Que Sera, sera? Conceptualizing strategic network foresighting

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ABSTRACT
In this paper, we take the first steps for developing business network foresight as distinct understanding and procedure for supporting strategizing efforts in business networks. We depart from the existing foresight literature, but realign its ideas to fit with the core tenets of the IMP approach. Our purpose is both to explore such phenomena but also to contribute to the practice of collective foresighting in business networks.

Keywords: Strategic foresight, strategizing, network pictures, strategic network foresighting
INTRODUCTION

This paper is concerned with the formation and development of foresight among actors in business networks. Before stating what we exactly mean by foresight and our purpose for studying it in more formal terms, we start off with a couple of examples from different business network settings. It is quite common among business actors involved in the offshore wind industry to rally other business actors together in order to share ideas and discuss a specific issue pertaining to the further development of offshore wind. Such issues can be technical such as calculating fatigue in steel structures or the interpretation of legal advancements, but are often inseparable from commercial issues (such as logistics and insurance costs) and involves some form of taking stock of the expected future and how to deal with it. These kinds of seminars abound among actors in the offshore industry; they may be called in by an industry association, by business actors or by a third-party consultancy firm. Typically, they are quite informal and by invitation. Invitations spreads through word-of-mouth. The discussions on these seminars seldom lead to any conclusions or proceedings and it is not uncommon to hear managers describe them as “nothing new came out” or “company x said exactly what they always say about this issue”. Still, they seem to serve a purpose and they are repeatedly and frequently attended by the same group of business actors.

Nordic Semiconductor is a fabless semiconductor company, specializing in ultra-low power wireless technology. Nordic Semiconductor outsources the capital intensive processing of silicon wafers as well as packaging and test, to highly specialized subcontractors, mainly located in South-East Asia. Nordic Semiconductor forges long-term relationships with a compact, strategic set of such subcontractors. The subcontractors are selected based on a combined assessment of a range of qualities, e.g. costs, manufacturing capacity, financial robustness and long term business perspective, and technology leadership and roadmap alignment to Nordic Semiconductor’s requirement. It is a future-oriented company with 80% of its employees working in R&D. New products and technologies are developed on a constant basis. Therefore, decision makers at Nordic Semiconductor needs to make sure that the subcontractors’ plans and roadmaps for technologies, products, and product improvements planned in the years ahead fit well with Nordic Semiconductor’s technology and product roadmaps. Consequently, Nordic Semiconductor includes discussions on roadmap alignment on the agenda in the dialogue with the subcontractors.

In these examples and in others we know or had heard of, business network foresighting – here understood as the interaction processes leading to the formation of individual and shared
expectations about the future - is at the heart of interacting and making strategic commitments in business networks. Future expectations forms the basis of choices made today, and forming guesses about the future it is a core activity in creating ideas of what to come and how best to prepare for it (Heger & Rohrbeck, 2012). Business researchers has a foundational interest in understanding how expectations and choices are interlinked, as this is at the very core of understanding organizing processes within and across organizational boundaries. IMP research on business networks has only begun to discuss strategic practice and so far not really discussed the formation of expectations and how it relates to the strategizing efforts of business network actors. In their discussion of the fallacy of managerial linearity in technological development, Håkansson & Waluszewski (2002) touch upon the relationship between interaction and futures, suggesting that while managers may be subjected to fallacies of linear thinking, they are in fact unable to predict emerging reality in any form, as this depends upon their own actions and those interacting with them. In this conceptual paper we expand on this idea as we seek to address the formation of managers’ expectations regarding business network futures. We ask the question: How do business actors form expectations about the future in business networks? As we see it, business actors’ expectations are generative, in the sense, that they both guide attention and activities as well as shape intentionality and the nature of commitments in interaction with other business actors (Borup et al., 2006). Furthermore, as business actors are uniquely positioned in business networks, expectations are generated from a heterogeneous vantage point. This suggests that differences in business network horizons and how they affect the strategizers’ understandings of interconnectivity and its consequences to strategic actor’s future behaviour comes to the fore (Thorelli, 1986).

Our paper serves several purposes. In more narrow terms, we think addressing the expectations formation in business networks will help us to develop the IMP research on strategizing by addressing the notion of business network foresight. But we also want to engage strategic foresight research in a useful dialogue with respect to how their practices may develop in order to encompass other understandings of axiomatic conceptions of what drives the formation of strategic expectations in business networks. Corporate foresighting – although evolving data collection from an immediate network of firms - is typically discussed as an internal competence (Major & Cordey-Hayes, 2000). It is rooted in the notion that the firm must take stock of the evolving environment, seek to identify opportunities and threats in their fruition and plan for the long range. Successful foresight link to the ability covert data to insights and take action on that basis. Adequate foresighting becomes a question of developing the right
corporate sensors for detecting weak signals that are forming future trends (Rohrbeck & Gemünden, 2011). Taking interaction to the core of the foresight process, suggests an alternative view of forecasting, where the formation of issues becomes a process of collective sensemaking. From the vantage point of individual business actors, the process of forming and contesting framing of issues, becomes attenuators, helping managers imbue meaning to a bewildering array of network equifinality (Deboer & Andersen, 2016). We see this discussion between a linear and an interactive perspective on forecasting as relevant also for strategic foresight practitioners, as it may bring different ideas to the table on how to frame foresight processes. Furthermore, taking a practice perspective, we seek to outline how business network foresighting – not only as an analytical but also as a co-creative act may be carried out among actors in business networks. This is the twofold aim of our research: to explore foresight phenomena in business networks and to contribute to the ongoing discussions on how we may move the IMP tradition from its descriptive stance into engaging with managerial reality.

The paper proceeds as follows. First, we review the existing IMP literature on strategizing and expectations. We link this literature to the strategic foresight literature, drawing on key contributions and existing literature reviews of this field. We contrast the underlying assumptions regarding business actors and their surroundings with the assumptions regarding firm’s strategic behaviour and business networks in the IMP approach and draw out implications with respect to the nature of strategic foresighting in a business network setting. In the final section of the paper, we develop a research agenda for exploring further the role of expectations and foresight in business network strategizing.

**STRATEGIZING IN NETWORKS AND NETWORK PICTURES**

Over the last decades the IMP literature has addressed business strategy, strategizing and management issues. In Ford et al (1998), strategy is thought of as the pattern of a company's choices that are significant for its economic performance over time, and that it becomes committed to. Conventional approaches to strategy assumes: a) a strict boundary between the environment and the organization and b) individual actors’ autonomous control over resources. These foundational assumptions are both questioned from an IMP perspective. Most IMP scholars would agree with Håkansson & Snehota (1989) that business actors are interdependent rather than independent actors. It is difficult to point out exactly where the influence of one company ends and another begins, challenging the notion of a definable
boundary between the firm and its environment. As a consequence, firms act and interact in order to influence each other, and seek to serve their own business interests in that respect. Interaction is unfolding both in relation to those immediately connected to the strategizing actor, but is also influencing and influenced by the wider network stretching beyond the actor’s business net. As pointed out by Baraldi et al (2007, p. 881): “if one accepts that business networks are ineluctably enmeshed in relationships and networks then the elusive concept of a network view of strategy is clearly important”.

Central to strategic decision-making in business relationships and networks is the activity of strategizing, which concerns choices about the future regarding how to interact with, and mobilize as well as influence, other actors through connected business relationships (Gadde et al., 2003; Holmen and Pedersen, 2003). This and other definitions following underscores two important aspects shaping strategizing research in the IMP tradition: human cognition and interaction. First, it is important to understand, that although organizations are engaged as economic actors in strategizing processes, strategizing is carried out by practitioners (Ritter et al, 2004). In this perspective, the IMP approach to inter-organizational strategy differs from other perspectives, viewing the strategic choices of organizational actors as subsumed a larger collective or business ecosystem (Adner, 2012; Astley & Fombrum, 1983). In this paper we take an actor-centric view, assuming that resources and activities are represented merely as images in the minds of managers. By managers, we are also referring to those within the organization, which has a decisive role to play in the sensegiving processes, which typically also would be those setting the strategic direction. We concour with March, stating that “as long as we assume that organizations have goals and that these goals have some classic properties of stability, precision and consistency, we can treat an organization as some kind of rational actor” (March, 1981, 215). These are clearly limitations, as one can imagine several other actors in- and outside an organization participating in the formation of expectations. Also, we acknowledge that business networks are more than actor bonds and that current resource ties and activity links also have an intermediating impact on the formation of expectations. However, we do not want to anthropomorphize these in any sense. In our view, scallops – or any other resource for that matter, will certainly influence and direct thinking and action but may never form expectations worth debating.

Second, the importance of interaction for the ongoing process shaping individual and shared beliefs and expectations must be properly addressed. How do business actors see and acknowledge other actors in their formation of expectations about the future? Some
contributions have looked closer at how managers use their understanding of the network to analyse and make strategic decisions, and have introduced the concept of network pictures (see e.g. Henneberg et al., 2010; Mouzas & Naudé, 2007; Mouzas et al., 2008; Öberg, Henneberg, & Mouzas, 2007; Ramos & Ford, 2011). Network pictures are defined as “the views of the network held by participants in that network” (Ford et al., 2003, p. 176). These actors act as representatives of an organization’s interests and beliefs. According to Holmen et al., (2013, p. 141) “network pictures reveal companies' perceptions of what is happening in the network around them, and provide guidance for assessing the usefulness of various actions and reactions that they may undertake in the network”. Abrahamsen et al. (2016) discuss network pictures are managers' theories-in-use about their business network, i.e. how they make sense of their network of connected relationships (their environment), how they perceive strategizing options, and how they evaluate these collectively.

In the last few years some contributions have discussed the process of strategizing in relation to different actors’ network pictures. Colville and Pye, 2012 refer to this managerial process as network picturing. Colville and Pye (2012, p. 372) claim “… sensemaking is a dynamic process and if we translate this to network pictures we should be thinking not so much of snapshot/static network pictures as of dynamic network picturing”. Furthermore, Abrahamsen et al. (2016) link network picturing to the process of strategizing as they are concerned with network picturing as the interplay between cognition and action, in particular relating to what managers perceive (their network picture) and what they do (their strategizing activities). The claim that the two aspects are part of network picturing, i.e. understanding the network on the one hand and strategizing on the other, are linked together through an evaluation of available strategic options.

The interactive element of strategizing and strategic behaviour is addressed early on by Håkansson & Snehota (1989), as strategy is developed through interactions maintained with other parties: “Interactions takes place between actors who are pursuing their own goals and acting purposefully (and) in such a setting, reacting to other actors’ actions can be more important than acting itself” (p.197). Interaction links to both learning and ex post rationalizations as part of the strategizing activities in business networks (Araujo & Easton, 1996). Firms are embedded in networks of economic exchange, that create restraints as well as opportunities. Resource ties, actor bonds and activity links all contribute to the formation of commitments, which in their turn be transformed into new opportunities as actors seize opportunities (Andersen & Medlin, 2016).
We believe that an important part is missing in the network picture discussion. This part concerns the role of expectation-building among interacting actors. In the network picture literature, managerial cognition is a private and subjective enterprise, as individual managers form theories about performance and how they may link activities and resources together across organizational boundaries in pursuit of strategic aims (Ramos & Ford, 2011). In the interactive approach, focus is on the (inter)actions as reactions, and these seems to be fuelled by actor-centric speculations, disregarding the formation of ideas and beliefs among a collective of business actors. From an interactive perspective on strategizing in business networks are more than everyday learning and interaction combined with private speculations and network picturing. These notions are not capturing the entire picture. As shown in our examples in the introduction of this paper, business network actors also publicly seek to develop and influence expectations. They externalize ideas and seek support for them ideas and in this way they seek to influence expectations of other actors. In a collective setting, expectations are not only adaptive: they are future generating, as they coordinate and guide activities, foster investments and attract attention and interest towards other actors.

The notion of future time as impacting on present-day interaction is not alien to IMP research (Medlin, 2004). We seek to extend the ideas of future as a context for strategic interaction, by addressing explicitly the ongoing formation of and relation to intersubjectively *shared expectations* as a strategic and intended endeavour. The formation of expectations among business actors is fundamentally a process of social construction. Shared expectations represents a form of objectification, where actors start treating social facts as objective. In this sense, they are interrelated and interactive and may socially construct disruptions, rhythms of stability as well as change in a business network. For instance, Porac (1995) showed the creation of shared categorizations regarding market opportunities and business actors among Scottish Knitwear manufacturers. Similarly, Barnett et al (2003) discussed the social constructivist underpinnings of Moore’s law\(^1\) among producers of microprocessors, synchronizing their innovation efforts.

Research on the formation and role of collective expectations has developed in a number of research areas outside the strategy literature, which might be helpful to further our understanding. Research programmes concerned with the social construction of technology (SCOT) and actor-networks have both been occupied with understanding the progresses of

\(^1\) Moore’s law suggests that that the number of transistors in a dense integrated circuit doubles approximately every two years
technologies and how these have been jointly developed with actors concerns and focus on certain issues and solutions deemed relevant by specific groupings of society (Pinch & Bijker, 1987). In their research, problems experienced by social groups shapes attentions and in this way moulds collective expectations concerning what issue matters for the future development of a technology. Likewise, the literature on strategic foresight has focused on the role of expectation-building and offers a substantial discussion with important possibilities for cross-pollination with the IMP approach with respect to both scrutinizing the role of expectations for strategizing efforts in networks, but also for developing procedures towards understanding how collective expectations shape the unfolding of business networks. In the remaining part of the paper we will discuss this approach in more detail, and outline how insights from this literature potentially may inspire the understanding of expectations formation processes in business networks.

**STRATEGIC FORESIGHT AND POTENTIAL IMP CROSS-POLLINATIONS**

A review of the strategic foresight literature must start with its precursor: forecasting, which dominated business literature and practice several decades ago. Forecasting has been defined as “the task of making a probabilistic statement on a relatively high confidence level about the future” (Wills, 1972). This notion was echoed in the strategy literature by Igor Ansoff (1965; 1975), who were at the forefront of introducing long range planning systems based on environmental forecasts\(^2\). In essence, the failure of predicting the 1973 oil shock led to considerable scepticism with respect to the validity of forecasting as an exercise in accurate predictions, casting the business actor in the role of a passive observer (Martin, 2010). Research focus has gradually shifted to anticipation or foresight, which involves an explicit recognition that the choices actors make today are actively shaping the future. The foresight perspective holds that futures are not singular but multiple and we derive one future rather than another from the confrontation between various actors (Godet & Roubelat, 1996). A similar notion is presented in a paper on innovation forecasts in interdependent business landscapes, suggesting that forecasts are context-dependent (Waluszewski, Ingemansson & Håkansson, 2014).

\(^2\) Long range planning and forecasting lives on in parts of the strategic management literature with specific journals devoted to furthering research on this issue
According to Slaughter (1995, p1), foresight “is not the ability to predict the future…it is a human attribute that allow us to weigh the pros and cons, to evaluate different courses of action and to invent possible futures on every level with enough reality and meaning to use them as decision-making aids”. Contrasting forecasting with foresight also helps in delineating the characteristics of the latter. First, foresight emphasize the processes of expectation building in the meeting of different actors’ different futures over the instrumental aspects of making deterministic predictions of the future task environment. In relation to this, foresight places strong emphasis in understanding what forces are likely to shape future possible and probable scenarios, rather than predicting a uniform future state or identifying one particular contingency (such as a technological advancement) as creating a particular future outcome. Underlying these differences are different ontological and epistemological assumptions about the future and how it can be understood. In a linear understanding of reality and how it unfolds, epistemological choices concern the degree of accuracy and sophistication of predictions. In the foresight approach, a voluntaristic approach is taken to unfolding of the future, suggesting that it depends on actors’ choices and mental framing of opportunities. In this perspective, the epistemological aim is to survey as systematically as possible chances of development and options for action and portray alternative future outcomes. However, there are important underlying differences between the foresight literatures understanding of actors and business contexts and the IMP perspective. These differences must be taken into consideration as well, in order for a cross-pollination to occur.

This fundamental difference between the strategic foresight literatures’ basic assumptions if the environment and those of the IMP approach has important ramifications for understanding the nature of foresight and how it possibly unfolds. We believe that exploring these concerns could form the basis of developing a research program of network foresight. The literature on business networks, builds on an alternative conceptualization of the business context, where a joint process of environmental construction is at the core. In table 1, some core tenets of the strategic foresight perspective are outlined and are further used in a discussion that may help informing a research agenda on strategic network foresighting. Following other traditions of comparative theoretical mapping and analysis (see for instance Möller, 2013) we address these under the headlines ontology, epistemology and procedure and practices of participants (methodology).
**Ontology**
Most important is the different ontological understandings of the means through which external forces shapes activities. In the strategic foresight literature emphasis is on an understanding of external forces as general, in the sense that they generate from the total interplay among all actors and influencing all actors in more or less the same way. At the ontological core of the

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<th>Aspects of foresight(ing)</th>
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<td><strong>Ontology</strong></td>
<td>The future is multiple and that from the confrontation between the various actors [we] will derive one future rather than another</td>
<td>The future will derive from the interaction between the company, the actors to which is directly or indirectly connected, and the wider connected interactions in the network.</td>
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<td><strong>Epistemology</strong></td>
<td>Foresight is concerned with creating an improved understanding of possible developments and the forces likely to shape them</td>
<td>Network foresight in concerned with creating an improved understanding of the possible development of the actors, activities and resources in the wider network, other networks beyond the horizon, and (possibly) exogenous factors affecting the network.</td>
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<td><strong>Procedure</strong></td>
<td>To survey as systematically as possible ‘what chances for developments and what options for action are open at present, and then follow up analytically to determine to what alternative future outcomes the developments would lead</td>
<td>To interact with other actors in network including (a) systematic inquiry into these actors’ views on possible developments and present options for action, and follow up analytically to determine to what alternative future outcomes the developments would lead and (b) being alert to cues about the actors’ views, as well as (c) being responsive to other actors’ inquiries into one own company’s views, and (d) signalling to other actors the company’s view. However, this may need to be supplemented with surveys of (other) networks beyond the horizon (however delimited).</td>
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<td>There are different time perspectives for foresight, at different management levels; Strategic management perspective is 3-7 years (median 5), Normative management is from 8-30 years (median 19), and Operational management 1-3 years (1,5 years).</td>
<td>Different individuals involved in interacting with other actors in the network may take different time perspectives on the future, and much of the interaction may concern day-to-day coordination. However, from a strategic network foresight perspective perspectives, interaction with actors which considers possible development in a 3-7 years perspective is of particular relevance.</td>
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<td>The space and time perspectives of individuals differ; most people are concerned with matters that affect only their family or friends over a short period of time; “others look farther in time or over a larger area – a city or a nation. Only a very few people have a global perspective that extend far into the future”.</td>
<td>Different individuals involved in interacting with other actors in the network may be aware of and consider relevant different parts of the network surrounding the company. While most of the interaction and coordination may concern direct counterparts and the immediate exchanges and short-term adaptations, it may be relevant to focus not only on interaction with the most important actors to whom the company is directly connected and presently relies most upon, but also interaction with or involving other actors in the network which are considered relevant for influencing the future of the network, as well as actors which are parts of other networks, and emerging actors.</td>
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<td>Bringing together different stakeholders and getting them to communicate with each other</td>
<td>Organizing venues and spaces for interaction with different subgroups of actors in the network, including with one counterpart, with several counterparts (several customers, several suppliers, customers and suppliers, suppliers and sub-suppliers, competitors, complementors, policy actors etc.). Similarly, take part in such venues organized by others.</td>
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<td>Creating a measure of consensus on future priorities for strategic research</td>
<td>Encouraging ex ante and ongoing matching of plans, and adaptations for the longer-term future, with actors in the network. Creating suitable formats for formalizing or materializing the consensus achieved, and actions to be taken and followed up.</td>
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<td>Most importantly, generating a feeling of commitment to the outcome of the foresight, making it likely that what start out as predictions turn into self-fulfilling prophecies</td>
<td>Relentlessly committing to, and encouraging others to commit to, actions which work to create the jointly envisioned future.</td>
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foresight literature is a faceless environment, that organizations must react and adapt to. In contrast, building on an ontology of interaction, the organo-centric view of the corporate foresighting literature is one, where the assemblage of internal and external resources, activities and actors come to the fore (Araujo & Easton, 1996). A business network approach stresses specific relationships as the vehicle through which networks changes and unfolds. The impact of change is channelled and dealt with through relationships and the interlinkages between actors are critical for understanding how the impact of external forces disseminates and becomes influential for single actors (Dahlin et al, 2005).

This ontological difference generates important differences. In the foresight literature sees the ideas of the future as multiple and as essentially created from the meeting (if not confrontation) among various actors in the environment, belonging to an industry, a region, or a set of stakeholders gathering around a technology, a solution to a problem, or another issue of importance. For example, in order to channel their funding of research, a research council may develop foresight related to different industries like energy, biotechnology, ICT, or material technology etc. In a business network perspective, the future is seen as multiple and created among actors that engage in networks. Furthermore, a business network approach outline explicit assumptions about the network which might be summarized in four main points.

Firstly, while all types of actors may be considered and play a role in IMP research, the main actors of interest are companies and organizations with whom companies do business. At different levels – from individuals to groups of companies - actors aim to increase their control of the networks they engage in (Håkansson 1987). Hence, the actors that a business actor involves in network foresighting might be limited and less diverse as suggested in some of the literatures on organizing foresighting.

Secondly, relationships among actors play an important role, since they affect what the companies think and do. Many business actors have a limited number of counterparts with whom they interact in long-term relationships (Håkansson & Snehota, 1989). Over time, the actors have made mutual adaptations in various dimensions, and these adaptations can be seen as investments which have a bearing on future interactions in the relationship. In line with these adaptations, the actors in a relationship hold particular micro positions in relation to one another (Johanson and Mattsson, 1992). As a relationship proceeds, the involved actors develop expectations as to how the parties will behave towards one another, and for what and to what extent the parties can rely on each other.
Thirdly, connections among relationships create business networks which are interlocking systems of exchange relationships. A single relationship may be positively or negatively connected to other relationships in which the involved actors are engaged, and in the wider network. Depending on how a single relationship is connected to other relationships of the involved actors, the actors hold particular macro positions towards one another (Johanson & Mattsson, 1992).

Fourthly, the business options which emerge to and are pursued by the actors depends on the interaction in their relationships and the past, present and future connections to other relationships. Thereby, all strategizing processes starts from an understanding of the faculty and potential of the business network, actors are situated in and a part of. From the perspective of the focal actor, the future will derive from the interaction between the company, the actors to which it is directly or indirectly connected, and the interactions in the connected relationships in the wider network.

Through interaction in relationships, a partly shared understanding and imagination of the future (and the past) can come about, including the forming of common mental frames and shared expectations. Such processes may result in what has been coined network insight, suggesting a process of collective mind-building emerging through continuous and iterative interplay (Mouzas, Henneberg & Naude, 2008).

Such interactions among actors in a network entails mutual attention drawing and also processes of creating and aligning actor expectations, which actively perform in constructing the future (Kjellberg & Helgesson, 2006). Take as an example the emergence of the silver market crisis, which, rather than being seen as produced by the disorganized behaviour of an atomized mass of speculators subjected to some force of change, rather is the outcome of interaction and rivalry among competing coalitions seeking to promote their own interests (Abolafia & Kilduff, 1988). This and other studies of the unfolding of market events suggests that market actors together create the context that impinges on their future activities. Hence, shared network insight may result in coordinated, matched or joint plans and actions aimed at creating an imagined future. In other words, more interaction leads to more similar joint thinking and joint action. However, this need not be the case. Firstly, more interaction may reveal differences or incompatibilities among the involved parties, due to the actors themselves or to their relationships. Furthermore, interaction in one relationship competes with interaction in other relationships and the business options generated in some relationships may be evaluated against and prioritized above options generated in other
relationships. In addition, network insights are multiple and differ across actors, since each of the engage in different relationships and networks. Therefore, actors may choose among, combine, question and even act contrary to the network insight in some of the networks in which it is involved, in particular when networks are being disrupted.

While some relationships often last for extended periods of time, it is not necessarily due to inert stability but rather due to the infinite possibilities for discovering and pursuing possibilities for joint value creation based on mutual adaptations made which as such are investments which may pay off in different ways, in different time period and settings. As such, even seemingly durable relationships develop over time, and new relationship may be initiated, and old ones may be transformed, hibernate, or end (Ford, 1980; Batonda & Perry). In addition, and consequently, connections among relationship evolve over time, due to positive and negative connections which emerge, are discovered, or exacerbate. Thereby, the micro and macro positions (Johanson and Mattsson, 1992) actors hold in relationships and networks they engage in, may change over time, thus influencing which changes they may and may not be able to bring about in their relationships and networks, and which stabilities they may or may not be able to preserve.

Summarizing, the multiple futures in a network pertain to the variety of imagined and discovered possibilities which the actors in the networks are able to imagine and discover through their interaction in connected, evolving relationships. The single realized future represent those network possibilities that eventually are pursued, and the interdependent actions taken and choices made by the actors as to which ideas, plans and adaptations are to be made together and towards one another.

Epistemology
How do actors gain insight into the possible futures of a network and the main factors at play in the network? This would involve insight into factors shaping the other actors, the relationships in which they are involved, the interactions taking place within them, the emerging and evolving opportunities, and the directions in which the relationships of the involved actor are developing and new relationships being initiated, the stability or change in the micro and macro positions, as well as the connections across the relationships and if and how these are changing.

For this reason, investigating the dynamics of ideas and expectations: how ideas and expectations are formed and influenced through interactions is a key element for network
foresight, i.e. for understanding both stability and future transitions at the business network level. In the traditional forecasting literature, diverging observations can be found with respect the underlining epistemologies: objectivist, subjectivists and pragmatic. Each has different consequences for the formation of what can be known by foresights – from predicting the future (assuming its deterministic nature) to creating realities with others (Piirainen & Gonzalez, 2015). It follows from the previous issue that from an IMP perspective, understanding how knowledgeable actors interact in creating the future of the network and influence other network actors in this respect is at the core of business network foresight. From a business actor’s point of view, knowledge is contextually bound.

In line with the ontological dispositions, the most obvious starting point of a network foresight endeavour within the IMP approach is this to scrutinize the network positions and horizons of their immediate counterparts, including whom they see as most influential co-creators of the future.

Identifying and investigating these actors and their wider connections, provides an emergent view of possible futures may evolve as a consequence of their pursuit of their own interests and their theories on how to serve these. Each actor has a particular conceptualization of reality, building on both expectations of their own activities and how they may align with those of other actors in the network to address what they at any given moment sees as emerging opportunities or threats (Andersen & Medlin, 2016). Creating expectations about the future is an ongoing activity. Business actors interpret and act within the business network—where it currently is and along which trajectories it is moving. This activity, in turn, depends on the network horizon—the part of the network that a single business actor is aware of and can take into account for strategizing purposes (Holmen & Pedersen, 2003). While a single actor may rely on its direct counterparts performing various mediating functions, such as joining, relating and insulating, in order to connect it to developments in the wider network, it neither can rest assured that the counterpart will always understand how it may best play a mediating function nor that the counterpart will in effect play a mediating function in line with the interests of the single actor, due to the counterpart’s unwillingness or inability to mediate caused by a lack of time, changed priorities, confidentiality, oversight, or concealment etc. There may be secrets and lies in networks which distort the network horizons and pictures. Furthermore, interaction is non-linear, which may lead to network surprises, which disrupts the present network dynamics.
Finally, network horizons and pictures are only cognitive aspects of foresight. According to Abrahamsen et al (2016), there is a need to move from network pictures to network picturing; the interplay between cognition and action, in particular relating to what managers perceive (their network picture) and what they do (their strategizing activities). These two aspects as part of network picturing, i.e. understanding the network on the one hand and strategizing on the on the other, are linked together through an evaluation of available strategic options likely to be pursued by other actors, and to be pursued by the single actor.

Procedure and practices of participants (Methodology)
How should we as researchers and managers proceed in order to promote processes that will help to business network foresight? As mentioned earlier, in this paper we mainly attend to the creation of business network foresight as a part of intentional strategizing. However, we are aware that the formation of expectations in business networks is a continuous and integral process of business interacting, which permeates continuous trust-building and re-assuring, adaptations etc. Our interest here, is however in the deliberate and committed attempts by the focal firm and/or its exchange partners to temporally “freeze” the flow of events in reality in order to create what Weick and Quinn (1999) refers to as making sequences visible for all relevant participants and show patterns through maps, schemas, and stories, thus convincing them about specific issues of concern. This is what we typically experience, when powerful business actors, industry associations or others seek to externalize expectations to the future among other business network actors.

For instance, when Unilever summons their most important suppliers for a two-day workshop in order to present Unilever’s next strategic vision and mission, they are making a deliberate attempt to influence expectation shaping and in this sense “talk the future into becoming realized”. Supplier days have also become a quite common practice, where a buying firm presents the future path it intends to pursue and elicits responses from a large group of invited suppliers as to whether or not they would like to follow (Laursen & Andersen, 2016). While supplier days and other similar assemblies involve a larger set of suppliers, the communication at such gatherings may be bilateral as well as multilateral, and characterized by different degrees of monologue or dialogue. Communication may also involve two parties in a dyadic setting, for example when a buyer and a supplier have annual relationship reviews where they present their respective technology roadmaps, future investment plans, prioritized product and service development portfolio, as well as the plans the two parties have in relation to one another. Furthermore, the parties may not only discuss matters concerning their
relationship per se, but also third parties such their respective suppliers and customers. At such meetings, the parties may engage in exchange of plans as well as interaction on and mutual adaptations and matching of plans, where the latter types are more akin to creating relationship and network foresight. A few other examples may help to illustrate this further:

Q-Free is a Norwegian intelligent transportation systems (ITS) company. Each year it organises “The Q-Free Day”. In 2016, focus is set on the environment and how to use ITS to solve some of the challenges in Norway. External speakers will talk about current issues, and Q-Free presents how the issues can be remedied through smart technology and efficient services. One external speaker is Trond Haukås from the Norwegian Road Authorities. He will speak on “Future system solution for toll collection”. Another external speaker is Trond Hovland, from ITS Norway (an association of organizations within transportation focusing on intelligent transportation solutions). Mr. Hovland’s speech is called “ITS and the road ahead”. In the session “We peek into the future ITS together with Trond Hovland, and run a plenary debate”. In the invitation, Q-Free states that “We intend to have time between speeches for conversation and discussion between participants and speakers. In this way we believe that Q-Free Day this year will be something everyone appreciates”. (https://www.q-free.com/q-free-dagen, 23.05.16)

In order to influence the future direction of the intelligent transportation systems in Europe, Q-Free takes part in national and international standardizations bodies. “Beyond the development work with which our staff is engaged, we also contribute to standardization work. Nordic has for many years been an active contributor to the Bluetooth specification through its engagement in the Bluetooth Special Interest Group’s (SIG) working group and committees. We have been particularly active in the development of Bluetooth core technology providing our insight into ultra-low power wireless technology and customer needs. We are involved in many other standards bodies, developing and influencing specifications. For example, we are active in the Rezence wireless charging standard developed by A4WP, NFC Forum and 3GPP.”

Q-Free also work with the field of “Cooperative ITS” which they expect to be important for the future of ITS. Therefore, to embrace and influence the future of ITS, they involve themselves in projects on C-ITS. “The concept behind Cooperative ITS (C-ITS) has evolved in the last few years from leading-edge research. It now provides the framework for all new ITS deployments. Q-Free has been at the centre of this evolution, with an involvement in research projects, standardization and pilot product design. The company is now offering this
competence and products to the emerging national pilot projects and trans-national corridors. It is also able to help prepare current ITS deployments for the evolution to C-ITS. (www.q-free.com)

NCE-Maritime is a cluster initiative focused on the offshore maritime industry on the southwest coast of Norway. The research institute Møreforskning makes an annual “Cluster analysis”. This analysis captures both the present situation and recent developments among the hundreds of companies that have joined the cluster initiative. However, the cluster analysis also contains a “Future outlook” section, stressing the coming trends, threats and opportunities which may affect the companies in the cluster initiative. The “Cluster analysis” is presented at the annual “Cluster Conference – Present Status and the Road Ahead” where time is set aside for discussing future issues and how they may be approached by the organization behind the cluster initiative, and by the companies therein. (http://www.aakp.no/?menu=4&id=1678)

Deliberate attempts may also involve sets of organizations which are not necessarily engaged in substantial collaborative buyer-supplier relationships but which may become so in the future. For example, a variety of organizations in a region may organize gatherings where desired futures of the region are on the agenda, and where mutual exchange of plans and ideas may come about.

In these organized fora, it is imperative that the dialogues are future-oriented in order to bring about network foresight. When the involved parties are mostly already engaged in business relationships, there is the risk that much attention will be paid to day-to-day issues that need handling in the short term. However, for strategic foresight to emerge, it is necessary to concentrate on possible developments that will stretch 3-7 years into the future.

Many different future-related factors may be considered. These may be related to intentions as to how relationships will develop, in themselves or in relation to other relationships in the networks the parties are involved. As such, the communication and interaction may concern changes or continuance of aspects related to the layers of activities, resources and/or actors within the individual organisations, in relationship, or in the network. It may also concern orientation towards networks to which the parties are not already related. Furthermore, it may concern network exogenous factors which however impact on the networks of attention.

Whichever factors are paid attention to, the aim in network foresight is to create some degree of consensus. Consensus may take several forms. Here we are mostly thinking about the type
of consensus which make the involved parties align their future actions, and match their positions and roles, and/or links, ties and bonds within or beyond their relationships.

We are particularly interested in exploring the interactive shaping of expectations, that takes place when two or more parties meet with the deliberate intent to influence perspectives and expectations about the future of the network or in particular relationships therein. We think that such events are rather common, and may unfold in meetings, such as the ones discussed above, as well as in a range of other types of fora, relevant for this particular kind of activity.

The expectation-shaping activities of any business actor is interpreted and understood by its exchange party. In this sense (inter)actions in a set of exchange relationships influences the formation of expectations in at least two ways. They are unintended and intended acts of communication for other actors to decipher and understand, based on their network horizon. We refer to this as signalling. Acts spark responses in the form of interacts, which may affirm, contrast or in other ways can be interpreted by those initiating the communication process. We refer to this as echoing.

**Taking an analytical approach**

The bringing together different parties to communicate and interact with one another in order to create network foresight may take on many forms. However, from a network structure point of view, a company may consider engaging in future-oriented interaction with direct counterparts in dyadic or network settings, as well as with indirect counterparts. No matter whether the starting point is making or investigating a network forecasting exercise, we assume that both the business network’s activity pattern, as well as the structure of activities must be taken into account. For instance, in providing scope for investigation of expectation-forming activities, our interest might revolve around the actors, activities and resources involves in the development of a particular product or service, such as the construction of an offshore wind park or the provision of public bus transportation services in a municipality. In this case, our scope is the expectation-building efforts actors may be part of with respect to the future of this particular activity, rather than their activities as such.

Taking inspiration from social construction approaches to understanding the social construction of technologies, we proceed by seeking to establish insights in to the particular
business network issues and solutions that captures individual actor’s attention and are as important and salient for the development of expectations towards the future.

A business network issue is an important problem recognized and debated among several actors related to the business network in question. It represents an objectified social enactment, that this is an issue worthy of attention for the future development and for strategizing efforts. In the context of an offshore wind turbine network, an example of such an issue might be the problem of insuring specialized vessels for the erection of towers and submarine structures, or it may the cost differential of offshore based wind power as compared to other power sources. In any case, naming the issues give raise to another important social enactment, namely the belief in specific solutions, that may help rendering or transforming the issue at hand. Such problems and issues. By an issue, we here refer to those particular social constructs, which captures the attention of business actors within a certain activity structure. The enactment of issues can be set in motion or influenced by actors’ strategic action, involving the mobilization of other actors to shape or redefine the existing definition of issues or create a novel one. It is a competitive process, since actors who occupy different positions in the market system may have different or opposing interests. We have illustrated the procedure in figure 1, below.

In the example there are four different issues pertaining to the business network activity at hand, which draws attention from different economic actors. Hence, issues are not simply there (as assumed by forecasting literature), but are co-created by actors engaging in dialog.
Furthermore, there are also several different solutions recognized by some or all actors, with a particular interest in one of these issues. The development and framing of such issues related to the carrying out of (future) activities is an ongoing endeavour, but it is also clear that not all attempts of creating an issue are successful. On the other hand, once established and acknowledged, issues may be constructed and reconstructed on an ongoing basis. From the outlook of any particular actor, the network horizon may look quite differently.

Hence, researchers as well as practitioners seeking to understand how expectations in business networks unfold, may seek to build a similar overview, and use this in order to understand better and perhaps also to make actors understand better how processes of issue-building evolves and how these influence strategizing efforts.

**DISCUSSION AND IMPLICATIONS**

Based on the discussion above we suggest some areas of further research within this field of network foresight. Firstly, we need more research on how an actor (or individual manager) who would like to take an interactive approach to foresighting can gather information about other relevant actors in the network horizon. To develop ways of doing systematic inquiry into other actors’ views of the network horizon, their thoughts on potential developments and their strategizing processes are important but complex activities. We need to develop methods and tools to assist managers in performing such systematic inquiries to be able to strategic network foresighting.

A second and continuing area of research is that dynamics and changes in the network horizon. Moving from mapping the network picture to doing network picturing is a large step which has implications for how we do research in this field. According to Medlin and Törnroos (2014) we need more attention into dynamic network emergence and development, including understanding of activity, processes and adaptations, to establish constructs relative to different forms of time so as to capture dynamics. To be able to do network foresighting the time perspective is essential.

A third area for further research is to problematize to boundary of the firm in an interactive network setting. This is also pointed out by Abrahamsen et al. (2016) who claim that understanding managers’ persecution of the boundary of the firm and how this understanding affects their decision marking is one important areas of further research. This is related to
conceptualizing network picturing which can be further developed as a strategizing tool to do strategic network foresighting.

REFERENCES


