



# Research in processes linked with IT solutions

- first humble steps...

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# Background and motivation

# Journey so far

TKK / HUT 1981-1988  
- **electronics**

Nokia-Mobira 1988  
- **R&D sub-project**

Bio-Orbit, Laukamo 1990  
- design, projects

Nokia Telecommunications 1994  
Nokia Business Infrastructure 2001  
- project & team mgmt  
- **product creation process facilitation**  
- project & resource mgmt solutions

Nokia Displays 1993  
- project

where next? 2013?

Nokia R&D 2004  
- error & test mgmt solution  
- product process (platforms –  
device families – Nokia PP)

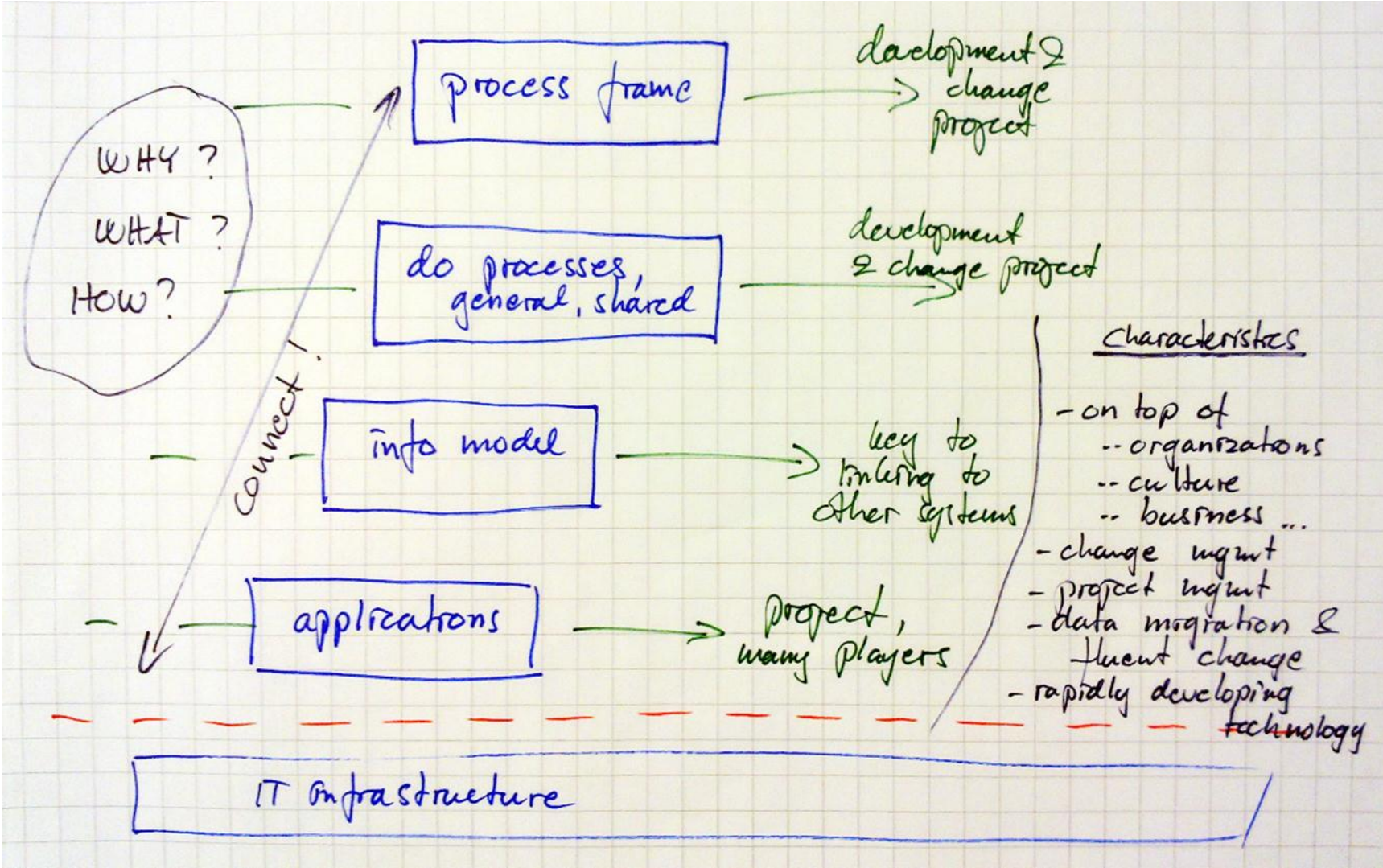
University of Jyväskylä 2010  
- **researcher**



# IT Project Success Rates

- Peat Marwick study—65% of projects failed
- META— >50% half failed to meet one of the triple constraints
- Applied Data Research—Up to 75% of projects cancelled
- U.S. Army—47% delivered but not used  
29% paid for but not delivered  
19% abandoned or reworded  
3% used with minor changes  
2% used as delivered

# Original idea



(J Nieminen 11/2009)

# Research work targets - motivation

## Research targets

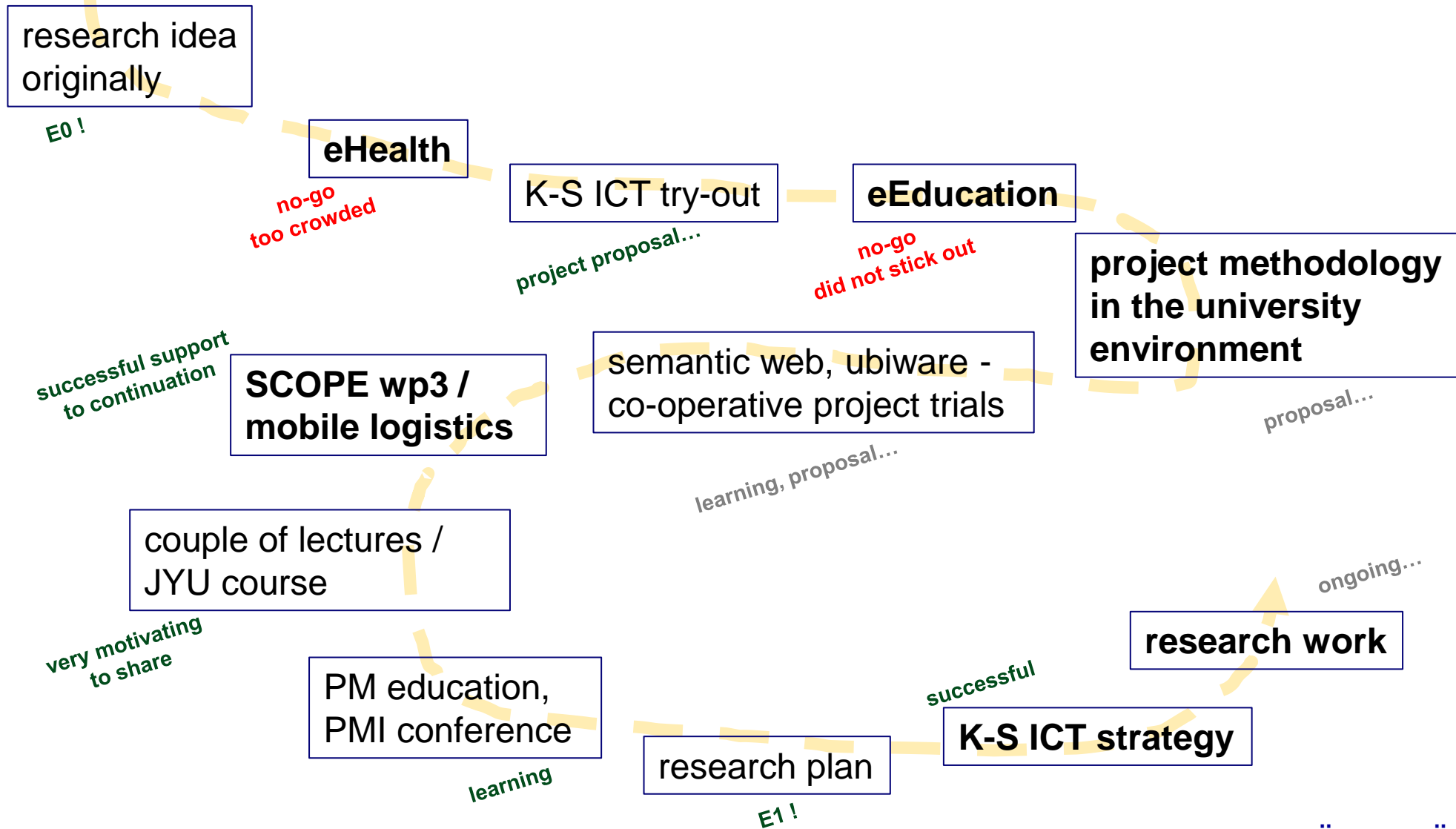
- to figure out success factors for major cross-layer implementation programs
- analysis of a few implementation cases, benchmarking view
  - providing added value to participants, as a motivation to participate

## Personal targets

- learn new – on top of and utilizing experience and knowledge gained so far
- network widely with people and organizations working in the same area
- basis for the next step in professional career

# Last year+ in the University of Jyväskylä

- an enjoyable learning trip!



# Project methodology in the university environment

## What

- introduction of some methodology in order to improve project performance and support
- mostly just by doing - ref. K-S ICT strategy project, SCOPE projects

## Learnings – challenges in project management

- in sponsoring, steering – cross-organization or cross-scientific is not typical
- basics are taught to the students, however, use in own projects is limited – leads also to difficulties with external parties

## General learnings – positive

- stable environment – a quarter means 25 years...
- free and liberal environment, lots of choices for what to do
- very good support and encouragement
- working in the university and being a member of the community seems to be loosely coupled with the work contracts

# Project management education and research

- masters' programs in universities around the world are emerging, increasingly
  - <http://www.pmi.org/en/Professional-Development/Global-Accreditation-Center-What-Is.aspx>
  - not limited to these PMI accredited ones
- academic research is a world of it's own (in general, not limited to PM topic)
  - certain process and formalities – internationally and traditionally
  - research methodology is a science of it's own
  - articles are a measure of success (challenged in reviews and screening)
  - conferences (proceedings and presentations) - a lot of events and often
  - references, references... stories need to be built on work done by other people, with adding new knowledge on top
  - networking – easy but sometimes guarded with jealousy
  - two main classes of post graduates (simplified)
    - direct academic career, limited industry experience – need to gain academic recognition through articles
    - decades of industry experience, brief visit to the academic world, and back to industry (?)

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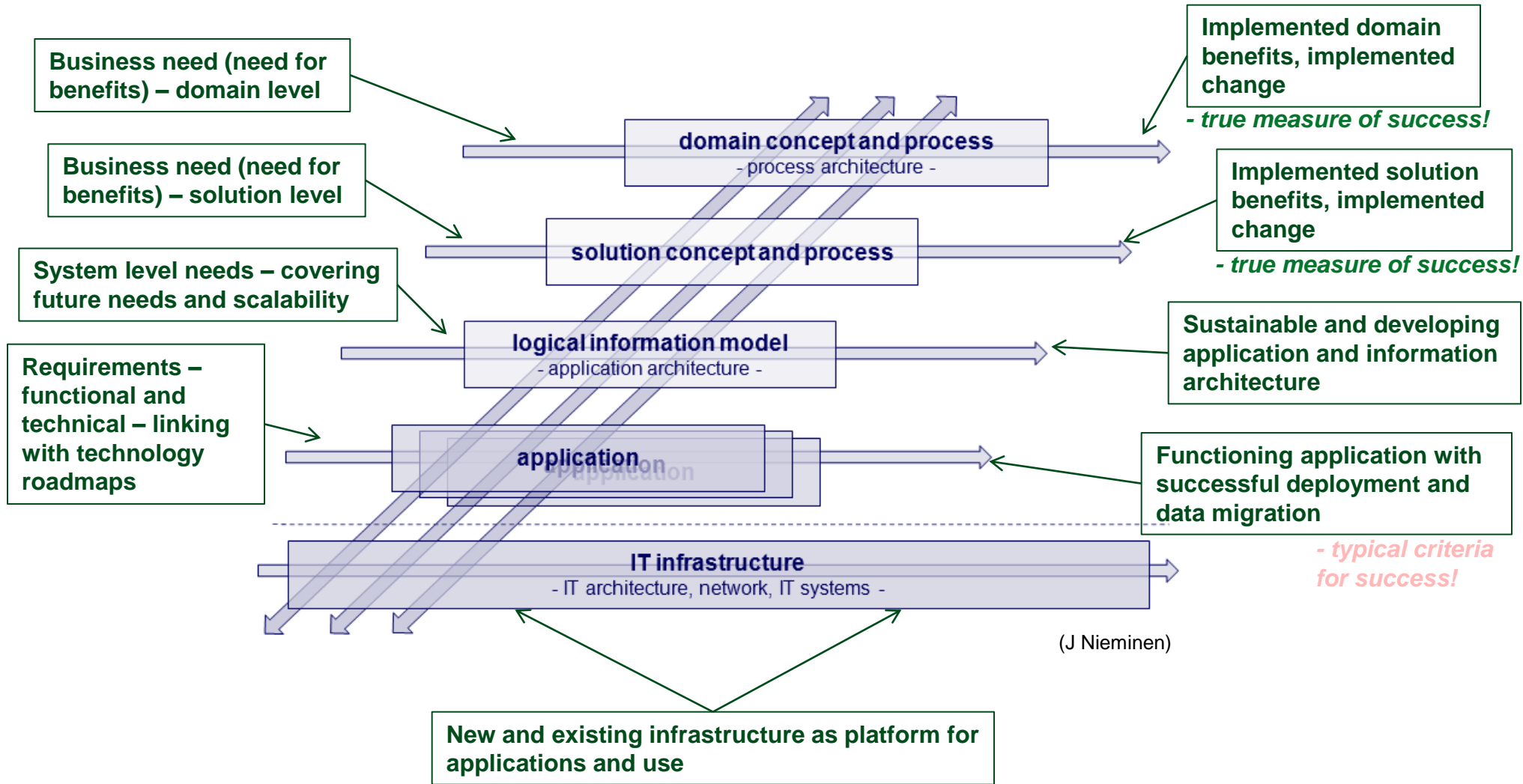
# Research

- **“Creation and management of processes connected with information technology solutions”**
- **early stage status and thoughts**

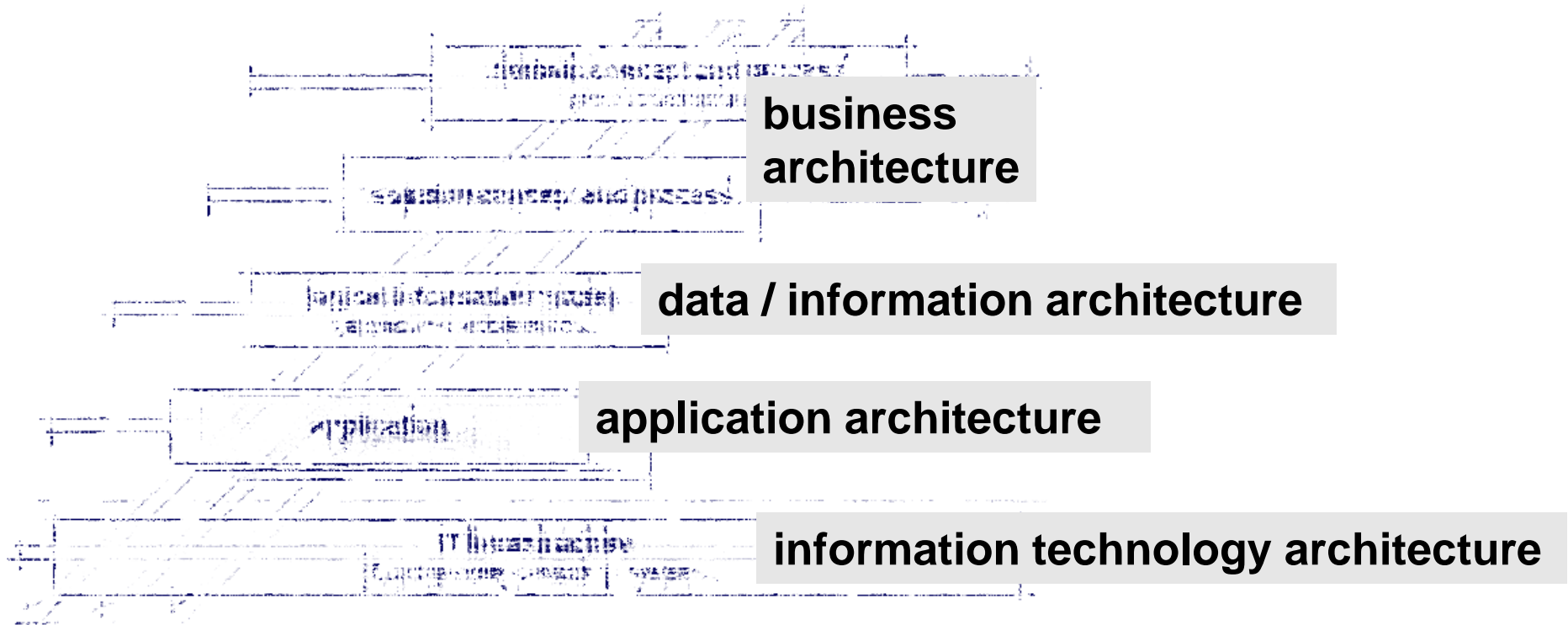
# Status

- Format
  - collection of conference papers, reservation for a monograph
- Supervisors
  - prof. Pasi Tyrväinen – digital media
  - prof. Pertti Saariluoma – cognitive science and user-friendly information technology
  - prof. Jukka Heikkilä – software business
  - prof. Pekka Neittaanmäki – guidance in general
- Status of research and study plan
  - plan approved 10/2010
  - 53/60 ects at the moment
- Targeted end date: end of 2012
- Status of research
  - literature review: about 25 usable references, mostly articles
  - very preliminary outline for the case preparation part of the text

# Domain of processes – IT solutions

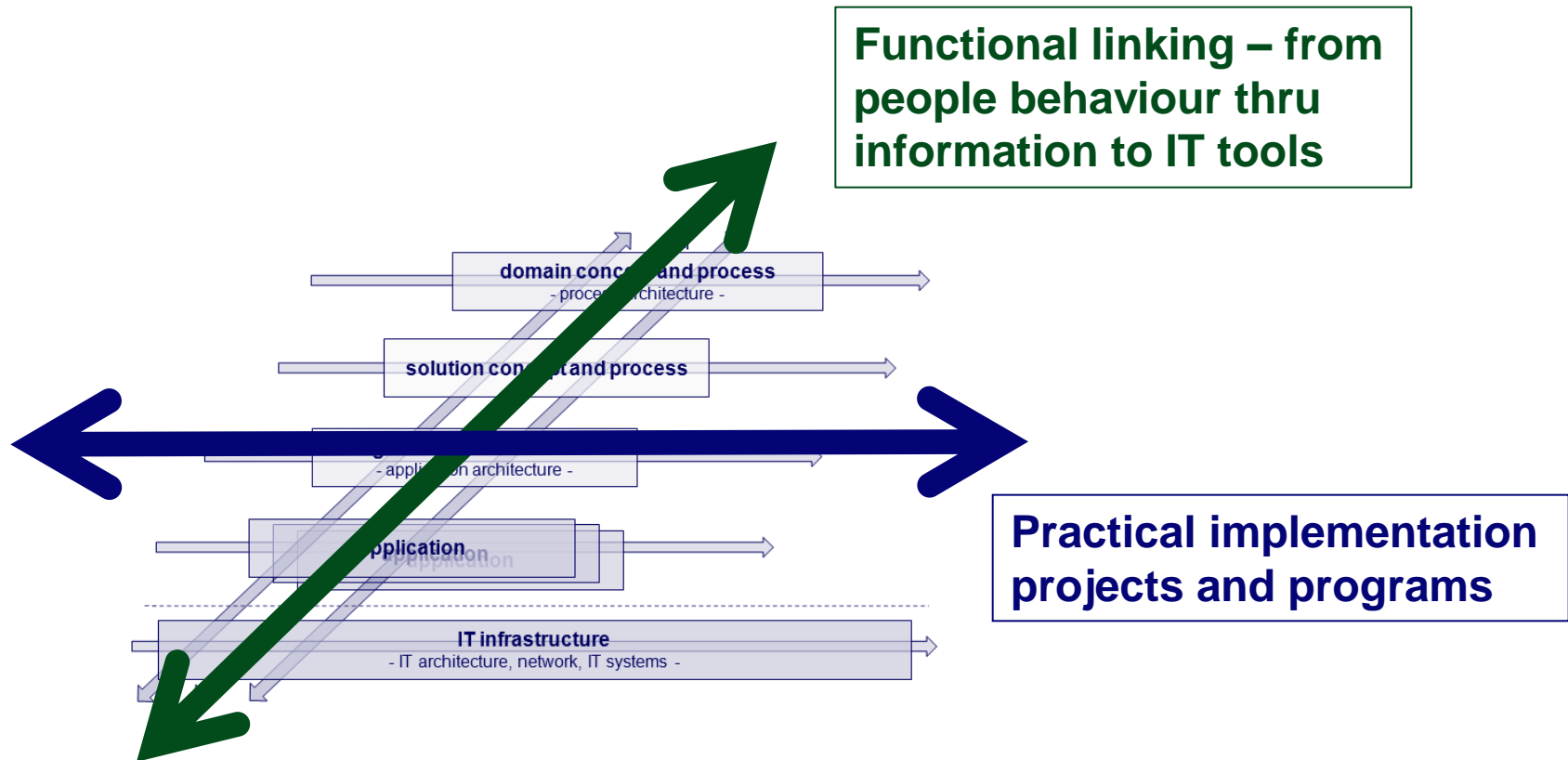


# Enterprise architecture

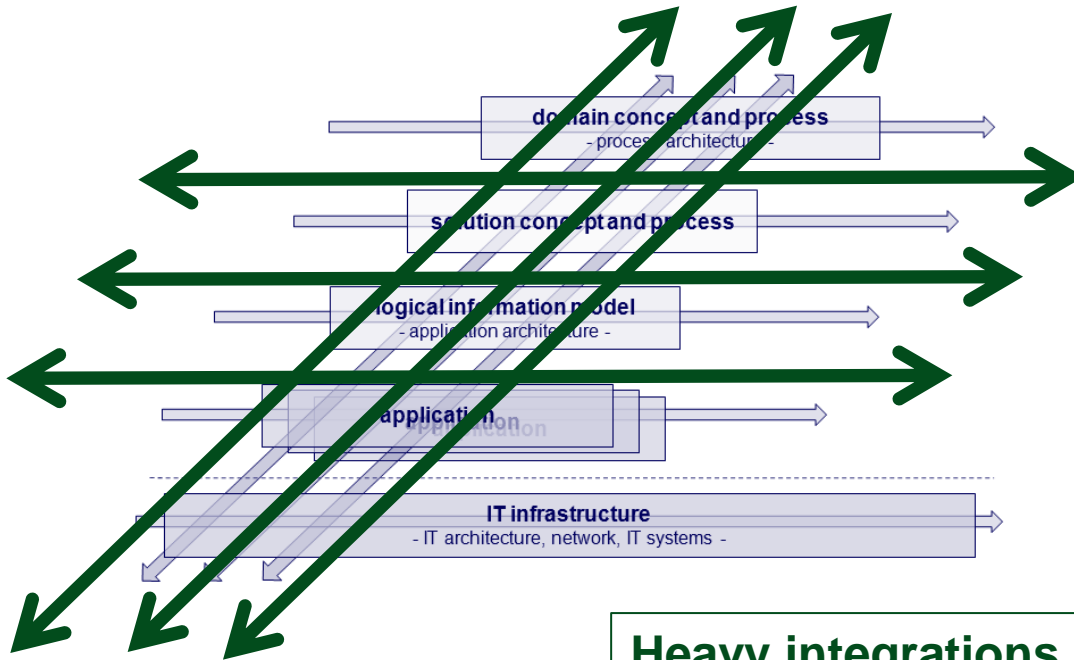


*The Open Group's Enterprise Architecture definition (TOGAF 2003)*

# Challenges



# Challenges



**The problem in short is:**

**major IT solution programs typically fail in a very expensive way**

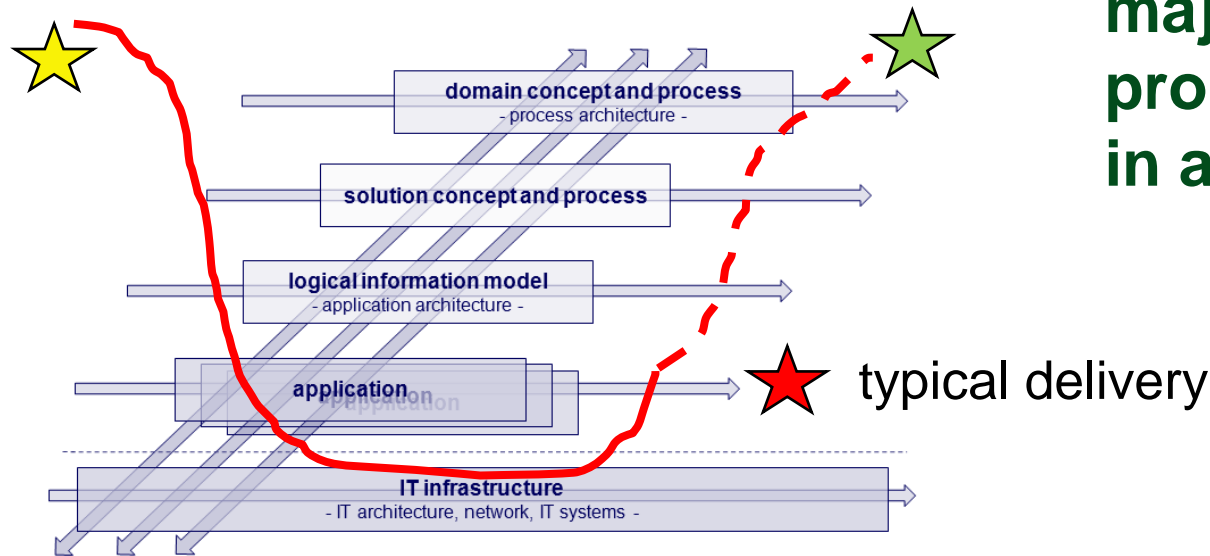
## Heavy integrations

- people behavior – change management
- information management – tools and data
- integrated project activities – implementation
- replacing legacy – no interruptions in service
- a part of a bigger picture – enterprise architecture
- ...

# Challenges

starting point

needed result



The problem in short is:

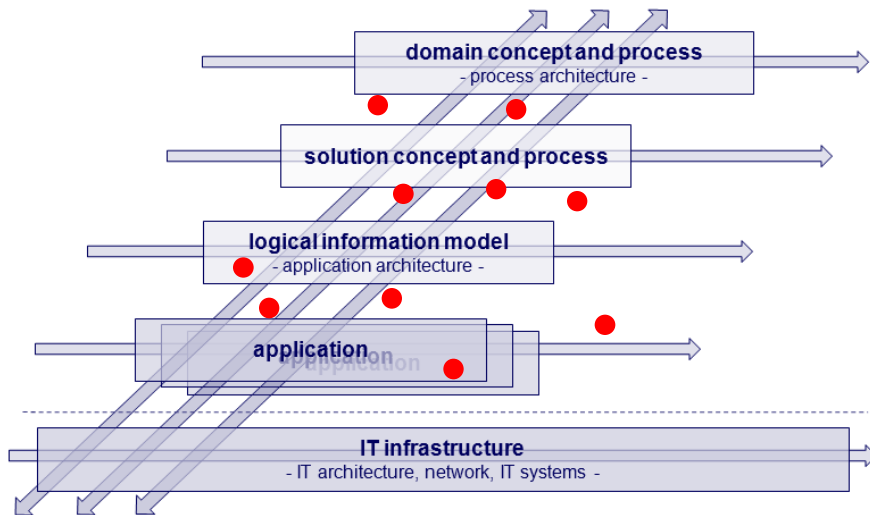
major IT solution programs typically fail in a very expensive way

**Business architecture level needs tend to reduce to application level delivery -> expected business benefits are not gained**

# Research questions (preliminary)

- What are typical success factors in a major scale enterprise architecture, information technology focused change initiative?
  - Which demonstrated methodological factors can enable success, especially leading to reaching of required business level benefits?
  - Which demonstrated organizational aspects can enable success, especially leading to reaching of required business level benefits?
  - What kind of transitional activities in organizations are needed for reaching improved capabilities in enterprise architecture initiatives?
- (Quite apparently these research questions are too open-ended and wide in coverage – will need to be narrowed down. The narrowing down will take place during further literature review and during the creation of the frame-of-reference.)

# Research process



**Identification of critical integration and implementation points (probes)**  
- to evaluate in a number of cases  
- to recognize success factors

1. Literature review
  - chart and select sub-elements of the EA domain and of the respective implementation programs, as relevant to this research scope
2. Creation of a comparable frame-of-reference – template for the cases
3. Study and comparison a number of public sector and industry sector case studies – 10 cases targeted
4. Conclusions and findings
  - about factors which seem to increase the probability of an EA program success
  - compares the findings against prior research results within the similar EA and IT domains

# Schedule



2011

2012

previous...

literature review

c. of frame-of-reference \*)

case preparations

case studies

conclusions

E3

project buffer... \*)

(\*note scheduling methods as examples :)

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# Thank you!

- **comments and suggestions are most welcome**
- **[jouko.k.nieminen@jyu.fi](mailto:jouko.k.nieminen@jyu.fi)**