LIVING WITH AGILITY

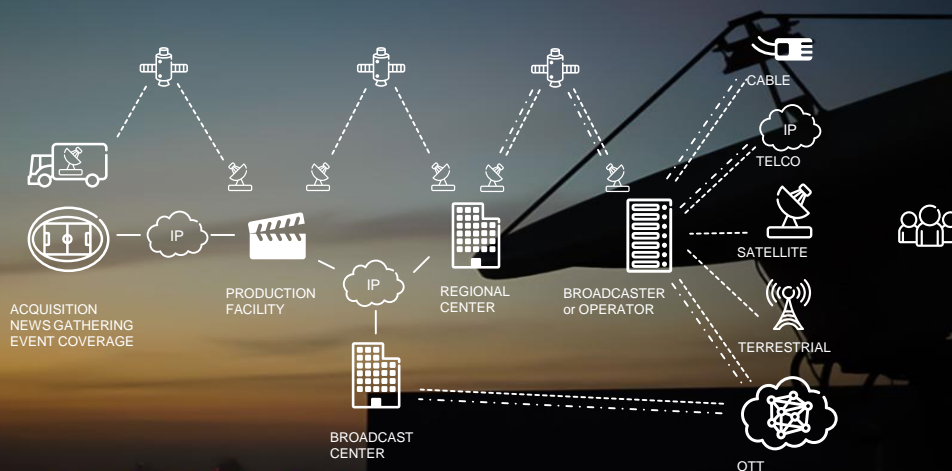Tales from the Battlefield

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WHO AM I?

ERICSSON

› Daniel Laird - Head of Software
› 15+ Years Experience
› Started as a Software developer in Research with Philips Semiconductors
› Joined Ericsson – Senior Software Developer
› Became Lead Engineer – leading process changes and improving Ways of Working
› 2016 – Became Head of Software
   – Leading us to become Agile Software Delivery company

WHAT DO WE DO?

CABLE

IP
TELCO

SATELLITE

ACQUISITION
NEWS GATHERING
EVENT COVERAGE

PRODUCTION
FACILITY

IP

REGIONAL
CENTER

BROADCASTER
or OPERATOR

TERRESTRIAL

BROADCAST
CENTER

OTT

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WHY AGILE?

› Large Waterfall project was due to complete 2009
  – It did not deliver on time, and the estimated delivery date kept slipping.
› Required iterative re-work to provide the desired product:
  – Business was not ready for development model – was viewed as a failure
› Business recognition of too much investment before any return
  – Head of Business Line – "Give me my money back!"
› Desire from E/// Leadership to move to regular, iterative releases
  – More predictable revenues
  – Greater customer satisfaction.
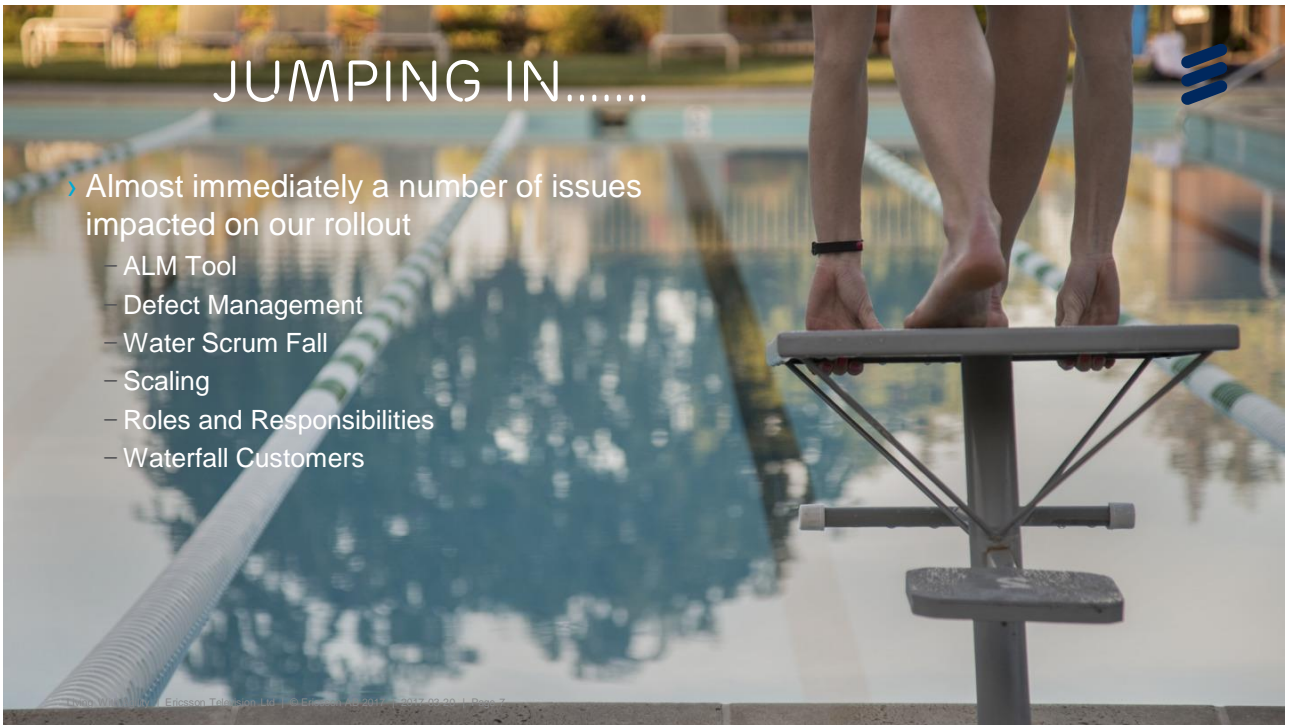 – Business acceptance of Agile working practices

THE TRIAL PROJECT

› Small Project (~10 engineers)
› Project Manager who believed in Agile development and SCRUM
› Selected an ALM tool (Input from Corporate E///)
  – Outcome was Rational Team Concert (IBM)
› Ran for over a year with positive feedback from the team and key stake holders

THE ROLLOUT – 2012....

› Form SCRUM teams matching the already established teams
› Nominate SCRUM masters based on being recognized as a 'goto' person
› Setup training course for Line Managers and SCRUM masters:
  – Theory, Expected Benefit, Pitfalls, Implementation, Terminology
› Establish and Prioritise Backlog with Product / Project Management
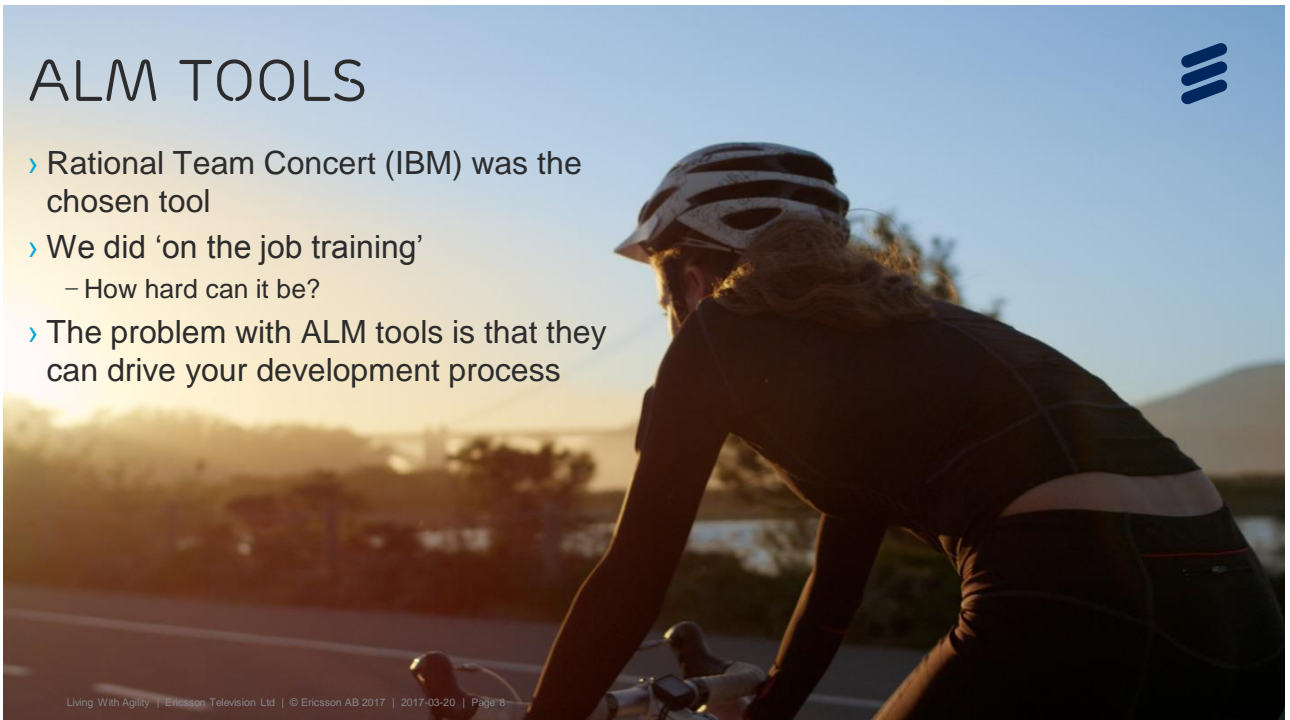› ALM tool linking business tools with requirements and backlog

JUMPING IN.......

› Almost immediately a number of issues impacted on our rollout
- ALM Tool
- Defect Management
- Water Scrum Fall
- Scaling
- Roles and Responsibilities
- Waterfall Customers

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ALM TOOLS

› Rational Team Concert (IBM) was the chosen tool
› We did 'on the job training'
- How hard can it be?
› The problem with ALM tools is that they can drive your development process

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THE PROBLEM WITH DEFECTS...

› Any process introduction (Agile / SCRUM) needs success to motivate the team(s)
› Defects distract from this
› Specifically:
  – Field defects interrupt Sprints – they undermine effort spent Sprint planning
  Defects are hard to scope, fix and deliver.
› Organisational Challenge:
  – Defects can lose you revenue, features create new opportunities
  – Teams focus on defects, Management focus on new business

WATER-SCRUM-FALL

› Individual devices only contribute part of our revenue
› Systems (Combinations of Own/3PP Equipment) make significant contribution
› System testing was done by domain experts, manually and after development was 'completed'
  – i.e. waterfall testing of systems
› Defects being found late in the cycle
  – Due to commercial pressures – they have to be fixed quickly
  – Another source of sprint interrupting defects

SCALED SCRUM

› We had a number of larger development projects
  - 8 Component based SCRUM teams
  - ~90 people working, plus supporting staff
› We struggled to ensure that teams were effectively 'handing-off' work
  - Minimising surprises.
› People and Process
› Key questions that we had to address:
  - What ceremonies should teams be using to align with other teams?

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ROLES AND RESPONSIBILITIES

› Within the organization we still had the same Waterfall project roles:
  - Project Managers
  - Line Managers
  - Department heads
  - Program Managers
  - Product Managers

WATERFALL CUSTOMERS

› Customers have their own acceptance tests
› Some are days, some are months
› This investment makes them risk averse
› They demand commercial agreements that
  – Manage scope, budget, delivery schedules and penalty clauses
› Unwilling to accept regular, iterative releases

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AUTOMATION

› Whenever you speak about Agility, it moves to
  discussions on CI/CD Practices
› Increasing automation and automated testing is
  an Engineering challenge
› Managers (as ex-engineers) and engineers want
  to solve this problem
  – More than fix the process or challenge the organization
› We have made huge progress in using CI/CD
  – but it has distracted us from challenging and fixing our
    development process.

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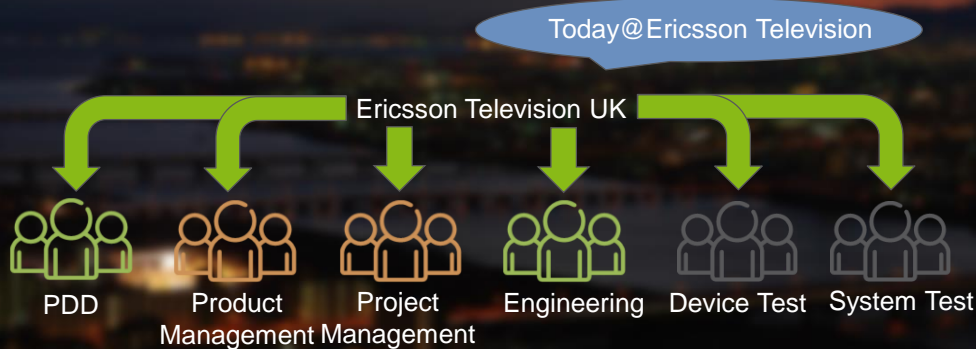
LIMITED BY THE ORGANIZATION

› In Mid 2016 – as we began to Align our ways of working an opportunity arose
› As always, changing organizations and roles is hard
  – Especially when viewed as successful, by a stable management team.
› However, the market was changing fast:
  – Increasing demand for Software Solutions
› Customers were changing (Broadcast -> IT)
  – Happier to work with Agile suppliers.
  – More demand for use of COTS Hardware
› This change created an opportunity to drive change top down and this was taken.

AN EVOLVING ORGANISATION

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PDD   Product   Project   Engineering   Device Test   System Test
             Management   Management

EMBRACING AGILITY

› Role of Product Owner introduced
  – Commercial facing, responsible for P&L in his investment stream
› Embedded Test Resource, Vertical teams
› Department heads / Line Management – 'capability builders'
  – Focus on how we are working (our processes) and the people
  – Much less technical direction, and our role clearly expects us to empower teams

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REMAINING CHALLENGES

› AGILE creates emotion unlike any other development process.
  – Some think its all rubbish
  – Some like the idea but don't think it works
  – Some believe and support it, but have 'flexibility' to ignore certain aspects
  – Some are purists, and if it's not perfect they try to undermine the entire process
› Being AGILE means you have to constantly evolve and adapt, and be flexible
  – Understand your engineers and stakeholders and work out which group they are in
› Defects, Defects, Defects
› Continuous Integration / Delivery
› Ensuring our customers are ready to work with an Agile organization.

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WHAT HAVE WE LEARNT?

› It **IS** a journey
› Your organization itself needs to become AGILE
› You can attempt to become more agile from the 'bottom up'
  − Ultimately you will have to do top down
› Ensure your Roles and Responsibilities are very clear
    It will impact on the job roles for nearly everyone, apart from engineers!
› Avoid choosing tools before documenting your processes
    Very common in larger companies
› Take people with you
    Both management and engineers

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