



HANDELSHØJSKOLEN  
AARHUS UNIVERSITET



# ENTERPRISE SYSTEMS AND INSTITUTIONS

## Theorizing about Enterprise Systems in Organizations Using Institutional Theory – A Case Study Approach

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PhD Defense, Thursday 24<sup>th</sup> June 2010, v1.00  
IRIS 33 Presentation of PhD Thesis, 23<sup>rd</sup> August 2010  
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PhD Thesis available at [http://www.hha.dk/man/IS/PER\\_SVEJVIG\\_PHD\\_THESIS\\_PRINT\\_2010.PDF](http://www.hha.dk/man/IS/PER_SVEJVIG_PHD_THESIS_PRINT_2010.PDF)





# Agenda

- › Introduction
- › Theory
- › Research Process and Brief about Case Study
- › Results and Implications



# Introduction (1 of 2)

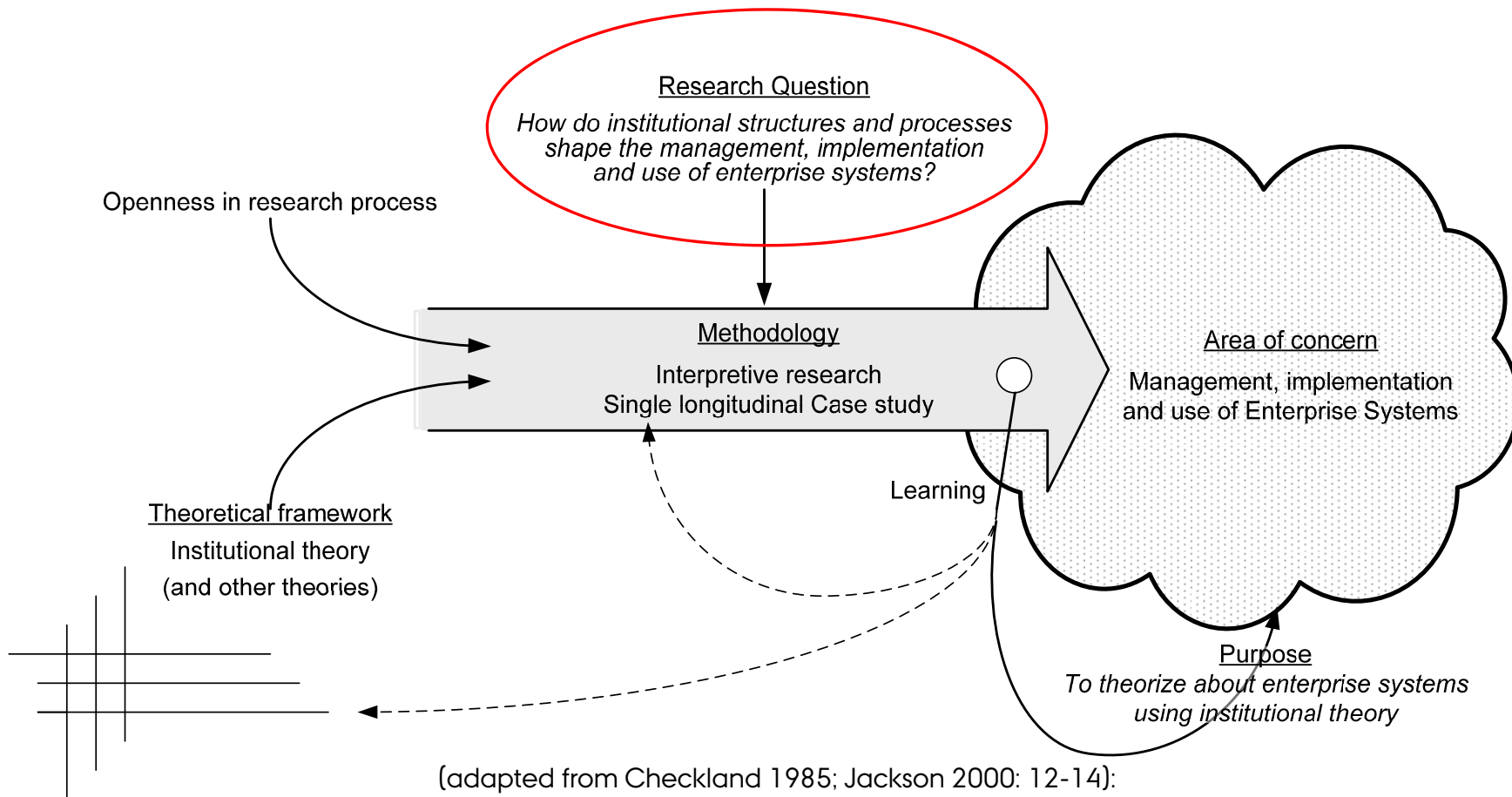
- › Enterprise systems (ES) have been a major trend in both the private and public sectors over the past decade.
  - › as a solution to the growing tendency for globalization, mergers and acquisitions (Chang et al. 2003) and
  - › as a way to optimize and improve business operation (Häkkinen and Hilmola 2008).
- › “*Standardized packaged solutions account for the bulk of systems used today*” (Pollock and Williams 2009: 4)...they are the de facto standard in many organizations.
- › Seddon et al. (2003) define ES as large-scale organizational systems, built around packaged enterprise systems software, enabling an organization
  - › to automate and integrate a comprehensive part of its business processes,
  - › to share common data and practices and
  - › to produce and access information in real time.



# Introduction (2 of 2)

- › Some companies have gained an important increase in productivity (Häkkinen and Hilmola 2008)
- › Others have experienced failure-prone ES implementations (Grabski et al. 2003; Sumner 2003), which might be due to
  - › Focus on managerial and technical issues where instrumental solutions are considered superior and sufficient, (Dillard and Yuthas 2006)
  - › *This is also in accordance with my practical experience!*
- › However, one way to overcome the managerial and technical understanding is to use institutional theory
  - › *“Its ability to develop structural and systemic understanding for how technologies [such ES] are embedded in complex social, economic, and political networks” (Orlikowski and Barley 2001: 154)*
  - › *“Existing studies both downplay the influence of technology supply and often overlook the influence of the broader historical setting (Pollock and Williams 2009: 9)*
  - › Institutional theory is in its infancy in IS research where “the use ... is comparatively narrow and limited when considering its wider use in organizational studies” (Weerakkody et al. 2009: 354; see also Currie 2009)

# Overall Research Question and Conceptual Model of the Research Process





# Theory

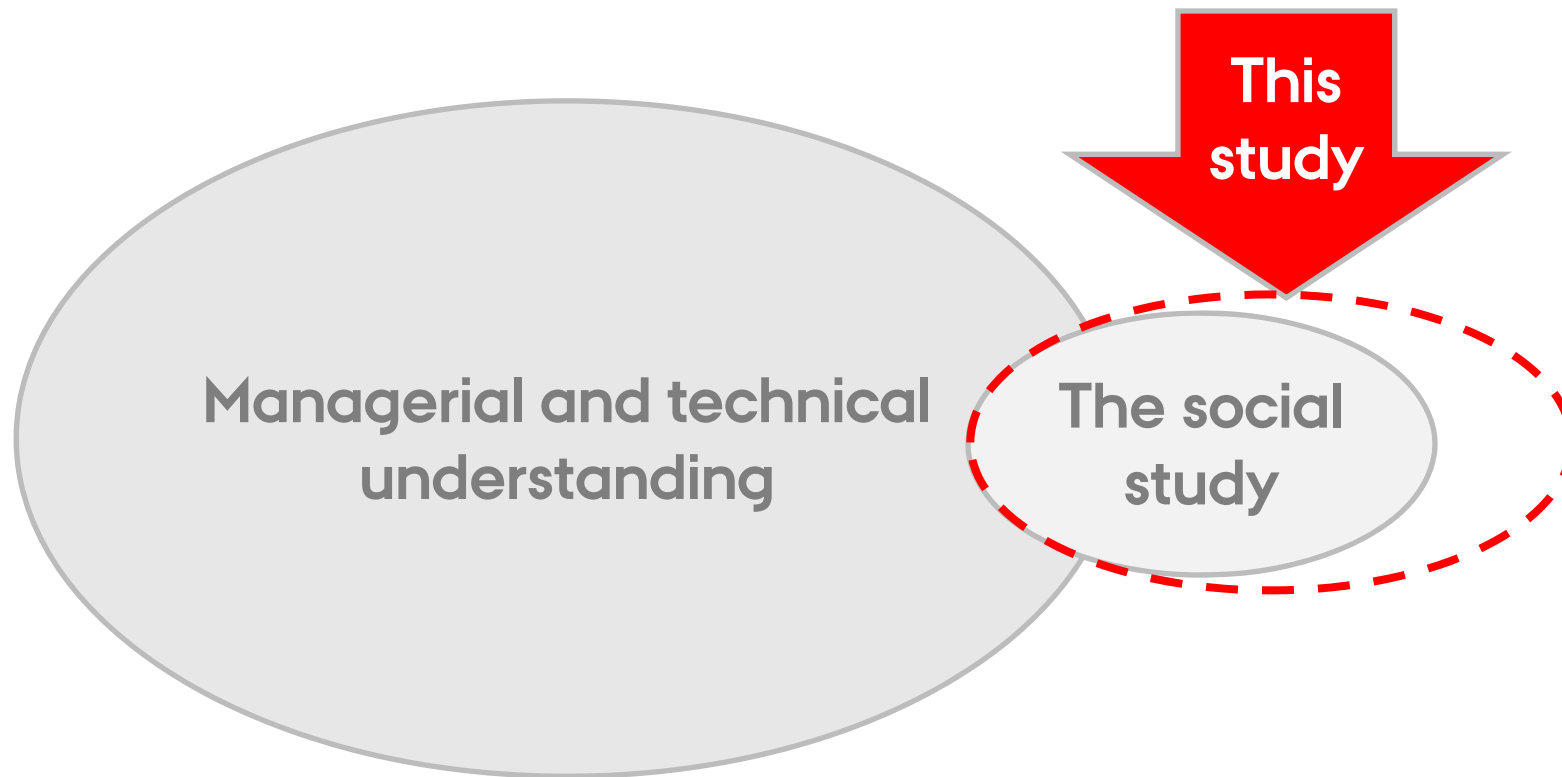
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- Enterprise Systems Research: Two contrasting perspectives of Enterprise Systems
- Institutional Theory





# Enterprise Systems Research: Two Contrasting Perspectives of Enterprise Systems





# Institutional Theory (1 of 3)

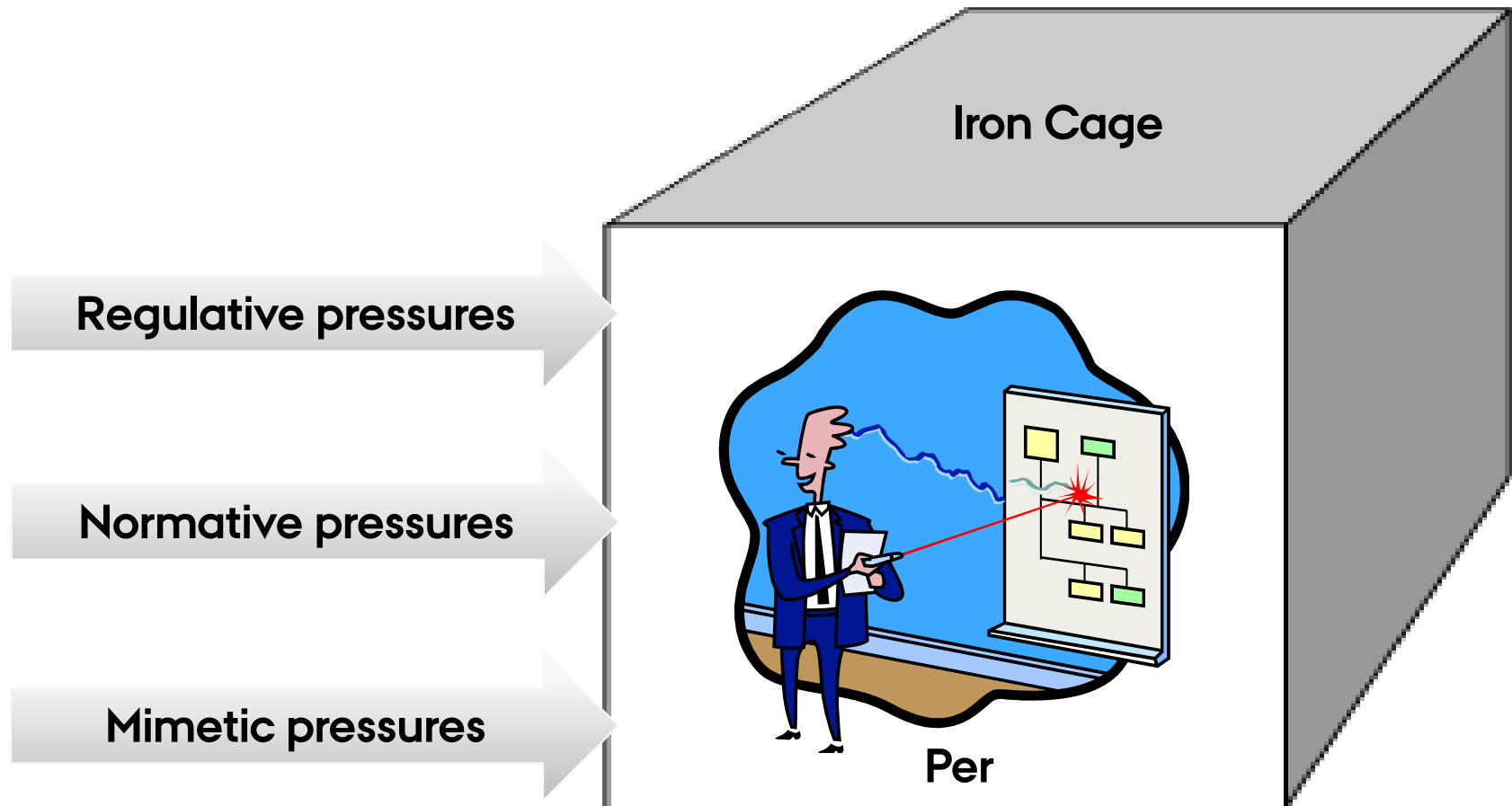
## Introduction

- › **Institutional theory attempts to describe the deeper and more resilient aspects of how institutions are created, maintained, changed and dissolved**, and deals with the pervasive influence of institutions on human behavior including the processes **by which structures, e.g. rules, routines, norms and belief systems, guide social behavior** (Scott 2004; 2008)
- › Examples of institutions:
  - › Human rights, societies, contracts, families, handshakes and belief systems like Buddhism (adapted from Jepperson 1991)
- › **Organizational institutional theory** addresses the overall question:
  - › **What does the institutional perspective tell us about organizational behavior?** (Greenwood et al. 2008: 1)



# Institutional Theory (2 of 3)

## Example: PhD Defense = Institution





# Institutional Theory (3 of 3)

## Some key characteristics

- › Institutional (and Competitive) pressures leading to isomorphism (DiMaggio, and Powell 1983; Scott and Meyer 1991)
- › Rationalized Myths (Meyer and Rowan 1977)
- › Multiple levels in institutional theory bridging macro and micro structures (Scott 2008)
- › Institutional logics (Friedland and Alford 1991; Thornton and Ocasio 2008)
- › Institutional processes and change (Greenwood et al. 2002; Oliver 1992; Tolbert and Zucker 1996)



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# Research Process and Brief about the Case Study

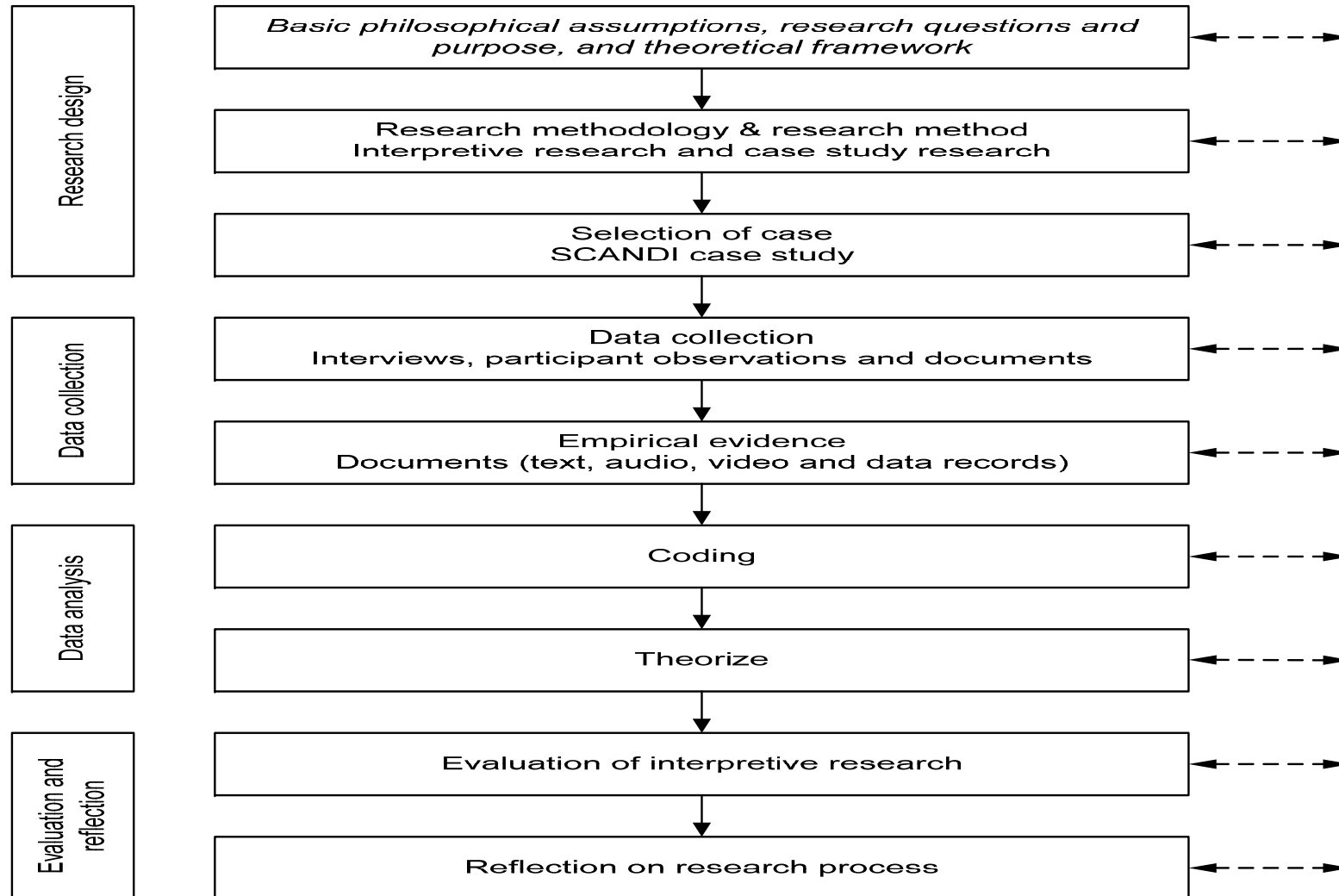
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Outline of research process  
Brief about empirical context  
Data collection





# Outline of the research process





# The empirical context - SCANDI

- › Large Scandinavian organization with representation in Denmark
- › 10.000+ employees
- › Produces and sells high tech services
  
- › Started in 1996 to implement Standard Enterprise System Package, Oracle E-business suite
- › A major re-implementation was started in summer 2007 and was launched in January 2009
  
- › My fieldwork started back in January 2008 and continued until the end of 2009

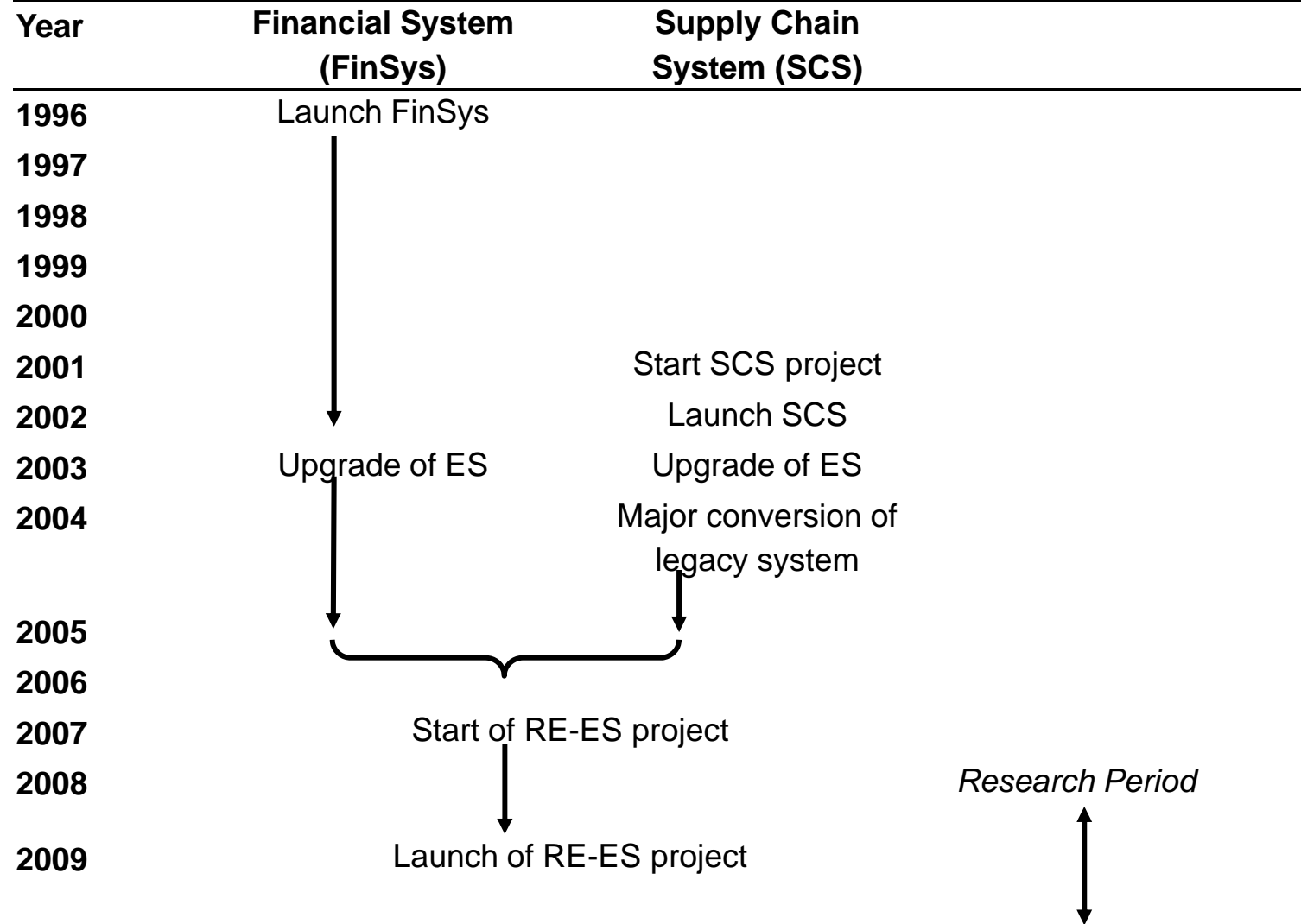


# Data Collection

	<b>Project Group</b>	<b>Finance</b>	<b>Supply Chain</b>	<b>Purchase requester</b>	<b>Oracle</b>
Semi-structured interviews	4	8	13	5	3
Short unstructured phone interviews	3	8	9	4	
Focus Group interviews		1			
Participant observations	18		1	2	
<i>Video recordings</i>			2	1	
<i>Process measurements</i>			6		
Documents	Plans, reports, minutes, presentations; press releases and Internet information from SCANDI; Oracle information (e.g. <a href="http://www.oracle.com">www.oracle.com</a> ); news articles; magazine reports etc.				



# Timeline of Implementation and use of ES





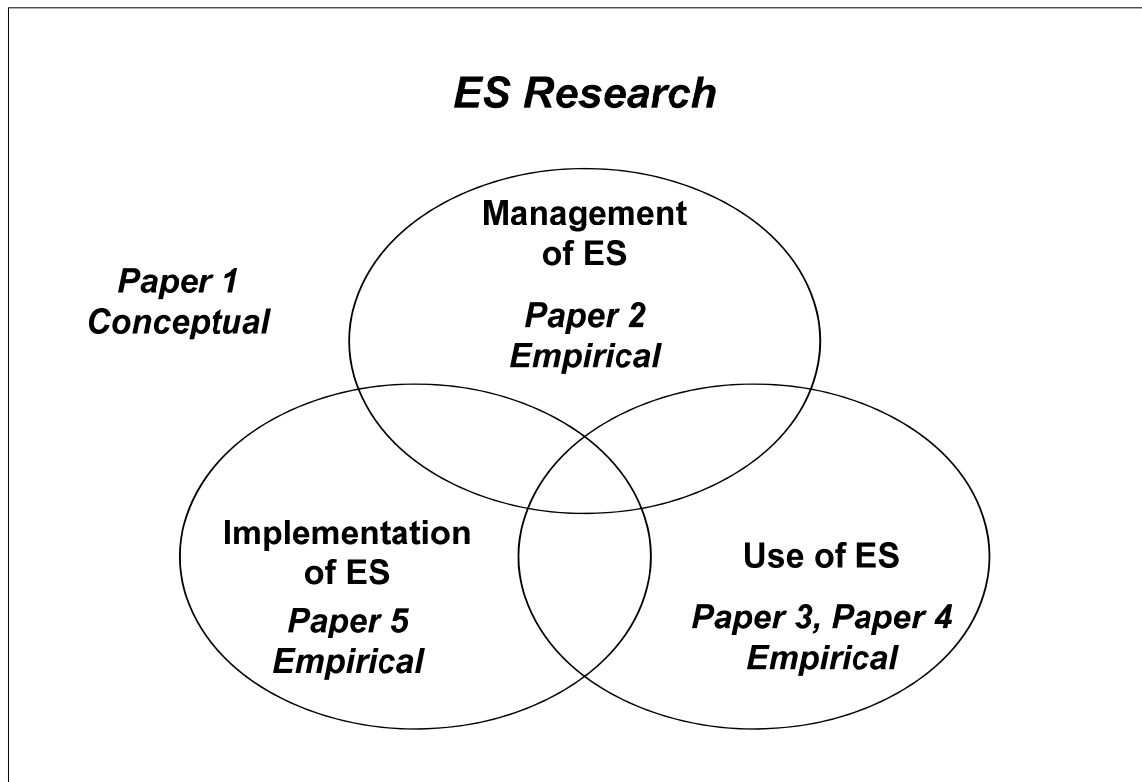
# Results and Implications

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# Positioning the five papers



- › Some characteristics of empirical papers
  - › Organization is unit of analysis
  - › Multi-level analysis
  - › Three papers are multi-theory (paper 2, 3 & 4)
    - › Transaction Cost Theory
    - › Sensemaking

# Results in Rich Picture of PhD process

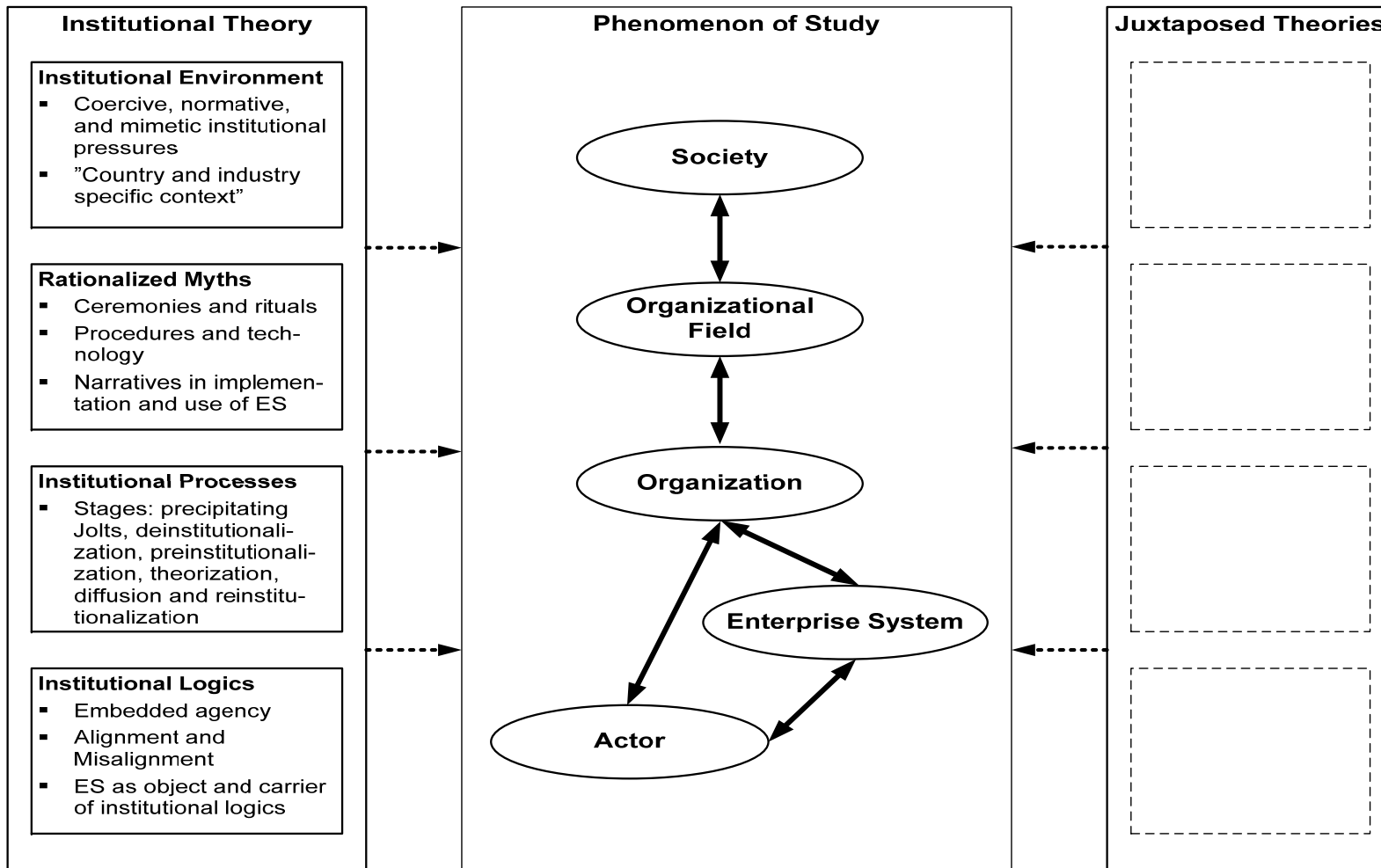
Research question:

"How do institutional structures and processes shape the management, implementation and use of enterprise systems?"



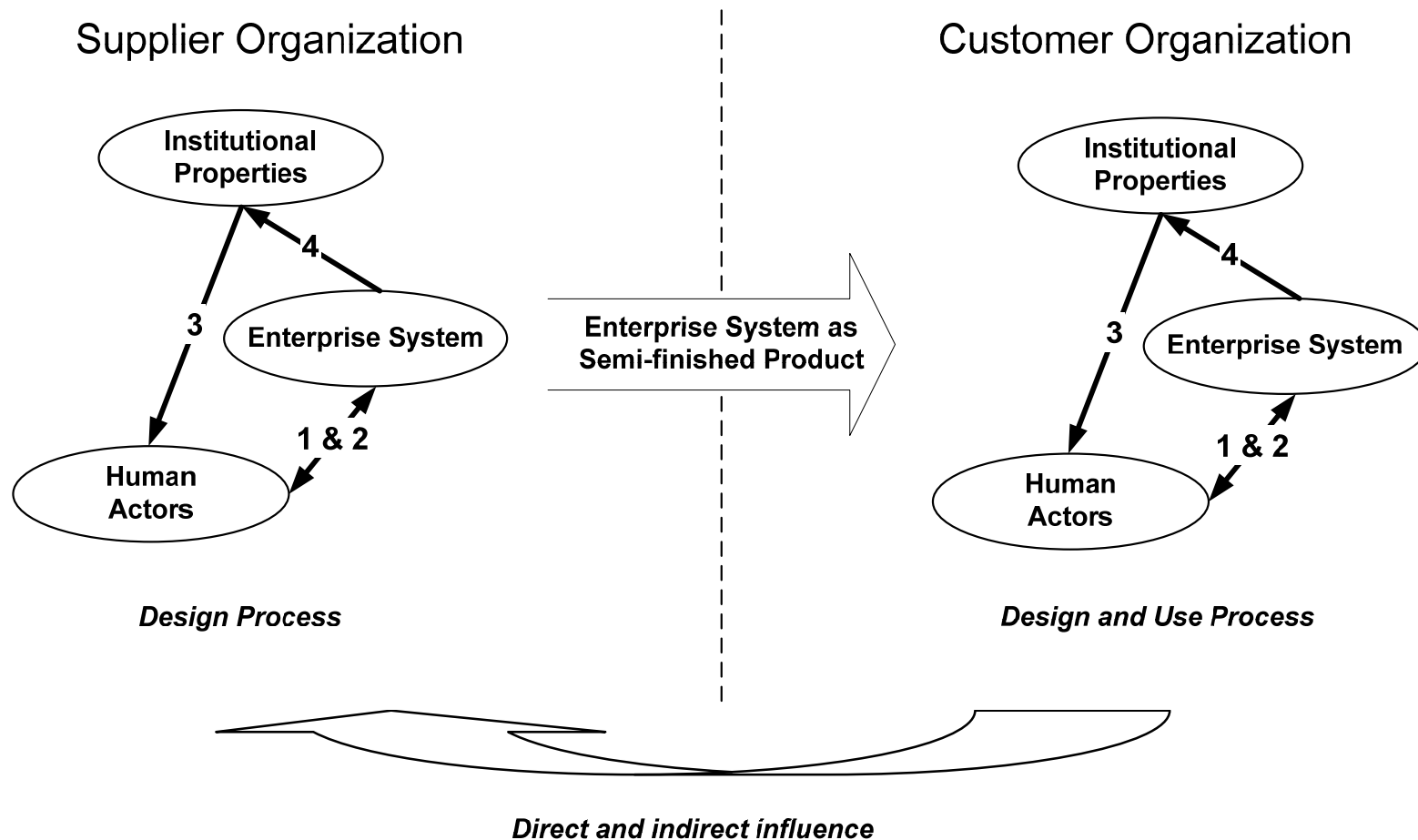


# How can we study institutional structures and processes that are relevant for ES research? (paper 1)





# The Dual Structural Model for Enterprise Systems (paper 4)



(adapted from Brehm and Markus 2000; Orlikowski 1992):

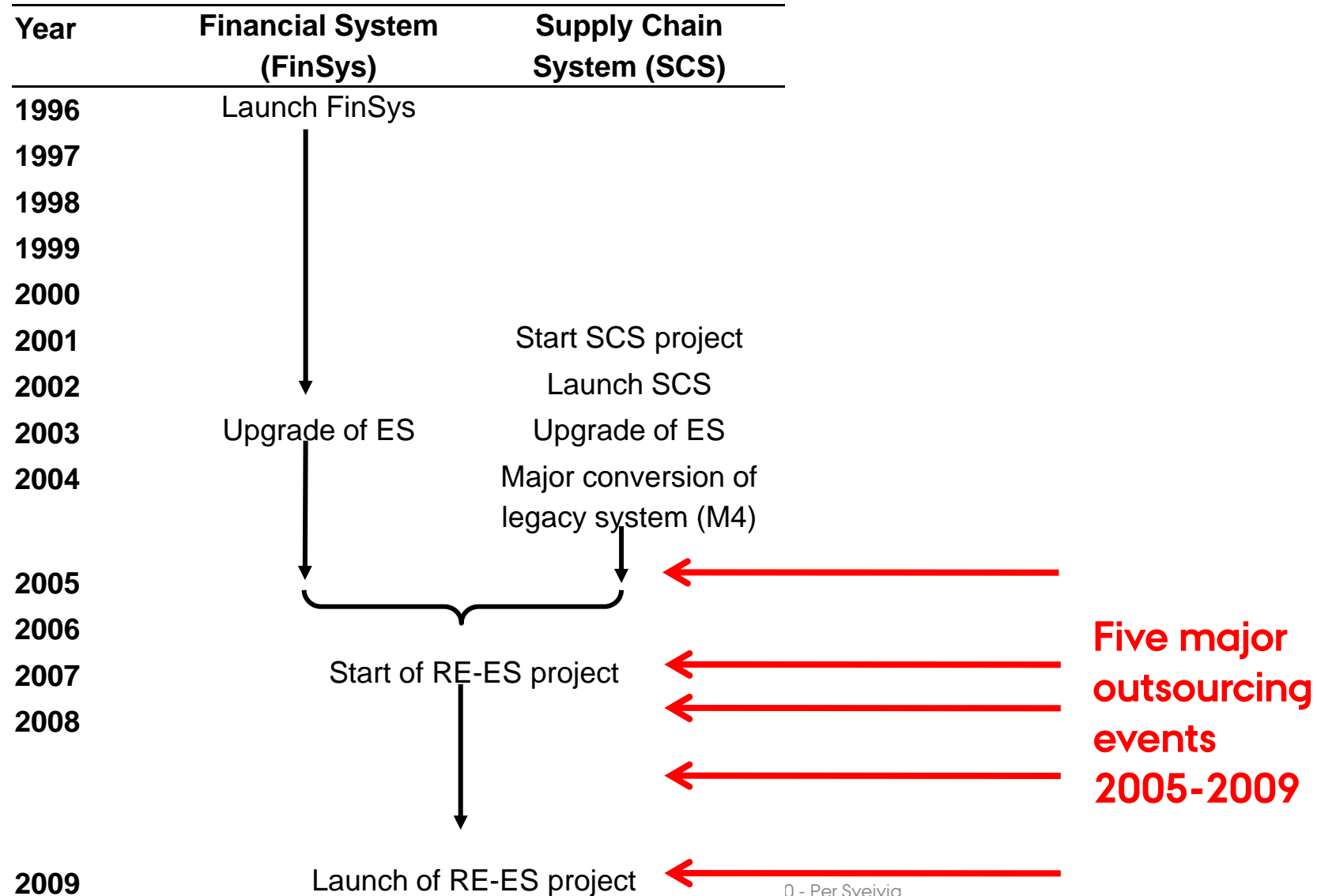


# Application of Dual Structural Model of Enterprise Systems (excerpt from paper 4)

	<b>Oracle Corporation (Supplier organization)</b>	<b>SCANDI (Customer organization)</b>
<b>Institutional Properties</b>	Oracle adapts and reinforces the rationalized myth about “the efficient un-customized ES” and uses marketing communication to diffuse the message and persuade customers	SCANDI has experienced a shift from monopoly to competition, which means a focus on more effective and streamlined work practices
<b>System</b>	From a US-specific system to a “multi-everything” global, highly integrated (globalization process) and flexible system with no need for customizations	First a highly customized version adhering to the institutional logic “match to current business processes” Then after the RE-ES project a much less customized version coming closer to the institutional logic of “match to standard package”
<b>Human Actors</b>	[Not investigated in this study]	Finance employees belong to a small and harmonic group Long adaptation process from 1996 to 2009



# Timeline of Implementation and use of ES (Paper 2)





## Said about outsourcing (Paper 2)

- > *“I think...that it gives prestige to undertake outsourcings...the people who got promoted at SCANDI, are the people who have carried through several outsourcings and cut down the number of employees”*

Supply Chain Manager

- > *He [specific top-level manager] created an extreme large power base and position, by virtue of good outsourcing deals for SCANDI...*
- > *and I am quite sure that the “outsourcing silver bullet” from the purchasing department also characterizes the governance of the IT department*

Consultant



# Implications for research

- › Conceptual models can serve as broad theoretical foundations for future research on ES using institutional theory
  - › especially for newcomers to institutional theory
- › Studies of actors/sub-group level applying institutional theory (these studies are very scarce especially in ES research). An example is how institutions enable identities related to use of ES (i.e. developing a micro-level component of institutional analysis)
- › Organizational field studies e.g. diffusion and use of ES (general, SAP, Oracle) in a specific field, sector, national or cross-national level
- › Ontological considerations of the ES artifact using institutional theory possible with other theories to grasp the inner structure of the ES artifact - Is the ES a new iron cage or an assembly kit?
- › Misalignment studies considering “what is the degree of misalignment” and “how is the degree of misalignment developing over time” – The dynamics of misalignment
- › The value of combining Institutional Theory and Sensemaking



# Implications for practice

- › Apply institutional theory to ES offers conceptual tools to practitioners for understanding and exploring complex scenarios in organizations
  - › To complement the managerial and technical understanding and. “the rhetorics of technology supply”
- › Deconstruct the rationalized myths
  - › Create awareness of these myths and then deconstruct
  - › “*The high triumph of institutional thinking is to make the institution completely invisible*” (Douglas 1986: 98)
- › Take a renewed view on tailoring (configuration and/or customization) and adaptation processes
  - › Is Vanilla implementations always the right approach?
  - › What is the suitable initial degree of tailoring versus long term goal?
- › *Practice appears to be sensitive to social studies!*





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