Making and sustaining the shift to services in the animal health industry

"Steps and best practices associated in the service transformation"

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Background

The introduction of Services changes the whole relationship between industrial firms and customers, from a transactional model to in-depth conversational and contact signs model.

Research objective

To understand how product-centric firms have developed and sold service solutions to their customers, and what practices they have learnt from their service journeys.

The company studied is one of the largest animal health company.

Services offerings include:

- Business Consulting
- Humain: Human Capital
- Cout: Cost Improvement
- Agrip: Data Analytics

Customers at the center of the shift to service journey

Service skills & capabilities – crafted by training, hiring people or partnering to facilitate discussions with customers about their most critical issues.

Customer buyer service journey – has to be completely integrated into the company service journey.

Benefits from the shift to services

Create strategic differentiation- an additional source of revenue and value to customers by delivering solutions that customers might have never dreamt of.

Enhance the growth of the core business. This value is embedded throughout the organisation and most importantly to the sales force to make them feel proud of services offerings

"We are creating a new unique exclusive capability to the veterinary channel." Customers benefit from integrated services that enhance their core businesses.
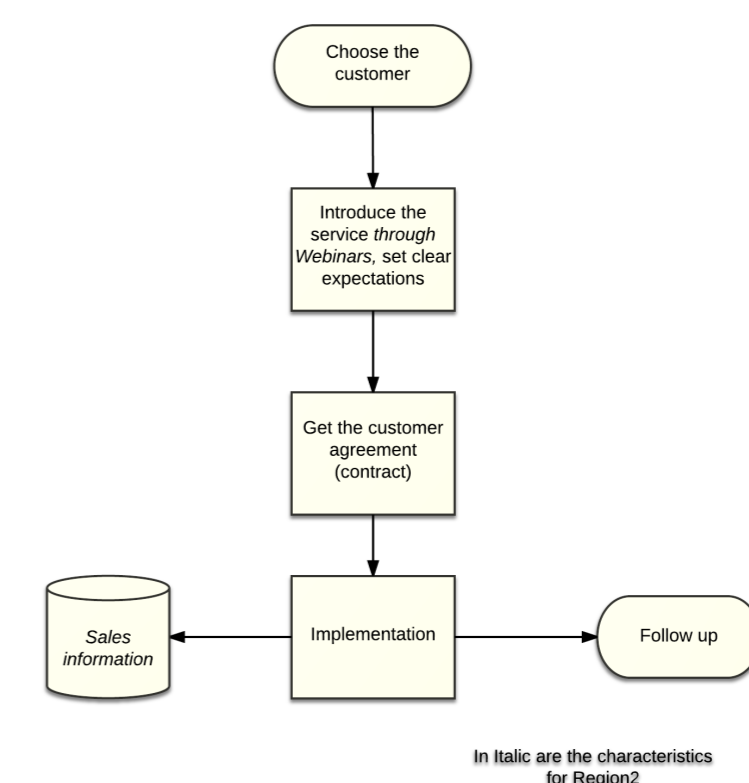
The service delivery journey

While the product sales process ends when customers receive the product, the service sales process requires follow up after the implementation: the company comes back to the customers to get their feedback and experience about the service. So, setting clear expectations from the very beginning is key.

Best practices: Shift to Services

- Develop a service culture with people willing to change
- Leverage the peers – storytelling
- Build an integrated service team
- Set fair and flexible service pricing structures

Conclusions

In the shift to services, three critical issues emerged:

- Set a strong service leadership
- Get the buy-in from sales force's for service selling
- Continuous communication of services as the vision of the firm's success

B2B Service Experience Management

A study of partition-based service experience patterns in business-to-business settings

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Background

Service experience pattern has been demonstrated in the B2C literature to be vital in shaping customer overall satisfaction. Extant studies have paid little attention to "service experience patterns" in B2B settings. Service providers need to know how to manage and respond their customer's experiences with a single service encounter to ensure they deliver a quality service with minimum cost and effort.

Research Objectives

Considering the effects of partitioning B2B service delivery processes, this study focuses on partition-based service experience patterns and investigate how different partition-based service experience patterns influence customers' evaluation of overall service satisfaction. In particular, this study considers the roles of service partitions in evaluating overall satisfaction and attempts to distil some of the findings regarding B2C service delivery and investigate which B2B service experience patterns are more effective .

Research questions

When is the best time for service providers to delight their customers within a service partition during B2B services?

How do the negative effects of service failure change over time within a service partition during B2B services?

How do the effects of peak service encounters on the overall satisfaction change across service partitions?

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

The research framework followed for this study is illustrated below.
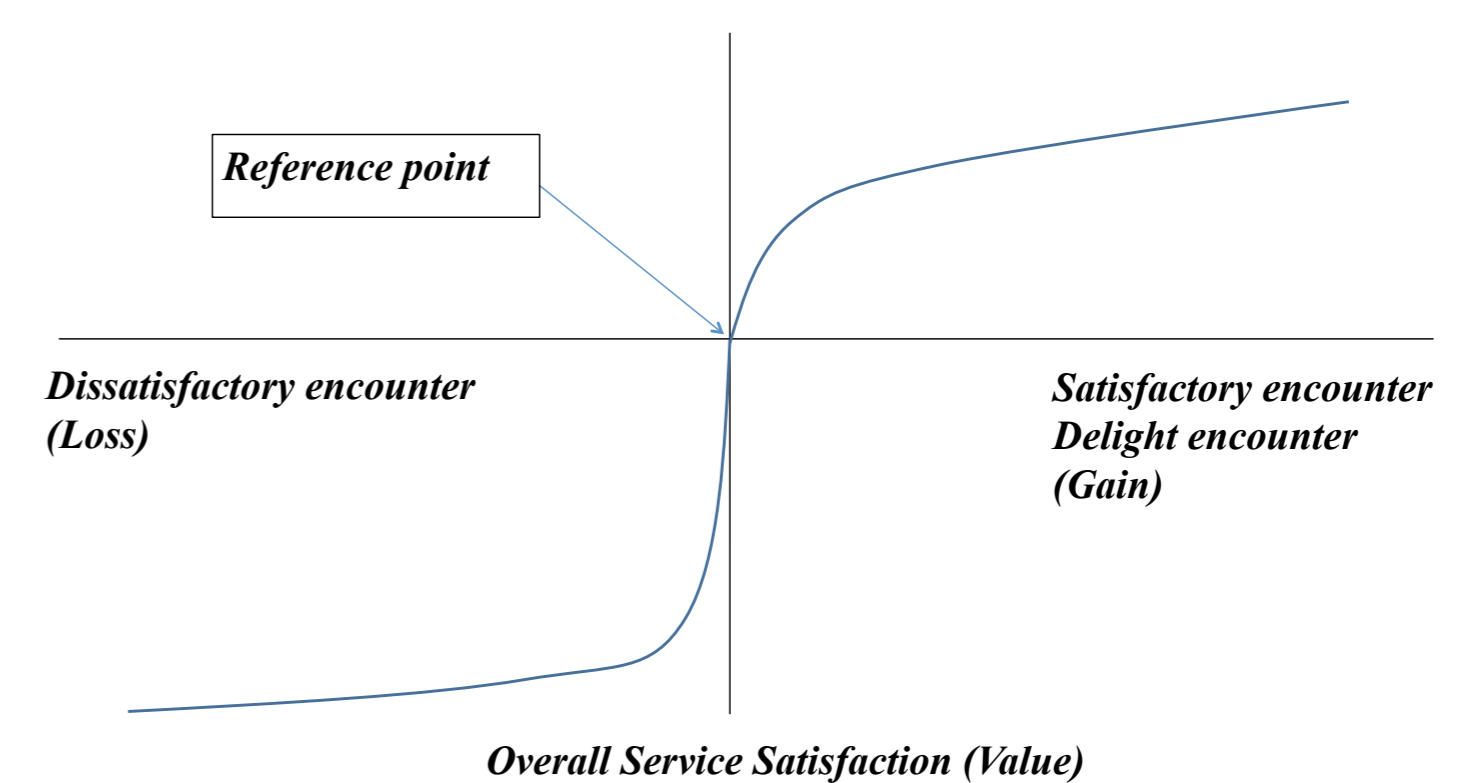
This study takes advantage of prospect theory as the theoretical foundation to analyze the effects of individual service encounter experiences on service partition satisfaction and overall service satisfaction. In line with prospect theory, this study codes dissatisfactory encounters as "losses" and both satisfactory encounters and delight encounters as "gains".

To test the hypotheses proposed in this study, this study employs a series of scenario-based experiments using an online role-playing survey approach in hypothetical B2B settings.

Expected Outcomes

Evaluation models for partition-based overall service satisfaction

Roles of delight experiences over partitions

Roles of dissatisfactory experiences over partitions

Impacts of partition-based service patterns on overall service satisfaction.

Research Framework followed for this study

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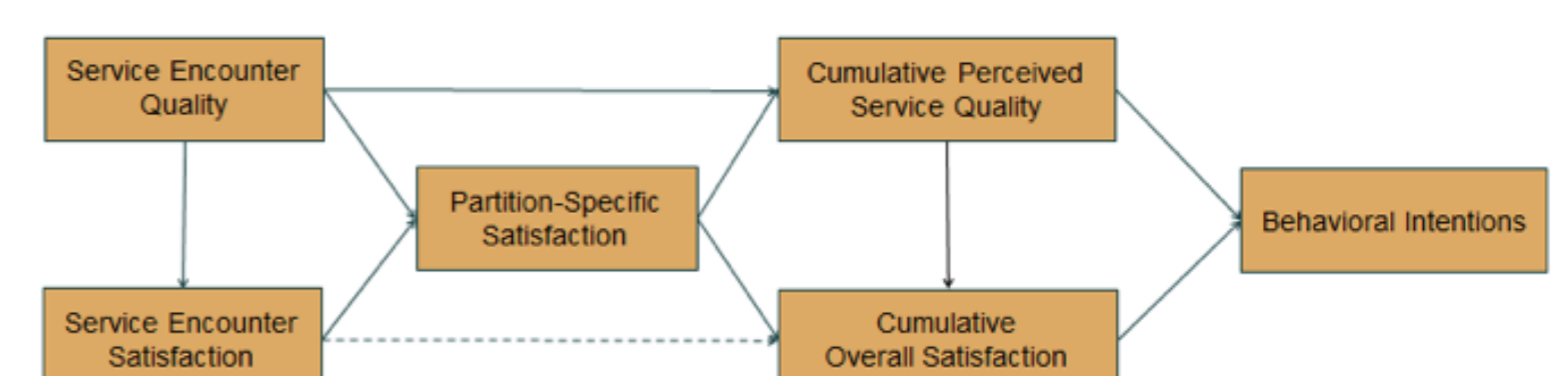
Counterfeit of Spare Parts in Service Supply Chains

"Definition, Impact and Best Practices"

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Background

By 2015, the total worldwide value of counterfeit and pirated products and services is estimated to reach $1.77 Trillion, with 2.5 million legitimate jobs lost.

(Frontier Economics, 2011)

Recently, counterfeit products have become increasingly prevalent in emergent service supply chains and their rapid expansion has resulted in increasing vulnerability to third party attacks.

Research Objectives

To critically explore the impact of counterfeit spare parts in service supply chains and the best practices to mitigate their effects.
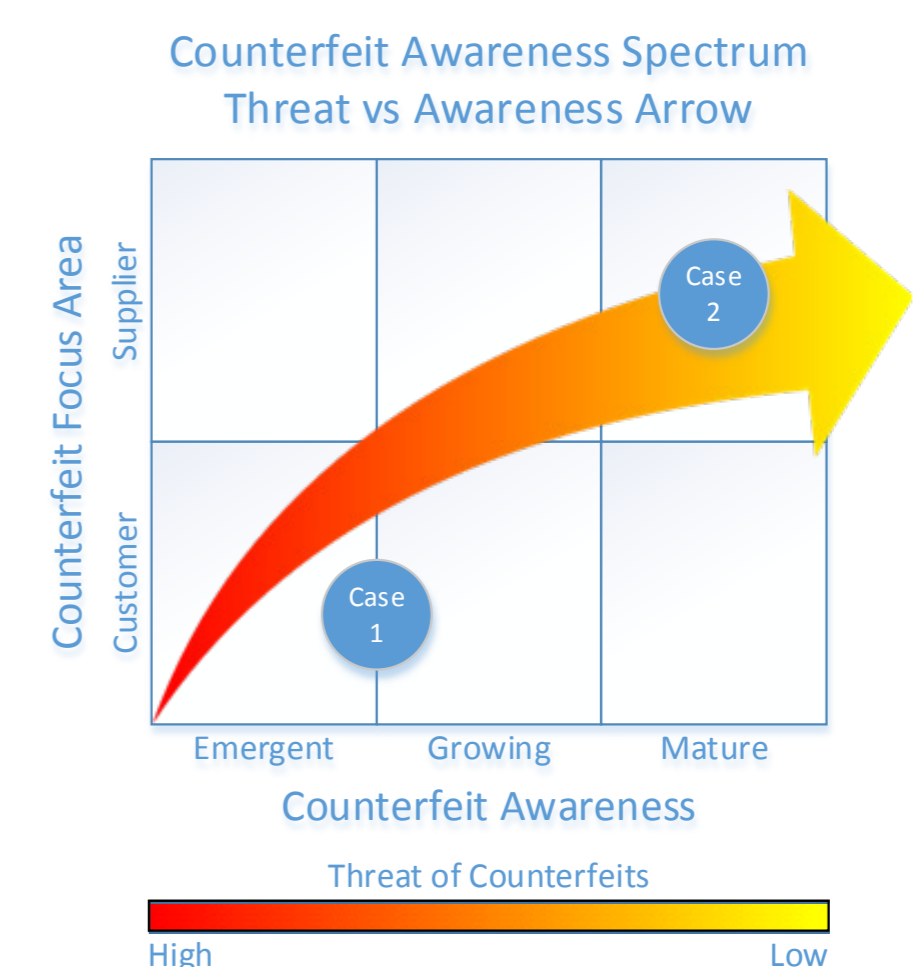
Service Counterfeit Definition

Service Counterfeit is defined as:
Services or Spare Parts whose origin, age, composition, configuration, certification status or other characteristic (including whether or not the materiel has been used previously – old represented as new) has been confirmed to be misrepresented.

Service Counterfeit Impact

This research found that the counterfeit impact is context specific. The potential impact of counterfeiting drives the actions and awareness:

- In the defence industry, the opportunity for counterfeits to enter the supply chain is lower, as the industry is highly regulated. Nevertheless, the potential impact from counterfeits is higher; therefore the actions and awareness are higher.

- Conversely, in the process industry, the opportunity for counterfeits to enter the supply chain is higher, as this industry sector is not sufficiently regulated. However, surprisingly and illogically, the actions and awareness are lower due to the potential impact from counterfeits being lower than in the defence sector.

The results highlight the urgency of evaluating the primary drivers and impacts of service counterfeiting.

Counterfeit Awareness Spectrum
Threat vs Awareness Arrow

Best Practices to Mitigate Service Counterfeiting

Primary Drivers and Impacts of Service Counterfeiting
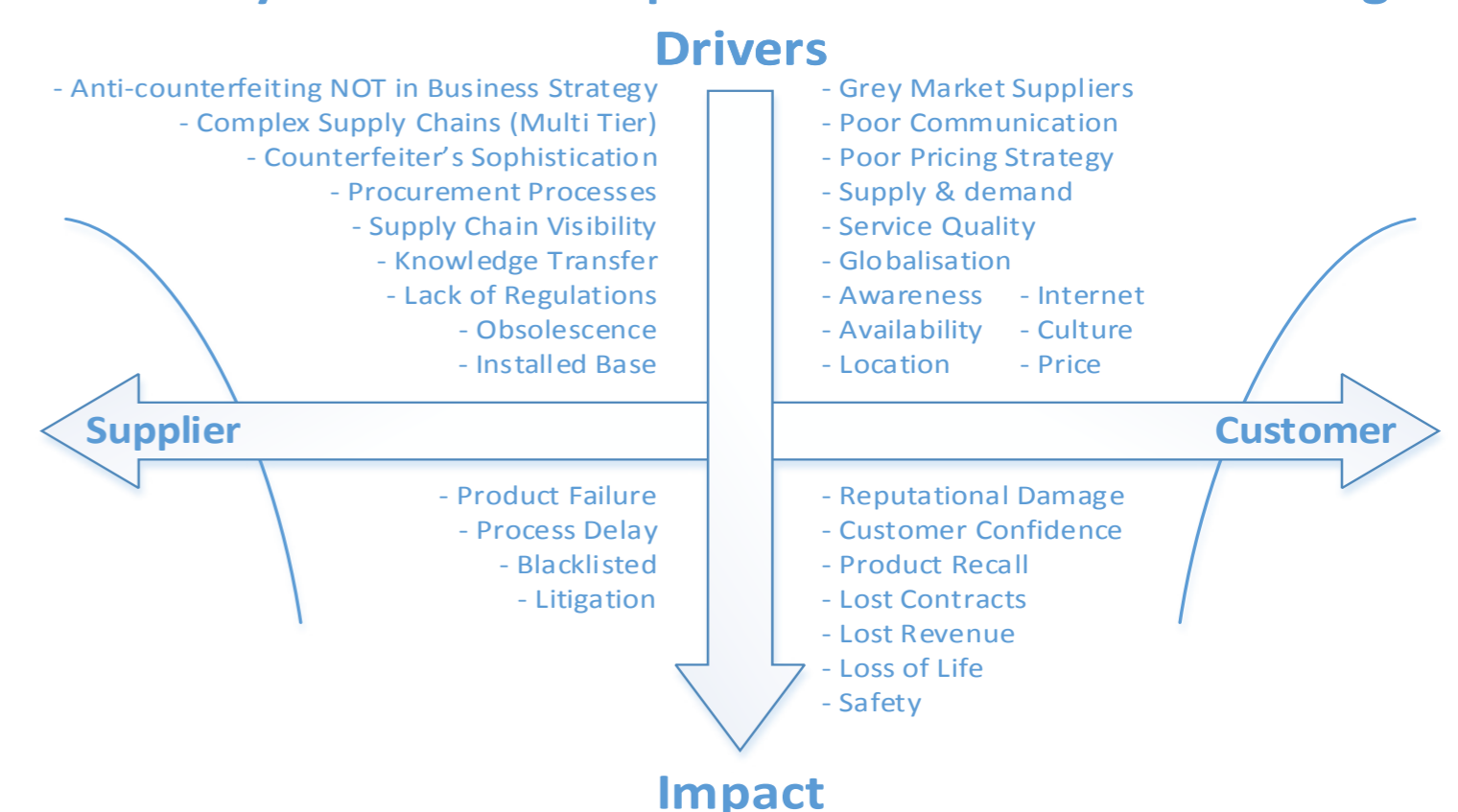
Four novel best practices to mitigate the impact of service counterfeiting are proposed:

Best practice	Action
Improve procurement procedures	• Supply Chain Maps • Supplier Questionnaires • Standards Procurement T&Cs • Partner with Suppliers • Increase supply chain visibility
Improve obsolescence management	• Design for full product life • Design out obsolescence
Do not return counterfeits	• Identify source • Destroy counterfeit
Drop counterfeit stigma	• Industry must encourage communication

Conclusions

The research shows the need to incorporate best practices to mitigate counterfeits in servitization business strategies and models.

By understanding the drivers, impact, awareness and actions, practitioners will better understand the risk associated with counterfeits.

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Ecosystems Research 2014

"Creating and capturing value in business ecosystems"

Background

In today's increasingly complex and interconnected world, customer needs for goods and services are better addressed by networks of interacting organizations – 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. But what are the factors that determine who creates and who captures value across ecosystems?

Research Objectives

The project has the following objectives:

- Describe the state of the art of the scientific discussion on value creation and value capture in business ecosystems through a systematic review of academic- and practitioner-oriented literatures.

- Formalize an "Ecosystem Strategy Framework" (ESF) that provides executives with formal guidance for formulating and implementing innovative corporate strategies, and influencing the characteristics and future development of business ecosystems.

Approach

Building on previous CSA studies, the Ecosystems Research 2014 aims to answer this question, and develop an Ecosystem Strategy Framework (ESF) that firms can use to explore, interpret, and leverage to their own advantage the competitive dynamics occurring within the ecosystems in which they participate.

For each case, the researchers seek to answer questions like:

- around which core capabilities will the ecosystem develop?

- which players will play a key role in controlling the ecosystem?

- who is likely to capture greater value?

2014 Activities

The study has allowed to identify macro-factors that firms need to consider for successful ecosystem strategies. These factors are represented in the figure below along an iterative process of analysis and decision making involving three phases:

1 Assess the preconditions for an ecosystem strategy.

2 Build and share a vision for the ecosystem development and future evolution.

3 Action four levers to influence the ecosystem.

Ecosystem Strategy Framework 3.4   EXTENDED VIEW

1. Evaluate Assess **conditions** for an ecosystem strategy	**1.1 DEFINE CUSTOMER AND NEED** • Type of customer(s) • Type of customer need • Geographical scale • Readiness for adoption	**1.2 MAP KEY PLAYERS & RELATIONSHIPS** • Key players • Leader(s) & Leadership • Type of relationships • Value definition & Map	**1.3 VERIFY THAT IT IS AN ECOSYSTEM** • Complexity • Multiplicity of roles • Coevolution/Emergence • Ecosystem life cycle	**1.4 UNDERSTAND THE CONTEXT** • Related ecosystems • Source(s) of funds • Legal constraints • Frequency of provision
2. Envision Build and share a **vision** for the ecosystem	**2.1 SET GOALS FOR FIRM & KEY PLAYERS** • Firm's strategic goals • Goals of other key players • Risks & Uncertainties • Time frame	**2.2 STATE THE VALUE PROPOSITION** • Customer experience • Value for the customer • Capabilities required • Players' contributions	**2.3 DESIGN THE OVERALL OFFERING** • Core products/services • Complements • Technical availability • Coherent offering	**2.4 IDENTIFY KEY INDIVIDUALS** • Strategy owner(s) • Strategy supporters • Transition managers • External co-innovators
3. Effect Action four **levers** to influence the ecosystem	**3.1 ORGANIZE THE FIRM & THE ECOSYSTEM** • Functions & Processes • Organizational integration • Corporate reorganization • Ecosystem's organization	**3.2 USE TECHNOLOGY STRATEGICALLY** • Designs & Design rules • Platform architectures • Platform tactics • Network externalities	**3.3 SUPPORT THE RIGHT CULTURE** • Ecosystem's culture • Firm's culture • Cultural alignment • Trust among players	**3.4 MANAGE CRITICAL KNOWLEDGE & IP** • Critical knowledge • IP appropriation issues • Use of standards • Shared IP models

Expected Outputs

1 Strategic decision-making framework to position the firm within complex service ecosystems and support its ecosystems strategy.

2 Academic paper on: Principles of Value Creation and Value Capture in Complex Service Ecosystems.

Effects of social capital on risk of outcome-based contracts from suppliers' perspective

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Increasingly firms are providing services and solutions and services provided are moving from basic services to advanced services where capabilities are delivered. In this circumstance, outcome-based contracts are increasingly used instead of behaviour-based contracts where suppliers get paid based on consumed resources or output-based contracts where suppliers get paid based on outputs. Two kinds of outcome-based contracts are:

Solution outcome-based contract

An outcome-based contract between the supplier and the customer that the supplier gets paid based on the outcome of total solutions of products and services in continual use situations.

Customer outcome-based contract

An outcome-based contract between the supplier and the customer that the supplier gets paid based on the outcome of customer's business performance in continual use situations.
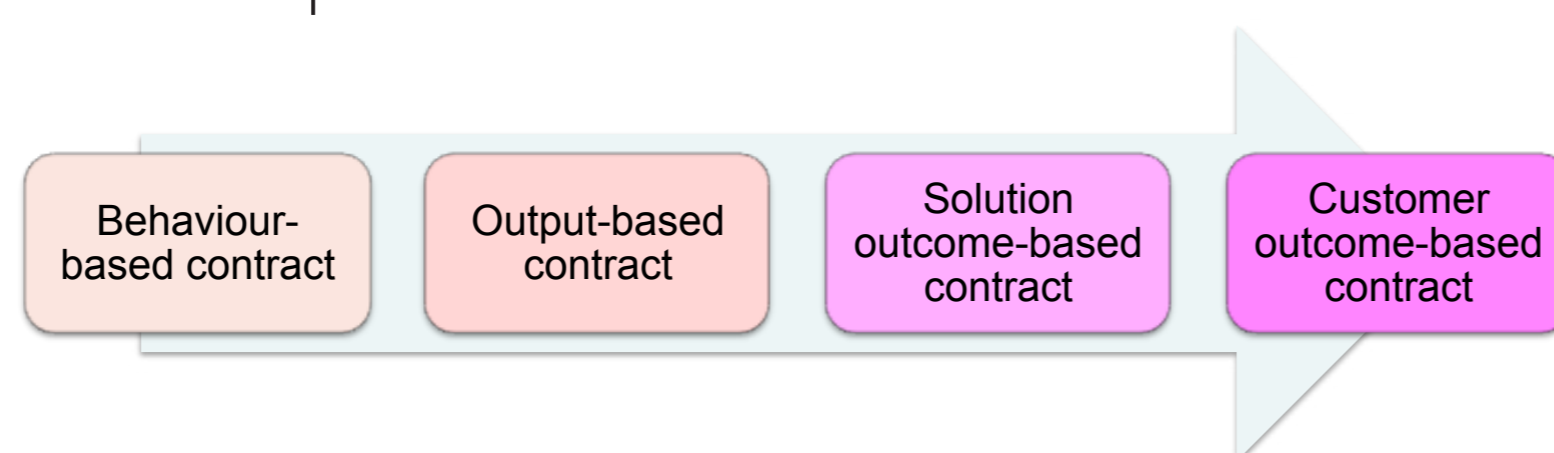

Fig.1   Types of service contracts

Social capital refers to a firm's relationships with other companies that have important resources (Ireland et al., 2002). Social capital has

three dimensions, which are mutually reinforcing each other.

- Structural – interactions, interface and communications
- Relational – trust, friendship and reciprocity.
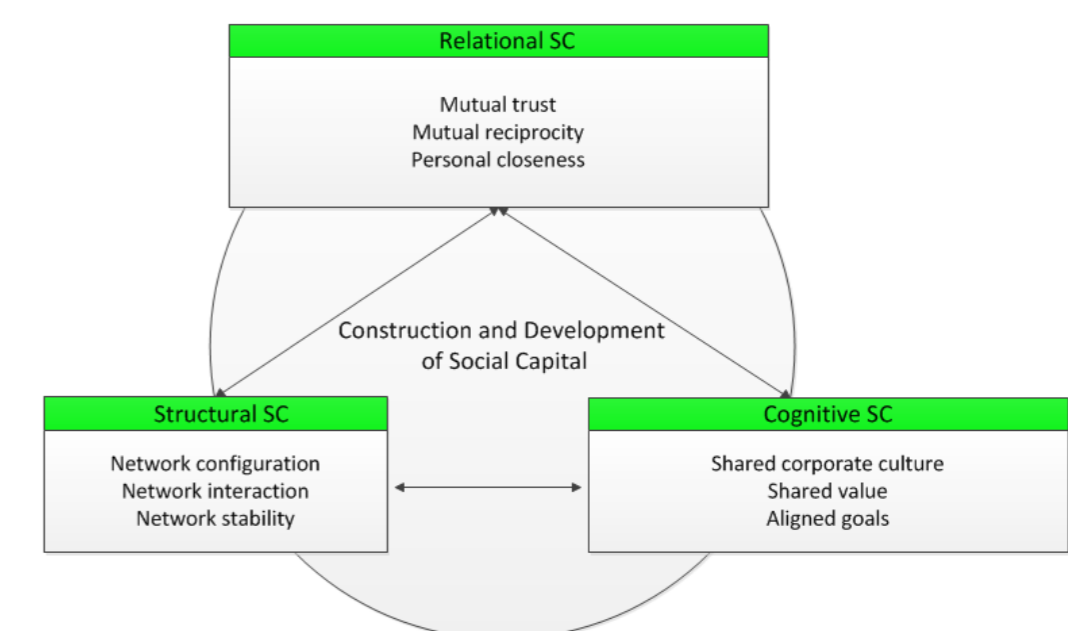- Cognitive – shared visions, aligned goals and similar corporate culture.

Fig 2 Construction and development of social capital

Risks of outcome-based contracts

identified so far from the research include twenty items regarding negotiation power, negotiation procedures, contract decisions, environment, requirements of outcome-based contracts, service delivery and customer demands. Together with that, twenty-eight risk factors leading to the happening of risks are identified.

Effects of social capital on risks

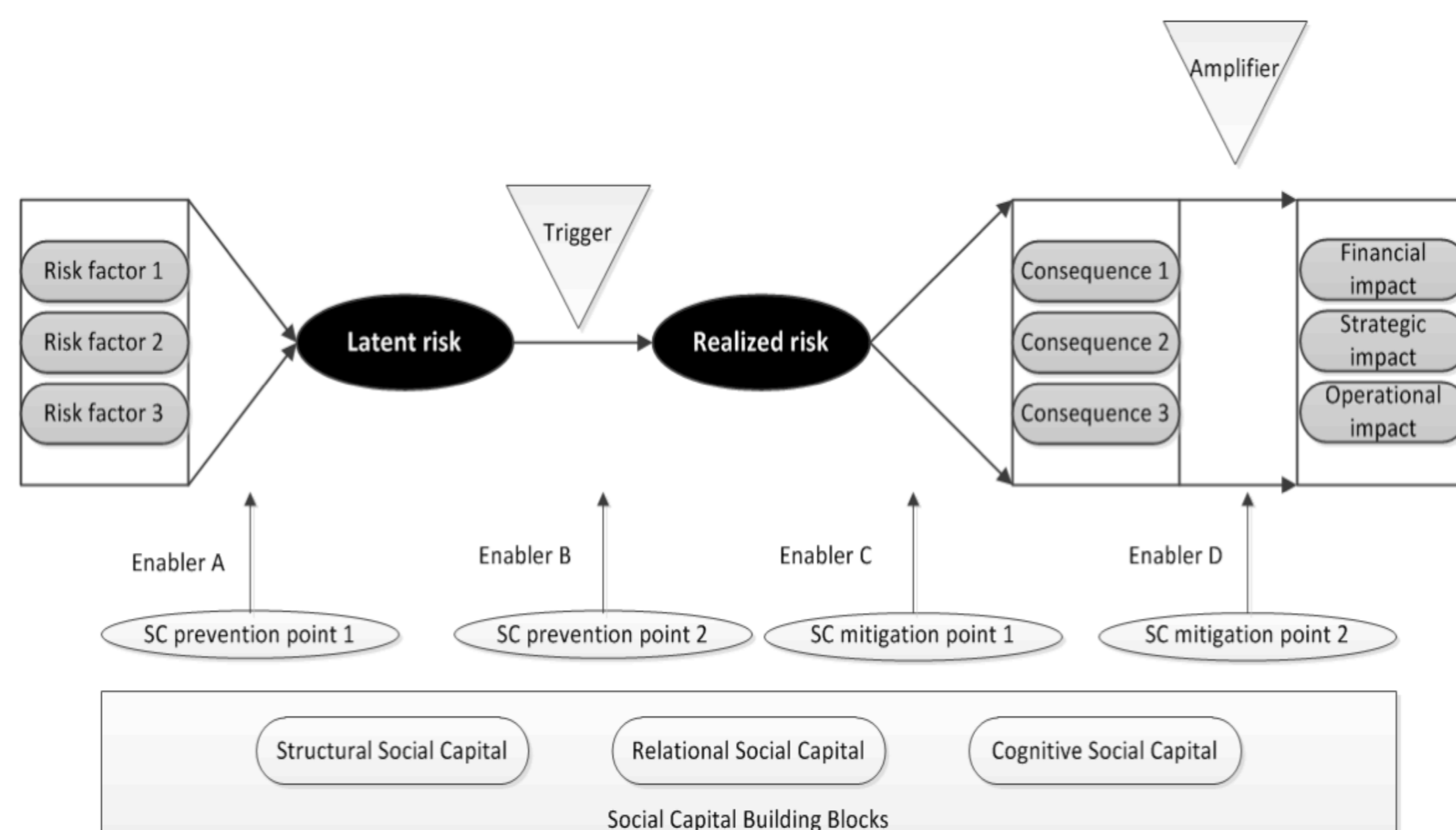Social capital can prevent and mitigate risks at different stages of risk formation, which is shown in figure 3.

Fig 3   Effects of social capital on risk of outcome-based contracts

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Developing a methodology for mapping Through-Life Accountability

"Accountability in complex product-service systems: How can we map TLA in order to improve product safety?"

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Background

The provision of services is nowadays a main part of a manufacturer's business. This is motivated primarily on the customers' unwillingness to bear the risk of ownership of a product such as, the uncertainty with respect to future maintenance costs. This reality requires multiple organizations to work together over extended periods of time and has significantly increased the complexity of operations since decisions may be taken by one party and actions carried out by another. But where does accountability lie in a failure of the product-service system? Despite the importance of this issue for servitized manufacturers – especially when they also retain the through life management of the product-service system– relevant academic research is sparse at best.

2014 Research Objectives

Motivated by the aforementioned considerations, this research adopts the Through-Life Accountability (TLA) definition proposed by Fuse (2013): 'Through-Life Accountability is 'the duty to inform, justify and accept the consequences of decisions and actions taken during the entire lifecycle of assets and associated services. Critically it involves understanding the boundaries of and responsibilities for safe and consistent outcome delivery over an extended service contract involving multiple organisations'. And investigates the TLA of a product-service system. The objective is to develop a methodology for mapping TLA which identifies the decisions and actions taken by those involved in the operation of the system, and the resulting consequences of these decisions and actions.

Data

The value of the proposed methodology is examined by analysing the official accident investigation reports in the case of 17 airplane accidents that took place globally over the period from 2006 to 2013.

Methodology
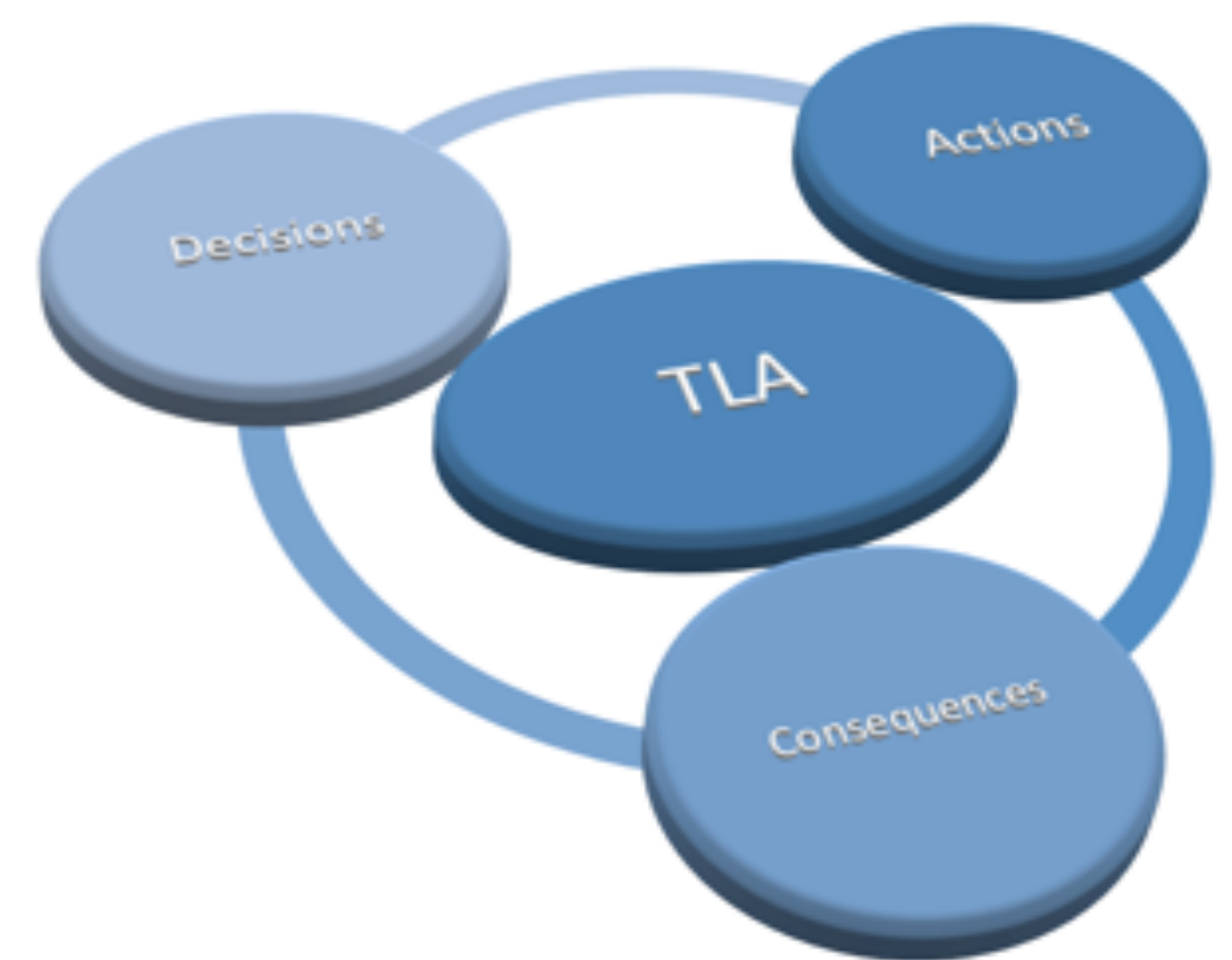
Conclusions

The results suggest that the proposed methodology can successfully identify and quantify the sources of accountability even when multiple organizations are involved in the operation of the product-service system. Most important, it seems that the methodology can provide key insights for improving the safety of the product and the associated services in a feed forward manner. To be more specific, the analysis highlights that the majority of the accidents under scrutiny were the result of a limited number of human errors. These errors could have been potentially prevented if the different stakeholders involved operated as high reliability organizations (HROs).

Next Steps

Work with BAE systems and adapt the methodology through case studies, based on past events to examine its feed-forward value for risk assessment.
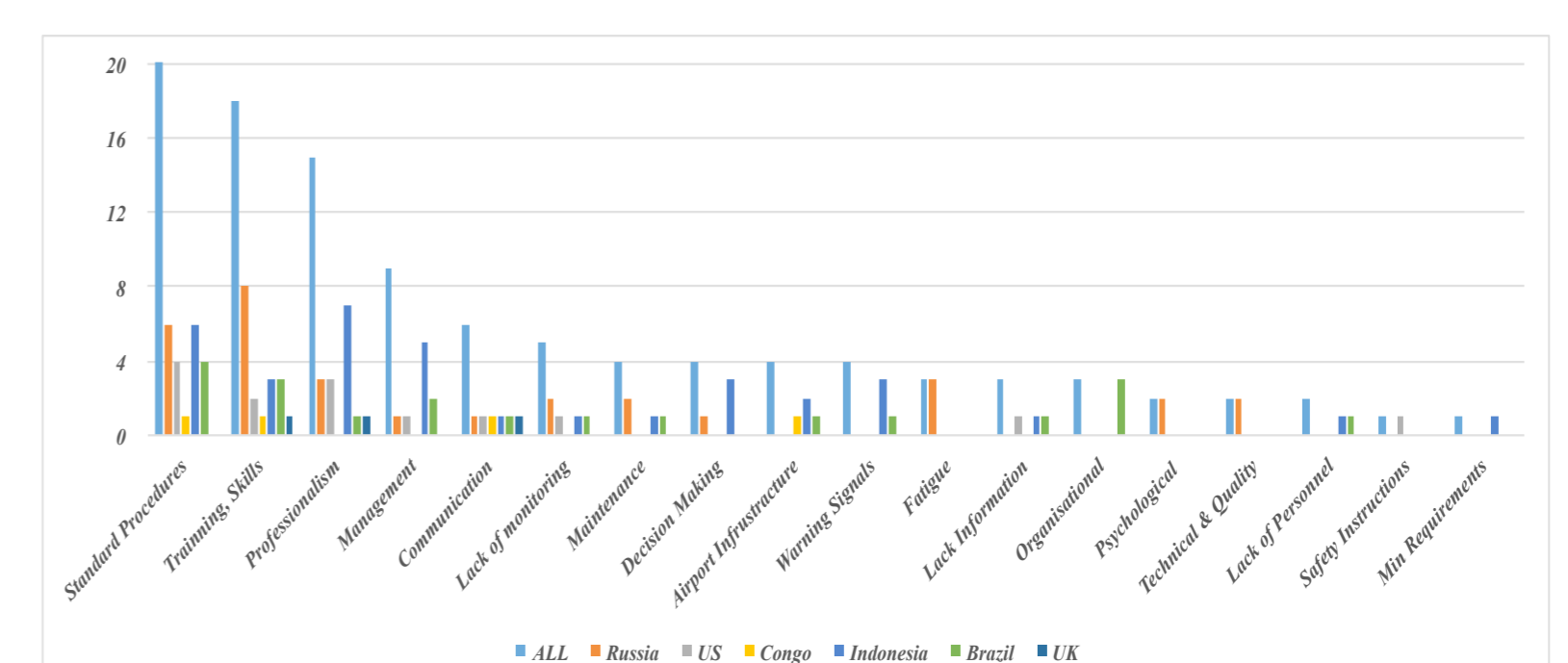

Figure 1. Frequency of different human errors per country

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Football Player Performance Indices

"Providing novel services to football managers and scouts"

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## Why numbers matter in modern football

Football has become a billion-dollar business. Scouting and recruiting activities are a vital prerequisite for composing a balanced and competitive squad. Selecting the best line-up out of this squad for each match is of decisive importance for a team's sporting success and as a result can also contribute to club's economic success. In addition, the rise in popularity of football fantasy leagues has meant that data analysis is now an important factor in modern football and its impact receives fast growing attention. Scouting and recruiting talents has reached a world-wide scale and football managers and scouts would be totally overstrained with assessing such a massive amount of individual players' performances. What they require are performance indices that can act as a kind of filter for pre-selection.

Objectives

Thus far, performance indices have been developed for use by the gaming industry and for the involvement of the fans. Football managers and scouts though may have very different requirements. For example, currents performance indices focus very much on individual player performance; however, football is a team game where the synergy of the players can contribute more than the sum of the individual players' performances. Therefore, the objective is to foster the understanding of football performance indices that are dedicated to the needs and requirements of football managers.

Preliminary Results

There are companies (e.g., Opta, ProZone, and InStat) that collect a variety of data types from football matches. The data collectors sell this information to companies in the broadcasting, betting, media and professional sport industries, which use the data for multiple purposes.
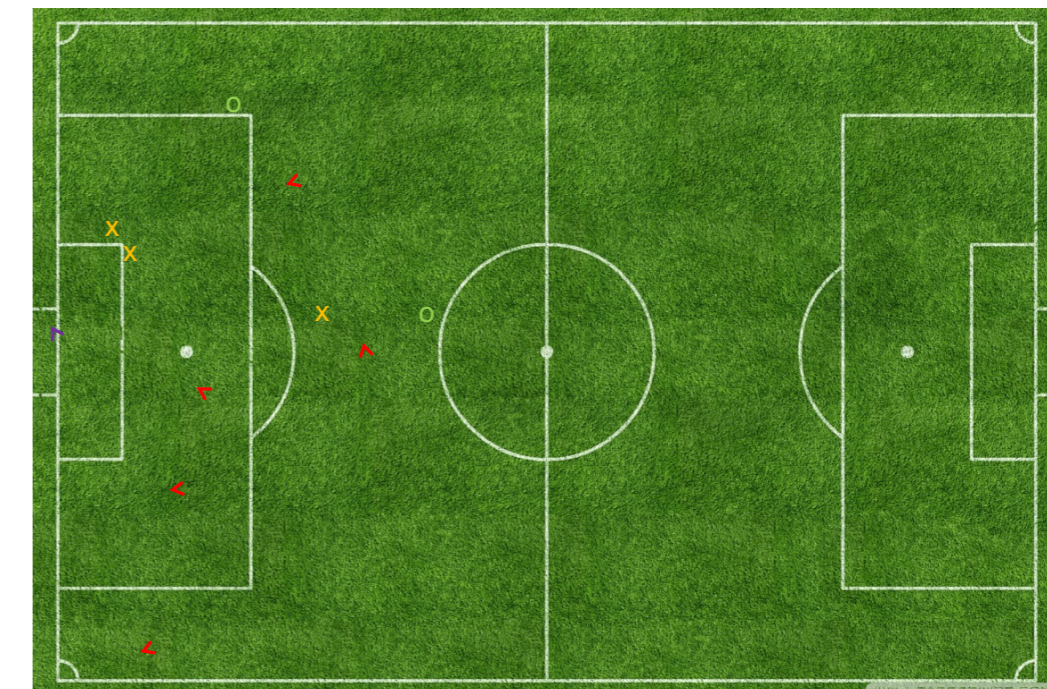
One specific use of the data is to calculate a performance index for each football player in a particular football league and tournament. For example, the Castrol Index and the Squawka Performance Score is based on Opta data. The data consumers typically apply their own algorithm to calculate a performance index. Two variables are particularly in the focus of discussion: first, weights that define the impact of each piece of data on the overall performance index; and second, moderators that can have an impact on weights or directly on the performance index, e.g., the zone on the pitch, the opponent's ability, the importance of the match, or the player's position.

Performance Index

There are mainly three ways to calculate a performance index:

1. The data consumer defines the amount of input data to be used and static variables to weight the impact of each input data.
2. The data consumer defines the amount of input data, but then also applies moderators that dynamically weight the impact of each action.
3. The index is calculated by analyzing whether each move on the field has a positive or negative impact on a team's ability to score or concede a goal.

Future Research

Future research will focus on the question of what should be the rational for defining the weights, amount of input data, and choice of moderators.

Making and sustaining the shift to services

"The fundamental steps in the transition to services"

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Background

Over one-third of large manufacturing firms offer services. Despite the increasingly large adoption of services, many firms struggle to make the transition to services. This is partly due to the lack of structured guidance in understanding this shift, for example, how it affects the relationship between manufacturing firms, partners and customers.

Project objective

The overall project objective is "How could we identify and evaluate the shift to services and solutions? – while creating and sustaining the business case"

The 2014 objective is twofold: to investigate WHY organisations make the shift to services and to understand HOW organisations make the shift to services.

Actions

First phase- Three pilot studies were used to generate and refine the initial version of the service journey model.

Second phase- It will validate the service journey model through its implementation in two organisations

The outcomes from the first phase are the following:

Logic for shifting to services

Our research shows that organisations encounter different rationales for shifting to services.


Logic behind the shift to services

The service journey model

The pilot studies show that organisations struggle to make the shift to services. This has been described as a series of different paths, unstructured and disorganised.

An issue identified is the iterative and non-linear nature of the journey, which in turn, affects the effectiveness of the transition. A possible explanation is the lack of guidance from existing literature, which represents a clear research gap.
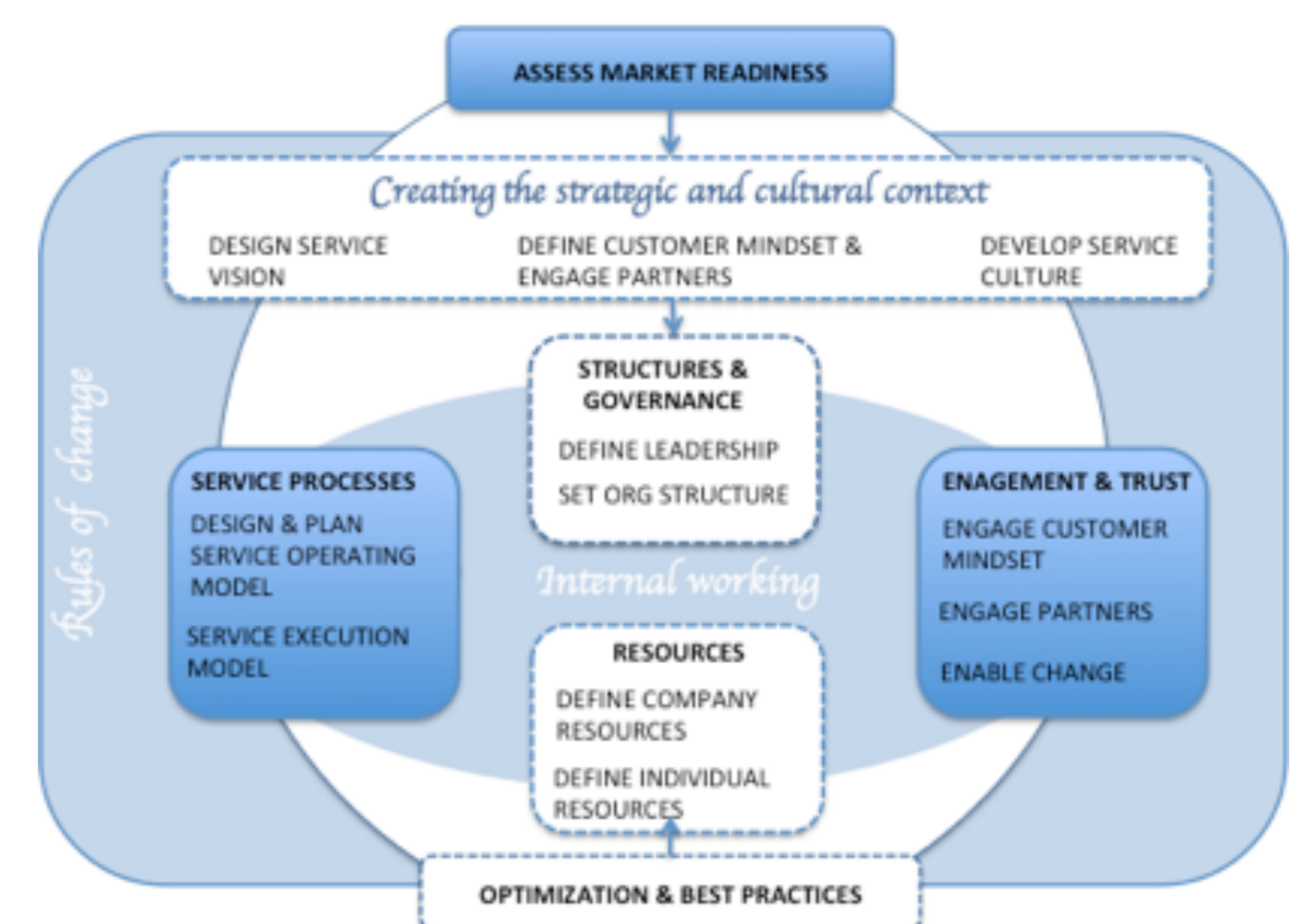
The service strategic model

The Shift-to-Service Model is a framework that emerged from the pilot studies. The framework describes the steps to be followed including details on how to "transition" to services.

Next steps

Conclude phase 1 - the refinement of the Service Journey Model. Continue with the second phase of this research- validation of the model in two organisations.

Designing, Deploying and Enhancing Services Research

"How can feedback and analytics be used to better design, deploy and enhance services and solutions?"

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Background

'Big data' is one of the most hyped technology terms of the moment. The investment numbers across industries between 2012 and 2013 continue to rise, with 64 per cent of organisations investing or planning to invest in big data technology, compared to 58 per cent in 2012 (Kart et al. 2013). However, a recent study by Gartner (2013) stated that adopting 'big data' is a challenge for companies as they are struggling to obtain value from 'big data'. It is not about technology, but rather (most probably) about 'where' and 'how' big data is creating value.

Research Objectives

This research aims to propose a data diagnostic framework that contributes to answering the overarching research question:

'How can data be used to optimise service delivery in complex service organisations?'
More specifically, the purpose of the proposed framework is to help organisations understand the key factors, enablers, barriers, competencies, value and benefits, and key dimensions of data necessary to optimise the delivery of their complex services.
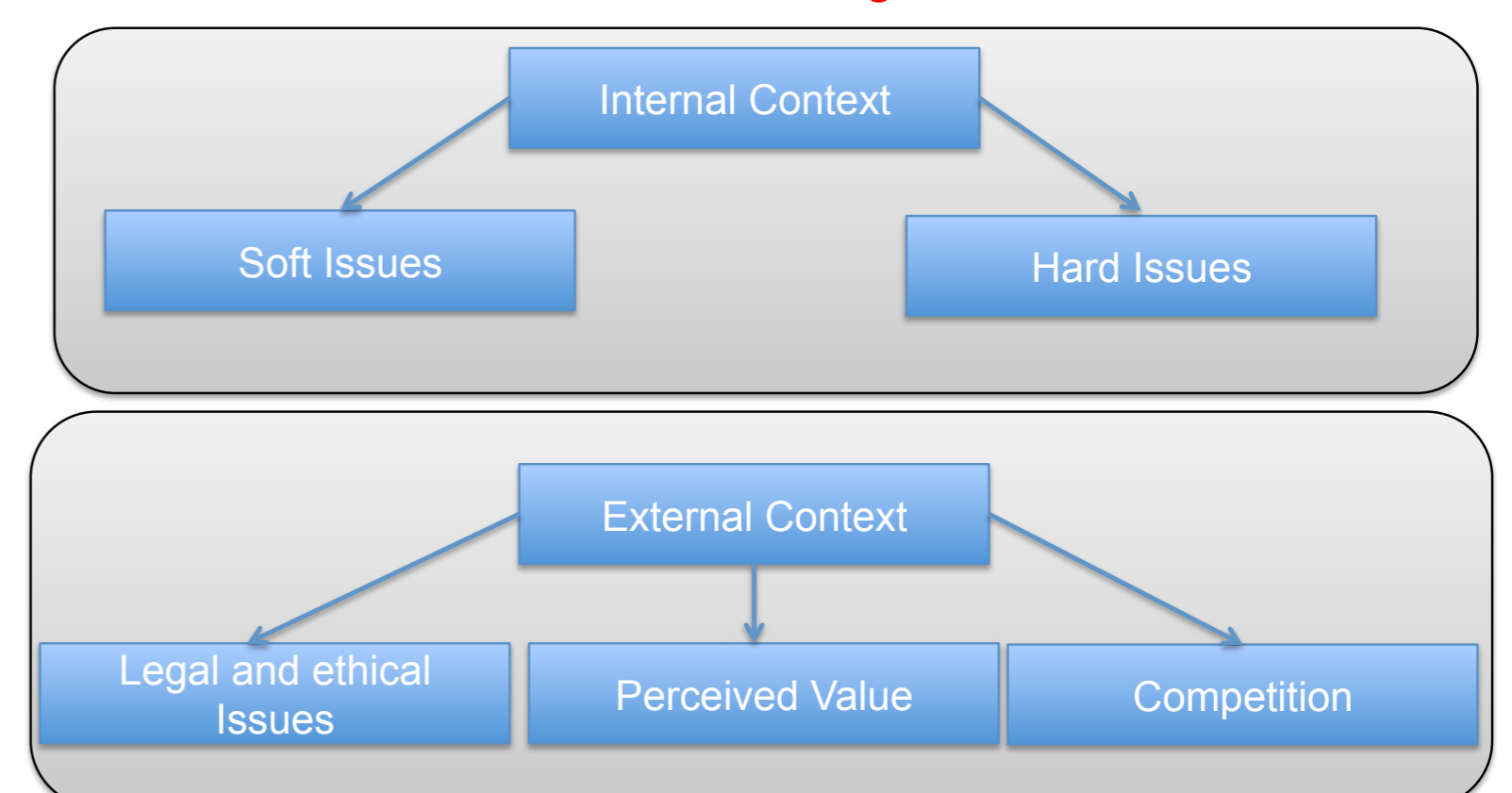
Design/methodology/ approach
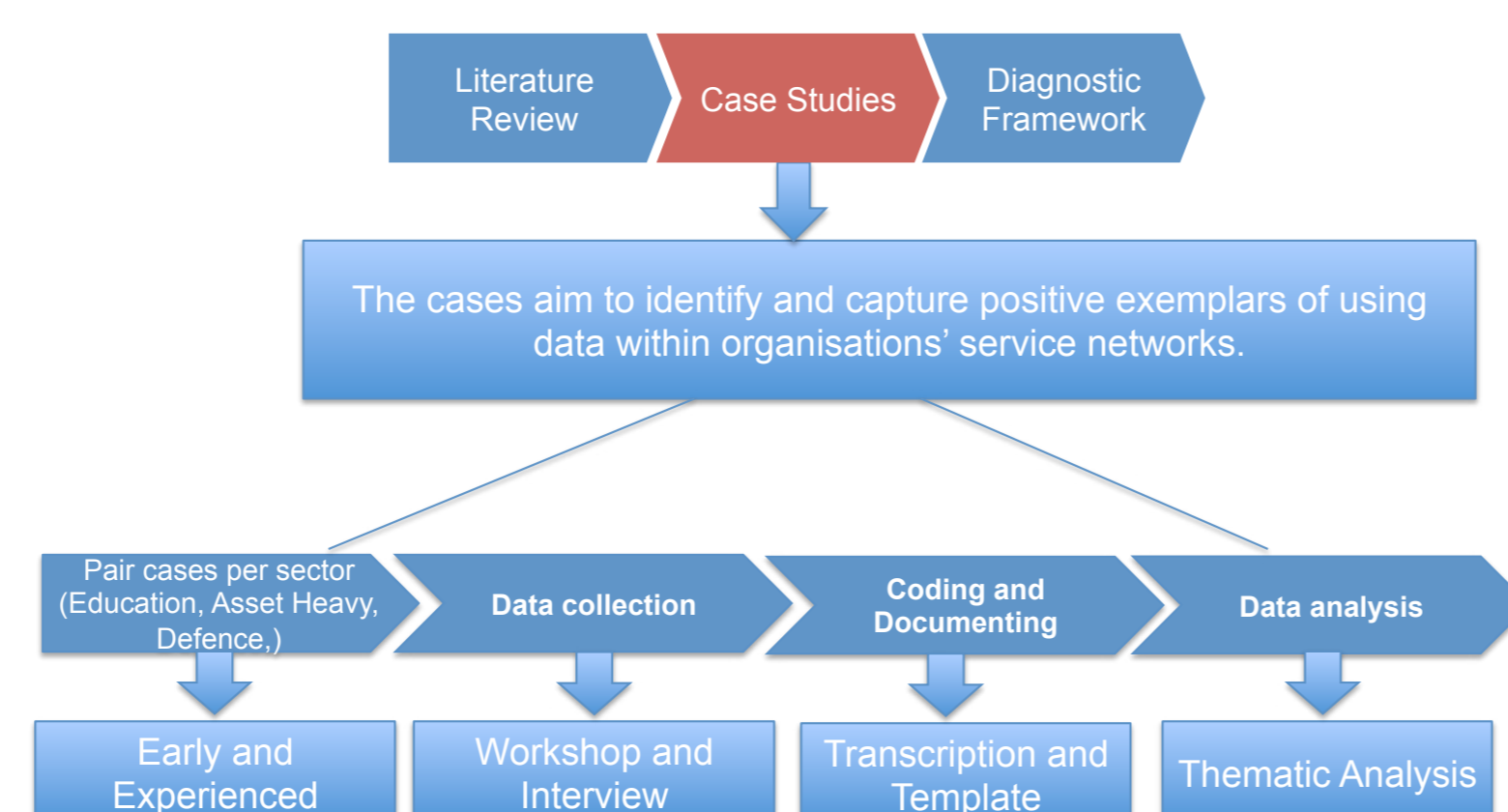
Data Diagnostic Framework

The proposed framework suggests that organizations face contextual barriers to using data.

Contextual Barriers to using data with CSNs

Internal context

- Soft issues include data culture, lack of skilled data scientists and collaboration issues leads sometimes to adversarial relationships with customers.

- Hard issues involve lack of data interoperability (data transmission accessibility, managing data volume, data compatibility, timeliness, data integration, data ownership, performance measurement of data analytics), technical issues include legacy and integration issues and practical issues such as territorial moving assets sometimes challenging to send telemetry data

External context

- Legal and ethical issues including intellectual property.

- Perceived value in terms how to demonstrate the value of the services to customers, Cost of ownership and viewing analytics as cost rather than investments are other key challenges in these sectors.

- Competition: Alternative providers will enter the market, resulting in a lost opportunity.

A Taxonomy of Data-driven Business Models (DDBM)

What types of business model are present among companies relying on data as a resource of major importance for their business (key resource)?"

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Background

The quote 'Data is the new oil' became widespread and established the analogy to natural resources needing to be exploited and refined to guarantee growth and profit. The existing literature highlights a general gap concerning 'if' and 'how' big data actually creates value for companies. Hence, understanding what business models relying on data look like remains a research question.
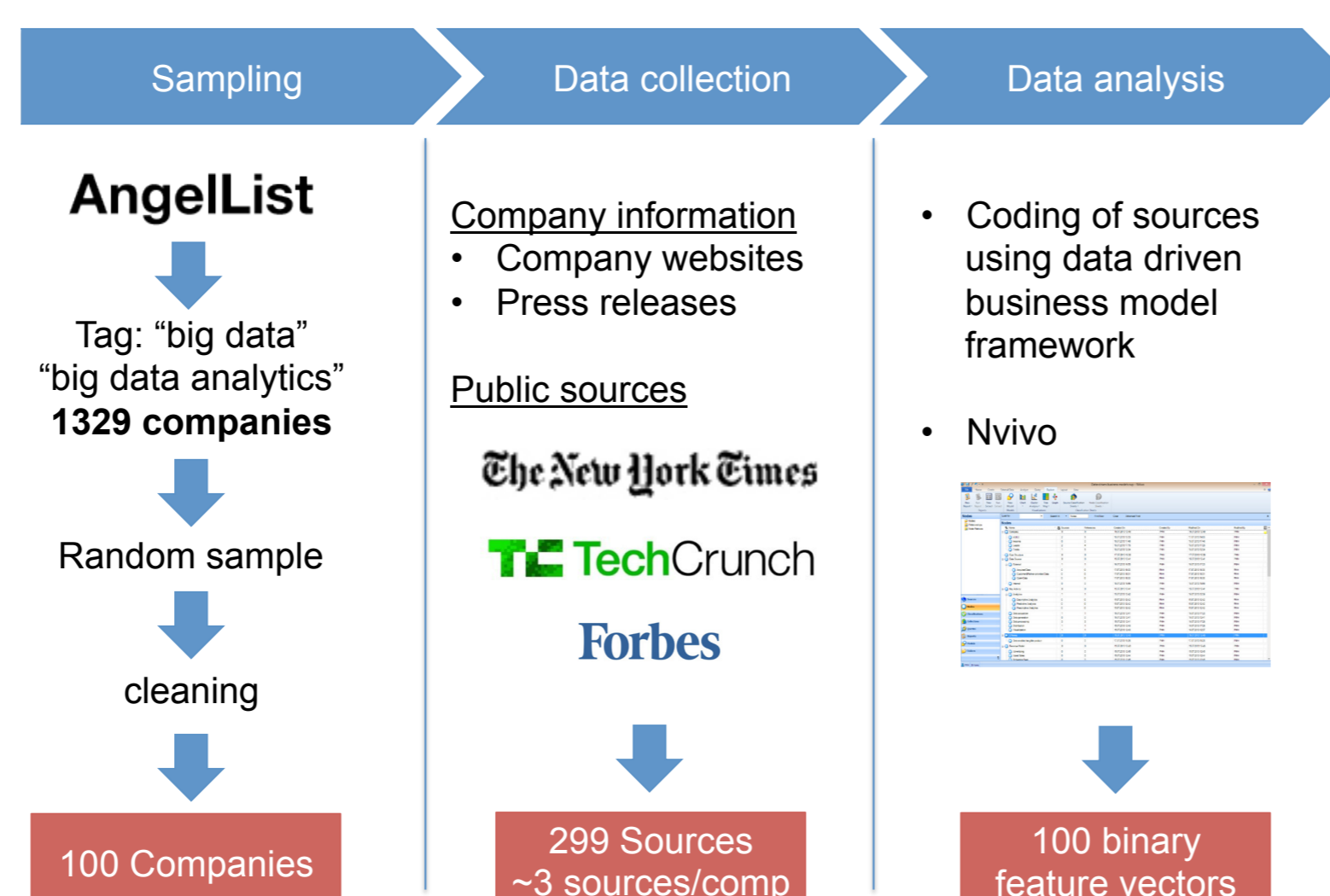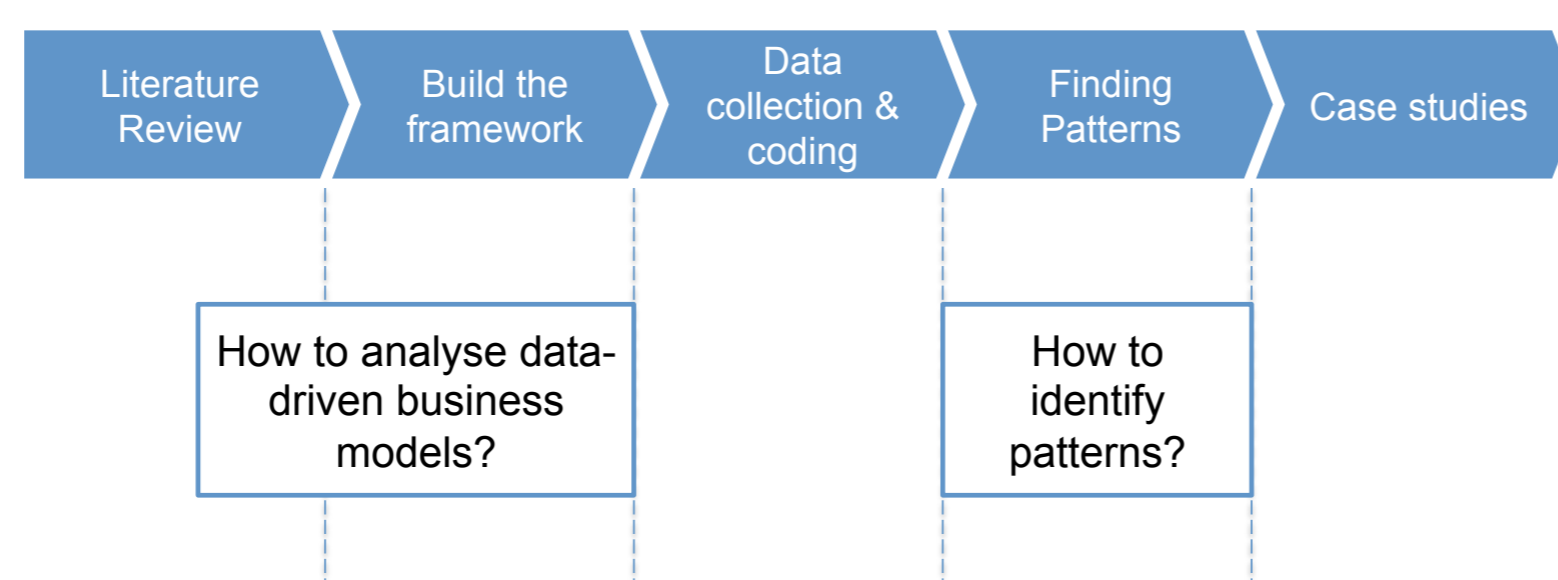
Research Objectives

Therefore, the purpose of this research is to propose a taxonomy of business models used by firms that rely on data as a resource of major importance for their business – aka data- driven business models (DDBMs).

What does a framework look like that allows systematic analysis and comparison of data-driven business models?

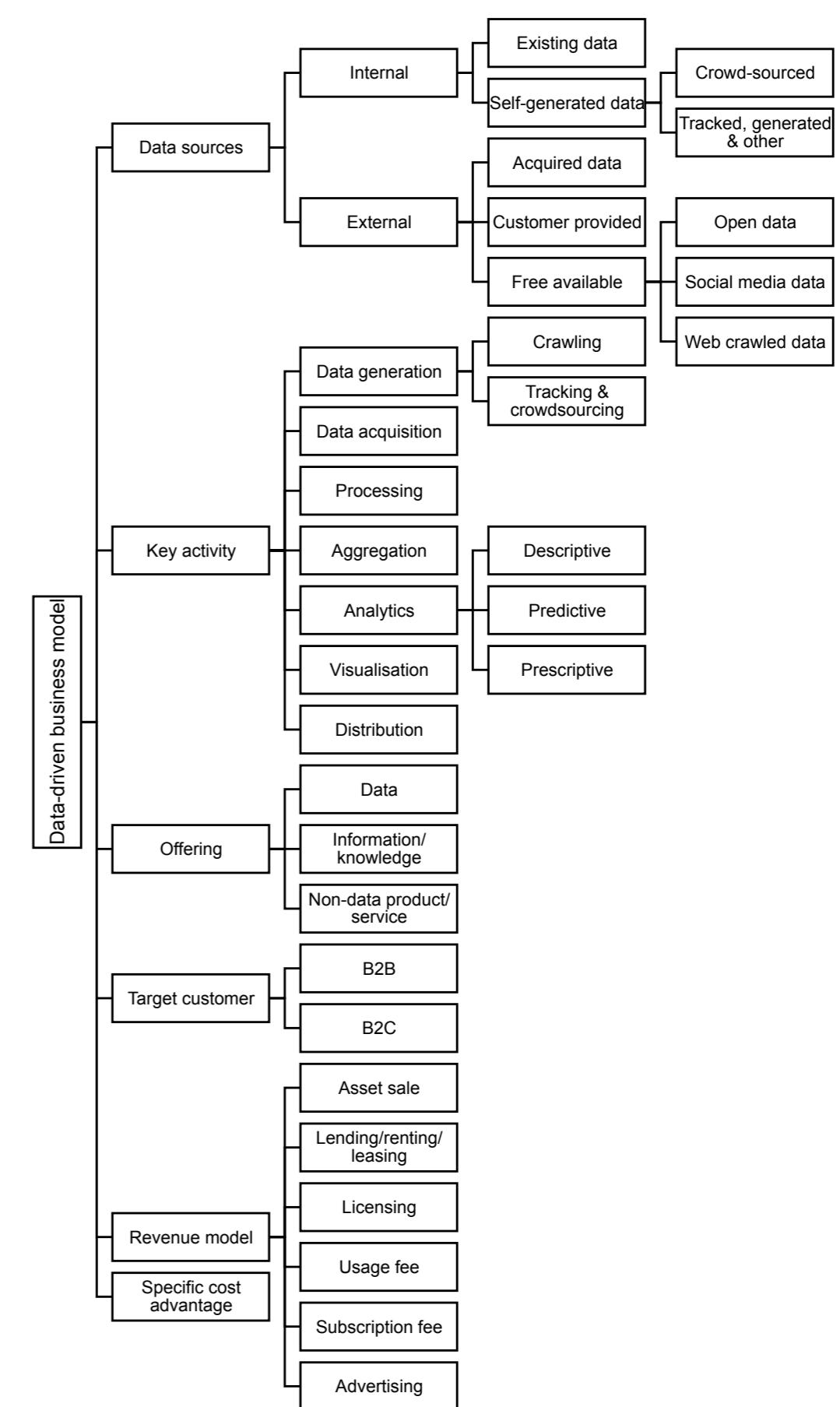What clusters of companies with similar business models exist?

Design/methodology/Data Collection

Literature Review → Build the framework → Data collection & coding → Finding Patterns → Case studies

How to analyse data-driven business models?

How to identify patterns?

Sampling → Data collection → Data analysis

AngelList
↓
Tag: "big data" "big data analytics"
1329 companies
↓
Random sample
↓
cleaning
↓
100 Companies

Company information
• Company websites
• Press releases

Public sources
The New York Times
TechCrunch
Forbes
↓
299 Sources ~3 sources/comp

• Coding of sources using data driven business model framework
• Nvivo
↓
100 binary feature vectors

Data Driven Business Model Framework (DDBM)

The proposed DDBM framework consists of six dimensions common to most of the business model frameworks, namely, key resources, key activities, value proposition, customer segment, revenue model and cost structure.

For each of these six dimensions, features were derived from literature to be able to exhaustively describe the DDBM.

6 DDBM types were identified