

*Told and Untold Stories of
the Lean and Agile Transformation
within the Cloud SW Community*

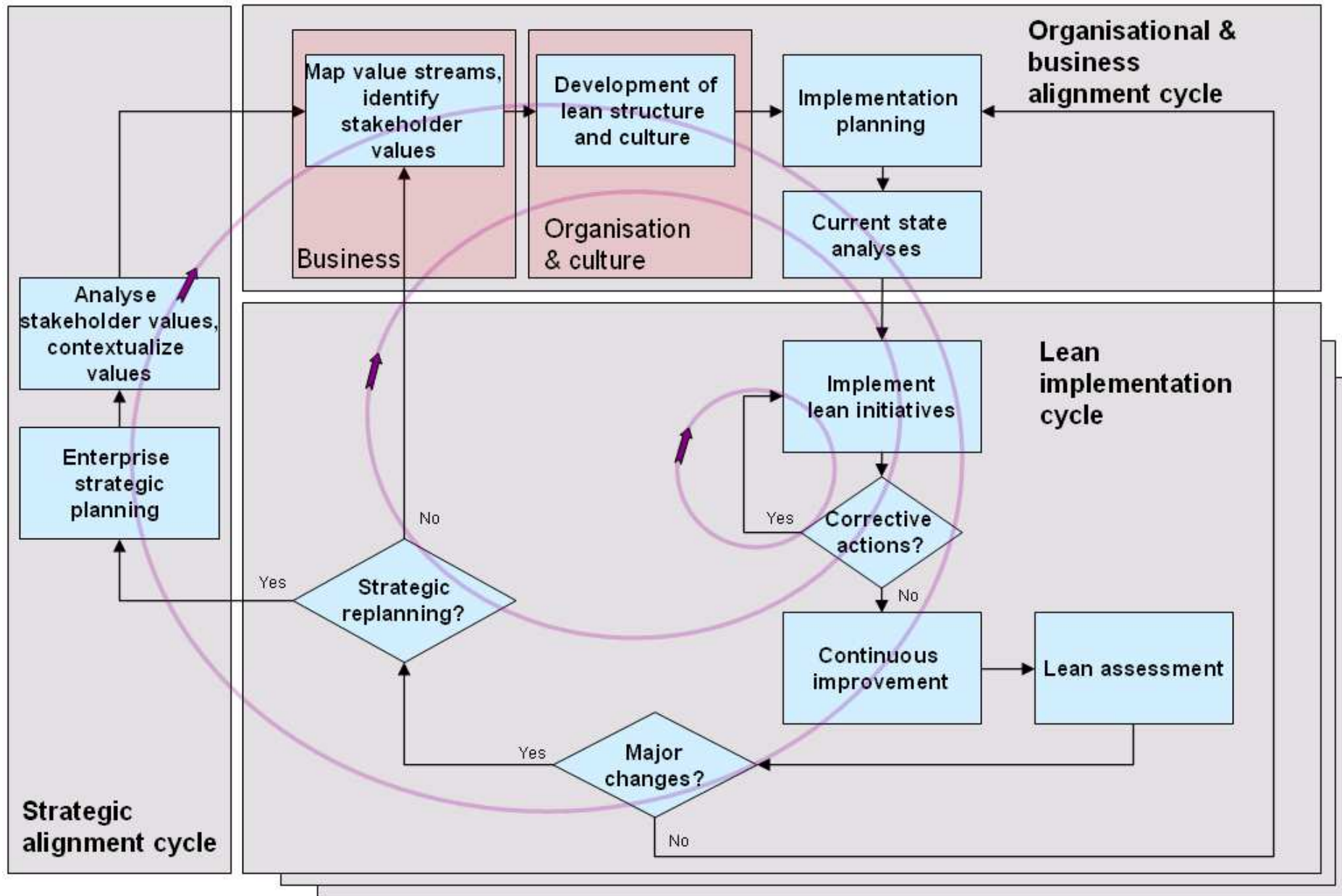
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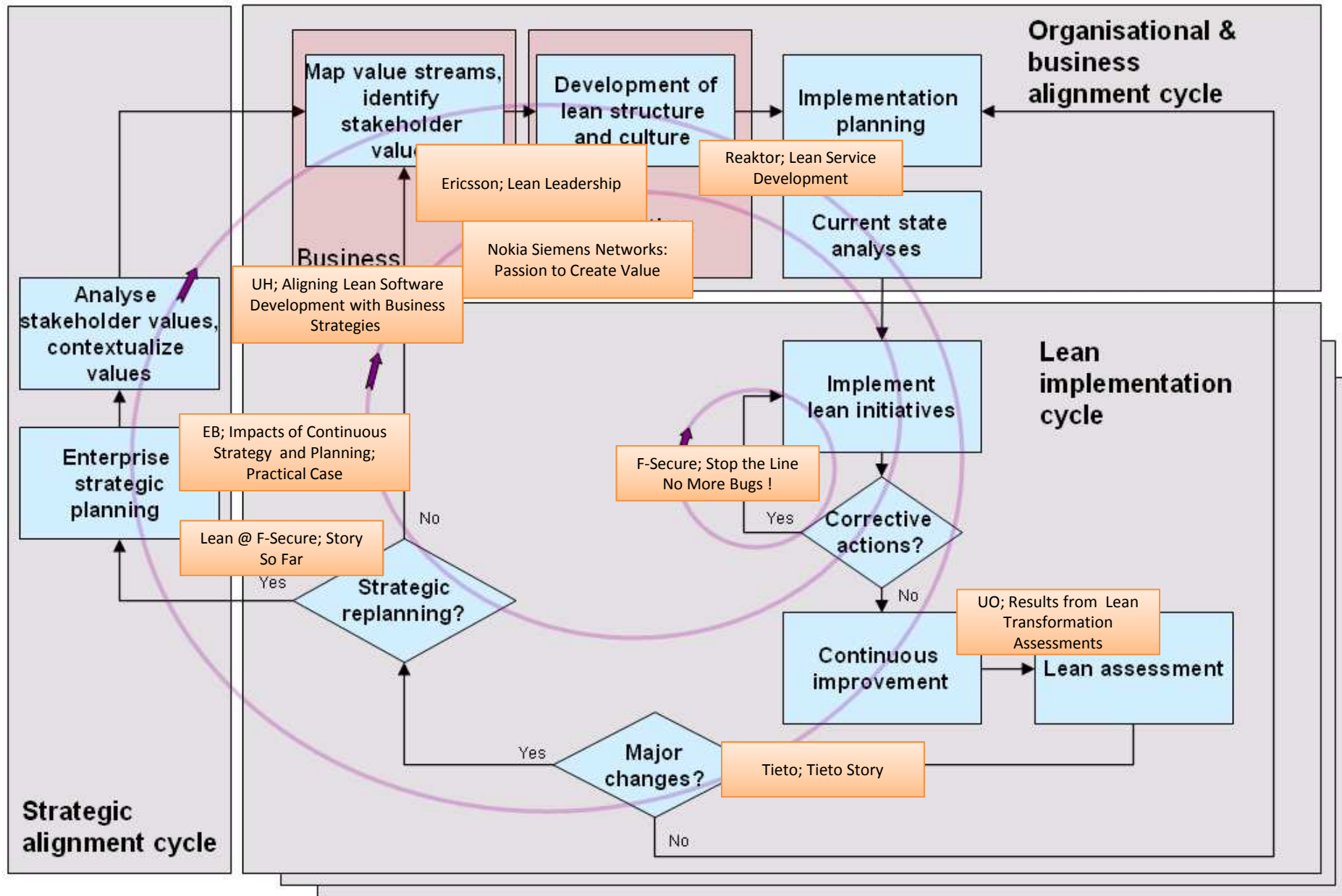
Presenters in the presentation order

- Raija Kuusela - VTT
- Jari Partanen - Elektrobit
- Petri Kettunen – University of Helsinki
- Christian Engblom – Ericsson
- Wolfgang Steffens – Nokia Siemens Networks
- Sami Lilja – Reaktor (Voice)
- Gabor Gunyho – F-Secure
- Harri Kaikkonen – University of Oulu
- Roman Smirak - Tieto
- Janne Järvinen – F-Secure

Lean Transformation Framework for Software Intensive Companies



Lean Transformation Framework for Software Intensive Companies



Elektrobit
Continuous Strategy and Planning
in Practise

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Case EB; Continuous Strategy and Planning in Practise @ Information Management

Strategy => Roadmap/Releases

**Improvement Initiatives
"Kaizen "A3" Story"**

Continuous Transparent working mode with EB Projects IT and IM Infrastructure Development

JIRA Ticket: MS Office 2010 for WS

Dilbert Comic Strip:

Panel 1: I NEED A \$1,600 HANDHELD BAR CODE SCANNER TO FINISH MY LAB TESTS.

Panel 2: OKAY, APPLY FOR A CAPITAL BUDGET VARIANCE, PREPARE AN RFP, GET THREE BIDS, FORM A TEAM TO EVALUATE THE BIDS, THEN PREPARE A PURCHASE ORDER

Panel 3: NEVER MIND, I'LL JUST LEARN HOW TO READ BAR CODES BY SIGHT. QUITTER.

Copyright Dilbert

What has changed ?

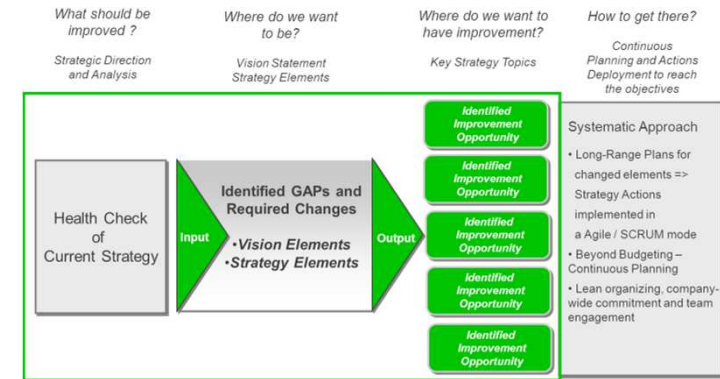
- ❑ **Shifted towards Continuous Strategy, Planning and Execution**
 - ❑ IM Strategy has been turned into a availability roadmap with assumed execution cost
 - ❑ Roadmap has been turned into monthly releases
 - ❑ Releases have been turned into transparent Kanban/Sprint type execution tickets with e.g JIRA/Greenhopper
 - ❑ 15 min Daily stand-ups and communication was established to improve the Working Methods
 - ❑ Retros e.g. in form of gathered
- ❑ **Clear Cost Improvement Trend over Quarters Achieved**

Identified benefits of Transparent WoW

- ❑ Better overview for IM to the IT needs of projects/programs
- ❑ Better visibility for project stakeholders to the progress of the IT related service requests of their projects
- ❑ Better way to document & prioritize IM related needs from projects through active discussion with projects
- ❑ Improved communication between projects & IM



Experiences of Continuous Strategy



- Started as BoD initiative Nov 2010
 - => Strategic actions are determined and quarterly reviewed, new actions are raised based on the needs on continuous basis, also strategy parts reviews are iterative
- Experiences after some 18 month run...
 - Strategy is now much better than ever aligned with the actuals of the work
 - We know much better where and what to focus when going forward
 - Financial planning has been aligned based on this, planning is rolling over periods, no separate 1H/2H budgeting, annual long-term planning still done
 - Goal setting has also turned to be continuous...
 - Conclusion; This is fundamentally better Way to Work than before
 - “Head of the EB Wireless Segment during Strategy Sharing; This is fundamentally better Way of Working”



*University of Helsinki;
Aligning Lean Software Development
with Business Strategies*

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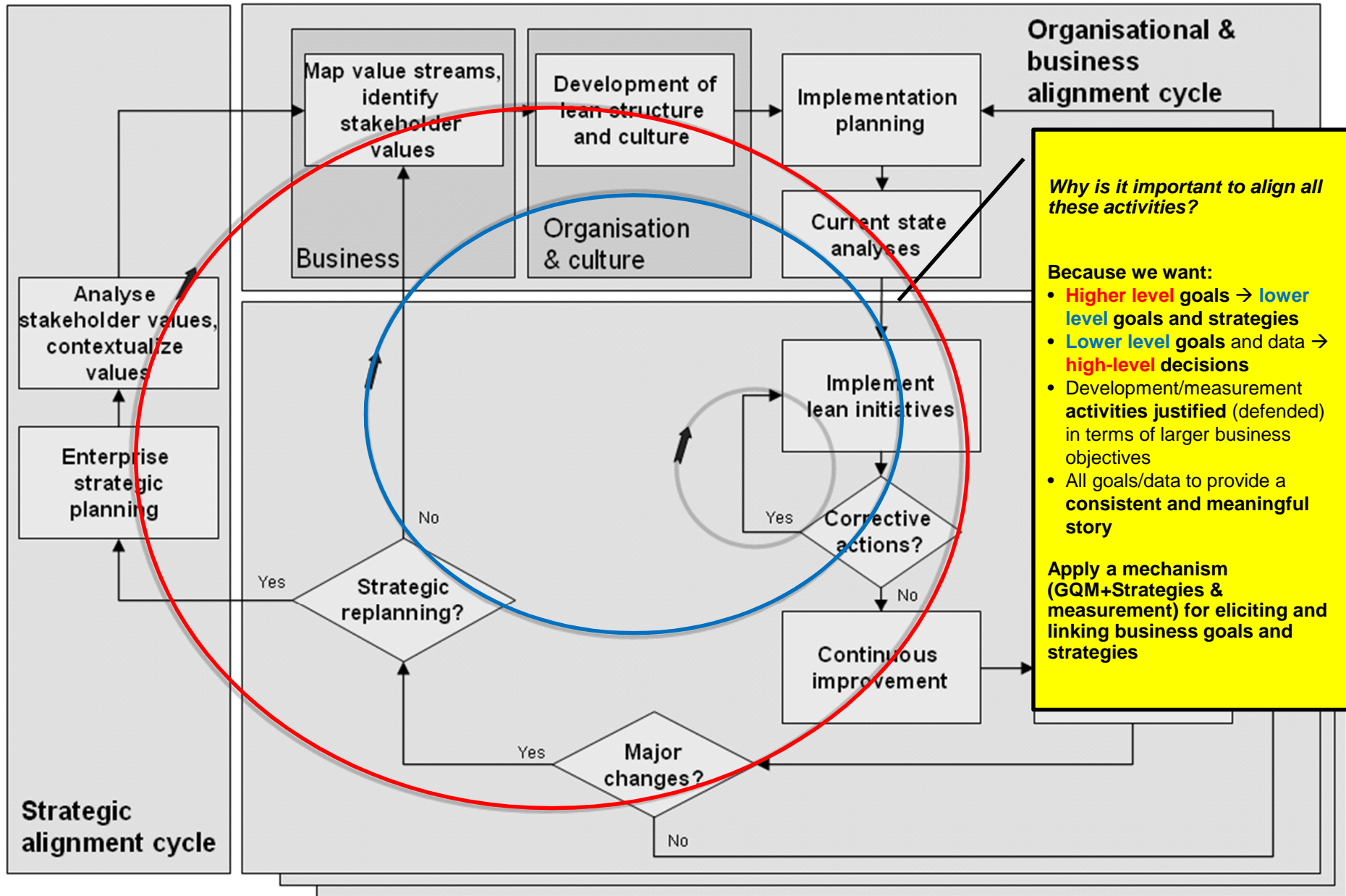


Aligning Lean Software Development with Business Strategies

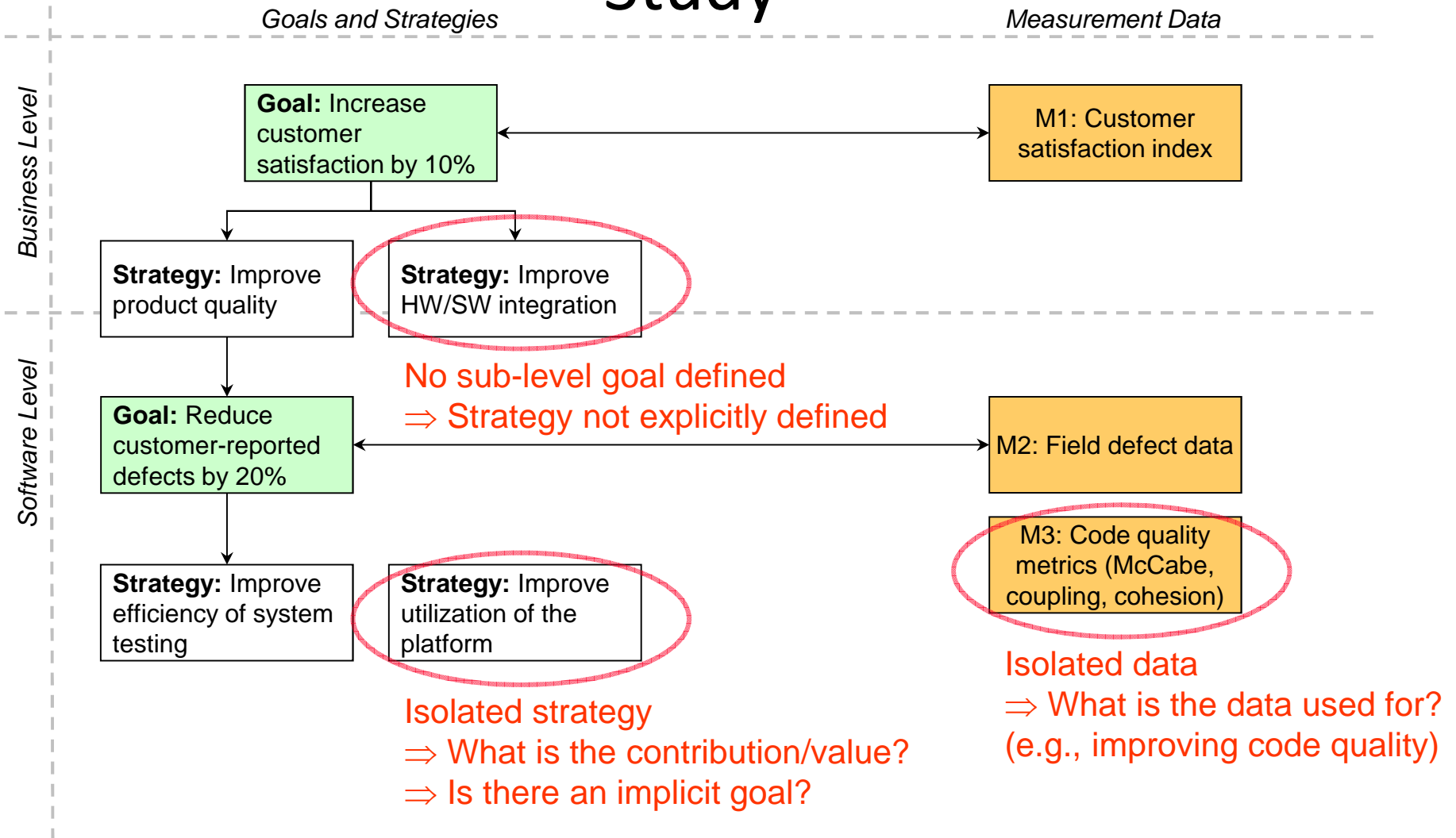
Success Cases from the Cloud Software Program

- Elektrobit & University of Helsinki
 - Operational Transparency for Distributed System Development
- NSN & University of Helsinki
 - Goal Setting and Alignment in Lean and Agile Environments

Lean Transformation Framework for Software Intensive Companies



Typical Example from Cloud SW Case Study



Ericsson; Lean Leadership and Culture

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Lean Leadership & Culture



**"it's easier to act your way
to a new way of thinking
than to think your way to
a new way of acting".**

Leadership challenges

- › **F**ind the balance between leadership and management
- › **E**nable DRIVE
- › **E**stablish the borders
- › **D**evelop your capabilities
- › **B**uild interactive communication
- › **A**llow empowerment
- › **C**reate alignment
- › **K**eep on challenging status quo

Changing the culture

What is culture ?

Values

- Transparency
 - Trust
- Courage
- Respect
- Curiosity

Attitudes

- Go see
- I will fix it
- I share
- YES, and
- Servant

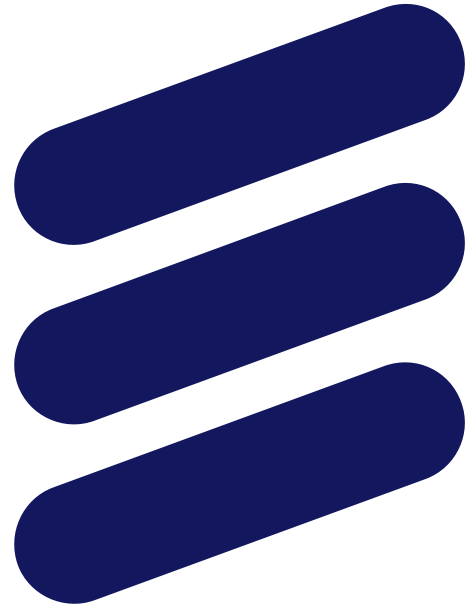
Thinking patterns

- Fast feedback
- Stop the line
- Fail fast/Fix fast
 - Constructive challenging
- What is the value of this



Community of practitioners





ERICSSON

Nokia Siemens Networks; Passion to Create Value

www.cloudsoftwareprogram.org



TiViT



CNPS – Passion to Create Value

This is how customer perceives us now:

- **Software for real need**
- **Fast response** to new requirements
- Awareness of solution status by frequent **demos**

Key figures:

- **4 months** from idea to product
- **2 weeks** from customer feedback to feature delivered
→ maximum agility
- Solid quality by test automation for **>80%** of key components
- **Zero** customer faults

This is what we also did:

- Question the existing processes, routines and habits
- Competent and motivated people
- Continuous improvement and willingness to experiment

This is how we did it:

- Show working Software, not Slideware
- Immediate feedback from customers and other stakeholders:
 - Continuous Integration
 - Demos – anyone can attend!
 - Sandbox users – anyone in NSN can use!
- Minimum distance between R&D and customers
- Continuous load, stress and performance testing
- Immediate decision making and actions
- Start-up project mentality – work beyond boundaries and role descriptions → empowered R&D

*Core Networks Productivity Suite



Wolfgang Steffens NSN



F-Secure; Stop the Line – No More Bugs !!!

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Stop-the-Line: a Lean practice applied for SW development

A practice coming from Lean that is originated from the Toyota Production System (TPS) [6]

Stop-the-Line

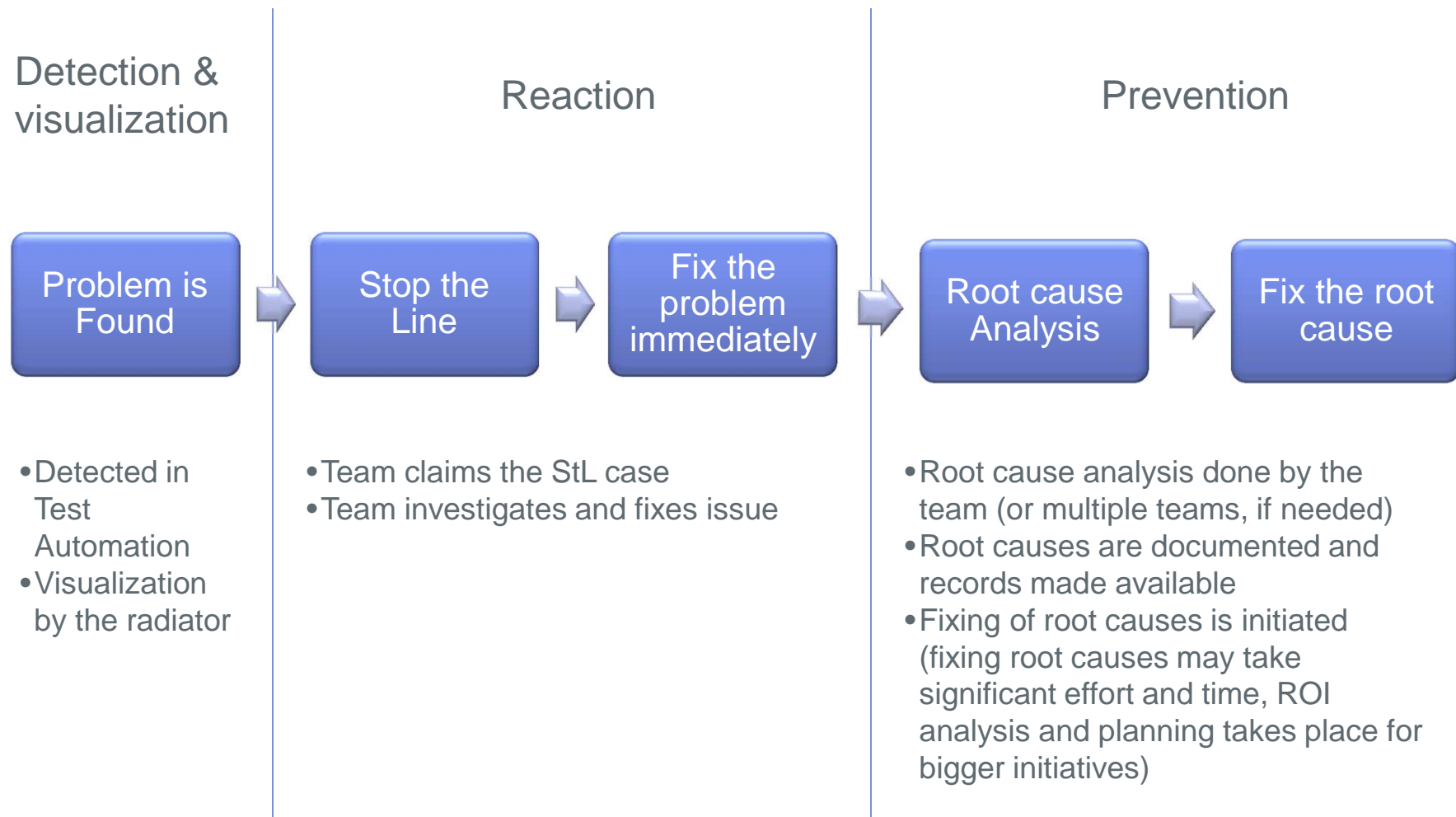
*Work is stopped if an abnormality is found.
Work continues only when problem is fixed.*



Why to use it?

- Focus on quality at all times
- Avoid burying problems deep in the product where it's more difficult to fix it, potentially adding more problems on top of the identified ones
- Everybody is aware of the problem so anyone who can help, can contribute to fixing it
- Identify recurrent (systemic) problems so they are solved once and for all

The Stop-the-Line workflow



Stop Feature Development (SFD)

- What is it?
 - An enhancement for StL
 - Line is stopped not only when tests are not passing but when the number of non-critical bugs go over a threshold:
 - Per team
 - Per project
 - Later:
 - Per Product Area
- Why?
 - To control another dimension of the system dynamics

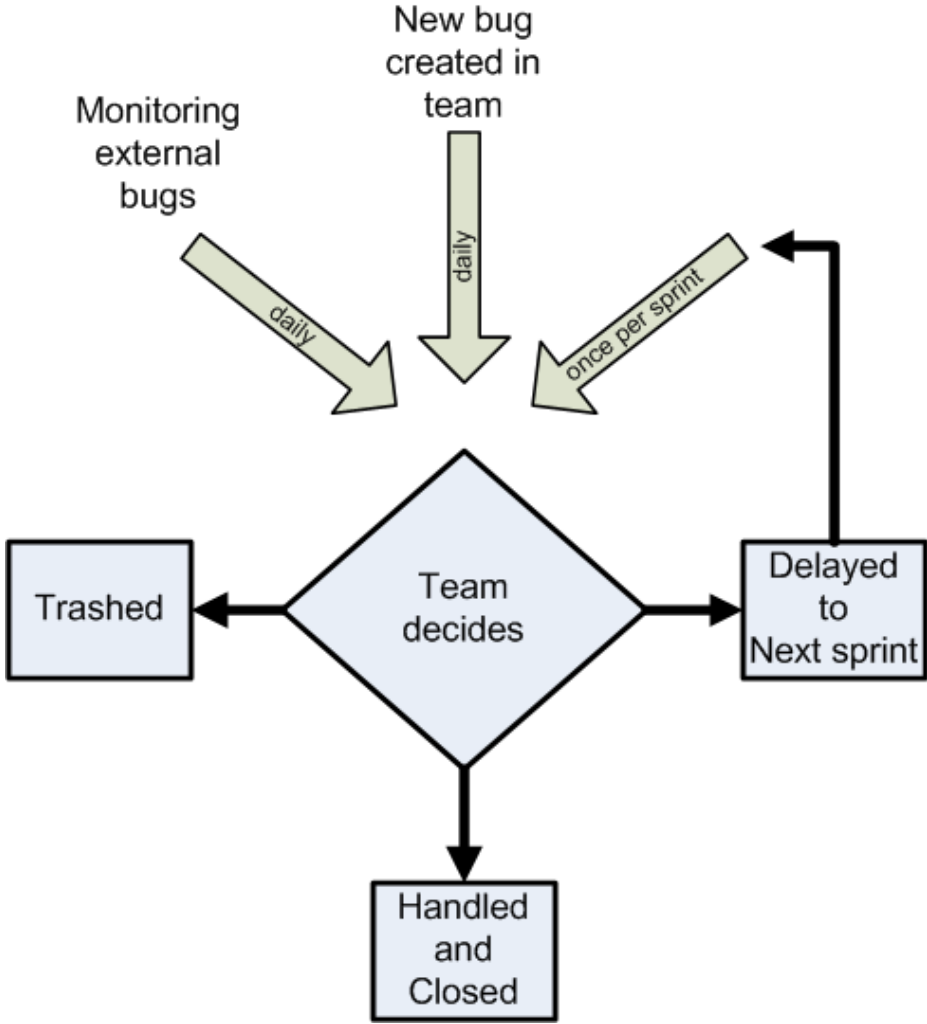


Image sources:

<http://johnastor.files.wordpress.com/2011/02/obstacle1.jpg>

http://messageboards.aol.com/aol/en_us/articles.php?boardId=89965&articleId=72064&func=5

The new bug handling process - overview



Some valid bugs will get trashed, but that is OK in this process!

Conclusions

- Overall quality of the product **improved**
- Number of StL events decreased by time
 - StL enforcer helped to avoid making mistakes
- Not releasing every two weeks **BECAME AN EXCEPTION** and not a rule
- New bug handling process helped on focusing on important bugs
- SFD keeps the level of open bugs in a manageable number
- After a settle-down period, these practices change the mindset of the people to be more quality focused

- **Next step:**
 - StL and SFD are “brakes” to avoid accidents, now we are learning how to drive at high speed safely (i.e., avoid making so many bugs in the first place)



Reaktor; Lean Service Development

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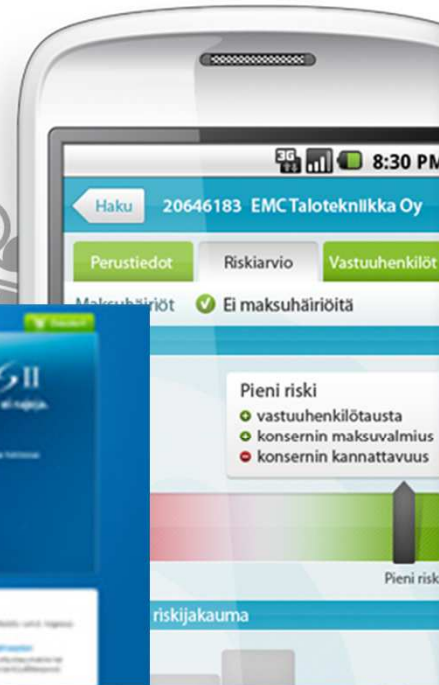
Reaktor @ CloudSW

Lean Service Development

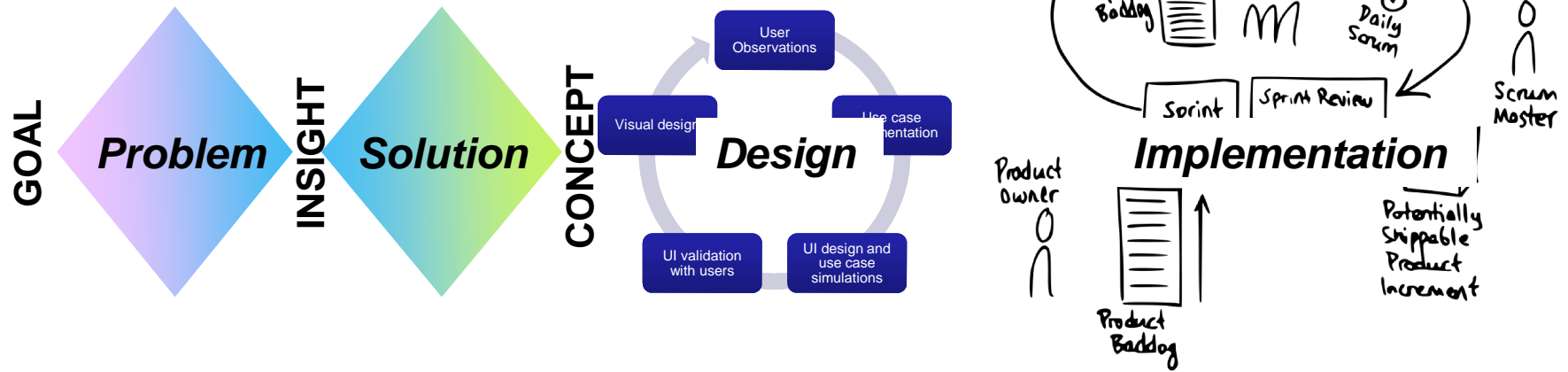




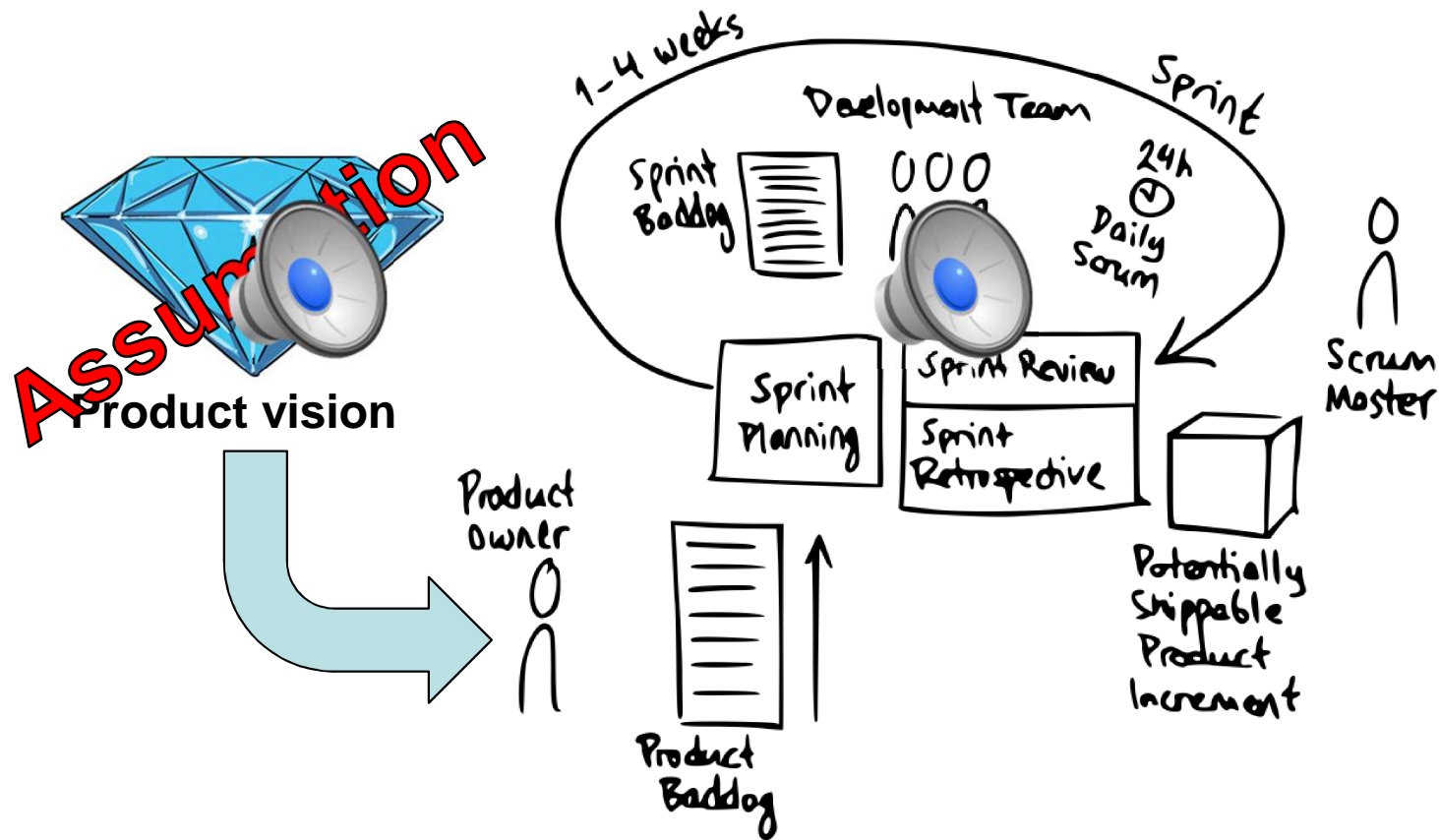
- Founded in 2000
- 170 employees
- Pioneer of Agile methods in Finland
- Turnover 19.6 MEUR in 2011
- Europe's best workplace in 2010, and Finland's best workplace in 2010, and 2011



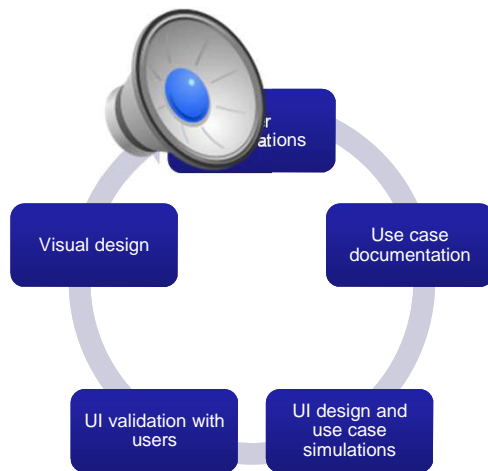
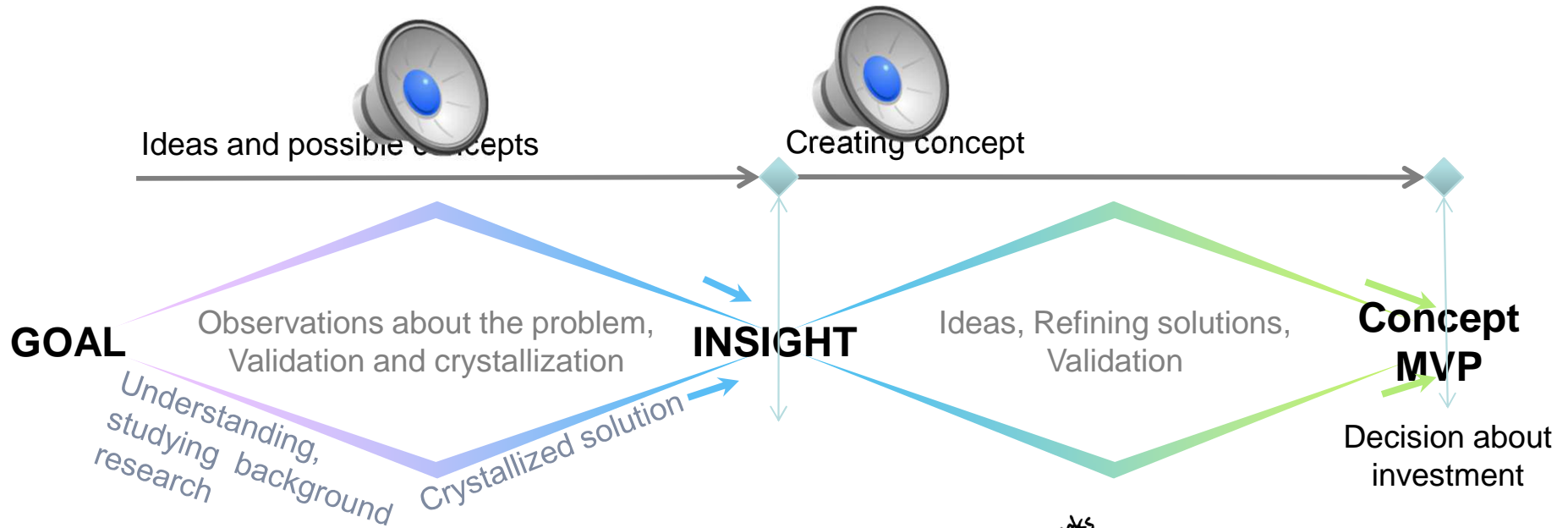
Lean Service Development



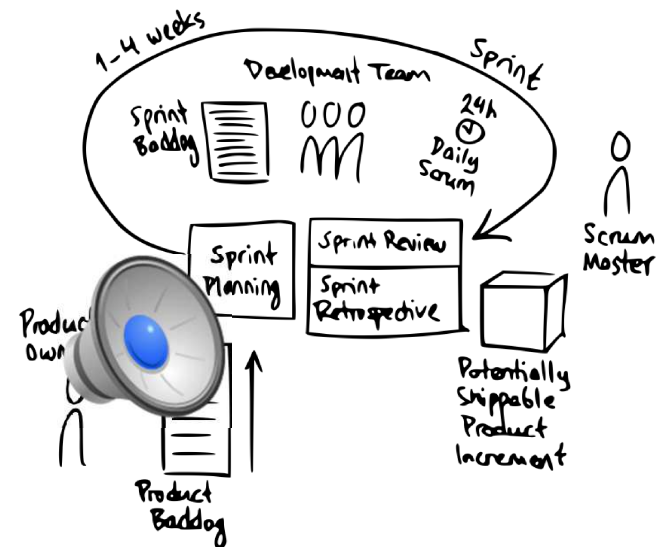
Agile Software Development



Lean Service Development

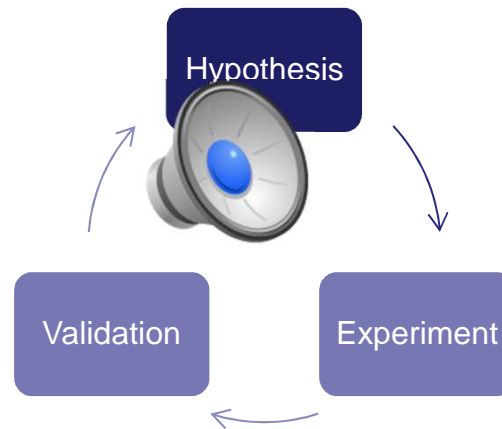
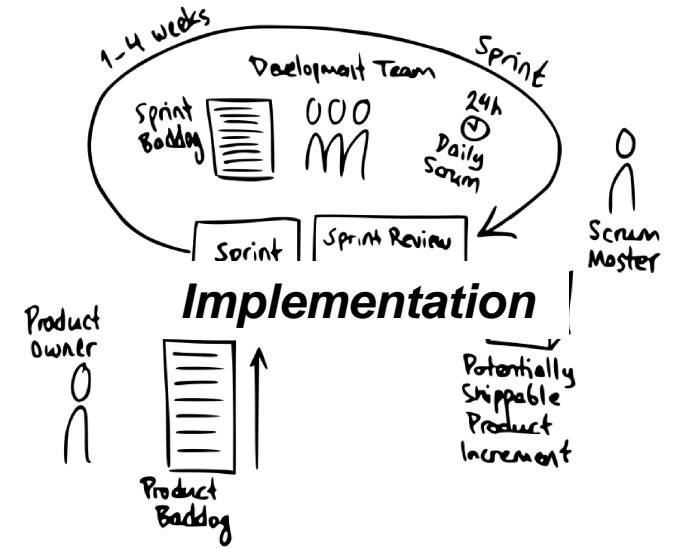
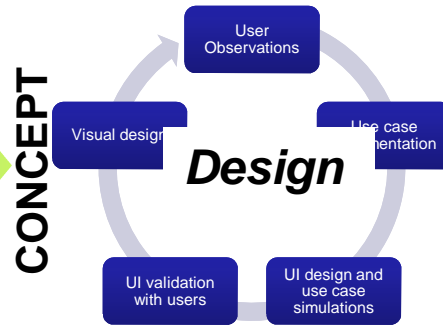
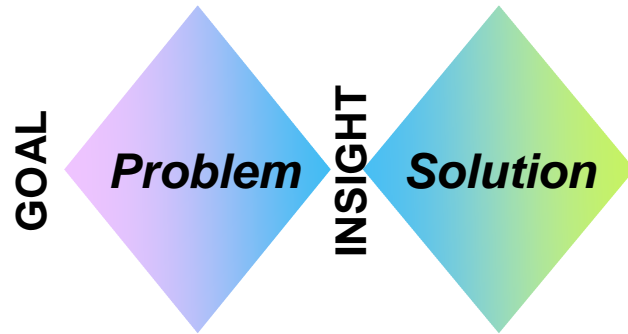


Functional design



Agile Development

Lean Service Development





Thank you!

University of Oulu; Results from Lean Transformation Assessments

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Lean Assessments

- As the software business climate has moved towards cloud and service-orientation, organizations are adopting lean and agile principles to tackle the challenges they face
- The University of Oulu M-Group in collaboration with several Cloud Software Program partners is working to support the transformation towards Lean by creating tools for assessing it



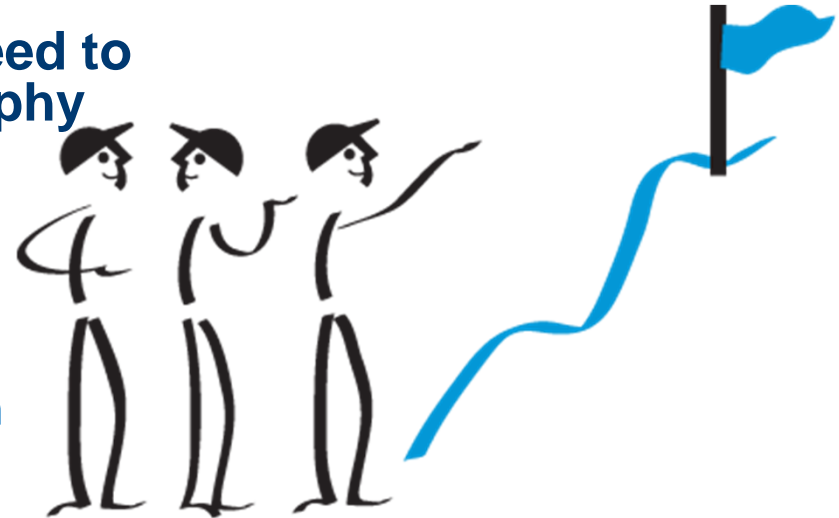
NOKIA

EXFO



Lean Assessments

- Assessments are useful to get a picture how lean transformation is progressing
- It is useful to check if the enterprise's strategic plans should be revisited and updated to respond to unforeseeable changes
- Assessments provide a starting point for measurements and continuous improvement!
- Additionally, the assessments need to be aligned with the Lean philosophy
 - ✓ Respect people
 - ✓ Build a continuous improvement mindset
 - ✓ Foster a learning organization





Lean & Agile Assessment Survey

Designed to

- Identify the progress that you are making within your transformation
- Offer the first step to understand opportunities for your Lean/Agile journey
- Create a prioritized plan for future improvement actions
- Seeking insights and explanations of possible problems or misunderstandings in the transformation



What could be improved?

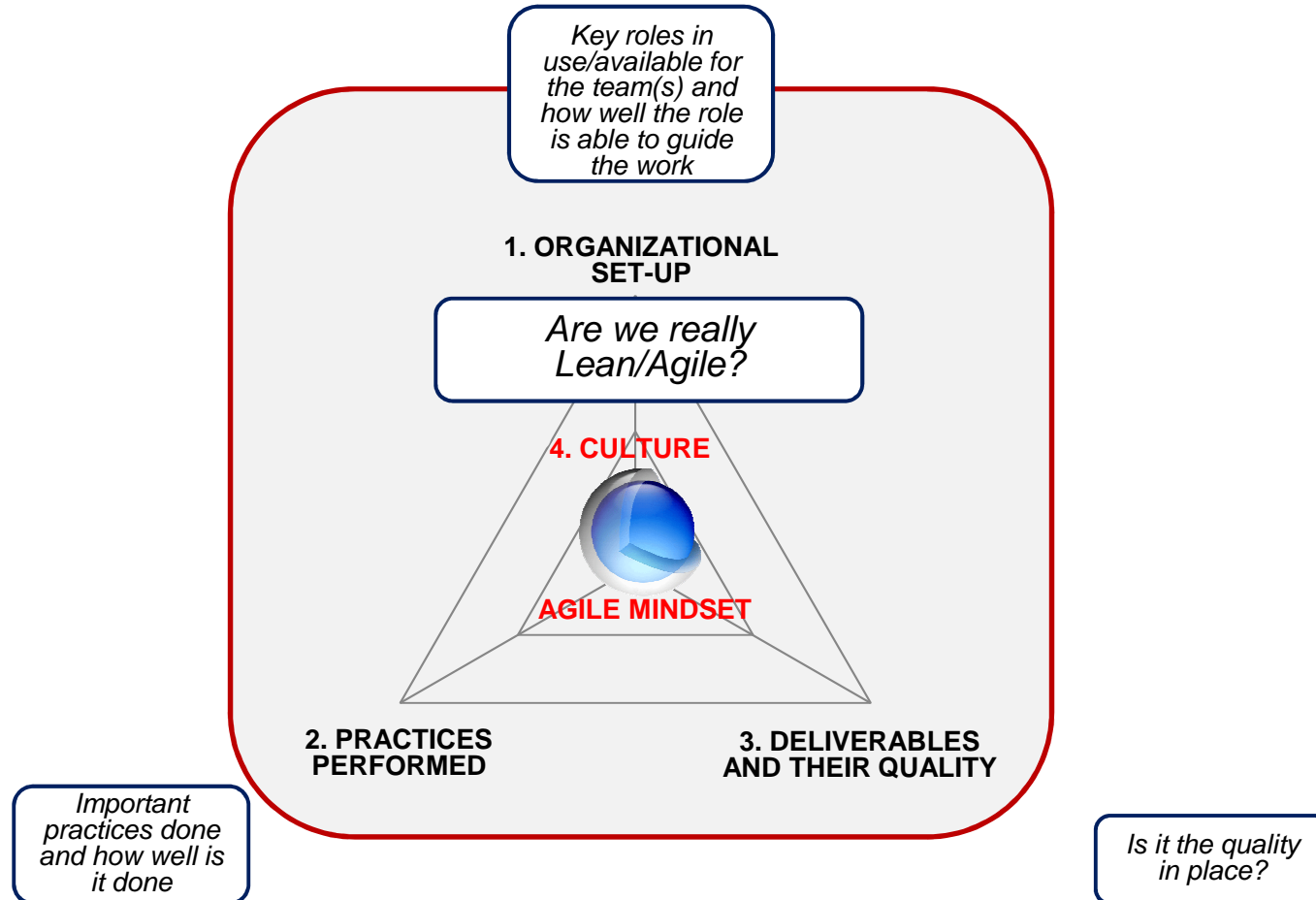


What has gone well and should be kept?





Assessing Four Dimensions





Tieto; Tieto Story

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A3 Navigator



- **Coach experience with A3:** despite Kaizen workshop, Lean game, training, A3 feels like “straitjacket”
- **Consequence:** A3 not created or not kept up-to-date
- **Goal:** Leverage people emotions like fun, collective work, visualization, group dynamics
- **Solution:** Team work in front of canvas to generate and update and digital tool to store A3’s

Lean Survey Assessment

- **Context:** Measurement Framework consists of Objective and Subjective evaluation
- **Goal:** Simple (short) individual and team evaluation
- **Solution:** Web based (individual) and Excel based (Team self-check) survey

Question	Average/question	Deviation/question	Talk?	AVG-MIN	MAX-AVG	Data section
Empowerment We are empowered to identify problems and decide on solutions for them as a team	5,0	0,00		0,0	0,0	5 5 5 5 5 5
Value Majority of the tasks that we do provide value for our customer	4,0	0,00		0,0	0,0	4 4 4 4 4 4
PDCA Our improvements are regularly followed up to make sure they are taken in use	2,6	0,53	Talk	-2,0	3,0	3 3 2 3 2 3 2
Go&See We finish actual improvements before starting new ones	2,7	1,60	Talk	1,6	1,4	4 1 4 1 4 1 4 1
Measurements Management is in close contact with team(s) so they understand real situation by experience and not only following up reports	-	-		-	-	-
Mgmt commitment and support Focusing on Lean and continuous improvement has made my team more productive	-	-		-	-	-
5 Why's Focusing on Lean and continuous improvement has improved quality of our product	-	-		-	-	-
Commitment Management is actively involved in continuous improvement activities	2,0	1,15		1,0	2,0	1 2 1 1 2 3 4
Coaching Management demands continous improvement activities	3,0	0,00	Talk	-3,0	3,0	3 3 3 3 3 3 3
Communication We have been able to find the root causes of our problems therefore they don't reoccur	4,0	0,58		0,5	1,5	4 4 5 3 4 4 4
Empowerment We are confident in Lean and the methods related to it	2,9	1,35	Talk	1,9	2,1	2 3 2 3 4 5 1
Value I find Lean and focus on continuous improvement to be important activity within our organization	2,4	0,79		0,4	1,6	2 2 2 2 2 3 4

2012-05-24





Success story

Currently we have in average
**Doubled Contribution
Margin per month** than in
average of 2011

Lean@Tieto significantly contributed by:

- Cross-functional, cross-country Lean workshops providing brand new perspective on improvements, pulling people out of their boxes
- Sharing experience and providing on-job coaching



Director, Solution Area

**Knowledge.
Passion.
Results.**

Roman Smirak

Manager of Consultant team
Tieto, GD&Q
roman.smirak@tieto.com

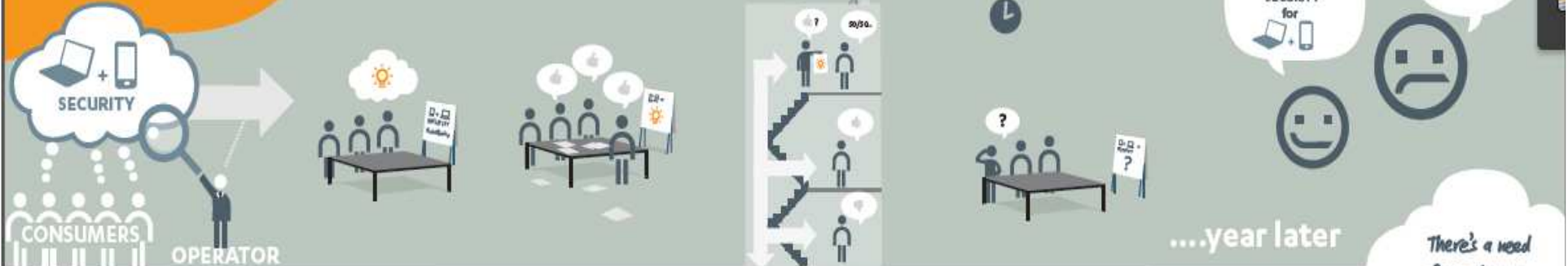
Lean@F-Secure; Story So Far...

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1 THE CHALLENGE

Challenge of adapting to fast-developing consumer demand



2 SOLUTION

How are we going to solve our business need dynamically and flexibly?

