

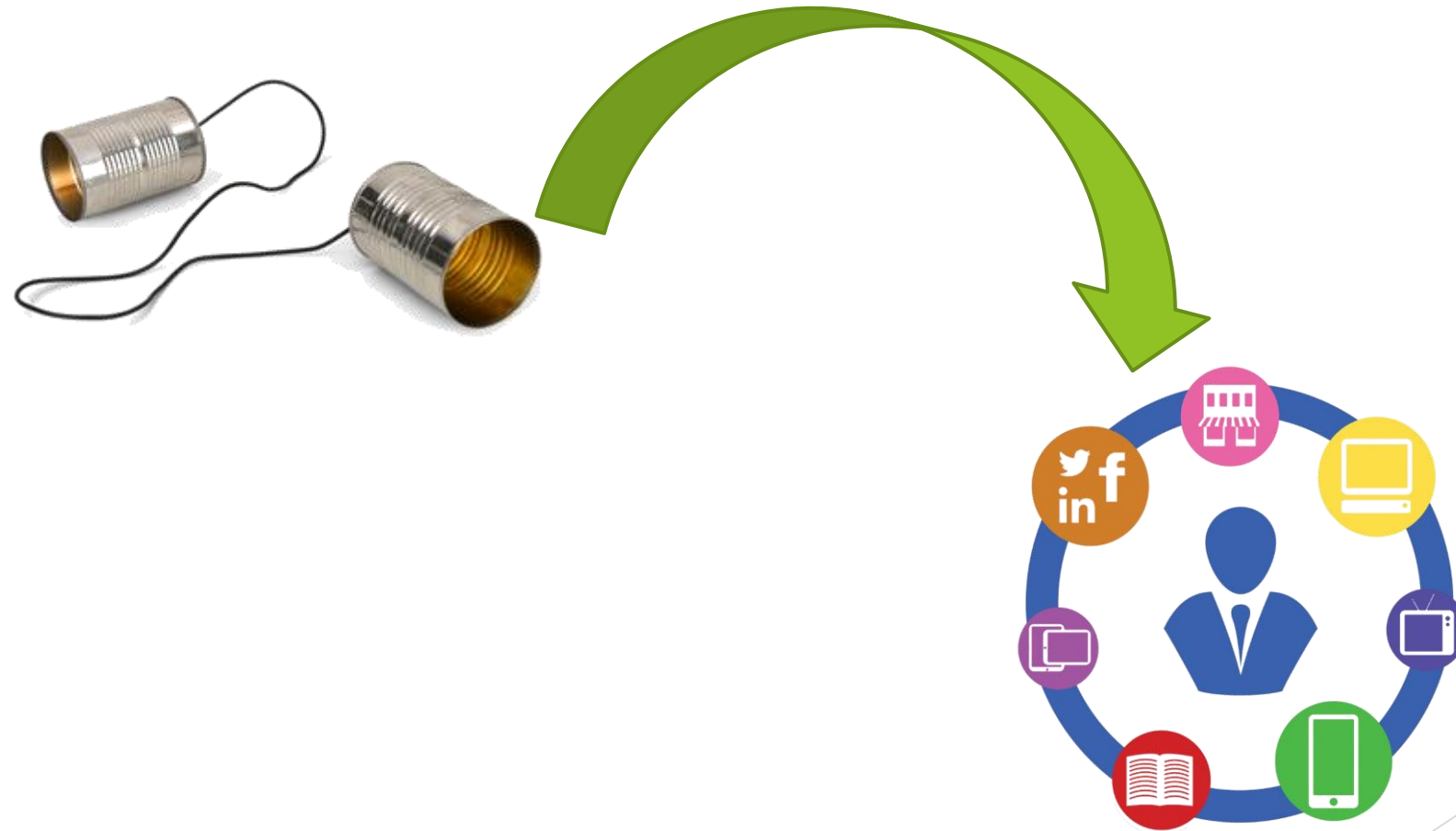
Cross Channel Communication Design

Research proposal - version 2016

Agenda

- ▶ Introduction
- ▶ Research objective
- ▶ Research status
- ▶ Research domains
- ▶ Definitions
- ▶ Research questions
- ▶ Relevance
- ▶ Approach
- ▶ Planning

Introduction Communication



Introduction

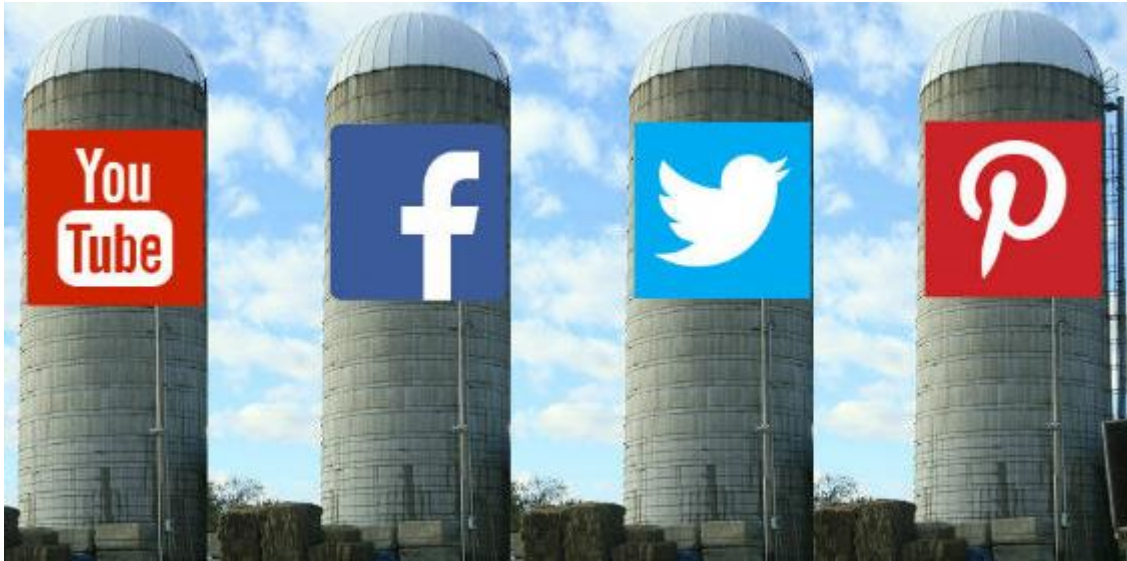
Design and business orientation



22. Patrcio, L. Designing multi-interface service experiences the service experience blueprint. (2008)

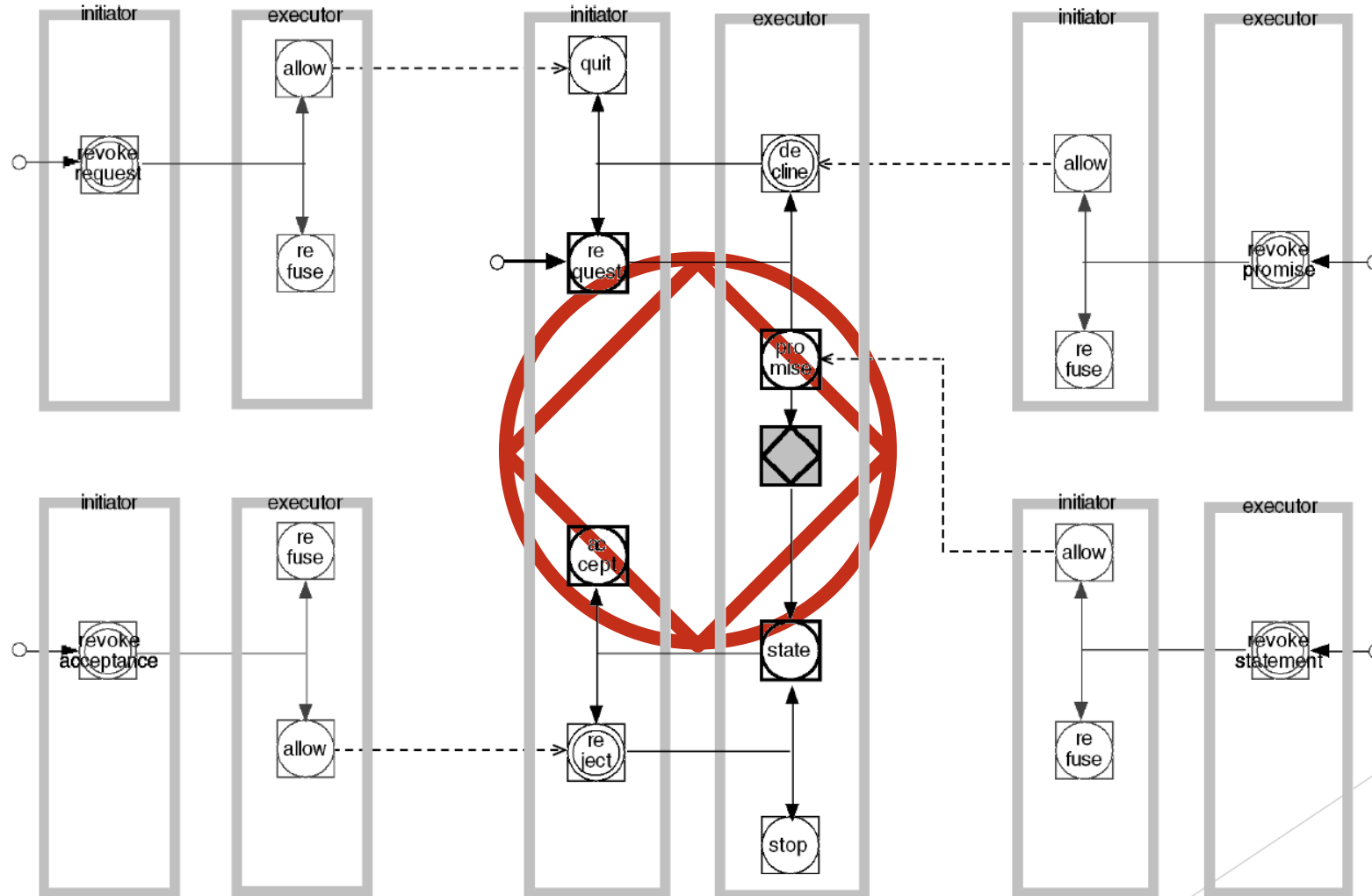
27. Sharma, A. Choosing an optimal channel mix in multichannel environments. (2007)

Introduction Business Silos

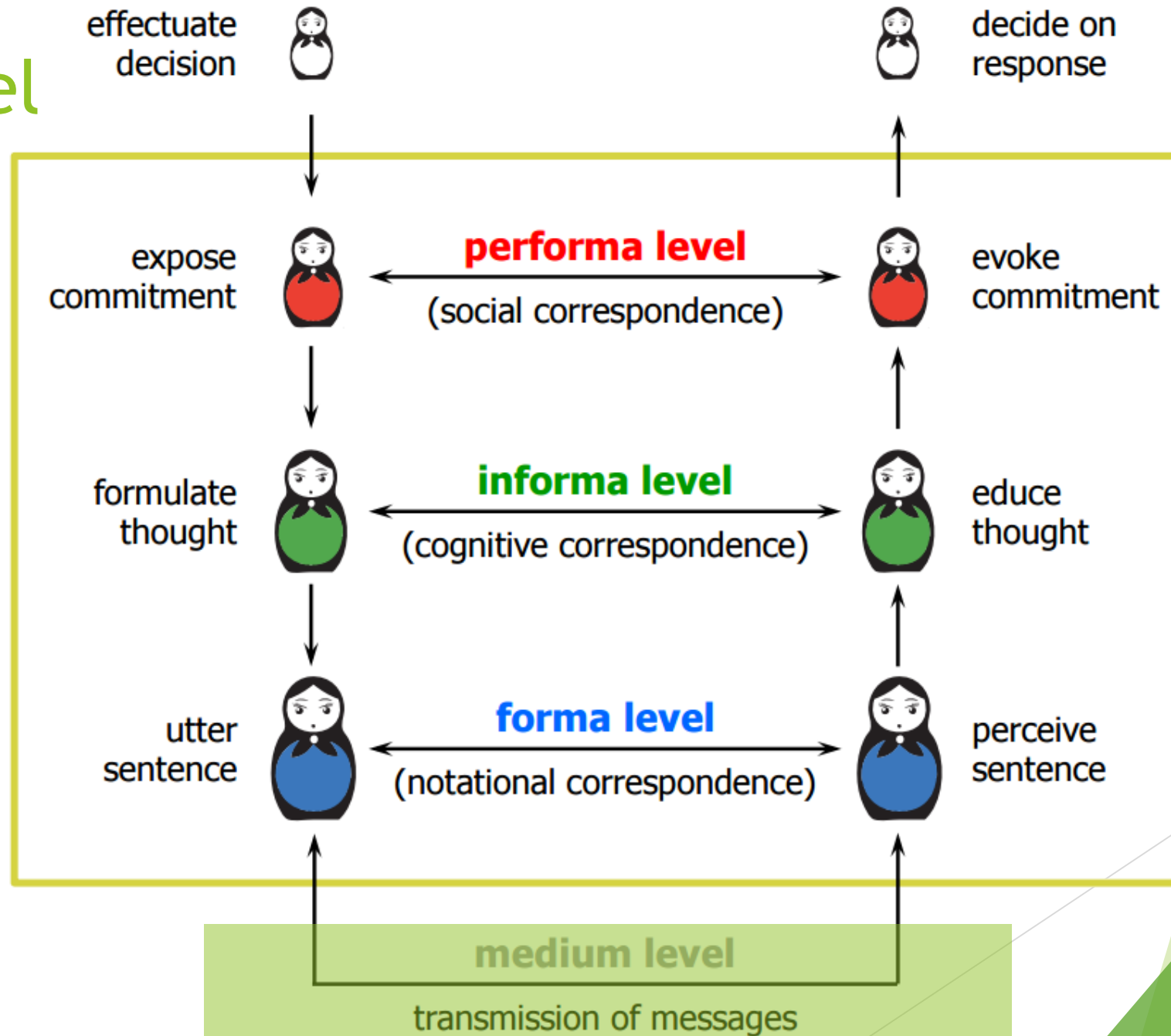


Introduction

Transaction based

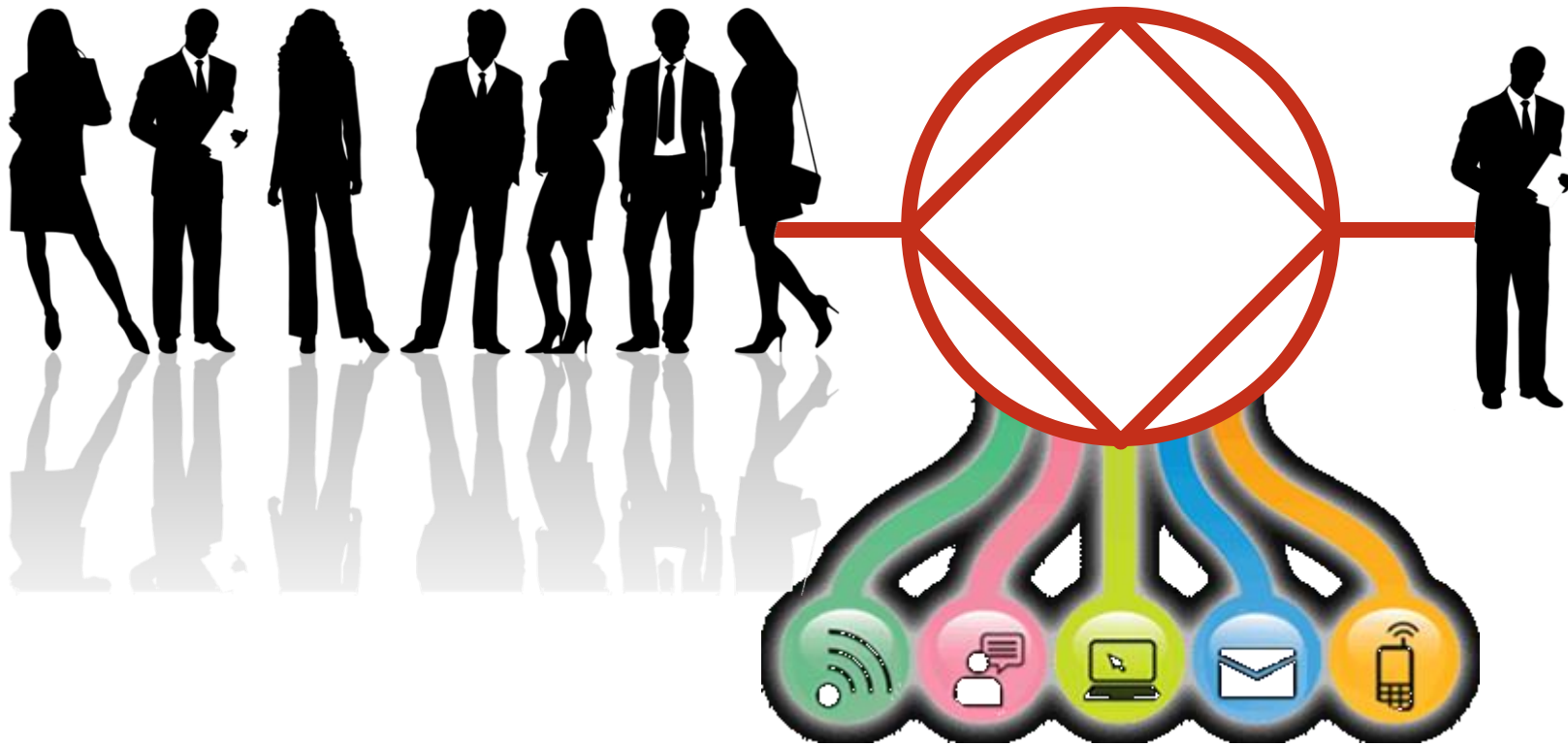


Channel



Introduction

Transaction based



Research objective

- ▶ The research objective is to create a
- ▶ IT communication protocol
- ▶ based on DELTA-processors bounded within C3D by using
- ▶ Formalized social transactions and
- ▶ bi-directional digitized communication channels
- ▶ While retaining the context within transactions and across channels,
- ▶ within an organisational structure.

Research status

- Preliminary research
- Paper:
Cross channel communication
design critical literature review

		Channel characteristics			
		Channel	Web Services	CRM	Customer Experience
Focus	Design	[22], [6], [29], [40]	[19], [27], [23], [7]	[2], [18]	
	Marketing	[8], [21], [9], [24], [39], [38]		[33],[47], [17]	[30], [28], [1], [42]
	Customer	[3], [48]		[44]	[32], [34]

Customer Service Service-centred paradigm for Interaction implementation; Service Acceptance using business cases	Communication Customer experience and engagement; Communication data interpretation; Enhancing Channel options within transactions; Closed communication loops
Channel Characteristics; Maturity to be able to change channels; Channel similarities	Implementation Organisational changes; Multichannel strategy; Best-of-breed modular concepts; Training free interfaces

Research domains

- ▶ Enterprise Engineering
 - ▶ Ψ -theory
 - ▶ Δ -theory
- ▶ Discrete Event Systems
- ▶ (Services, Database, Interactive) Marketing
- ▶ (e)-Technology, e-Commerce and (e)-Service
- ▶ Internet and Web Applications
- ▶ System Sciences

Definitions

- ▶ C3D is the communication within a single transaction, as defined within Ψ -theory, over two or more channels.
- ▶ A Channel is a protocol description used for communication over a medium during the execution of a transaction.
- ▶ To define
 - ▶ Protocol
 - ▶ Cross
 - ▶ Communication
 - ▶ Design

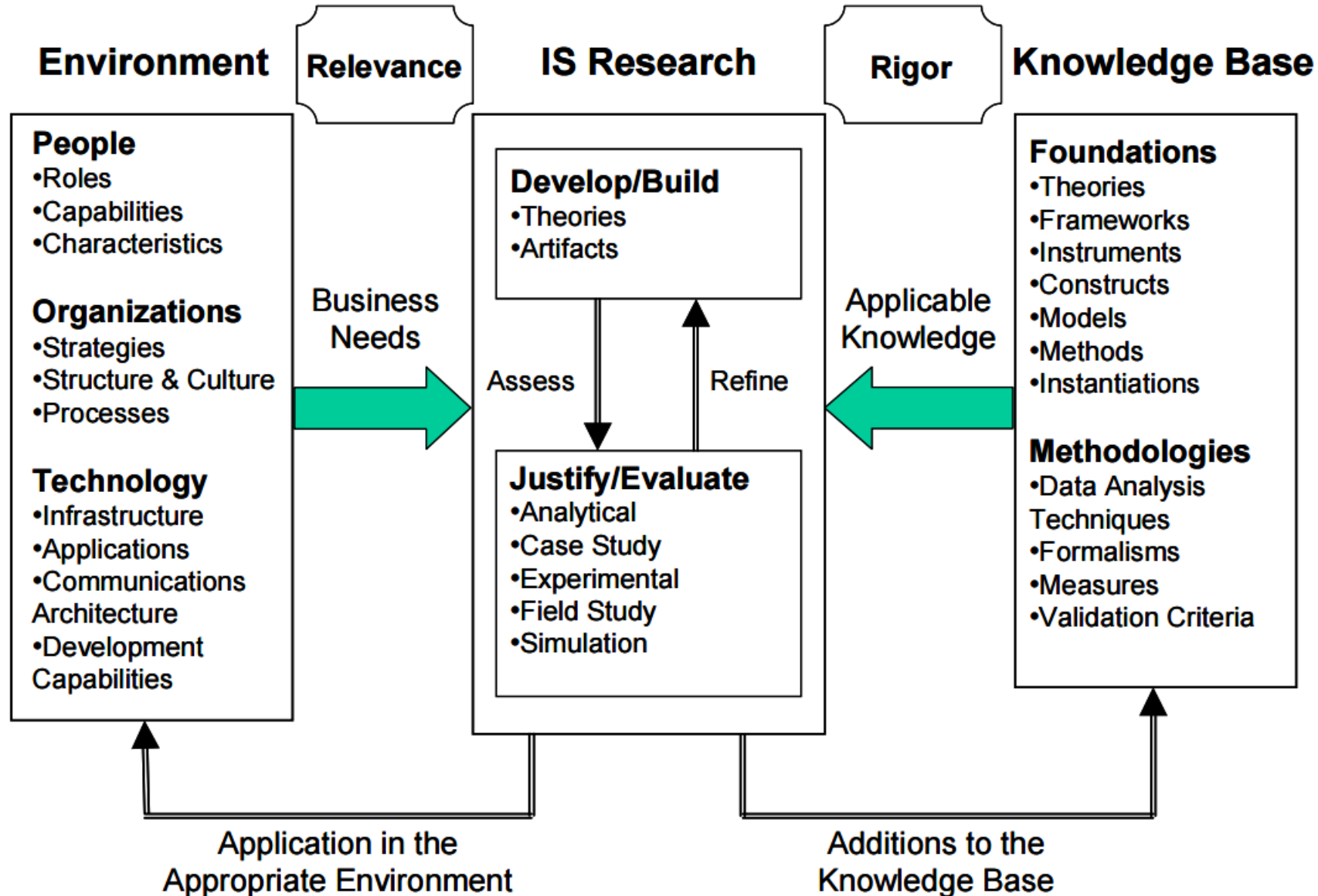
Research questions

- ▶ How can a transaction in the B-organisation, as described in the Ψ -theory, be implemented in an physical organisation and transformed to communication steps, as described in Δ -theory, in such a way that communication steps support multiple channels.
- ▶ How can the communication context within a transaction be preserved between channels during a transaction within C3D?
- ▶ How can we define the end of a communication step, as defined in Ψ -theory, in such a way that the next step in a transaction can be processed?

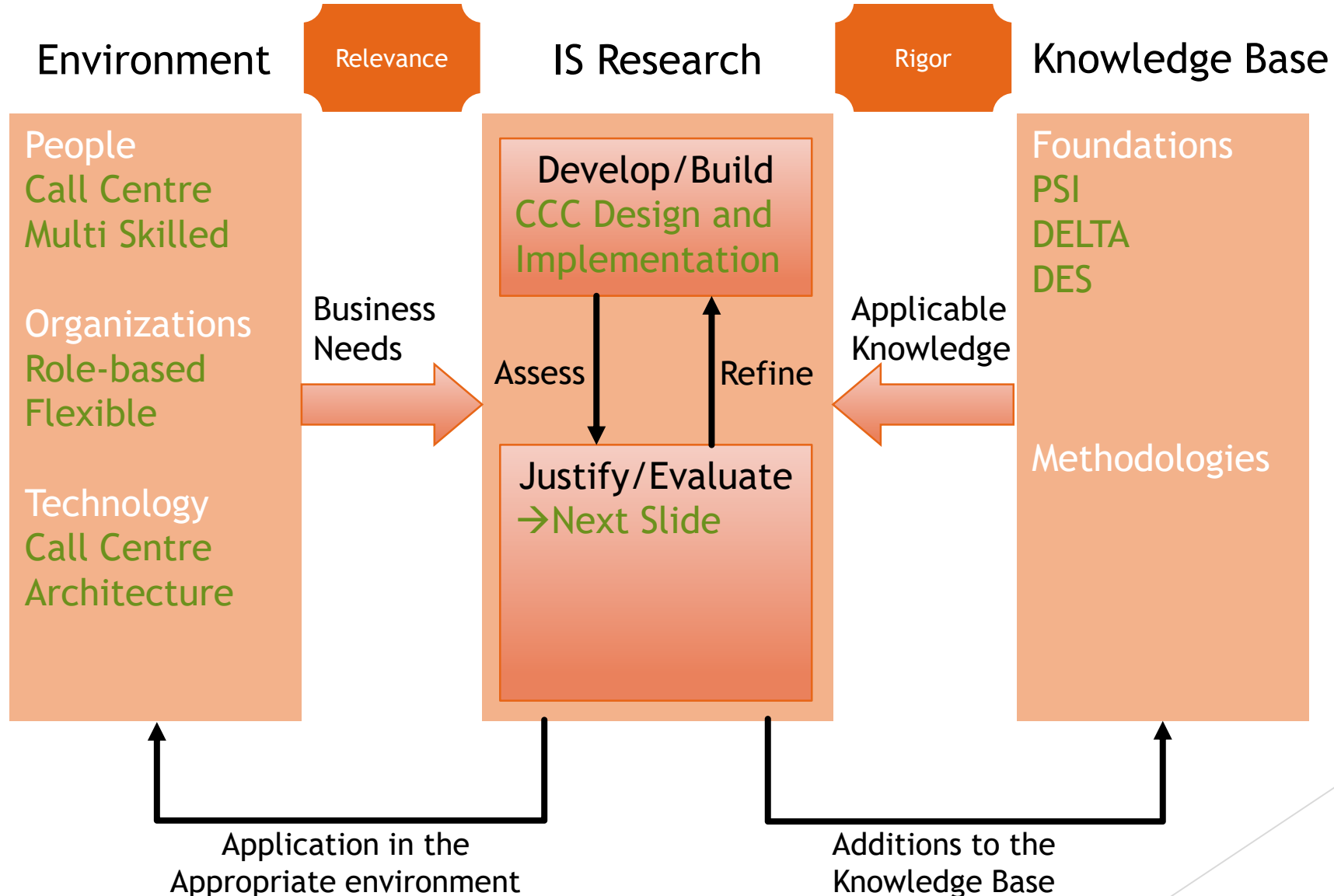
Relevance

- ▶ Integration of automation in the industry
 - ▶ Silos
 - ▶ Organisational mismatch
 - ▶ Reduced communication cost
- ▶ Scientific
 - ▶ Validation of DELTA implementation
 - ▶ Extending implementation validation of PSI

Approach - Design Science Research



Approach - Design Science Research



Design Evaluation Methods

Observational	Case Study: Study artifact in depth in business environment
	Field Study: Monitor use of artifact in multiple projects
Analytical	Static Analysis: Examine structure of artifact for static qualities (e.g., complexity)
	Architecture Analysis: Study fit of artifact into technical IS architecture
	Optimization: Demonstrate inherent optimal properties of artifact or provide optimality bounds on artifact behavior
	Dynamic Analysis: Study artifact in use for dynamic qualities (e.g., performance)
Experimental	Controlled Experiment: Study artifact in controlled environment for qualities (e.g., usability)
	Simulation - Execute artifact with artificial data
Testing	Functional (Black Box) Testing: Execute artifact interfaces to discover failures and identify defects
	Structural (White Box) Testing: Perform coverage testing of some metric (e.g., execution paths) in the artifact implementation
Descriptive	Informed Argument: Use information from the knowledge base (e.g., relevant research) to build a convincing argument for the artifact's utility
	Scenarios: Construct detailed scenarios around the artifact to demonstrate its utility

Planning

2013	Jan-Aug	Orientation and literature
	Sep-Dec	Pre-promotion Seminars
	Nov-Dec	Research proposal
2014	Jan-May	Pre-promotion Seminars
	Feb-May	Design Science college
	Feb-Mar	Research proposal
	Mar	Thesis paper EEDC 2014
	Apr	Presentation prep/presentation EEDC 2014
2015	Feb-Apr	Literature review
2016	Feb-Mar	Literature review paper EEWC 2016
	Apr	Thesis paper EEDC 2016
	May	Presentation prep/presentation EEDC/EEWC
	Jul-Dec	Design Artefact
2017		Validate
2018		Validate?