

Rolling out mission critical system in an agilish way

Reflections on building a large-scale dependable information system for public sector

RCoSE 2015

Session 2: “Processes”

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Context: the new Finnish ERC IS

System facts:

- 4 M calls per year
- 1,6 M dispatched tasks
- 6 ERC's, 2 datacenters
- up to concurrent 200 operators

ERICA



EMERGENCY • COMMON •
RESPONSE • INTEGRATED •
AUTHORITIES •

Development facts:

- 40-50 people, 5-6 agile teams
- ~1 mio LOC (Java+Javascript)
- ~20 3rd party systems integrated
- 6 subcontractors

SYSTEM PROVIDED AS A SERVICE

The starting point



CUSTOMER

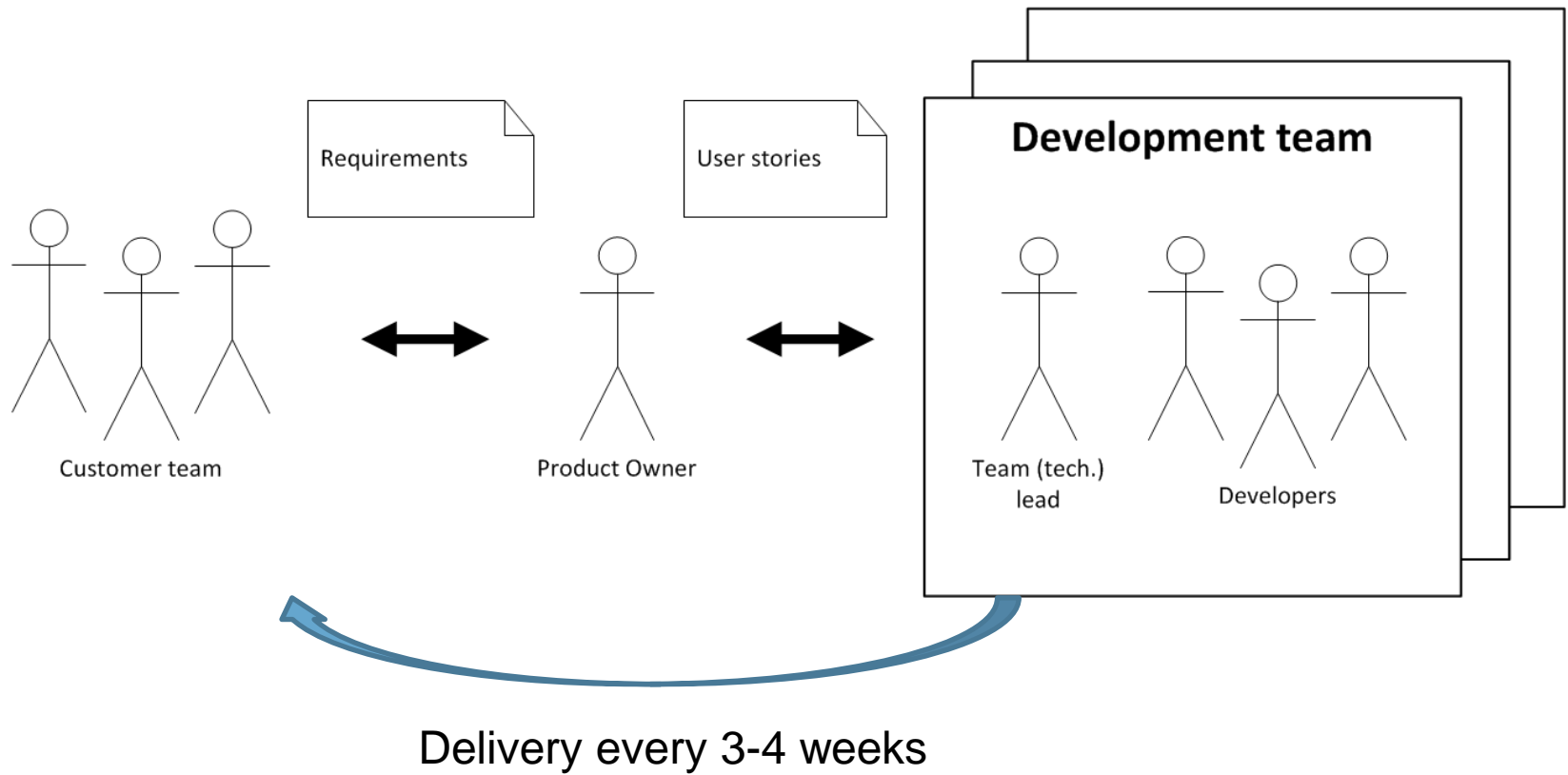
- I want you to build this system for us...
- And we can do it together...
- However,
 - The budget is fixed...
 - And the schedule is fixed...
 - And we really cannot drop any features anymore...
- But we should execute this project in an **agile** way!

In an agile way?

- Only three things:
 - User involvement
 - Iterative and incremental development (frequent deliveries)
 - Constant adaptation to the situation at hand

Common factor: feedback

The original setup



Dark clouds in the horizon...

Symptoms: User stories do not get finished

Unsatisfying sprint demos

Progress not clear

Gut feeling of increasing TD

Change in working atmosphere

...

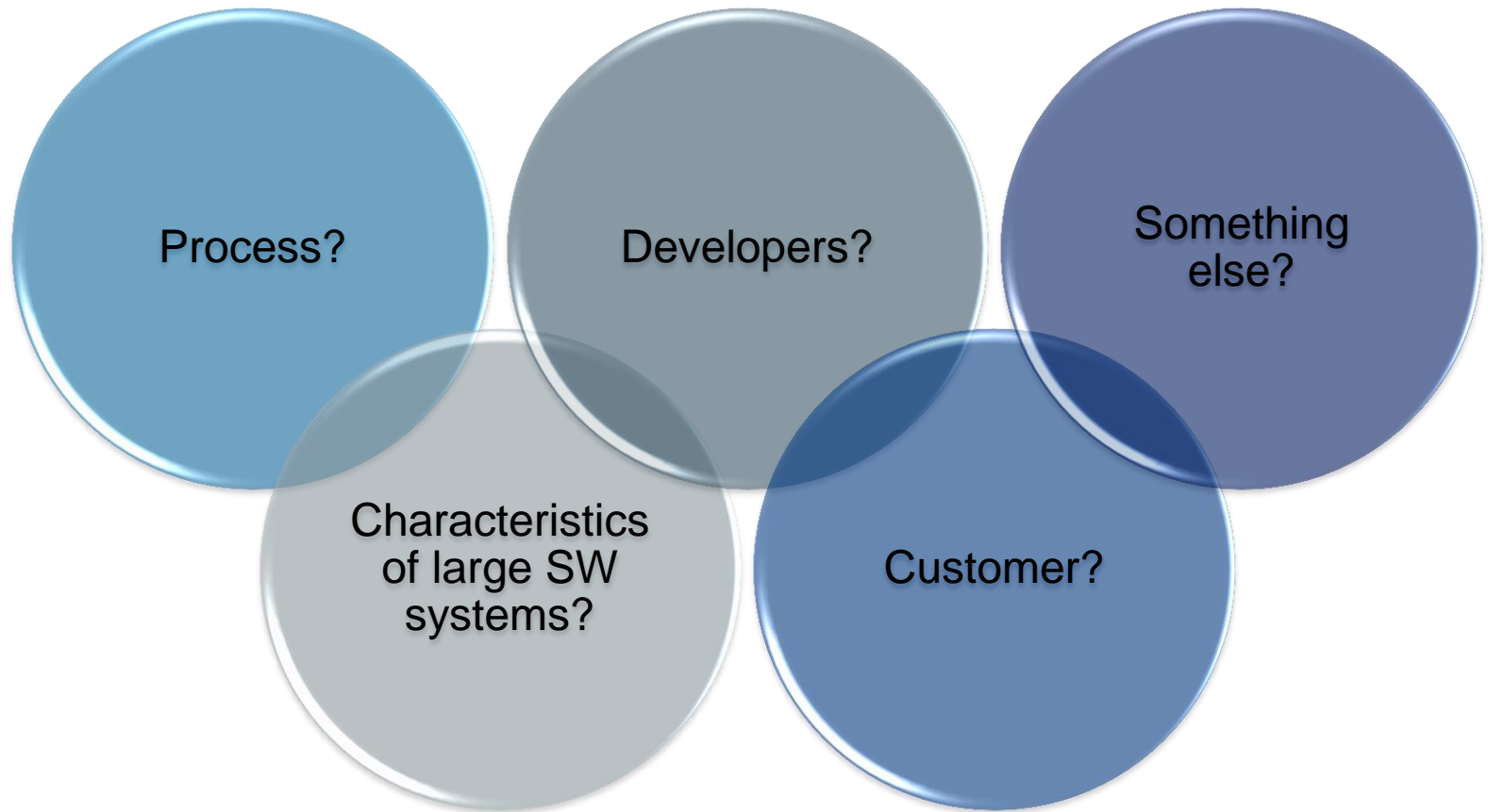
The main pain points

- Inability to adapt the development model continuously
- Too slow responses to changing needs
- Too long development cycles and time to delivery
- Estimates treated as deadlines
- Insufficient developer productivity
- Insufficient level of testing
- Unsatisfying end user experience, bad overall quality
- Insufficient visibility to project state and progress
- Weak diagnosis of the delivered SW performance
- ...

OBVIOUSLY:

WE WERE NOT RAPID/AGILE ENOUGH FOR THE MARKETPLACE!

Quality is a problem – who to blame?

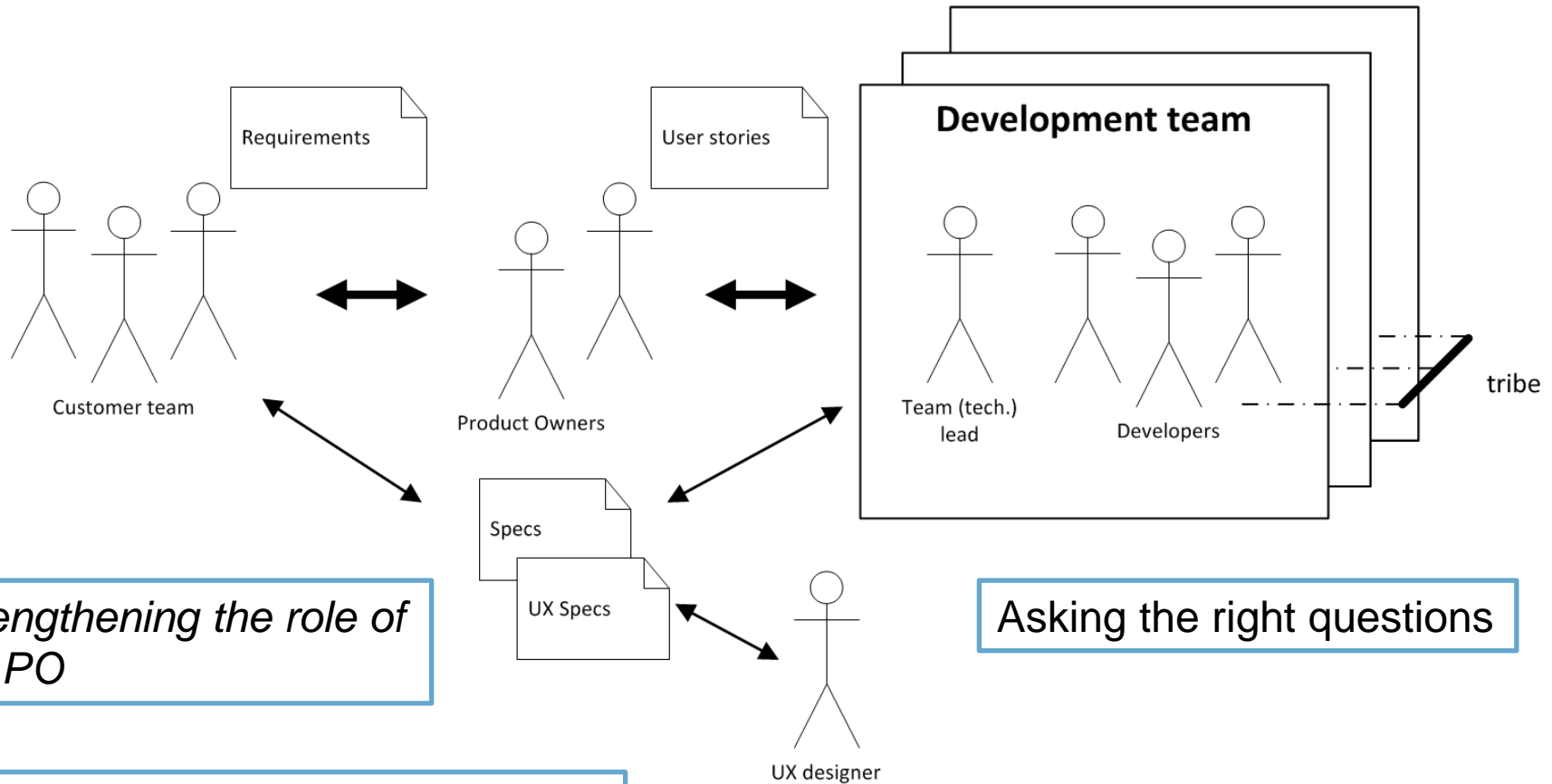


Lessons learned

It is not enough to do the things you do almost right or by the book.

- Everyone involved must keep raising the bar every day, in a **disciplined and continuous** way

Development organization – the current setup



Strengthening the role of the PO

Asking the right questions

Dual-track requirement handling

Strengthening the role of the UX

The way ahead...

Constant focus on the way we work

- Everyone's responsibility to find ways to improve, continuously

Improvements on the testing effort

- Test automation
- Testers involved in the definition of the acceptance criteria

Enhancing developer productivity

- Wideband communication, ease of communication
- Collaboration on every level
- Feedback in a constructive way

The most important issues – no surprise...

Direct access to real customer

- Someone with the true capability to make decisions

Short feedback loops

- As short as possible, and even shorter

Environment to support effective collaboration

- Instant and easy access to up-to-date information

Emphasis on quality-driven development

- Understanding what quality means to the customer
- Have effective means to assure the quality of the deliverables

ENABLERS OF SUCCESS, NOT QUARANTEE!