

Analysis of Inter-organizational Business Capability Modeling Initiatives

Julian Feldmeier – Bachelor's Thesis Kick-off Presentation, 09.03.2020

Chair of Software Engineering for Business Information Systems (sebis)
Faculty of Informatics
Technische Universität München
www.matthes.in.tum.de

Motivation

Research Questions & Approach

Case Study Partner

Current State

Motivation – Why Business Capability Modeling?



Companies need to adapt to changes quickly to stay competitive (Koc, 2017; Herselman 2007)



Role and structure of IT is constantly changing

Resulting Problems:

- Unstructured IT architecture impedes flexibility, aggravates redundancies
- Difficulties to reasonably align business to capabilities (Koc, 2015)
- Unused possibilities for optimization (e.g. understand how components work together)
- Stakeholders have problems understanding IT activities (Koc, 2015)



**Business
Capability
Management**
(Espana, 2015)

Business Capabilities (BCs)

Capability:

“A particular ability that a business may possess or exchange to achieve a specific purpose.” (TOGAF)

- Abstraction of business function, describes “what” an organization does, not the “how” (Ulrich, 2011)
 - Stable: independent of underlying processes, organizational structure or technologies (Bondel, 2018)
 - Capture the whole organization, do not overlap and are not redundant (Ulrich, 2011; Bondel, 2018)
 - Vertical hierarchy: can be broken down (Freitag, 2011)
- **Business capability modeling** as supporting tool for optimization, investment alignment, strategic decision making (hiding inner workflows), enhancing stakeholders understanding of IT activities (Bondel, 2018)

Motivation – Inter-organizational Business Capability modeling

- Inter-organizational collaboration trend since decades (Moore, 1996)



- Reasons for collaboration: (Pouwels, 2017)

- Reduce costs
- Increase transparency
- Innovation
- Market development
- Knowledge development & transfer
- Risk spreading
- Social networking

Only effective with proper government structure
(Williamson, 1991; Zajac & Olsen, 1993)



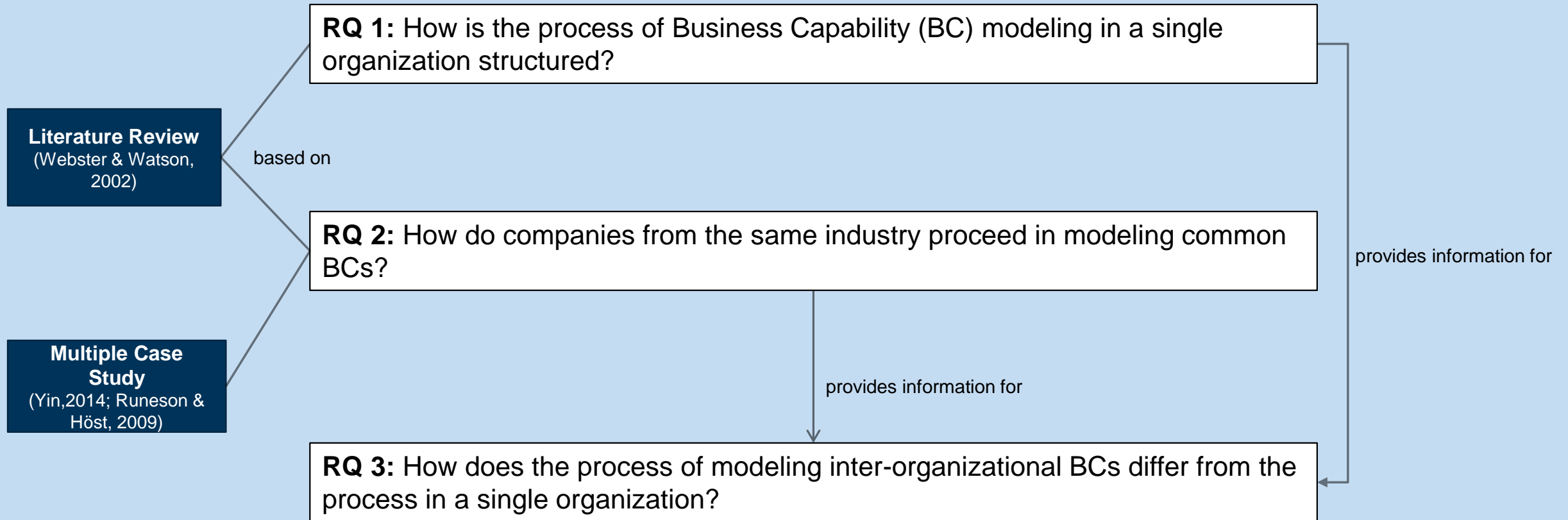
Business Capabilities as
supporting tool for inter-
organizational collaboration

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	Industry	Data extraction	Reasons/Goals/Strategy	Area	Cross-organizational relationship structure	Collaboration Form
Case Study Partner 1	Broadcasting	Analysis of documents and protocols	Harmonization	National	Horizontal	Work Group
Case Study Partner 2	Broadcasting	Analysis of documents and protocols	Reference Architecture	International	Horizontal	Community of practice
Case Study Partner 3	Banking	Semi-structured Interview	Reference Architecture	International	Horizontal	Community of practice
Case Study Partner 4	Gambling	Semi-structured Interview	Merger & Acquisitions	National	Horizontal	Unclear

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RQ1: How does the process of Business Capability (BC) modeling in a single organization look like?

Research Approach: Literature review

Search Query (Abstract – Keywords – Title) :

("business capabilit*" OR "capability-based" OR "capability-driven")

AND

("definition" OR "creation" OR "planning" OR "modelling" OR "development" OR "design*")

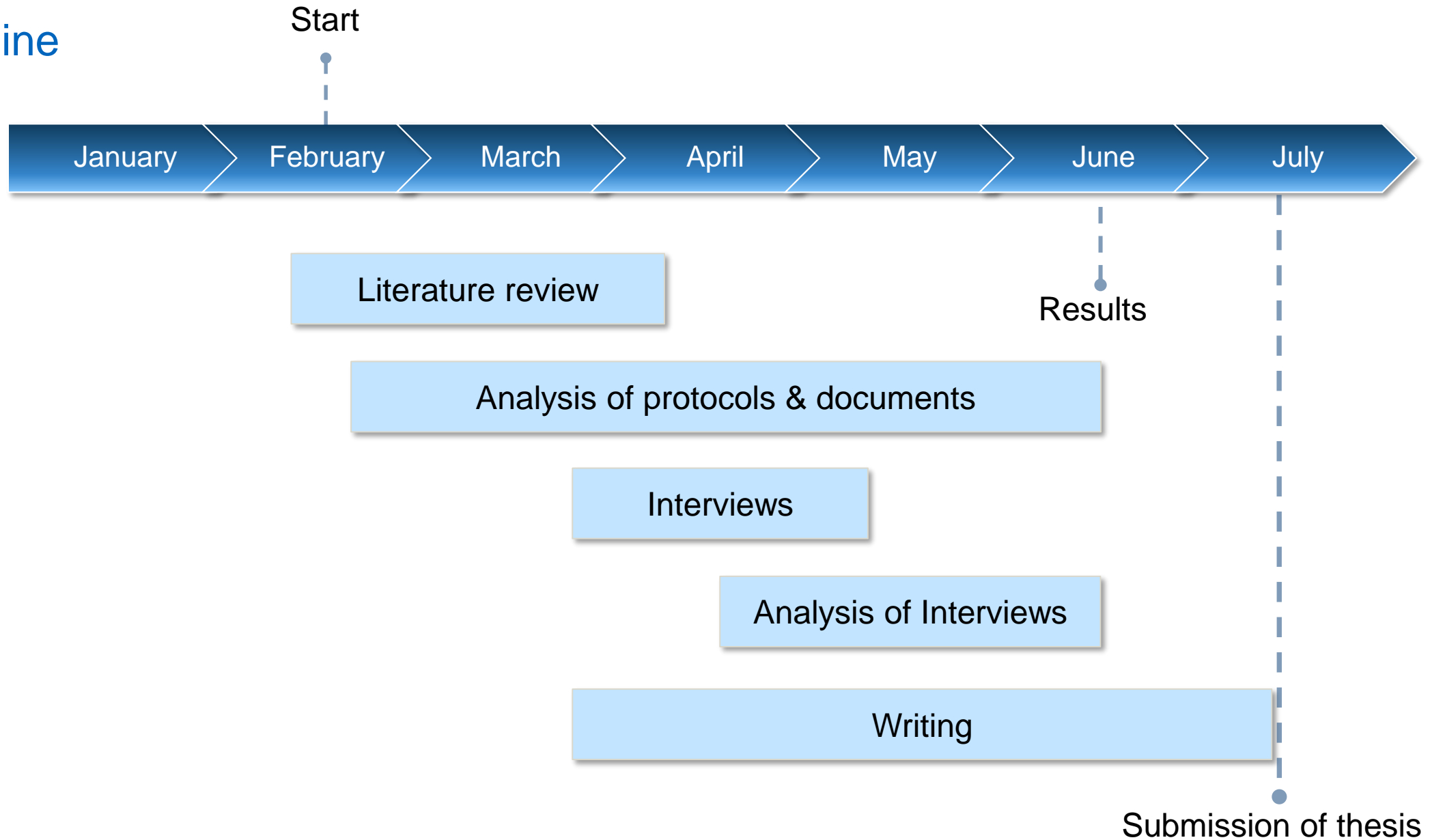
Database	Relevant Results
IEEE Xplore	5
AISel	1
ADM DL	1
Scopus	4
EBSCOhost	2
ScienceDirect	0
	13

RQ1: How does the process of Business Capability (BC) modeling in a single organization look like? – Current state

Author	Process											
	Assign Roles, Responsibilities	Analyze existing process models	Define expected results	Analyze business visions & goals	Required processes and resources	Set up Key-performance indicators	Create/Obtain draft BCM	Create BCM	Enhance BCM	Capability evaluation	Implementation	Context Modelling
	<i>Bondel et al. (2018)</i>	X		X			X	X	X			
	<i>Espana et al. (2015)</i>		X	X	X	X				X	X	X
	<i>Zdravkovic et al. (2013)</i>	X	X	X		X					X	
	<i>Koc & Sandkuhl (2015)</i>		X	X		X						X
	<i>Ulrich & Rosen (2011)</i>						X	X	X	X		
	<i>Beimborn & Martin (2005)</i>		X			X		X	X			

Timeline

2020



- *“A Process Approach for Capability Identification and Management”* , M. Wißotzki, 2015
- *“Elements and Characteristics of Enterprise Architecture Capabilities”*, Sandkuhl, 2015
- *“Strategies for capability modelling analysis based on initial experience”*, Espana, 2015
- *“Reporting from the Implementation of a Business Capability Map as Business-IT Alignment Tool”*, Bondel et al. 2018
- *“Capability oriented Modeling of the firm”*, Beimborn, 2005
- *“Business Capability Maps: Current Practices and Use Cases for Enterprise Architecture Management”*, Khosroshahi, 2018
- *“Conceptual framework for Modeling Business Capabilities”*, Herselman, 2007
- *“Methods in Designing and Developing Capabilities: A Systematic Mapping Study”*, Koc, 2015
- *“Modeling Business Capabilities and Context Dependent Delivery by Cloud Services ”*, Zdravkovic, 2013
- *“The Business Capability Map: The “Rosetta Stone” of Business/IT Alignment”*, Ulrich, 2011
- *“From Business Process Models to Capability Models”*, Koç, Sandkuhl, 2015



Julian Feldmeier

Technische Universität München
Faculty of Informatics
Chair of Software Engineering for Business
Information Systems

Boltzmannstraße 3
85748 Garching bei München

Tel +49.89.289. 17132
Fax +49.89.289.17136

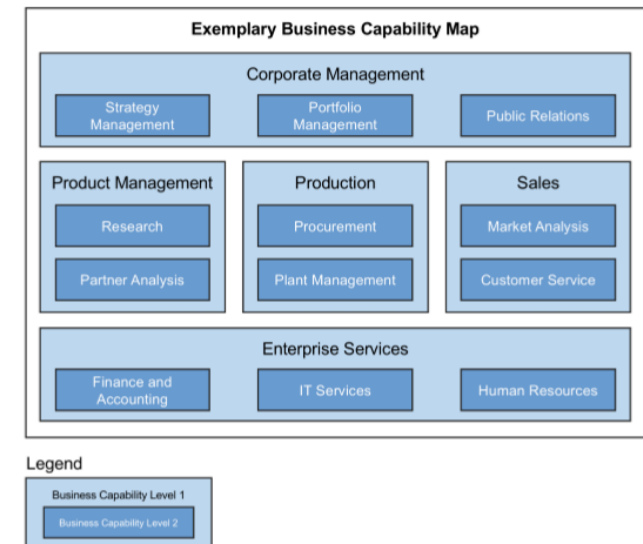
matthes@in.tum.de
www.matthes.in.tum.de



RQ1: How does the process of Business Capability (BC) modeling in a single organization look like?

Findings: Example (Bondel, 2018)

- Top-Down vs. Bottom-up approach to capture capabilities
 - Top-Down: identify high-level BC's which are subsequently decomposed into lower level BC's
 - very efficient, but needs involvement of senior executives
 - Bottom-up: Identify BC's in different parts of the business, then unite them
 - bottom-up requires more time, strong governance and senior leadership support
- Visualization using a Business Capability Map (BCM):
 - Identification of essential roles within the organization
 - Definition of expected results
 - Creation of BC-Map visualizing the top-level BC's
 - Extend BCM with lower-level BC's
 - Enrich BCM with strategic information to use it for strategic decisions



A Business Capability Map – 2nd level
Bondel, 2018

RQ2: How do companies from the same industry proceed in modeling common BC's?

Research Approach : Literature review

Search Query (Abstract – Keywords – Title) :

((“collaborative”) OR ((“cross” OR “inter”) AND (“compan*” OR “enterprise” OR “organization”))))

AND

(“business capabilit*” OR “capability-based” OR “capability driven”)

AND

(“definition” OR “creation” OR “planning” OR “modelling” OR “development” OR “design* ”)

Database	Relevant Results
IEEE Xplore	0
AISeL	0
ADM DL	0
Scopus	1
EBSCOhost	0
ScienceDirect	0
	1

RQ3: How does the process of modeling inter-organizational BC's differ from the process in a single organization?


TUM

Expected Outcome - Visualization

	Inter-Organizational				
	BCM in a single organization	BCM - Initiative 1	BCM - Initiative 2	BCM - Initiative 3	BCM - Initiative 4
1) Initial Phase					
2) Preparation					
3) Design					
4) Development					
5) Implementation					

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TUM

	Inter-Organizational				
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1) Initial Phase					
2) Preparation					
3) Design					
4) Development					
5) Implementation					

Top – Down approach	BCM in a single organization	Inter-organizational BCM
1) Initial Phase	Assign roles, responsibilities, software to use (e.g. TOGAF ADM)	Expected: Assign roles, responsibilities, define software to use
2) Preparation	Define expected results, create basic understanding of BCM	Define expected results, create basic understanding of BCM
3) Design	Creation of BCM (can be several steps in regard of leveling)	
4) Development	Enrichment of BCM, Creation of heat maps	
5) Implementation	Align IT to business strategy, Address identified gaps	

Observed (Bondel,2018; Ulrich, 2011) - Expected

RQ3: How does the process of modeling inter-organizational BC's differ from the process in a single organization?

- Results from RQ1 and RQ2 as basis to answer RQ3
- Questions to be answered additionally:
 - How do the processes differ within the inter-organizational approaches?
 - One country \leftrightarrow Multiple countries?
 - Operating fields \rightarrow Legal requirements?
 - Responsibilities?
 - Governance?
 - Requirements?
 - Scope of binding?
 - Implementation: Top down \leftrightarrow Bottom up?
 - Cost infrastructure?