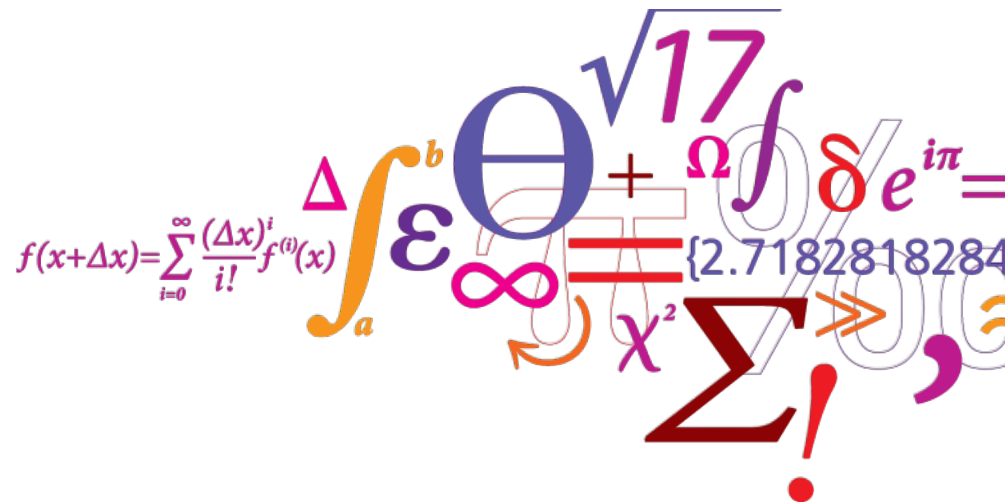


# Implementing IT in FM organizations. Why does it fail?

CAFM trade fair 2014  
Copenhagen, October 9, 2014

Poul Ebbesen

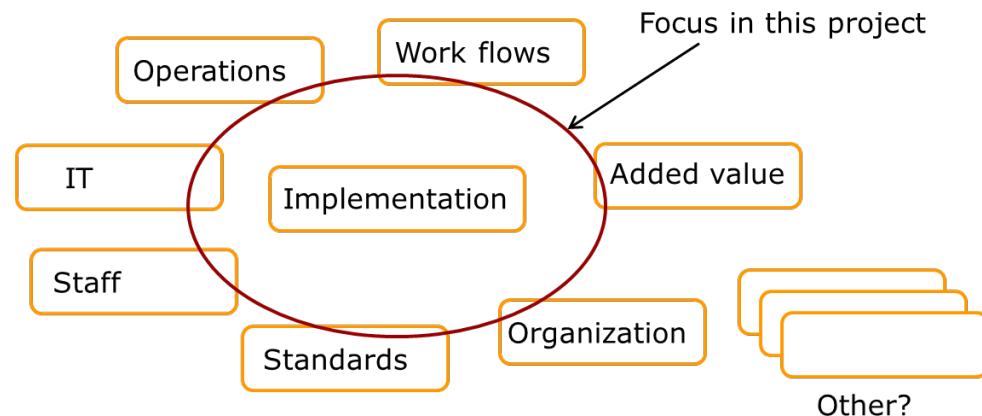


# Aim and Contents of this presentation

- Aim
  - Present some observed problematic issues/areas in FM departments implementing IT
  - Show how these problematic issues / areas may contribute to failure
- Contents (in a mixed form)
  - The PhD project
  - Definitions
  - Research method
  - Observations
  - Discussion
- Relevant parts of my background
  - Education
    - M.Sc. in Civil Engineering and Information Technology
    - IT Diploma in Software Engineering
  - Work
    - 10 years in a Real Estate and Construction Organisation

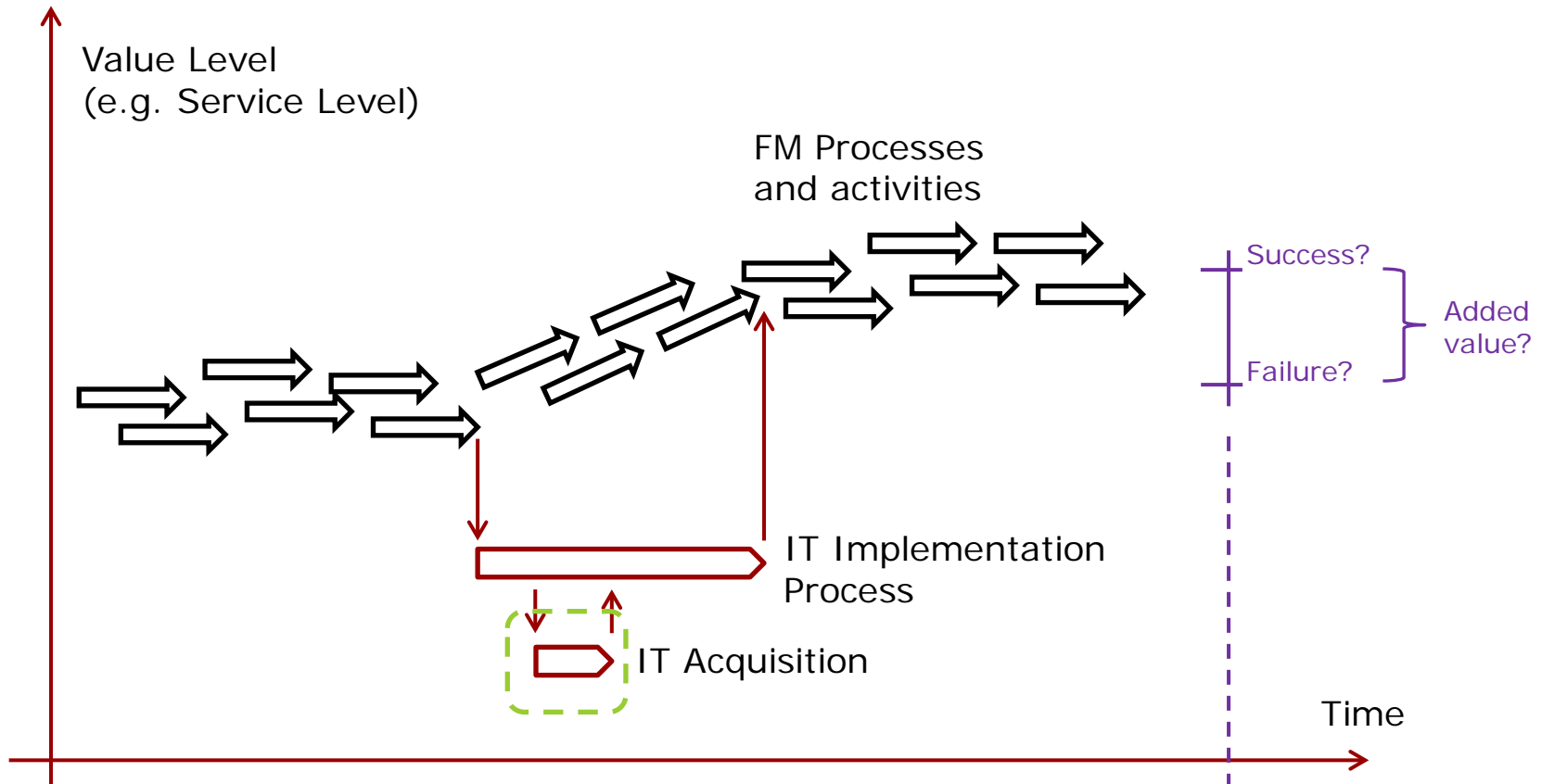
# The PhD project

- Title:
  - **Adding value to FM with IT**
- Background
  - **IT investments in FM often do not add value**
- Objective:
  - **To identify methods ensuring best possible added value when implementing IT supporting FM**
- Focus:
  - **The implementation process**

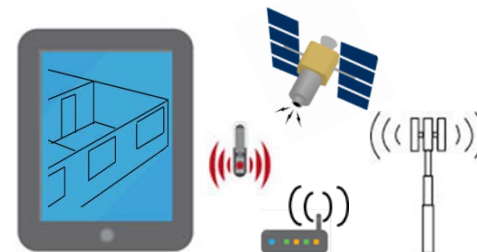
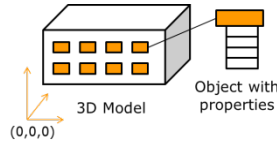
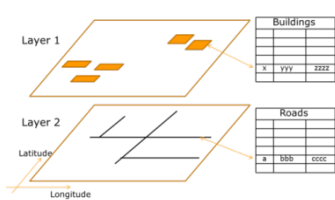
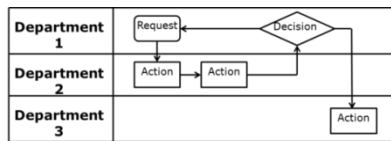
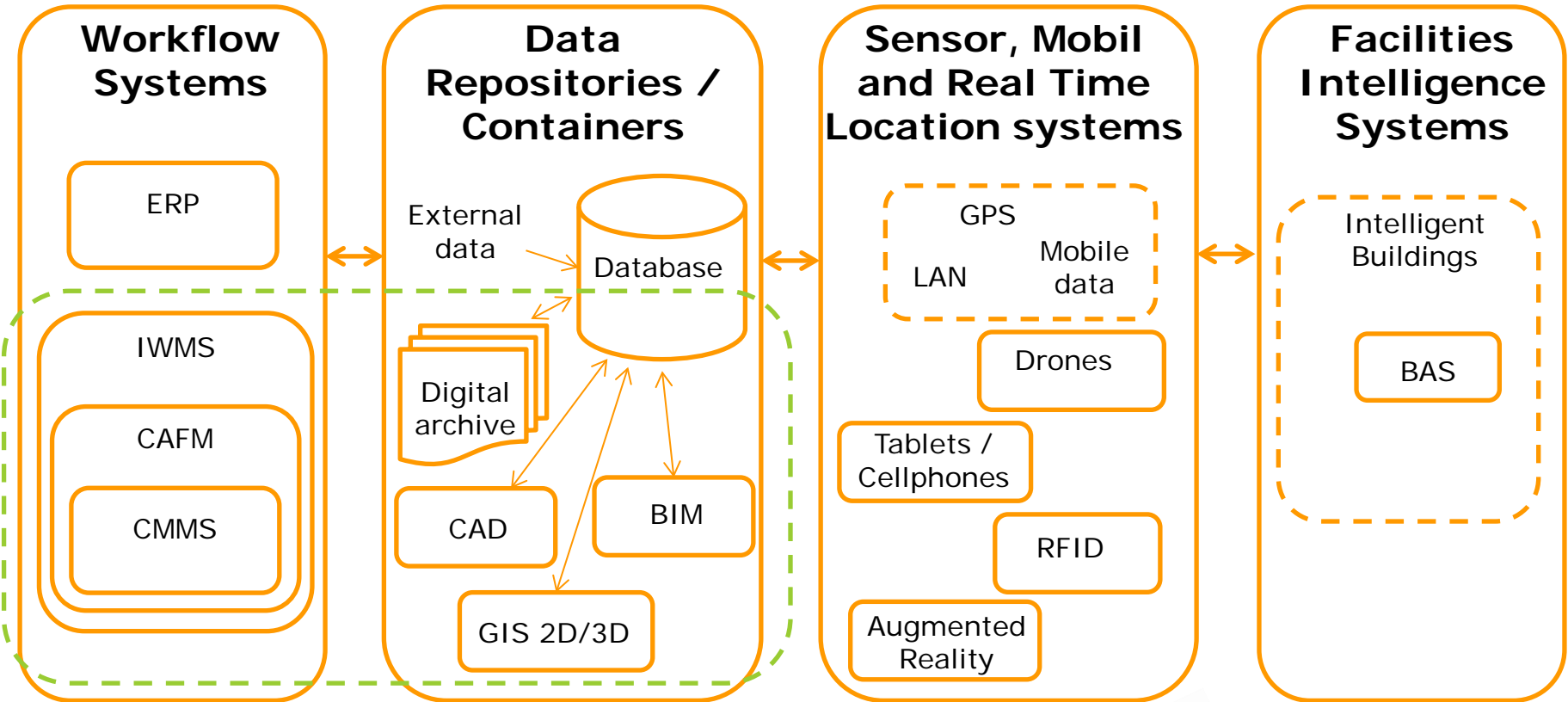


# Defining value and added value.

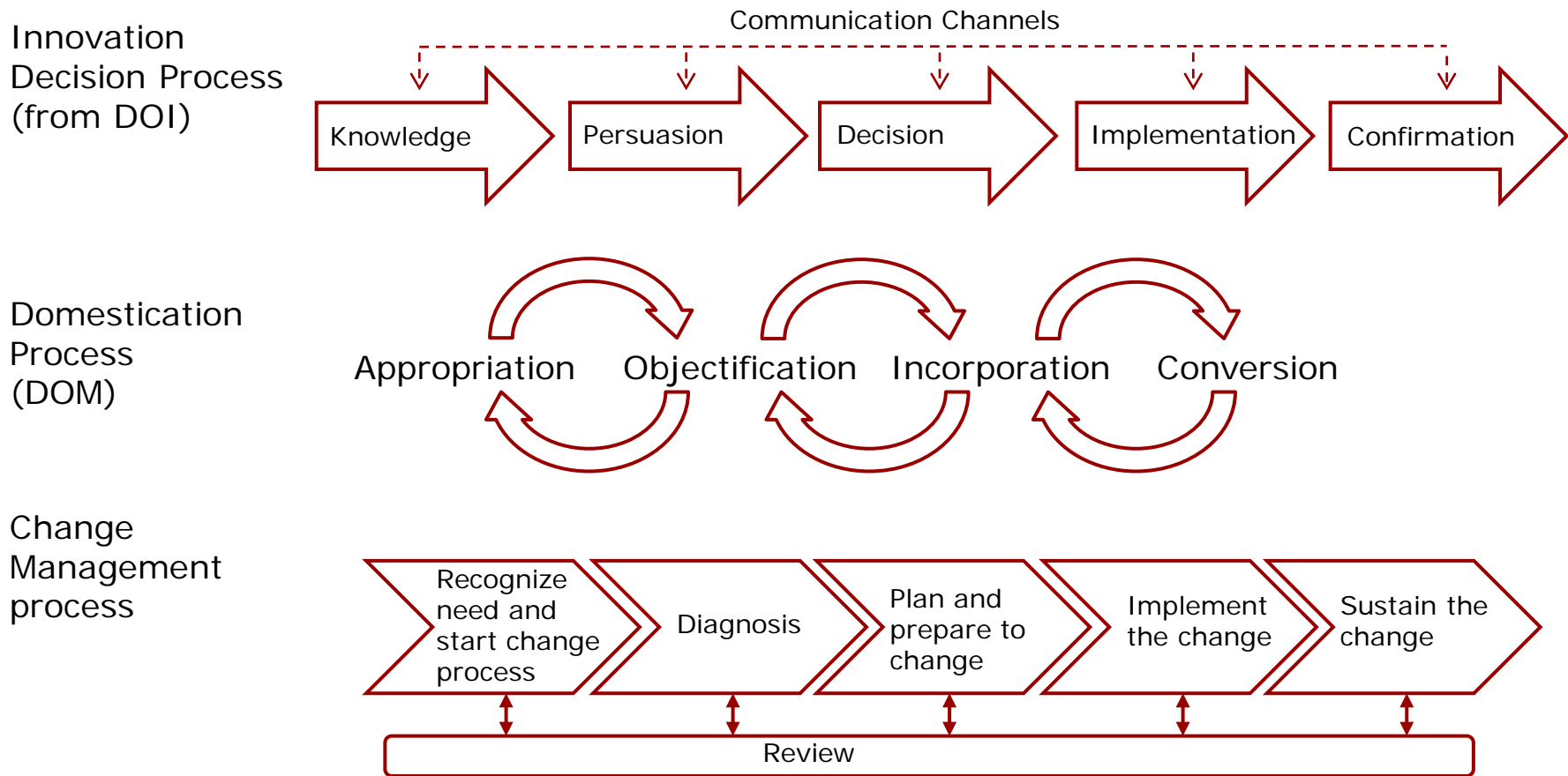
## Value level, processes and IT implementation



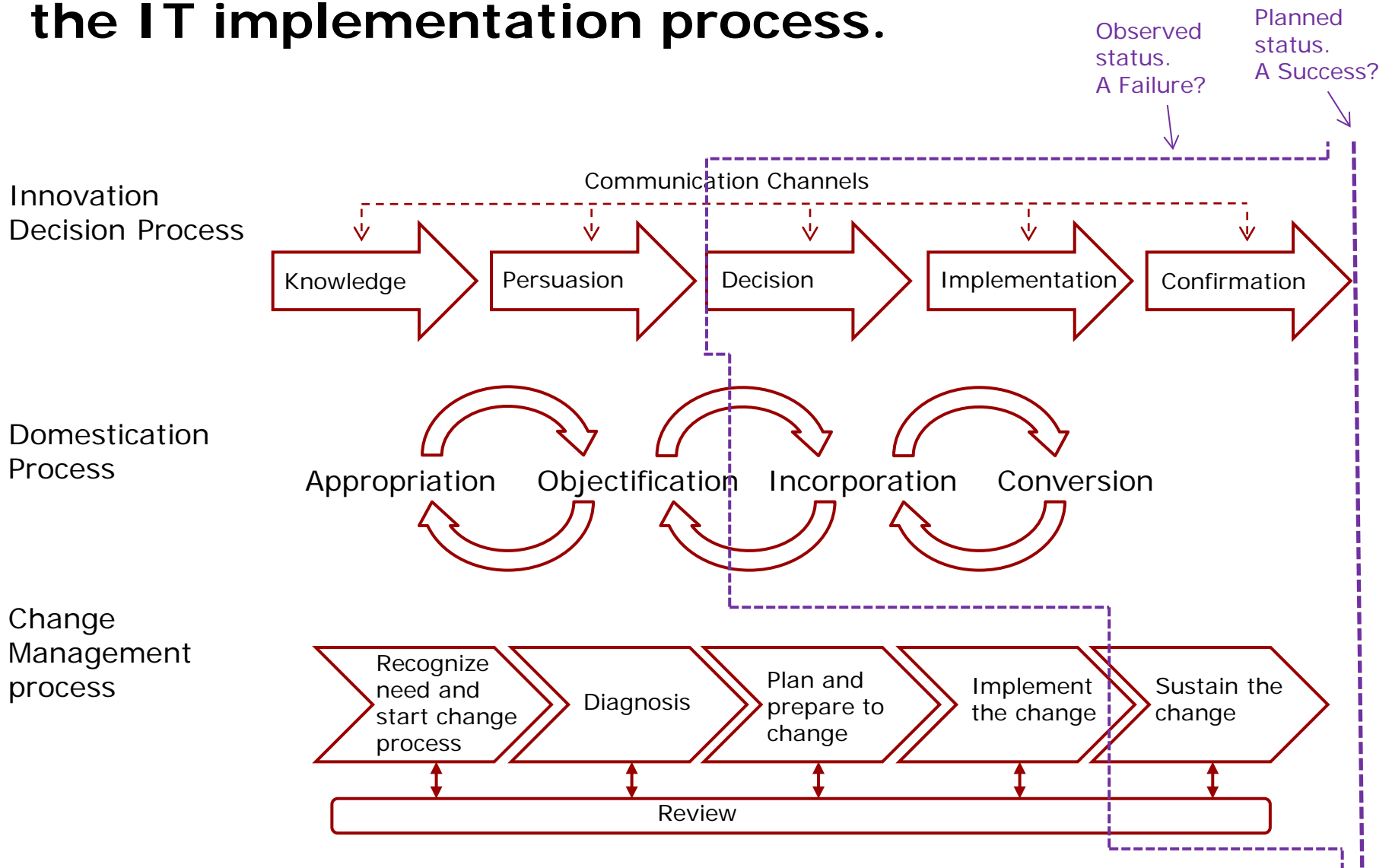
# Defining Technology. Technology Clusters in FM



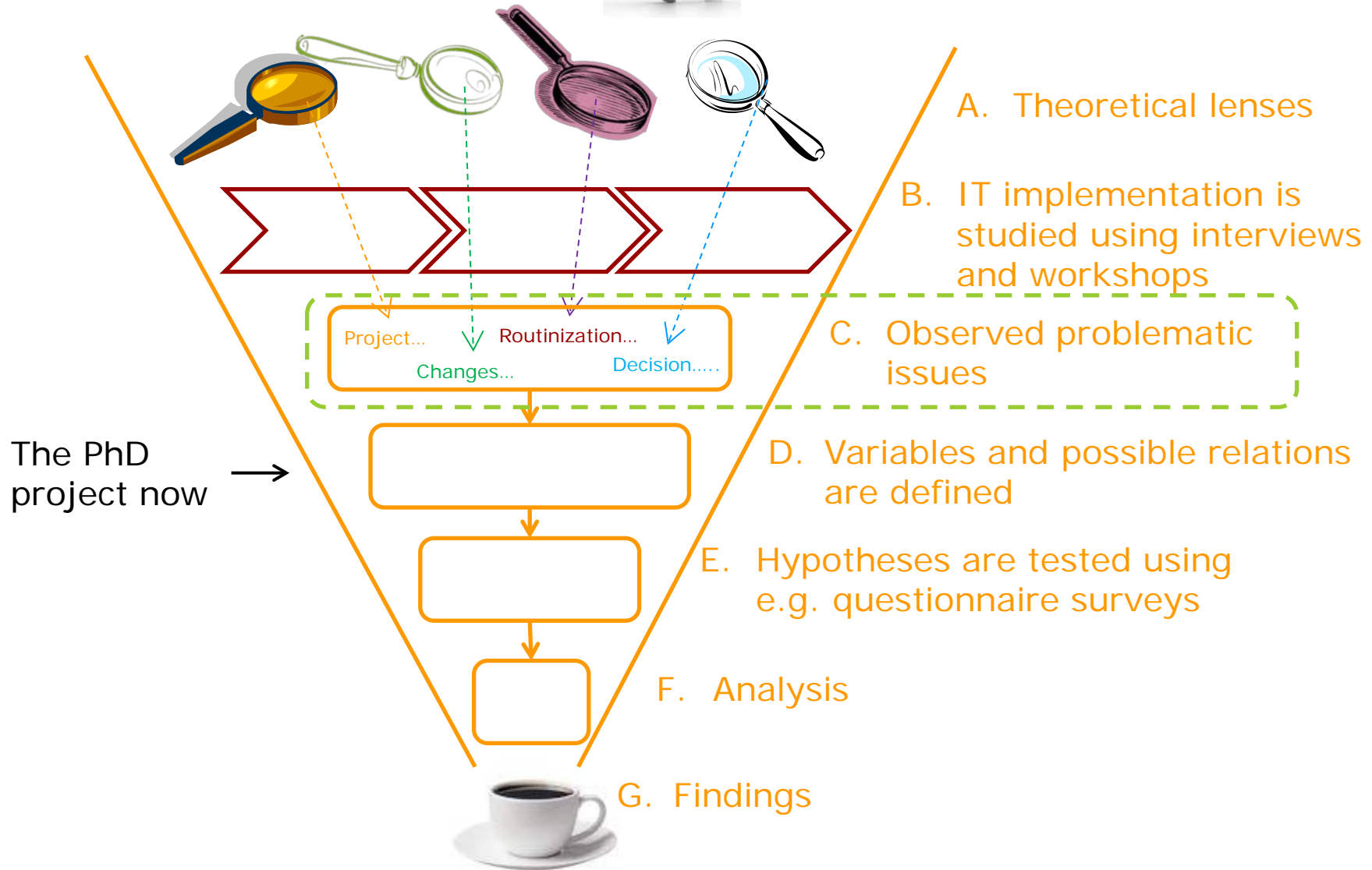
# Defining the IT implementation process. Many processes in parallel.



# Defining failure / What is failure in the IT implementation process.



# Research method

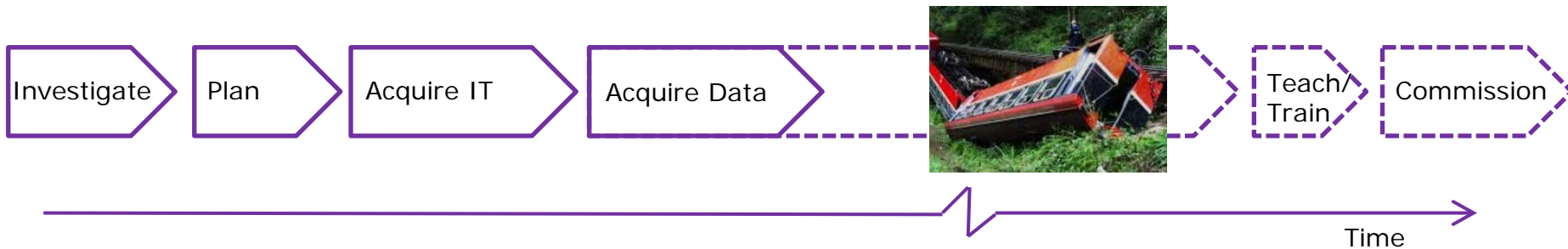




# General observations

## The typical setting when implementing IT in FM

People involved	1-3 internal enthusiasts 1 external consultant and/or 1 system vendor 1-10 internal employees from different departments	} Cross disciplinary
Technology	Ready-to-use Low degree of customization	
Main effort	IT acquisition Data acquisition	} IT deployment
Project	Few project organization elements	
		} Strange



# Theories and concepts use to observed the implementation process

- **Innovation**

- General Innovation Theory
- Diffusion of Innovations (DOI)

- **Sociotechnical**

- Social Construct of Technology (SCOT)
- Actor Network Theory (ANT)
- Boundary Objects (BO)
- Domestication Theory (DOM)
- Intermediaries

- **Organizational**

- Configuration models
- Diagnostic models

- **Management**

- Project Management Theory (PM)
- Change Management Theory (CM)

- **General Implementation Theory**

- Structural model of technology
- Technology acceptance model (TAM)
- Success and failure models

Each theory offers approaches, concepts, dimensions and variables for studying, understanding and describing the phenomenon in focus:

Implementation process

Focus in this project

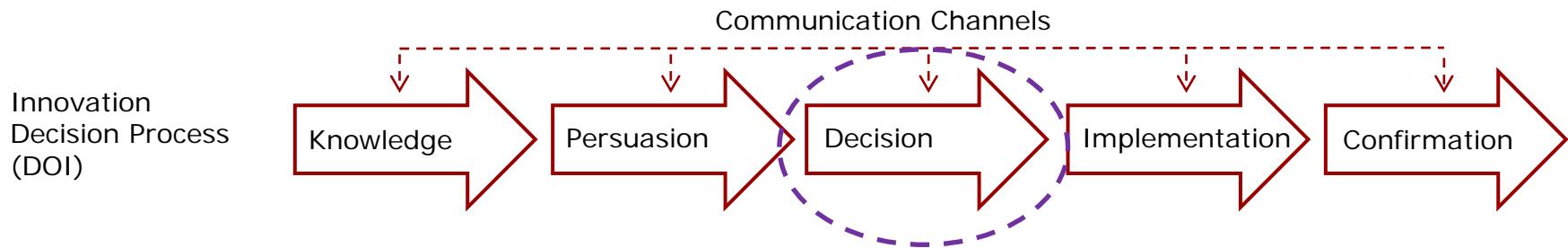
# Some problematic issues observed through the theoretical lenses



Theories and concepts		Problematic issues observed using the theories and concepts	
Innovation	General		
	DOI	Has a formal decision been made to implement?	
	Socio-technical	SCOT	Which work processes and activities will the chosen IT support? Which type of IT can supports the work processes and activities?
		ANT	How much customization is needed?
		BO	What entities are central for collaboration between professionals
Organizational	DOM	How can routinization of the IT supported work processes and activities be achieved?	
	Intermediaries	What is the width and length of the intermediaries involved?	
	Configuration	Where are FM functions placed in the organisation?	
	Diagnostic	Which changes in the organizational components are executed?	
	Management	Project	Which project elements are in use
Change		How are the changes sustained?	
Implementation	Structurational		
	TAM		
	Success/Failure		
Value		What value levels are raised?	

# Decision

- Often informal or even lacking

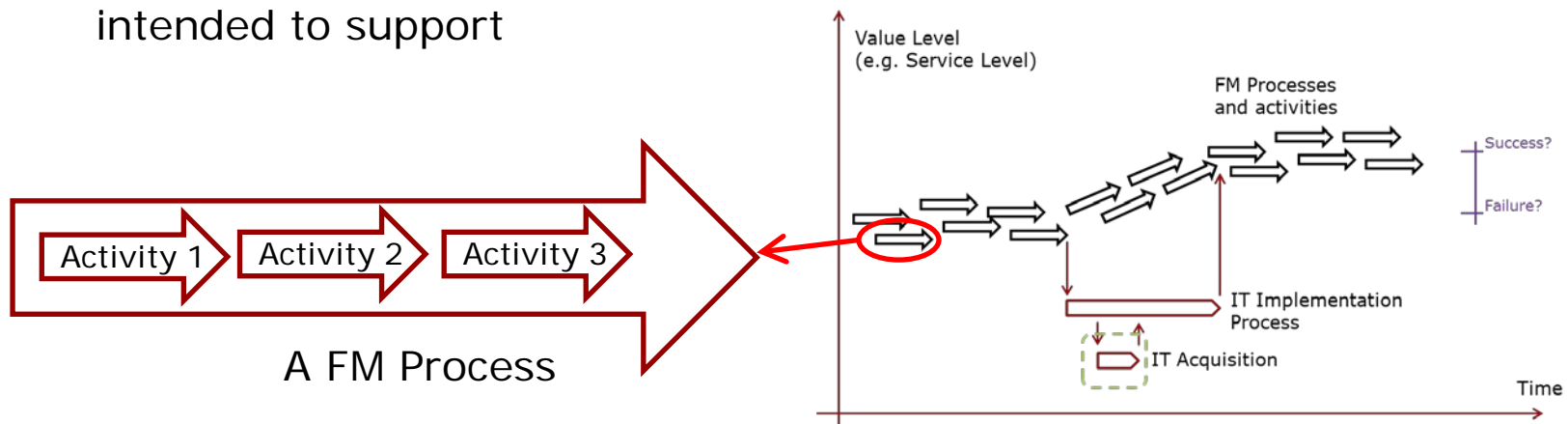


- Reasons for contributing to failure
  - Disorientation / confusion amongst participants
  - Participants may argue, that they do not have to contribute to the process
  - 
  -

# Work processes

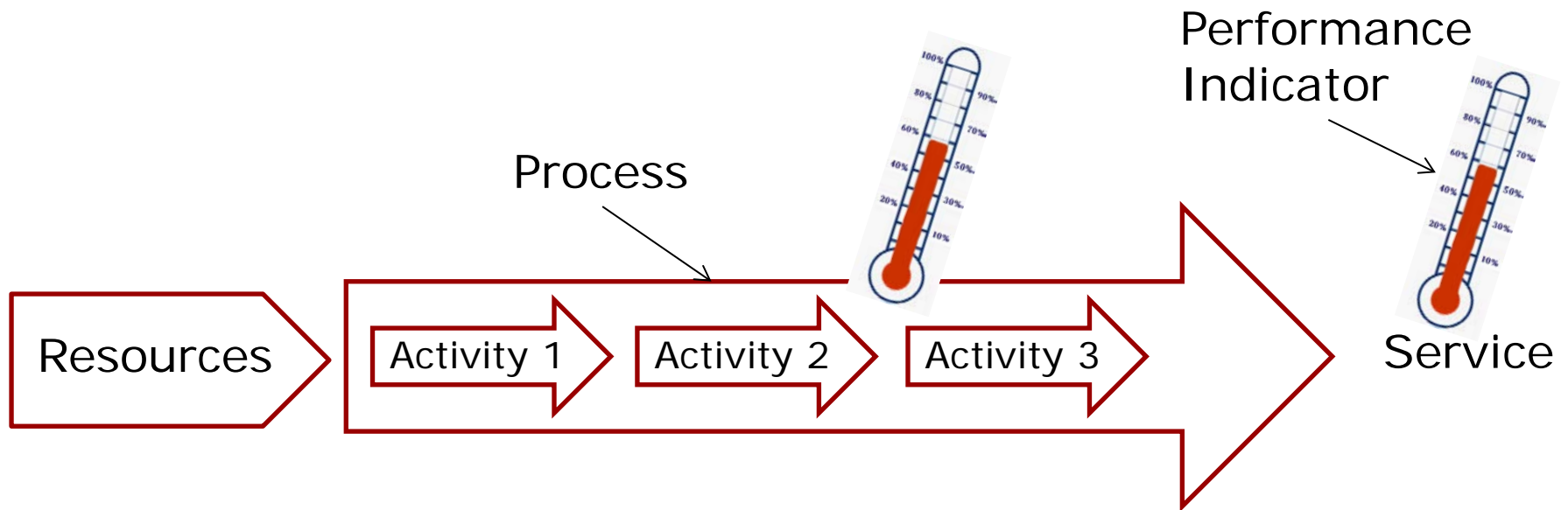


- Often unclear which work processes and activities the chose IT is intended to support



- Reasons for contributing to failure
  - No common direction in the implementation process
  -

# Defining work processes and activities



## Related concepts

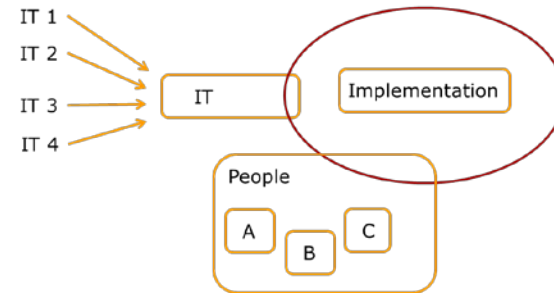
Recourses / Input

Activity / Sub process / Task

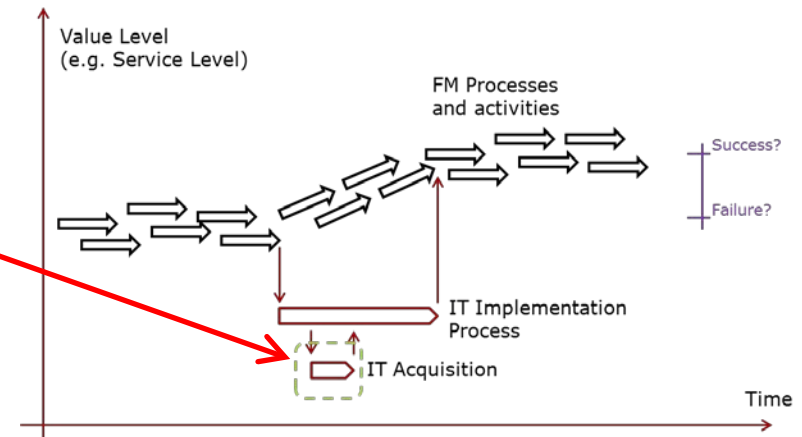
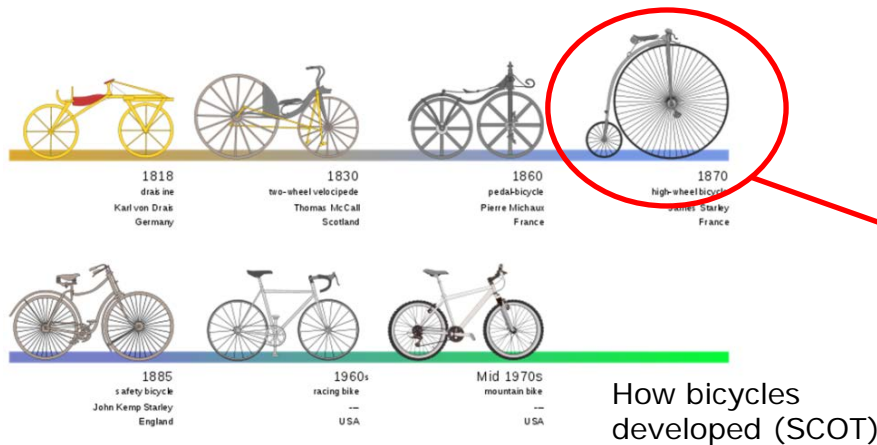
Service / Output / Objective / Goal

Performance Indicator / Key Performance Indicator

# Type of IT



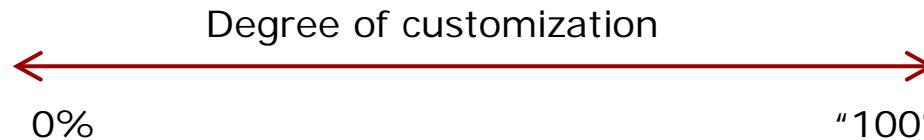
- Often unclear why a specific type of IT is chosen to support some specific work processes or activates



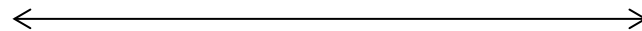
- Reasons for contributing to failure
  - The chosen IT may not fit the purpose of supporting the given work processes and activities
  -

# Customization

- Often unclear how much customization is needed

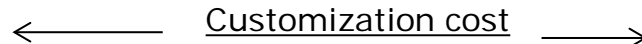


Develop from scratch



Ready-to-use / Of-the-shelf

No costs for customization



$\frac{\text{Customization cost}}{\text{Basic system cost}}$

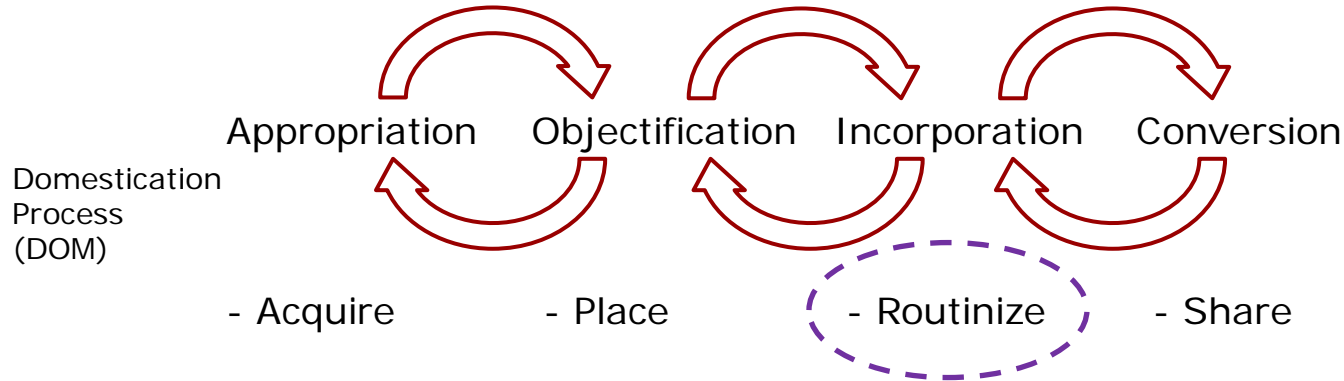
Costs for customization equals costs for the basic system

- Reasons for contributing to failure
  - Customization costs and efforts may require resources not available
  -



# Routinization

- Often a state of routinization, for the use of the IT, is not achieved

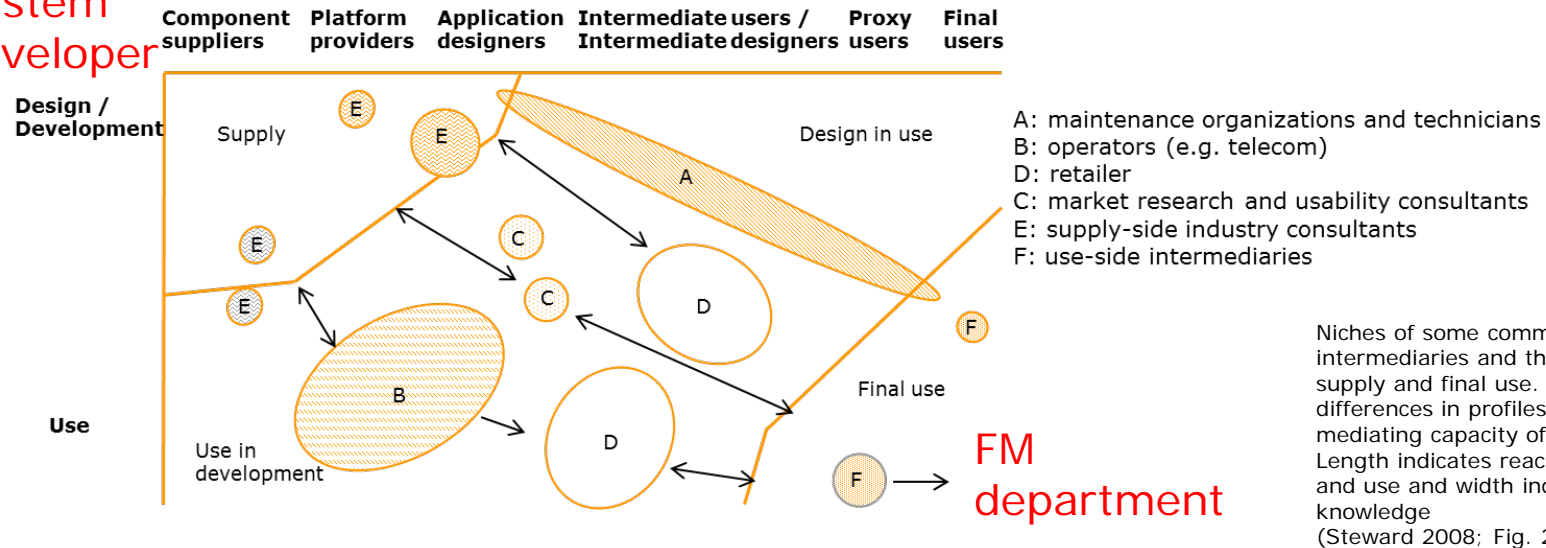


- Reasons for contributing to failure
  - The IT may end up being perceived as difficult or time consuming etc. to use
  -

# Intermediaries

- Often unclear how intermediaries are chosen and what their role in the implementation process is

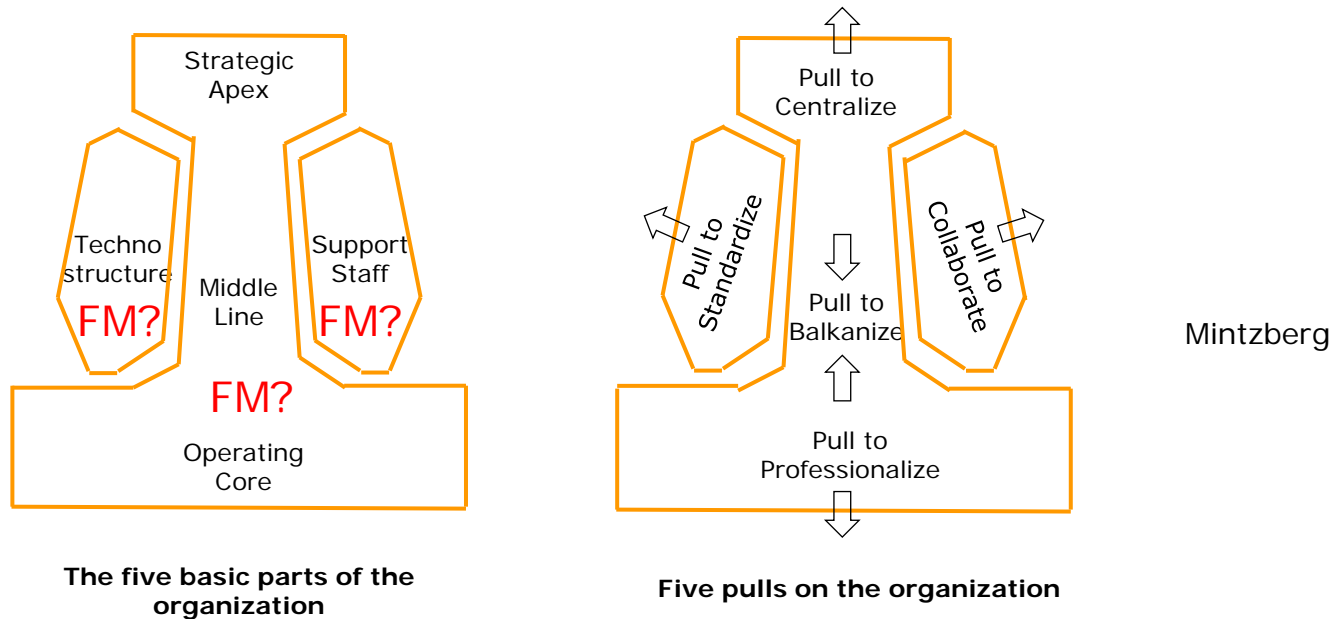
System developer



- Reasons for contributing to failure
  - Mismatch in expectations among participants may occur
  - Lack of reach to supply side may occur
  - Lack of needed knowledge may occur
  -

# FM in the organization

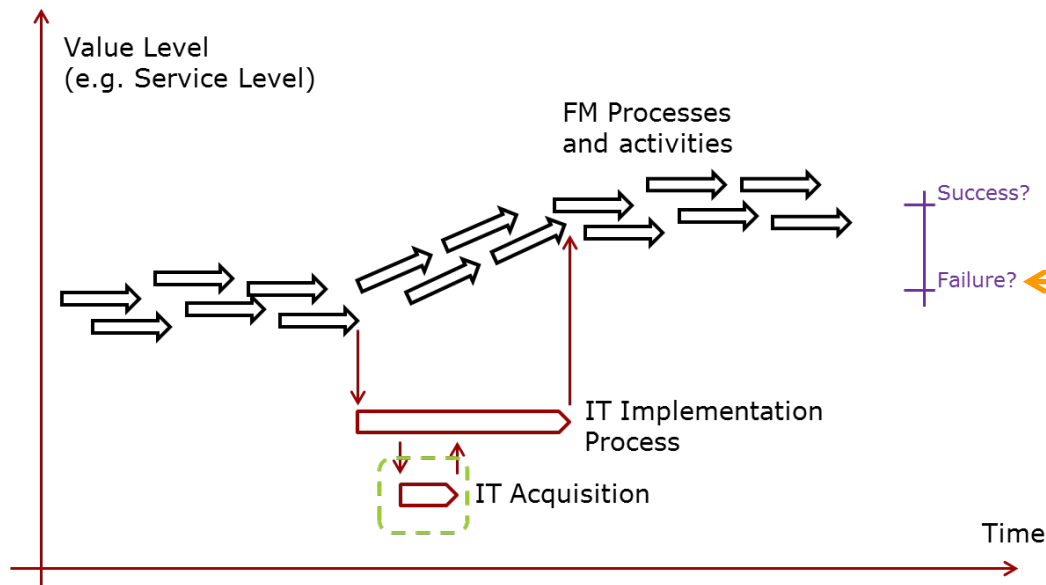
- Often unclear where the FM functions are placed in the organization



- Reasons for contributing to a high risk of failure
  - Unclear what parts of the organization to involve in the implementation process
  - Unclear who the IT supported work processes serve

# Conclusion

A series of problematic issues/areas can lead to failure. Where should we start?

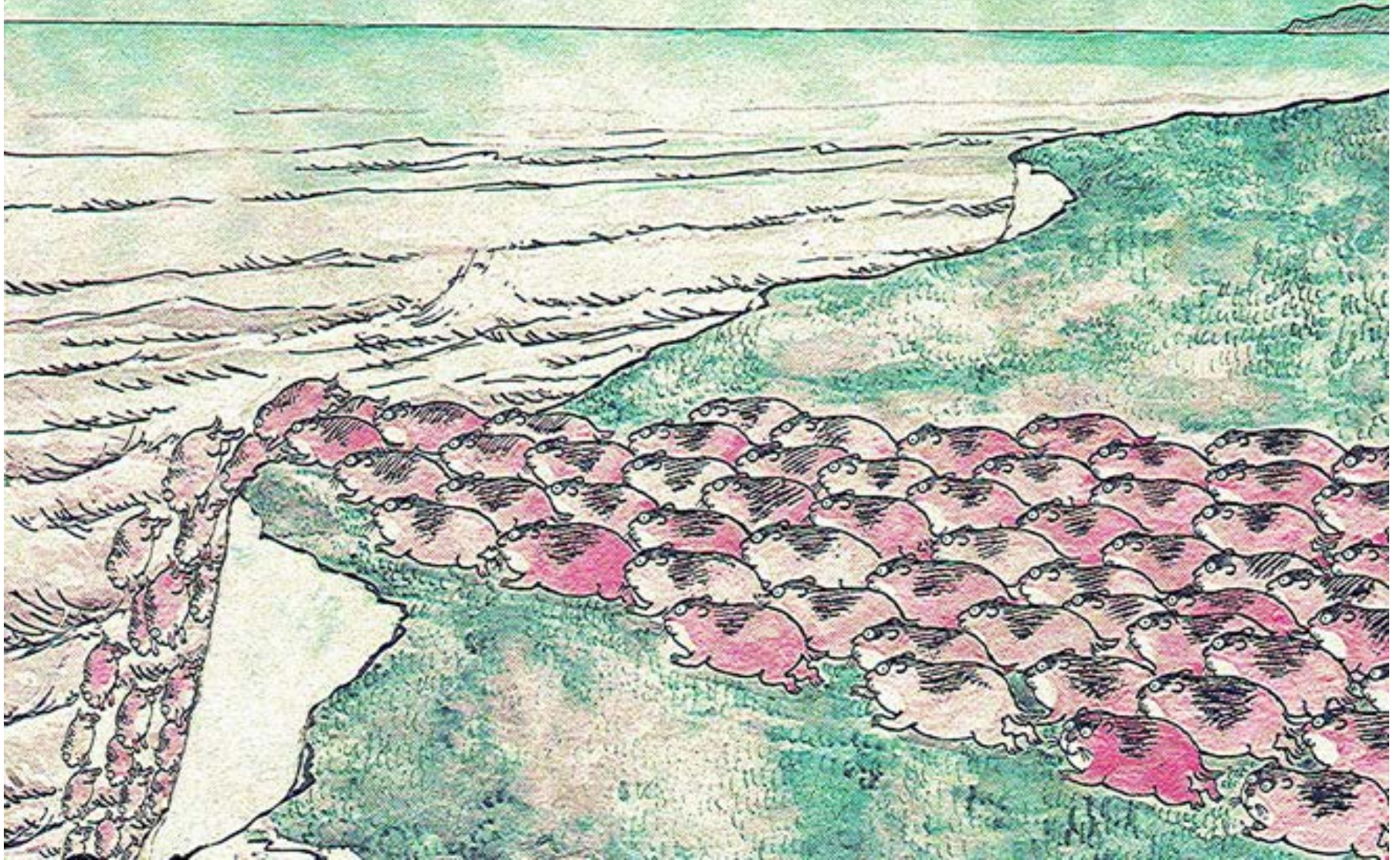


## • Problematic issues / areas

- Project
- Data acquisition
- Decision
- Work processes
- Type of IT
- Customization
- Routinization
- Intermediaries
- FM in the org.



# Questions?





# Get involved in the IT in FM PhD project

- More in 2014 and 2015
  - Workshops / Focus Groups
  - Interviews
  - (Case Studies)
  - Questionnaire Survey
- Follow the project on
  - ITinFM.com
- Contact:
  - Poul Ebbesen
  - poeb@dtu.dk
  - +45 22942817

Get involved and let the project be involved in your organization





**"It's not bad once  
you get in."**