Service Experience Management

"The influence of service partitioning on customer satisfaction"

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Research Objectives

This study mainly focuses on examining how service experience patterns and customers' motivations jointly affect the formation of overall service satisfaction during service delivery processes. This study, therefore, aims to enrich the knowledge on delivering customer satisfaction by investigating how customers' motivations influence their preferences of service delivery and proposing the framework of designing service delivery processes from the lens of customer satisfaction, rather than the lens of service operation.

Research questions

(1) When is the best time for service providers to delight their customers within a service partition? How do the negative effects of service failure change over time within a service partition?

(2) How should service providers manage the distribution of peak service encounters across service partitions in order to maximize the positive effects of multiple delight service encounters and minimize the negative effects of multiple dissatisfactory service encounters?

Methodology
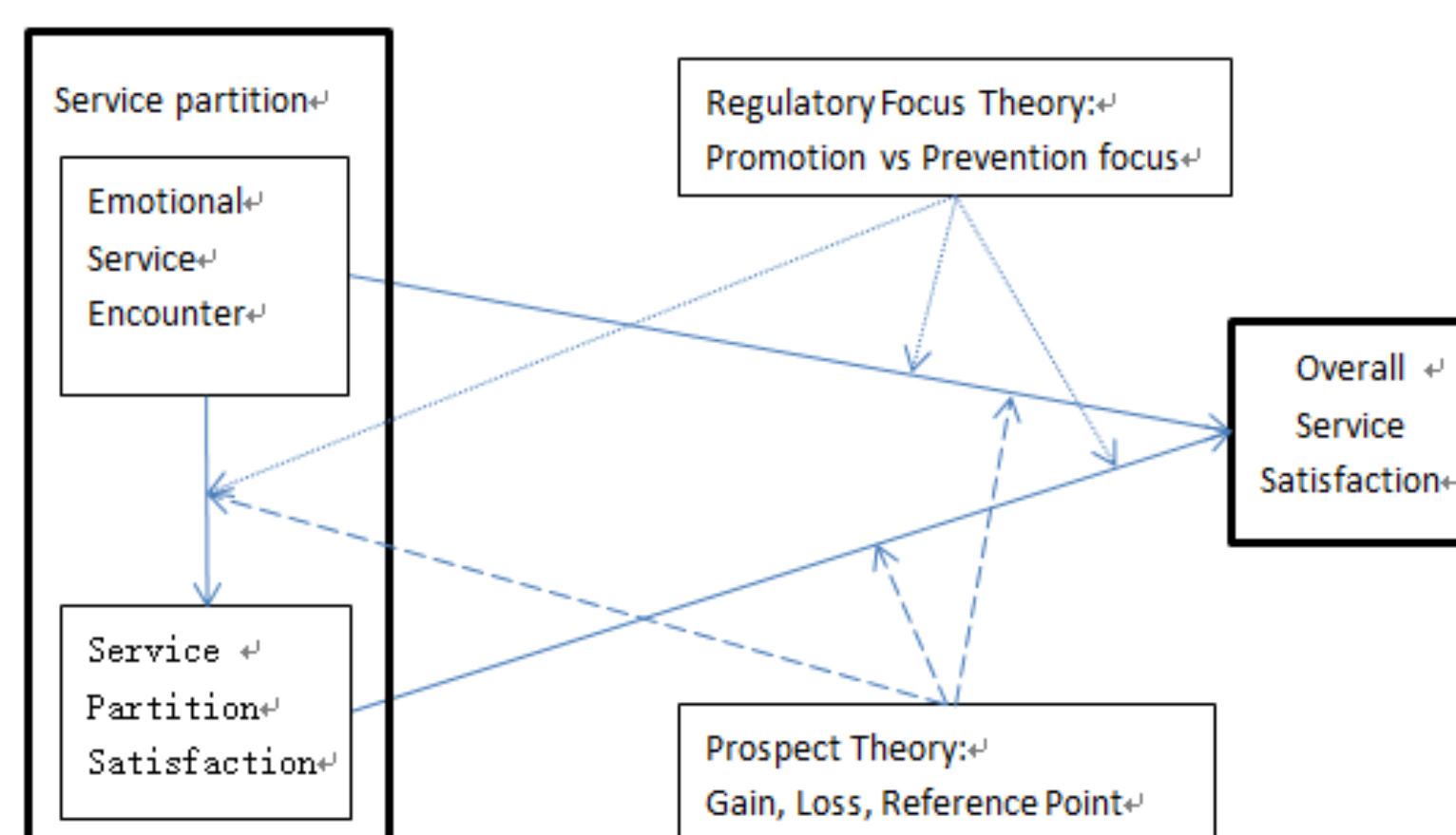
This study takes advantage of prospect theory as the theoretical foundation to analyze the effects of individual service encounter experiences on service partition satisfaction and overall service satisfaction. In line with prospect theory, this study codes dissatisfactory encounters as "losses" and both satisfactory encounters and delight encounters as "gains".
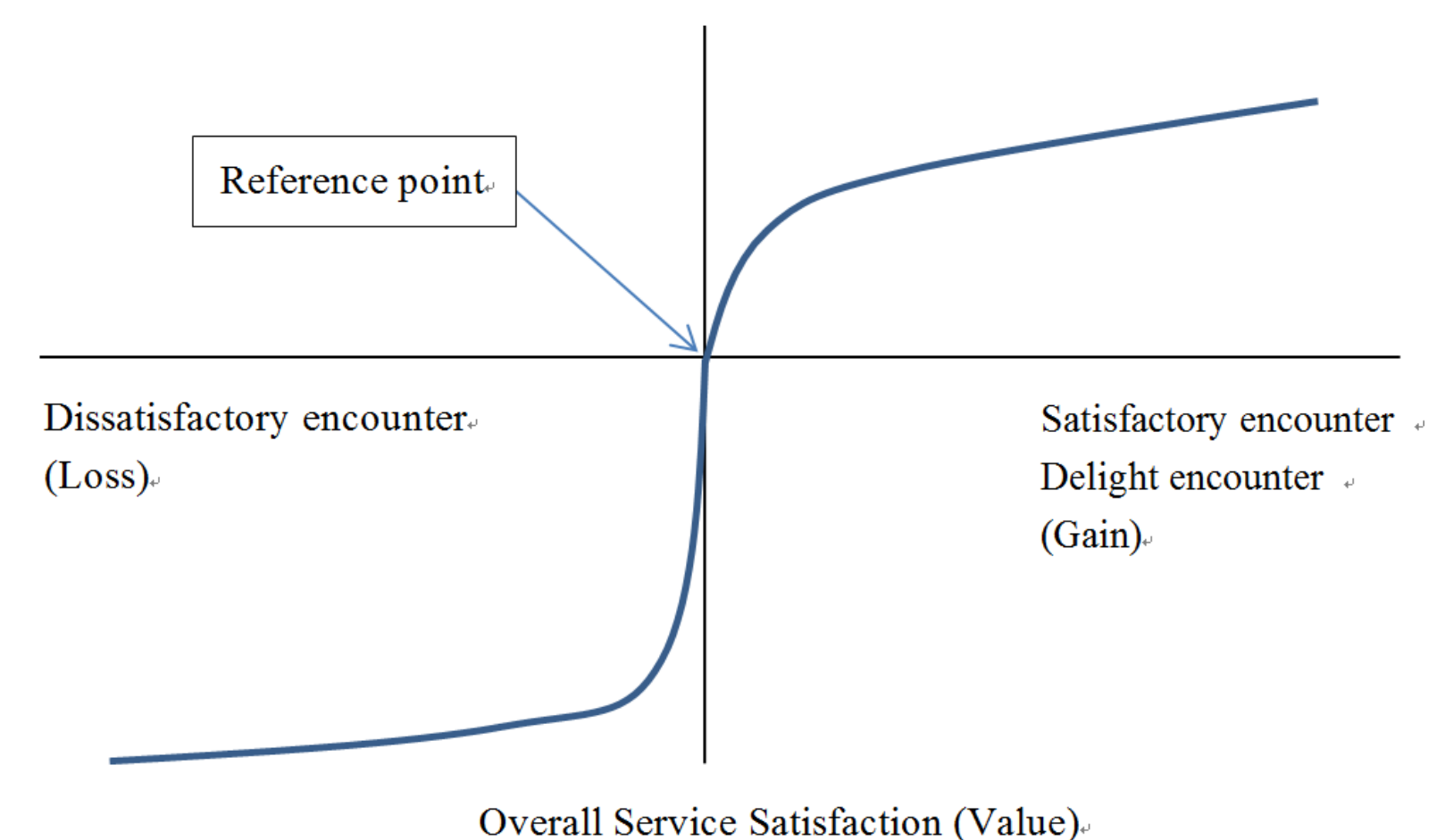
Findings

- A delight has a more positive effect on customer satisfaction for customers under promotion focus than a delight of the same magnitude for customers under prevention focus.

- A failure has a more negative effect on customer satisfaction for customers under prevention focus than a failure of the same magnitude for customers under promotion focus.

- The temporal position of a delight matters for promotion focused customers, not for prevention focused customers.

- The temporal position of a failure matters for prevention focused customers, not for promotion focused customers.

- Two delights occurring in two different partitions have a more positive effect on customer satisfaction than the two equal delights occurring in a single partition.

- For customers under promotion focus, the trade-off effect of a delight following a failure is not significantly influenced by the temporal position of the delight.

- For customers under prevention focus, the trade-off effect of an early delight following a failure is more positive than that of a late delight of the same magnitude.

Ecosystems Research 2015

"Creating and capturing value in business ecosystems"

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Background

In today's increasingly complex and interconnected world, customer needs for goods and services are better addressed by networks of interacting organisations – focal firms, suppliers, competitors, partners, complementors, and other stakeholders. Such networks act as business ecosystems in which companies' strategies are closely interdependent, competition goes hand in hand with cooperation, and no single firm can succeed without relying on resources and capabilities controlled by others. Thinking in terms of ecosystems is increasingly important for large corporations worldwide. The research streams research focused on the partnership, hence two organisations. The question studied is *'what are the factors that determine who creates and who captures value across ecosystems?'*

Research Objectives

The objective is to understand B2B value exchange in ecosystems. *'How are different types of value being created within an ecosystem and captured by its customers?'*
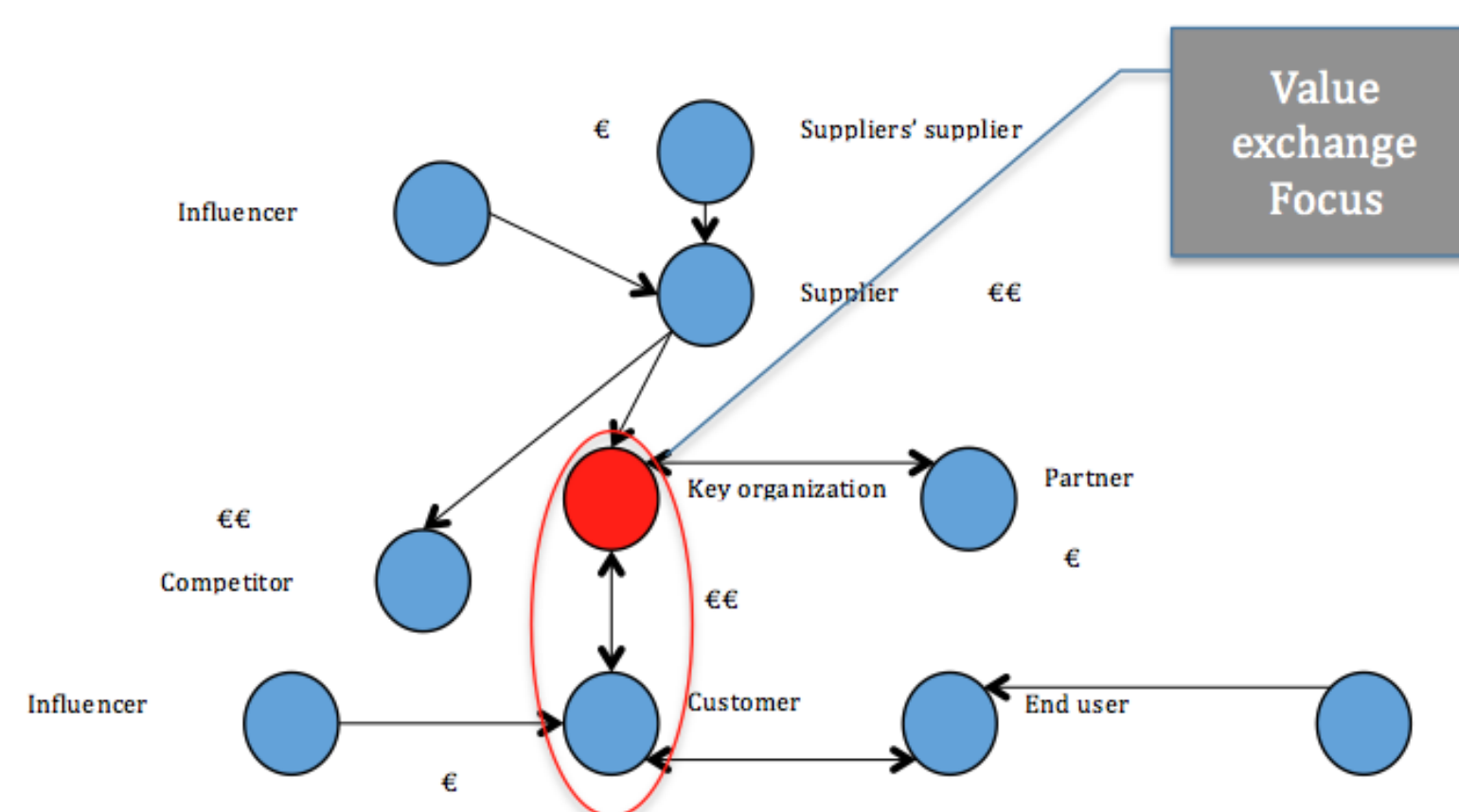

Approach

Building on previous Alliance studies, the Ecosystems Research aims to answer this question, and develop an Ecosystem partnering value canvas, that firms can use to explore, interpret, understand and leverage the dynamics of partnering within the framework of a business ecosystem in which they participate.

Activities

The study has allowed us to identify macro-factors that firms need to consider for successful ecosystem partnering. These factors are represented in the canvas below. Despite a direct value transfer - which could be a product, a product service or a service offering - they split into two. First, *'who would like to partner'* and second, *'why the organisations would like to partner'.*

The sub sections separate into **Who**, in the organisation captures or creates value, when thinking about the organisational level. In addition, the management or the decision makers within the organisations will be capturing or creating value as a second focus.

The second subsection looks at **Why** would the above be looking to exchange value. This would split into a strategic intent and the reduction of risk.
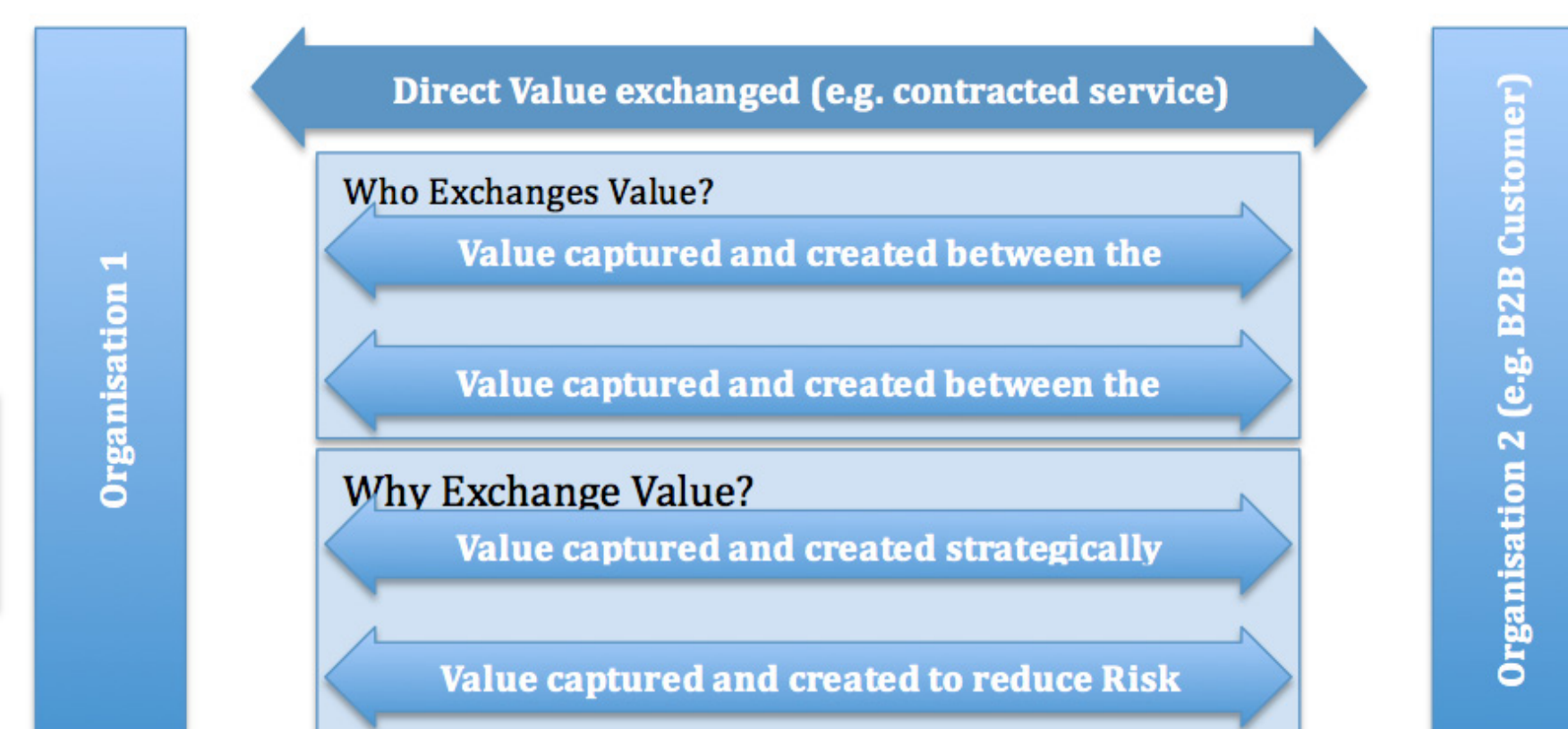
Expected Outputs

1. Strategic canvas to be used in management workshops to deeper understand an existing partnership or to select a new partner within complex service ecosystems.

2. Executive briefing and academic article.

Effects of social capital on risks of outcome-based contracts from the supplier's perspective

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On the journey of servitization, services provided are moving from basic services to advanced services where capabilities are delivered. In this circumstance, outcome-based contracts (OBC) are increasingly used. Two important issues in OBC are risk and relationship (social capital).

An outcome-based contract refers to an agreement between the supplier and the customer that the supplier gets paid based on the outcomes of total solutions or the outcomes of customer value in a continual use situation.

Two approaches to deliver outcome-based contracts are first, the supplier-customer binary approach and second, the alliance / joint venture approach.
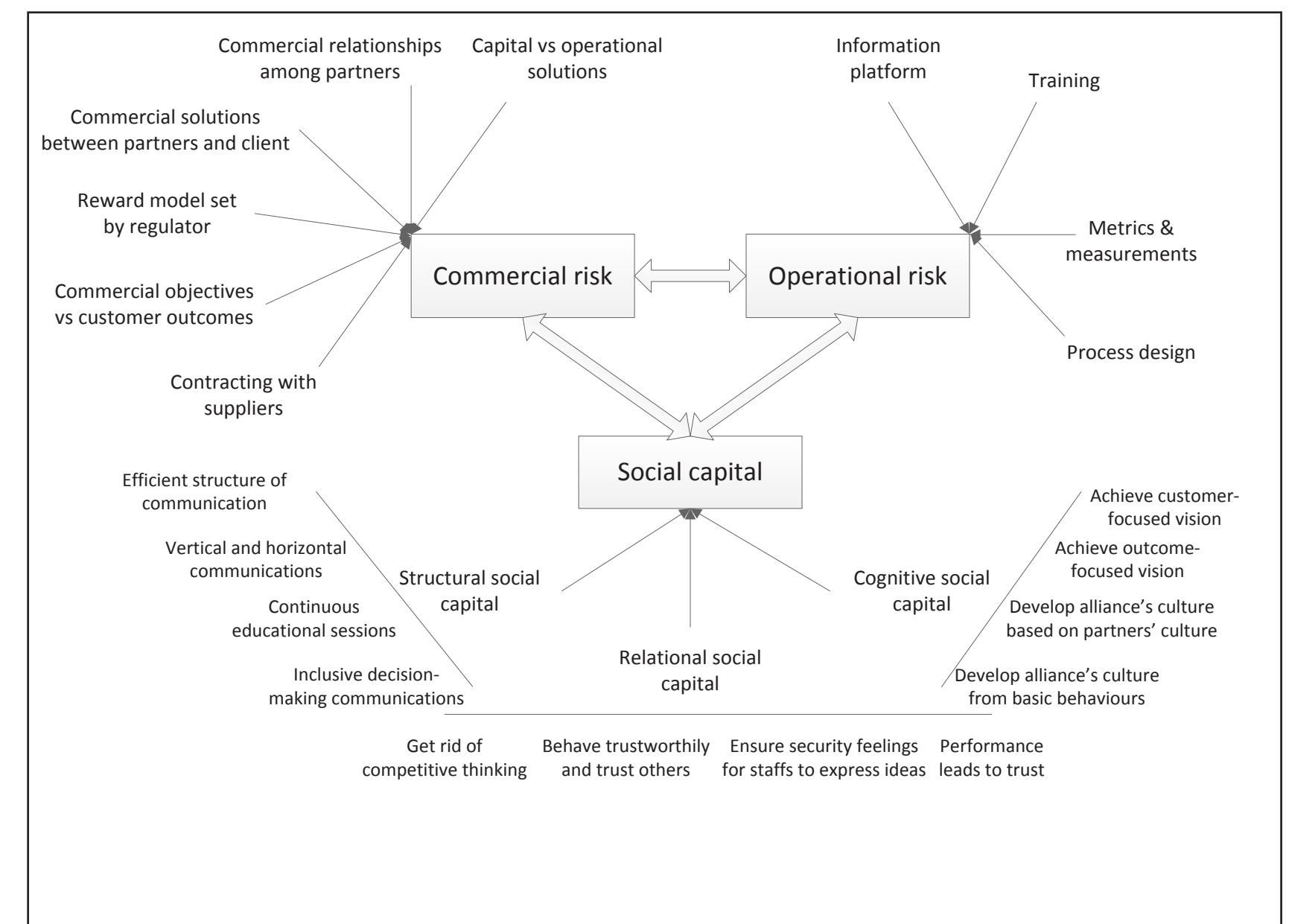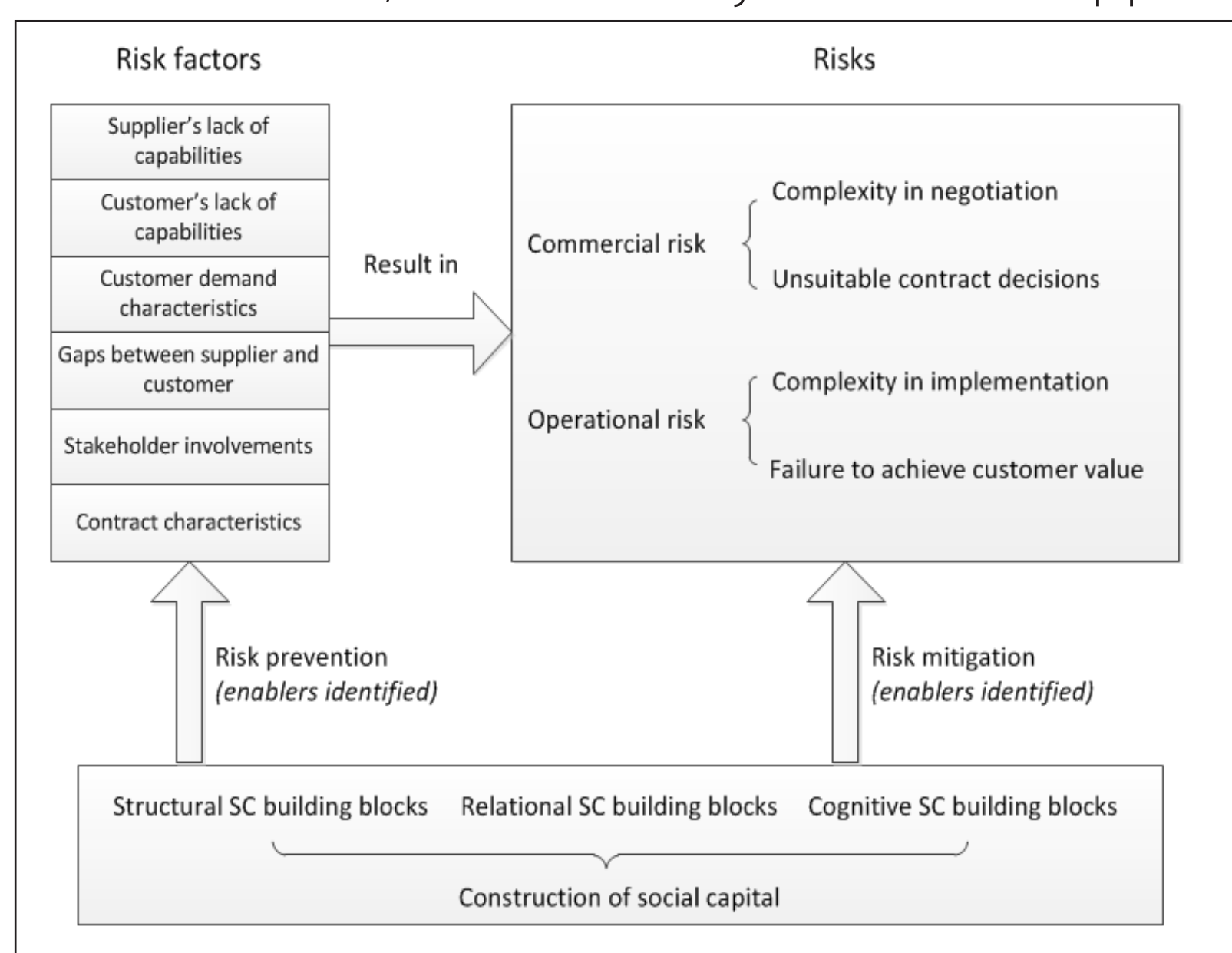

Fig.1 Effects of social capital on risks of outcome-based contracts with a supplier-customer binary approach from the supplier's perspective

Fig.2 Risk and social capital building blocks in outcome-based contracts with an alliance approach

In the supplier-customer binary approach, two major risk categories are commercial risk regarding the contracting of OBC, and operational risk regarding the implementation of OBC. Eighteen risk factors in six categories are identified to be the influencing factors. Social capital can prevent and mitigate risks to a certain extent.

In the alliance or joint venture approach, three major risk categories are commercial risk regarding the commercial solutions among partners, operational risk regarding the operations of the alliance, and social capital risk regarding the construction of social capital in the alliance. The three risks mutually influence each other.
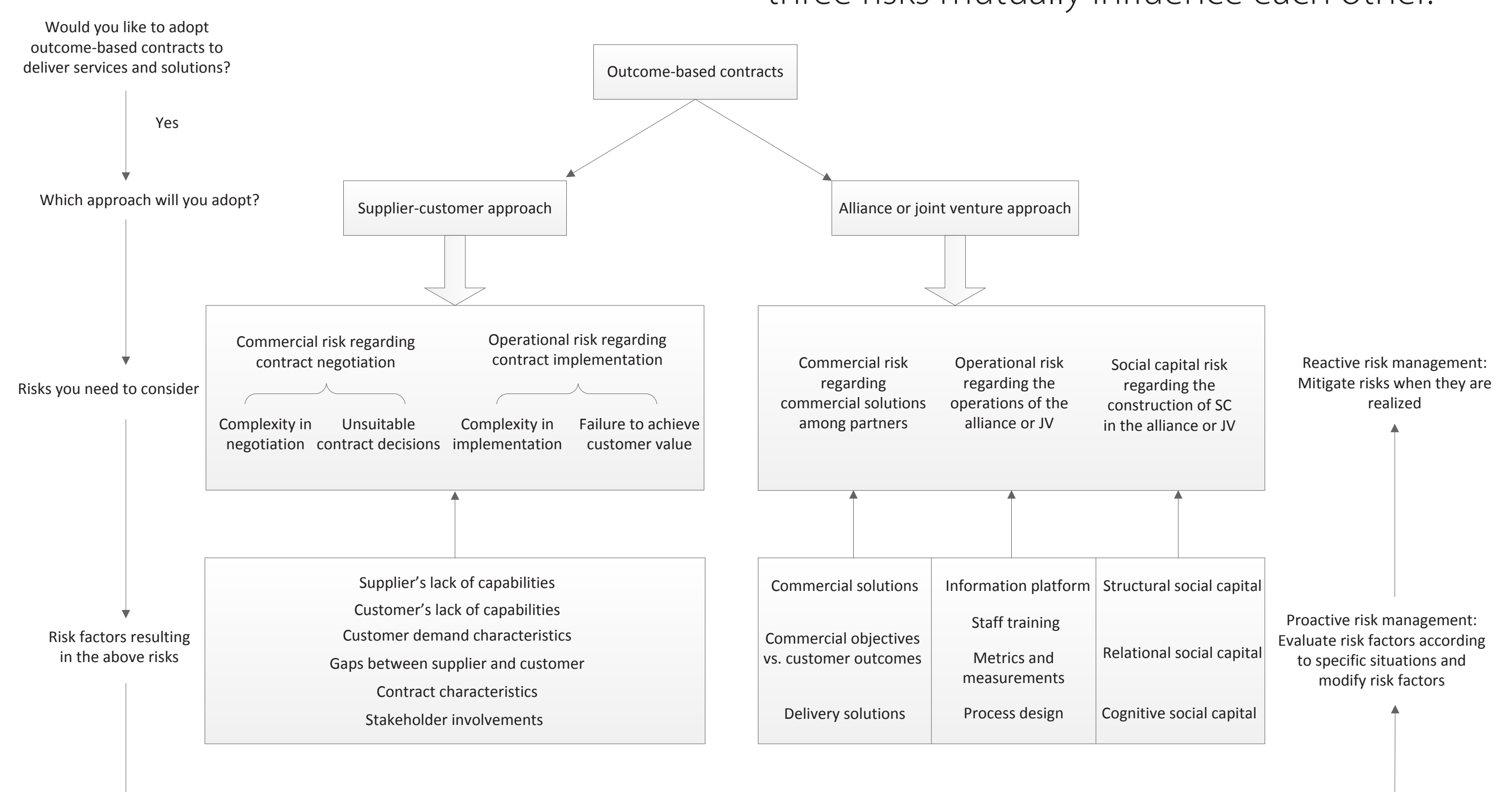

Fig.3 A risk management process for outcome-based contracts

Through-Life Accountability
"Managing Complex Services"

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Shift to Services

Customers
Reduce risk of ownership *(Ward et al. 2005)*
Capability to perform operations

Manufacturers
Strategic, economic, environmental motives *(Vandermerwe & Rada 1988)*
More responsibilities *(Tukker 2004)*
Operational, performance & financial risks *(Nordin et al. 2011)*

Services
Relationship based *(Oliva & Kallenberg 2003)*
New capabilities *(Baines et al. 2009)*
Multiple partners & long term contracts *(Neely 2008)*

What about risks associated with safety?

Manufacturers need to have a clear understanding of where accountability lies in the event of failure of a provided service through-life in order to reduce the risk of failures and hedge the organisation against liabilities.

Accountability

Accountability has many forms and dimensions which are not independent. As a result, it is far from straightforward for organisations to understand and deal with their accountabilities, especially in the case of servitized manufacturers where the product may be provided by one organisation, and the support services by a large network of partners.

Figure: Accountability forms and dimensions (e.g. Roberts 1991; Sinclair 1995)

Through-Life Accountability

Through-Life Accountability (TLA) is '…the duty to inform, justify and accept the consequences of decisions and actions taken during the entire lifecycle of assets and associated services.' (Fielder et al. 2014)

Accident Causation

Required attributes in order to achieve high levels of reliability are: 1. commitment to standard procedures 2. culture of continuous learning 3. commitment to results and safety 4. flexible structures 5. in-built system and human redundancy 6. outstanding technology 7. effective communication 8. reward systems for reporting failures and 9. establishment of minimum requirements (e.g. Roberts et al. 1994; Tranfield et al. 2003; Hopkins 2007; Sullivan & Beach 2009; Saleh et al. 2010; Lekka & Sugden 2011; Sutcliffe 2011; Makri & Neely 2015)

Studies focus only on single organisations

Exploratory Research

Initial results from 5 Interviews conducted within different departments of a defence manufacturer with worldwide presence, suggest that the following categories are important in order to promote safety and prevent accidents: 1. culture of reporting failures 2. clarity of accountabilities 3. effective communication 4. system and human redundancy 5. standard procedures 6. culture of continuous learning 7. flexible structures 8. culture that promotes safety

Research Gap

Research on TLA is limited and research on 'accountability' focuses on identifying its complexity rather than how organisations can best deal with it. Research on 'servitization' focuses on the challenges associated with operational, performance and financial risks, with research on the impact of services on safety being rather limited. Finally, while the literature of accident causation provides useful insights on how to reduce the risk of failures, there is no explicit focus on servitized manufacturers and particularly on how failures are influenced by the large number of partners involved in long-term service contracts.

Research Proposal

We investigate how through-life accountability can influence safety by examining the factors that can lead to accidents within a service environment. More specifically, we first aim to understand how the propensity to report incidents changes through time and why. Second, we aim to identify how these changes affect the number of accidents that may occur. We expect that the results of this research will be of use to both the academic and practitioner community. This study will be an exploratory research with the analysis based on qualitative methods:

Land x6
Sea x6
Air x6

6 incidents per area
18 cases in total

Unit of analysis: Incident

5 interviews per case
90 interviews in total

5 Interviews
Accident reports

Service Co-creation Environments

"An Exploratory Comparison between Virtual and Physical Living Labs"

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Background

For decades, the importance of services to the global economy has progressively increased whereas the importance of goods has declined. To realize service innovation, companies increasingly utilise living labs which follow an open innovation model allowing businesses to engage with users early in the creative process. As a consequence, co-creation with users and the insights derived from it are expected to better address both existing and emerging customer's needs and wants (Leminen et al. 2012).

Objectives

The objective of the doctoral research is to contribute to the theoretical debate and managerial practice by:

- contributing to the nascent development state of service co-creation
- exploring the characteristics of physical and virtual living labs in relation to the quality and quantity of creative contributions
- explaining the drivers of service innovation with respect to the co-creation environment
- developing guidelines for successful service innovation in living labs through customer co-creation.

How does successful service co-creation happen in living labs?

1. How should customers be integrated into the service co-creation process in living labs?
2. How should firms manage business processes to successfully support service co-creation in living labs?
3. How do the virtual and physical characteristics of living labs impact creative contributions by co-creators?

Method
Research Design

- Exploratory qualitative research
- Multiple case study approach
- Cross-sectional analysis

Data collection

- Semi-structured interviews
- Observations
- Focus groups

Pilot Study: JOSEPHS

- Living lab in Nuremberg/Germany
- In-depth interviews and observations: Managers, Administrators, Facilitator for co-creation, Users

About JOSEPHS

Josephs has 5 Business co-creation spaces for companies to present their products or services for 3 months under 1 theme. Visitors are encouraged to try out products/services and give feedback.

Katharina Greve and Dr Veronica Martinez tried out a video game that is controlled by movements. Fun and interactivity are important aspects for JOSEPHS to encourage users to test products and services and provide feedback based on their user experience.

Preliminary Findings

Based on the pilot at JOSEPHS, three key challenges in the co-creation process could be identified:
Education: Shift from passive consumer markets to markets as platforms for firms and active customers to jointly create value requires explanation and education of customers and firms to stimulate the co-creation process.
Execution: Turning an idea or prototype into an engaging and interactive service whilst encouraging customers to provide feedback without limiting their creativity.
Exploitation: Capturing feedback and customer behaviour appropriately, collecting information, processing data and communicating findings accurately and effectively.

Making and sustaining the shift to services

"Decoding the Service Processes"

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Background

The lack of processes and guidelines on how to shift to services has pushed organisations to experience slow, inefficient and uneconomical transitions to services. If we can provide guidelines on how to shift to services, organizations like yours could increase success rates, be leaner, faster and accelerate the commercialization of services.
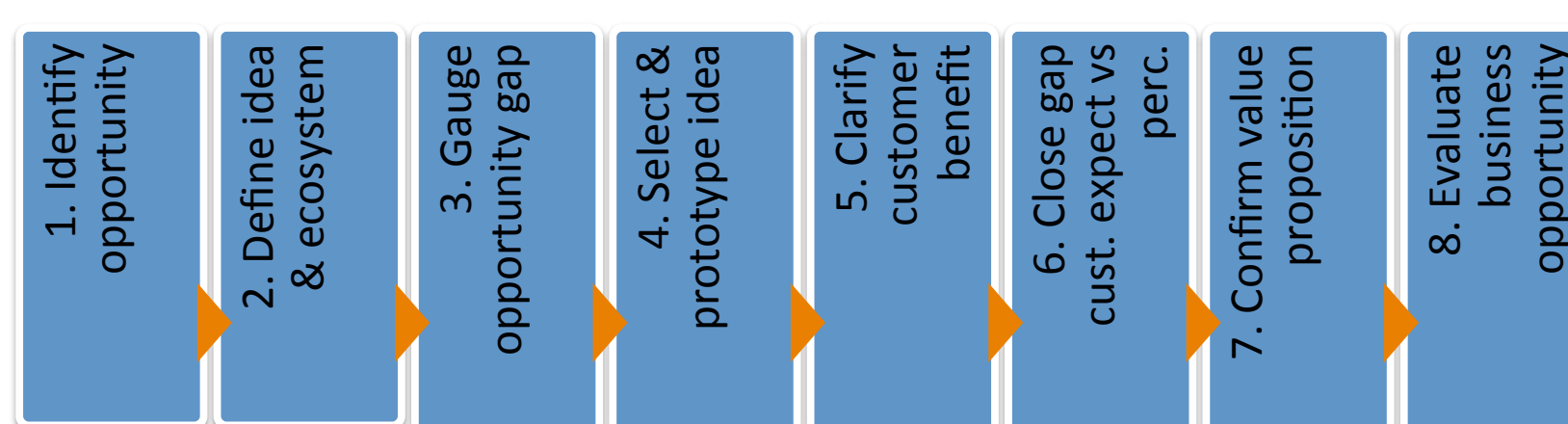
Our 2015 project objective

Is to help organizations to move forward by providing guidelines and tools to develop and embed *services processes* in the way they do businesses.

Outputs to date

- *'Factors that drive success report'* equips you with a strategic set of actions to shift to services.

- *'Five service processes' guidelines, tools and recommendations'* in making and sustaining the shift to services. They are:

1. Design & plan the service model

Through a business viability analysis, this process guides you from the idea generation to selection of the strongest service idea to be piloted.
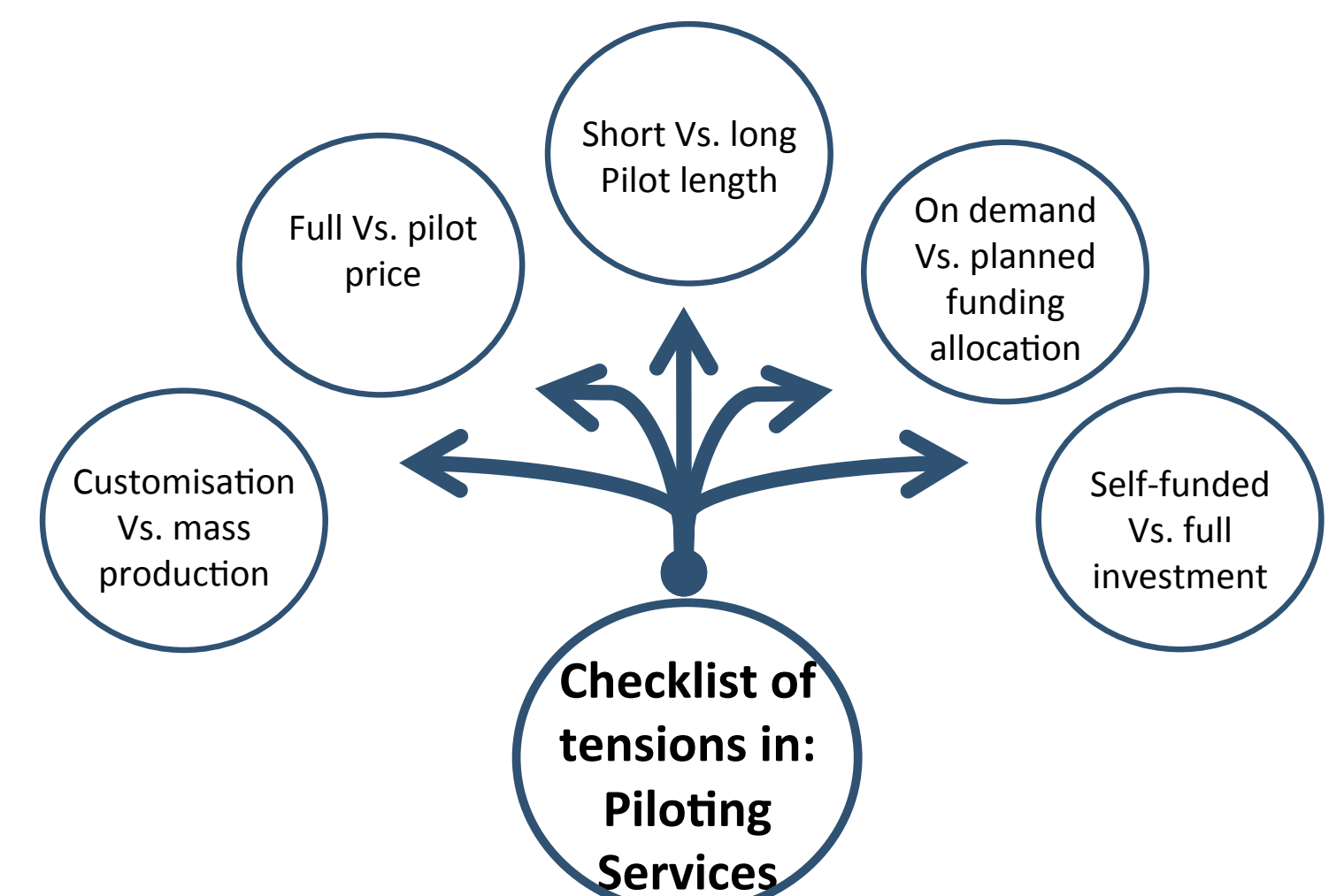

1. Identify opportunity
2. Define idea & ecosystem
3. Gauge opportunity gap
4. Select & prototype idea
5. Clarify customer benefit
6. Close gap cust. expect vs perc.
7. Confirm value proposition
8. Evaluate business opportunity

Service design and plan process

2. Piloting services

New insights in setting a piloting process:

- Map the pilot lifecycle & time frames.
- Blend the entrepreneurial with business approach from early stages (see figure).
- Identify key variables of the pilot for future standardisation and scalability.

Short Vs. long Pilot length

Full Vs. pilot price

On demand Vs. planned funding allocation

Customisation Vs. mass production

Self-funded Vs. full investment

Checklist of tensions in: Piloting Services

Piloting & managing the service portfolio: Tensions

3. Management of services portfolio

New insights for managing portfolios:

- In managing the service pilot lifecycle, it is vital to set various decision-making points (see above).
- Strategic and financial criteria are key components in the evaluation of pilots.

4. Commercial execution

New insights in service pricing:

- 10 rules for service pricing.
- General rules for pricing services in emergent markets.

This process will be completed this year.

General rules for pricing services in emergent markets

- **Know your business and then segment it**
- **Work out different "service rates"** for each segment
  - "By hour" selling rate for field ser...
  - "Flat rate"
  - Create "a discount" that allows ou... judge for different customers or m...
- **Do not drive customers away**
  - Support and secure customers
  - Do not jeopardize spares
  - Maintain operating cost down, ma...
- **"Bundle"** parts and service and only d... customer. Remember: bundles' prices... customers in emergent markets
- **Invest** in our people's training

Ten rules for service pricing

1. Make the **value proposition** evident. Tailor it to the customer
2. Clarify the **value to the customer** - now and in the future. Communicate value to customers - procurers versus users
3. **Differentiate between** complementary **services** and revenue generating services - recognise there are different types of services.
4. **Think long-term**: how to incrementally build capability today as well as building long term value. How to make service resilient as technology develops.
5. Consider **baselining** services as a way of making explicit the customer's current cost to serve.
6. Consider your **options for pricing** – should you bundled? Give the service away only if you can secure complementary sales - and you don't want to charge in the future. Can you pilot prices?
7. Establish the right **governance, controls and accounting processes** - who owns pricing, who signs off prices and who has to commit to deliver the service for the price that will be charged.
8. Review the **operations processes** - can you support the delivery of the services with your existing infrastructure.
9. **Protect your brand** - failure to deliver service can damage the brand & future sells.
10. **Scope the contract** to reflect the budget - be clear about what you can deliver and what you can't as price is negotiated.

5. Managing the transition from service generation 1 to generation 2

Preliminary results are presented during the service week.

Customer Experience Analytics

"How can qualitative and quantitative measures be combined to better measure the customer experience?"

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Background

Customer experience management is listed in the top ten priorities of CEOs around the globe. Despite acknowledgement that the customer experience is complex and longitudinal, measurement is usually made at one point in time, typically at the end of the journey, and often based on rather superficial and subjective assessments, such as the net promoter score.

These single measures mask sources of friction in the customer experience. Even if multiple measures are taken at several touch points across the customer experience journey, they are often 'averaged out', masking important details.

Research Objectives

This project aims to create a novel way of analysing customer experience data, by combining qualitative and quantitative customer data that captures details of positive and negative experiences, in order to generate deep insights of key touch points across the customer experience journey.

Research Process:

1. Business Understanding
2. Data Sources: Transaction survey
3. Manual Coding Process
4. Library and Patterns Development
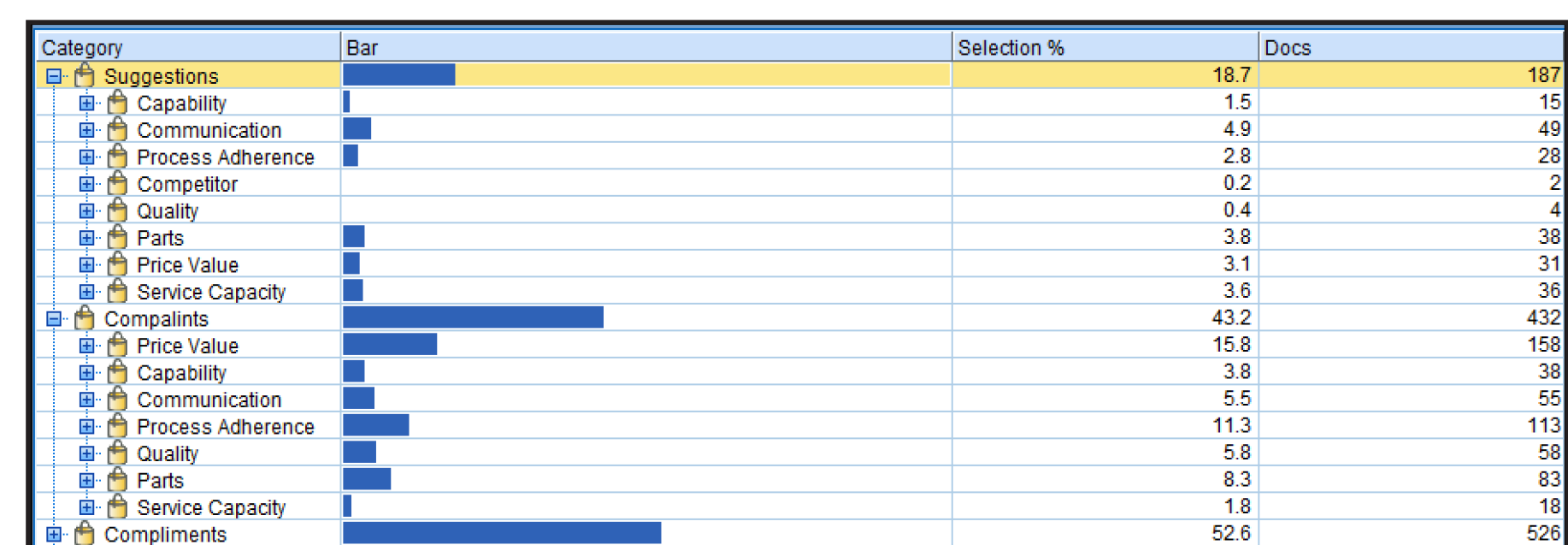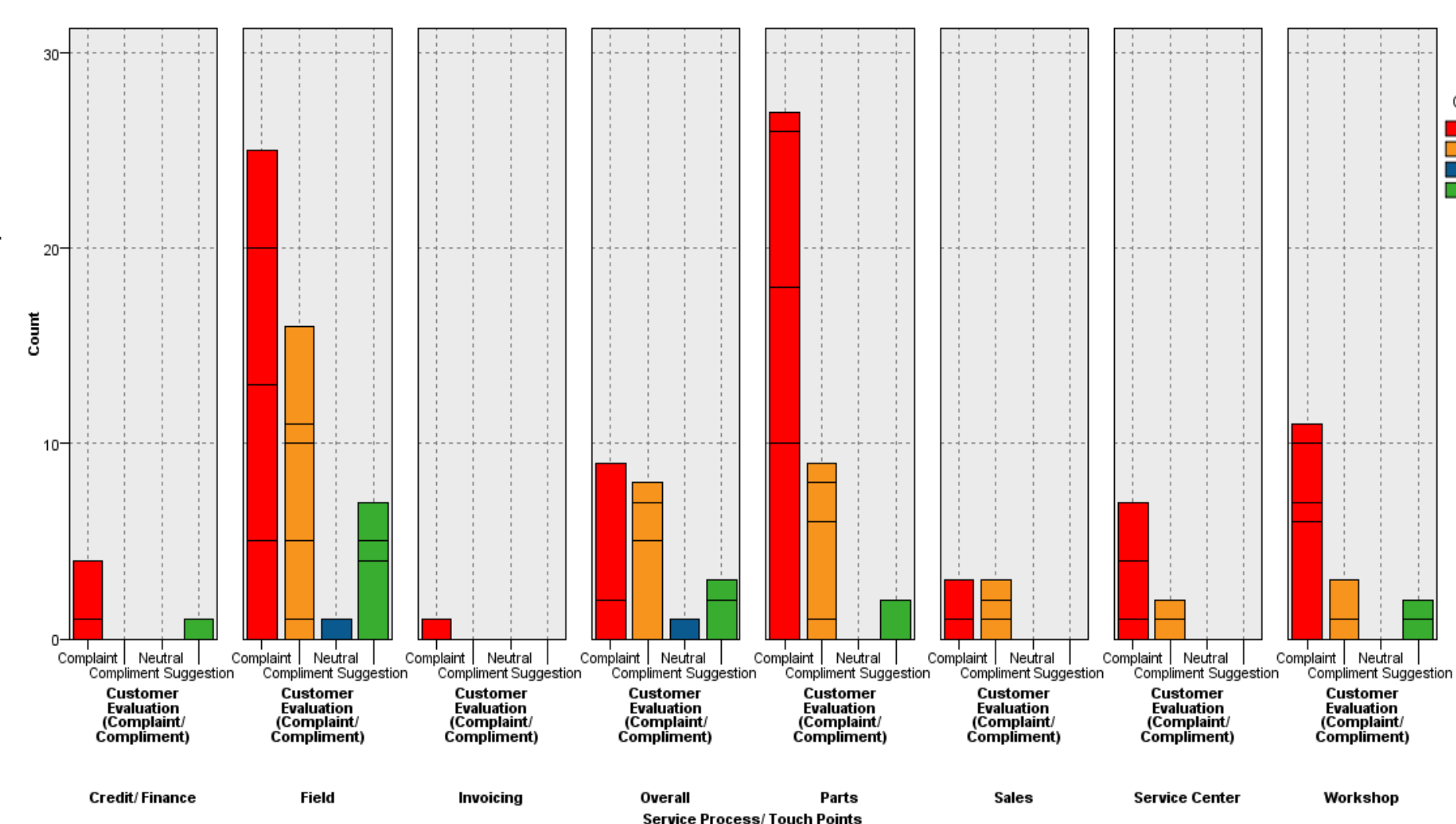5. Model Evaluation and Validation

Expected Outcomes

The project demonstrate how text analytics can be used to automate the process of analysing customer satisfaction data. The result will be:

a) Root cause analyses - what are the major factors that are causing customer complaints.

Category	Bar	Selection %	Docs
Suggestions		18.7	187
Capability		1.5	15
Communication		4.9	49
Process Adherence		2.8	28
Competitor		0.2	2
Quality		0.4	4
Parts		3.8	38
Price Value		3.1	31
Service Capacity		3.6	36
Complaints		43.2	432
Price Value		15.8	158
Capability		3.8	38
Communication		5.5	55
Process Adherence		11.3	113
Quality		5.8	58
Parts		8.3	83
Service Capacity		1.8	18
Compliments		52.6	526

b) Customer evaluation for each touch point

c) Loyalty status versus customer evaluation

Customer Loyalty Status	Complaints	Compliments	Suggestions
Loyal	41.35%	69.5%	17.22%
Vulnerable	43.46%	26.52%	40.73%
At-Risk	15.29%	13.97%	17.22%

Comment	Additional Comment
I think the *service* is *very very good at the moment, only problem* has been in *last couple of months* that some of *key service technicians were missing.* But even if they cannot help you with the *first visit,* they keep you informed and try to solve the problem	I think the service is very very good at the moment only problem has been in last couple of months that some of key service technicians were missing But even if they cannot help you with the first visit, they keep you informed and try to solve the problem

| Resource company	Resource Customer	Activity Customer	Activity Company	Emotion Positive	Emotion Negative	Service Process	Interaction	Interaction Duration	Customer Role	Evaluation	Root Causes	
		Service		very very good		Field			Receiver	Compliment	Process Adherence	Field Service
key service technicians					were missing	Field		In last couple of months	Receiver	Complaint	Service Capacity	Manpower
			competitive with the pricing			Overall				Suggestion	Price Value	Product

Outsource Big Data

"The make-or-buy decision for big data service"

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Background

Data is now considered to be the new resource; the volume, variety, velocity and veracity of data are rapidly increasing and it makes big data become so complex that cannot be processed by traditional techniques and skills.

Big data service is to 'manufacture' data to create value. Although top-performing organizations are twice as likely to apply big data analytics to activities (Lavalle et al. 2011), companies have finite resources and cannot always afford to have all big data service in-house, i.e. data acquisition, data analytics, they may wish to outsource big data service.
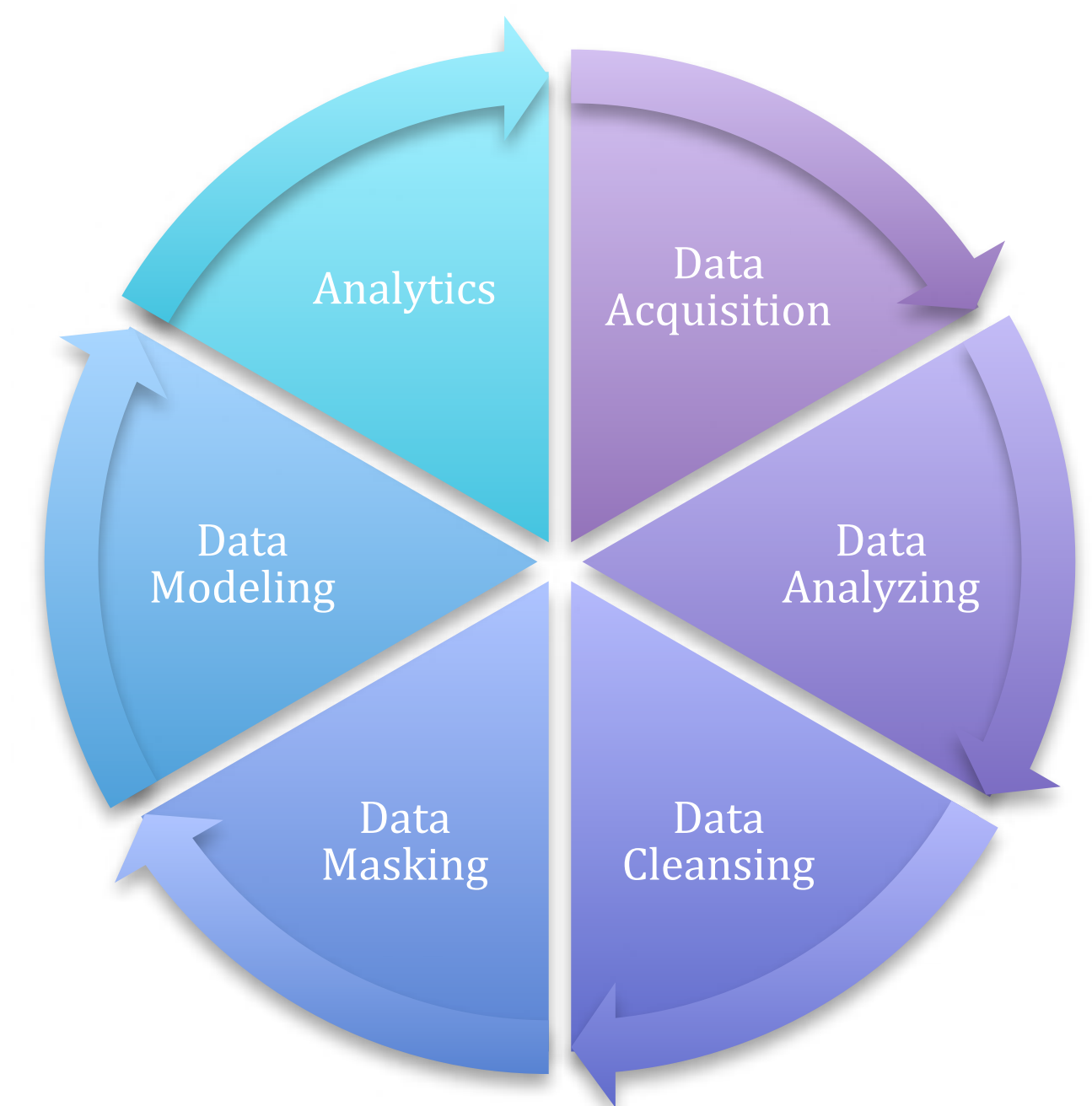
Big data as a service

Research Objectives

The overall project objective is *'How could we decide whether to outsource the big data service or not?'*

Research questions

- What is big data service?
- Big data is a broad term for data sets so large or complex that traditional data processing applications are inadequate.
- Most of the studies focus on the importance and impact of big data
- There is huge ambiguity regarding the definition of big data as a service.
- How to decide whether to make or buy big data service?
- Transactional Cost Analysis
- Resource based view
- Transform "manufacturing make-versus-buy framework" into big data service make-versus-buy framework

Activities

- Literature review to develop initial framework on big data service
- Literature review to identify how should the make-versus-buy framework for manufacturing be different from make-versus-buy framework for big data service
- Initiate the make-versus-buy framework for big data service
- Interviews and case studies to refine the big data service model
- Interviews and case studies to test and refine the make-versus-buy framework for big data service

Expected outcomes

- Define big data-as-a-service and develop a big data service model
- Develop a make-versus-buy framework for big data service