

# **Understanding Business Net Development in a Service Innovation Setting**

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**Irina D'Amore-Sokolova**

**Alliance Manchester Business School**

**Management Science and Marketing Division**

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## **List of Abbreviations**

AEI	Adult Education Initiative
ARA	Actors, resources and activities
EU	European Union
E-U	End-user
EU LDVP	European Union Leonardo da Vinci Programme
IATTO	International Association of Trade Training Organizations
ICT	Information and Communications Technology
IMP	Industrial Marketing and Purchasing
INA	Industrial Network Approach
IPR	International Property Rights
ITM	International Trade Management
ITMC	International Trade Management Concept
ITMF	International Trade Management Foundation
KIBS	Knowledge-intensive business services
LLL	Life Long Learning (LLL)
NAP	National action plan for employment



NSD	New service development
NIMI	Nordic International Management Institute
SMEs	Small- and medium-sized enterprises
CAQDAS	Computer-assisted Qualitative Data Analysis Software
VET	Vocational Education and Training
VITTI	Vocational International Trade Training Implementation Programme

## Abstract

The following research is a qualitative exploratory case study of a business net changes and development in a context of an innovative international vocational and education training programme. This study employed the explanatory power of network theory and the process approach to address three objectives. The first objective of the study was to identify how business net structure changes as innovation progresses. The second objective was to understand what net actor's position/role interaction patterns emerge at each stage of business net development in a service innovation setting. The third objective of the study was to understand what is the nature of business net development in a service innovation setting. The results of this empirical investigation revealed that role-taking and role-making interaction patterns emerge with the prevalence of role-taking over role making or role-making over role-taking in different phases of the business net development. The findings also suggested that the changes in the business net development are driven by actors' shared interactions, common priorities and interests inherent to the contextual nature of the shared logic.

**Keywords:** *Business net change, Service innovation setting, Business net development, Process research, Shared logic.*

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# Chapter 1: Introduction

## 1.1 Background to the Research

Business networks, a conceptual representation of the market structure, gain significance as an important area of study for the service industries (Henneberg et al., 2012, Scott and Laws, 2010). And although many concepts and theories originated in business marketing emanate from studies of manufacturing businesses (see the history of the IMP group, Ford, 2006, Håkansson et al. 2009), they provide a starting point in understanding the applicability of services in the business marketing context (Henneberg et al., 2012). Particularly, service networks formed around knowledge, such as education (Muller and Zenker, 2001) with different constellations of resources, actors and activities shape the today's research agenda for understanding the complex nature of such networks and how they develop over time (Henneberg et al., 2012; Gabauer et al., 2011; Kowalkowski, 2011; Alexander and Jaakkola, 2011). Additionally, the network approach offers a novel perspective to service innovation research that has previously examined innovation primarily as a company-internal activity (Droege et al., 2009) or activity pursued through informal partnerships (Eisingerich et al., 2009).

The intercept of business networks and innovation highlights the network as the primary locus of innovation in various streams of business network research (Rusanen et al., H., 2014, Aarikka-Stenroos et al., 2013) Furthermore, the stream of process studies has extended our understanding between innovation and network emergence (Ostendorf et al., 2014, Ramos et al., 2013) and arguably provided the basis for considering service innovation as a driver for business network evolution in the context of this empirical enquiry.

The ITM business network, positioned in Vocational Education and Training (VET) sector in Europe, was characterised by a complex cooperative and competitive environment of different providers with horizontal and vertical diversity, a multitude of learning approaches and acts as the impetus of new programmes' emergence and development. The ITM programme, an innovative vocational programme in trade management created and delivered by the International Trade Management Foundation (ITMF) of Sweden, was developed and delivered in informal partnerships with ministries, trade councils, small- and medium-sized enterprises (SMEs) and educational entities of participating countries worldwide, including NIMI. The International Trade Management Worldwide Concept (ITMC) was developed in response to a need for SMEs' ability to grow that was increasingly dependent on the power of these companies to conduct business internationally and access world markets. Although the development of SMEs has been a common concern worldwide, it is an issue of strategic importance to countries whose economies are primarily export dependent. Moreover, the biggest obstacle for these countries' SMEs appeared to be a lack of adequate trade management skills. The award-winning and globally certified ITM Worldwide programme filled this gap in the market.

The ITM business network, driven by the innovative ITM programme development, has prospered for more than 20 years, from 1993 to 2016. However, faced with internal changes within the existing network of collaborating actors and external changes in the operating environment, the ITMF management team was presented with the challenge of deciding the further development of its network and management activities associated with it. Furthermore, key actors were convinced that the 'winning formula' of their historical success was due to a specific configuration of ITMF's actor's system with their particular set of activities and resources they controlled. Therefore, it raised questions about the business network nature,

origin and drivers of changes that affected the structure and more profound processes of the system ITMF operate.

## **1.2 Justification of the Research**

From the perspective of the Industrial and Marketing Purchasing (IMP) Group, interactive relationships and networks are the aspects that differentiate business-to-business reality from other types of environments (Håkansson and Snehota, 2006; Håkansson and Ford, 2002, Axelsson and Easton, 2016). A central tenet to the entire discipline is the concept of connectedness, defined as firms' relations with, and dependence on, various types of networks extending beyond the boundaries of the individual firm (Halinen and Törnroos, 1998; Chou and Zolkiewski, 2012). A business network is characterised by business relationships of actor ties, resource bonds, and activity links embedded in a network of other interdependent relationships (Håkansson et al., 2009). Actors control valuable resources, tangible and intangible, and through long-term exchange relationships with the other actors, they employ or combine resources to achieve economic goals (e.g. Håkansson and Snehota, 1989; Möller and Halinen, 1999). Therefore, connectivity and interdependence give significant explanatory power to business networks (Håkansson and Ford, 2002; Ford et al., 2003).

Innovation forms a specific context of the business network (Möller and Svahn, 2003; Möller, 2010; Perks et al., 2017; Baraldi et al., 2014; Nystrom et al., 2014). The role of networks in fostering innovation has been intensely investigated when developing a new product or a service (Möller and Halinen, 2017; Ramos et al., 2013; Öberg et al., 2010, Håkansson and Waluszewski 2012; Håkansson and Ford 2002; Corsaro et al., 2012). Researchers and practitioners alike share an understanding that innovation is not a product of only one actor but a result of an interplay between multiple actors; in other words, a product of a 'network' of

actors. In the context of innovation, actors perform activities and control resources, which are interrelated in the network structure. Actors and networks evolve simultaneously where the network development influences innovation and are in turn influenced by the innovation process (Nystrom, 2009; Codini 2015; Dawson 2014; Lara, Kolasani, and Ramamurthy, 2013; Ostendorf et al., 2014). Through intentional choices, implicit or explicit, actors modify network structures (Fors and Nystrom, 2009; Aastrup, 2000) where network position, framed by 'its relationships and the activity links, resource ties, and actor bonds that arise from them' (Ford et al., 1998: p. 49) and role, as a dynamic or processual aspect of the position, used to analyse how actors interpret their position in the network and what they intend to do. With extant literature often viewing innovation at a particular point of time, the phenomenon is often researched as a discrete event or an outcome (Avital, 2000), overlooking its change process nature that originating from the continuous and complex interaction between the actors involved (Pettigrew et al., 2001, Van de Ven, 1999).

As the IMP traditional views of innovation as an outcome of change in network structures (Agarwal & Selem, 2011; Corsaro et al., 2012; Eisingerich et al. 2009), has recently progressed to the understanding of innovation as a process that emerges and evolves over time (Möller and Halinen, 2017; Rusanen et al., 2013; Aarikka-Stenroos and Sandberg, 2012; Ostrom et al., 2010), all structural elements of a business network - actors, activities and resources - are discussed today from the standpoint of time and space. Temporality (Araujo and Easton, 2012; Hedaa and Törnroos, 2008; Araujo and Harrison, 2002; Medlin, 2004, Mattsson and Andersson, 2006), as an essential determinant of network change and evolutionary processes, brings the debate on the development of network, patterns and configurations in a given context, for example, innovation (Nystrom et al., 2014). Lately, industrial network research has tried to put in focus the general idea of change and evolution and connect both in methodological terms to the concept of the process (Törnroos et al., 2012; Van de Ven 1992;



Pettigrew 1997) that denotes and grasps dynamic phenomena and how things change or evolve over time.

At the same time, the focus of recent studies of industrial marketing researchers, has given attention to interceptions between services, innovation and networks (Spohrer and Maglio, 2008) ‘as service companies need to regularly renew themselves and have to develop strategies for new service development’ (Henneberg et al., 2012, p.4). However, the service innovation context of a business network (Axelsson and Easton 1999) is still an under-researched domain (Henneberg et al., 2012), except for some notable contributions (Rusanen et al., 2013; Ostendorf et al., 2014; Ramos et al., 2013; Jaakkola and Halinen, 2006). Resonating with researchers who perceive innovation as an interactive and evolutionary process (Cooke, Uranga, and Etxebarria, 1998; Kotsemir, Abroskin, and Meissner, 2013) endogenous to networks (Aastrup, 2000; Axelsson and Easton, 1992), this thesis argues that the complex nature of this process becomes more prominent in unstructured cooperative and competitive environment of service innovation (Baregheh, Rowley and Sambrook, 2009; Witell et al. 2016) that involves the complex adaptive interaction of people, technology, processes, and information along with a well-thought-out service concept. As such, the process-based evolutionary approach to change provides a good conceptual fit to understanding an innovation process in the service field (Gaebauer, 2013; Carlborg et al., 2014; Biemans et al., 2016).

This research provides an opportunity to study the emergence and development of a business network fragment, or its boundary defined net (Chou and Zolkiewski, 2012; Brito, 1999) in the context of service innovation perceived as a collective, non-linear and interactive change process endogenous to business networks (Möller and Halinen, 2017; Rusanen et al., 2013; Aarikka-Stenroos and Sandberg, 2012; Ostrom et al., 2010) in an unstructured setting and dynamic environment. Building on the interest of IMP researchers in studying changes in

industrial networks (Hoholm and Araujo, 2011; Mattsson, 2003) and the formation of nets in the process of innovation (Hoholm and Olsen, 2011), the quest for business network understanding extends to theorising on a business net development in a service innovation setting. Also, it calls for the advancing of theoretical ‘tools’ to better understand change and process aspects of nets (Waluszewski, 2004; Håkansson and Waluszewski, 2001; Medlin, 2004; Leek and Canning, 2003; Dubois and Araujo, 2004) from the perspective of a network actor and particularly the interplay between process and structure (Codini, 2015; Aastrup, 2000). As such, this research considers the conceptualisation of interplay between net actor, position and role over time. The ability of an actor to impact net emergence (change over time) through changes that originate from the actor’s action and reaction to aggregate role-taking or role-making net configurations and prevailing interaction and development patterns in a business net.

### **1.3 Research Aims and Objectives**

The main objective of this research is to explore change processes of a business net over time from an impact of the development of a new vocational education and training (VET) programme viewed as a collective, non-linear and interactive change process internal to a business network. The research employs the explanatory power of the industrial network approach to explore and interpret network change at the net level in the context of service innovation using longitudinal qualitative approach methodology. The research aims to provide theoretical and managerial implications concerning business net configurations and re-configuration viewed as an interplay of a business net actor’s position and role and different business net change and development patterns.

In an attempt to extend our understanding of business net changes over time, or its emergence and development in the context of service innovation, the following research questions are developed:

- 1. How does business net structure change in a service innovation setting?*
- 2. What role/position interaction patterns emerge at each phase of business net development in a service innovation setting?*
- 3. What is the nature of change in the business net development in a service innovation setting?*

#### **1.4 Research Structure**

The thesis comprises seven chapters (Fig 1.1), which have been outlined and briefly described below:

**Chapter One: Introduction**—provides a general context of this study detailing its significance, the research aims, as well as the objectives and type of research questions posed.

**Chapter Two: Literature Review**—this chapter presents a comprehensive review of the relevant literature within this study's topic. As such, the existing literature defines various fundamental aspects of the business net(work) such as its structure, changes, dynamics and delineates service innovation comprehensively as a context of the study. A research gap is also presented here.

**Chapter Three: Methodology**—this chapter provides an in-depth description of the research methods undertaken to answer the study's research questions. It also justifies pursuing a case study strategy, a profile of the respondents, and discusses methodological and ethical

considerations that emerged. Further, it defines the methods used to analyse the collected data, the pilot project, the use of NVivo, transcriptions, and the actual process of data analysis.

**Chapter Four: Empirical Context**—this chapter provides the empirical evidence and contextual information derived from the investigation, observation, and experience as part of the analysis used to conduct this research.

**Chapter Five: Analysis and Findings** – this chapter presents the analysis and results of the study. The results are presented in Phase I, Phase II and Phase II of the ITM business evolution of an issue-based net as a net of relationships amongst actors who are concerned with a particular issue through mutual or conflicting interests

**Chapter Six: Discussion and Conclusion**— this chapter discusses the study’s key findings by relating them to the literature review. The key findings are presented using the study’s research questions as a framework and summarised in the chapter’s conclusion. It summarises the theoretical context of the research, the major findings and the key contributions to management praxis and academic knowledge. The chapter concludes with a description of the limitations encountered while completing the study.

## Chapter 2: Literature Review

### 2.1. Introduction

The purpose of this chapter is to provide theoretical underpinnings to aid our understanding of business net development and emergence as service innovation unfolds. The starting point of the chapter is an elaboration of the industrial network approach, which is the key concept in this research. This approach emphasises the interdependence between actors in the business networks. Hence, it acts as a cornerstone for both academics and managers to understand and analyse the changes and development of business networks in various industrial settings, including innovation.

The process of innovation is characterised as a collective, non-linear and interactive process, with unknown ex-ante's outcome due to uncertainties (Håkansson and Waluszewski, 1997; Lundgren, 1995). In addition, the service innovation process tends to unfold in largely unstructured and informally organised settings (Gottfriedsson, 2001), comprised of primarily informal processes (Kelly and Storey 2000, Chen et al., 2004). However, viewed as systemic change, service innovation can impact and be impacted by business network development if understood from a network perspective.

This chapter discusses changes in business networks or their boundary defined nets (Chou and Zolkiewski, 2012, Brito, 1999), considering the interaction between network actor and network structures in a service innovation setting. In particular, it argues that the change originates with the network actor and as the business net develops, the interplay of actor's position and roles creates business net change patterns. This discussion extends to examining different nature of business net development from evolutionary (Brennan, 2006; Matthyssens et al., 2013; Easton, 1992; Anderson et al., 1998) and intentional (Heikkinen et al., 2007; Möller et al., 2005).

## **2.2. Business Networks and Innovation**

### **2.2.1. Business Network Perspective on Innovation**

Innovation in the context of networks is linked to various network approaches such as network economics (Katz and Shapiro, 1985), network organisation (Kogut, 2000), actor- network-theory (Latour, 2005, Law, 1992), social networks (Burt, 1992, Granovetter, 1985, Uzzi, 1996), strategic networks (Möller et al., 2005), entrepreneurial networks (Coviello and Munro, 1993) and industrial networks (Håkansson and Ford, 2002) (detailed discussion in Aarikka-Sternoos et al., 2017), innovation networks (Möller and Halinen, 2017) and innovation-generating networks (Ritala et al., 2012).

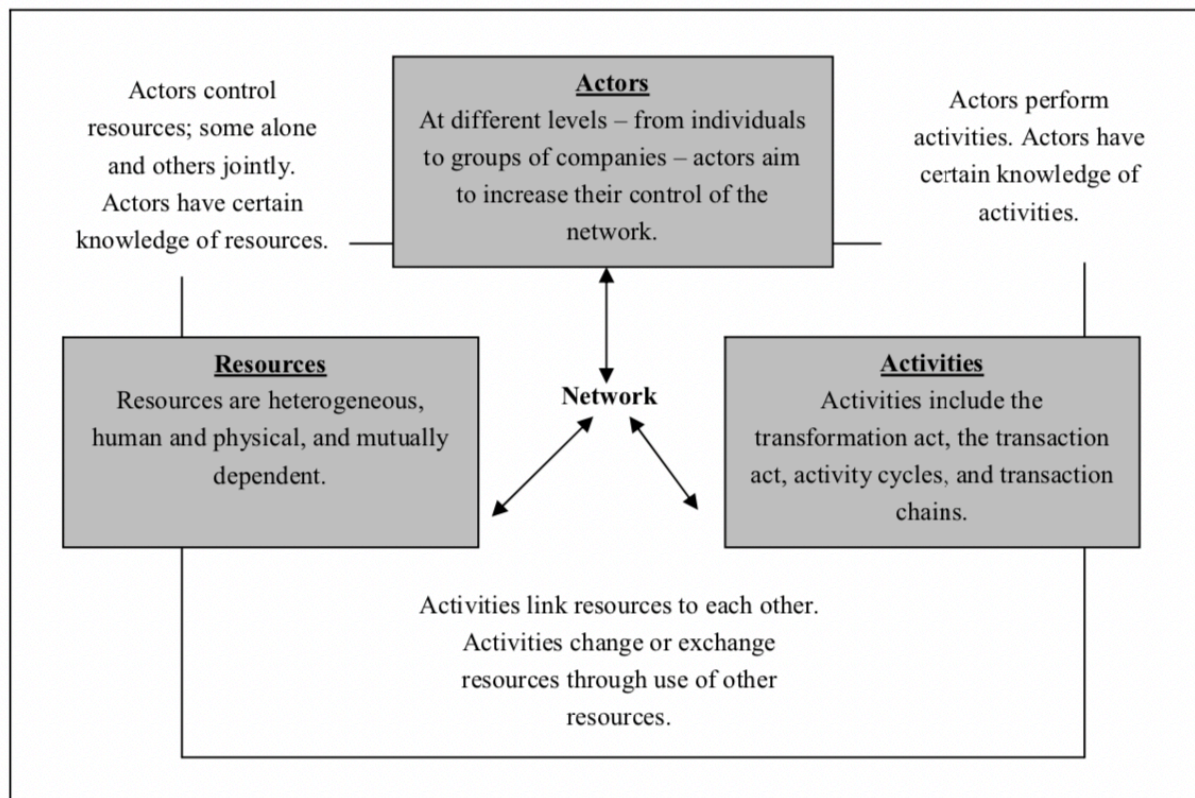
In the IMP view, business networks research has always been interested in the co-creation of innovation (Håkansson and Waluszewski, 2007), focusing on inter-organisational collaboration and its management (Möller and Halinen, 2017). For example, in an early IMP research on innovation, the focus of attention was on technological co-operation and innovation projects that study innovation processes within the organisation, between co-operating organisations and finally, in interactions between organisations (Håkansson and Ford, 2002).

From the turn of the century, the focus of an IMP researcher has shifted to the resource element of the actors, resources, activities (ARA) model that depicts business networks as a web of actors and the relationship between them and specific activities/resources constellation. These three elements are intimately interrelated, implying that that change in one is contingent on a change in others. Ford (2011) recognises that a critical aspect of networks is to provide access to organisational resources such as operational resources, technologies or know-how and relationships with other companies through business relationships. As such, relationships are how companies cope with their increasing interdependence. To ensure survival, companies continually assess their actions, intentions, and relationships with competitors, facilitators,

customers, suppliers or development partners (Ford et al., 2008). In this stream of research, innovation is understood as a new resource constellation (Håkansson and Waluszewski, 2002b, 2013) of previously unconnected actors that co-operate with a specific aim, for example, the development of a new product or a service (Hoholm and Olsen, 2012; Aaboen et al., 2016, Story et al., 2008, 2009; 2011). Commonly, co-opting resources from outside with external partners (Mohannak, 2007) brings benefits if there is a lack of internal resource for innovation. Customers and users, distributors and suppliers, investors, associations, public organisations, policymakers, and regulators support innovation adoption, diffusion, creation of new markets, and commercialisation of innovation (Aarikka-Stenroos and Sandberg, 2012).

Based on the industrial network approach, actors seek to explore benefits from various economic exchanges. Most actors have a limited set of resources and must develop relationships with other actors to access their resources to gain those benefits. The network model (Fig 2.1) suggests interdependencies between actors, resources they control and activities they perform (Håkansson & Snehota, 1995).

**Figure 2.1. The Network Model**



Source: Håkansson, 1987, p. 17

As an integral dimension of industrial networks, the actor has a blurred context (Johanson & Mattsson, 1987). Earlier research studying actors within networks tends to conceive actors as individuals or collective entities and organisations, rather than using the concept of the business actor, which might refer variously to individuals, sub-groups or companies (Anderson et al., 1998; Ford et al., 2010; Håkansson et al., 2009). In addition, Kenis & Knoke, (2002) consider non-business actors in network formation in an institutional setting.

The studies of the last decade focus on intercept between innovation and networks (Spohrer and Maglio, 2008), drew attention to service innovation, accepting that 'service companies need to renew themselves regularly and have to develop strategies for new service development' (Henneberg et al., 2012). In addition, the stream of process studies explores innovation and network emergence and development, implying a link between innovation and the formation



of business partnerships and networks (Ostendorf et al., 2014, Ramos et al., 2013). However, the composition of actors involved in the innovation process raises a question of how to turn the diversity of an innovation network into an opportunity rather than an obstacle (Muller and Zenker, 2001, Henneberg et al., 2012). Hence, recognising that actors are also important factors determining both 'constraints' and 'opportunities' of the network from the perspective of innovation, result in the focus of attention shifting to studying perceptions and roles of the actor in the innovation process (Laage-Hellman et al., 2014; Öberg et al., 2010; Espelid et al., 2013).

### **2.2.2. Service Innovation and Business Networks**

As business networks gain significance as a prominent area of study for the service industries (Scott and Laws, 2010), this research argues that service innovation's interactive and evolutionary nature, viewed as systemic change, can be understood from a network point of view.

Traditionally innovation in services is viewed as a firm-driven method of 'an economically successful introduction of something new' (Drejer, 2004) or an internally developed service with all subsequent activities involved in bringing that new service from idea to commercialisation. Empirical studies on innovation in services have been carried out since the 1980s (Gadrey *et al.*, 1995, Anderson *et al.*, 1998, Toivonen and Tuominen, 2009, Miles, 2000, Djellal *et al.*, 2013, Sundbo, 1997, Gallouj and Savona, 2009); however, this literature is significantly fragmented and predominantly business-to-consumer oriented. Traditional theories related to service innovation focus primarily on the service concept rather than interactions between actors involved. Service development is considered as a mainly internal activity (Carlborg *et al.*, 2014) that could be managed and planned. As a closed system, service innovation development is a service-oriented firm-internal process that results in non-

technological innovations such as new business practices, marketing and external relationships or new technologies (Cainelli et al., 2006, Drejer, 2004, Miles, 2000, Howells, 2006).

Similarly, service innovation development, linked with the systematisation of services, highlights the significance of in-house formal development processes, with clear pre-planned stages, as a prerequisite for successful service development (Alam *et al.*, 2002; Droege *et al.*, 2009). Several authors have proposed various models to describe how innovation is developed (Storey and Easingwood, 1998; Kelly and Storey, 2000). Initially, a two-stage model that divides the innovation process into initiation and implementation was proposed (Zaltman 1973). Yadav (2007) distinguished between three stages: detection, development and deployment. Furthermore, Alam and Perry (2002), based on case studies of several Australian service providers, proposed a simplified and improved model containing ten development stages: strategic planning, idea generation, idea screening, business analysis, the formation of a cross-functional team, service design, personnel training, service testing, test marketing and commercialisation. Some researchers consider the sequential linear model for new service development to be one of the success factors for new services (Edvardsson and Olsson, 1996). Other researchers claim it is inadequate.

A different stream of empirical studies has consistently shown that formalisation of the innovation process is relatively rare amongst service providers, especially in comparison to their manufacturing counterparts. The findings of these studies demonstrate that new service development is comprised of primarily informal processes. For instance, a study of service providers in Hong Kong concluded that most companies do not have an established system to control the innovation process (Chen et al., 2004). However, well-documented benefits of service innovation process formalisation include the provision of critical resources for innovation (Foehle and Roth 2007), a system that organises actors from diverse functions (Hull,

2004), speed of new service development (Foehle et al., 2000) and success in launching service innovations (de Brentani, 2001). What remains unclear is how the service development process can be understood in largely unstructured and informally organised settings (Gottfriedsson, 2001).

From the perspective of an open-system (Chesbrough, 2003), innovation takes place beyond the company's boundaries, looking for the contribution of external actors. As such, the attention of researchers is directed to the external context of innovations, where inter-organisational interactions between the focal firm and other organisations such as customers, suppliers, collaborators, competitors, technological infrastructures, professional networks and environment play a vital role in the innovation process. Building on an understanding of service innovation as a non-linear and interactive process and recognising that innovation activities associated with it are placed outside the boundaries of the innovating organisation, a plethora of academic studies explore different dimensions of the external relationships' context (see Carlborg et al., 2014).

Customers' involvement, including their intentional or unintentional roles in the innovation process, has received significant attention as a service innovation topic since 2001 (Abramovici and Bancel-Charensol, 2004, Alam and Perry, 2002, Hippel, 2001, Magnusson et al., 2003, Alam, 2006a). Customer involvement refers to deliberate and managed user participation (e.g. Alam, 2002), and other forms of customer interaction and learning (Matthing et al., 2004). Hereto, research increasingly views customers as active participants in the service process and co-creators of value (Prahalad and Ramaswamy, 2004, Vargo and Lusch, 2004).

Suppliers form another group of actors involved in the service development process. According to Tether (2005), service providers typically seek new technologies and intellectual property from their suppliers; in other words - resources. Syson and Perks (2004) identified a range of

intangible resources such as reputation, information, knowledge, and experience as significant contributions from suppliers to service innovation. The supplier–client interface, essential for all kinds of innovations, is highlighted in the service context.

Consultants, universities, research centres, funding agencies and associations are mainly viewed as sources of critical resources such as knowledge, information technology and finance for the innovation process (Freel, 2006; Koch and Strotmann, 2008). A reliance on universities and research centres as a source of knowledge has influenced a company's knowledge development potential and ability to integrate internal and external innovation activities (Tether and Tajar, 2008). Further, co-operation with private consultants can provide diverse input into the innovation process, including experience sharing and diagnostics, beneficial for enterprises in verifying and defining specific innovation needs (Bessant and Rush, 2000).

Additionally, Toivonen and Tuominen (2009) refer to innovation in service firms as a collective process highlighting alliances and collaborations between independent firms. According to this perspective, firms form linkages to obtain access to needed resources (Harrigan, 2007) to learn new skills (Baum et al., 2000), to manage their dependence upon other firms (Pfeffer and Salancik, 2003), or to maintain parity with competitors (Garcia-Pont and Nohria, 2002). In addition, there are further developments in research on the formation of inter-firm relationships between potential competitors (Ahuja, 2000).

Finally, another key characteristic of service innovation is that it often changes the role of providers, coproducers, and customers of services and alters their patterns of interaction. For example, service systems/service science literature discusses the change in a system, specifically service system, in relation to innovation (Spohrer and Maglio, 2008, Storbacka and Nenonen, 2011, Pittaway et al., 2004). However this discussion often focus on issues of service delivery networks, service logistics networks or supply chain management in terms of

operations, production and ICT systems (Agarwal and Selen, 2011, Eisingerich et al., 2009, Hsueh et al., 2010).

### **2.2.3. Innovation as a Trigger of Change in Business Networks**

Innovation is generally assumed as a trigger of change, exogenous or endogenous, to the firm's environment (Walsh, 1995). A tenet of organisation theory suggests that change originates in the external environment of an organisation, and changes occur in environments and organisations that try to adapt to it (Pfeffer 1978). Based on this understanding, organisations hold a passive role in the environment, only responding to an external trigger for a change. However, network researchers re-directed the discussion on change towards its origin in the relationships between actors. In line with his thinking, actor adapts to external changes and initiate changes in their relationships, in actions and reactions with other actors (Gadde et al. 2003; Håkansson and Snehota, 1995). Therefore, the IMP has a different ontological interpretation of a notion of change compared to the organisational theory. A standard view is that a change is triggered by exogenous factors and driven by actors acting purposefully, defining goals, and choosing the best course of action (Corsaro and Snehota, 2012). As such, exogenously initiated changes such as innovation eventually can be understood from a network perspective.

#### *2.2.3.1. Structural Change*

In the tradition of IMP, innovation is commonly viewed as an outcome of change in its structure (Agarwal & Selem, 2011; Corsaro et al., 2012; Eisingerich et al. 2009). Network actors configure their 'value creating elements' (Storbacka & Nenonen, 2011, p 256) to achieve

desired outcomes that result in specific configuration (Möller & Rajala, 2007). Phelps (2010) distinguish between two dimensions of network configuration: network structure and network composition. The network structure centres on the purposes of the focal actor's configuration activities, similar to definition of Perks and Jeffery (2006, p.70), 'network configuration [...] is conceptualised as the shaping and management of the firm's position in a network in order to access and mobilise critical knowledge', and Ford et al. (2003) definition of 'networking' and 'network position' . Network composition is focused on Gemünden et al. (1996) understanding of structure and morphology of network configurations: pattern as importance played by the collaboration with partners of specific nature (universities, co-suppliers, distributors, research and training institutes), and intensity as how often or how strong is the interaction with a specific partner.

Although structures influence the construction of networks, it is actors and networks that ultimately constitute the environment. The critical point of this discussion is that although structural aspects of networks are recognised as a key determinant or at least a moderating factor for innovation (Calpado, 2007, Baraldi et al., 2011), it is actors that ultimately contribute to the innovation environment. As the co-existence and interdependency between change and stability (cf. Anderson et al., 1998; Freytag and Ritter, 2005) occur in different network dimensions, meaning change in the activity structure might presuppose a stable actor structure or vice versa. Network activities and resources are not coordinated and combined spontaneously: they are purposefully directed by individual actors to systematically influence one another (Gadde et al., 2003). Therefore, motivation to influence and control others is a central driving force for network dynamics leading to a paradox of co-existence of stability and change. On the one hand, stability leads to a relationship's development; conversely, relationships are seen as a source of change (Freytag and Ritter 2005). As such, if '...no change is created without activities undertaken by an actor, regardless of the occurrence of new

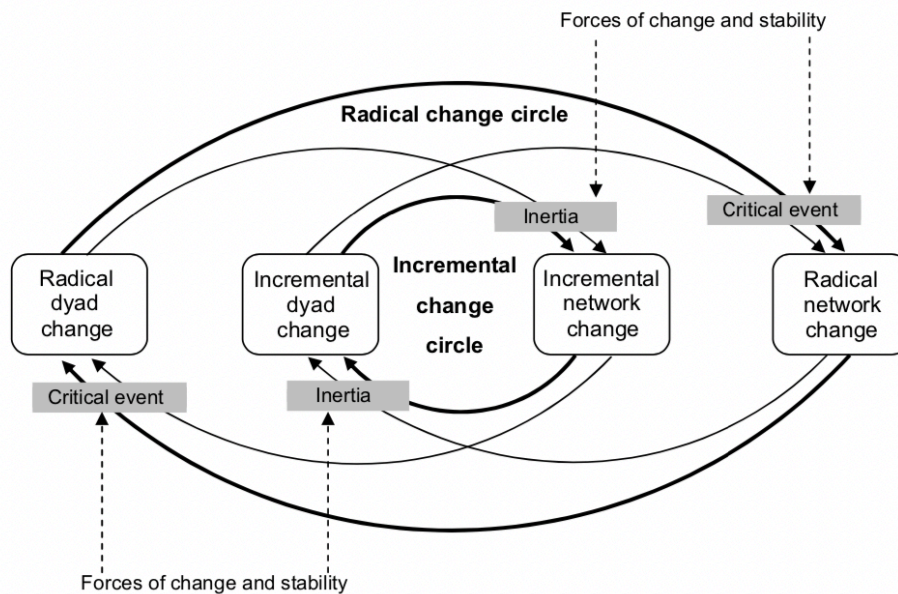
conditions in the environment (Gadde & Håkansson, 1992 p. 170,) actors in the network should be seen as main initiators of change, not only as passive adapters to the environment'. Thus, all changes in a network must come from active participation by one or more actors.

Research on business network changes within the IMP tradition has focused on change originating in the relationship level (micro-level). There are several approaches taken within the IMP tradition, with the majority of contributions addressing the change in networks (macro-level). Less attention is given to triad or net (mezo-level).

#### 2.2.3.2. Level of Change

As business networks do not have lifecycles, they change over time. Håkansson and Snehota (1995b) regard change as a result of a continuous networking process, connecting actor bonds, activity links, and resource ties within a business network. On the one hand, the constant process of change defined as the distance between firms (Hertz, 1996); on the other hand, they are characterised as incremental or radical changes (Halinen et al. 1999), with incremental network change viewed as a primary mode of change. The two outer bold arrows in Fig 2.2 signify the radical change circle, while the inner two bold arrows represent the incremental change circle. In addition, the left and right halves of Figure 2.1 represent the change at the dyadic level and change at the network level, respectively. With these two types and two levels of change, the change in business networks can be further categorised into four groups. As such, radical changes transform the entire relationship causing transformations of the network structure, while incremental changes cause adaptations within ongoing business relationship within an overall stable network structure

**Figure 2.2 The Incremental vs radical changes in a business network**



Source: Adapted from Halinen *et al.* (1999)

However, organisations do not always possess the ability or the desire to change and adapt (Håkansson and Ford, 2002; Capaldo, 2007). Resistance to change is understood as inertia. Various reasons, such as capital investment, specialised equipment or personnel, can cause an organisation to retain existing network structures. Also, any potential changes incur a switching cost that needs to be considered for a company willing to enter the network. Furthermore, an existing network actor might not recognise the need for change, making it difficult for a new actor to join the network. Some researchers have proposed external triggers for change (Zerillo and Raina 1996) and substantial motivational assets to entertain changes. Accepting a new network member is likely to change the power structure of the network, and the dominant network actor might impede any potential adaptations. Both internal established network practises and external ones, such as legal or fiscal, might prevent newcomers or make their entry into the network a costly attempt.



Hertz (1998) understands network change as a change in network relationship that triggers a sequence of changes in other relationships or through direct and indirect relationships. The 'domino effect' implies 'successive changes in relationships and nets affect the positions of organisations in a net as well as on the total network of an industry' (Hertz, 1998, p 9). The essential elements of domino effects, connectedness, speed and sequence of changes are triggered by a radical change in connected and complex networks. Connectedness is a prerequisite to initiating a sequence of the change process, whereas speed is viewed as a contributing factor. Although changes in relationships occur in a single dyadic, those changes transmit to both nets and networks.

Lundgren (1992) understands change in the relationship as continuous and discontinuous changes, where the former indicates the processes of change founded in existing activities and an established structure of the network. The latter implies the change processes only loosely relate to the existing network structure. Five change sequences are viewed as pivotal. The 'reflection' sequence of change occurs when company X initiate change in the XY dyad, where Y, in turn, rejects and not passing on the change further, acting as a gatekeeper of an initiated change in the network. Second, the 'adaptation; sequence of change occurs when company X and company Y manage the change within the XY dyad without influencing the rest of the network. Third, the 'absorption' sequence of change occurs when company X accepts the initiated by company Y change, as company X absorbs the impact within its company boundaries without affecting company Y. Fourth, the 'transmission; sequence of change occurs when company X initiates change that impact company Y. Company Y, in turn, transmits the change from XY dyad to the other actor of the network, company Z, to mitigate the impact upon itself. Finally, the transmutation sequence of change occurs when 'transmission' and 'absorption' sequences are combined or when company Y accepts and transmits the change initiated by company X. Amplitude modification, which 'captures the extent of the size, rather

than the character of the change presented to the node is modified' (Easton and Lundgren, 1992, p 94) affect the diffusion that occurs when a change is required from a company who in turn requires the network to support that change. Thus, the company involved in change may affect other actors in the process of change.

As initiated changes by a single actor affect other network members and cause reactions and counter-reactions (Nystrom 2009; Aastrup 2000; Håkansson and Snehota, 1995), changes in networks can be traced back to actions and reactions in relationships and should be viewed as processes transforming or reproducing the network structures. This is the case dealing with radical change, continuous change, as well as stability. All kinds of change (or stability) should be accounted for and should be viewed as ontologically similar. The different types of change can be considered nothing but empirical categorisations (Havila and Salmi, 1999). Consequently, the conceptualisation of changes in a business network lies in understanding and explaining actors' abilities to act as properties of their connectedness in positions and network structures.

Some network researchers (Smith and Laage-Hellman, 2016) understand change as options for actors to transform or change the network structure at the level of the triad. Five patterns of transformation are identified. First, by-pass refers to how an actor wants to avoid an intermediary actor (avoidance) by interacting directly with the third party or influencing an intermediary actor through this third party (flanking). Secondly, a combination refers to the strategy in which the focal actor chooses to pool resources and coordinate activities with a second organisation in the context of their common relation to a third party. Thirdly, bridging refers to the strategy in which the focal actor uses an intermediary actor as a facilitator or access to a third actor. Fourthly, displacement occurs when a focal actor replaces a former partner with another. Finally, separation occurs when a focal actor establishes an indirect relation as a

replacement of a direct one. Two degrees of separation can be distinguished – elaboration and blocking. These 'patterns of transformation' are categories of options possible for the single actor to initiate change. In this case, the context is a triad, but this understanding is applicable also for network levels beyond the triad (Aastrup, 2000).

The concept of joining, splitting, drifting (away or closer) of nets is viewed to be a dominating type of changes in business networks (Hertz 1996). Joining of nets occurs when significant parts of two nets join together. In this situation, establishing several direct relationships between two networks is observed, where several firms co-operate between nets, for example, in the case of the formation of a strategic alliance (Möller et al., 2003; 2005; 2009). Splitting of nets, in contrast, implies that a firm or a large group of companies break up several direct relationships and exit from an integrated net. Drifting closer and drifting away, as a form of existing relationships between companies that belong to different nets occur when moving closer or further away from each other for a period of time, for example, as a result of strategic action.

#### 2.2.3.3. *Dimension of Change*

Change in business networks could be understood as a general dimension in developing a network structure (Aastrup 2000; Håkansson & Henders, 1995; Håkansson & Lundgren, 1995). Håkansson and Henders (1995) argue that 'the interaction of actors using certain resources to perform specific industrial activities that initiate change activities in their own self-interest' (p. 142). They discuss dependencies between different changes, which can be described in terms of actor, resource and activity dimensions and where a change in one dimension instigates changes in other dimensions. Using the concept of vector to indicate the direction and strength of change forces, they distinguish three types of change vector: structuring vs heterogenising; hierarchisation vs extrication; and specialisation vs generalisation, as shown in Table 2.1. They

also emphasise that there are 'new actor/resource/activity vectors intersecting the existing trajectory at all times' (p. 146). The evolution or revolution of business networks depends on the direction and relative strength of these colliding vectors.

**Table 2.1: The Change Vectors**

Basic Factor	Change Variable	Definition
Activities	Structuring	Attempt to perform old activity better
	Heterogenizing	New ways of combining activities and resources
Resources	Hierarchization	Consolidating access to the resources needed to execute activities
	Extrication	Relinquishing control of some resources
Actors	Specialization	Focusing more narrowly on executing a specific activity
	Generalization	Developing flexible competency

Source: Håkansson and Henders (1995), p. 143

Three vectors of change are identified based on connections between activity links, actor bonds and resource ties. The first vector of change describes the way activity links and resource ties connect. Structuring is the refinement of existing methods to utilise and combine resources in activities. Structuring process indicates that certain relations and dimensions of the resources are given a higher priority at the expense of others (Håkansson, 1992). Heterogenising means the re-configuration between companies is already working in a network or through links to companies belonging to the network. Heterogenising, on the other hand, is new ways of combining activities and resources. This structuring-heterogenising vector is about technology and the economy.

The second vector connects actor bonds and resource ties in the hierarchisation and extrication tendencies. Hierarchisation is a change force towards the necessary resources controlled by

fewer actors. In contrast, extrication is a change direction in which many actors control the resources used. This vector describes resource control or availability. The third vector of change regards the connection between actor bonds and activity links. Specialisation is the tendency towards each actor performing a narrow range of activities, whereas generalisation describes the tendency towards each actor performing a broader range of activities. The generalisation-specialisation vector is about the organisation of activities. These vectors of change are valuable for identifying the general dimension in the development of a network structure.

## **2.3. Actor's Position and Role Interplay in Understanding Business Network Change**

### **2.3.1. Position Concept**

In the IMP view, the concept of actor's position and on role explored to gain an understanding of business network change and dynamics with the focus on internal network issues, for example in the context of an actor initiating change by introducing a new product or a service. Network position is a concept that has emerged simultaneously with the industrial network approach, whereas the concept of role has gained research interest only during the last decade. Anderson et al. (1998) strongly point out that one cannot discuss a position without referring to a role (and vice versa). However, the link between position and role within the IMP tradition is unclear and not a problem many researchers address (Henders, 1992; Havila, 1996).

A network position is a relative concept with each actor having his perceptions of the position he occupies in a network and being perceived by other actors, similar or differently, on the

same position (Corsaro and Snehota, 2012; Håkansson and Snehota, 1989; Gadde et al., 2003). Ford et al. (1998: p. 49) argue that a company's network position is framed by 'its relationships and the activity links, resource ties, and actor bonds that arise from them'. In this perspective, the position of a company is determined more internally and is contingent on how the company relates to others involved in business interactions. Axelsson and Easton (1998, 2016) notes that network position provides a language to talk about network changes as position in the network is primarily concerned with the connectedness of the actor. Time and commitment are necessary to achieve a position and change a position in the network. The achieved position resulted from investment in exchange relationships and characterised by the actor's connectedness in the network. Thus, the concept of position offers a tool to describe network structure and network distance between actors. In addition, the position has been argued to form a framework for actions meaning that firm actions are dependent on position (Henders, 1992). On the one hand, actor's position might restrict his activities in the network; on the other hand, it suggests that network structures determine the actors' abilities to act. Based on these arguments, the position can be viewed as a resource used by a network actor to access, for example, specific roles, through which capabilities are developed, the knowledge gained or resources combined in intention to innovate.

The concept of position is multi-faceted and, as such, defined based on its various characteristics. Mattsson (1985) explains position relative to 'the function performed by the organisation'; relation to the identity of the organisational units the firm is linked to' and the 'relative importance of the firm' to others (1985, p. 270), thereby, linking network position to the role, identity and power. According to Henders (1992), the position is seen as the primary determinant of the firm's opportunities and constraints. It characterises the relation an actor has with other firms as results of earlier activities in the network and constitutes the base that gives the firm's development possibilities and constraints in the network.

An actor's current position is determined by its activities and characterised by the actor's relationships to other firms and the consequences of earlier activities in the network (Mattsson in 1987). Network position defined by function organisation hold to perform activities it is expected to undertake. The organisation's network position changes with the change of expectations of the network. Each position has its macro and micro levels, defined by its relationship to the whole network and other actors, respectively. Finally, each position has its relational strength and historically determined as consequences of prior activities (Johanson and Mattsson, 1985). Positions also reflect the cumulative nature of networks (cf. Forsgren et al., 1995) and the connection between past and future (Axelsson and Easton, 1992, 2016). Therefore, building and developing positions in networks consumes time, resources and commitment.

As each actor has a position that depends on his relationships with counterparts, he cannot get into a position single-handedly. Rather, the actor constantly changing position in search of a better one. Positions come into existence when they are occupied and dissolve as the network continues to change. The initiation of new relationships and existing ones affects a company's network position (Hertz, 1996). As such, network position is viewed how an actor interprets the changing environment and makes adjustments and adaptations (Henders 1992).

Relationships are the factor that defines the position of the actor in a network. The network position strongly influences the basis for an actor's future exchange relationships, which eventually forms the basis for the actor's strategic actions (Mattsson, 1984). In this view, the position of the actor associated with his strategic identity (Håkansson and Johanson 1984) implying that the actor is expected to behave according to the norms related to the position. Positions are furthermore balanced between the past, and the future as history determines the current position and the future offers opportunities. Each position is unique and perceived

differently by the various actors in the network (Gadde *et al.*, 2003; Håkansson and Snehota 1989; Salmi 1996). Therefore, a position has both stable and dynamic character, and it is difficult to separate an actor's position and role (Anderson *et al.*, 1998).

When it comes to the operationalisation of positions, a snapshot view of position allows for the 'detection of opportunities for and constraints to action through consideration of the fit of resources in the network' (Henders 1992, p. 102). As resources have value only in combination with other resources, actors change positions to access relevant resources. On the one hand, the lack of resources restrains change. As such, position contributes to the actor's ability to affect change processes. Positions are also constantly altered through the process of change. On the other hand, change initiates a sequence of additional change, such as changes in activities would demand changes in resources, which eventually may result in changes in actors.

### **2.3.2. Role Concept**

Actor roles have been widely discussed in the social sciences for several decades, emphasising role theory (Biddle 2013; Broderick, 1999; Linton, 1936). A central premise of role theory is that roles are socially constructed clusters of behaviours expected of actors (Montgomery, 1998) and that actors should be viewed as a collection of roles (Anderson *et al.*, 1998).

Traditionally, a role theory focused on individuals' behaviour and has found its fruitful application as managerial roles in management theory (Mintzberg, 1980). In addition, the role appears as a focal concept in organisational theory defining organisations as social systems that consist of patterned activities performed by individuals (Katz & Kahn, 1966). Accordingly,



organisations as actors in nets are systems of individuals' performing roles conditioned by tangible resources and through interactions with each other (intangible resources).

The concept of role can be traced back to the 1930s, explicitly used in behavioural sciences studying occupational roles such as teacher or nurse (Havila, 1996). Levinson (1959) defines the role as something existing outside of the individual, indicating that some kind of structurally given demand is associated with a particular position, which then, in turn, guides the individual's actions. Levinson further suggests that if the individual leaves the position, the role remains, and another individual can learn to perform this role. This view is similar to Henders (1992), who argues that a position in a business network pre-exists the actor.

Drawing on behavioural and psychological sciences, Linton (1936) defines the role in relationship to a position and proposes that role can be seen as the dynamic aspect of the position. Also, one position can be said to involve many different roles (Havila, 1996). Depending on the situation, the role is activated. Henders (1992) sees the role as an activity in how many actors perform any one role at any one time and that each of these actors executes several roles simultaneously. Bales (1958) points out that no role exists without a paired reciprocal role which is a part of a different position. On the characteristics of role, it has been noted that roles have a pre-history and are not created from scratch (Nadel, 1957).

Role-making and role-taking are concepts that define the role as 'the set of prescriptions defining what the behaviour of a position member should be', according to Biddle and Thomas (1966, p. 29). Role-taking begins with the use of shared role-conceptions as the basis for inputting a role, and it is only when the gestures of others do not seem to correspond to these more shared and standardised conceptions that actors begin to construct a situationally unique role for others. As such, the process of role-taking 'involves interpreting the behaviour of others as a syndrome of gestures that reveals a role' (Biddle and Thomas, 1966 p. 86). Conversely,

role-making assumes that individuals consciously and unconsciously orchestrate their actions to 'make' or assert a role in a particular situation.

As a result, based on different role change processes, several perspectives have emerged (Table 2.2).

**Table 2.2: The Role Change Process**

+ Role perspective	Use of role in business networks	Change process
Structuralist	Role is predetermined by the actors in a network	Role-taking
Symbolic interactionist	Role is created in a social structure, such as the network	Role-taking/ Role-making
Resource-based	Role is used as a resource to control resources or establish structure	Role-taking/ Role-making
Action-based	Role is determined by actions and based on openness and common goals of the network	Role-making

2.3.2.1. Structuralist Perspective

Role theory suggests that individuals behave differently depending on their social identities and individual situation (Biddle, 2013 1986). A fundamental assumption in classical role theory is that not all roles are the same. Distinctions have been made between ascribed and achieved status (Biddle, 2013 1986), task roles and status roles (Bales, 1958), and expressive and instrumental roles (Parson and Shils, 1951). Callero (1994, p. 235) notes an important aspect: these distinctions are based on structural definitions of the role and suggest certain determinacy and stability in both roles and social structure'. A structural perspective of role theory, therefore, assumes that roles are given in formal social structures. Baker and Faulkner (1991, p. 281) note

that a role is, according to the structuralist view, thought to be 'enacted from a position, meaning that a person first assumes a pre-established position and then behaves (or learns to behave) in a role-appropriate manner'. The structuralist approach implies certain stability in the role and social structure, demonstrating that acted roles are based on position and highlighting the importance of compliance with norms and expectations (Havila 1996).

#### 2.3.2.2. Symbolic Interactionist Perspective

Montgomery (1998) argues that the role of an actor is socially constructed, and actors should be perceived as collections of several roles. Roles are, therefore, emergent and negotiable between individuals. Actors coordinate their behaviour based on preferences, perceptions and interpretations, ending up jointly defining what constitutes a specific role. A role is thus composed of expectations and requirements about behaviour. According to Biddle (2013,1966), this view corresponds with the symbolic interactionist perspective of role theory, according to which roles evolve through social interaction. For instance, changing role also alters the goals and self-conceptions of an actor/individual. A structural perspective of role theory, as already noted, assumes that roles are given in formal social structures.

According to a symbolic interactionist approach, roles are first claimed and then enacted into positions, implying roles are used to create positions and their relationships or social structures. In other words, according to this approach, a role does not exist without individuals, whereas a structural approach sees roles as given by a particular position (Havila, 1996). Thus, roles are first claimed and then enacted into positions. Roles are used to creating positions and their relationships or social structures.

### 2.3.2.3. Role-as-a-Resource Perspective

Other researchers of role theory (Baker and Faulkner, 1991; Callero, 1994) have adopted the perception of roles as resources, combining the determining structures for expected behaviours of the structural functionalist perspective and emerging behaviours of the symbolic interactionist perspective. Similarly, Callero (1994) notes that roles are not viewed as consequences of one's position in a social structure; roles must be claimed before they are enacted into positions. Roles can thus be used for granting access to other types of resources. Baker and Faulkner (1991) argue that a role as a resource is used to gain acceptance to social settings and exploit this settings to pursue their interests. Baker and Faulkner (1991) use this concept as a tool to analyse the process by which roles are used as resources to create new positions and social structures in a specific context, such as a business network, for instance. This view suggests that a position does not necessarily pre-exist a role. Instead, roles are used in shaping positions, an approach similar to the symbolic interactionist approach. However, roles under the 'role as resource' perspective are regarded as tools, which are 'used in a competitive struggle to control other resources and establish social structures' (Callero, 1994, p. 230).

Like the interactionist approach, the role-as-resource perspective recognises the unpredictable and changing nature of interactions. When roles are used as a resource, they are part of a dynamic and fluid process. In effect, roles cannot determine behaviour if they are conceptualised as means for accomplishing behaviour. Unlike the interactionist tradition, the resource perspective does not find it necessary to presuppose structure in the form of a pre-established position. Consequently, rather than arguing about the degree to which roles prescribe action, the resource perspective is concerned with how roles are used to establish structure.

#### 2.3.2.4. Action-based Perspective

The action-based approach to roles differs from other approaches in terms of its interpretation of roles of a collective actor as a normative approach to role theory. According to views adopted in this stream of research (Nystrom et al., 2014; Heikkinen et al., 2007), an actor's role is created through actions searching for an ideal role and attempting to achieve a common goal. The tasks associated with the ideal role determine how that role is played out, which resources to access and use, which actors to team up with, and which networking goals to consider realistic under time and resource limitations. As such, the actor's actions and reactions of others determine an actor's role. Moreover, openness in action suggests establishing elaborate networks in which the company team up with diverse types of partners and users to generate new products and services (Nystrom et al., 2014; Chesbrough 2003; Corsaro et al., 2012).

#### **2.3.3. Roles in Business Networks**

Contrary to role theory, which traditionally puts individuals as the primary unit of analysis, the industrial network approach includes organisations as key actors performing in a network. As a result, roles have found their way into the industrial networks approach mainly at the organisational level (cf. Anderson et al., 1998; Heikkinen et al., 2007; Henders, 1992; Knight & Harland, 2005; Mattsson, 1985). The last decades have witnessed a growing academic interest in the concept of roles mainly associated with service encounters (Broderick, 1999), inter-organisational networks (Snow et al., 2000), embeddedness (Montgomery, 1998), external supply networks (Knight & Harland, 2005) and innovation networks (Möller and Halinen, 2017; Heikkinen et al., 2007; Möller et al., 2005). Generally, the notion of roles is linked to role theory, a central premise of which is that roles are socially constructed clusters of behaviours expected of actors in certain situations (Montgomery, 1998) and that actors

should be viewed as a collection of roles (Anderson et al., 1998). A recent stream of empirical studies (Nystrom 2014; Heikkinen et al. 2007; Abrahamsen et al., 2012) advanced the understanding of roles in the context of innovation and new service development.

Roles have been used regularly in studies of industrial networks (Håkansson, 2002) and have provided a valuable lens to interrogate innovation networks (Möller and Halinen, 2017; Möller et al., 2005), network change and dynamics (Abrahamsen et al., 2012, Anderson et al., 1998); strategic processes (Nyström et al., 2014) and typologies of behaviour (Heikkinen et al., 2007, Nyström et al., 2014a). In the context of business networks, the concept of the role was initially brought into the discussion on the network position and linked to the network dynamics (Henders, 1992; Anderson and Havila, 1993; Anderson *et al.* 1998) and later extended to innovation networks (Möller and Halinen, 2017; Nystrom, 2014; Heikkinen et al., 2007; Möller et al., 2005).

In an environment that supports innovation, actors form relationships to access resources that both influence innovation and are, in turn, influenced by the innovation process (Dawson 2014; Ostendorf et al., 2014). Through interactions, the resources and activities of individual actors may be combined, exploited, modified or transformed to progress innovation. Each actor's activities and resources are heterogeneous and have different use and value depending on the activities and resources of the other actors with which they are combined (Ford et al., 2010). Therefore, it is inevitable that the actors involved will have different identities in each interaction in which they are engaged. For that reason, actors may hold different identities or roles at any one point in time, not only with other counterparts but indeed with the same one. As Ramirez (1999) notes: 'one economic actor 'A' may simultaneously be a supplier to another economic actor 'B', as well as a customer of economic actor 'B', as well as a competitor of 'B', as well as a partner with 'B' to produce value with and for a third economic actor 'C', and

possibly a competitor with 'B's partners' (Ramirez 1999, p. 54). Consequently, it is the process by which actors interact and their roles during these interactions that are important in the context of innovation development.

In business and management studies, researchers largely adopt a structuralist view of roles (Halinen, Salmi, & Havila, 1999; Havila, 1996; Håkansson 1987). The structuralist approach to roles assumes that the position determines which roles an actor can act. Roles are, therefore, consequences of the position an actor has. The position concept locates an actor in a structure or system, but the role is viewed as the dynamic aspect of position (Havila, 1996). For instance, Håkansson (1987, pp. 217-219) concludes that a company has a position and acts in a role. Therefore, the structuralist view on role implies that its framework of action restricts the firm and merely enters a pre-existing structure to meet a position and perform the specific role(s). According to a structuralist approach, Berger (1963, p. 95) argues that role 'provides the pattern according to which the individual is to act in the particular situation'. In contrast, Henders (1992) points out that this definition does not allow for multiple roles and suggests that (1) many actors can perform one role at any time and (2) each actor performs several roles at the same time, referring to this as 'the multiplex idea'. She further argues that if the role is defined as an activity of an actor in the network, it remains consistent with the activity/actor/resource concept of a role becoming an aspect of the actor's contribution to the functioning of the existing network logic and more importantly to contribute to change in the network. In addition, Havila (1996) points out that it is always individuals who act and build up relationships with counterparts, and as such, the role(s) of an actor is created and modified in the interaction process (Havila, 1996, p. 35)

#### **2.3.4. Role Change**

In addition, Mattsson (1985) implies that actors are expected to behave according to a set of norms, which are associated with their position. Thus, one can assume that the position pre-exists the role(s) since behaviour expectations are linked to a position in a business network. This largely corresponds with the structuralist approach to roles and assumes that a firm may use its position to orientate in a business network. The position becomes a resource by which specific role(s) are accessed. On the other hand, Andersson et al. (1998) propose that role is a construct of the meanings of a situation, and an actor can change the situation by acting in a role, therefore also changing its position in the process of such as role-taking. The role can thus be seen as the dynamic or processual aspect of the position and describes what actors intend to do and how they construct meaning from their position.

As such, one way to interpret change in business networks is to consider the concept of network position conceptualised from a structural perspective by assuming who actors are connected to and 'the function performed by the organisation' (Marrison, 1885). The position is a structural connectedness of the actor, giving him the power to make different choices to act (Aastrup, 2000) that impact network dynamics and innovation (Wilkinson and Young, 2002). Following Hedstrom (2005), it can be assumed that the process of change includes actors (different entities) and activities, which enable them to regularly achieve a specific type of outcomes.

### **2.4. Nature of Business Net Changes**

#### **2.4.1. Evolutionary Development Perspective**

Traditionally, the IMP contributions draw on an evolutionary outlook on the nature of change (Brennan, 2006, Matthyssens, P. et al., 2013). As networks are forever in a state of change



(Törnroos 2002), change is a central feature in network evolution (Axelsson and Easton, 1992; Anderson et al., 1998). The evolution includes both vaguely defined and clearly observed phases of a tangible value created and captured in a successful outcome of a network goal. While evolutionary phases certainly might go back and forth in time, the main tendency is towards eventually realising the goals of a given network, and thus the network evolution is approached from this perspective. Based on this understanding, evolution proceeds naturally from explorative phases towards more exploitative phases. Thus, net (work)s progress and evolve as their goals are modified or realised, as actors come and go, relationships are activated and deactivated.

In traditional IMP thinking, change can be categorised as evolutionary following van de Ven and Poole's (1995) typology that distinguishes between four theories of change: life cycle, teleology, dialectic and evolution. According to life cycle theory, the life of a relationship is divided into a sequence of stages and relationships can progress or die ( Ford, 1980). The teleological theory assumes that relationships change due to decisions made by the most powerful entities (leaders) within a given network (Möller & Wilson, 1995). The dialectic approach views the process of change in terms of interactions between competing entities (Webb & Hogan, 2002), but as some authors note (Wilkinson, 1990), it does not explain why and how conflicts, treated as the driving force of change, among companies arise. Finally, the evolutionary theory of change is based on Darwin's work on natural selection in biology. It explains changes and evolution by referring to three processes: variation and adaptation, selection and retention/reproduction (Huang & Wilkinson, 2013). From the evolutionary perspective, changes are seen as resulting from interactions that take place over time in an environment (Axelrod & Cohen, 1999). The four theories emphasise the role of time required for change to take place or to be implemented. They also highlight the importance of interactions between firms as one of the mechanisms driving the process of change. In this

context, it is, therefore, necessary to identify the actual mechanism of change in business relationships to understand how and why a business relationship moves from state A to state B.

As discussed in Section 2.2.1, IMP highlights the micro-foundations of network change in contrast to mainstream management literature, where change is commonly treated as individual agency as exogenous occurrences. In so doing, IMP explains how adaptive change is distributed in markets (Snehota, 2003) and how actor bonds, resource ties and activity links in networks are conducive to mutual adaptation to changes (Håkansson & Ford, 2002; Mattson, 1987). The dynamics in which actions initiated by one actor via interaction ripple through the network and cause suited reactions by connected actors has been referred to as that of a 'living' structure (Brito, 2001; Ritter et al., 2004) with the exact pattern of this rippling effect is unpredictable.

In addition, Gadde and Håkansson (1992) also indicate that an organisation initiates a change to act or react to the changing conditions generated from its interface with the environment. This structure is influenced by exogenous factors (environment) as well as endogenous factors (company) in which relationships function as transmitters and transformers of change (Håkansson and Snehota, 1995; Halinen et al., 1999; Halinen and Törnroos, 1998). Furthermore, an actor's changing activities are its purposeful actions based on its interpretation of the environment in a continuous process of improving operational efficiency and pursuing competitiveness (Axelsson and Easton, 1992; Ford and Håkansson, 2006). Further, Gadde et al. (2003) point out that a network is indeterminate since the usual distinction between a firm and its environment is not advocated, and the set of actor bonds is not given. It is a system of loosely connected actors and relationships that does not have a natural centre or clear borders and in which no firm can dominate (Wilkinson and Young, 2002). Nevertheless, network

development is not random but based on particular pattern, path or logic (Gadde et al., 2003), which is often difficult to interpret.

Anderson et al. (1994) argue that network or net formation could be the result of (1) necessity, (2) asymmetry of power, (3) reciprocity, (4) efficiency, (5) historical path or (6) legitimacy. Once a network is in its place, it becomes a self-sustaining system that may be much more resistant to change than would first appear (Anderson et al. 1994). However, if changes in networks occur, these changes result from interactions and thus are viewed as emerging with collective actions and common goals shared by the network members (Axelsson and Easton, 1992).

A collective action arises when various actors join efforts to cope with a collectively recognised issue by influencing the structure and evolution of the systems they belong to through increased control over activities, resources and other actors. For example, the cooperative character of an export scheme, the form of a network among firms sharing common interests regarding internationalisation issue, usually involves forms of collective action (Welch and Wilkinson, 2002; Welch et al., 1996). The logic of such schemes is that 'companies should be able to achieve far more impact in a foreign market by acting in combination rather than singly, with resources being pooled and costs, information and experiences being shared' (Welch et al. 1996 pp 464). Thus, using collective action terminology, actors join schemes that provide them with a collective good that compensates their individual costs to provide the collective benefit (Roseira et al., 2010; Wilkinson et al., 1998).

### **2.4.2. Intentional Development Perspective**

A more recent stream of IMP contributions contest the traditional view of change as an emergent process and argues that networks can emerge intentionally (Heikkinen et al., 2007; Möller et al., 2005; Rampersad et al., 2010)

Möller and colleagues introduced the perspective of the strategic net between 2003 and 2007 (Möller et al., 2005; Möller & Rajala, 2007 and Möller & Svahn, 2003) in efforts to distinguish the purposefully designed network organisations (nets) ontologically different from the emergent (and borderless) view of business networks dominating the IMP research (Ritter, Wilkinson, & Johnston, 2004). Based on this perspective, strategic nets are formed by a few actors pursuing an intentional goal(s) with mutually agreed and contractually defined roles and responsibilities.

Möller and Svahn (2003) originally extended the work of Lundgren (1995) demonstrated how the development of innovative technology of digital image processing in nets occurs through network processes. The result of this study showed that business network, fragmented into nets, emerge in three stages, linked to each other, namely (1) genesis – identification, (2) coalescence legitimation and (3) dissemination – adaptation. In the first stage, the changes occur due to the development of a new digital image processing technology through a research project in partnership with various network actors. In the second stage, through collective learning and knowledge sharing, existing network partners could identify and mobilise other network actors needed in developing digital application. This stage was characterised by co-operation that led to further development of the network. In the third and final stage, the changes in network development included further co-operation between various actors to have competencies required to commercialise the developed technology.

Möller and Svahn (2003) similarly propose phases of net development: exploration, mobilisation for resources and mobilisation for commercialisation. In the first stage, actors explore business opportunities that are characterised by competition between the actors and collaboration. This phase is explorative and coloured by the quest for ideas to which relationships with other network actors can add value. In the second stage, mobilisation for resources involves actors' collaboration to develop the commercial application to a viable idea. This phase is characterised by technical co-operation. In the third stage, mobilisation for commercialisation involves actors competing and collaborating to develop production and distribution nets. The expanding of nets is required to transform an idea into an innovation and turn an innovation into a viable business. Strategic nets represent the most organised form of innovation networks as they are generally driven by a hub company and are more often characterised by collaboration between complementary technology producers and pilot customers (Möller and Rajala, 2007).

In addition, the authors suggest the degree of complexity, novelty, embeddedness and dynamics that influence the phases of new business net emergence and dynamic capabilities required for managing strategic nets. Further, Möller and Rajala (2007) argue that emergent networks are based on intentional actions by the actors that construct them. Traditionally, strategic nets mainly focus on radical innovation (Möller and Rajala, 2007). Such nets are more goal-oriented to establish a dominant technology in an emerging domain, and their existence is typically justified by challenges for an actor to achieve a common goal on its own (Möller and Halinen, 2017).

In the process of innovation, actors pursue their interests, priorities, and interaction goals or logic (Öberg and Shih, 2014). Compared to business nets or business relationships, the logic of co-innovating net extends beyond those actors constituting the net, as not connected actors

may have similar logic. In contrast, those that interact may have different logic (Corsaro & Snehota, 2010). As such, Öberg and Shih (2014) suggest the relevance of shared logic to understanding how certain actors may be more motivated toward innovation and how logic portrayed by actors can promote certain types of innovations. In the co-development of novel ideas, actors share complementary activities with other network actors that act as enablers or barriers of a joined outcome, such as innovation. Öberg et al. (2014) argue that the concept of shared logic contributes to the understanding of actors' motives in innovation participation or their unwillingness to contribute. Although the co-operating actors would perform complementarily (Gittell, 2002) or independent activities (Desouza et al., 2008, Öberg, 2010), they would share priorities, interest and goals to achieve a joint outcome. In the context of shared logic, priorities are understood as to how actors choose to participate in incremental or radical innovations. Interests are viewed as an actor's intention to innovate or willingness to welcome new ideas. Interaction goals defined as reasons for co-operation in the innovation process.

## **2.5. Conceptual Framework for Understanding Business Net Development in a Service Innovation Setting**

### **2.5.1. Introduction**

The purpose of this section is to develop frameworks from the theoretical elaboration. Two conceptual frameworks in Fig 2.1 and Fig 2.2 guide the main area of the research, indicating the key constructs in use and explaining links between its various parts. This research focuses on business net development in a service innovation setting and how changes over time impact net configurations and net development patterns. As such, this study aims to employ the

explanatory power of the industrial network approach to explore and interpret network changes using a qualitative approach.

### **2.5.2. Key Concepts**

The key concepts provide important definitions to facilitate the empirical investigation.

**Business Network** - In the context of this research, business network is defined within the Industrial Network Approach (INA) of the IMP Group (Håkansson & Ford, 2002; Ford et al., 2003) and refers to an overall network that consists of nets of connected companies. It is essential to note that all boundaries in network research are arbitrary and a result of the perspective and interpretations of the investigator or, in the case of the actor's view of it (Axelsson and Easton, 1992, 2016).

**Business Net** - Business net is conceptualised as a net of relationships amongst actors who are concerned with a particular issue through mutual or conflicting interests. As a form of association based on cooperative relationships amongst actors who aim to cope with the collectively recognised issue by influencing the structure and evolution of the system to which they belong through increased control over activities, resource and other actors. This form of a business net described as an issue-based net (Brito, 1999, 2001). The issue-base net in the context of this research acts as a framing device with respect to the connectivity between the participant actors concerning with developing and implementing an innovative training approach for internationalisation of SMEs.

**Actor's Position and Role** - Actors are an important element of network structures defined as the interdependence between actors, activities and resources. As such, actors are defined as a socio-economic or non-business actor based on the resources they are mobilising and the

activities they are performing (Gadde et al., 2003). Role and position of a network actor influence stability and changes in business networks. As such, the position is conceptualised from a structural perspective by considering who actors are connected to and 'the function performed by the organisation' (Marrison, 1985). The position is a structural connectedness of the actor that gives him the power to make different choices to act (Aastrup, 2000). The role is conceptualised as cognitive function interpreted through changing actor behaviours and perceived as relative behaviours compared to other network actors (Anderson et al., 1998), including reactions to others' behaviours within the role interpretation process (Heikkinen et al., 2007, Nyström et al., 2014a). As role and network position cannot be separated (Anderson, Havila, Andersen, & Halinen, 1998), the role is defined as actor behaviour within activities.

**Business Net Configuration** – Business net configuration is conceptualised as an interaction pattern between actor, position and role. On the one hand, network position determines the role(s) actor holds in the business network. On the other hand, network position is shaped by the role(s) the actor chooses to act. In both instances, the network position indicates how the actor fits into the industrial system vis-à-vis other actors and the role is defined as a function, task and behaviour concerning other actors. It is argued that roles are not static and can be achieved (role-making) or assigned (role-taking). As such, a change in role(s) of one actor may result in a change of role(s) of another actor(s) and consequently lead to a change in resources constellation and activities pattern in the whole network.

**Service Innovation** - Service innovation concept conceptualised as a collective, non-linear and interactive change process embedded (endogenous) in a business network. From an industrial network perspective, economic change, such as innovation, cannot be explained by theories explicitly or implicitly assuming that economic actor can act independently. Thus, to understand the drivers behind a change of this nature, there is a need to focus on the



interdependences of the industrial system and acknowledge the fact that service innovation is not solely determined by economic variables but also social factors. The service innovation process is considered a part of the actors' context and motivation behind acting in networks, forming relationships, seeking change in nets, roles, and positions.

### **2.5.3. Research Framework**

The first framework (Fig 2.1) assists in understanding the change in a business net from the impact of service innovation development. A relatively stable net represents the existing net in which the roles and positions of net members are clearly defined; their resources are combined, and activities are coordinated in an ongoing interaction process (e.g. Brennan et al., 2003).

As Figure 2.3 shows, the framework comprises three elements: a relatively stable business net, a new configured business net and network processes that might lead to the re-configuration of the existing net or emergence of a new business net. An actor's position in the net is determined by its activities and characterised by the actor's relationships to other firms and consequences of earlier activities in the network (Mattsson in 1987). The actor's network position changes with the change of the network's expectations. Each position has its macro and micro levels, defined by its relationship to the whole network and other actors with a relational strength and historically determined as consequences of prior activities (Johanson and Mattsson, 1985). Roles act as a process to change the position of a network actor (Andersson et al., 1998). However, actors' roles could be viewed from different perspectives (structuralist, symbolic interactionist, 'role as a resource' or action-based) that influence position/ role pattern and impact how actors organise relationships and activities within a business network.

**Figure 2.3: The business net change from the impact of service innovation development**

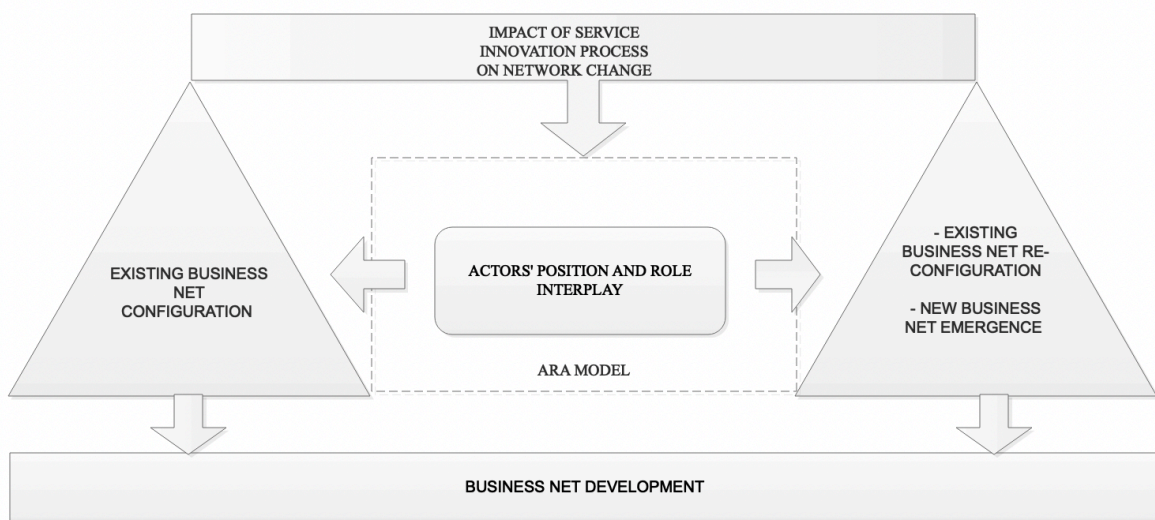
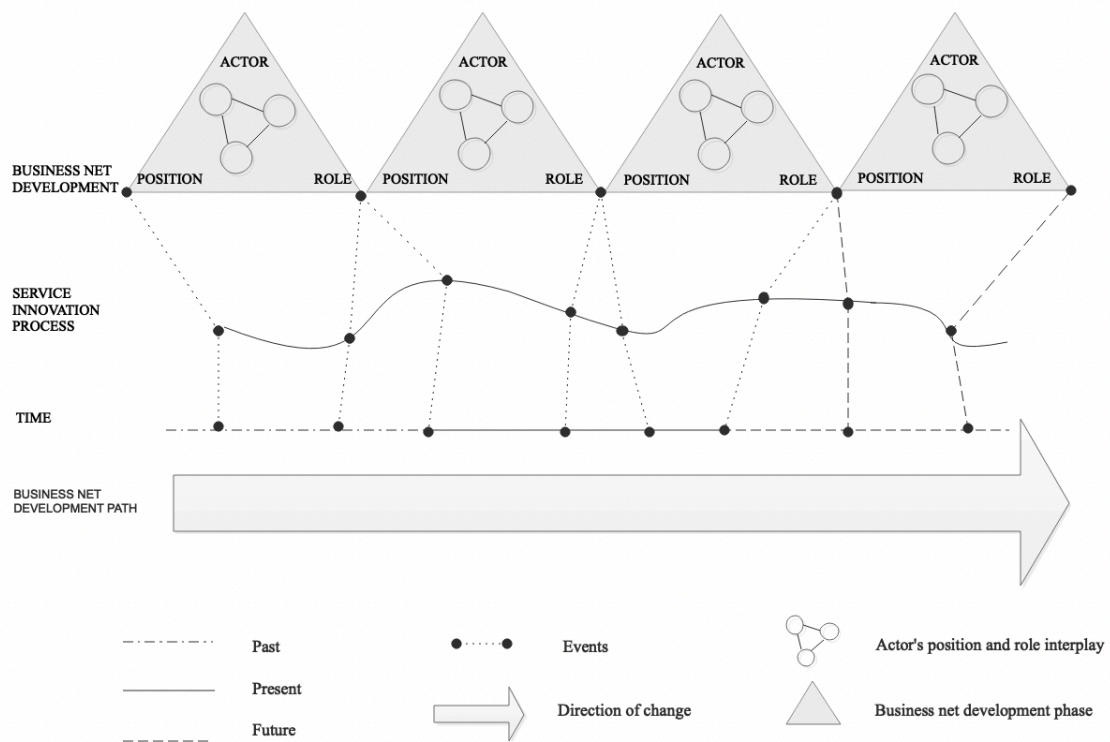


Figure 2.4 assists in understanding the change in a business net over time or business net evolution. Time is conceptualised as a relational time, with the existing past, present and future (Halinen & Törnroos, 1995). As such, the time concept is sequenced in periods or phases (Capaldo, 2007). The three-time concepts are connected in a service innovation context: (1) asymmetric time, where time flows irregularly into the future (Halinen et al., 2012), takes the network from one period to another, (2) the sequenced periods are researcher constructed according to innovation phases that managers of the co-operating business net socially recognise, and (3) managerial decisions occur in the continually moving present of relational

time. In addition, the role of time as an environment for interactions indicates the importance of critical events, decisions and decision timing (Hedaa & Törnroos, 2002), and pathways of events and processes over time (Araujo & Harrison, 2002). Time can be viewed as natural time and human time as cultural or social. The perspective of human time and interaction understood as a link between social and economic exchange and the formation of business relationships from events and episodes within the interfirm interaction process. The cultural time can be further separated into organisational time and individual time (Halinen & Törnroos 1995). These perspectives on time in the 'social time' setting are not disconnected from each other but form a relational whole of time conceptions related to business relationships. Relational time should therefore be treated in a specific context.

Interaction between firms is considered a key process through which companies relate and combine their activities and resources, forming interconnected business relationships. However, actors may view the network, its scope, and the nature of the exchange relationships in quite different ways and relationships are established for various purposes. The network does not have a natural centre or clear borders and is dynamic over time (Håkansson and Snehota, 1995). However, this does not mean that network development is random; rather, it is understood that change often follows a particular pattern, path, or logic (Gadde, 2003; Håkansson and Snehota, 1995; Håkansson and Henders, 1995; Axelsson and Easton, 2016). It is assumed that gradual or evolutionary changes follow a particular direction or a pattern, while radical or revolutionary changes are path-breaking (Freytag and Ritter 2005).



**Figure 2.4: The business net development in service innovation setting**

#### 2.5.4. Research Questions

The conceptual frameworks (Fig 2.3, Fig 2.4) address three main research problems using actors' perspective on the development of a business net as service innovation unfolds. These research problems are related to structural configurations and re-configurations of business nets emerging in the interplay of actors' position and roles and business net change nature impacting business net development.

The main objective aims at understanding the nature of the change processes. From an interaction and network perspective, the innovation process in a business network is progressively perceived as an interactive and evolutionary change process endogenous to networks (Aastrup, 2000; Axelsson and Easton, 2016, 1992) and a collective issue that can

only be understood when the interplay between actor bonds, resource ties and activity links is taken into account (Håkansson and Waluszewski, 2002a). Due to the complexity of this process, single firms innovate in a mixed, cooperative and competitive, environment with other firms, enabling all partners to use their internal resources optimally and combine them with specific resources of their partners. Notably, the interactive nature of innovation is well pronounced in services involving complex adaptive combinations of people, technology, processes, information, and a well-thought-out service concept (Witell et al., 2016; Ostendorf et al., 2014, Westerlund and Rajala, 2010). In addition, the service innovation process tends to unfold in largely unstructured and informally organised settings (Gottfriedsson, 2001), comprised of primarily informal processes (Kelly and Storey 2000, Chen et al., 2009). Therefore, employing explanatory power of business networks (Håkansson and Ford, 2002; Ford et al., 2003) and defining service innovation as a collective, non-linear and interactive process (Håkansson and Waluszewski, 1997; Lundgren, 1995) endogenous to a business network, the objective of this research questions is to extend contributions in understanding business net changes and development in a service innovation setting (Rusanen et al., 2013; Ostendorf et al., 2014; Ramos et al., 2013; Jaakkola and Halinen, 2006).

Based on these objectives, the following research questions is developed:

***1. How does business net structure changes in a service innovation setting?***

The main objective extends to understanding the origin of change influences by network actors, their business nets and roles and positions within them. The actor, or rather a diversity of actors desired in developing innovation, is presently under-theorised in network research (Medlin and Törnroos, 2015). In the context of innovation, actors perform activities and control resources, and they are interrelated and interconnected in the network structure and transformed by

network processes. Actors and networks change and evolve simultaneously, where the network development influences innovation and is influenced by the innovation process (Nystrom, 2009; Codini, 2015; Dawson, 2014; Ostendorf et al., 2014). Through intentional choices, implicit or explicit, actors modify the network (Fors and Nystrom, 2009; Aastrup, 2000) and are viewed as an active contributor to a network change and not only as a passive adapter to the environment.

The key to a firm's survival in the process change lies in preserving its network position, enabling the necessary mobilisation of resources (Johanson and Mattsson, 1992; Lundgren, 1992; Mouzas and Naudé, 2007). Network position is a concept that has emerged simultaneously with the industrial network approach, whereas the concept of role has gained research interest during the last decade. Recent contributions (Heikkinen et al., 2007, Nyström et al., 2014a) shed light on interpreting the role in a business network perspective; however, the research is scarce in understanding how do innovation processes affect the actors' roles and positions in business nets or how are roles and positions determined in business nets. This domain is still significantly under-researched (Henneberg et al., 2012) in lacking contributions to how service innovation initiates change processes in the business net or what interactions exist between actors and how they change during service innovation. Based on this objective, the second research question is developed:

***2. What role/position interaction patterns emerge at each phase of business net development in a service innovation setting?***

Most studies on network change focus on network dyadic change (Fors and Nystrom, 2009; Aastrup, 2000) or network change. Although there is a stream of studies addressing changes on the net level (Fonfara et al., 2017; Fors and Nystrom, 2009), the researchers are not specifying the nature behind changes in specific settings (contextual nature). Industrial network

theorists appear to be divided between emergent (evolutionary) (Axelsson and Easton, 1992; Anderson et al., 1998) and intentional (Heikkinen et al., 2007; Möller et al., 2005; Rampersad et al., 2010) nature of change in business net development (Matthyssens et al., 2013). Based on this objective, the third research question is developed:

3. *What in the nature of change in business net development in a service innovation setting?*

## **3. Methodology**

### **3.1. Introduction**

This chapter provides a discussion and justification of the methodological approach undertaken to address the research questions. First, it discusses methodological assumptions related to the nature of management research in an organisational setting, research epistemology and ontology. Second, it introduces qualitative research methodology and case study method for conducting this research. Third, it presents a case research design outlining data collection and data analysis strategies. Finally, it concludes with ethical and methodological considerations.

### **3.2. Methodological Assumptions**

#### **3.2.1. Philosophy of Management Research**

Management research aims to understand and improve management practices; it concerns not only ‘knowing what’ but also ‘knowing how’ (Hodgkinson, 2009). This dual orientation, in turn, directly impacts on design and implementation of management practices. As a result, much of the debate in management research revolves around its fragmented nature. As a discipline, management manifests ‘soft’ properties, its epistemological and ontological paradigm demonstrates a very heterogeneous field that draws methods and knowledge from neighbouring social science disciplines. Bringing the issue of how management research can be best categorised and understood (Easterby-Smith et al., 2008), three distinctive factors of management research offer a good starting point. First comes the eclectic nature of management practice. Second, the research access to the organisation in question-related to confidentiality, publication rights and the cost of managers’ time. Third, it is the consequences



of theoretical developments, the necessity of taking action with or without the guidance of the researcher.

The distinction between theory and practical action has been widely discussed in academia. The critical point to be taken out of this discourse is that methods and generated knowledge of management research have to be outlined, produced and disseminated within the context of its application. Some management scholars argue that management research should follow knowledge production through direct contact with social practice and problems; others suggest both theoretical and practical work is required (Huff, 2000). Considering the latest developments, numerous approaches to a high scholarly quality and practical relevance (Hodgkinson and Starkey, 2011) give more credibility to contemporary management research. As such, the rigour-relevance gap in management research, once brought to attention by (Kieser et al., 2015), appears to be less unbridgeable, increasingly standard and well legitimated. Despite fundamental concerns, such as the diverse nature of management research, resulting in the challenge of its integration amongst sub-disciplines and issues of the relevance and application of findings, the critical goal of management research is not simply to provide a solution to an organisational problem. From a broader perspective, the role of management research can be viewed as improving the relationship between theory and practice. Consequently, the specific competence of the skilled management researcher should be the ability to develop ideas and relate them to practice.

In addition, management research is regarded as an everyday activity of the people that form a live organism called an organisation. Managers are building blocks of the organisations with the essential functions of planning, organising, staffing, directing and controlling. In this context, management research viewed as 'practical guidelines about how management should be conducted' (Easterby-Smith et al., 2008 pp 76). In its methods and techniques, management

research heavily relies on cognitive disciplines such as sociology, education and psychology. Considering the diversity of management research and its inter-disciplinary spectrum, many researchers call for opportunities to develop new research methods and traditions. Conventionally, the preference in management research is given to a positivist tradition with consequential quantitative methods. The emphasis here is on coding and counting the events, often at the expense of understanding why things are happening. However, there is a broader appreciation for using the qualitative methods and emerging paradigm of social research tradition. Each position has its strengths and weaknesses and allows the researcher to choose what methods and aspects are more likely to help a given situation. More importantly, it compels identifying and discriminating the philosophical assumptions of contrasting position and their corresponding ontologies, epistemologies and methodologies.

### **3.2.2. Research Epistemology**

In management or social research, the traditional epistemological position is often classified as positivist (quantitative) or phenomenological (qualitative) (Byron, 1998). As epistemology is concerned with assumptions about how we obtain or create knowledge and what we accept as being valid knowledge (Collis and Hussey 2003; Bryman 2002), the relationship between the researcher and what is being researched is under examination. Addressing the researchers' confusion to different approaches, Bryman (1984) discriminated between philosophical and technical issues, highlighting philosophical problems related to the epistemology of the research and technical matters defined as the appropriateness of methods being used. Additionally, Bryman (1994) differentiated the term 'methodology', qualitative or quantitative, as an epistemological position and 'method' or 'technique' to collect data, as both 'methodology' and 'technique' terms present different level of analysis. In his findings, Bryman (1994) concluded that there is no obligation to establish a link between methodology (epistemology) and techniques in the practice of social research. As both qualitative and

quantitative methodologies reflect distinctive epistemologies, it is viewed that the researcher's epistemological position is often reflected in the methodology that he adopts (Easton 1998). Further, Easton (2010, p.119) suggests that critical realism 'offers a way forward as a new approach to ontological, epistemological and axiological issues.

The critical realism approach is relatively tolerant to different research methods, such as positivism and interpretivism (Sayer, 2000), and a critical realist ontological position is well recognised as being particularly apposite within an IMP perspective due to its ability to capture and explain complex emergent phenomena, which characterise industrial networks (Easton, 2002, 2010). Central to the critical realist position is the delineation of reality into three distinct but interrelated levels: the empirical, the actual and the real, as suggested by Bhaskar (1978). The value of this view of reality has already been introduced to IMP researchers through the work of Easton (2010). Therefore, the intention here is not to restate the critical realist position but to delineate those aspects that become important when viewing business networks as a complex system. Therefore, what critical realism can offer is a better understanding of the business's net structure and development over time.

Three of the most important characteristics of complex adaptive systems, such as open systems context, dynamism, and emergent order over time, are well fitted to a critical realism epistemology. Dynamism, indicating a sense of life within any system emerges, forms and reforms through constant interactions, interconnectivity and interrelationships (Dubois and Gadde, 2002; Halinen and Tähtinen, 2002). This continuous change and concept of non-linearity bring a different characteristic of such systems, which is dependent on initial conditions. In other words, given the level of interconnectivity between parts of a system and its whole, it is unlikely that the change relates to the simple cause and effect. And any change

in a part of the system brings unpredictable levels of transformation to other parts or amplifies through the system.

### **3.2.3. Research Ontology**

Adopting a critical realist ontological position requires researchers to embrace epistemic relativism, meaning that while seeking to describe real properties of business relationships, all our insights are inevitably fallible. Our knowledge of business relationships or networks is not the same as the nature of them “out there”. In this regard, critical realism differs from naive realist positions where there is a simplistic correspondence between ideas and reality (Ryan *et al.*, 2012). In addition, critical realism views all our knowledge as theory-laden - our pre-existing theories, understanding, and related cognitive schema shape how we see business relationships and networks. Objective observations conducted without any theoretical assumptions are therefore not a possibility. This means that there cannot be entirely accurate research about business relationships and business networks, nor should critical realist research claim to be completely objective.

## **3.3. Research Strategy**

### **3.3.1. Qualitative Research Methodology**

The rationale behind choices of research strategy reflects the different logic of qualitative studies that are better suited to understanding the particular context in which the participants act and influence this context with their actions. It also relies on a significant strength of qualitative research to appreciate the processes that led to a particular outcome rather than the outcome itself. Qualitative research has a long history and tradition used by business and management researchers and practitioners (Cassell *et al.*, 2005; Cassell and Symon, 2004). In

addition, Gummesson (2000) suggests that qualitative methods provide ‘powerful tools’ for organisation and management researchers.

There is a widespread acknowledgement of qualitative research as a valuable and valid research method (Cassel, 2000; Eisenhardt, 1989). However, qualitative research comes in various research paradigms (positivist, relativist, constructionist), diverse research strategies (case studies, field studies, action research) and numerous research processes and techniques. This breadth of research approaches poses theoretical and practical challenges for a management researcher. From the theoretical consideration, a significant concern is the quality of qualitative research. In particular, failure to think through philosophical issues can seriously undermine the quality of managerial research.

In contrast, an understanding of the philosophical research position enables a satisfactory outcome of research activities for a management researcher and resolves problems with regards to undertaking its evaluation. From practical consideration, the challenge presents the relationship between the data and theory. Jankowicz (2002) views business and management research from the complexity of organisational issues, their cross-disciplinary boundaries and co-existence of organisations that do not live ‘an independent life of their own’, causing oversimplified methods to be used to fit the data to a theory. Accounting for such consequences, this research employs a case study as its research method. This method is commonly used in today’s modern management studies and organisational theory and advocated to be the most flexible of all research designs, allowing the researcher to retain the holistic characteristics of real-life events while investigating the empirical matter. The case study is discussed further in the following section.

### 3.3.2. Case Study Research Method

The type of research method that suits the topic under analysis is always a point of discussion and concern at the start of any research project. The present research uses a qualitative case study method to explore the evolution of the business net in the context of service innovation development. The following considerations drove the methodological choice of research method. First, case studies are widely used in modern management studies and organisational theory. According to Yin (2017), they are the most flexible of all research designs, allowing the researcher to retain the holistic characteristics of real-life events while investigating the empirical events. In addition, case studies are more appropriate to how and why questions and their often-exploratory nature deal with operational links needing to be traced over time, rather than mere frequency or incidence. As a research method, case studies also permit investigating a small number of situations using multiple data sources and developing a holistic description through an iterative research process. Easton (2010), Eisenhardt et al. (2007) and Yin (2002) advocate that case studies are beneficial where there is a lack of knowledge about the studied phenomenon and current theories are inadequate or insufficient. Also, case studies allow the analysis of a contemporary phenomenon, which is difficult to separate from its context, ‘but necessary to study within it to understand the dynamics involved in the setting’ (Halinen and Törnroos, 2005, p 1286).

Therefore, case studies are optimal for studying changes in business networks, as the context is complex, but the issues cannot be separated from it. Business net(work) must, in this case, be analysed in their current setting and context, implying change on several levels of the economy and society in general. Both Stake (2010) and Yin (2017) conclude that case studies appear to be the most appropriate method of research where no control over behavioural events is necessary (or possible), where the focus is on contemporary events, and the question posed addresses how and why as opposed to quantitative analytical questions. Finally, the case study,

in its relative usefulness and application, is subject to interpretation. Proponents of the more comprehensive application claim that case study is only limited by a lack of understanding of the types of applications, research studies being addressed, and case study design.

According to Yin (2017), case studies can be exploratory of ‘what’, descriptive or explanatory of ‘how’ and ‘why’. The types of research questions, the extent of control over actual behavioural events and the degree of focus in contemporary or historical events will determine which strategy to use. Stake (2010), on the other hand, distinguishes between three types of case studies. First, an *instrumental case*, in which the case is of secondary interest and plays a supportive role. The case facilitates the understanding of something else, contrary to the second type, *intrinsic case*, where the case itself is of interest. Third, a *collective case* study indicates studying several cases in the same study. Both the instrumental and collective case studies require the researcher to choose the case(s). When it comes to case selection criteria, Stake (2005, 2000) argues that one should examine the case from which we feel we can learn most and that the primary criterion for case selection should be the opportunity to learn. In qualitative case studies, it should be remembered that the researcher is the primary instrument of data collection.

However, there is a fair amount of criticism of the case study research strategy that is often directed at many levels, from the most practical to the most abstract (Dul and Hak, 2007). On the practical level, it relates to the highly intensive and time-consuming nature of this research strategy. On the epistemological level, it concerns the ontological foundation of qualitative research as opposed to the philosophical basis of quantitative research. Construct validity is especially problematic in case study research. It has been a source of criticism because of potential investigator subjectivity. Yin (2017) proposed three remedies to counteract this: using multiple sources of evidence, establishing a chain of evidence, and having a draft case study

report review by key informants. Internal validity is usually a problem of inferences in case studies, and can be tackled using the pattern-matching technique. External validity deals with knowing if the results are generalisable beyond the immediate case. However, that criticism is directed at the statistical and not the analytical generalisation that is the basis of the case studies.

In addition, Halinen and Törnroos (2013, 2005) point out that there are four major challenges of case research when it comes to analysing business networks. These are problems of (1) network boundaries, (2) complexity, (3) time, and (4) case comparison. Halinen and colleagues (2013) proposed a processual case study approach to understand how business relationships are perceived to emerge, evolve and dissolve in a continuous and interactive process between companies. This approach has been adopted in this research.

### **3.3.3. Processual or Longitudinal Research Perspective**

Some researchers take an approach of studying not only the result of the process outcome but also the process itself, describing how things change over time (Easton, 1995; Halinen, 1998; Pettigrew, 1995, 1997; Van de Ven and Marshall, 2005). This type of processual research is often viewed as longitudinal studies where dynamics are revealed by the time dimension.

Processual research can generate comprehensive knowledge, not only of processes and outcomes but also of *why* and *how* outcomes are differentially shaped by processes (Van de Ven 1992; Pettigrew 1997). Processual case research, as a research design, has been developed by a number of authors within the management literature, namely Van de Ven (1987, 1990, 1995) and Pettigrew (1997). This particular research design has also proved insightful within studies incorporating an IMP perspective (detailed discussion Bizzi and Langley, 2012). Most importantly, within processual research, the entity under study is recognised a priori as a complex system in its own right. Processual research is concerned with ‘describing, analysing,



and explaining the what, why and how of some sequence of an individual or collective action. The driving assumption behind process thinking is that social reality is not a steady state. It is a dynamic process. It occurs rather than merely exists. Human conduct is perpetually in the process of becoming. The overarching aim of the process analysis, therefore, is to catch this reality in flight' (Pettigrew 1997, p 338).

While the search for single causes refers back to a variance theory paradigm, Pettigrew (1997) suggests 'attempting to theorise about *constellations of forces* shaping the character of the process (context) and its outcomes'. The term 'context' refers not only to the stimulus environment but also to a 'nested arrangement of structures and processes where the subjective interpretations of actors, perceiving, learning and remembering, help shape process' (Pettigrew 1997, p 338). Therefore, the focus in processual research is on the temporal and interconnected nature of change and the influence of subjective attitudes, perceptions, and change outcomes.

According to Van de Ven (1992), a process can be described in three main ways: a logic used to explain a causal relationship in a variance theory; a category of concepts that refer to activities of individuals and organisations; and a sequence of events that describes how things change over time. Pettigrew (1997) defines a process as a sequence of individual and collective events, actions, and activities unfolding over time in context. Ontological assumptions of social reality, which guide the processual research, include an explicit recognition that change is multifaceted and dynamic (Tikkanen and Tuominen, 2000). Social processes are thus constructed and created by human agents (individual or collective) through their actions. The action occurs in the context of encountered structures (Giddens, 1979). The interchange of action and format happens in time, meaning that the legacy of the past constantly shapes the emerging future (Pettigrew, 1997).

Based on this logic, any theoretically sound and practically beneficial processual research should explore the context, content and process of change and dynamics together with their interconnections through time (Bizzi et al. 2012; Langley, 2007; Pettigrew 1997). Cycles of deduction and induction best characterise the process research with the aim of producing a case study, not a case history. In this study, the service innovation development is perceived to constitute the context of the evolution of the business net, in which actors are embedded. The context influences business net dynamics as well as business network change. Thus, a processual approach is adopted, where the context is investigated in detail, and the content and process of change and dynamics are studied with reference to both the network and the business net level during a certain period of time. Particularly in the area of longitudinal (or processual) research, the mix of inductive and deductive components in the research process is advocated. Pettigrew (1997) argues that a processual study is an inseparable balancing act of deduction and induction. He also mentioned: “It is in this constantly iterating cycle of deduction and induction that the real creative process of the research takes place” (p. 344). Perry (1998) suggests the usage of a mix of induction and deduction for case study research, as he argues ‘pure induction might prevent the researcher from benefiting from existing theory, just as pure deduction might prevent the development of new and useful theory’ (p. 789). The research process of this study can be viewed as a process of abduction blending together induction and deduction, in which the former emphasises generating theory from the data (e.g. Glaser and Strauss, 1967).

#### **3.3.4. Abduction Research Approach**

The link between theory, empirical phenomena and methods is crucial in all methodological approaches but seems to be of particular importance in case research and mainly associated with the multiple options in which case research can be conducted. Resonating with Dubois and Gibbert (2010, p 130), who argue that ‘disciplinary conventions, traditions and norms

fundamentally shape our understanding of what we conceive case studies to be and which standards for case research we subscribe to', this study follows schools of thought traditional to industrial marketing management. Specifically, to broaden our understanding of business net evolution in the context of service innovation as well as the role of inter-organisational relationships in the facilitation of an innovation process, the research design adopts an abductive approach, where theoretical frameworks evolve simultaneously and interactively with empirical observation. The notion of travelling "back-and-forth" between theory and the empirical phenomenon is a recurring theme in qualitative methods.

The abductive approach in social sciences originates in the insight that most great advances neither followed the pattern of pure deduction nor of pure induction (Danermark et al., 2005). The method is a combination of deduction and induction that brings new elements into the research process. Perry (1998) argues that it is unlikely that any researcher could genuinely separate the two processes of induction and deduction. During the research process, the empirical observation slowly reveals itself to the researcher, where after, for instance, in my case, I return to the already prepared theoretical framework and refine or revise it. The same authors point out that there is a specific understanding involved in the abductive approach, which cannot be derived from a deductive or inductive approach solely. Similarly, systematic combining, as presented by Dubois and Gadde (2002), follows abduction rather than induction or deduction, allowing the theoretical framework, the empirical findings and the case analysis to evolve simultaneously. During this process, 'the research issues and the analytical framework are successively reoriented when they are confronted with the empirical world' (Dubois and Gadde, 2002, p. 554). Accordingly, the preliminary analytical framework will be affected by what is discovered during the data generation and interpretation (Coffey and Atkinson, 1996; Dubois and Gadde, 2002).

On the other hand, a predetermined conceptual framework may also restrict the researcher. In this study, systematic combining has been used as a guide for performing abductive research. Abductive reasoning starts at the point at which an observation does not match existing theories, and systematic combining starts to create a framework that matches the phenomenon under study (Dubois and Gadde, 2002). Firstly, a theoretical framework was created, after which a pilot study revealed ‘unexpected observations’ (Alvesson and Sköldbberg, 1994), which could not be explained by the existing theoretical framework. The theoretical framework was amended, and the main study was conducted. Systematic combining allowed for new insights about the change process and business net evolution by examining theses from a new perspective (Kovács and Spens, 2005).

### **3.3.5. Network Boundary**

Case-based network research requires consideration of the research boundary and network complexity where embeddedness and connectedness is a central characteristic of industrial networks with significant methodological implications.

Network boundaries can either be set based on managers’ perceptions or based on researchers’ goals of the study (Dubois et al., 2013). According to Brito (1999, p 93), ‘an issue-based net is a form of association based on cooperative relationships amongst actors who aim to cope with the collectively recognised issue by influencing the structure and evolution of the system(s) to which they belong through increased control over activities, resource and other actors’. Formalised or un-formalised in structure, an issue-based net may aggregate mutual interests of various types of actors through the process of interaction and exchange (Aarikka-Stenroos and Sandberg, 2012; Komppula, 2000; Araujo and Easton, 2012). As such, issue-based nets respect the connectivity between actors and, at the same time, facilitates setting the boundaries within the network.

Equally, the focal actor perspective considers the focal actor's significant relationships, both directly and indirectly connected, and reveals a firm's position and role within the business network (Alajoutsijärvi et al., 1999). Such a perspective allows the researcher to study the interconnectedness between the focal actor and its focal net members and their business relevance. As a result, a focal net perspective is employed for this research.

### **3.3.6. Critical Events in Network Research**

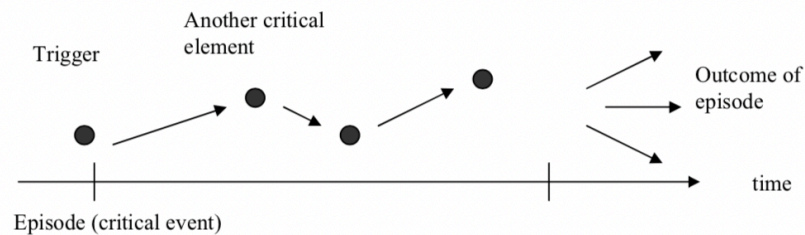
The research involves a historical reconstruction of the business net development during the service innovation process (Abrahamsen 2012; Halinen et al. 2013, Langley 2007; Mollet 2017) using a retrospective, although first-hand, accounts of relevant events. As such, the research 'reconstructs' thought system of the informants' terms and language and involves retrospective, although first-hand, accounts of relevant events.

Events that relate to each other in the past, present and future and together influence the development of a network, are seen as a core for understanding change in business networks. (Hedaa and Törnroos, 2008; Medlin, 2004). Citing the work of Mead (1932), Medlin (2004) suggests that a sequence of past events is likely to be a prerequisite of understanding the present and foreseeing the future.

An event that triggers a radical change in a business net(work) is referred to as a critical event or a critical incident (Halinen et al., 1999; Roos and Strandvik, 1996; Holmlund & Strandvik, 1999; Hedaa and Törnroos, 1997). Holmlund and Strandvik (1999, p 12) argue that critical incident 'derives from what is expected and, as a result of this, catches attention and thus triggers different perceptual reactions. As such, what may be perceived as a critical incident for one might be a routine for another, and therefore, incidents are characterised as routine or non-critical events. Triggers of critical incidents may include mergers and acquisitions, change

in interactions between companies or change in the interaction between the firm and environment (Holmlund and Strandvik, 1999). Critical incidents, as subjective actor's interpretation of change, include four elements: (1) the initial state; (2) the trigger of the critical incident; (3) the process; and (4) the outcome of the incident (Roos and Strandvik 1996).

**Figure 3.1 : The Critical Event Elements**



Source: adapted from Olsen, 1992, p.

Most authors that study network phenomena related to changes (Chou and Zolkiewski, 2012; Fors, 2009; Hedaa and Tronroos, 2008; Halinen, 1994) refer to events as ‘critical events’. The critical event is a concept of occurrences that trigger changes affecting business dyad or business network (Halinen et al., 2012; Halinen et al., 1999) and should not be interpreted as unfavourable, simply as ‘decisive’ events that offering ‘windows of change’ (Kamp, 2005). In addition, Hedaa and Törnroos (1997) suggest two sources of critical events: internal forces such as intra-net related forces; and external forces such as political changes, natural forces, regional and global changes and innovation. As such, the critical event is seen as a key element in understanding changes in business networks.

There are a number of shortcomings to this chosen technique, such as informants being asked to remember a particular event for a reason not being evident (Collis & Hussey, 2003; Edvardsson & Luukkonen, 1996). Another challenge arises when informants unable to remember significant facts or ‘rationalise events to impose a certain logic and coherence which did not exist at the time’ (Edvardsson & Luukkonen, 1996, p. 165). Memory lapses and informants’ misunderstanding or misinterpreting are another drawbacks of the critical incident

method (Gremler, 2004). In addition, informants might refuse to share or run out of time telling the whole story (Edvardsson & Roos, 1992).

### **3.4. Research Design**

#### **3.4.1. Case Selection**

This research aims to explore the richness of network phenomena and help both researcher and readers learn from the case to advance the knowledge of business net(work) changes in an un-formalised setting of service innovation development. Consequently, selecting a suitable case becomes crucially important since it provides a platform for the researcher to iteratively interact between the theory and the empirical setting (Bonoma, 1985; Dubois and Gadde, 2002). A case of the ITM VET Programme that is built on the perspectives of the net actors involved in the development of service innovation, its suppliers and customers is chosen for several reasons. First, both, the Vocational and Educational Training (VET) sector and the business net actors have experienced socio-economic changes, in which network development can be observed. Second, the case enables the researcher to gain access to key organisations and interviewees, allowing sufficient resources to be acquired while in the field (Yin, 2002). As such, this case study is selected according to its relevance to the investigation and its learning potential (Stake, 2010), focusing on understanding the dynamics present within a single setting (Eisenhardt, 2007).

The selected case is also purposefully and theoretically chosen. Purposive sampling (Piekkari et al., 2010) allows the researcher to study the process of business net development, which is the central interest of this research; and its selection of participants and sites permits the researcher to best understand the research problem and questions (Creswell, 2009; Silverman,

2005). This purposive sampling does not follow the logic of random sampling and a large number of informants, as typically found in quantitative research; it is theoretically driven (Eisenhardt, 1989; Miles and Huberman, 1994; Silverman, 2005; Yin, 2003). Instead, ‘the cases may be chosen to replicate previous cases or extend emergent theory, or they may be chosen to fill theoretical categories and provide examples of polar types. While the cases may be chosen randomly, random selection is neither necessary nor even preferable’ (Eisenhardt 1989, p. 537). These research aims to build on existing theory with the selected case. The characteristics of the case draw to similarities of ‘extensive networks’ tightly involved actors that closely contribute to the innovation process and more loosely involved actors, such as regulators and experts, that can indirectly facilitate or hinder the innovation process (Aarikka-Stenroos L et al., 2017) and ‘living labs’ as innovation networks characterized by openness and user involvement (Nystrom, 2014).

Theoretical sampling (Miles and Huberman, 1994) can be seen as within-case sampling in which the net actor and its business net are all embedded in a broader environment. As Miles and Huberman (1994) indicate, such within-case sampling has an iterative or rolling quality, leading the researcher to new samples of informants and new documents. Thus, ‘choosing cases in terms of your theory’ and ‘changing the size of your sample during the research’ are the characteristics of theoretical sampling (Silverman, 2005, p. 131).

### **3.4.2. Pilot Project**

To enhance the knowledge of the researcher about the case and to pre-test the feasibility of the research topic and chosen research method and techniques, a small-scale empirical study was piloted in the period of June 2013 - September 2013. The pilot project captured the insights on the emergence and evolution of business net concerned with the internationalisation of SMEs in Europe and contributed to data collection of the present research design. As part of the study,



semi-structured interviews were conducted with the founders of the ITM Programme. The collected primary data on on-site observations were supplemented by company archival documents and press coverage analysis which presented in the findings section.

Analysis of secondary sources such as annual reports was also included in the study. The researcher also participated in seminars and events, during which presentations and discussions of ITM Programme took place. The events were organised by partners of participating organisations.

### **3.5. Data Collection**

The qualitative research method offers excellent possibilities to investigate observed phenomena in the past where the ‘past loadedness’ of a network facilitates understanding of network relationships and network development. However, the past extends into the present and then to the expected future. The importance of the “future loadedness” of a network for businesses in understanding why organisations invest in relationships and why new networks are being developed. In light of understanding three modes of time - past, present and future, the data collection on the emergence of service innovation process commenced in a retrospective mode and progressed capitalising on an opportunity to gather direct observations on inter-organisational exchanges and interactions related to the service innovation process as anew service development in the present. Based on the ‘point mapping’ approach to data collection, where researchers plunge into the process regularly over time (see Halinen et al., 2012), the data collection started with a historical reconstruction from 2004 to early 2016.

The important work by Yin (2017) is a reference point for this research. As such, the main sources of information remain to be interviews, observations and documentation. The main source of data for studying the process of change was through interviews. Several researchers characterise in-depth interviews, or person-to-person interviews, as a “*conversation with a*

*purpose*” (Collis and Hussey, 2003). In-depth interviews are conducted to observe behaviour, feelings or, which is more relevant for this study, how people interpret the world around them. Interviews are also useful to study past events that are impossible to replicate. Furthermore, interviews combine structure with flexibility and are interactive in nature. The material is, in other words, generated by the interaction between the researcher and the interviewee (Ritchie and Lewis, 2004). The interviews were flexible and let the interviewees recall which critical incidents had triggered an event or caused change over time in business networks. The dynamics of the industry and between the actors was discussed through the interviewee getting an initial question and the interviewees’ opinions, interpretations and experience of the change process were also discussed freely due to the choice of using interviews as a primary data collection method.

### **3.5.1. Interviews**

A change process in this study is viewed as encompassing the actions and reactions of the involved actors, their perceptions and decisions concerning the service innovation development, as well as the consequences of these actions, perceptions, and decisions with regard to this service innovation. As such, the researcher was interested in a respondent's narrative accounts of events within the content and context of the researched phenomenon. Individuals are experienced in the phenomenon under study and are seen to tell narratives about reality by describing the sequence of events in time and their experiences of them. Narratives are used in everyday planning, enacting, interpreting and evaluating one’s behaviour (Pentland, 1999); they also indicate the content and context, the actor(s) and their roles, the narrative voice and the evaluative frame of reference or the moral of the story. Thus, narratives offer us data on deeper levels that facilitates the search for the generative structures that enable and constrain processes. The accounts of actions undertaken by actors within each organisation involved in the business net, therefore, become an important for analysis.

Semi-structured in-depth interviews were conducted with key actors representing Vocational Education and Training service providers and related organisations such as independent and institutional program content providers, public agencies, industry associations and private companies and other partnering organisations participating in an existing business network. The majority of informants were directly involved in the innovation process in influencing of ITM business network development but were also associated with other institutions simultaneously, making them very knowledgeable of business network development. All the informants were related to educational sector in various capacity and were able to discuss not only specific business net development but also provide insights on sector-specific issues. Furthermore, industry experts, policymakers and end-user were also chosen as a participant for the research to get an additional insight of the industry and its evolution and to include actors who are not considered to be central to the studied phenomenon or no longer involved (Miles and Hubermann, 2002).

A total of seventeen semi-structured in-depth multiple interviews with key business net actors were conducted throughout 2014-2016 and presented in Table 3.1.

**Table 3.1: The Interview participants**

<b>Company</b>	<b>Actor Description</b>	<b>Function</b>	<b>Period involved</b>
F	ITM Project team	1.ITMF President	1993-2016
		2.Project Manager	2014-2016
		3.Former Project Manager	2000-2006
G1	City Council, Sweden	4.Local Government Commissioner / ITMF Chairman	2008-2016
		5.Head of Liberal Party / ITMF Board Member	2014-2016 1993-2016
		6.Director of Industrial Development / ITMF Board Member	
G2	Ministry of Entrepreneurship and Craft, Croatia	7.Head of Directorate of International Cooperation, Investment and Innovation	2014-2016
		8.Head of Entrepreneurial Infrastructure Service	2014-2016
A1	International Association of Trade	9.President	2008-2016

	Training Organisations (IATTO)		
P1	Swedish Trade Council / Business Sweden	10.Senior Manager	1992-2016
P2	Public Agency for Entrepreneurship and Foreign Investment (SPIRIT), Slovenia	11.Acting Head for Internationalisation 12. Undersecretary of Internationalisation and Export Promotion	2008-2016 2006-2016
P5	Croatian Export Association	13.Representative	2014-2016
S1	INSEAD, France	14.Professor of Information Technology / ITMF content provider of “Change Management Simulation” Module	1995-2016
S2	Nordic International Management Institute (NIMI)	15.Professor of Strategy / ITMF content provider of “International Trade and Marketing” Module	1993-2016
S3	Actionline Research and Training Consultancy (ART)	16.Consultant / ITMF content provider of International Market Research Module	1993-2016
E-U	ITMC end-user	17.ITM participant	1994-1995 2014-2016

These types of interviews are often used when the researcher wants to delve deeply into a topic and to understand thoroughly the answers provided. Following the best practice, a semi-structured interviewing guide was developed (Appendix B), with questions and topics about aspects that inform the researcher’s understanding of the literature on service innovations in the network context. As such, the interviewer had some discretion about how questions are asked, the questions are standardised, and probes are provided to ensure that the researcher covers the correct material. As a result, detailed information was collected in a style that is somewhat conversational. Possible memory lapses or distortion of information that concerns recollection of events and activities over twenty-three years were dealt with by checking the plausibility of the account and the reliability of the interviewee. The informant’s account of events was triangulated by other informants, company archival documents and direct observations.

All interviews were tape-recorded to concentrate on the dialogue fully and make notes during the interviews. Transcriptions of recorded interviews were completed during October 2014 and April 2016, simultaneously with the data collection process. The transcription was done word-by-word in most parts. Parts where the interviewee would discuss a topic irrelevant to the study were not transcribed. Notes on the topics were, however, made in the transcription. Preliminary analysis was done during the transcription and recorded for eventual data analysis.

### **3.5.2. Observations**

Observation was seen as the ideal tool for uncovering the descriptive information and to subsequently inform interview questions of the research plan. These are closely associated with a case study methodology (Yin, 2017, 2002). Adler and Adler (1994) stated that observation is ‘the fundamental base of all research methods’ and regarded it as becoming ‘the most powerful source of validation’ (p. 389). As such, observation is used as a primary data collection tool, and the researcher acknowledged that observation produces accuracy when it is combined with other methods (Meyers , 2001).

This research adopts an observer-as-participant technique, where the researcher acted as a ‘spectator’ (Saunders, Lewis and Thornhill, 2000) to the various exchanges and interactions. Angrosino and Mays de Pérez (2000) described the observer-as-participant approach as being an acceptable compromise against using other observation techniques such as the complete participant technique. Adler and Adler (1994) advocated the observer-as-participant approach by stating that it allows the researcher to interact ‘casually and non-directly’ with subjects, whereby a researcher remains a researcher and does not cross the line by becoming friends with the subjects. An integral component in successfully implementing the observer-as-participant technique relates to the researcher divulging her role to all subjects. This can, in many cases

(Barley, 1989), create problems if some subjects do not trust the researcher. In this instance, the researcher's previous links to numerous members of the group were quite advantageous, as it appeared to provide what Lofland (1971) referred to as 'pre-existing relations of trust'.

The observation process was undertaken in Sweden and Slovenia from the period of 2014-2016. The observation activities were as follows:

- ITM Local and International Seminars – provided evidence of exchange interactions of business net actors of the ITM (Worldwide) Programme Third Generation.
- Meetings (formal and informal) with key actors and the ITM programme participants.

The researcher allocated extensive periods towards observing participating actors during various episodes of exchanges and interactions. During the observation sessions, the researcher took notes and collected relevant documents but did not have any influence on the events. The observation was conducted in order to have a better understanding of the organisation's setting, as well as the interactions between key actors. When necessary, the researcher also engaged in informal discussions with the actor to clarify what was observed (Robson, 1993). 'Informant verification' was an important step towards rendering the observations reliable and acted as a form of triangulation (Saunders, Lewis and Thornhill, 2000). Reliability, and triangulation, were further enhanced through interviews that followed the observation process.

### **3.5.3. Secondary Data**

This research uses secondary data as a mode of supporting the primary data. The secondary data (Table 3.2) covers the collection of public documents such as formal reports and archival material and private documents such as internal reports, memos, presentations (Creswell, 1994).

**Table 3.2: The secondary data collection documents**

	Document Type	Source
1	The ITM Foundation Corporate Structure	Internal Document
2	The ITM Worldwide Concept	Internal Document
3	The ITM Worldwide International Partners	Internal Document
4	The ITM Worldwide Alliances	Internal Document
5	The ITM Worldwide Model	Internal Presentation
6	The ITM Programme Training Material	Internal Document
7	The IIATTO World Trade Professional Designation	Internal Presentation
8	The Leonardo Da Vinci (VITTI) 2012	Internal Report
9	The Leonardo Da Vinci (VITTI) 2013	Internal Report
10	The Leonardo Da Vinci (VITTI) 2014	Internal Report
11	SPIRIT Slovenia ITM Reference to VITTI partners	Internal Document
12	The Leonardo Da Vinci (VITTI) Project	Internal Presentation
13	'International Trade Training' editorial in International Innovation, 2014	Public Document
	'Cutting the barriers' editorial in Pan European Networks, 2012	Public Document

14	'World unique export Foundation based in Lidköping' editorial, 2013	Public Document
15	'Capacity building boost export in SMEs' editorial 2014	Public Document
16	"Best Cases" by European Commission 2005 and presented with IATTO Ian Felps Award 2008 for "Honouring world-class achievement in trade education and development".	Public Document
17	The ITM Leonardo Da Vinci Programme Partnership Application Form	Internal Document
18	LLP General Provisions Guide 2013	Public Document

The secondary data was used as documentary evidence supporting the interviews and observations collected, helping form the business net structure during the innovation process and served a triangulation purpose.

First, at the outset of the data collection, the ITMF internal memos and reports assisted with the general overview of the organisation's structure and provided the bases for 'orientational' interviews with key actors gaining the knowledge of history and present functioning of the organisation. For example, initial interviews were set up with the ITMF founder and the Board of Directors. Insights on the history of trade training organisations as origins of the ITM Programme, corporate restructuring to accommodate flexibility of getting access to public funds and expanding partnerships worldwide facilitated the selection of participants for semi-structured in-depth interviews.

In addition, mapping external partnerships and stakeholders facilitated the location of principal data sources. For example, the ITMF collaborated with Market Institute in Tallin (Estonia), Enterprise Lithuania Enterprise (Lithuania) (former Lithuanian Development Agency) and



SPIRIT Slovenia (former JAPTI) Public Agency of the Republic of Slovenia for Entrepreneurship and Foreign Investments in delivering the ITM Worldwide programme within the Leonardo Da Vinci initiative. As such, getting access to internal documents outlining the scope of participating partners' project roles and responsibilities was of particular interest.

Further, understanding the ITMF workflow helped to schedule the best time and occasion for talking to people, which drove the planning of primary data collection. For example, the ITM programme was delivered over a period of 9 months and consisted of fourteen days of International Trade Seminars and International Networking taking place in Lidköping (Sweden), four days of Individual Export Coaching taking place at the location of a participating organisation and Company Visits Abroad allowing a participating organisation to visit companies in another country. The site and time for key actors' interviews largely depended on their availability and access to their location. Most interviews took place in Lidköping (Sweden) and Ljubljana (Slovenia) between October 2014 and April 2016.

Finally, gathering a broad array of evidence on the ITMF assisted in developing research evidence systematically, to ensure that the theoretical constructs were supported by evidence obtained in different ways from different actors and in different situations.

### **3.6. Data Analysis**

Due to the characteristic of connectedness (Ritter, 2000), a suitable boundary of analysis needs to be drawn in order to effectively and efficiently study the business net changes and development in a service innovation setting. As such, the data analysis of this research takes the business net as units of analysis.

As the main purpose of this research is to provide an understanding of the business net development, the analysis of empirical data pays a great amount of attention to the episodic dimensions of events. However, the focus is not merely on temporal succession but also on the logical and theory-stamped association of events (Dubois and Araujo, 2004). As Yin (2003, pp. 126-127) points out, ‘the important case study objective is to examine some relevant ‘how’ and ‘why’ questions about the relationship of events over time, not merely to observe the time trends alone. An interruption in a time series will be the occasion for postulating potential casual relationships; similarly, a chronological sequence should contain causal postulates’.

### **3.6.1. Data Reduction**

This research employed a system for data analysis that included data reduction, data display, and conclusion drawing and verification (Miles and Huberman, 2002). Data reduction refers to organising the mass of data and somehow meaningfully reducing or reconfiguring it. Data reduction is the process of “selecting, focusing, simplifying, abstracting and transforming the data that appears in written-up field notes or transcriptions” (Miles and Huberman, 2002). Even before the data is collected, anticipatory data reduction occurs in the form of decisions made by the researcher on conceptual frameworks (often without full awareness), selecting cases, research questions and data collection approaches. The data reduction process continues until a final report is completed.

The historical reconstruction of business net development resulted in three chronological periods. In every period, the data is analysed on the business net level. (Liljegren 1988).

To provide valid descriptions and explanations of network change, the time concept was incorporated consistently into research at all its domains: conceptual, methodological and substantive. Hereto, the above discussion extends to methods used in data collection. Making

sense of longitudinal data collected in a real organisational context could be a constant challenge. The sequence of unfamiliar to researcher 'events', multiple levels of analysis temporal embeddedness and eclectic character of the qualitative data make it difficult to analyse this data. This empirical study takes advantage of the temporal bracketing strategy to mitigate the potential challenges of data analysis. This approach allows for the decomposition of data into successive adjacent periods or phases. These phases enable the detailed examination of how actions of one period lead to changes in the context and how it affects action in the subsequent period. These phases enable the explicit examination of 'how actions of one period lead to changes in the context, and how it affects action in the subsequent period' (Langley, 1999, p.703).

### **3.6.2. NVivo**

To manage, organise, analyse and visualise a large amount of primary and secondary data, the researcher used NVivo data management software. The choice of using NVivo was given because of the advantages of storing, organising, searching and retrieving qualitative data with ease was particularly suitable for this project's needs. NVivo also permitted advanced data searches, allowing the researcher to capture all the factors of a given construct or text. NVivo allowed for the categorisation of data into different codes, establishing an automated relationship between those codes. Furthermore, integration of the literature into NVivo, allowed for generation of theory-laden codes leading to discussion of linking research findings to the extent literature.

Data analysis focused on generating codes and category constructs by understanding interview transcripts, field notes and archival company documents. Analysis was assisted by computerised software to handle large amounts of data and documents. As such, each interview

transcript was edited to a clean verbatim format suitable for coding. Then, the data from the transcripts were organised according to concept categories derived from the conceptual lens, allowing the researcher to relate the empirical data to the theory in use. First-order constructs constituted the direct feedback of respondents based on their own experiences and interpretations. Second-order constructs were interpretations by the authors of the original studies. Third-order constructs included the final interpretive stage, which identifies a process of identifying the constructs that best summarise and illuminate the relationship between the research question and the second-order constructs.

### **3.6.3. Coding Structure**

Good results in analysing data are achieved when the data is examined meaningfully in a way that accurately represents relations between the individual parts of the real-world phenomenon under study (King 2004b). Choosing codes carefully helps to derive codes that reflect themes recurring in data and, in turn, assist with answering the research question. Codes can consist of words, sentences, or whole paragraphs. They can be connected or unconnected to a specific topic and corresponds to a progressively increasing depth of understanding of the researcher's part of the phenomenon under investigation (Miles and Huberman, 2002).

The coding structure (Fig 3.2) of this research includes process codes as first-level codes, interpretative codes as second-level codes, and pattern codes as third-level codes. Where appropriate, a fourth level code was used to allow the researcher to analyse contradictory findings (relevant vs not relevant). The following explains how the coding structure at these various levels of coding was developed throughout the data analysis process.

The first level codes stand highest in the hierarchical order on top of the second and third-level codes. This research used process coding (Miles and Huberman, (2002) as first-level coding, which uses gerunds to indicate observable and conceptual action in the data. Processes also

imply actions intertwined with the dynamics of time, such as things that emerge, change, occur in particular sequences, or become strategically implemented. According to Miles and Huberman (2002), process coding is appropriate for almost all qualitative studies but particularly useful for research that extracts participant action/interaction and consequences.

First level codes emerged from the data (rather from *a priori* knowledge) and were developed through careful attention to interviewees' words. An increasing number of new sub-categories emerged from the data as the data analysis proceeded over time. This process also involved relating the material back to the literature. For example, the first level coding themes such as 'Altering relationship to change network position', 'Shaping new activities resulting in a new position of the actor' and 'Mobilising preferred role based on a net position centrality' were further grouped under 'Creative participation' theme.

An example from the interview transcripts illustrates the following coding themes :

Theme: Altering relationship to change network position

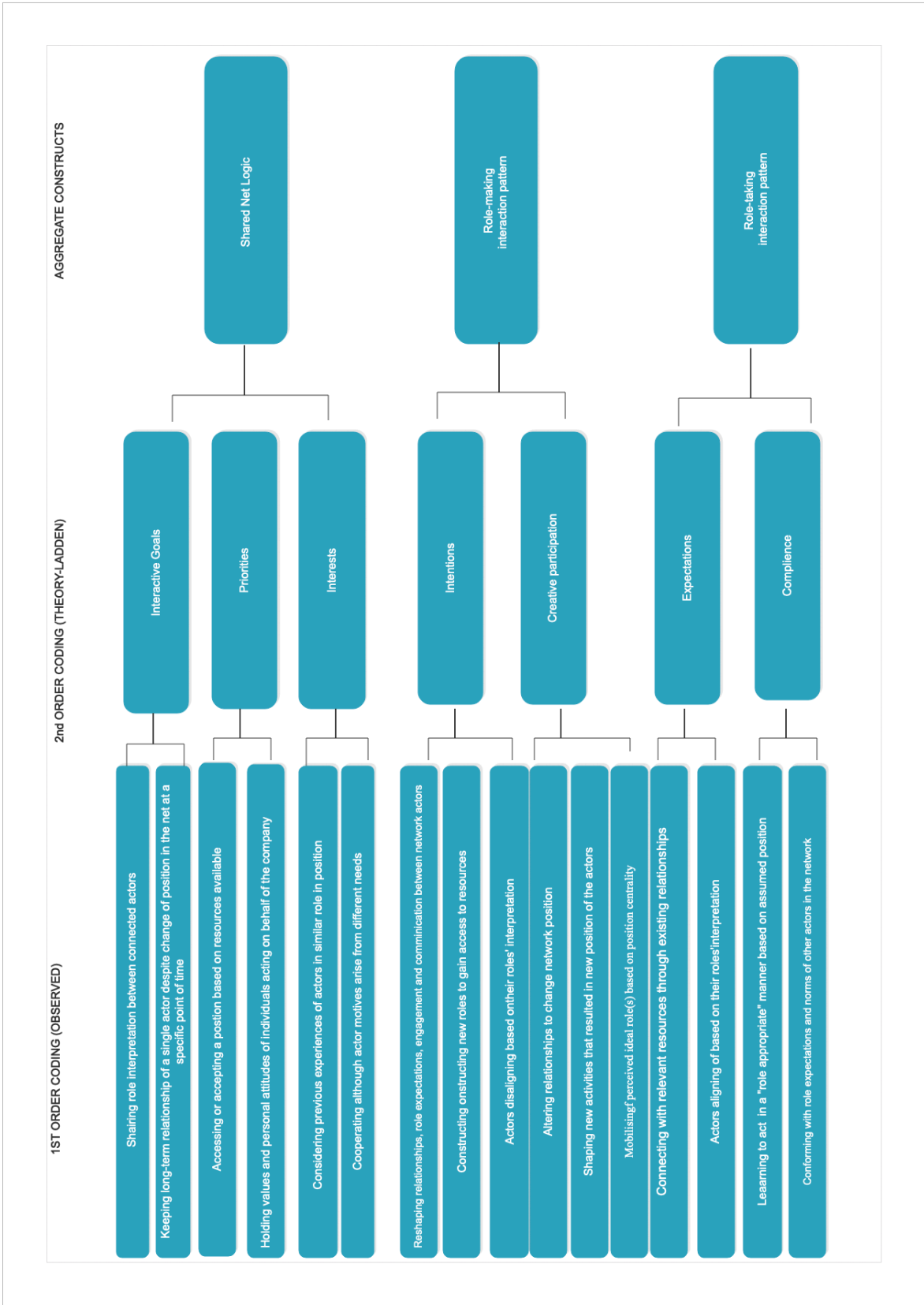
*Actor P5: 'We are the Croatian Exporters Association. We are very small in size. The association was established in 2004 by a group of entrepreneurs who thought there was no adequate support to exporters from the Croatian Chamber of Commerce. They have struggled to get access to international markets. Although we are still having the Croatian Chamber of Commerce and Employers Association, we are the ones who provide various services to exporters and protect their rights. We are also financed only by our members'. (Interview transcript)*

<p>Theme: Shaping new activities resulting in a unique position of the actor</p>	<p><i>Actor P3 (see appendix A): ‘We see the role of SPIRIT Slovenia as a partner in ITM Programme. We perform various tasks and functions. For example, every year, we publish an open public invitation to Slovenian companies and gather application of potential participants. Because it is not a public procurement or a public tender, we have an authority to choose the most suitable candidate regardless of the industry or sector they operate in’. (Interview transcript).</i></p>
<p>Theme: Mobilising preferred role based on a net position centrality</p>	<p><i>Actor P3: Regarding the ITM concept.... In this case, our main role was to connect our fellow public associations that promote the export or development of the business to small and medium enterprises. Now we position ourselves as an institution that runs vocational education training programmes for a period of time. We have knowledge of doing it with good results and positive feedback from participants’ (Interview transcript).</i></p>

As a second-level coding, pattern coding is a way of grouping those summaries from the first level of coding into a smaller number of categories, themes, or constructs. Pattern codes describe a pattern or possible causal relationship between factors under investigation. Paying attention to these different levels of codes as one becomes increasingly familiar with one’s data set is especially helpful to first-time qualitative researchers because it discourages jumping to premature conclusions at the early stages of data analysis (King, 2004b). Pattern codes are explanatory or inferential codes, ones that identify an emergent theme, configuration, or

explanation. They pull together a lot of material from the first level coding into more meaningful and rigorous unit of analysis. The third level codes provide a more detailed understanding of the second level codes. At this stage, the interconnectedness of the second level codes and the first level codes is illustrated. It also allows for within-case analysis to describe, understand, and explain what has happened in a single, bounded context—the ‘case’ or site (Miles and Huberman, 2002).

Figure 3.2 The Coding Structure





### **3.7. Methodological Considerations**

Traditionally, evaluation criteria of qualitative research case studies deployed criteria relevant to a positivist ontology that has gained the status of a benchmark for the assessment of management research (Cassel, 2001, Stake, 2006). Classical quality criteria in the qualitative research includes the evaluation of internal validity, construct validity, external validity and reliability. However, such an approach to evaluation may require an alternative philosophical position that can help the researcher not only clarify the research design but also indicate the limitations.. Traditionally, qualitative research departs from the deductive model of qualitative positivism and considers evaluation criteria proposed by Lincoln and Guba (1985). Hereto, the internal validity has been replaced by credibility, external validity by transferability, reliability by dependability and construct validity by confirmability.

#### **3.7.1. Internal Validity vs Credibility**

The internal validity in the qualitative research relates to problem of ‘inferences’. According to Yin (2002), for internal validity there is no academic problem employing the case to illustrate the theory. The credibility criteria involve establishing that the results of qualitative research are credible or believable from the perspective of the participant in the research. From this perspective, the purpose of qualitative research is to describe or understand the phenomenon of interest from the participants’ eyes; the participants are the only ones who can legitimately judge the credibility of the results.

#### **3.7.2. External Validity vs Transferability**

The method of generalisation in the case study should be an analytical generalisation where the previously developed theory can be used to compare the empirical results of the case study. From a qualitative perspective, transferability is primarily the transferability of the one doing generalising. Transferability (Hirschman, 1986; Lincoln & Guba, 1985), however, refers to the

degree to which results of qualitative research can be generalised or transferred to other context or settings. One way to enhance the transferability of the research is by doing a thorough job of describing the research context and assumptions that were central to the research. The person who wished to ‘transfer’ the results to a different context is then responsible for making the judgment of how sensible the ‘transfer’ is.

### **3.7.3. Construct Validity vs Confirmability**

Some scholars view construct validity as problematic in case study research. It has been a source of criticism because of potential investigator subjectivity. Yin (2017) proposed three remedies to counteract this: using multiple sources of evidence, establishing a chain of evidence and having a draft case study report reviews by the informant.

#### *3.7.3.1. Multiple Sources and Chain of Evidence*

The multiple sources of evidence aimed at addressing the triangulation of data from the semi-structured interviews with the direct observations of the working conditions, work atmosphere, interactions between key actors, as well as company documents, press releases, partner operation manuals and work contracts.

#### *3.7.3.2. Key Informants’ Reviews*

Qualitative research tends to assume that each researcher brings a unique perspective to the study. Confirmability refers to the degree to which the results could be confirmed or corroborated by others (Hirschman, 1986; Lincoln & Guba, 1985). In the course of this enquiry, after the completion of the interviews and the analysis of documents, the results were written down in a comprehensive report and given back to the respondents inviting them to correct errors of fact, resolve inconsistencies and supply additional information.

#### **3.7.4. Reliability and Dependability**

As the promise of replication is problematic in qualitative research, dependability might be further demonstrated through a particulate form of triangulation. The idea of dependability emphasises the need for the researcher to account for the ever-changing context within which research occurs. The researcher is responsible for describing the changes that occur in the setting and how these changes affected the way the research approached the study. This entails the contingent use of multiple types of research, multiple primary and secondary data sources, collection methods to cross-reference and substantiate the objectivity of findings by demonstrating their convergence and consistency of meaning. The traditional quantitative research is also limited in reliability that is concerned with the researcher obtaining the same results if he could observe the same things twice.

#### **3.8. Ethical Considerations**

The research participants were provided with the participant information and consent form (Appendix A) before data collection. Each interviewee was given complete information about the study and its aims, profile of the researcher, the timeframe of the interview, the protection of their identities in line with recommendations of King et al. (2018). As such, the initial briefing provided the potential participants with an opportunity to withdraw from the case study at any time. Additionally, interviewees were not compelled or coerced in any way to provide information.

## **4. Empirical Context: Development of The Vocational Education and Training (VET) Programme in International Trade Management for SME Internationalization**

### **4.1. Introduction**

This chapter presents the development of the Vocational Education and Training (VET) sector in Europe with a particular focus on a Swedish VET Model. This discussion facilitates our understanding of the current structure of the sector in light of its remarkable diversion. This ongoing transformation of VET sector characterised by the multitude of learning approaches at all levels of the education and training system, different providers, levels and target groups, increased horizontal and vertical diversity and assimilation of programs, triggered the development of innovative outputs and acted as the impetus of new VET programs emergence and development. Firstly, the development of various types of VET approaches is presented, followed by a discussion of Swedish VET model development and its role in the sector. Secondly, critical industry events that directly impacted on the ITM net development from the period of 1993-2016 are discussed. The events prior to this time period are also presented as supporting evidence. Finally, the ITM innovative programme is explained against the background of its operating environment. The position, role and activities overview of International Trade Management programme key actors concludes the discussion.

### **4.2. Operating Environment of VET Sector in Europe**

Vocational education and training take many forms, and it is certainly the most heterogeneous of the education service sectors in Europe today. It is difficult to grasp the VET as a single institutional entity, and in many cases, it overlaps with other parts of the education and training

system as its diversity in terms of its purposes, institutions, participants and programs is one of its key characteristics. It serves a broad set of interests in quite distinct ways across a range of nation states. Looking at the development of the VET sector, it can be observed that its institutional composition seems to change over time, underlining the need to observe how the institutional landscape is evolving continuously.

Traditionally, VET programs are seen as operating at the middle level of the education and training system either in the form of apprenticeships or ‘technical schools’, the position of this traditional part of VET in relation to other parts of the education and training system has changed. As a part of lifelong learning-oriented policies, a vast majority of European countries support the progression of VET into higher levels of education. The expansion of VET oriented programs takes part in all levels of education and training. Higher VET covers a number of different provisions, ranging from specialized training provided by companies to specialized vocational colleges and schools and vocationally oriented university programs. Developments in higher education are particularly important as we can observe an increased focus on practice-oriented learning and an emphasis on dual solutions involving close cooperation with companies and the labour market.

The understanding of the VET sector is influenced by its institutional perspective. It is commonly defined with reference to the institutions explicitly and formally populating the sector. However, the composition of institutions is currently changing the landscape of the sector with the European Union (EU) cooperation broadening the focus on institutions operating outside a narrow definition of VET. The way national VET systems are understood in all EU Member States demonstrates the significant diversity but with the common interests and shared goals of providing an occupation-specific education and training with the aim of skilled labour supply.

#### **4.2.1. Overview of Different VET Origins Prevalent in Europe**

National VET systems have different regional traditions from VET in the German, French to Italian parts of Switzerland, but it is also shaped by the different history of various institutions: in-company training, vocational schools, further education providers, polytechnics, programs for the unemployed can be components of a country's VET system. Significant differences in workplaces are tremendous in Europe can also produce different roles for VET. The differences among the European Member States in terms of organizational learning are dramatic and the countries in the South of Europe are much more exposed to the competition from emerging economies than the Nordic countries where education systems and labour markets have adjusted to the needs of the learning economy. Given this difference in the demand for skills, differences in the VET offerings can be divided into four distinct propositions: (1) work-based or initial dual training; (2) initial vocational education; (3) further training; and (4) lifelong learning.

##### *4.2.1.1. VET as Work-Based/Dual Initial Training*

Dual initial training or dual system is prevalent in Germany, Austria, Denmark, Slovakia and Hungary and to some degree in Iceland and England. VET is based on practical knowledge and 'learning by doing' for young people (recognized as apprentices) to become members of an occupation/profession with distinct occupational or professional ethos and occupational rights. Substantial contributions by companies, financially and as a place of learning equal or more important than the school, and strong coordination between employers and trade unions are presupposed in this conception of VET. Vocational Education and Training is associated with the middle level of education without or with restricted access rights to higher education. An employer perspective is dominant in so far as the VET's main purpose is to secure the supply of skilled labour and to foster business innovation and growth.

#### 4.2.1.2. VET as Primary Vocational Education

Vocational Education and Training is understood as a particular part of primary education, where schools financed and governed by the state are the main place of learning and learners are regarded as students. Despite the large variations within this type, two patterns can be distinguished: 1) Vocationally oriented school education and 2) varied occupation-oriented upper- and post-secondary education.

‘Vocationally oriented school education’ which is discipline-based, mainly takes place in classrooms (although there are work-based elements as well) and teacher-student relations are the normal case. Vocational Education and Training is not necessarily occupation-specific, but can also aim at broader vocational fields, is targeted at middle and higher levels, addresses young people, and provides access to higher education. Individual or societal perspectives are more evident, for instance, individual progression and personal growth is rated more important than securing the supply of skilled labour. This system is adopted in identified Austria, Bulgaria, Malta, Romania, Slovenia and Spain, and to some degree in the Czech Republic, Estonia, Flanders, Latvia, Lithuania, Slovakia, Sweden.

Varied Occupation- Oriented Upper- and Post- Secondary Education is identified in Croatia, Cyprus, Luxembourg, Netherlands, Poland and Portugal and to some degree in Greece, Norway, Sweden and Ireland. A broad range of more occupation-specific education, also addressing young adults for which securing the supply of skilled labour and entry into working life is rated higher. It is more diverse than Vocationally Oriented School Education in many aspects: levels of education span from low to high, and so do skill levels (semi-skilled workers and skilled workers); types of providers, instructions and learning approaches can be diverse. School-based and work-based options may form part of one system.

#### 4.2.1.3. *VET as Further Training*

Vocational Education and Training is understood as mainly further on-the-job training for all age groups at various levels to become semi-skilled, skilled workers or professionals (with no specific occupational rights) offered by a wider range of further and higher education providers. Programs for unemployed or second-chance programs form part of this understanding and are adopted by England, Ireland and Cyprus. Entry into working life or employability is seen as more important than occupational identity. Employers' views dominate, and VET is regarded as a means to secure the supply of skilled labor and promote innovation and economic growth.

#### 4.2.1.4. *VET as a Lifelong Learning*

Vocational Education and Training is understood as co-existence of a diverse set of learning approaches, both disciplinary or experienced based; education and skill levels related - semi-skilled, skilled and professional; age groups, status of learners (apprentices or students), types of providers - school, companies, higher education; types of instructors - teachers, coaches, masters. In terms of learning outcomes, it results in both occupation-specific and broader-vocational field oriented and in terms of qualifications – occupational and educational types. Lifelong learning VET is associated with various and more balanced purposes and prevalent in France and Finland and to some degree in Croatia, Ireland, Italy, Greece and Luxembourg.

### **4.3. Changing the Nature and Role of VET Sector**

Over the last few decades, various market trends changed the development of the VET sector both at the national level and internationally. Many of these trends are referred to as vocational drift, academic drift, individualization, diversification, pluralization and hybridization. Some of the main trends are discussed in the ensuing section:



#### **4.3.1. Increased Emphasis on Practical Knowledge**

Many countries have experienced an increased emphasis on practical knowledge in curricula and learning approaches. This is closely linked to a strengthening of the work-based aspect of VET. This is particularly the case in countries with a school-based origin of VET. This changing emphasis into practice through the implementation of apprenticeship programs reported by quite a number of countries and notably the expansion of apprenticeship programs to higher levels of education (e.g. France, Italy, Germany). At a governance level this includes a more prominent role given to employers' and/or industry representatives (e.g. England, Hungary), very often in the framework of social partnership (e.g. Lithuania, Croatia, Malta), or the attempt to encourage stronger participation of enterprises in the financing of vocational education and training.

#### **4.3.2. New Pathways in Higher Education**

Another particular form of diversification can be observed when it comes to access to higher education. New pathways into higher education viewed as major changes that took place in the last two decades. Interestingly, issues of access to higher education through vocational qualifications are specifically addressed in countries that have long-standing traditions of VET: Austria, Denmark, England, Germany, and France. Most prominently, the German VET now gives access to higher education to vocationally qualified applicants like 'Meister', 'Techniker' or 'Fachwirt', if they have proof of relevant occupational experience, pass an aptitude test or complete a probationary year of studies. In many other countries, higher education institutions are already major providers of vocational education and training.

Many countries demonstrate an increase in several new VET pathways for adults (e.g. Denmark, Croatia, Malta) or an increase in the number of adult learners in existing VET programs (e.g. Estonia, Finland, Ireland). This often goes hand-in-hand with an increased

emphasis on the accreditation of prior learning (e.g. in France, Finland, Norway) and is frequently related to the implementation of European Life Long Learning (LLL) policy.

#### **4.4. Strategic Partnerships in VET and the Leonardo Da Vinci Programme**

Strategic partnerships in education at European level aim to support the development, transfer and/or implementation of innovative practices as well as the implementation of joint initiatives promoting cooperation, peer learning and exchanges of experience. Significant attention is paid to public-private partnerships, or social partnerships, that are critical to the development of high-quality VET programs because they allow for regular communication between employers and VET providers. This generation of better networks for communication is a tangible outcome of social partnership activities. Communication is critical in VET practice on many levels. This communication enables VET providers to learn what skills are in demand and to train for jobs that change regularly. The communication also allows employers to have input into the curriculum of VET and often gives them a recruiting tool to attract skilled workers.

In a market economy, public-private partnerships link education and employers. These partnerships manifests in a range of public policies, funding systems, and curriculum frameworks that have as a shared goal to tighten the level of communication among educators and employers. The policy framework that governs these partnerships is varied, although there are archetypical systems. Germany's "dual system" is one model of private-public engagement. The German system is based on a law from 1969 that mandates a particular governance structure for vocational education and training. At the heart of the system is a delegation of responsibility for curriculum and assessment to a coalition of labour representatives, businesses, and educators. The business associations play a particularly complex role, managing the system by monitoring the quality of training provided by firms in the dual system.

Operating public-private partnerships in VET is something every country does to an extent. In virtually all countries in Europe, there is some national level policies that guide the engagements in vocational education and training. For example, in Germany Vocational Education Act from 1969, legislated the apprenticeship system that has come to be known as the ‘dual system’. Hungary created legislation in the mid-1990s to decentralise vocational education training management. As part of the decentralisation, the government created a new system of continuing vocational education and a comprehensive national registry of vocational qualifications. Slovenia, additionally, changed its vocational education and training system making private and public sector both responsible for its development. The specific changes included creating common curriculum documents for industry and education that outline the requirements to complete a specific vocational degree.

With a view of facilitating exchanges between training organisations in Europe, in 1995, the European Commission created two new educational programmes called Socrates and Leonardo Da Vinci. Both programmes acted as umbrella schemes that brought together previously separate action programmes in education (European Commission, 1998).

The purpose of the Leonardo da Vinci Programme resided in promoting the international mobility of the students, teachers and educational administrators, facilitating the development of innovative practices in vocational education and training in Europe. Further, it aimed to enrich the transparency of the European Educational system through recognition of qualifications and competencies, including those acquired through non-formal and informal learning, while encouraging learning of modern foreign languages.

The critical activities supported by the Leonardo da Vinci Programme covered such areas as mobility of individuals, including placements of trainees (described as people in initial vocational training – IVT) and people in employment (described as people on the labour market

– PLM) in training institutions or enterprises in other participating countries. It also includes placements and exchanges aimed at the further professional development of trainers, guidance counsellors and those (described as responsible for vocational education and training on a professional level – VETPRO) accountable for training establishments and training planning and career guidance within enterprises. Further, it supported partnerships focusing on participating organisations' mutual interest and networks of experts and organisations working on specific issues related to vocational education and training. Finally, it targeted multilateral projects aiming at improving training systems by focusing on the transfer of innovation involving the linguistic, cultural and legal adaptation to national needs of innovative products and processes developed in different contexts of innovation.

Driven by the need for an educated workforce, competitiveness and economic growth, the programme promoted the internationalisation of education. Although exclusively focused on vocational education, the programme's target group ranged from trainees to graduates, from VET professionals to organisations active in this field, such as institutions and educational bodies, enterprises, associations, and social partners relating to either lifelong learning or the labour market. The programme enabled actors in the vocational education sector to work in partnership with other actors across Europe, supporting the funding of these partnerships projects. The central feature and advantage of the Leonardo Da Vinci Programme have been its cross-national character. Each project required partners from not less than two or three different member states to influence educational practices through cultural exchange and experiences.

Also, innovation initiatives were the key elements of the programme. They expected to improve the quality of training systems by developing and transferring innovative policies, courses, teaching methods, materials and procedures. These included 'mobility' initiatives enabling

people to train in another country, cooperation projects to transfer or develop innovative practices, and networks focusing on topical themes in the sector.

The first phase of the Leonardo DA Vinci Programme, Leonardo I that lasted for five years (1995-1999), was driven by the influence of earlier programmes:

- Commet I (1986-1989) and Commet II (1995-1994) promoting cooperation between higher education institutions and industry
- Eurtecnet promoting innovation in education
- Force developing further education and continuing vocational education (CVT)
- Perta I (1987-1981) and Petra II (1990) promoting vocational training and initial vocation education and training (IVET) to the youth as well as helping with the transition from school to work.
- Lingua (1990-1994) assisting with the development of language skills.

The second, broader phase, covered the seven years from 2000 to 2006. While drawing on experience gained in the first phase of the Leonardo da Vinci programme and focusing on the objectives set out by the European Commission, at this stage, the programme promoted transnational projects based on cooperation between various players in vocational training. With the total budget of €1.45 billion and 21 projects that supported 367,000 individuals, the programme was open for collaboration to the Member States of the European Union (Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Slovenia, Slovakia, Spain, Sweden, United Kingdom), three countries of the European

Economic Area (EEA - Iceland, Liechtenstein, Norway) and two candidate countries (Bulgaria and Romania).

Participation in the programme was open to all public and private organisations and institutions involved in vocational training, in particular:

- training establishments, centres and bodies at all levels, including universities
- research centres and bodies
- companies and consortia, particularly SMEs
- trade organisations, including chambers of commerce
- social partners' organisations at all levels
- local and regional bodies and organisations
- non-profit associations and non-governmental organisations.

The programme included the following activities:

- support for transnational mobility of people undergoing vocational training in Europe and of training organisers
- support for pilot projects based on international partnerships designed to promote innovation and quality in vocational training
- promotion of language skills, including for less widely used and taught languages, and understanding of different cultures in the context of vocational training

- support for the development of transnational cooperation networks facilitating the exchange of experience and good practice
- development and update of Community reference material and comparable data
- development of joint actions with other Community programmes
- design of accompanying measures
- support of global efforts to promote and use information and communication technologies (ICT) in vocational training.

The focus of the European Commission was directed on the implementation of the actions covered by the programme with the view of The Member States taking necessary steps to the efficient running of the programme at the national level, in particular, setting up National Agencies to manage the operational implementation of these actions. The assistance in support this call was classified under submitted proposals, selected according to one of the following procedures:

- procedure *A for mobility projects*. The general aim of this measure was to provide individuals with financial assistance to train abroad. The procedure was administered by the national agencies, which receive an overall annual grant from the Commission
- procedure *B for pilot projects* (except thematic actions), language skills and transnational networks. This was a two-stage selection procedure which requires the participating Member States to evaluate and select proposals and the Commission to assess and classify them
- procedure *C for reference documents, thematic actions, projects* based on joint activities and projects submitted by European organisations. This was a centralised

procedure under which the Commission is responsible for concluding contracts and managing and monitoring the projects concerned.

The European Commission provided further support for implementing selected programmes in developing dialogue at the European Community level and collaboration with the social partners on the national level. The assistance was also given in strengthening cooperation with non-Community countries and with the relevant international organisations. With partners from different countries working on the shared pilot projects and testing them in practice, the Leonardo Da Vinci Programme functioned as a development centre for innovation and experimentation. At the time, more than 2,500 trans-border pilot projects, or Transfer of Innovation projects, generated a significant number of different successful applications, such as new curricula, study modules, information material, manuals, study materials and work tools (European Commission, 2005) as well as project partners' intercultural learning, exchange of experiences and promotion of common goals.

#### **4.5. The Swedish Model of Vocational Education and Training**

Vocational education and training in Sweden have many similarities to those in the other European Member States, and particularly in the Nordic countries. It does, however, have many unique elements. Firstly, it is not a system with specific objectives and clear boundaries; rather it forms part of a comprehensive model of education stressing active citizenship, work-life orientation and preparation for further studies. Of special interest is the role of the core curriculum and general skills as well as the degree to which the system has been modular with a wide range of provision available in continuing vocational education and training. It is interesting that it is a system in which the Ministry of Education and Science and the Ministry of Labour share the responsibility for continuing vocational training and where national



agencies such as the National Agency for Education and the National Labour Market Board play a key role in continuing VET, but also in which the social partner organizations have a considerable influence. As a school-based model, it is a system in which emphasis has been laid on ensuring that curricula and qualifications are updated and meets the needs of the workplace, particularly in relation to the use of new technologies. Also, value for money is very much emphasized, and there has been a decentralization of many aspects of management of the system to municipalities and to individual institutions. The system remains, however, overwhelmingly publicly run and financed, with very few private providers of training involved.

Sweden has a long tradition of social and local partner involvement in VET. The regional growth agreements introduced in 1998 started to be implemented in 2000. Within their framework, the local and regional players collaborate on measures to increase growth and employment. The idea behind the government's initiative is that the greatest knowledge of the criteria and suitable measures for local and regional growth and employment is to be found among those most closely involved. Numerous forms of cooperation have been developed: the national action plan for employment (NAP) between the government and social partners; and, efforts by training coordinators and trade unions to stimulate and motivate reluctant recruits of further education. The trade unions are contributing by arranging counselling for and actively visiting groups in the communities with a low level of education. These activities are carried out with the assistance of the local authorities and training organizations. Such collaboration ensures that less-educated people are supported in their local environment and are motivated and encouraged to improve their employability. The work conducted for the Adult Education Initiative (AEI) is an example of regional cooperation between employers, trade unions, school and education providers, as are the employment service committees which involve local authorities, local business and individuals.

#### **4.6. The ITM Programme Development**

The ITM Worldwide Programme was initially created in 1994 by the National Agency, the Swedish Trade Council (STC), as an internal VET programme that offered a unique opportunity for the small and medium-sized enterprises (SMEs) to grow internationally. As the SMEs sector was strategic to largely export-dependent economies, the ability of national companies to conduct their business internationally became of greater importance. To coordinate the numerous export- promoting activities run by the government and private companies in Sweden, the STC had a joint private and public entity owned in equal shares by the Swedish state and the Swedish Foreign Trade Association. The STC aimed to facilitate the international expansion of SMEs to plan, organise, and implement activities to grow Swedish exports. The activities of the STC were broadly divided into four categories: essential export services, consultancy services (from 2008), skills development for companies, and targeted measures for international business promotion. However, the biggest obstacle to the global expansion of Swedish SMEs continued to be a lack of qualified trade education and training. The ITM Programme was designed and developed to fill this void.

At the core of the ITM Programme was the International Trade Management Concept (Fig 4.1), an innovative VET solution in trade management training for exporting SMEs. As a blend of recruitment, individual export coaching and joint international training, the ITM Programme also functioned as a collaboration platform for networking, pooling expertise, testing new ideas and exchanging good practice and experience.

**Figure 4.1. The ITM Worldwide Concept**



Source: [www.itmworldwide.org](http://www.itmworldwide.org)

Fully developed to its current offering in partnership with seven Trade Councils and SMEs within the EU Leonardo Da Vinci Life-Long Learning framework, the ITM Worldwide Programme trained more than 1,600 export managers in 27 countries around the world from 1999 to 2016. In 2005, the ITM Programme was presented with a ‘Best Cases’ award by the European Union. In 2008, the ITM Worldwide Foundation, which delivered the ITM Worldwide Programme, was accredited by the International Association of Trade Training Organisations (IATTO) and awarded the IATTO Ian Phelps Award, honouring world-class achievement in trade education and development. The ITM Worldwide Program is also globally certified and qualifies for the IATTO ‘World Trade Professional’ designation.

#### **4.6.1. The ITM First Generation Programme (ITM Sweden) in 1993-1999**

The ITM Concept, the core of the ITM Sweden Programme, was built on the backbone of the VET system. Sweden had many similarities in the VET system to the other European Member States, particularly other Nordic countries; however, it had many unique elements. Firstly, it was not a system with specific objectives and clear boundaries; instead, it formed a comprehensive model of education stressing active citizenship, work-life orientation and preparation for further studies. Of particular interest was the role of the core curriculum and

general skills and the degree to which the system had been modular with a wide range of provisions available in continuing vocational education and training. It was also a system in which the Ministry of Education and Science and the Ministry of Labour shared the responsibility for continuing vocational training, and the National Agency for Education and the National Labour Market Board played vital roles. As a school-based model, the Swedish VET system focused on the most up-to-date curricula and qualifications that met the needs of the workplace. Although the system was getting decentralised, giving more decision-making power to municipalities and individual institutions, it remained publicly run and financed, with very few private providers of training involved.

During the five years after its inception, the ITM Sweden Programme, under the umbrella of the National Agency and its social partnering organisations, provided modular trade international trade training to university graduates placed with the small and medium-sized companies to facilitate internationalisation. The ITM Sweden Programme international trade seminars in International Marketing and Strategy, Change Management and Managing Cultures were taking place in Europe and delivered by renowned experts in their discipline. Seminars in Marketing Research and International Sales and individual coaching and assistance in building an export business plan for a participating organisations were delivered locally. Benefiting all stakeholders involved, from young professionals, SMEs, local governments and the nation at large, the ITM (Sweden) Programme proved to be a successful endeavour of the Swedish educational system.

#### **4.6.2. The ITM Second Generation Programme (ITM EU) in 2000-2007**

The regional growth agreements introduced in 1998 in Sweden started to be implemented in 2000. Within their framework, the local and regional players collaborated on measures to increase growth and employment. The idea behind the government's initiative was that the most

significant knowledge of the criteria and suitable standards for local and regional development and engagement was found among those most closely involved. Numerous forms of cooperation have been developed: the national action plan for employment (NAP) between the government and social partners; and efforts by training coordinators and trade unions to stimulate and motivate reluctant recruits of further education. The trade unions contributed by arranging to counsel groups in the communities with a low level of education. These activities were carried out with the assistance of the local authorities and training organisations. Such collaboration ensures that less-educated people were supported in their local environment and motivated and encouraged to improve their employability. The work conducted for the Adult Education Initiative (AEI) was an example of regional cooperation between employers, trade unions, school and education providers, as are the employment service committees which involve local authorities, local business and individuals.

At the same time, promoting and intensifying educational cooperation in European Union, the Leonardo da Vinci Programme entered its second phase. Taking advantage of the programme's aim of internationalisation of education, the ITM Sweden Programme was re-developed and co-piloted in Europe with seven EU participating countries: Sweden, Slovenia, Estonia, Lithuania, Croatia, Greece and Rumania, under the framework of EU Leonardo Da Vinci Programme during the period of 2000 to 2007.

At this stage of ITM (Europe) Programme development, the EU Leonardo da Vinci Programme played a vital role in bringing together seven partners to work on a shared project idea fostering the quality of innovatory activities in the education system of EU member states. Such partnership has made it possible to establish permanent networks for collaboration across national boundaries and exchange good practices. At the same time, the successful outcome of the ITM EU Programme, amongst other 'best cases' in the field of vocation education,

contributed to the success of the Leonardo da Vinci Programme. In effect, the programme became well known by promoting trans-border mobility, allowing participants to gain work and study experience abroad.

The Leonardo da Vinci Programme was a central tool in evolving lifetime learning and strategies and generating synergies between the EU's educational and employment policies. In 2007, the European education and training programmes were further merged under the Life Learning Programme (LLP), delivering learning opportunities to all individuals in vocational education and training, other than tertiary level, and institutions and organisations that provide VET. The interests of the Leonardo da Vinci Programme consisted of a broader scope from the mobility of individuals to multilateral projects in the development and transfer of innovations and networks.

#### **4.6.3. The ITM Third Generation Programme (ITM Worldwide) in 2008-2016**

In 2008, the Swedish Trade Council ceased vocational education and training as part of the skills development service category, focusing its role on consultancy services - commercialised business advisory services for companies interested in engaging in foreign exports. The ITM Europe Programme, the second generation programme, was redeployed under the ITM Worldwide Foundation, incorporated as a non-profit organisation with the mayor of Lidköping (Sweden) acting as a Chairman. The international seminars module offered to programme participants twice a year was delivered from Lidköping, Sweden. The individual coaching and assistance in building export plan modules for the participating organisation were provided locally in each partnering country with the support of their National Agencies.

The International Trade Management (Worldwide) Programme, the third ITM generation programme was delivered across 28 countries worldwide and has trained 1,600 world trade professionals. A vital part of the programme included an International Worldwide Alumni Network, which offered networking with the broader community of alumni and trade experts in international trade. According to European Commission surveys, the ITM Programme rated high on customer satisfaction or exceeded participants' expectations.

## **5. Analysis and Findings**

### **5.1 Introduction**

This chapter analyses the ITM business net development in the Vocational and Education Training (VET) sector based on different ITM programme generations. The analyses covers a timespan of twenty-three years from 1993 to 2016, offering an insight into business net changes during three phases: the introduction of the ITM First Generation Programme (ITM Sweden) in 1993-1999, the development of the ITM Second Generation (ITM EU) in 2000-2007 and consolidation of the ITM Third Generation Programme (ITM Worldwide) in 2007-2008. The ITM business net in the process of three-phase development suggests an existing net configuration and two re-configurations resulting from incremental and radical changes triggered by a collective, non-linear and interactive process of the ITM programme development (service innovation process). This chapter also covers the findings that will be discussed in the next chapter.

### **5.2 The ITM Business Net Development**

The ITM business net development has progressed through three distinctive phases. Phase I shows the ITM business net development from 1993 to 1999, when the first generation of the ITM programme, the ITM Sweden Model, was developed and commercialised. Phase II presents the ITM business net development from 2000 to 2007, when the second generation of the ITM programme, the ITM EU Model, was developed and piloted, and the first generation continues to be provided on the market. Finally, Phase III exhibits the ITM business net development from 2008 to 2016, when the first generation of the programme and the second



generation of the ITM programme were commercialised, and the third generation of the ITM Programme, the ITM Worldwide Programme, was introduced.

The business net draws a boundary around the programme development in International Trade Management (ITM) of the Vocational Education and Training (VET) sector. The business net perspective considers actors' exchange relationships and actors' positions and roles within the ITM business net. The key ITM net actors are introduced in Figure 5.1.

### **Figure 5.1: ITM Business Net Actors**

- Project Team (F) A service provider of the ITM VET programme involved in the development, co-development and implementation of three generations of the ITM programme across 128 countries worldwide.
- Company (G1): A funding provider responsible for developing public health care, public transportation and public education in Sweden.
- Company (G2): A facilitator and funding provider involved in the First Generation of the ITM Programme and responsible for the teaching and training needs of vocational education and training (VET) and support of skilled and mobile workforce across Europe
- Company (P1): A partnering organisation involved in developing the First Generation of ITM Programme (ITM Sweden) and co-development of the Second Generation of ITM Programme (ITM Worldwide) and responsible for the educational and financial support of exporting SMEs in Sweden.

- Company (P2): A partnering organisation involved in developing the Second Generation of the ITM Programme responsible for the educational and funding support of exporting SMEs in Slovenia.
- Company (P3): A partnering organisation involved developing the Second Generation of the ITM Programme and is responsible for the educational support of exporting and non-exporting SMEs in Estonia.
- Company (P4): A partnering organisation involved in the co-development of the ITM Second Generation and responsible for the educational and financial support of exporting SMEs in Lithuania.
- Company (P5): A partnering organisation involved in the co-development of the Second Generation of the ITM programme and responsible for the educational and financial support of exporting SMEs in Croatia.
- Company (P6): A partnering organisation involved in the co-development of the Second Generation of the ITM Programme responsible for educational support of exporting SMEs in Greece.
- Company (P7): A partnering organisation involved in the co-development of the Second Generation of the ITM Programme and responsible for educational and financial support of exporting SMEs in Bulgaria.

Company (A1)	A facilitator involved in the Third Generation of the ITM Programme and educational support and shared knowledge platform to export SMEs and trade professionals worldwide.
Company (S1)	An educational provider with international accreditation responsible for training content of the ITM Programme.
Company (S2)	An educational provider with international accreditation responsible for training content of the ITM Programme.
Company (S3)	An educational provider with international accreditation responsible for training content of the ITM Programme.
Company (S4)	A training consultancy responsible for training content of the ITM Programme
Company (C5)	A training consultancy responsible for training content of the ITM Programme
Trainees (Ts)	ITM Programme trainees (collective actor)
SMEs (Cs)	ITM Programme participating SMSs (collective actor)

To make the process of business net development visible, several critical events were identified in the emergence of the ITM business net around the innovation process. These events that triggered significant structural changes in the business net relate to single activities of net

actors, their exchange relationship and the ITM programme development. Each innovation development phase involved critical events presented further in Section 5.2.1.1., Section 5.2.2.1. and Section 5.2.3.1, resulting in the first configuration and two subsequent re-configurations of the ITM business net (Fig 5.4, Fig 5.6, Fig 5.8). In each re-configuration, the roles of net actors changed due to changes in inter-firm relationships. Role changes then impacted changes in business net actors' positions. Maps of net actors' roles are presented in Fig. 5.3, Fig 5.5 and Fig 5.7 and role and position changes are discussed in Section 5.2.1.2, Section 5.2.2.2 and Section 5.2.3.2.

## **5.2.1 Phase I (1993-1999) of the Business Net Development: the ITM First Generation Programme**

### *5.2.1.1 Structural Configuration of the Emerging Business Net*

After the municipalisation in Sweden in 1991, triggered by a reform in the education industry (CE1), the new conditions opened up possibilities for the regional institutional actor (P2) to change existing forms of vocational education (CE2). The changes have been much more far-reaching in those education and training programmes aimed at the manufacturing industry than in any other. The main reason was that there had been widespread dissatisfaction among companies with the quality of the existing educational offerings. The inability of the national institutional actors to 'deliver' was the essential background to the development of the ITM Programme. With the decentralised system, more possibilities emerged for local public and private players to change the VET content and the organisational forms of vocational education to suit their particular interests.

Actor (P1), as an organisation, was formed in co-operation between the Swedish government and representatives from the Swedish business community and positioned to promote Swedish

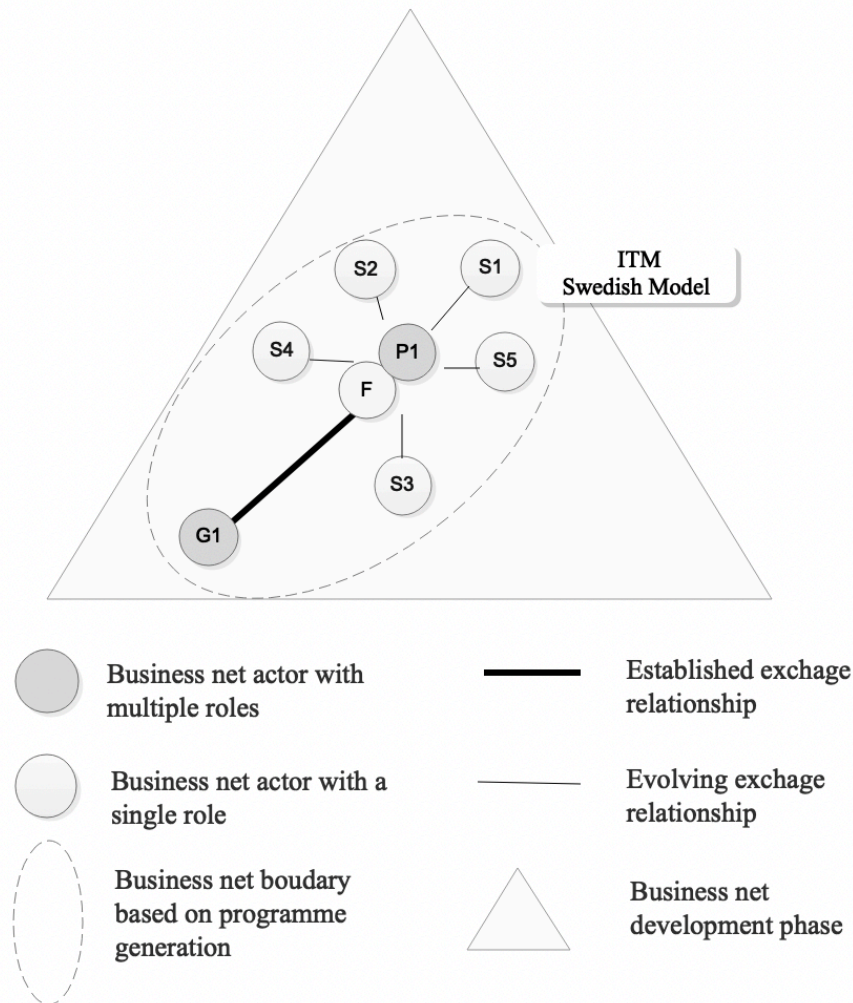
exports on behalf of the Swedish industry and government. In 2013, the organisation was merged with the government agency Invest Sweden to form a new organisation named Business Sweden. The role of (P1) was to co-operate with many different actors within established and new organisations. Its long-term perspective was meant to help innovative companies to generate future export successes or be subjects of international investments, acquisitions or partnerships. In addition to its professional services, Actor (P1) had access to public funds to promote Swedish exports and investments in Sweden. The support to Swedish companies included industry advice, business contacts, market analysis and international procurement. According to the traditional Swedish model, the success of (P1) rests on its experienced employees' collective expertise: politics, networking, communication and diplomacy combined with responsible and sound business development. The main activity of the actor (P1) was to connect Swedish products and services with new export and investment opportunities. With consultants in fifty of the world's most promising markets and offices usually located in the country's capital or its financial centre, actor (P1) closely collaborated with Swedish embassies, consulates and chambers of commerce. This extensive global presence allows for unique market expertise and resources to source international business opportunities and makes actor (P1) an attractive business partner.

As a result of a critical event (CE1), regional institutional actor (G2) launched market research (CE2) with 70 manufacturing companies to identify areas of competence improvement and activated an existing relationship with a national institutional actor (P1) to develop a solution to retain young graduates in local communities and assist local business to export internationally. *'In 1993, I met with the Business Developer in the City of Lidköping. He told me he had a problem, and young talents left Lidköping to study at Universities in Sweden and abroad. They never returned. At the same time, there was a need for young university graduates with good language skills and experiences locally to make it possible for small and medium*

*companies (SMEs) to grow internationally. The challenge was: how do we attract young talents to return to Lidköping and work for small and medium-sized companies? (P1).*

As the national institutional actor (P1) shared an interest with the local institutional actor (G1) in providing support to the country's SMEs and already had experience in developing and running educational training as well as resources to finance such projects, the actor (P1) collaborated with the actor (G2) on development and implementation of a new VET programme. As such, the ITM VET programme met the objectives of both actors in building export competence for local SMEs (C1/C2/C3) in providing expertise, knowledge and network needed to grow internationally and assisted with the retention of young university graduates (trainees), trained in international trade management as a new SMEs recruit. The program's hallmark was standardised training modules developed and delivered employing mobilised internal educational training resources and access to international academic training resources of collaborating actors. At this stage, the actor (P1) project manager mobilised (CE4) international content providers (S1), (S2), (S3), (S4) and (S5) to deliver 'Change Management Simulation', 'International Trade and Marketing' and 'Market Research' ITM training modules.

**Figure 5.2: The ITM business net configuration and critical events in Phase I**



**Critical Events (CE):** Critical events of the ITM programme development (the service innovation process) that impacted ITM business net development:

**CE1** – the educational reform of 1991

**CE2** – the launch of market research to identify potential SMEs competencies gaps (1993)

**CE3** – the formation of the ITM project team

**CE4** – the ITM project team mobilised international content providers (S1/ S2/ S3 /S4/S5)

**CE5** – the launch of the ITM First Generation programme (ITM Swedish Model) in (1999)

### 5.2.1.2 Actors' Position and Role Interplay

Given that the national institutional actor (P1) had his own interactive goal of promoting and supporting the country's SMEs in their attempts to succeed in foreign markets, it has played a significant role in developing a range of new activities to facilitate export growth. One of the primary assignments was the engagement in providing regional export advisers paired with potentially trading-abroad SMEs to identify their 'readiness' to export and offer assistance in developing an export strategy in new or existing markets. In addition, 'Steps-to-export' and 'Market Selection Analysis' programme modules were delivered as part of the ITM programme mobilising the internal resources of a national institutional actor (P1). To ensure exporting SMEs have an entry point to a foreign market actor (P1) also allowed them access to its extended arm of non-profit organisations in delivering direct and local support in a country of potential export. As a result, ITM programme development brought a corporate aim of the national institutional actor (P1) of increasing international sales and the objective of the regional institutional actor (G2) to decrease local unemployment by retaining young graduates in local communities.

As vocational education was mainly publicly managed to handle education problems, the Committee on Vocational Education in Sweden took the view that both employers and trade unions must assume greater responsibility for managing, financing and setting up the content of training programmes. The purpose of the new council was to coordinate the work of the employer and labour organisations, both concerning the governmental, and educational authorities and vis-à-vis the apprentice boards of the various trades. As such, the actor's (P1) role was to improve educational opportunities by offering pedagogical support and encouraging companies to collaborate in order to redistribute education costs within and across trades. The labour market trade councils would form part of the support structure for apprenticeship training in the various trades with a primary objective to develop the content and forms of



vocational and educational training in the various trades and cultivate and support SMEs to succeed in the foreign market.

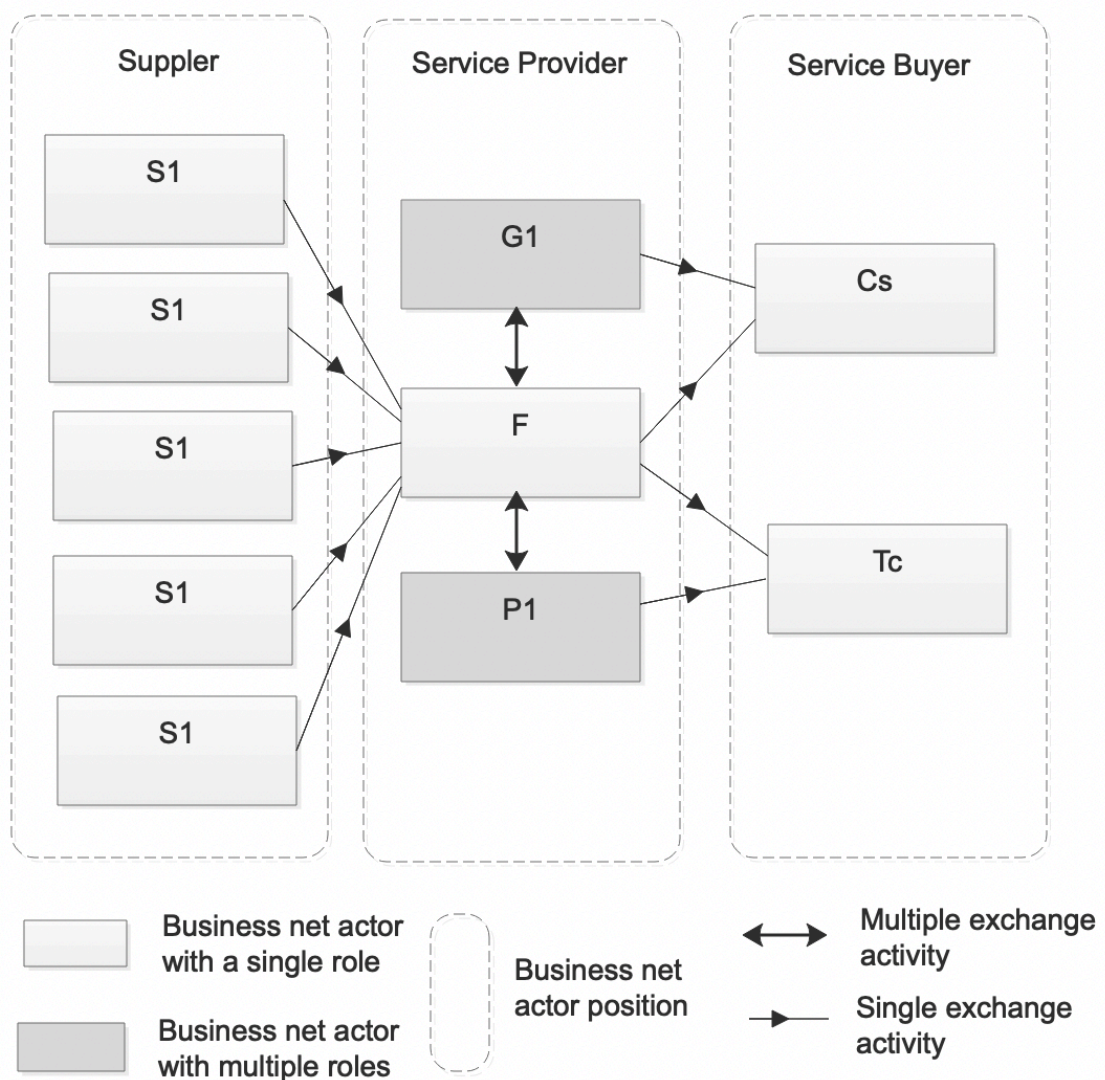
The first generation of the ITM VET programme was launched (CE5) in 1999 as a result of a relatively stable business net (Fig 5.1), established on the existing relationship of two institutional actors (P1) and (G2) and the ITM programme project team (F). Both actor (P1) and actor (G2) played single roles in coordinating activities in new service development. The actor (F) accepted the pre-defined role of the ITM programme provider (service provider).

The expectation of a shared objective towards the role and position of the actor (P1) and the actor (F) was noted by a net actor: *'For ITMF...[. ], the optimisation of profit has never been the organisation's objective. It was not of the Swedish Trade Council [P1], and it is not of ITMF [F], which is a foundation. Of course, breaking even and a little profit on top is nice, but it's not the objective to maximise profits. In your position [as Swedish Trade Council and International Trade Management Foundation], you must always relate to your organisation's objective, right?' (G1).*

The priorities of actor (G1) to innovate have been highlighted in the following comment: *'...new ideas in vocational and education training towards SMEs export are very important for Sweden. Sweden, as a welfare state, would be nothing without export. We [Sweden] started to export earlier than other countries, and now we are at the forefront of the export ... The economy is growing ... This would have never happened without export sales and trade. Trade is very important for our country's development; it's the most important choice to make for that exact reason...' (G1)*

Fig 5.3. demonstrates a mapping out of ITM business net actors' roles in Phase I. In this phase, actor (G1), based on his current role as an economic developer of the country, accepted the pre-set role of a funding provider. The actor (P1), based on his role as a facilitator of national exports on behalf of the government and business community in supporting the internationalisation of SMEs, has accepted the role of recruiting SMEs for the ITM programme. Finally, the actor (F) has accepted a pre-set role of a service provider responsible for developing and implementing VET programmes for SME internationalisation. Thus, all three actors acted according to their roles (role-taking).

**Fig 5.3: The ITM business net actors' roles in Phase I**



## **5.2.2 Phase II (2000-2007) of the Business Net Development: the ITM Second Generation Programme**

### *5.2.2.1 Structural Business Net Changes and the First Business Net Re-configuration*

In 2001 the ITM project manager (F) searched for a relevant opportunity to promote the Swedish VET model abroad and connected (CE4) with an EU representative who suggested applying the Swedish concept in the European context.

Actor's (G2) sectoral programme, included Europe-wide co-operation between VET stakeholders in order to enhance the attractiveness, quality and performance of VET systems and practices. Actor (G2) carried out multilateral projects in the form of an European co-operation activity developed jointly by a formal and informal organisations or institutions. Equally supported multilateral networks as a formal or informal group of bodies active in a particular field, discipline or sector of lifelong learning, focussing on specific needs and networking activities in the field of VET. Besides actor' (G2) general objectives to foster interchange, co-operation and mobility between education and training systems within the EU so that they become a world quality reference, the specific objectives of the Leonardo da Vinci programme was to: 1) to promote co-operation in quality assurance in all sectors of VET in Europe 2) to encourage the best use of results, innovative products and processes and to exchange good practice in the field of VET in order to improve the quality of education and training.

As Leonardo da Vinci programme was open to the 27 EU Member States, the EFTA-EEA countries, Turkey, Croatia, Switzerland and other EU candidate countries, actor (P1) joining the programme as a participating partner presented an opportunity to expand the ITM programme from a national (Sweden) to a European dimension. As a result, actor (P1) used a bridging strategy to access co-operating actors (P2), (P3), (P4), (P5), (P6), and (P7) through a

successful application to actor's (G2) European Commission's Leonardo da Vinci partnership programme.

The new actor (G2), was positioned as a facilitator of the teaching and training needs of those involved in vocational education and training (VET). The actor (G2) was in the second Phase (Leonardo II 2000–2006) of its development and concentrated on the skills and employability of young people. Of the 21,000 projects financed in this Phase, 19,000 had to do with mobility, supporting 367,000 individuals. The role of the actor (G2) was to support innovations and improvements in vocational education and training systems and practices and, in so doing, enhance the competitiveness of the European labour market by helping European citizens to acquire new skills, knowledge and qualifications and have them recognised across borders. Participation criteria for the Leonardo da Vinci Programme (LDVP) included enterprises, social partners and their organisations at all levels, including trade organisations, professional organisations, chambers of commerce and industry, and National Agencies of the participating countries, making actors (G1) as an eligible programme candidate. Additionally, the actor's activities (G2) included funding in the form of a project grant contributing to all its project costs: travel and subsistence during mobility periods and expenses linked to local project activities.

As such, in 2006, the actor (P1) co-operated with the actor (G2) by successfully starting two-year participation in the European Union Leonardo da Vinci Programme (EU LDVP). The purpose of the EU LDVP collaboration was to enable organisations in the vocational education sector to work with partners from across Europe to exchange best practices and increase the expertise of participating members. A particular preference was given to partnerships in which vocational education and training organisations originated from different European countries and worked together on small-scale collaborative projects.

For example, from the EU's perspective, the LDVP initiative intended to improve the quality of training systems by developing innovative content, methods, and procedures within the VET sector. These projects view innovation as doing new things or finding new ways of doing familiar things. As a result, the ITM programme, with its innovative VET content, methods and procedures provided by the actor (P1), was recognised amongst other EU VET providers.

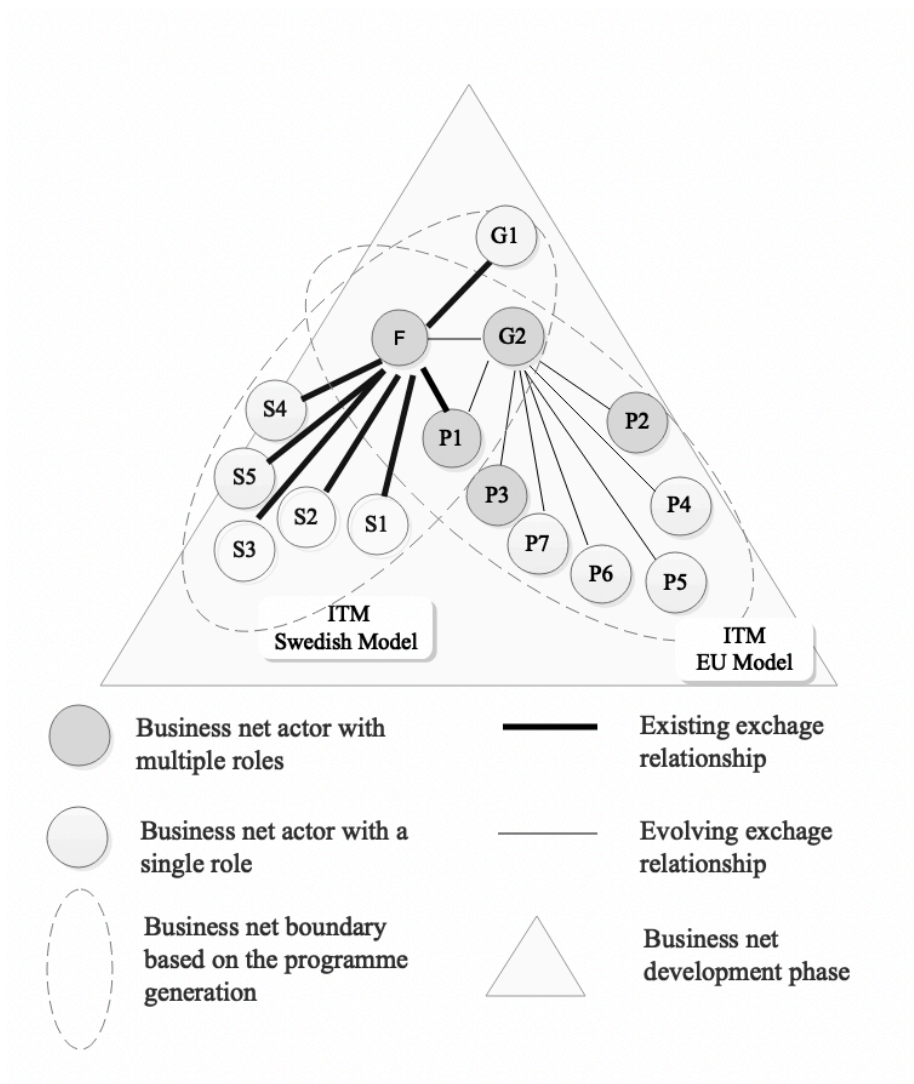
The actor (G2) acted as a collaboration platform that connected European institutional actors to exchange, develop, and implement various learning initiatives in vocational education and training. The actor (G2) more significant initiatives included the 'mobility' advantage, enabling people to train in another country, exchange innovative practices, and networking opportunities. Actors who benefited from these initiatives ranged from institutional VET providers to VET customers (SMEs) and trainees (EUs). Additionally, the actor (G2) offered funds to facilitate the development and implementation of programmes that resulted in collaborating projects. Securing the position of EU LDVP participant, the Swedish national institutional actor (P1) further extended its role as a VET provider and gained access to financial resources (funding) required for the ITM programme implementation in a European setting. The actor's role (P2) changed from acting as an ITM programme provider to an ITM programme institutional customer.

Under the framework of LDVP, actor (G2) created a partnership model between national institutional trade organisations (National Agencies) of Sweden, Slovenia, Estonia, Lithuania, Bulgaria, Croatia and Greece. The diversity of participating actors allowed for cross-fertilisation and creativity and facilitated the development of a new solution to their customer's needs. Actors (P1), (P2), (P3), (P4), (P5), (P6), and (P7) embarked on a long-term relationship as innovation projects of this type typically involved a lot of time allocated for both development and testing phases. A formal agreement with all actors was formed for the

duration of collaboration in anticipation of any challenges that might arise concerning international property rights (IPR).

The ITM EU partnership model involved actors with overlapping roles and diverse expertise and experience in providing educational and training services for SMEs in their respective geographical areas, reshaping relationships and role expectations between network actors. As business and non-business actors, they had different interests in the innovating initiative within the partnership model framework but shared common interaction goals and priorities in joining ITM programme development. Participating actors (P1), (P2), (P3), (P4), (P5), (P6), and (P7) shared pre-defined roles (role-taking) of promoting innovation in vocational training in their respective environments in such a way that tools, methods or concepts, as well as concrete materials, developed during the project, can be used in, or adapted for, changing environments. To make the best use of the development process and obtain feedback on developed VET programmes, actors shared results communicated in the form of guidance materials, methods and approaches available in the language of all participating actors involved. The priority of knowledge transfer and dissemination of innovative solutions were an integral part of the project work shared activities.

**Figure 5.4: The business net configuration and critical events in Phase II**



**CE6** – The ITM project team meets with an EU representative to discuss an application for ITM EU Programme in Europe

**CE7** – The ITM joined the EU Leonardo da Vinci Initiative

**CE8** – The ITM second-generation programme (ITM EU Model) Development and Implementation Plan was set up



#### 5.2.2.2 Actor's Position and Role Change Pattern

The entry of a new actor (G2) with made-up-activities (role-making) in supporting the re-development and funding of the ITM programme within the LDVP framework facilitated the broadening of the ITM network to the European VET market. Additionally, owing to the experience of the actor (G2) conducting joint European co-operation projects, partnerships and networks, all ITM business net actors benefited from the LDVP programme structure that impacted on the effectiveness and efficiency of the ITM programme's re-development and implementation.

Notably, actor (G2), as part of his new role-making activities, initiated a guiding provision for evaluating LDVP candidates with regards to the professional competencies and qualifications necessary for carrying out the ITM programme and introduced eligibility criteria for funding. For example, the actor's (G2) General Provisions Guide states: *'Selection criteria are used to assess whether the applicant organisation / partnership has the operational and financial capacity necessary to undertake the proposed activity. Applicant organisations may be required to provide documents to attest to their operational and financial capability. If, on this basis, the Agency considers that operational and financial capacity has not been proved or is not satisfactory, it may reject the grant application or ask for further information (G2's LDVP General Provisions).*

New actors (P2), (P3), (P4), P(5), (P6) and (P7) acted in a new role of participating partner in the ITM business net. Actor (P1) added a new coordinating (leading) partner role in the re-configured business net. Actor (P2) role as a participating partner of the Leonardo da Vinci initiative was based on his role as a public agency that independently performs regulatory, professional and development activities aimed at boosting competitiveness, taking responsibility for promoting the Slovenian economy, developing entrepreneurship and

promoting innovation, technological development, Internationalisation of Slovenian companies, and attracting foreign direct investments. The actor's role (P2) was defined as offering comprehensive business support to Slovenian companies during their business development activities at home and abroad. On the one hand, the actor (P2) was tasked to supervise the implementation of policy designed to cater to Slovenia's entrepreneurship and competitiveness development. On the other hand, the actor (P2) runs the programmes to attract foreign direct investments and SME internationalisation. In his role as a participating partner in co-operation with the actor (P1) of the ITM programme development, the actor (P2) was acting as the recruiter of SME organisations in his local market.

Additionally, the actor (P2) 's role included the responsibility of co-financing the ITM programme participants, running advertising campaigns, conducting interviews with candidates, and facilitating local and international seminars of the ITM programme. The actor (P2) accepted the role (role-taking) of a participating partner of the Leonardo da Vinci initiative and ITM programme development based on his current role and conformed with the role expectation of being a participating partner of the ITM programme but additionally shaped new activities of co-developing a second generation of the programme that resulted in a new role of an active partner. In 2016, actor (P2) celebrated its 10th anniversary as an ITM programme active partner.

The actor (P3) was included as a participating partner of the Leonardo da Vinci initiative based on his role as an education organisation aiming at providing high-quality training and innovative programmes with practical application in the fields of marketing, sales and export to Estonian business organisations. In co-operation with the local partner, the largest institution within the national support system for entrepreneurship, the actor (P3) accepted the role of the ITM programme partner in 2011 to deliver the ITM Worldwide program within the framework

of a national project – ‘Export Revolution Estonia’. The actor (P5) accepted the role of a participating partner of the Leonardo da Vinci initiative and the ITM programme development based on his current role but did not conform with the role expectations and norms of other network actors, acting as a service provider of the ITM first generation programme.

The actor (P4) has accepted the role (role-taking) as a participating partner of the Leonardo da Vinci initiative based on his role as the governmental institution responsible for promoting the export of Lithuanian products and services. Furthermore, the actor (P4) role involved providing various education and training programmes for local SMEs and offering financial support to business organisations in partnerships with national financial institutions. In particular, (P4) co-closely operates with organisations impacting the development of the SME sector. In so doing, the actor (P4) was actively participating in the development of the SMEs sector (1) by ensuring (1) coherence of strategies developed at the governmental level with and impact on the SMEs sector; (2) granting a financial support by state compatible with the European Commission recommendations; (3) medium-term development strategy for SMEs regularly updated to designed and implemented measures; (4) special attention granted to the development of SMEs in regions with weak social and industrial infrastructure and high unemployment rate. Therefore, the actor (P4) accepted the role (role-taking) of a participating partner of the Leonardo da Vinci initiative and ITM programme development based on his current position and role and conformed with the role expectations and norms of other networks actors, acted as a partner in providing inputs for the second generation of the ITM programme.

The actor (P5) has accepted a role (role-taking) as a participating partner of the Leonardo da Vinci initiative based on his role as the policy-making body for Croatian entrepreneurship and craft providing educational, financial and institutional support to small and medium enterprises in investment and innovation projects. The actor’s objective (P5) was to create a supportive

environment for foreign direct investments and increase the competitiveness of Croatian entrepreneurship and their export performance. The actor's (P5) activities within his role included administrative and other tasks related to 1) economic co-operation with foreign countries in industry and trade; 2) involvement in integration within European Union and participation in multilateral trade frameworks; 3) promotion of exports and foreign investment. Thus, the actor (P5) accepted the role of a participating partner of the Leonardo da Vinci initiative based on his current role and conformed with the role expectations and norms of other network actors, acting as a partner in providing inputs for the second generation of ITM programme.

Actor (P6) has accepted the role (role-taking) as a participating partner of the Leonardo da Vinci initiative based on his current role as a non-profit organisation, and it is currently the largest association of exporting companies with members that include manufacturers, distributors and service providers of a broad spectrum of products. The actor's (P6) role aims were to (1) consolidate, protect and promote the professional, economic, social and ethical interests of its members; (2) promote and support local products and services in foreign markets; (3) to promote and support the development of international co-operation between Greek enterprises and those of other countries; (4) to conduct market research in foreign countries; (5) to provide support to Association's members; (6) to co-operate with organisations worldwide; and (7) to implement European programmes that help to promote the economic interests of its members. The actor (P6) is accredited by the actor (A1) and plays a crucial role in providing education and training programmes on export topics. To reinforce his role as the VET provider, the actor (P6) joined forces with a local export research institute to (1) undertake sponsored and commissioned research projects on international trade issues; (2) co-operate with research institutions within Greece and abroad; (5) to organise International Trade Conferences. The actor (P6) has accepted his role as a participating partner of the

Leonardo da Vinci initiative and ITM programme development based on his current role and conformed with the role expectations and norms of other networks actors, acted as a partner in providing inputs for the second generation of ITM programme.

The actor (P7) has accepted the role (role-taking) as a participating partner of the Leonardo da Vinci initiative based on his position as a government institution. Its primary function is to implement the national policy for small and medium enterprises. In this respect, the agency provides Bulgarian SMEs information and consulting services, organises training courses, and implements promotion activities to support the increase of SMEs' competitiveness and strengthen their international positions. Its two departments deliver the main activities within the role of the actor (P7). They include: (1) implementation of the innovation policy through monitoring the programmes, projects and initiatives related to the innovative activity and technological development of national companies and (2) support for the Internationalisation of the national SMEs. In addition, the actor (P7) benefited from the EU-funded projects and delivered its shared initiatives in partnership with associations, chambers of commerce, industry, and local NGOs. The actor (P6) accepted the position of a participating partner of the Leonardo da Vinci initiative and ITM programme development based on his current position and role and conformed with the role expectations and norms of other networks actors, acted as a partner in providing inputs for the second generation of ITM programme.

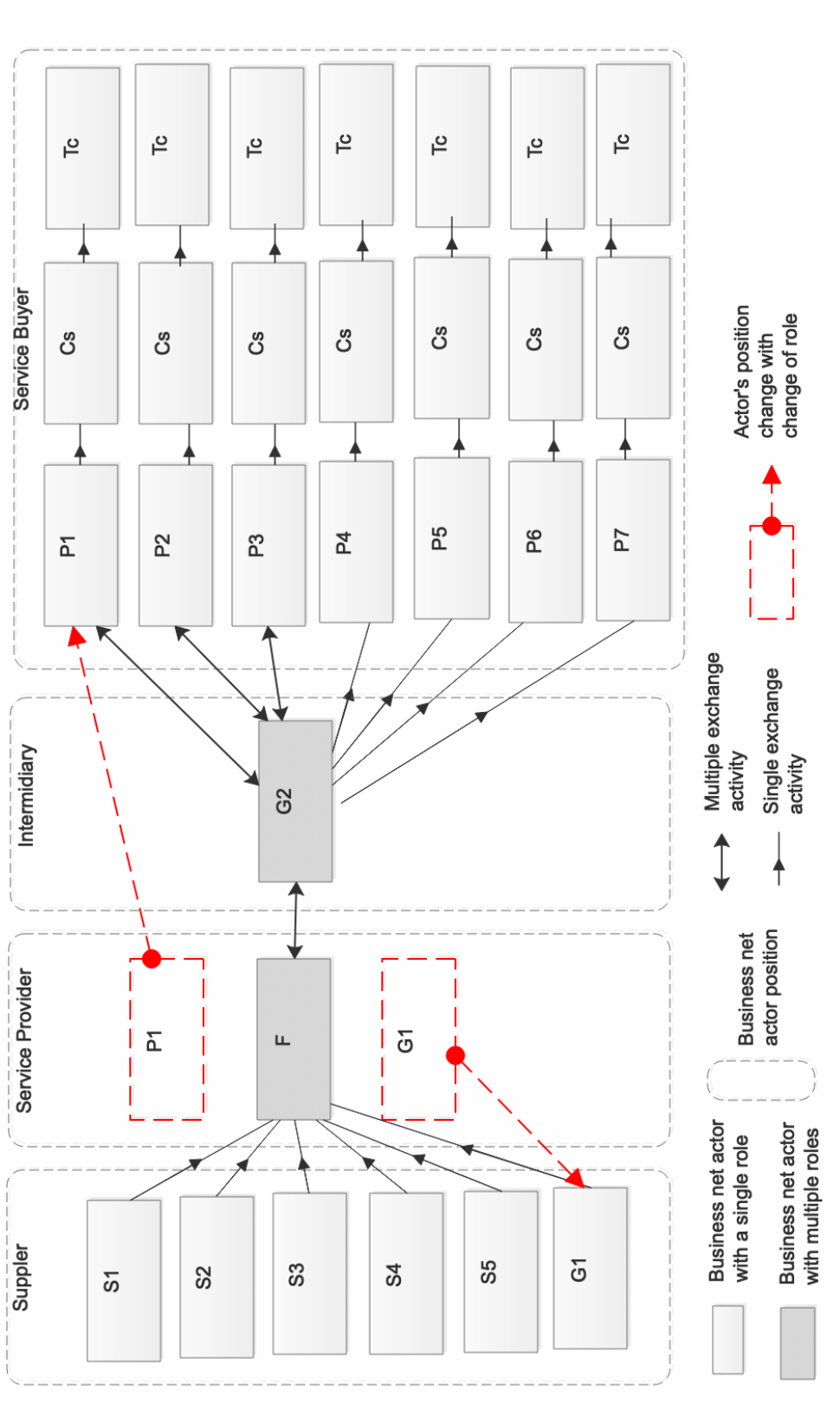
As such, the assessment process introduced by the actor (G2) contributed to aligning goals and priorities of selected partners to those of the ITM business net, and selection process gauged the commitment to undertake the development and implementation of an innovative ITM programme.

Fig 5.5 demonstrates a mapping out of the ITM business net actors' roles in Phase II. In this phase, new actors (P2), (P3), (P4), (P5), (P6), (P7) accepted a new pre-set role of co-developer

of the innovative VET programme based on actor's (P1) ITM Sweden Model prototype and shared the perception of their position with the actor (G2).

As a result of this collaboration between seven participating business net actors, the ITM Sweden (ITM first-generation programme) was piloted with the actor (P2) and actor (P3). Actor (P3) commercialised the traditional ITM Swedish model recruiting trainees and placing them with SME organisations in line with the work-based apprenticeship model of VET. However, the Slovenian institutional actor (P3) approached piloting differently, aiming to train existing SME employees, usually top-level managers, in international trade. Although actors (P2) and P(3) had similar roles in the ITM business net as programme partners, they interpreted their roles differently. As a result, the actors' activities within the role varied. The Slovenian institutional actor (P3) acted as a partner in co-developing the ITM EU model (ITM second-generation programme) and shaped new activities, resulting in a new position. However, the Estonian institutional actor (P3) was misaligned in interpreting the partner's role and acted as a service provider of the first generation of the ITM programme. As such, despite sharing the same interaction goals and priorities with co-operating partners, the actor (P3) could not contribute to the ITM programme's co-development, lacking interest in innovation and commitment to co-operate.

Fig 5.5: The ITM business net actors' roles in Phase II



### **5.2.3 Phase III (2008-2016) of the Business Net Development: the ITM Third Generation Programme**

#### *5.2.3.1 Structural Business Net Changes and Second Business Net Re-configuration*

In 2007, due to the second wave of educational reforms and despite more than ten years of successful operation of the ITM programme in Sweden, the Swedish Trade Council ceased its role as the educational training provider for the local SMEs market. *'It was also a situation where the [Swedish] trade council went through all the things it did and made a decision to streamline their wide portfolio of services, to focus less on a foreign markets entry [Internationalisation] for SMEs in Sweden. So for everything that had to do with vocational education training, it was decided the trade council would not do it. This was only one of many areas at that time they discarded' (P1).*

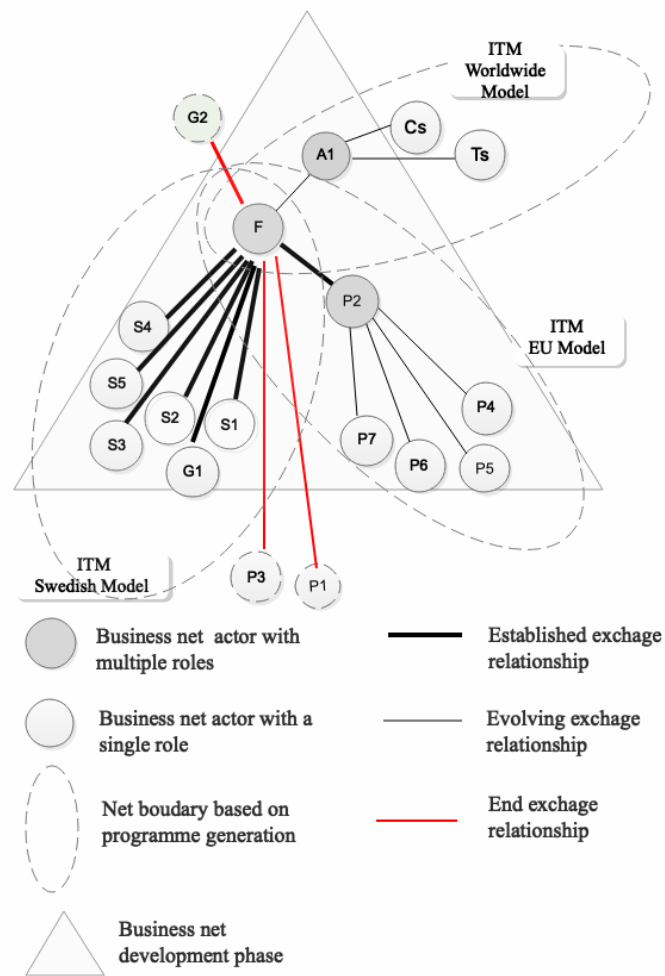
As a result of this radical change and with an official go-ahead from Swedish Trade Council, the actor (F) successfully relaunched the concept with a different organisational structure - International Trade Management Foundation (ITMF). As such, actor (F) created a new position as a global ITMC provider. To reinforce its new position as a leading and innovative global VET provider, in May 2008, actor (F) has joined the IATTO and was awarded the IATTO Ian Phelps Award in August 2008 for 'Honouring World-Class Achievement in Trade Education and Development', followed by the IATTO Forum hosted in Stockholm in October 2008. As a result, the ITM Worldwide Program was globally recognised and certified by IATTO to provide its graduates with the 'World Trade Professional' certificate and diploma. *'...as long as you belong to the Swedish Trade Council, you have a status. That is very clear. There was only one Swedish Trade Council. But suddenly, you are in a position of the ITM Worldwide Foundation; you have none. We had to work hard to create our status. Otherwise, who would care? The reason for joining IATTO was to achieve this status. We became a member in 2008, and the same year we were awarded for the best training and educational development' (P1/F).*



Consequently, actor (F) acted on his intention to occupy a more central position of a re-configured net and made up a new role - a founder of a new organisational entity. As a reaction to these changes, to ensure content providers (S1), (S2), (S3) are committed to the ITM business net incumbent actors, representatives of the actor (P2), the educational content provider (S1), and the educational content provider (S2) accepted roles of actor's (F) Board Directors.

Building on a long-term relationship and a sustainable network of EU Trade Organisations offering vocational education and training to local SME managers, actor (F) continues participation in the LDVP initiative, progressing to the next step of LDVP – the Vocational International Trade Training Implementation (VITTI) Programme. This initiative aimed to Implement the ITM Worldwide Concept in four new countries – Greece, Croatia, Bulgaria and Romania with the support of already involved Sweden, Estonia and Slovenia. The partnership model shared objectives and strategies in making the ITM programme available in four new countries using shared activities of active partners actor (P2), (P3), and (P4) in 1) conducting an export training needs and market analysis; 2) taking part in trade training and evaluating the ITM programme; 3) partnering with existing participants from Sweden, Estonia and Slovenia sharing their experiences; advising on successful strategies of the ITM Worldwide Concept implementation; 4) running joint promotional campaigns based on success stories; establishing a long term relationship with participating trade training organisations and SMEs with a view of co-operation between the partner after the project comes to an end. *'The ITM concept is built on partnerships with public agencies, alliances with educational entities and collaborations with academics and trade industry experts. Internationalisation for SMEs network is built on the loyalty of ITM partners that have the freedom to market the concept and adapt it to each country's requirements. To work through net(work)s is the best way for a service organisation as ITMF to stay competitive' (F).*

**Figure 5.6: Business net configuration and critical events in Phase III**



**CE9** – the G11 Educational Reform

**CE10**- the Swedish Trade Council ceased the provision of VET programmes

**CE11** – the ITM project manager resigned from the Swedish Trade Council

**CE12** – the ITM Foundation was a service provider of the ITM Programme

**CE13** – the ITM Programme received accreditation by IATTO and a trademark

### 5.2.3.2. Actors' Position and Role Change Pattern

In Phase III, the ITM business net expanded further, accommodating a new actor (A1) positioned as a representative of trade training organisations worldwide with competencies in the global system of accreditation for trade programmes and trade professionals. The role of the actor (A1) was to enable its members to network and learn from trade specialists (individuals and organisations) in the field of international trade around the world. Actor (F) added a new role of a member with the actor (A1).

The role behaviour of an actor (A1) was motivated by demonstrating a commitment to non-material investment in high standards accreditation to reinforce his position as a qualified VET programme provider. The following extract from the actor (A1) document demonstrates the benefits of 'opportunities to qualify'. *'The criteria for accreditation and certification are rigorous, ensuring an extremely high standard of training. Organisations must be recognised by their national authorities, provide exceptional trade training programmes, employ qualified lecturers to deliver the training and have appropriate assessment techniques in place. If they meet these conditions, they can offer employees the opportunity to qualify with a choice of three titles: Certificate, Advanced Certificate or Diploma' (IATTO, internal document).*

As such, by adding a new role, actor (F) moved to a new position as an independent VET global provider and extended its role to implementing the ITM Programme worldwide shifting the ITM business net from a European to a global dimension. Actor (P2) accepted a new role within the LDVP framework as the ITM Worldwide Programme VET provider in Europe, resulting in a new position as the actor (F) coordination partner and provider of ITM VET in Europe. At the same time, the actor (P1) ceased his role as participating partner of ITM EU Programmes (stopped playing a role) and changed his position in the net by merging with

another organisation. Finally, actor (P3) remained in his position vis-à-vis actor (P1) and actor (P2) but ceased his role as an ITM EU programme co-developer.

As actor (P2) adopted the pre-defined role and became familiar with the network in Phase II, he assessed another role of the net that assisted his goals and those of the whole network. Upon entering the net with a new role, actor (P2) was able to add new activities in new roles (role-making) that redefined actors' positions in the business net in Phase III. Notably, this role transition from role-taking to role-making illustrates how actors (P2) as LDVP programme participants are positioned in different roles vis-a-vis actors (P3), (P4), (P5), (P6), (P7). Actor's (P2) collective knowledge and opinion brought forward to other network actors an understanding of their problems and needs. As such, the ability of actor (P2) to transition his role from participating to coordinating partner (service provider) in the LDVP framework of the implementation of the ITM programme in transitioning from role-taking activities to role-making activities is understood to impact the re-configuration of the ITM business net in Phase III. The actor (P2) highlighted this point: *'Prior to 2006, our agency explored avenues to provide educational programmes for Slovenia's small and medium-sized enterprises. But we didn't have anything valuable to offer them. We are good at organising international fairs and trade missions, but we didn't have the capacity (we are only seven people within the department) nor expertise to offer vocational education and training. So, in 2006, we started with four companies as the ITMC customer, and in 2013 we run a seventh-generation intake ITMF Worldwide intake as ITMC partner with 18 participants on board'* (P2).

Changing into a new position of a global VET provider actor (F) manifested in changes in interactive goals and priorities to the ITM innovation programme resonating with the importance of endorsement from graduating trainees rather than alignment with collaborating business net actors. The actor (F) shares his perception in the following insights: *'It's very*

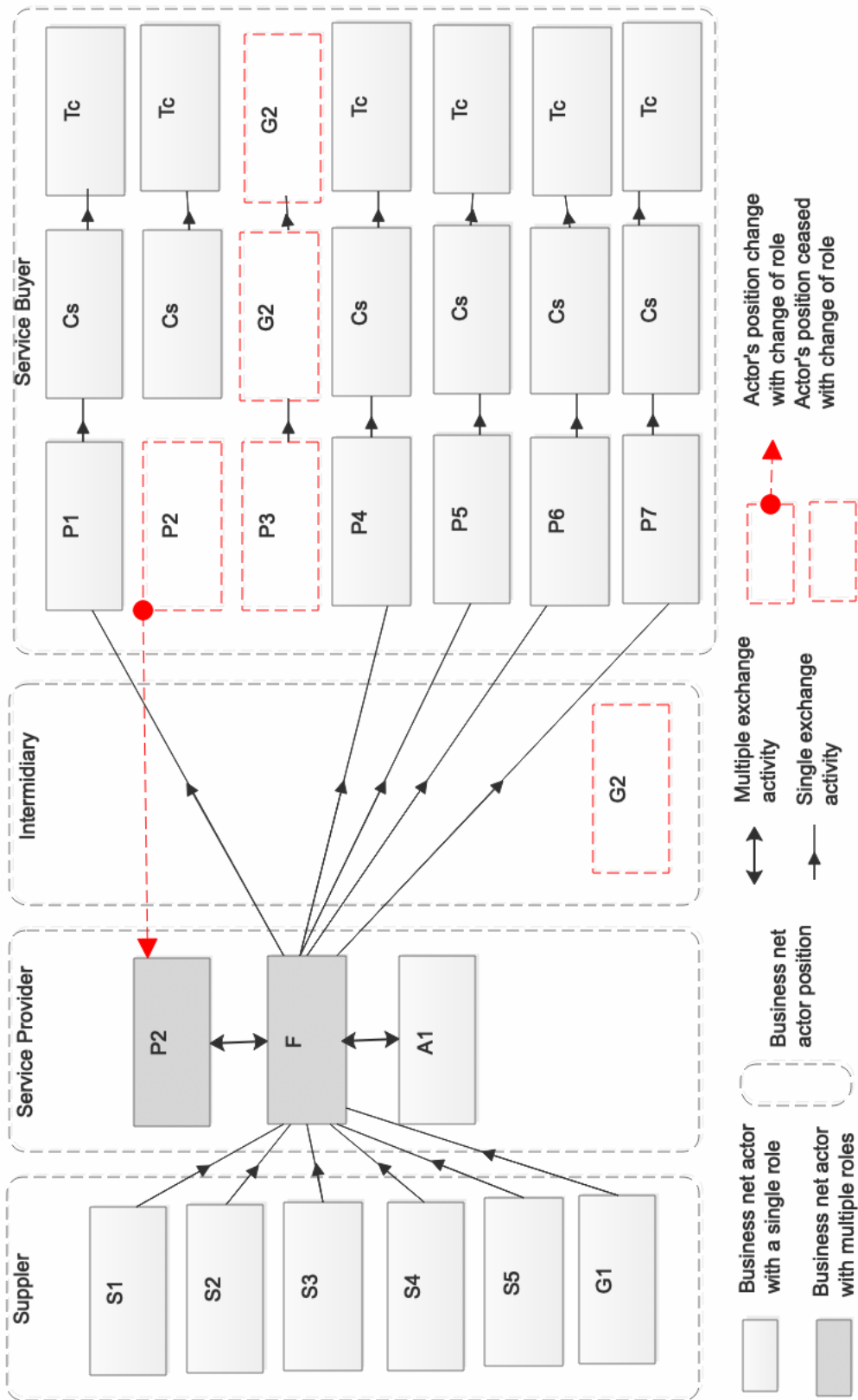
*important to get a diploma for candidates looking to participate in the ITM programme. It gives the ITM programme a certain status. [ITMF Founder] always points it out and makes something special about it. The fact that a participant graduates with a diploma presentation. He's making something very special about it. And it should be special. The possibility to offer participants a diploma, which wasn't possible before. It has some international status which is maybe more important abroad than here in Sweden' (F). Another representative of the actor (F) demonstrates her understanding of role behaviour based on motivation: 'for new customers, those who yet to know you, there's some kind of formal recognition in place, so you can demonstrate that it's accredited, certified' (F2).*

Actor (F1) reinforces the importance of these changing interests and priorities in interpreting the role of the occupied position: *'...as long as you belong to the Swedish trade council, you had an identity. That was very clear. There was only one Swedish trade council. Suddenly you call yourself an export person of ITM Worldwide Foundation identity, zero. We have been working like hell to create our own identity. Otherwise, who would care? One reason for me to join IATTO was for that purpose. So, that was done in 2008. So, we joined IATTO and became a member. Then in 2008, we received an award for the best training and educational development, and that was important, and then we were accredited as an organisation' (F1)*

Figure 5.7 shows a mapping out of ITM net reactions to actor's role changes in Phase III of ITM business net development. As such, this net pattern is constituted of the actors' positions and actors' roles change process defined as role-taking and role making. As shown in Figure 5.7, a change in the net interaction pattern has occurred from role and position dynamics from the second generation of the ITM programme to the third generation of the ITM programme. Additionally, actors (F) and (P2) have transformed the net by use of a bridging strategy in which actor (F) uses an intermediary actor (G2) as a facilitator to access a third actor (P2).

Observed changes result from the interaction between actors. The dynamics behind the change that produces net patterns can be explained through understanding how the respective actors perceive their position and their intentions (or roles). The actor's perception of his position is the base of his own activities. Based on this understanding, the concept of position does not include the behavioural aspect and the concept of role is used to express the actor's activities from her position.

**Fig 5.7: The ITM business net actors' roles in Phase III**



### **5.3. Summary**

The empirical enquiry describes a business net development in the Vocational Education and Training sector in Europe, covering the period between 1999 and 2006. The history of business net development is re-constructed using the business net actor perspective, and the exchange relationships between buyers, suppliers, service suppliers (contractors) and intermediaries that constitute the business net. From the appearance of a relatively stable business net that emerged from the ITM First Generation of VET programmes, the ITM business net experienced two systemic changes: the development of the second generation of ITM programme, the ITM EU, and the emergence of the third generation programme, the ITM Worldwide. As such, the development of the ITM business net progressed from the existing configuration to two new re-configurations. Both ITM business net re-configurations exhibit changes in exchange relationships (emerging, established and ending) in which actors' roles and positions were changed. The case shows that the development of the business net is dynamic and reflects the changing environment of the VET sector in Europe.

The findings of this empirical study draw attention to the diversity of net actors in a network of long-term relationships. Actors stay in the network when they are involved in innovative programme development, but the network role of actors varies according to their position in the net at a specific point in time. As such, the structure of nets changes at each stage of development as innovation progresses in time, resulting in role-making / role-taking interaction patterns. These patterns result from changes enacted by actor roles viewed as a mechanism for changing actor position.

Phase I (1993-1999) focused on the ITM net development of the ITM First Generation Programme, ITM Sweden, and described the emergence of the business net in established business relationships and existing positions with pre-set business net actor roles. Phase II



(2000-2006) focused on the ITM net development in the ITM Second Generation Programme and described the development of the business net in evolving business relationships of new net actors, new positions and roles. Actors' positions and roles were intentionally changed to accommodate activities toward shared interaction goals and priorities of collaborating actors. However, net actor interests in innovation initiatives remained individual. Phase III (2008-2016) focused on the ITM Third Generation Programme's ITM net development, the ITM Worldwide Concept, and described further development of the business net in established business relationships, end of business relationships, and change of position and roles.

The interaction pattern of Phase I had a prevalence of role-taking over role-making activities manifested in established positions of business net actors and low actor diversity with single roles played by each actor. The interaction pattern of Phase II is characterised by the prevalence of role-making over role-taking activities manifested in the high diversity of business net actors playing roles. Finally, the interaction pattern of Phase III is characterised by the prevalence of role-taking over role making activities shaped by a change in the actor's position due to changes in role. The findings conclude that role-taking and role making activities were efficiently coordinated by business net actors in different periods of ITM net development.

The findings that emerged from the data analysis also suggest that the nature of changes is dynamic and shifting from the path-dependence and evolutionary nature, motivated by common action, to intentional, driven by the shared logic of net actors manifested in their shared interaction goals, common priorities and interests towards innovation in support to SMEs' international growth. These themes are discussed and explained in the next chapter.

## **6. Discussion, Implications and Conclusions**

### **6.1. Introduction**

This chapter provides a discussion of the findings presented in the previous chapter. First, findings from the empirical data are explained in light of the research objectives. Second, the contribution to the existing literature is identified in the discussion and summarised at the end of the chapter.

### **6.2. Towards Understanding of the Business Net Development in a Service Innovation Setting**

Building on the interest of IMP researchers in studying changes in industrial networks (Aastrup 2000; Håkansson & Henders, 1995; Håkansson & Lundgren, 1995), this research broadens our understanding of the emergence and development (evolution) of a business network fragment, or its boundary defined issue net (Brito, 1999), in the context of business network endogenous factors (Håkansson and Snehota, 1995; Halinen et al., 1999; Halinen and Törnroos, 1998) driven by service innovation perceived as a collective, non-linear and interactive change process (Möller and Halinen, 2017; Rusanen et al., 2013; Aarikka-Stenroos and Sandberg, 2012; Ostrom et al., 2010), as well as the influence of exogenous factors of an unstructured service innovation setting and its dynamic environment (Gadde et al. 2003; Håkansson and Snehota, 1995).

Notably, this research considers the conceptualisation of endogenous factors of change in the interplay between the net actor's position and role over time. The ability of an actor to impact net evolution (change over time) through changes that originate from the actor's action and

reaction to aggregate actor's role-taking or role-making activities configurations and business net's prevailing development patterns. At the same time, an actor's changing activities contribute to its purposeful common actions based on its interpretation of the environment (Axelsson and Easton, 1992; Ford and Håkansson, 2006), motivated by shared net logic (Öberg and Shih, 2014).

### **6.2.1. The Answer to the Research Question 1: How Business Net Structure Changes in a Service Innovation Setting**

The first objective of this research was to understand how business net structure changes in a service innovation setting.

#### *6.2.1.1. Service Innovation as a Trigger of Change in Business Networks and Importance of Critical Events*

The findings of this research reiterate the importance of the Industrial Network Approach (Easton, 1992; Håkansson et al., 2009) in understanding service-oriented business networks and providing appropriate insights for the ITM case study in terms of understanding the morphology of the network structures (configurations) as outcomes of change: the collaborative and co-creational character of services is conceptually complementary to Industrial Network Approach concepts (Syson and Perks, 2004). Furthermore, assuming innovation as an endogenous trigger of change to the firm's environment (Walsh, 1995), this research attempts to interpret exogenously initiated changes driven by actors acting purposefully, defining goals, and choosing the best course of action (Corsaro and Snehota, 2012) or, in other words, from a network perspective.

Resonating with Toivonen and Tuominen (2007), this research highlights that the innovation process in services is a collective process characterised by alliances and collaborations.

Similarly to the findings of Ritter and Gemünden (2003) from the study of German mechanical and electrical engineering companies, this research draws upon the diverse network of the ITM business net, including business actors (F, S1, S2, S3, S4, S5), non-business actors (A1) and institutional actors (G1, G2, P1, P2, P3, P4, P5, P6, P7) and how they contributed to the development of the innovative solution of the ITM programme to support SMEs commercialisation. However, the insights of this empirical study do not support views of empirical work that originated in the service science and service marketing domain (Chen et al., 2009; Toivonen and Tuominen, 2007) that consistently shows that formalisation of the entire innovation process is relatively rare amongst service providers.

Equally, the insights of this research do not share the understanding of the service innovation process as sequential linear models proposed by various service system/service marketing contributors (Alam *et al.*, 2002; Droege *et al.*, 2009; Edvardsson and Olsson, 1996; Langeard *et al.*, 1986; Scheuing and Johnson, 1989a, b; Easingwood and Percival, 1990; Edgett and Jones, 1991; Edgett, 1994, 1996; Storey and Easingwood, 1996; Kelly and Storey, 2000). As such, understanding service innovation as a systemic change endogenous to business networks reveals an opportunity to capitalise on the explanatory power of business networks (Håkansson and Ford, 2002; Ford et al., 2003) to unlock the black box of innovation in services.

The research supports the findings achieved by Håkansson and Ford (2002) and Hankinson and Waluszewski (2002a) that innovation in business network is a process of continuous interactions that emerges and evolves over time (Möller and Halinen, 2018; Rusanen et al., 2013; Aarikka-Stendroos and Sandberg, 2012; Ostrom et al., 2010). This empirical inquiry demonstrates that the ITM business net development has progressed through three distinctive phases (Fig 5.1). Phase I shows the ITM business net development from 1993 to 1999, when the first generation of the ITM programme, the ITM Sweden Model, was developed and

commercialised. Phase II presents the ITM business net development from 2000 to 2007, when the second generation of the ITM programme, the ITM EU Model, was developed. Finally, Phase III exhibits the ITM business net development from 2008 to 2016 when the third generation of the ITM Programme, the ITM Worldwide Programme, was introduced.

The findings of the ITM net configurations at different phases of a business net development resonate with the work of Ramos et al. (2013). They analysed the business network of the Health Cluster Portugal with similar results. The case study reveals that in Phase I of ITM business net development, the business net (Fig 5.2) configuration of the net presented by loosely connected incumbent actors conditioned by a long-term relationship holding established positions and acting in pre-defined roles.

Phase II focuses on the newly developing business network structure with activity patterns revealing a configuration of the incumbent actors, such as (service) suppliers, service providers, service buyers, but also new actors, such as an intermediary, and their roles in a developing business net (Fig 5.4 and Fig 5.5). Phase II of the ITM business net re-configuration (Fig 5.4) demonstrates the diversity of actor composition but tightly coupled partnerships aimed at accessing resources and value activities required for the development of innovative service solutions. This phase is characterised by shared interaction goals, negotiated actor roles, working norms, and coordinating systems.

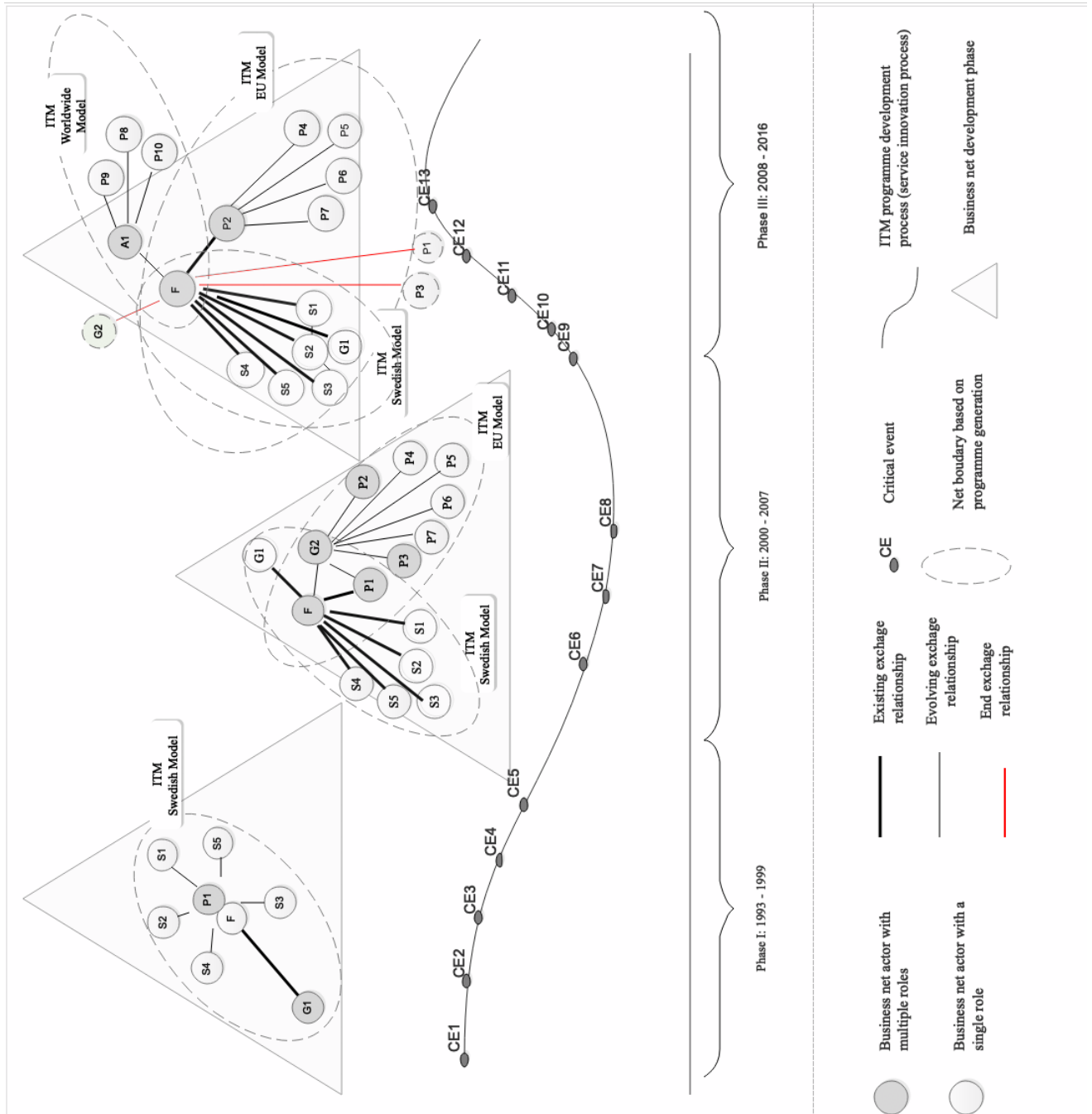
Phase III focuses on the resulting newly developed network structure with the activity pattern reveals a configuration of incumbent actors such as (service) suppliers, service providers, intermediaries, service buyers and their roles in the newly developed business net (Fig 5.6 and Fig 5.7). Finally, the ITM business net re-configuration in Phase III shows the maturity of established structures as a result of prolonged cooperation (Fig 5.6). The structural composition

of the ITM business and its structural changes during the process of service innovation are presented and summarised in Fig 6.1.

Further, this research responds to the need to include time and process in the network research agenda (Hedaa and Törnroos, 2002; Ford and Håkansson, 2006) and demonstrates the validity of using connected critical events to enrich the understanding of change and evolution of business networks (Hedaa and Törnroos, 2008). In the context of this research, events can be seen as temporally specific outcomes of an actor's activities related to service innovation, self-created or induced by other events. For example, in Phase II and Phase III of ITM business net development, a new actor (G2) enters into a network by performing activities that push the former (G1) actor to exit from the business net and change position in the broader network (Fig 6.1).

As such, the findings of this empirical study contribute to our understanding of changes in business net structure that form the context within which the actor has a position, influence and is influenced by taken-on-activities (role-taking) and made-up-activities (role-making) triggered by critical events (CE1-CE13, Fig 6.1) related to service innovation.

Figure 6.1: The Structural Changes in the ITM Business Net Development



### 6.2.1.2. Network Actors as a Source of Change in the Business Network Development

The findings of this research sharing Aastup's (2000) views on network change as processes transforming or reproducing network structures. Although network change has received increasing attention (Easton and Lundgren, 1992; Håkansson, 1992; Zerillo and Raina, 1996; Hertz, 1996, 1998; Halinen, Salmi and Havila, 1999), most contributions focus on network reactions to dyadic change and how one dyadic change affects another relationship, this empirical study shares the understanding of change developed by Hertz (1992, 1996, 1998) who asserts that '...the increased integration at a relational level in an industrial system could lead to changes of both evolutionary and radical type not only at the relational level but also on the system [the net] and network levels'.

The finding of this research confirms that actors of the ITM business net are not isolated entities but interlinked through knowledge, social relationships and other interdependencies that make them respond to changes that originate at the actor level and affect the exchange relationships and the network structures, and vice versa (Fig 5.2, Fig 5.4, Fig 5.6). In line with the perspective of Håkansson and Snehota (1995), relationships and network actors act and react. As such, in contrast to seminal studies of innovation in business networks (Corsaro et al., 2012, Möller and Rajala, 2007, Ramos et al., 2012), where resources were the centre of attention in innovation development, the findings of this empirical inquiry brought to light the importance of the network actors that impact the development of the ITM business net.

Similarly to Havila & Salmi (1999), the findings of this research illustrate that the incremental and radical changes in the business net development brought by the ITM actors' actions and reactions from the impact on the development and commercialisation of the ITM Programme. The findings of this research reveal that incremental changes of the re-configured nets do not break up actors' existing structures. In contrast, radical changes triggered by a critical event(s)



break up existing actors' structures. Both re-configurations of the ITM business net in Phase II (Fig 5.4) and Phase III (Fig 5.6) exhibit structural changes.

In line with the categorisation of Easton and Lundgren (1992) on workings of action and reactions on the level of the net, the empirical investigation of this research observed actors transforming the change by accepting the change willingly and altering the transformation and exchange activities they undertake. The patterns of transformation reflect Smith and Laage-Hellman's (1992) categories of strategy available to the ITM network actors with the prevalence of bridging strategy; for example, a focal actor (F) replaces a former partner (P1) with a new partner (P2).

In Phase I and Phase III of the ITM business net development, the actors' actions and reactions led to minor business net development changes (Fig 5.4). However, in Phase II, actors' actions and reactions resulted in significant changes in the business net development (Fig 5.6). Viewed as a connected change (Havila & Salmi 1999), it resulted in reactions similar to Hertz' (1998) concept of the domino effect: '...connectedness, speed and sequence of changes are seen as essential elements of domino effects. Sequences of change are the process, connectedness is a prerequisite, and speed is a contributing factor to the development (Hertz, 1998). In the three phases of the ITM business net development, Phase II is characterised by the higher speed of change and more significant effect of transmitted changes related to the higher number of ITM focal net actors' motivations to transmit the change. In contrast, the ITM business net in Phase I and Phase III revealed the actors' motivations to absorb the difference.

The case analysis highlighted what Hertz (1996) refers to as the joining of the nets in situations when several firms co-operate. In the case of the VET provider in the education sector, this process occurred when significant parts of nets joined together in Phase II of the ITM business net development when the integration of activity links of first-generation of the ITM

programme (ITM Sweden) and the second-generation of the ITM programme (ITM EU) occurred and in Phase III when consolidation of the third-generation of the ITM programme (ITM Worldwide) activities followed.

### **6.2.2. The Answer to the Research Question 2: What Role/Position Interaction Patterns Emerge at Each Phase of Business Net Development in a Service Innovation Setting**

The second objective of the research was to understand what role and position interaction patterns that emerged at each phase of business net development.

#### *6.2.2.1. Role-making and Role-taking Interaction Patterns in Business Net Development*

The empirical results validate the first framework (see Fig 2.3) in examining the business net change from the impact of the service innovation development employing actor's position and role interplay by explaining how a change of role of one actor via interaction ripples through the network and causes reactions by connected actors resulting in new actor roles or positions (development pattern).

Notably, the findings of this study reveal two distinctive development in the patterns of interaction: the pattern with a predominance of role-taking over role-making activities in Phase II and the pattern with a predominance of role-making over role-taking activities in Phase I and Phase III (Table XX). The case also demonstrates how one actor may cause business net changes through role change and the long-term effects of role change on business actors' attitudes towards new entrants and the experience of actors that have undergone role changes. For instance, the Swedish VET ITM model was 'exported' to Estonia (P3) and Greece (P6), while Slovenia (P2) participated in the redevelopment of the ITM concept. The case particularly shows how actors' role-making activities facilitated by Leonardo Da Vinci

Programme (G2) created a critical actor position in the International Trade Management (ITM) network. As such, actor P2's intentions and interpretation of the actor's G 2 position started role-making activities that created an interplay with the role-taking activities of the other actors (P1, P3, P4, P5, P6, P7). This dynamic force, in turn, shaped new activities that resulted in a new position for actor P2.

In line with other researchers (Nystrom et al., 2014; Heikkinen et al., 2017; Purchase, 2016), this research found it useful to employ the actor's position and roles to understand changes in business networks. Additionally, the research findings have further extended our understanding of the interplay between position and role change.

Similar to the work of Heikkinen et al. (2007) and Story et al. (2011), the empirical findings indicate that the actors' roles change during the business net development (Fig 5.3, Fig 5.5, Fig 5.7) and actors act in more than one role. Notably, in Phase I of the business net development (Fig 5.2), almost all focal net actors performed pre-defined roles. In other words, they simply aimed to participate in the net based on the past connections and current resources that made them act in a certain role when entering the net. During Phase II of the business net development and its first re-configuration (Fig 5.4), actors (P1) and (G1) changed their position by changing their roles in line with the role expectation and norms of other actors in the net. However, actors (P2), (P3), (P4), (P5) and (P6) transitioned to new roles based on the knowledge, information, experience and credibility associated with the position they hold in the business network.

Additionally, the actor (G2) acted in a new role of connecting actors (P1), (P2), (P3), (P4), (P5), and (P6) in the co-development of the innovative solution for SMEs internationalisation. The focal actor (F) did not give up its role as the ITM Sweden programme provider but acted in a new role as co-developer and provider of ITM EU. In Phase III, the focal actor (F) added

a new role as an ITM Worldwide provider and the actors (P2), (S1) and (S2) and role of an active partner in the commercialisation of the ITM Worldwide programme. In each situation, the role of an actor was determined by its motivations, connectedness, and the way other actors of the business net perceived its actions.

This empirical investigation reveals similarities in approach to roles consistent with a symbolic interactionist approach (Montgomery 1998), arguing that positions can be influenced by acting in role(s). In addition, this case reveals that in innovating the ITM business net characterised by the diversity of business and non-business actors and complexity of interactions, role-taking and role-making change patterns are not alternatives to each other but complementary in understanding the business net development. As net actors gain knowledge and experience in the business net, they are able to redefine their role more freely. In other words, the actor's knowledge, information, experience and credibility gained through their position in the business net enables the actor's role-making instead of role-taking, where the actor is new to the business net. As such, an actor's position in the network defines its role potential, and a role allows actors to change their position.

Role-taking enables new actors (P1), (P2), (P3), (P4), (P5), (P6) and (P7) to perform pre-defined roles and position themselves in relation to other net actors (Fig 5.3, Fig 5.5). Once new actors have adopted the given roles and become familiar with the network, actor (F) and actor (P2) assess if another role or network position would serve their goals and those of the whole network better. After the initial entry position has been securely established, the actor (F) can enter upon a role-making that redefines not only the actor's current role but also the actor's (F) position in the net. Role-making implies a process in which an actor first receives a role and then starts to transform his role to perform new activities. Hence, the actor (F) transforms his role to perform activities that require the network to create value and, on the


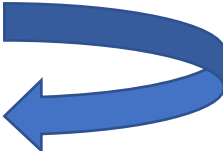
other hand, align with his own goals. Remarkably, the efficiency of role coordination is highlighted in how intermediary (institutional) actors, such as actor G2, add roles or transition to new roles beyond the scope of their function. As such, the findings of this study are consistent with a view of how different actors support innovation and their importance in innovation development (Aarikka-Stenroos and Sandberg, 2012; Öberg, 2010, Nystrom, 2014).

As the discussion of using the role concept in network theory has recently been associated with the question of whether business networks can be managed, we resonate with the researchers (Möller & Halinen, 2017, Möller & Svahn, 2003; Ritter, Wilkinson & Johnston, 2002; Möller & Halinen, 1999;) who argue that managing in nets is mostly understood by the capability of actors to influence the net. Adopting this perspective, management in a net occurs through the roles in which the individual, company, and network actors act.

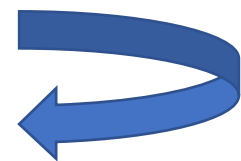
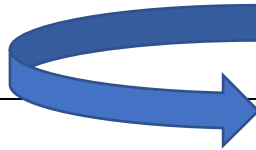
#### 6.2.2.2 Impact of Role Change on Business Net Development

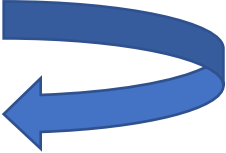

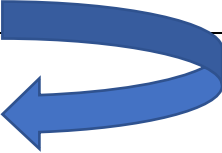
The findings of this empirical study contribute to our understanding of changes in business net structure that form the context within which the actor has a position, influence and is influenced by taken-on-activities (role-taking) and made-up-activities (role-making) triggered by critical events (CE1-CE13) related to service innovation development.

As such, this research responds to the need to include time and process in network research (Hedaa and Törnroos, 2002; Ford and Håkansson, 2006) and demonstrates the validity of using connected critical events to enrich the understanding of change and evolution of business networks (Hedaa and Törnroos, 2008). In the context of this research, events can be seen as temporally specific outcomes of an actor's activities, self-created or induced by other events. For example, in Phase II and Phase III of ITM business net development, a new actor (G2) enters into a network by performing activities that push the former (G1) actor to exit from the business net and change position in the broader network (Fig 6.1).

Business Net Evolution	Role-taking activities	Role-making activities
Phase I	<p>2. As a result of the formation of the ITM project team (CE3), Swedish Trade Council (P1) mobilised international content providers S1, S2, S3, S4, S5 (CE4), who taken-on on the activities of education service suppliers.</p> 	<p>1. As a result of the educational reform in 1999 (CE1) and the outcome of the market research in 1993 (CE2), Swedish Trade Council (P1) had intentions to re-enforce its position in supporting SMEs export and investment opportunities by introducing International Trade Management (ITM) education and training programme.</p> 

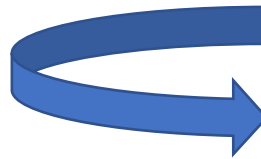
	<p>3. Following the launch of the ITM First Generation programme, ITM Swedish Model, in 1999 (CE5), Swedish Trade Council (P1) took over the activities of a traditional Swedish VET service provider.</p>
<p><b>Phase II</b></p>	<p>4. Interpreting the possibility of launching the ITM Programme in Europe in discussion with an EU representative (CE6), the Swedish Trade Council (P1) accepted a new role and new activities of a participating partner of the Leonardo da Vinci initiative (CE7) to develop and implement ITM EU Model.</p> <p>5. New actors (P3, P4, P5, P6, P7) accepted a new co-developer role in the innovative VET programme based on the ITM Sweden Model prototype. They shared the perception of their position with the Leonardo Da Vinci programme</p>



		<p>(G2) as part of The ITM second-generation programme (ITM EU Model) development and implementation plan (CE8).</p>  <p>6. SPIRIT Slovenia (P2) changes its position to service provider partner by shaping new activities in co-developing and implementing the ITM programme (CE8) across Europe, resulting in a position of VET provider within participating counties.</p>
<p><b>Phase III</b></p>	<p>7. Following the G11 Educational Reform (CE9) Swedish Trade Council changed its position by ceasing the provision of educational and training programmes and exiting the VET market (CE10).</p> 	



	<p>8. The ITM Project Management team exited Swedish Trade Council (CE11) and established a new entity (CE12), ITM Foundation (ITMF), by role-taking implementation and delivery of the ITM EU programme.</p>	<p>9. The ITM Foundation established the position of International VET service provider by taking a new role (role-making of a member of the International Association of Trade Training Organisations (CE13)).</p>
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**Table 6.1.: Changes in role-taking and role-making activities in the evolution of ITM business net(Phase I, Phase II, Phase III) triggered by a critical event (CE)**

### **6.2.3. The Answer to the Research Question 3: What is the Nature of Change in the Business Net Development in a Service Innovation Setting**

The third objective of the research was to identify the nature of change in the business net development in a service innovation setting.

### 6.2.3.1. The Multiplicity of Business Net's Nature of Change

To understand the nature of business net development, or its specific parts, business nets, set in a service innovation context, this research drew on business networks' body of knowledge to explain how exogenous factors (environmental circumstances) shape business network's emergence and development, particularly: evolutionary (Axelsson and Easton, 1992; Anderson et al., 1998; Brennan, 2006, Törnroos 2002; Matthyssens et al., 2013) , path-dependence (Hite and Hesterly, 2001; Araujo & Harrison, 2002: Gadde et al., 2003) and intentional perspectives ( Gulati et al., 2000; Jarillo, 1988; Möller and Svahn, 2003; Heikkinen et al., 2007; Möller et al., 2005; Rampersad et al., 2010). The empirical findings of this research show that the nature of business net change is driven by the process of shaping and reconfiguration underlying the development of such networks and that, contrary to what the extant body of literature usually claims, there is not one sole or predominant theory that can explain this process. Instead, a diverse combination of different theories is shown to have good explanatory power at different phases of the process. The multiplicity of change in business networks was empirically verified by Ramos et al. (2013), who put forward different aspects of business network formation and explored different theories within social sciences, namely exchange and dependency theory, homophily and proximity theory and theories of network evolution.

Notably, the processes related to the ITM net development in Phase I, such as the formation of the ITM Project Team (F), within Swedish Trade Council, were driven by the recognition of the importance of the VET training for the internationalisation of SMEs in Sweden, with strong network ties already established between different relevant actors, such as service provider, service buyer, training supplier. At this stage, the ITM business net actors were engaged in similar activities based on occupied net positions and pre-defined roles. However, this set of choices was conditioned by previously existing alliances, collaborations, and business relationships of the actors involved. Certain actors could be characterised as 'anchors' for the

net development, with the institution being especially driven by Swedish Trade Council. As such, a certain path-dependence of the transitional development existed, especially regarding the issue of net positions. However, despite the pre-existing social and business relationships, the business actors defined the scope of an early-stage business net. These findings corroborate the work of Shapira and Yountie (2008), who explored the trajectory of cluster formation and found that not only path-dependence play an important role in network formation but also actors make strategic choices to use the existing network structures to pursue their own goals. The empirical evidence of this research resonates with Araujo and Harrison's (2002) understanding of path dependence in terms of past capabilities, that might lead, for example, to technological growth resulting from the re-use of existing knowledge. The issue of path dependence has also been empirically verified by Gertler and Vinodrai (2009), who observed that regional networks were associated with the activities carried out by diverse institutional and non-institutional actors, as well as with milieu conditions and chance events.

Additionally, the dual nature of ITM net development, expressed with path-dependence and intentional management processes at play, share common views with Hite and Hesterly (2001), who argue that path-dependence is the main factor behind the emergence of networks, while in more advanced stages, like the early-growth stage, networks become intentionally managed. Sharing concerns with researchers arguing about limiting a firm's flexibility (Ahuja, 2000; Hite & Hesterly, 2001) in pre-existing social networks (Birley, 1985; Larson & Starr, 1993; Ostgaard & Birley, 1994) there is a need, as the network develops, to be 'managed or adapted' (Hite & Hesterly, 2001, p. 282).

The results of the empirical finding in Phase II of the ITM business net development demonstrated the previous alliances and collaboration activities between the ITM Project Team (F) and incumbent net actors in line with the path-dependent perspective (Hite and Hesterly,

2001; Araujo & Harrison, 2002; Gadde et al., 2003). However, a new net actor (G2) mobilised other incumbents (P1) and new actors (P1, P2, P3, P4, P5, P6) to join an EU Leonardo Da Vinci Programme with the objective to re-develop and implement ITM (Sweden) training programme in Europe, marking an intentional management nature of the net development (Gulati et al., 2000; Jarillo, 1988; Möller & Svahn, 2003; Heikkinen et al., 2007; Möller et al., 2005; Rampersad et al., 2010). As this transition represented the first re-configuration of the business net change in the decision to go from a national to European dimension, it reflects the evolutionary nature of business net development (Axelsson and Easton, 1992; Anderson et al., 1998; Brennan, 2006, Törnroos 2002; Matthyssens et al., 2013),

Finally, the results of this empirical study in Phase III and second business net re-configuration demonstrated the path-dependent nature of existing collaboration between participating actors and the evolutionary nature of change in the decision to move the ITM programme from the European to the International dimension.

Therefore, this study demonstrates how a combinatorial approach that considers several different perspectives of the business net nature of change can lead to an insightful understanding of the evolution of business networks. These findings corroborate Powell et al.'s (2005) work on network dynamics. The authors showed how different rules of affiliation reflect how partners are chosen to apply at various stages of the evolution process of business networks, thus shaping that evolution. As the authors put it, '...we do not expect that one mechanism dominates at all the time periods and exerts an equal gravitational pull on every participant. The very essence of dynamic systems is that they change continually over time' (p. 8). Powell et al. (2005) illustrated how multi-connectivity principles come in at different stages of the evolution of the inter-organisational network.

### 6.2.3.2. Net Shared Logic as Actor's Motivator on Business Net Development

Shared logic inherent in the business net is a social construction that exists as some collectively perceived system (Öberg and Shih 2014). This empirical enquiry reflects today's world of the totally mixed cooperative and competitive environment of a service innovation setting. Actors' propensity to innovate is interrelated with socio-economic development, and a shared net logic can explain the contextual nature of network change and this development involves parts of the network or nets or even the whole network to which actors are connected.

Based on findings of this empirical enquiry (Fig 3.3), a shared logic is supported by network actor's motivation towards shared interactive net goals based on similar interests and priorities, but also commitment to collaborate in demonstrating fulfilment of expectations and intentions of actor's attitude and behaviour. In line with Öberg and Shih (2014), the findings of this research agree that a shared net logic affects the actual development of network-specific parts, or nets, depending on the interests and goals of net actors.

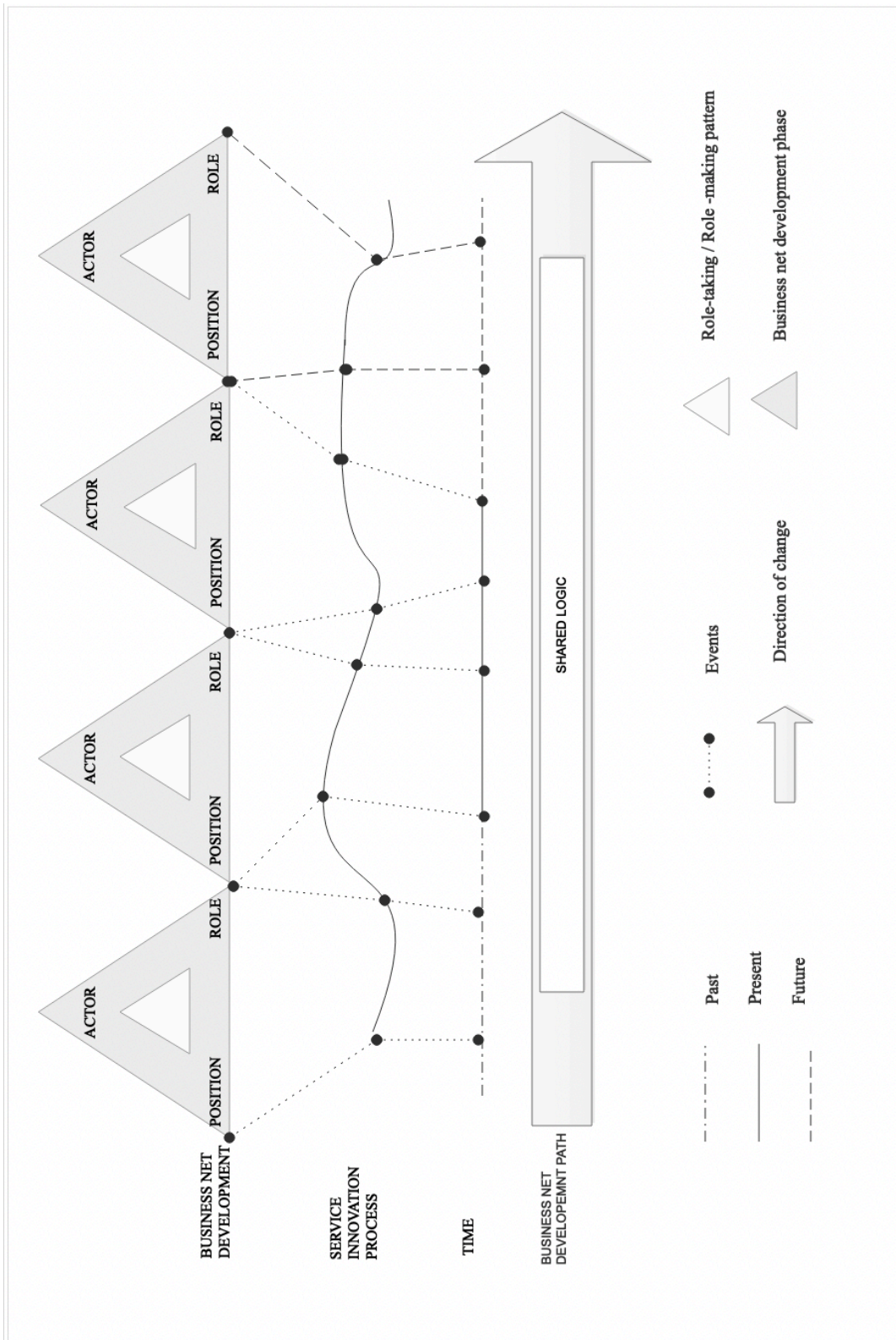
Further, the findings of this research demonstrate that the establishment of relationships with other actors creates expectations regarding exchange patterns and actors' activities. New forms of exchange cannot be introduced unilaterally, and new possibilities cannot always be predicted. Actors may disagree on the best course of action to pursue or try to exclude old participants or include new ones. Adaptations by individual actors are seldom sufficient, and some situations require simultaneous action to be taken by several actors. Within the network, net actor and its allies try to influence and exploit different change processes to achieve the best outcome for their needs. The actor actively participates in streams of events together with other involved actors. As the change processes are limited by the net structure and its composition (diversity of actors) without the support of at least some of the others, no changes

are possible. On the other hand, with support, ‘almost anything could be done’ (cf. Håkansson (1987) p. 18). As such, they are efficiently coordinating change processes is a strategic issue.

Drawing on similarities of Aastrup’s (2000) contributions in the discussion of change patterns and network development, this case extends our understanding of the interrelationship between the innovation process and the business net development dependence. Each distinct net development path concerning three generations of the ITM programme occurred in the interaction between co-operating actors (Håkansson and Lundgren, 1997; Wilkinson and Young, 2002) motivated by actors’ shared logic.

Based on discussed findings, Fig 6.2 provides a revised integrated model of business net development in the service innovation context based on the review of the extant literature and the results of the empirical investigation.

**Fig 6.2 The Revised Business Net Development in Service Innovation Setting**



## **6.3. Contributions**

### **6.3.1. Theoretical Contribution**

This research is positioned in the Industrial and Purchasing (IMP) Group's Interaction and Network Approach (INA), which studies evolutionary processes of network change as an outcome of endogenous factors as innovation (Waluszewski, 2004; Håkansson and Waluszewski, 2001a, 2001b; Corsaro et al., 2012; Möller and Halinen., 2017; Håkansson, 1989) and exogenous factors as environmental circumstances (Axelsson and Easton, 1992; Anderson et al., 1998; Brennan, 2006, Törnroos 2002; Matthyssens, P. et al., 2013; Hite and Hesterly, 2001; Araujo & Harrison, 2002; Gadde et al., 2003). The results of the study contribute to our knowledge of business network developing service innovation (Syson and Perks, 2004; Rusannen et al., 2014) by building a deep understanding of changes concerning the emergence and development of a business network fragment, the business net, including the nature, origin and the process of those changes. In considering the service innovation development as a trigger of network change and actors as the origin of change that spread changes across the net and entire network through actions and reactions, transforming the existing business net structures in role-making and role-taking activities, these findings contribute to better explaining and interpreting the business net changes from the perspective of the interplay between action and structure. Additionally, a cooperative and competitive environment in a service innovation setting where actors are interrelated in socio-economic development, the actors' shared net logic can explain the contextual nature of network change and business net development to which actors are connected.

The contribution of this study is discussed in Section 6.2.1., adds to notable contributions of business-to-business research (Rusanen et al., 2013; Ostendorf et al., 2014; Ramos et al., 2013; Jaakkola and Halinen, 2006) in understanding the emergence and development of the service-



oriented business networks. Similarly, it is broadening the field of service research by adopting a processual perspective of business-to-business research, unveiling the complex, interactive and evolutionary nature of the service innovation process that unfolds over time in an unstructured mixed cooperative and competitive environment of a business network. Additionally, the findings of this empirical study progress our understanding of business networks in an innovation setting, contributing to network studies of innovation (Aarikka-Stenroos et al., 2017; Nystrom, Anna-Greta et al., 2014; Öberg and Shih, 2014; Håkansson and Waluszewski, 2007) in the context-driven stream of research in the understanding of contingencies specific to service innovation (Möller and Halinen, 2017).

The contribution of this study is discussed in Section 6.2.2. adds to our understanding of how actor's role change and position dynamics influence the emergence of role-taking and role-making interaction patterns in the process of business net development. The study results in Section 5.2.1.2, Section 5.2.2.2 and Section 5.2.3.2 demonstrate different interaction patterns of the business net in existing configuration and two net re-configurations based on role-taking and role-making activities of business net actors related to service innovation, self-created or induced by other events. Using critical events as temporally specific outcomes of an actor's activities enriches the understanding of change and evolution of business networks (Hedaa and Törnroos, 2008) and responds to the need to include time and process in the network research agenda (Hedaa and Törnroos, 2002; Ford and Håkansson, 2006). Additionally, these findings contribute to how actors who change their positions through roles impact the structure of a business net (Nystrom, 2014). In so doing, it also extends a domain-driven stream of business network research to the explanatory power of 'the inherently descriptive and generic IMP network' (Möller and Halinen, 2017, p 9 ). It equally provides some insights into the interplay of structure and human agency in business networks

Further, the contribution of the study discussed in Section 6.2.3. adds to our knowledge of the multifaceted context of cooperation (Brito, 2004, Easton & Araujo, 2003) and innovation inherent to business net in a service innovation setting. The findings of this research demonstrate that there is not one sole or predominant theory that can explain its nature of change. Instead, a diverse combination of different approaches (Ramos et al., 2013) is shown to have good explanatory power at different phases of the process, namely, path-dependence (Hite and Hesterly, 2001; Araujo & Harrison, 2002; Gadde et al., 2003), evolutionary (Axelsson and Easton, 1992; Anderson et al., 1998; Brennan, 2006, Törnroos 2002; Matthyssens, P. et al., 2013) and intentional management perspectives ( Gulati et al., 2000; Jarillo, 1988; Möller & Svahn, 2003; Heikkinen et al., 2007; Möller et al., 2005; Rampersad et al., 2010).

While a rich body of literature can be found in a specific form of intentionally created business networks or strategic nets (Gulati et al., 2000; Jarillo, 1988; Möller and Svahn, 2003), orchestrated business networks (Dhanaraj & Parkhe, 2006; Doz, Olk, & Smith Ring, 2000; Dyer & Nobeoka, 2000; Hite & Hesterly, 2001) and non-orchestrated business networks (Brito, 2001; Roseira, Brito, & Garrett, 2009), only a limited number of studies (Hite and Hesterly, 2001, Ramos et al., 2014) cover combination of theories to explain business network formation and development.

The diversity of actors with mutually shared interactive goals based on their similar interests and priorities and a commitment to collaboration is demonstrated in fulfilling actors' expectations and intentions (Öberg and Shih, 2014). A shared net logic would decide whether a party chooses to participate in the innovation process, and how it acts as part of the process (Öberg and Shih, 2014). A net consisting of several innovative firms working together (such as in TLC's interaction with parties in the US) indicates shared or similar interests, priorities

and interaction goals, while displaying complementary interests in their transactions with other parties in the broader business network (Öberg and Shih, 2014).

### **6.3.2. Managerial Implications**

In managerial terms, the results of this research suggest that the diversity of actors in largely unstructured and informally organised settings (Gottfriedsson, 2001) makes the network's understanding and therefore managing into a much more complicated task than managing in traditional networks. However, while the realm of activity for a network organisational actor remains the network, the realm of practice, from a managerial perspective, remains at the level of a net. As such, all actors should monitor their roles and positions within the network and evaluate whether their company's goals correspond well with those of the network. If the company's goals diverge from the network's goals, the company may seek new roles or transform its current roles to align with the strategy and goals of both the network and its company. The changes may involve joining industry groups to change role expectations or actors from another net to develop a closer position to the focal actor. These changes significantly impact relationship coordinating behaviour throughout the network. As there are no 'universal laws' of managing relationships, managers rely on their tacit knowledge to understand why co-operating partners behave the way they do to achieve the desired outcome.

Understanding the shared logic in a business net, and its determinants add to the managerial skills of an individual manager of an innovating business net. Suppose we accept that change is inevitable because of the interdependence of relationships and constant interactions, the managerial solutions that can be applied in the ever-changing complex, cooperative and competitive. In that case, business reality should be focused on managerial decisions about the direction of changes (Fonfara et al., 2017). Managers and network members benefit from a

better understanding and, therefore, better interpretation and structuring of their efforts in dealing with business net development and capitalising on business net position and role interaction patterns that contribute to service innovation outcome. In addition, considering actor' priorities, interests and goals for innovation contribute to policymakers' need to understand their function in these matters and promote systems that support interactions among firms, if new ideas are considered essential for growth.

When a change occurs in the operating environment or within a company, it is important to understand the collective actor's shared logic that drives and shapes this collective change. In addition, considering the underlying individual reasons for the collaborative change today could offer an insight into the future.

### **6.3.3. Limitations**

The first limitation of this research is associated with shortcomings of any quantitative research limited in its credibility, replicability (transferability), dependability and confirmability criteria (Cassell et al., 2006). Replicability (Hirschman, 1986; Lincoln & Guba, 1985) is concerned with whether the researcher would obtain the same results if he could observe the same things twice. However, an empirical investigation using qualitative research depends upon the social setting in which research takes place, the promise of its replication is problematic. The idea of dependability (Hirschman, 1986; Lincoln & Guba, 1985), on the other hand, emphasises the need for the researcher to account for the ever-changing context within which research occurs. The researcher is responsible for describing the changes that occur in the setting and how these changes affected how the researcher approached the study. As such, the potential investigator's subjectivity could be a source of criticism. Finally, qualitative research tends to assume that each researcher brings a unique perspective to the study. As such, confirmability (Hirschman,

1986; Lincoln & Guba, 1985) of the qualitative research that suggests the degree to which the results could be confirmed or corroborated by others could create potential inconsistencies.

The second limitation of this research is related to a selection of a single case study method. In theory-generating research, the potential to make cross-case comparisons is commonly viewed as important, if not even necessary (see, e.g., Eisenhardt, 1989; Perry, 1998; Yin, 2002, 2017). By comparing sites or cases, one can establish the range of generality of a finding or explanation and, at the same time, pin down the conditions under which that finding will occur (Miles and Huberman, 1994, p. 172). As a result of context specificity and historical background, each network case is somewhat unique and thereby difficult to compare with others. As such, the cross-case comparison in this research cannot be delivered. In addition, the case study that takes place from 1993 to 2016 is longitudinal. The problem of time is central in network research (Halinen and Törnroos, 2003) that, according to Easton (1995), brings two main limitations related to the notion of change built into the industrial network approach. 'The first is that the unit of analysis is, by its very nature, dynamic and susceptible to change. In addition, the explanatory power of the industrial network approach comes into play when this approach is used to explain the changes that have occurred in particular networks' (Easton 1995, p. 419). The inclusion of the concept of time is complicated.

The third limitation of this research is concerned with the network boundary selected for empirical investigation. According to network researchers (Anderson et al., 1994; Axelsson and Easton, 1992; Halinen and Törnroos, 2005), the boundary of each network fragment has to be intentionally delimited to examine the content of the research problem and retain the characteristics of connectedness and embeddedness. As such, a purposeful setting of network boundary is required to access the research field and collect the data within a limited time, meeting the research objectives (Halinen and Törnroos, 2005).

#### **6.3.4. Further Research Directions**

The main aim of this research was to explore the business net changes over time in a service innovation setting taking place in the education sector. More insights into business net development could be gained if future research focuses on additional longitudinal case studies within different empirical settings. The possible choices of other empirical settings include the wide range of business services characterised by the co-operative and unstructured operating environment. In addition, using a longitudinal, focal net perspective under a multiple-case research design would allow for comparison of similarities and differences in the business net evolution and, thus, can contribute to theory development (Dubois and Gadde, 2002; Eisenhardt, 1989; Yin, 2002).

As the findings of this research suggest that understanding the shared logic concept and its determinants, interest, priorities and goals, adds to the managerial skills of an individual manager of an innovating business net, future studies could focus on how logic relates to a company's resources and competences. Furthermore, assuming that the shared logic of net actor would be valid beyond the contingencies of this empirical investigation, additional studies would benefit from exploring this concept beyond the research on innovation, delving into how shared logic affects interactions within existing business relationships and the development of new business relationships.

#### **6.3.5. Reflections**

The discussion of this empirical inquiry reflects on five specific aspects. Firstly, triggered by the set of critical events of the collective, non-linear and interactive nature of the service

innovation process, the development of a business net can be seen as the result of actor's individual actions that through action and reaction to the other network actors configure and re-configure the innovating business net. Secondly, each configuration or re-configurations of the business net exhibit different actors' position and role interplay patterns. The role-taking pattern of interaction prevails during the incrementally changing phase of the business net development. The role-making pattern is more prominent in the radically changing phase of the business net development. Thirdly, the nature of the business net development shifts from evolutionary during incremental changes to the intentional nature of the radical change phase. Fourth, the service innovation process and the development of the innovating business net are driven by actors' shared interests, priorities and common interaction goals inherent to the contextual nature of the shared logic. With innovation being increasingly perceived as an interactive and shared process, understanding actors' motivation for change helps to turn the diversity of an innovating net into an opportunity rather than an obstacle. Fifth, the service innovation process impacts the business net development. Equally, the development of the innovating business net affects the service innovation process.

# Appendix A: The Participant Consent Form

University of Manchester  
 Faculty of Humanities  
 Manchester Business School

Ethical Approval

Participant Information Sheet

<b>What is the title of the research?</b>	Working title: “ <b>How business networks support service innovation</b> ”
<b>Who will conduct the research?</b>	The present research will be conducted by Manchester Business School DBA Programme Member Mrs Irina D’Amore-Sokolova
<b>What is the aim of the research?</b>	The research is based on a case study of ITMC Worldwide. In response to internal changes within the existing network of collaborating actors as well as external changes of the operating environment, the ITMF management team was presented with a challenge of deciding the further development of its network and management activities associated with it. As key actors were convinced that the "winning formula" of their historical success owned to a specific configuration of ITMC’s formal and informal relationships of the actors, their specific set of activities and resources they controlled, it raised a question of understanding the structure of this configuration in its emergence and evolution, changes that affected this structure and deeper processes that caused these changes.
<b>Why have I been chosen?</b>	You have been identified as ITM Worldwide network member
<b>What would I be asked to do if I took part?</b>	You will be asked to take part in a semi-structured interview(s).
<b>What happens to the data collected?</b>	All interviews will be audio-recorded and transcribed. You, as a participant, are allowed to see transcripts of interview(s) and notes and to alter the content, to withdraw statements, to provide additional information or to add glosses on interpretations.
<b>How is confidentiality maintained?</b>	You, as a participant, have your rights under copyright and data protection laws. As such, you will be afforded anonymity and confidentiality and will be able to reject the use of data-gathering devices such as tape recorders and video cameras.
<b>What happens if I do not want to take part or if I change my mind?</b>	Should any of the information included on this sheet change during the course of the study, new consent will be sought. You,



	as a participant, are free to refuse consent and withdraw from the study if you wish.
<b>Will I be paid for participating in the research?</b>	You, as a participant, will not be offered payments to be persuaded to take part in a research in which you would not ordinarily take part.
<b>What is the duration of the research?</b>	The data collection to be taken place within the period of 2014 - 2015, commencing in May, 2014
<b>Will the outcomes of the research be published?</b>	You, as a participant, will be offered feedback on findings, for example in the form of a summary report, should the present research be considered for publication.
<b>What benefit might this research be to me or other subjects of the research?</b>	From a managerial point of view, it assists network members at a better understanding of business network in the context of service innovation and presents with a decision-making tool of facilitating management activities in complex competitive settings.
<b>Contact for further information</b>	<b>Mrs Irina D'Amore-Sokolova</b> <b>Manchester Business School</b> <b>The University of Manchester</b> <b>Booth Street West</b> <b>Manchester</b> <b>M15 6PB</b> Email: <a href="mailto:irina.sokolova@postgrad.manchester.ac.uk">irina.sokolova@postgrad.manchester.ac.uk</a>
<b>What if something goes wrong?</b>	Please contact DBA Programme Director <b>Prof Jikyeong Kang</b> <b>Manchester Business School</b> <b>The University of Manchester</b> <b>Booth Street West</b> <b>Manchester</b> <b>M15 6PB</b> Email: <a href="mailto:jikyeong.kang@mbs.ac.uk">jikyeong.kang@mbs.ac.uk</a>

**University of Manchester**  
**Faculty of Humanities**  
**Manchester Business School**

**Ethical Approval**

**PARTICIPANT CONSENT FORM**

If you are happy to participate in this study, please complete and sign the consent form below.

I confirm that I have read the attached participant information sheet and have had the opportunity to consider the information and ask questions, and had these answered satisfactorily.

**Please  
Tick Box**

I understand that my participation in the study is voluntary and that I am free to withdraw at any time without giving a reason and without detriment to any treatment/service.

I agree to take part in the above research project.

Name of participant

Signature

Date

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name of person taking consent

Signature

Date

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Appendix B: The Topic Guide for Semi-structured Interviews

	Question	Logic
1	Please describe the ITMC Programme development. Any particular critical event(s) to be brought to the attention. Please provide its details and description	1.Reconstructing chronology of service innovation development. 2.Delineating sequence of events based on actors' interpretations that determine what is critical and what is not
2	Please provide your account of experiences in developing ITMC (How? Who? What? When?)	1.Reconstructing chronology of service innovation development 2.Delineating sequence of events
3	Please define the ITMC network and its members	Mapping ITMC network
4	Please describe your role and position in the ITMC network in the period of time you were involved?	Identifying role/position of a network actor
5	How would you describe the nature of the relationship between your organisation and X (a participating network actor) in the context of the ITMC Programme development?	Identifying relationship ties
6	How do you understand role(s) and position(s) of organisation X in ITMC network?	Verifying role/position of a network actor based on the perception of another network actor
7	What changes occur during your participation in the ITMC network?	Identifying the origin of change and actor's actions and reactions
8	What action(s) have been taken? By whom? When? Why?	Looking for mechanisms leading to changes, identifying the origin of the change
9	What decision(s) have been made? By whom? When? Why?	Looking for mechanisms leading to changes, identifying the origin of change

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