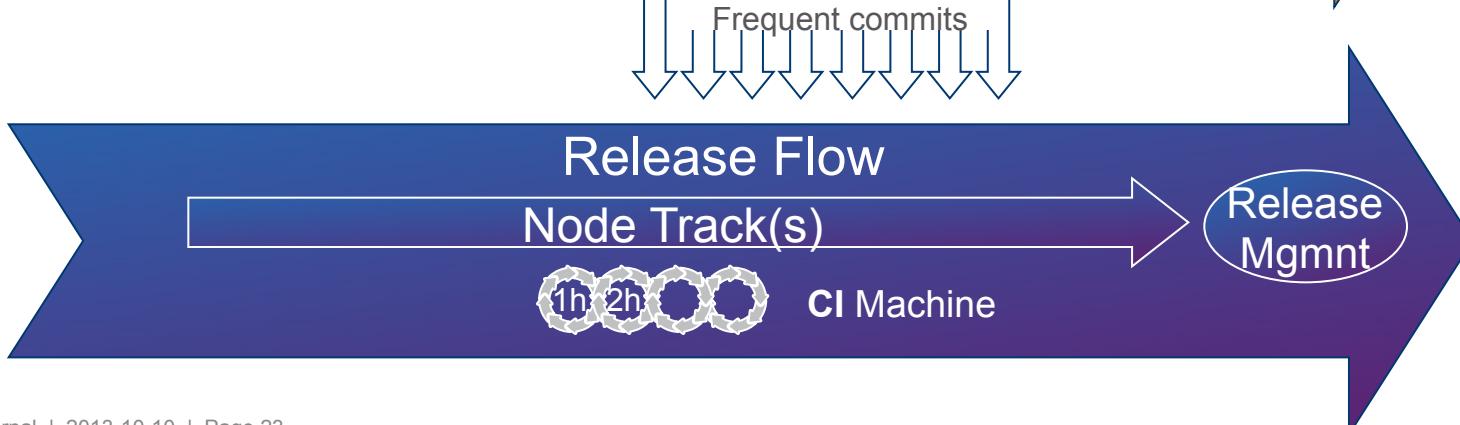
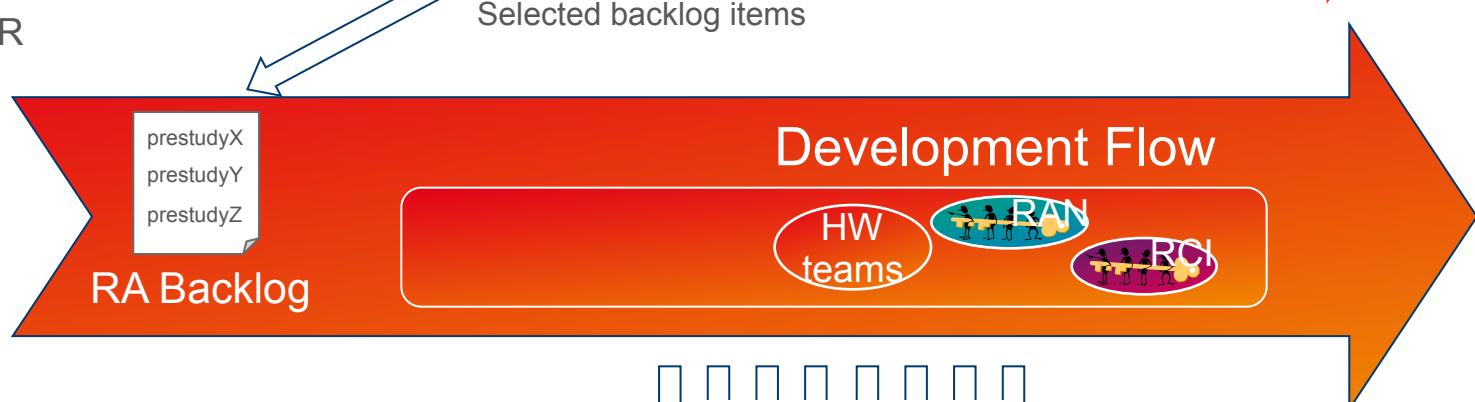
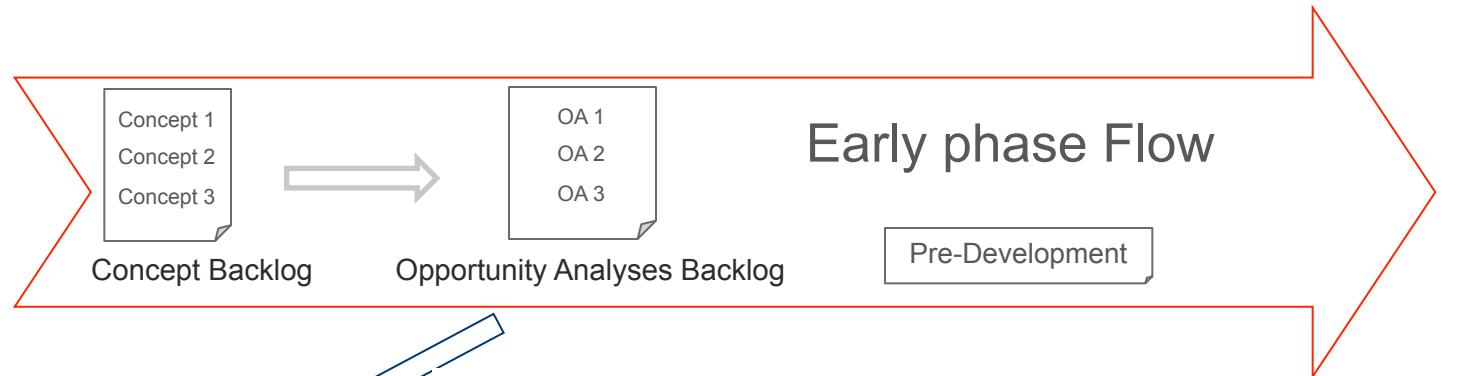
Scaling



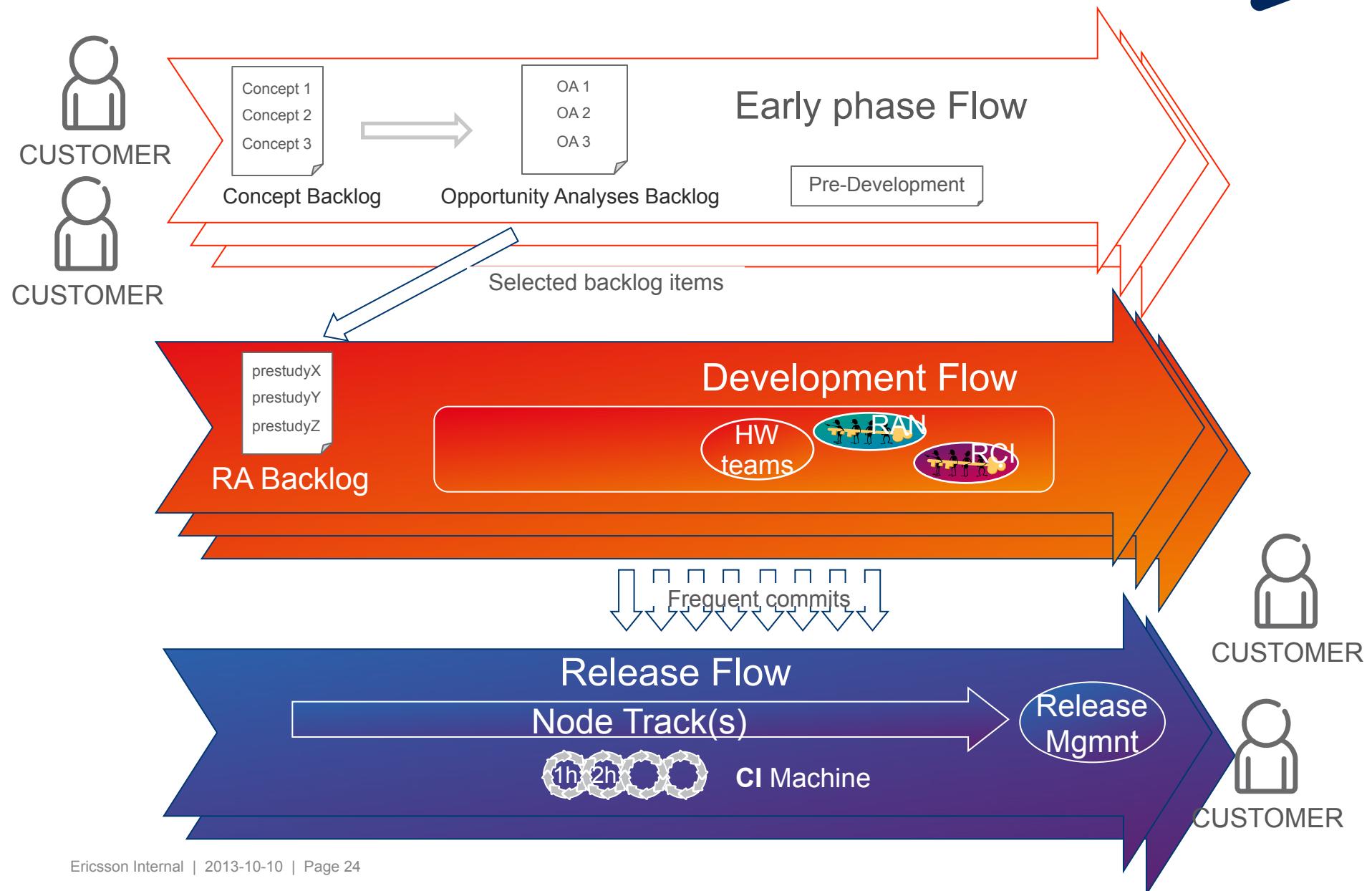
Flow



CUSTOMER



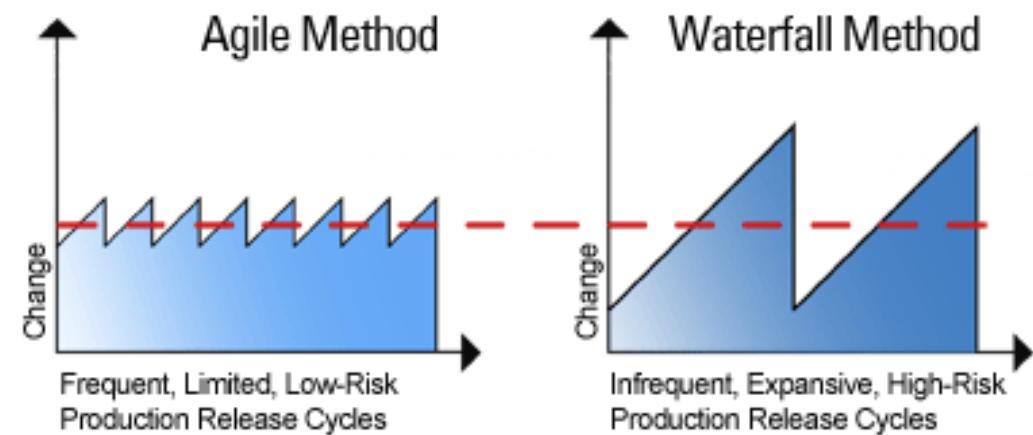
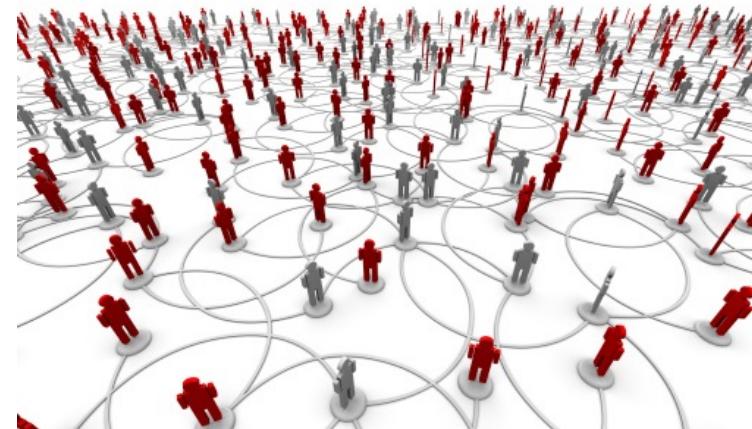
Flow



CONTINUOUS INTEGRATION



- › Merging all developer working copies several times a day.
- › To prevent integration problems

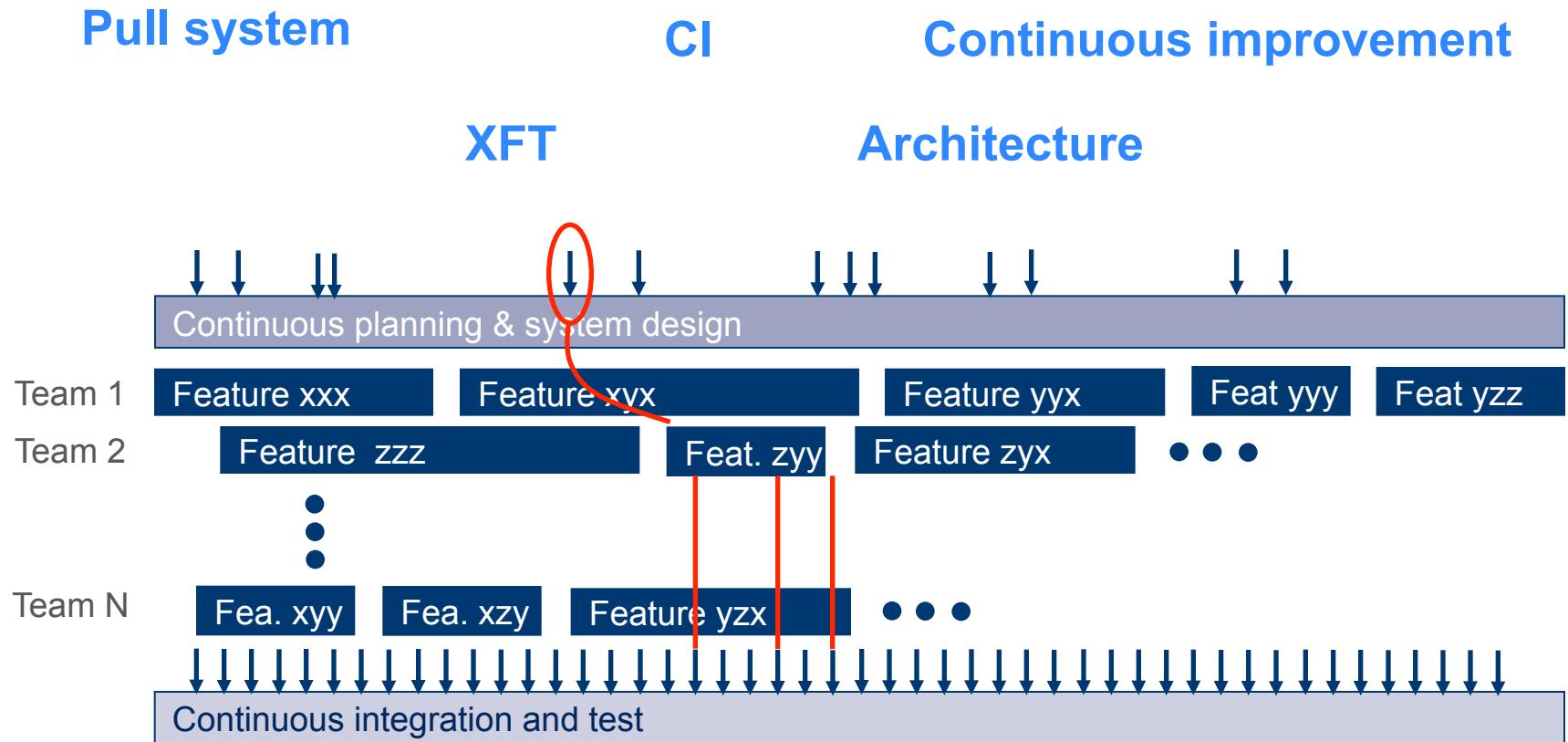


Source: http://en.wikipedia.org/wiki/Continuous_integration

Development flow



We defined our cornerstones in lean and agile



Five key building blocks



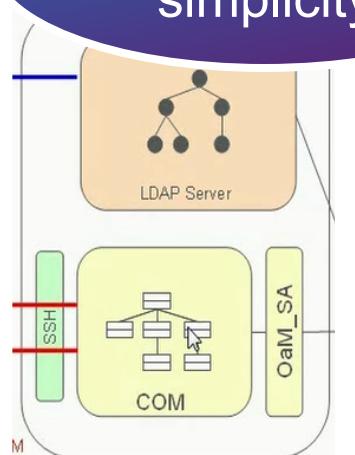
Short feedback loops

Pull instead of push

Architecture and simplicity

Empowered cross functional teams

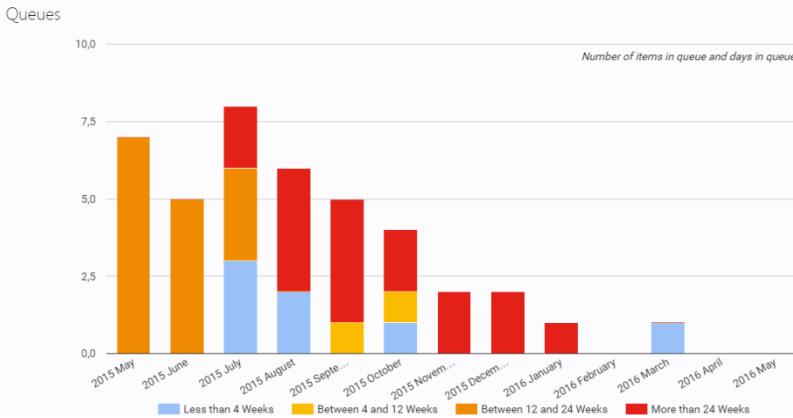
Continuous improvements



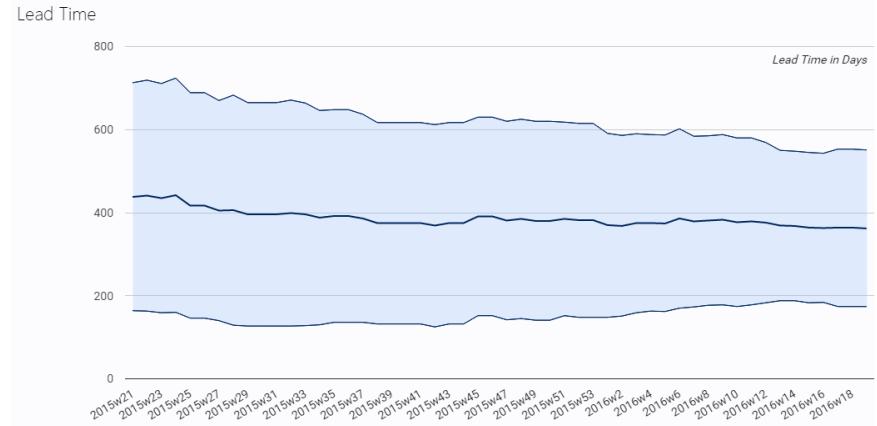


Some learnings

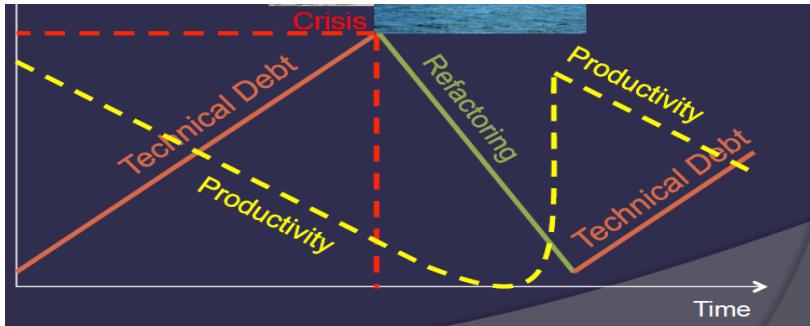
Queues



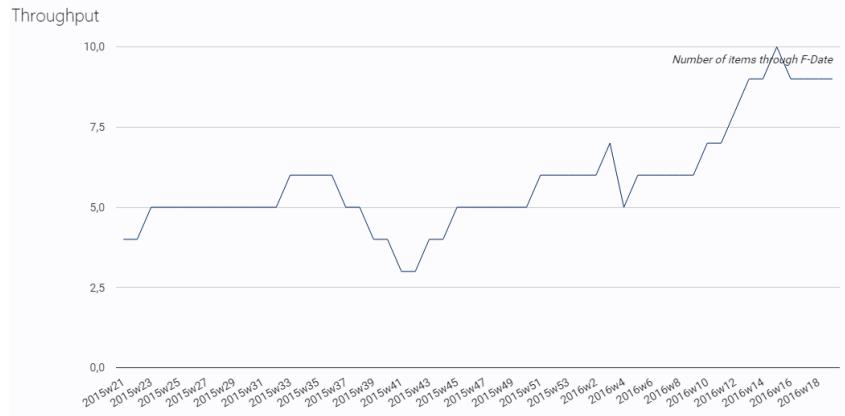
Lead time

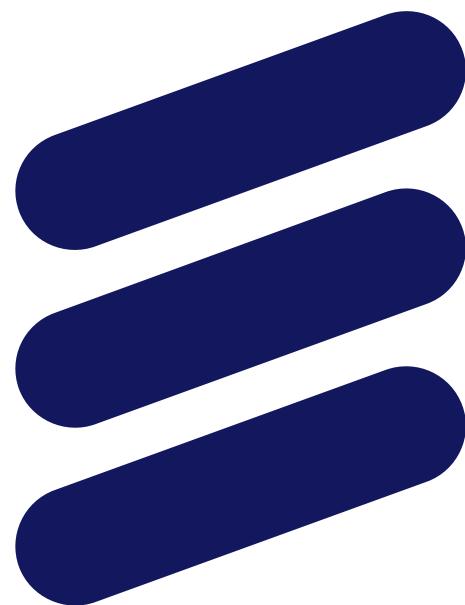


Technical Debt



Throughput





ERICSSON