

Title	A relational lifecycle model of the emergence of network capability in new ventures
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Publication date	2017-12-04
Original Citation	McGrath, H., O'Toole, T., Marino, L. and Sutton-Brady, C. (2017) 'A relational lifecycle model of the emergence of network capability in new ventures', International Small Business Journal, 36(5), pp. 521-545. doi:10.1177/0266242617738571
Type of publication	Article (peer-reviewed)
Link to publisher's version	http://journals.sagepub.com/doi/abs/10.1177/0266242617738571 - 10.1177/0266242617738571
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Download date	2026-10-07 17:09:11
Item downloaded from	https://hdl.handle.net/10468/5263

A relational lifecycle model of the emergence of network capability in new ventures

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International Small Business Journal

Abstract

This article presents a relational lifecycle model of the emergence of network capability in new ventures. Network capability is defined as a strategic ability learned in interaction with business partners. We focus on the foundational phases and processes of the emergence of this dynamic capability. The lifecycle model comprises three phases that evolve over time in tandem with the level of network engagement. The qualitative study also identifies five tipping points or critical changes that move new ventures between the lifecycle phases. Using a sample of new ventures in a longitudinal action research design, the study shows how new ventures emerge in network capability through increasingly complex and multilayered engagement processes with their business partners. The relational lifecycle model contributes to the literature on how network capability emerges over time through the dynamics of interaction between business partners as new ventures' networks evolve and change.

Keywords: Network Capability, New Ventures, Relational Lifecycle, Longitudinal Action Research, Marketing in new ventures

A relational lifecycle model of the emergence of network capability in new ventures

Introduction

Network capability, like all capabilities, is not innate or instinctive (Edwards et al., 2010; Teece et al., 1997), rather is strategic and takes time to build (Larson and Starr, 1993; Hite, 2003). It requires a firm to learn over time how to purposefully leverage its experience in interacting in the totality of its relationships (Chen and Tan, 2009; Dyer and Singh, 1998; Zahra et al., 2006). Networks are important for new ventures to succeed (Semrau and Werner, 2014; Newbert et al., 2013). Yet research on business relationship development in the early stages of a new venture has been limited (Aaboen et al., 2011; Gadde et al., 2012; Jack et al., 2010; La Rocca et al., 2013). Understanding this developmental process is important as, despite the recognition that firms do not possess or control all the components of the resource combinations that the new business requires (Ciabuschi et al., 2012) and rely on external resources and capabilities to achieve their goals, we know surprisingly little about how they emerge in the capability to leverage business relationships and networks.

The influence of social networks on new venture creation has been studied extensively focusing on network structure and its associated impact on performance (Ebbbers, 2014; Slotte-Kock and Coviello, 2010). An implicit assumption in this research stream is that new ventures have network capability, or the ability to initiate, maintain, and utilize relationships to gain access to key resources controlled by other actors (Mitrega et al., 2012; Walter et al., 2006), a capability developed in interaction with other firms (Håkansson and Snehota, 1995; Håkansson et al., 2009). This assumption is at odds with studies that have found that network capabilities are heterogeneously distributed and that substantial differences in the ability of firms to use and become embedded in business networks exist (Edwards et al., 2010; Möller and Svahn, 2003; Ritter et al., 2002; Semrau and Werner, 2014). This disparity raises an important question which forms the theoretical motivation for this study: How does the network capability of new ventures emerge and what tips the new venture into emergence? To answer this question we develop a relational lifecycle model which we empirically examine employing a longitudinal action research (AR) study with eight new ventures operating in the Southeast of Ireland.

Our view of emergence in interaction runs parallel to a social networks view and to a resource-based view. Both these approaches view network capability as an innate capability of a firm, or individual, which it can leverage to its advantage (Coviello and Joseph, 2012; Jack et al., 2010). However, for it to be a competitive or strategic capability it needs definitional specificity beyond this. Realising network capability emergence as a resource activated and embedded in interaction takes time to build. It involves engagement with other actors whom may initially be neutral on such engagement as the new venture has unknown capability in its network. The new venture needs to connect the firm into existing business networks with established activity patterns and resource structures (Johanson and Vahlne, 2011; La Rocca et al., 2013). Therefore, in our view, network capability emergence comprises a new venture's ability to purposefully shape, in interaction with its current and future business partners, the resources and activities exchanged in its relationships and network. Possessing it is a signal of a new venture's ability to position itself in its networks albeit within the context of its

bounded understanding and limited power.

Emerging in network capability for a new venture unknown in its strategic networks is onerous but ultimately beneficial as it provides legitimacy and the access to resources critical to a firm's long-term survival. Benefits of developing network capability have been shown to include co-adapting and innovating with a partner (LaRocca and Snehota, 2014; Partanen et al., 2014) and accessing and mobilizing external resources (Ciabuschi et al., 2012; Gadde et al., 2012). This emergence is especially important for new ventures that face the liabilities of newness and smallness and who, therefore, have a disproportionate amount to gain, as compared to their larger and more developed counterparts, through involvement in diverse networks.

Our study responds to a call for increased research addressing the origins of capabilities (Montealegre, 2002; Winter, 2012; Zollo and Winter, 2002), particularly in a new firm context (Autio et al., 2011; Zahra et al., 2006). In doing so we contribute to the extant new venture and capability based literature in several ways. Network capability is often assumed as a starting point in new venture network based studies. However, the ability to strategically use and become part of a business as opposed to social network is not innate (Möller and Svahn, 2003; Edwards et al., 2010). In recognizing that capabilities are built rather than bought (Teece et al., 1997) and the importance of dynamic capability development to attain a competitive advantage, we provide a unique insight into the foundational processes of network capability's emergence in new ventures. Business network process research in a new firm context is a rare, but emerging field of research (La Rocca et al., 2013; Ciabuschi et al., 2012). Our relational lifecycle will add to this literature illustrating the evolution and change dynamics as new ventures move from a social to relational to business network positions.

To research the emergence of network capability process we first review literature on new venture marketing and networks, employing a business or industrial network perspective (Håkansson and Snehota, 1995; Håkansson et al., 2009) to describe the phases in the emergence of network capability and their associated engagement processes. Consistent with this perspective we view network capability as a resource that is developed and fine-tuned in interaction by closely interconnected firms through long lasting, heavily interdependent business relationships. We develop a relational lifecycle model which we empirically examine with a sample of new ventures. Findings are presented, discussed and conclusions drawn.

The emergence of network capability model

Classic lifecycle models of early stage firms have been traditionally employed to illustrate how new firms move through the various stages of growth including existence, survival, success, take-off, and resource maturity (Churchill and Lewis, 1983; Scott and Bruce, 1987). Examining the entrepreneurial marketing lifecycle, Carson (1985) put forward a four stage pattern of the evolution of marketing in small firms moving from reactive initial marketing activity to integrated proactive marketing. Similarly models of marketing and other resources accessible in the structure of network ties have been classically developed in the literature. For example, Hite and Hesterly (2001) link network tie evolution to firm stages, finding that networks of emerging firms evolve in response to the changing resource needs and challenges of the firm as it moves through the lifecycle stages of emergence and early growth. Lechner and Dowling (2003) demonstrate that the relational mix changes over time in order to enable firm growth, proposing a four-phase development model of entrepreneurial firms. Moreover in capability

development, we know that capabilities have a lifecycle in the context of organizational change and evolve in line with the progression of the firm and the wider industry environment in which they operate (Boam and Sparrow, 1992). Given the importance of lifecycle models to new firms, marketing, networks and capability development research, we borrow from this logic and put forward a relational lifecycle model (see Figure 1) for new firms' network capability emergence. That firms' relationships and networks will change over time is not new (Coviello, 2006; Greve and Salaff, 2003; Hoang and Yi, 2015; Lechner et al., 2006). How they develop the capability to manage at a business network level, network capability emergence, is new and the focus of this paper.

As illustrated in Figure 1, we propose that new firms move through three relationship lifecycle phases: new venture networking, relational capability, and network capability. This movement occurs as its network engagement changes. The level of network engagement is apparent in three network processes: awareness, information exchange and action. We define awareness as the new ventures understanding and belief that there is opportunity in widening and strengthening their network context to grow the business. In studies of the process of alliance and relationship development the initial phase of partner choice and familiarization is often one of awareness (Dwyer et al., 1987; Ring and Van de Ven, 1994). Information exchange refers to the firm's willingness to search for and share information with its business exchange partners (Riege, 2005; Storey and Quintas, 2001; Sun and Scott, 2005). The action process of the emergence of network capability is defined as the new firms' purposeful use of their problem solving ability and joint problem solving ability in interaction with their business exchange partner(s) (McEvily and Marcus, 2005).

Through the AR interventions we also identify what critical changes or tipping points take place to move new ventures towards the development of regular patterns of interaction routines to access and mobilize resources held by other business actors, emerging in network capability. Our model, like other process studies does not endeavour to offer accurate predictions regarding the outcome or time scale during which capabilities will develop (Mohr 1982), nor is our relational lifecycle pegged to firm growth stages. Rather we propose the phases, processes and key inflection or tipping points in which network capability could emerge. We depict each phase in Figure 1 and describe each narratively below.

Our relational lifecycle is developed using an industrial network perspective, a view that complements the social network concept. The industrial network perspective refers to interaction in inter-firm relationships and networks (Ciabuschi et al., 2012; Håkansson et al., 2009) as opposed to the socio-structural view which focuses on information flows at an individual level which can extend to the firm level if these actors are viewed as representatives of the company (Hite, 2003; Zahra, 2010). Network capability has been acknowledged from an interaction based perspective as a source of real value to the firm and to its network of relationships (Mitrega et al., 2012; Möller and Halinen, 1999; Möller and Svahn, 2003; Ritter and Gemünden, 2003). However, surprisingly little attention has been placed on its application to new ventures (Slotte-Kock & Coviello, 2010) with the few empirical studies grounded in a large firm context.

[Insert Figure 1 Here]

Relational lifecycle phases

New Venture Networking

New venture networking activities are social in nature and performed in an informal, intuitive and instinctive manner by the firm in the early stages of its venture (Carson et al., 1995;

Coviello and Joseph, 2012). Firms are born within a set of trusted social networks which have economic importance. They may provide initial resources, including information and finance (Uzzi, 1997; Davidsson and Honig, 2003), social support (Greve and Salaff, 2003) and can act as a preliminary 'think tank' for ideas and opportunities (Birley, 1985; De Carolis and Saporito, 2006). Stemming from the field of sociology, the influence of social networks on new venture creation and performance has been studied extensively (Ebberts, 2014; Granovetter, 1973; Hoang and Antoncic, 2015), a view which focuses on the structure and performance of social ties. However, this first group of connections are seldom accountable for the new firm's development over the longer term. To grow, new ventures need to move from their initial social network and engage more strategically with a broader business network of relationships, consider resources acquisition needs, and invest time on network engagement (Hallen and Eisenhardt, 2012; La Rocca et al., 2013; Semrau and Werner, 2014; Vissa, 2011). They need to move towards the development of relational capability. This process progresses through three engagement processes.

Awareness of new venture networking is high and strong due to its instinctive nature. But, to move towards relational capability requires the firm to recognize a wider network of customers, suppliers, distributors and competitors and other business exchange partners than first used, or begin to see the possibility to access and use their local and wider network horizon in a more strategic way. Information exchange is also intuitive during this phase as new ventures are inherently alert in acquiring new information which could lead to new opportunities (Tang et al., 2012). However, having ones 'antenna out' does not translate to information exchange as part of this capability building process. It needs to become more deliberate within business relationships. New venture development requires action (Davidsson, 2015; McMullen and Shepherd, 2006), and network capability emergence is no different. Winter cautions that "brilliant improvisation is not a routine" (2003: 991) which is more in tune with the opportunistic problem solving toolkit that is part of any new venture networking. New ventures need to move towards dyadic and interactive problem solving to attain relational capability.

Relational Capability

Relational capability, our second relational phase, is defined in the literature as a firm's willingness and ability to partner and coordinate competencies and combine knowledge across corporate boundaries (Dyer and Singh, 1998; Lorenzo and Lipparini, 1999). Relational capability represents an early movement outside of the firm's 'born with' contacts towards a more strategic view of developing business-to-business relationships. Individual differences in motivation and ability are increasingly recognized as drivers of the way new firms shape and use their relationships. We argue that that new ventures leverage their experience in social networks and begin to realize the value of developing business ties within the value chain. This is likely to commence at a customer level where the firm can experience the advantage of joint engagement as superior than those stemming from discrete or recurrent transactions. Such conditions typically occur through customer or supplier adaptations (Gadde et al., 2012; Viio and Grönroos, 2016). This approach is akin to relationship portfolios and a customer centric internal view of capability, which is invariably needed.

In engagement processes, during this phase, awareness of dyadic business relationships is enhanced. With enhanced awareness, the new venture becomes increasingly deliberate in their relational activities, targeting and leveraging ties to access resources based on their evolving needs (Vissa, 2011). The new venture can build on its relational capability

through repeated engagement processes and gain reputation in the business network through their initial dyadic activities. New firms will engage in experimental information exchange process where they interactively learn through reciprocal information search and sharing with its developing business relationships. In action, problem solving at a customer level is likely to be complex and interactive at a dyadic level (La Rocca et al., 2013) which can be used to get into business exchange networks, or to strengthen the firm's position in networks by showing what it can do.

Network Capability

The ability of the new venture to gain access to, and use networks is developed in interaction with, and dependent on, other actors in the network (Håkansson et al., 2009; La Rocca et al., 2013). This is important as the new venture may reside outside of the network, that is, it may not be known as a key player in the market. The ability of the new venture to become part of the network takes an interactive engagement assumption on a new venture process (Shepherd, 2015) and its complexity cannot be underestimated. Its understanding of the network increases and it begins to see how value can be co-created through identifying and mobilizing resources in a wider network context. The new venture is becoming active within its network, jointly creating value and problem solving, both in its own interest and, over time, in the interest of other network actors.

With network capability, the new venture should be aware of a wider business network context and horizon (Anderson et al., 1994; Holmen and Pederson, 2003). Information exchange has become more deliberate and strategic as the firm moves through the relational lifecycle and stems from a considered pattern of understanding the potential in business relationships and networks to access and develop resources to grow the new firm. Action is becoming more multi-layered and is reflected in some intentional joint problem solving between the new venture and its partners at, potentially, multiple relational levels. Joint problem solving is critical to the emergence of network capability process as it is the mechanism for early stage collaboration as a new venture actor can change their perceptions of business relationships based on positive or negative experiences in adapting in interaction with its network partners. Business interactions between firms requires coordinating resources across company boundaries in a more networked way.

Tipping points

Our relational lifecycle is written with a logical narrative progressing to network capability. In reality, it is not so straightforward. Network capability development processes are different in each firm due to context and the pathway that the firm is aware of, chooses or may not choose to develop or use preferring the use of social ties which do not expose them to overt dependence (Johannisson, 1988; Lee and Tsang, 2001). Critical changes will occur in new ventures leading to the emergence, or not, of network capability in their business exchange relationships, that is, tipping points between the three lifecycle 'relational' capabilities. Potential tipping points are infinite, hence we will focus on identifying the critical points which emerge from the study's inductive data including the data generated from its action research interventions.

Method

Given that this research contributes to a significant yet under researched area, capability emergence in new ventures (Autio et al., 2011; Zahra et al., 2006) and, more specifically,

modelling the microdynamics and phases of the evolution of network capability (Capaldo, 2007), an interpretive action research approach was employed. Longitudinal case research comprising 32 semi-structured interviews and six action research (AR) sessions over an eight month period with eight new ventures were conducted. This fit our overriding aim as process analysts to “catch reality in flight” (Pettigrew, 1997, p. 338) recognizing that “processes are embedded in contexts and can only be studied as such” (Pettigrew, 1997: 340). AR was deemed suitable for new venture capability development research as it aims to contribute to the practical concerns of individuals in an immediate problematic situation (Reason and Bradbury, 2001; Susman and Evered, 1978) with theory emerging inductively from the data (Eden and Huxham, 1996). AR fulfils the need to move beyond traditional research methodologies to embrace the contextual capabilities and limitations that characterize new firms. As a methodology, the flexibility of AR mirrors the activity based learning preferences of new venture owners and its emphasis on reflective practice can assist them to disengage with the business and step away from the treadmill of day-to-day activities (Beckinsale et al., 2011; Cope, 2005; Leitch, 2007; Leitch et al., 2009; McGrath and O’Toole, 2016).

Participants were selected for our study using convenience (Coviello et al., 2002) and theoretical (Strauss, 1987) sampling with cases selected along multiple criteria based on their suitability “for illuminating and extending relationships and logic among constructs” (Eisenhardt and Graebner, 2007: 27). The first selection criterion was demographic and based on convenience as we had restricted access to a database of eighty four new ventures who had graduated from a regional university-led start-up programme and represented a variety of business types. Our second sampling criterion was based on certain characteristics including having less than ten employees, serving business-to-business markets, being in operation for less than five years and a willingness to experiment in their business exchange relationships. This sampling process yielded eight early stage ventures, committed to implementing a business idea. The number of cases is consistent with qualitative research guidelines and the inductive theory-building nature of the research (Eisenhardt, 1989; Eisenhardt and Graebner, 2007). The eight month time frame was deemed as appropriate as new venture literature supports the need for longitudinal, qualitative studies to be conducted in the area of new firm networks (Chen and Tan, 2009; Hoang and Antoncic, 2003). Our final sample represents a diversity of sectors and business types (see Table 1 for a profile of the personal and business characteristics). Each of the new ventures were in business for less than four years, strived to achieve greater growth in their enterprises yet lacked the internal resources and capabilities to achieve growth in an independent manner. Therefore, the sample of new ventures was consistent with the intentions of the study.

[Insert Table 1 Here]

Interviews

Semi-structured interviews were initially used to familiarize the new ventures with the researchers, to discuss the nature of the study in more detail, and to discover their awareness of networks and their current level of network capability. Post-AR session interviews (averaging 2 hours) were also conducted to allow for a more in-depth discussion of how they were progressing, or not, in enacting the process. This enabled us, through analyzing critical interaction episodes with business exchange relationships, to identify how the network capability of new ventures emerges in addition to what tips them towards, or away from emergence. These interviews enabled the researchers to reduce overall bias through benchmarking progress and reflecting back on their assumptions about what was happening

in the process and ongoing data analysis (Robson, 2002). These interviews yielded over 70 hours of data.

Action Research Interventions

Given the importance of both context and action to process research, we ensured that action within the AR process was carefully planned with theoretically informed stimuli that were deliberately implemented and carefully observed. Three stimuli were introduced, one focused on each network engagement process with each venture self-reporting, discussing, sharing and reflecting on their experiences at the next meeting. As seen in Figure 2, the three stimuli necessitated six 3-hour group AR sessions to ensure that the new ventures understood and had time to make changes to their business based on the concepts introduced (Huxham and Vangen, 2000; Susman and Evered, 1978). An independent observer attended all of the AR sessions. Interventions are 'one-offs' so AR has been criticized for its lack of repeatability and hence rigor. These criticisms are countered by the argument that the involvement with practitioners over things which actually matter to them provides a richness of insight which could not be gained through any other means (Reason, 2006).

[Insert Figure 2 Here]

Awareness

Based on the network pictures literature (Corsaro et al., 2011; Ford et al., 2003) the awareness stimuli involved network mapping, whereby the participants and researchers were each given a blank sheet of paper and asked to draw their network connections (by name) using arrows to explain how the actors relate to each other. These pictures are critical in this process as they form the basis for the new ventures awareness of their surrounding business network base, and consequently guide their strategic actions (Ford et al., 2003). After each map was completed, we each discussed our network picture explaining to the group the type of connection that each actor in the map represented and how each connection was used in practice. Explaining network use using the pictures as a visual tool during the discussion allowed each group member to amend or further develop their network maps for the following AR session thus enabling them to see the full extent or wideness of their network base to which they were, and could be, embedded. This intervention allowed the researchers and participants to fully understand their cognitive schemata with the visual data, informing the data analysis phase.

Information exchange

To stimulate a dialogue and to gauge the participants' current level of information exchange, they were encouraged to discuss the type of information and means through which they had searched for and shared information through networks in the past. As an exercise stimulus, they listed at least one information gap pertaining to their business and looked to their own and others' network maps in a bid to access the information. This introduced the notion of looking at other actors' networks as potential information sources. This was further progressed by asking the new ventures to plan information searches and to show a willingness to share sensitive information about their businesses.

Action

At the action level, to tap into the participants' perceived strength in creating opportunities through solving problems they were prompted to discuss how they had previously solved customer problems to see if they could leverage this practice into something deliberately solved or jointly created and, in the longer term, embedded in a network setting. As a stimuli

exercise, the participants were encouraged to work on a particular problem that would require close cooperation with their customers and other actors, for example, suppliers to solve problems. Through this means the researchers were poised to observe change in the participants' levels of network action and their approach to joint problem solving over the period of the study.

Data analysis

The data analysis was iterative (Langley, 1999) and continued over time with constant revisions. Having the three lifecycle phases and network engagement processes of the emergence of network capability derived from the literature in advance provided the anchor for the work in identifying emergence and the critical changes in the case study firms' progression or non-progression towards emergence in network capability. Throughout the iterative process it was essential to keep combing the data with the dialectic in mind of what restricted and led to change in the ventures' behavior in emerging in network capability between the three lifecycle phases. This analysis of movement allowed us to identify critical interaction episodes in the firms' behaviour with and towards their business exchange relationships.

Through this process 119 critical interaction episodes were isolated. These were arranged to compile a complete map of the events which could potentially lead to changes in the firms' emergence of network capability (Schurr et al., 2008; Halinen et al., 2012). Analyzing interaction episodes can explain the various changes that take place within relationships or networks (Schurr et al., 2008) and were initially categorized as generative or positive episodes, degenerative or negative episodes (Schurr, 2007), serendipitous or goal directed (Kilduff and Tsai, 2003) and as recurrent or critical for network capability emergence (see Table 2).

To aid us in analyzing the data we applied the qualitative analysis software NVivo, to facilitate the organization and analysis of documentation, interview data, and action learning session data, rearranging the data into smaller coded groupings to facilitate insight, comparison, and theory development (Strauss and Corbin, 1990). In analyzing the episodes, we looked for themes and patterns through constantly comparing grouped data (Strauss and Corbin, 1990) and when a consistent pattern emerged we labelled it as a descriptor of a critical change in the emergence of network capability. In examining the patterns across the three lifecycle phases of network capability emergence and the critical interaction episodes, five critical changes emerged: (i) realization of network potential, (ii) networks as a burden, (iii) building momentum, (iv) cognition versus action and (v) dependence on low risk networks (see Table 2). In the findings and discussion, we present the data for each of the eight case studies across the 3 phases for each of the five critical changes. This enables us to provide the reader with the researchers' evaluation of the overall pace of emergence of the case companies (see Table 3).

This article is written by us in a linear narrative but our model creation moved iteratively through a cycle of developing theory, to action, to reflection, to developing theory again in small steps (Eden & Huxham, 1996; Kaplan, 1998). Whilst we had the lifecycle model outlined in advance of the fieldwork, we identified the tipping points through the action research process. For high quality action research a high degree of systematic method and orderliness is required in reflecting about, and holding on to, the research data and the emergent outcomes of each episode or cycle of involvement in the organization. The critical changes were apparent and were the dominant tipping points to emerge after our three

interventions. Their consistency of appearance across the three phases in the lifecycle and their ability to classify the data from our sample firms (see Tables 2 and 3) gives them currency and certain face value. In sum, through iterative cycles, the findings are the result of joint action and negotiated reality, and validated by participants' determination of these viewpoints' value in practice.

[Insert Table 2 Here]

Findings and Discussion

Our findings suggest that new ventures move through three relationship lifecycle phases: new venture networking, relational capability and network capability. This movement occurs via the new venture network engagement processes of awareness, information exchange, and action. The ability to evolve through relationship lifecycle stages is a strategic market ability, learned in interaction with business partners. Our model parallels Carson's (1985) lifecycle model of small firms' marketing evolution through stages but focuses on new venture engagement to access resources rather than on the atomistic marketing practices of the firm. The network engagement processes become more complex over time and with experience of the nascent firm. They represent the microfoundational dynamics of how the new venture engages with its business partners. Our model complements the major advances in new venture network research that focuses on the structure, content, and outcomes of relationship ties in the three stages of the lifecycle model (Hallen and Eisenhardt, 2012; Hite, 2005; Lechner and Dowling, 2003; Newbert et al., 2013; Zane and Decarolis, 2016). In addition to the new venture and entrepreneurship literature, the lifecycle model adds to the paucity of literature on how networks evolve and change. Our work is especially salient, given the relative weak network position of the new venture, its limited initial ability to influence it, and the potential outcomes of resource access in networks. The development of relational capability in the lifecycle model proposed follows the iterative nature and patterns in phases suggested in the network and general capability literature albeit at a new venture level (Ahuja et al., 2012; Donada et al., 2016; Helfat and Peteraf, 2003; 2015). Consistent with the network capability research cited, and apparent in the complexity of these types of capabilities, our lifecycle model is not sequential. Each phase in our relational capability lifecycle is important for the new venture and is not replaced by emerging into the next phase.

Table 3 summarizes our findings and highlights that new ventures emerge in network capability at a different pace with three ventures moving through the lifecycle phases quickly and five at a much slower rate. It is clear that new venture networking is engaged in a natural way and all of our participant firms intuitively engaged in this form of networking. This parallels with much of the networking literature from a social network lens and is important for initial sales, resourcing and information gathering for the new venture (Hite, 2005; Jack et al., 2010). Relational capability developed in this study through the adaptation and development of the activities and resources of the new venture to meet core customer/supplier needs. This must happen for the new business to survive and represented an internal view of a relational capability without joint investment or shared resourcing. However, network capability development was not inherent, and in line with the capability based literature required development (Teece et al., 1997). Recent literature from a business network perspective has drawn attention to the importance of the new venture to connect into an established business network, to assemble a constellation of resources to develop their firm, and to adapt and innovate, in interaction with other business actors (Ciabuschi et al., 2012; La Rocca et al., 2013; La Rocca and Snehota, 2014). Our findings show that

connecting into that network and moving over time to more central or valuable network positions is complex and requires network capability development.

While our relational lifecycle is novel, our findings in respect of its emergence were not surprising. It is clear that experiences in interaction throughout the lifecycle phases can be positive or negative leading new ventures closer to, or more removed from emerging in network capability (see Table 3). Through our AR interventions, we identified five tipping points of network capability emergence which are described below in relation to our findings: (i) realisation of network potential, (ii) networks as a burden, (iii) building momentum, (iv) cognition versus action, and (v) dependence on low risk networks. Corresponding and additional quotations can be seen in appendix 1. These tipping points were consistent at each phases of the relational lifecycle as shown in Figure 1.

[Insert Table 3 Here]

Realization of network potential

Our findings underscore the importance of new ventures realizing the potential of business exchange networks as distinct from new venture networking. Similar to the social orientated network literature, our participant firms could see the potential of new venture networking for support, finance and information (Uzzi, 1997; Davidsson and Honig, 2003; Greve and Salaff, 2003). While cognizant of the existence of business relationships including customers, suppliers, distributors and competitors, they were part of their network horizon characterized by transactional interactions. In describing interaction episodes, trade shows and formal business events were highlighted, and the factors that the new ventures isolated as important for network capability emergence such as age and sociability inhibited progress in moving through the lifecycle phases (see Appendix 1, A:6; D:41). This led to five of the new ventures striving to extend social connections into their business world through referrals and sales, in lieu of further embedding themselves within business relationships/ networks.

Clearly, the potential of using business networks as a strategic tool for resourcing, knowledge sharing or product development is not obvious or instinctive for the new venture. It is a gradual process, developed or, in some cases not developed, by the firms in reshaping their view of their network context and in interaction with other network actors through experiences in information exchange and problem solving processes. As can be seen in Appendix 1, for ENT C movement toward network capability was driven by a change in legislation (C: 27), for ENT F through repeated information exchange with customers (F: 81), and for ENT E through joint problems solving within the business net (E: 57). Resource gaps and problems were present for all participants, and support agencies and mentors were deemed useful for information search and perceived as having “no hidden agenda”. Sharing information and solving problems outside of their local net or new venture networking with business connections was not readily observed but was beginning for three participants (G: 94; A: 1). For others, problems were overcome by outsourcing (G: 103), primarily abroad on a transaction basis, in lieu of sharing and combining resources within their business networks. To engage the emergence process new ventures must see the potential in a slightly bigger network horizon than the one they may have perceived at the start of the AR intervention. This may involve a cognitive leap to understand the potential in using a broader set of conduits to building their firms in a business network where they can have access to wider pools of resources.

Networks as a burden

Networks as a burden concerns the development of business relationships and networks being viewed as a liability and a disincentive for the time and resource constrained new venture. This was evident even with the AR sessions and interventions prodding the sample firms in the direction of network action. Previous literature has emphasized the potential benefits associated with network engagement and our findings partially resonate with this literature as three participants accessed resources, opportunities and capabilities from their wider horizon (Hite, 2005; Hoang and Antoncic, 2003; McEvily and Marcus, 2005; Partanen et al., 2014). Our findings highlight that perceptions of, and experience in, using networks, at times, led to networks being viewed as a burden. This was driven by the predominant social or new venture networking view of networks (C: 28) and further compounded by the presence of many new ventures in formal, macro-networks with the primary aim of attaining funding and training (H: 107). This view of networks clouded their overall judgement of relational engagement as they continued to view interaction as time consuming without immediate results (E: 73).

The reciprocal approach necessary to connect in business relationships and networks added to the perception of networks as a burden with three participants unable to see beyond the use of network ties for self-interest (B: 19; E: 59; G: 104). For information exchange, the Internet was regarded as a free, quick and easy source of information. However, this information access was not reciprocal and in line with the relational development capability processes. Negative experiences in generating the required information in a timely fashion and difficulty in gaining access to the appropriate actor contributed to a poor view of networks (G: 95; E: 66). Events were driven by improvisation and intuition and the “ready, fire, aim” (Harrison and Leitch, 2005:361) mentality which characterizes new ventures in their bid to access resources and solve problems on a day-to-day basis. New ventures, associated with a survival mentality and constant firefighting, (Gilmore et al., 2006) used outsourcing as a resourcing tool or delayed product development until resources could be gathered in-house. Self-reliance was high and the effort in engaging with the network was seen as an investment of time without instant returns (B: 16). Involving business networks to facilitate innovation was blinded by the fear associated with sharing ideas or the extra time that engaging with a network for innovation purposes would take (E: 66; H: 119).

Our study exemplifies new ventures who want to maintain independence and emerge in network capability from “trials by fire” (Dalley and Hamilton, 2000:55). This was further cemented by the fact that, although three of the new ventures realised the potential in jointly engaging in problem solving processes and in building and maintaining relationships with distributors and customers, they were not planning on expanding their business in a joint manner or sharing financial or other material resources, showing a preference to build up their businesses on their own. They did not strategize for networks in a formal, planned or long-term way (Coviello et al., 2000) more fitting with network capability emergence.

Building momentum

Similar to Miller and Friesen (1980) two directions in emergence were exhibited. Periods of momentum in which past practices, trends and strategies continually evolved in the same direction slowing the emergence process and, for others, periods of revolution in which numerous trends were reversed leading the new ventures closer to emergence. Critical episodes in both directions were led by mindful trial and error (Miner et al., 2001; Coviello and Joseph, 2012).

Where experiences in interaction with business networks led to new customers (F: 84), rapid international expansion (C: 38; E: 63:65), and enhanced reputation in the network (E:61), the new ventures, through reflecting on the positive experience, evolved their thinking on networks from predominantly a social process and moved through the relational lifecycle. We also saw evidence from the AR sessions and interventions, and interviews of momentum in new venture network engagement processes. For example, adaptations in product development processes using business networks enhanced awareness, while intensifying the amount of information exchanged with a wider pool of actors heightened action continually building momentum towards emergence. Three of the new ventures (C, E, F), through initial information exchange, had moved to sharing more tacit, or know-how based knowledge within their network of distributors and customers, and had engaged in joint problem solving bringing them closer to emerging in network capability. In one case this joint problem solving was with a competitor (F: 85).

Others for whom critical events centred on, for example, attaining state funding or third party blind referrals, continued to operate on the same independent and less networked path more indicative of new venture networking. Strong personal contact ties were favored by these participants in information exchange as trust already exists with their initial social network (G: 96). These sample firms were more likely to take action based on advice from their social network rather than through their business networks. This is in line with Miller and Friesen (1980; 1982) who found that continuing in the same direction is easier and may be more economical in the short-term than evolving through the relational lifecycle.

Cognition versus action

The cognition to action gap relates to the new venture's (founder's) mind-set and is a test of its intention and use in action. A firm might be highly cognizant of its potential networks but without a transition to action it will not emerge in network capability. This resonates with Obstfeld (2005) who notes that coordinated action is not automatic in networks. Our findings suggest that some of new ventures enhanced their awareness of the potential in engaging with a wider business network context. Yet, some showed a reluctance to develop or strengthen their business relationships through the movement between information search/share and problem solving and joint problem solving (see Table 3). This inhibited a progression across relational lifecycle phases.

Information exchange was not actioned as an automatic process, and our findings showed, in line with the knowledge management literature, that at times the ventures chose to purposefully hoard information (Currie and Kerrin, 2004; Wang, 2004; Lee and Ahn, 2005). Cognition in information exchange was enhanced for all firms through the action research setting (D: 44), yet, some did not act in information exchange processes in dyadic relationships or business networks, rather relied on their new venture networking capabilities, including mentors (D: 45). Some became aware of the merit of searching beyond their immediate networks to the connections held by others as a trajectory to additional information sources and assistance in innovation (A: 4). They knew that invaluable information could be acquired from their network of distributors, in relation to sales, as they handle related products, and in operating in foreign markets (E: 63). This demonstrates an ability to move from dyadic ties and understand the threads binding various actors together. This facilitated the mapping of others' networks as a potential source for useful network information exchange as the firms became aware of, and started acting in the use of existing ties as a 'conduit' to other relationships and information sources. The potential value in

collaborating with competitors was not realized by the firms, which, similar to Shaw (2006), stemmed from the competitive industry structure, short product life-cycles in addition to the turbulent economic environment.

The participant firms spoke in terms of partnerships to facilitate the adaptation and innovation process, but were reluctant to take the first step due to the prevailing fear and potential risk of losing crucial information and competence to business partners (H: 114) highlighting the cognition/action gap. Only one venture was currently looking for external investment to further develop their distribution channels (C: 31). Even in areas regulated by industry standards, joint activities did not ensue (A: 12). The general new venture unwillingness to cooperate and their independence-seeking mentality is well documented (DeCarlo and Lyons, 1979; Birley & Westhead, 1994), and acted as a strong disincentive to sharing information on technology, products, prices and costs which were still guarded closely by the new ventures and constrained by an inherent fear of competitors. This point, coupled with the self-reliance in their ability to independently carry their vision through to completion (Lee and Tsang, 2001), tended to mitigate strategic participation in networks.

Three new ventures (C; E; F) did transition from cognition to action through the movement from problem solving to joint problem solving, developed with their main customers where together they designed, tested and developed new products. In discussing joint problem solving in terms of new product solutions through networks, in line with March and Simon (1958), it was clear that engaging others in the process enabled a rapid expansion of ideas, shortening the time span from initial concept to product completion. Transitioning to joint problem solving in this manner sometimes required the sharing of complex, tacit knowledge that was mutually beneficial to the parties involved. Moving from single handed entrepreneurial opportunity creating problem solving behavior to joint does build on the new ventures strength in problem solving and on their readiness to act (Dyer et al., 2008). Cognition to action seems to distinguish those firms whom were ready to use network capability and those whom had some way to go in the process before they would let themselves become fully open to network partners.

Dependence on low risk networks

Our findings suggests that some of the new ventures exhibited dependence on low risk networks or new venture networking which had the potential to delimit their access to network information and resources through relying on redundant sources, hemming, trapping and locking them within their own initial social/local network (Gargiulo and Benassi, 2000; Uzzi, 1997; Vissa, 2012). Emerging in network capability is more strategic and learned than the low risk network structure and requires experience within business networks to translate into a capability (Larson and Starr, 1993; Hite, 2003). In this study we witnessed an over-reliance on support agency networks for opportunities, funding and advice, which prevented the ventures from moving through the relational lifecycle (G: 102; A: 9; D: 46). Support agency networks are not reciprocal; they operate as a one way steam in favor of the new venture. Some did engage in a more strategic manner with state agencies (C: 32) or exhibited less dependence due to negative experiences (E: 72). In widening their network context for information exchange, a reliance on online events further highlighted a dependency on low risk or on new actors (B: 18; H: 112) where reciprocal relational exchange did not happen. Low risk networks were also relied on for information exchange and support (A: 13; B: 15; D: 47). Hence, less dependency on the same would require a strategic change to understand and be willing to engage in business networks which require a reciprocal, 'give

and take', approach. Vissa (2012) found that firms who focus on deepening existing social connections are highly reliant on referrals. This resonates with our findings as the participants who relied on their low risk nets used networks primarily for referrals and were less likely to widen their context to include new relational exchanges or deepen interactions with business partners in their horizon. That is, they were less likely to move through the relational lifecycle.

Low risk networks required little investment in terms of time, however those that did invest time in business networks reaped rewards. ENT C, E, F commenced regular meetings with suppliers, customers and distributors which were not solely pegged to events, moreover were focused on the long-term relationships for information exchange and problem solving. ENT C noted that they now have four manufacturers in place and through the distributor and manufacturer networks, profit margins and customer satisfaction have increased for the firm. The participants were beginning to build, and see the value of building long-term relationships with customers (H: 91). However, as noted the participants were unwilling to financially partner with their business networks in order to raise capital or sell shares for fear of losing control (DeCarlo and Lyons, 1979; Birley and Westhead, 1994). They all aspired for growth, but wanted to achieve it independently, not through joint strategizing or joint investment activities.

Conclusion

The core intention of this paper was to develop a relational lifecycle model of how a new venture emerges in network capability. Our research question was how is this done and what tips the new venture into emergence? We presented a relational lifecycle model of a process-based pathway for the emergence of network capability depicted in Figure 1. Findings suggest that this process is evolving and cumulative. The lifecycle model is divided into three phases which evolve over time based on the level of network engagement. As the new venture gets more involved with its business partners it develops the strategic ability to use its networking, relational and network capabilities as it learns from its interaction experience. To be able to use network capability requires the firm to have a high level ability to purposefully interact with its business partners through developing its level of network engagement. This level progresses through increasingly complex interactions through the dynamic capability building microfoundational processes identified.

Our AR interventions inductively identified critical changes between the phases which furthers our understanding of what can propel or repress new ventures towards emerging in network capability. Capabilities do not suddenly appear, and while there have been calls for more literature addressing the origins of capabilities (Montealegre, 2002; Winter, 2012; Zollo and Winter, 2002) the literature in this areas is still in the nascent stage (Autio et al., 2011; Winter, 2012). Our paper adds to the new venture and business network literature and is the first exploration, to our knowledge, of how capabilities emerge through periods of change, in interaction processes in a business network context.

Conceptually, as a strategic new venture construct, network capability emergence shares a common theoretical frame of reference with dynamic capabilities in a resource-based perspective (Teece et al., 1997; Eisenhardt and Martin, 2000). Similar to Zahra et al., (2006), in examining critical episodes we place our focus on examining the dynamism of the relational capabilities themselves, moving between periods of change or equilibrium and not the environmental characteristics which surround them. In this way new venture actions and interactions are central to the emergence of network capability process and we unravel the interplay between and within the underlying interactive processes and lifecycle phases upon

which the capability can be configured and developed. As the business network lens suggests (Håkansson and Snehota, 1995; Håkansson et al., 2009), our study focuses on process and pathways of the relational lifecycle, and recognizes that the firm, and relational actors in their environment, need to be understood, in interaction to fully appreciate the development of capabilities that enable it to create a distinct relational advantage, which in our case is the emergence of network capability.

Our relational lifecycle has implications for the new venture network literature. The benefits and performance consequences to firms of being embedded in networks are commonly identified (Hoang and Antoncic, 2003; Edwards et al., 2010) but network capability is often assumed as a starting point in research on new ventures' network development. Our paper questions the assumption that new ventures will understand and readily use network capability and the degree to which it varies from firm to firm. Inherently, firms are embedded in a nexus of external social relationships but translating this into a capability or thinking about it as a strategic possibility on which to grow and develop the business involves challenging the firm's worldview and rationale for being in business. By examining firm behavior and events in interactions with their business networks we shed light on the relational lifecycle and tipping points moving them towards or away from becoming more integrated into their business exchange networks using them as a vehicle for the survival and growth of the firm.

Within the new venture literature, the term network has been loosely applied to illustrate a myriad of interactions rendering comparison of findings across studies difficult while restricting the development of a core body of knowledge about small firm or entrepreneurial networks (Ciabuschi et al., 2012; Jack et al. 2010; Shaw, 2006). We know that new venture networking is social in nature and not synonymous with the business network concept. The intention of this study was not to add to this definitional or theoretical debate. Rather, we accept that there are benefits stemming from all network types and viewpoints and adopt an inclusive view of networks whereby we suggest that new venture moves through a relational lifecycle from new venture networking to relational capability to emerge in network capability. The new venture needs to be aware of, and act within diverse network types to facilitate the emergence of their network capability. The characteristics of network ties may change (Granovetter, 1985; Hite, 2003) and can be activated according to different needs (Greve and Salaff, 2003). Hence, focusing on any one type of network would not give the new venture a clear picture of the full breadth of their network engagement potential.

In practice the emergence of network capability is invaluable for new ventures as it has the potential to relieve some of the resource/time pressure on them by providing them with strategic routes to acquire key resources through their existing and potential network ties. Through the engagement processes of awareness, information acquisition and sharing, and action they are poised to access, share, and jointly integrate network expertise and more tangible assets to move through the relational lifecycle. This is particularly important in a new venture context in which such activities are often constrained because of a lack of resources such as funding and/or expertise. However, developing a network capability is a time-consuming learning process that requires a level of commitment that cannot be underestimated. New ventures must pay attention to their networks and the implications of their connections to continually develop their network capability. Understanding the tipping points in this journey may accelerate this important process.

Our study is not without its limitations. The obvious problem with it is that it is process-based and does not address the structural nature of networks. Yet it does respond to the

need for more process-based work. Additionally, the lifecycle model may not be homogeneous for every firm. New ventures' constant fire-fighting status based on day-to-day survival can consume their activities and translate to a lack of long-term strategic orientation and planning which mitigates a more deliberate action-based transition needed to emerge in network capability. For emergence, it is essential to engage the mind-set of the new venture which can be challenging. Our findings highlight that, should they have the time and finance available to develop the required capability, they would generally prefer to remain operating independently (Hanna and Walsh, 2008). A cognitive leap from independence to considered interdependence in their approach to relationships with other firms is needed for the firm to move from stability to change in emergence. Finally, the benefits of emergence may not be immediate. A new venture needs to have the capability to benefit and this may be a disincentive for the time and resource strapped new venture.

The five tipping points identified in this research were inductively derived and not exhaustive. Their definition, measurement and underlying conditions could be enhanced in further studies. Incorporating a longer time frame into the research might also be a fruitful area for research. Using AR interventions to identify the tipping points could lead to measurement bias. AR, as practiced by us, is a form of field experimentation, and, as such, has the associated problems in ensuring replicability and generalizability being bound by context and situational. Findings from this research have intuitive appeal and were developed through interventions in and with practice. AR was complemented with interviews and the collection of a huge data bank of data on the sample firms which mitigated the drawbacks of the method.

The pace of capability development varies between firms and future research could concentrate on factors endogenous to the new venture or by events in its broader environment which can trigger changes in emergence. One very promising avenue relates to the business mindset and beliefs of the founder (s) and their impact on moving through our relational lifecycles. These intentions have been found to affect individuals and entrepreneurs' behaviour in their social networks (Brinckmann and Kim, 2015; Sasovova et al., 2010; Schillebeeck et al., 2016). This could impact their desire, action and the timeframe it takes them to move through the lifecycle phases. Additionally, performance effects from moving closer or away from emergence could be analyzed. Finally, because of the small country context within which the process was explored, it may be interesting to conduct a similar study in a larger country context with more resource-rich new ventures.

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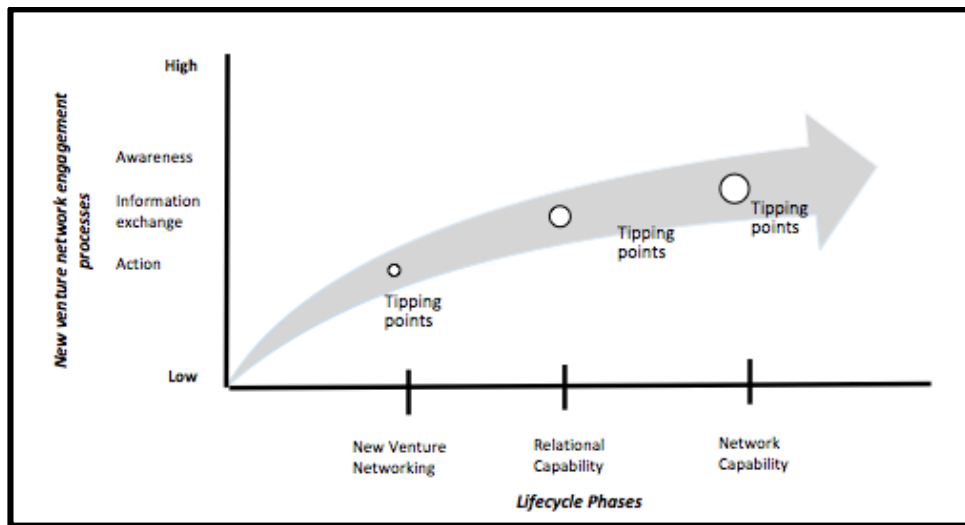


Figure 1: Relational lifecycle

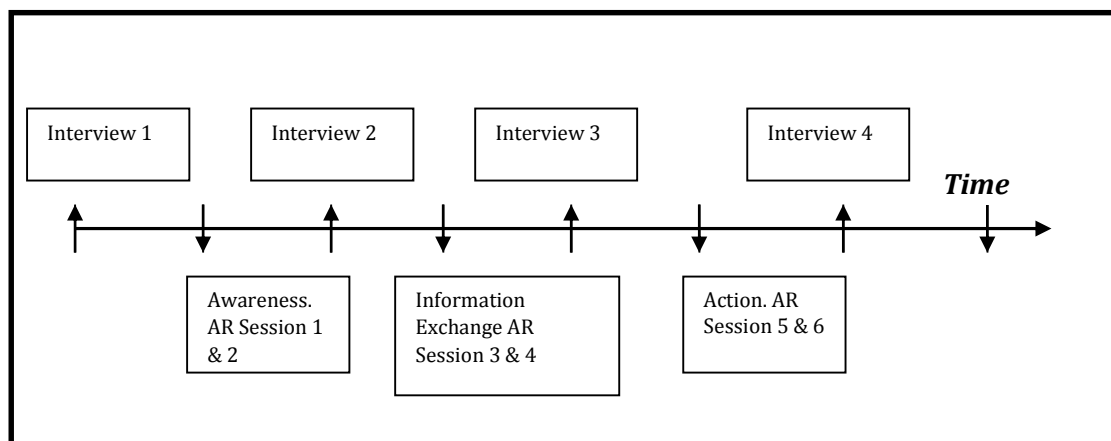


Figure 2: Data Collection Process. AR = Action Research.

New Venture								
Turnover								
Number of Employees								
Industry Sector								
Education								
Number of Years in Business								
Age of venture owner								
Gender								
Export								

A	€180k	1	Nutritional food manufacturing	Science Degree	2	60	Male	No
B	€220K	2	Information management software systems	IT Degree	1.5	38	Male	No
C	€750K	4	Manufacturing nutrition and pharmaceutical products for animals	Master of Business Degree	4	42	Female	Yes
D	€200K	1	E-learning solutions and course development	IT Degree	3	40	Male	Yes
E	€500K	1	Provision of external, embedded and base station antenna solutions for M2M applications	Engineering Degree	2	36	Male	Yes
F	€75K	0	IT specialist	Business Degree	2	40	Male	Yes
G	€120K	2	Specialist training programmes and management consultancy	Business Degree	3	45	Male	Yes
H	€100k	0	Online tax solutions	Accountancy Degree	2	58	Male	No

Table 1: Profile of case new ventures

	Awareness	Information exchange	Action
Realisation of network potential			
Networks as a burden			
Building momentum			
Cognition versus action			
Dependence on low risk networks			

Table 2: Critical events within and between the lifecycle phases in the emergence of network capability

*Circle = Recurrent; Square = Critical; Shaded = Positive; Not shaded = Negative; Continuous line = Serendipitous; Broken Line = Goal directed

Table 3: Tipping points and engagement processes in network capability emergence

New Venture	Potential			Burden			Momentum			Cognition			Dependence			Pace of Lifecycle Emergence
	L/H	S/S	P/J	L/H	S/S	P/J	L/H	S/S	P/J	L/H	S/S	P/J	L/H	S/S	P/J	
A	●	○	●	●	●	●	●	●	○	●	●	○	●	○	○	Slow
B	●	○	○	○	●	●	●	●	○	●	○	○	●	●	●	Slow
C	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	Fast
D	○	○	●	●	●	●	●	●	●	●	●	●	●	●	●	Slow
E	○	○	○	○	●	○	○	○	○	●	○	●	○	○	○	Fast
F	○	○	○	○	○	○	○	○	○	○	○	○	●	○	○	Fast
G	●	○	●	●	●	●	●	●	●	●	●	●	●	●	●	Slow
H	●	●	●	●	●	●	●	●	○	●	●	●	●	●	●	Slow

* Negative ○ Positive ●, L/H = Local network/Network Horizon, S/S = Search/Share, P/J = Problem solving/ Joint problem solving

Appendix 1: Sample classification quotes from case data and code references used in the findings and discussion section

	Local/Horizon	Search/Share	Problem Solving/Joint Problem Solving
Realisation of network potential	“Networks are working a room well” (A:6); “I am hopeless with networks, I am too shy” (D: 41); “Following a referral from an existing network customer there is an 80% chance of securing a potential customer” (E: 67);	“Through carefully listening to customers we can engage in mass customisation” (F: 81); “You must make a deposit before you can make a withdrawal” (G: 94); “Give and you shall receive. Rather than drop a 200 page report to another manager give them two relevant pages... view information through the eyes of the recipient” (A: 1); “A change in legislation rendered the importing of our product illegal in a foreign market, however, through engaging in information exchange with our distribution network, we discovered a local manufacturer to guarantee supply to our customers” (C: 27).	“I am going to look at the possibility of outsourcing some of the more routine work that I have to do on a daily basis to give me more time to innovate” (G: 103); “One of my customers complained that his drivers were dissatisfied with the noise, size and leakage problems associated with the component that I provide. We approached the installer and drivers to discuss their requirements and the resulting product was very successful. The drivers were pleased to have an involvement with the design; the sales team didn’t have to deal with so many complaints and the company owner was satisfied to have resolved the issue” (E: 57).
Networks as a burden	“Looking for agency funding wasted a lot of valuable time and effort” (E:73); “At the last event I was at no business cards were distributed and nobody was discussing their business with the e-marketing experts present” (B: 17); “Networks as a name dropping is and pompous and arrogant thing to do” (C: 28); “I am constantly striving to build stronger relationships with the likes of Enterprise Ireland... Now, after four years of attending as many meetings and conferences as I possibly could, and talking to the right people, I have made myself visible. I am invited to meetings and conferences as a guest of the agencies” (H: 107).	“Last week I had a meeting with a person who I do not know that well, as such a weak tie, regarding my business direction and I feel that he was putting me in the wrong direction” (B: 19); “I admit that I have a selfish attitude towards networks and am cagy about my competitors. I will not give them any information, being a salesman all my life I know that competitors are always out to bring you down and I will never refer anybody to anybody else” (E: 59); “There are many people who I know could assist me with my business, for example, the Minister for Communications, Energy and Natural Resources. However, unfortunately I cannot tap his brain on a weekly or even yearly basis” (G :95).	I approached an academic institute in Dublin for innovation purposes but I could not wait for the holiday period to end and the academic term to recommence (E: 66); “The old B&B days are gone, whereby if you had a full house you would pass business down the road” (G: 104); “Being a software engineer I know exactly what products are on the market, how they operate and the processes behind them. Therefore I can innovate based on the limitations of my competitors. Without much effort I understand the costing behind my innovative activities and recognise from customer suggestions what is and what is not feasible” (B: 16); “I do not use my networks in terms of innovation. I have found through experience that others tend to copy ideas or run with silly projects that will not make money or will merely supply them with a nice life style. Others are waiting for that big idea that may never come. I’m getting on with my own vision and plans and cannot wait for fool’s gold” (H: 119).
Building momentum	“The attainment of a large, prestigious customer opened the doors to numerous other customers who previously had not engaged with us due to our small size” (E:61); “In my view, distribution involves a lot more than the mobilisation of goods and services; customers greatly assist in the diffusion of products and	“A good network is worth gold. That is something that has to be respected and contributed to as much as it gives back. Otherwise it will never work” (C: 29); “I have started to visit to our UK customers, and with them, visit current and potential customers. Distributors know the lay of the land. They know the local key players, including customers, competitors and suppliers. They	“I have built significant relationships with the individuals to whom I outsource work” (B: 14); “Distributors acting as agents in international markets have enabled us quickly expand our offerings into new markets in European and the US with reasonable ease” (C: 38); “With a complex product change, the customer will work directly with us for design purposes. However, I will always give the distributor 10% of the sale price as they made the initial connection. This ensures that they will continue

	services through positive word of mouth" (E: 69, 70); "In co-developing and supplying one customer with my product, I have gained access to the network of over 40 sister customers" (F: 84); "I was surprised at a recent event that no business cards were distributed or that nobody was discussing their business with the e-marketing experts present (B: 17); "At a recent event the speaker spoke only for a few minutes which was ridiculous and a waste of time" (H: 108).	keep me informed of changes in the market and introduce me to new customers on each visit" (E: 64); "Both I, and (another member of this group), can speak at length about our businesses as we know each other's business and issues intimately. To conduct such a conversation with another individual would not be as beneficial to me as I do not know them as well" (G: 96).	to recommend our products. Similarly, if a customer contacts us directly I will involve the local distributor to keep them motivated" (E: 65). "I recently presented a product to a potential client. The client was impressed with my ideas and also the ideas of a competitor. As they were undecided regarding who to give the large contract to they suggested that we both work together to deliver the product. They highlighted features of both our presentations that they would like to see combined. Thankfully we are both open to this idea and this way of conducting business and have had many phone calls to date discussing the issue" (F: 85).
Cognition versus action	"Enterprise Ireland has injected €140 million into the food sector through partnerships with UCC, UCD and UL. Many research and training and development programmes have ensued through the funding, with the aim of supporting the development of a market oriented, competitive and innovative food sector particularly in the growing 'foods for health' sector, which meets the highest standards of quality and safety" (A: 3); "The outcome from our meeting with Enterprise Ireland concerning exporting was very positive. We were very impressed with the overseas network potential through EI. However, we have not made the move yet" (D: 53).	"These sessions have made me think more about my networks which has been of great benefit to me. I have realised that you have to capitalize on the opportunity to 'put yourself about' whenever you can and that there are sources of information close to me that I have never used before. This, in the future, could save me time and effort" (F: 87); "My mentor, as a key business person in the ICT area, has a massive network of contacts that I can now tap into due to a clearer visibility of his network. This could present significant opportunities for information relating to my business as he can bridge useful connections on my behalf" (D: 45); "Our distributors sell other components that are used in conjunction with ours. When a customer calls them they will ask if they have a supplier for the component we sell. If not, they will put the customer in contact with us" (E: 63).	"I was struggling with part of the innovation process and reached out to a supplier for help. The supplier could not help but used his network to sort the issue" (A: 4); "I would like external investment but am not actively seeking it" (H: 114). "There are seven potential companies that they we merge with; we have identified two end users who could potentially invest in the company; and there are three distributors in a position to invest" (C: 31); "Consumer service audits facilitate adaptation. It helps us to determine what products are successes, what new products or adjustments are required and what changes the customers would like to see. Mandatory meetings with suppliers, distributors and large allow for discussions regarding new trends and products in the market, but we have not co-developed products" (A: 12).
Dependence on low risk networks	"We have many ideas and opportunities but cannot attain the state funding to enact them" (G: 102); "Ideas are not the problem, it is the finance, time and personnel to move them from a white board to a reality" (A: 9); "My business partner is going to look for CORD funding next year. We have decided that we can innovation under a new company and start the process again. We have experience in dealing with state agencies so it should be much easier second time round" (D: 46); "I	"I have enlisted the support of a fellow participant to teach me how Customer Relationship Management (CRM) technologies operate in order to retain all relevant information about my customers" (A: 13); "Mentors are useful for information search and have no hidden agenda" (B: 15); "My previous employer provided a very supportive and mentoring role and even provided me with references when I was trying to finance my venture" (D: 47); "When I launched my software based product, I sent a demonstration as far and wide as I could through online network software	"Enterprise Ireland helped to create market awareness for our product in Spain. The Madrid office conducted some research on our behalf to see what products already existed on the market and hence what adaptations were necessary. They also suggested some potential distributors for our product which were are still using today" (C: 32); "I approached the enterprise board regarding laboratory space so that all of Irish operations would be in the same building. I would buy the equipment to furnish the room and would then rent from them on a long term basis. I was disappointed when my offer was rejected, based on the premise that there would not be enough earning potential in the project for the board. The space is now dedicated to the training of hairdressers which is non-

	haven't really thought about customers much because I have been too busy with the jobs that came through from my last employer" (D: 48).	such as 'Facebook' and 'Linkedin'. Results have been positive in that a large number of people have tested our product. However, it is too early to gauge exact figures" (ENT B: 18); "I have been involved in a course in Dublin City University (DCU) with 50 other sales managers. I just set up a network to keep in contact with the class members, both the high profile and small companies equally" (H: 112)..	compliant with their aim of assisting small enterprises" (E: 72); "I will travel as far as necessary to meet a customer eyeball to eyeball, even if an interpreter is necessary, it is good that a customer can visualise you and vice versa" (C: 33); "To a certain degree we rely on our customers to either tell us or imply what improvements they would like to see. Through frequent meetings with them we increase our chances of discovering their needs and innovating to meet them. On occasion this has been merely a passing comment by a customer which has sparked an idea for us" (H: 91).
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