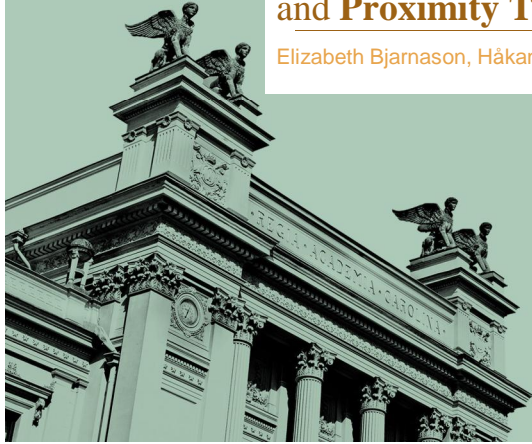


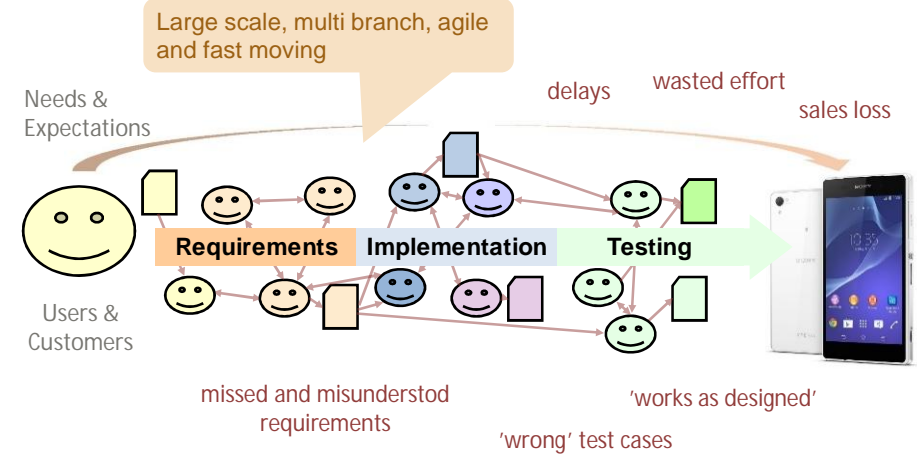


## A Proposal for Improving Project Coordination using Data Mining and Proximity Tracking

Elizabeth Bjarnason, Håkan Jonsson



## Reqts Communication – RET Alignment



E Bjarnason, K Wnuk, B Regnell. "Requirements are slipping through the gaps—A case study on causes & effects of communication gaps in large-scale software development." *Requirements Engineering Conference (RE), 2011 19th IEEE International. IEEE*, 2011.

E. Bjarnason, P. Runeson, M. Borg et al. "Challenges and practices in aligning requirements with verification and validation: a case study of six companies." *Empirical Software Engineering* 19.6 (2014): 1809-1855.



## Physical distance matters



"The conversation slows down."

- Delays in requirements clarification and detailing
- Decreased awareness
- Miscoordination
- Incomplete, incorrect requirements information

Bjarnason, Elizabeth, and Helen Sharp. "The role of distances in requirements communication: a case study." *Requirements Engineering* (2015): 1-26.  
Bjarnason, Smolander, Engström, Runeson. "A Theory of Distances in Software Engineering". *IST vol 70*, February 2016, Pages 204–219

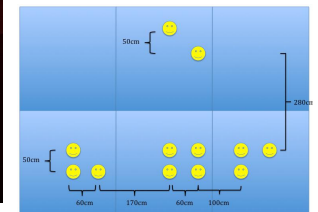
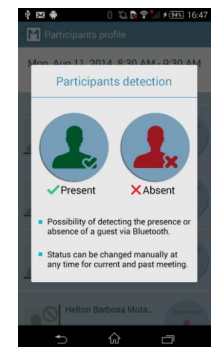


## Proposal: Team Coordination Application

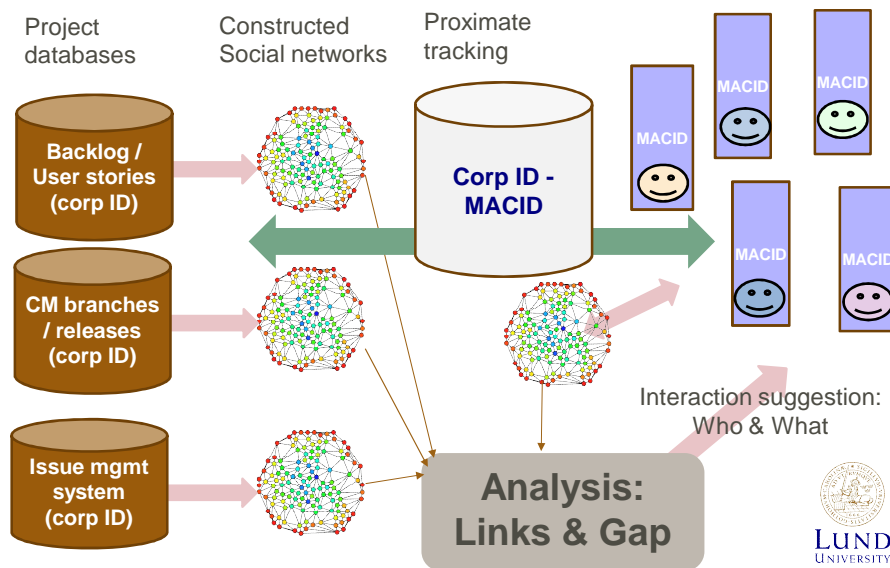
- Support project team coordination
  - Suggest interaction
  - Increase awareness
- Support project monitoring & tracking

Combine

- Proximity with BT
- Data mining
- Social network analysis



## Team Coordination Application



## Scenarios

	Work relatedness	Proximity
Interaction recommendations	X	Current
Coordination recommendations	X	Past
Orientation	X	
Project meeting	X	Current
Human resource management	X	Past
Organisation and office space management	X	Past

## Next steps

Plan study, prototype and evaluate idea for case company

Focus: Coordinate reqts communication to testers

Research Questions

- How can app improve RE and Testing coordination?
- What suggestions are useful? Optimise set of data relative usefulness of suggestions
- Study interaction patterns: with and without app
- How manage privacy issues? Gain trust and pilot users.
- ...



## The Future?

Team Coordination App

