

The Customer Foresight Territory

Customer foresight is a relatively new research field. We introduce the customer foresight territory by discussing its localization between customer research and foresight research. For this purpose, we look at a variety of methods that help to understand customers and future realities. On this basis we provide an overview of customer foresight methods and outline an ideal-typical research journey.

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Customer foresight is currently emerging as a new field of applied research. The objective of customer foresight is to understand customers' future circumstances and wishes with regard to tomorrow's products and services by combining two highly relevant, yet mostly separate fields: the investigation of customer needs based on their everyday usage (i.e., customer research) and the dynamics of change and projections (i.e., foresight research). From a methodological perspective, the focus on customer foresight implies that a different approach, in terms of the techniques and tools used, needs to be taken to understand the needs and preferences of future customers. Whereas both customer research and foresight research use a broad range of methods, it is not yet defined what particular methods of the two fields or combinations of methods are suitable to conduct customer foresight studies. We perceive this as a missing link in the literature in the emerging field of customer foresight.

In this article we analyze the methodological scope of customer research and foresight and assess which tools are most suitable for conducting customer foresight studies. In this context, we refer to the methodological playground of customer foresight as customer foresight territory, introducing a more structured version of this playground. The customer foresight framework integrates practicable methods to develop our understanding of customers, future realities, and their interaction. We then sketch out an ideal-typical research process. The suggested customer foresight research journey combines several approaches from the field of customer research and customer foresight. Today, many companies have understood that successful business needs to be customer-centered. With this article, we aim to equip these companies for taking a strategic perspective on customer centricity by understanding, and focusing on, the customer of the future.

The Customer Foresight Territory

Customer foresight combines the needs of customers with the dynamics of change and expectations of future circumstances, products and services (Schweitzer, Hofmann, & Meinheit, 2019). The evolution of customer foresight reflects, on the one hand, the relevance of foresight in general and, on the other hand, the growing challenge of placing the customer at the center of strategy, innovation and foresight. While in the 1990s it was argued that consumers are increasingly unmanageable

for firms (Gabriel & Lang, 2015), this state has not improved. Approaches such as design thinking (Brown, 2008, 2009; Brown & Martin, 2015; Liedtka, 2018) and lean startup (Ries, 2012) have gained attention because of their human-centered approach to innovation. In the field of foresight, the terms strategic or corporate foresight are used to describe similar activities of anticipating changes in the business environment (Rohrbeck, Battistella, & Huizingh, 2015). Thus, whilst human-centered approaches align business activities with the problems and needs of today's customers, strategic customer foresight aligns business activities with the problems and needs of tomorrow's customers.

Insights from customer foresight (e.g., what customers may want to buy in 10 years' time) are highly sought after but hard to come by. Understanding future customers is a key factor in the success of all kinds of industries. The industries that could benefit the most from customer foresight are those with long development cycles (such as manufacturing) because those companies need to develop value propositions today that customers will want to buy in several years' time (Hofmann, 2010). On the other hand, creating tangible insights into customers' future realities

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is difficult from a methodological perspective because it deals with at least three unknown factors: How will customers evolve over time? What will everyday reality look like in the future? How will customer foresight approximate customers' future realities regarding future consumption? These three questions help us envision the customer foresight territory (figure 1).

Understanding Customers

A first step in the direction of understanding tomorrow's customers is to understand the customer of today. The social sciences aspire to understand human behavior. Customer research uses qualitative methodologies such as behavioral observation, in-depth interviews and quantitative methods such as surveys and experiments. In this article, we do not

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attempt to explain all possible approaches, but we will focus on the most promising ones in terms of developing our customer foresight framework. Ethnographic research is based on the observation of what people actually do. Design thinking, for example, uses participant observation to understand the latent needs of customers when using cultural products (Cranz, 2016). Netnography is a kind of virtual or online ethnography, i.e., the observation of behaviors on the internet (Kozinets, 2013). On that basis and through capturing and reflecting on factors that are likely to influence how customer needs and behavior might change in the future (see also Schweitzer et al., 2019), assumptions on future customer behavior can be made. Such factors may, for instance, be culture (culture analysis; Ullrich, 2006), values (value research; Inglehart & Baker, 2000) and individual motives (motivation research; Heckhausen & Heckhausen, 2009).

Understanding Future Realities

Customer foresight is impeded by the fact that tomorrow's customers cannot be observed today, and today's customers are not able to predict what they might do in the future. Con-

sequently, the future context of customers needs to be understood and researched to assess customers' future behavior. We therefore propose to combine the customers' context and future realities with elements of customer research. Foresight research uses different approaches to envision the future. With respect to foresight tools, we refer to those used in corporate foresight (Rohrbeck & Schwarz, 2013; Schwarz, 2008), such as trend research and scenario planning, and to a less-known approach that we believe adds value to our framework: science fiction (Schwarz, 2015; Schwarz, Kroehl, & von der Gracht, 2014; Schwarz & Liebl, 2013).

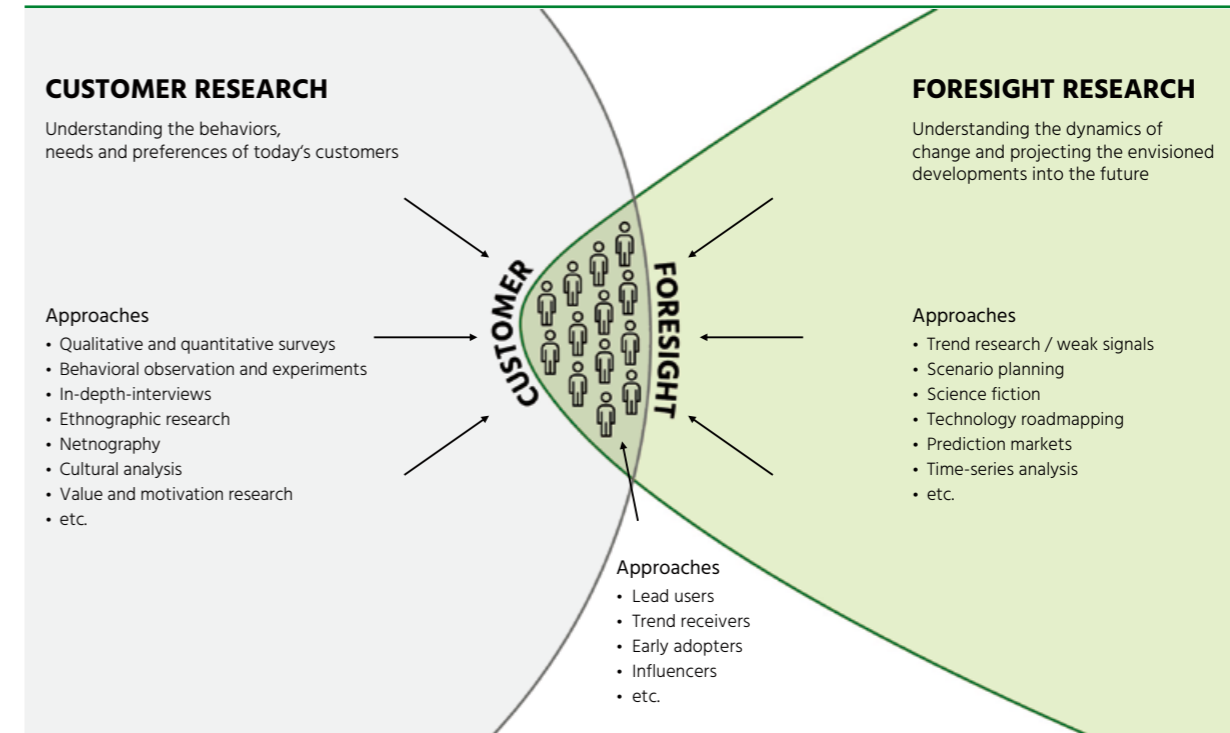
Trend research builds on the concept of weak signals (Ansoff, 1975). The main argument is that trends develop from a weak to a strong signal over time (Liebl & Schwarz, 2010). This implies that trend research can be perceived as a search for new ideas. New things usually start at the periphery of an industry (Day & Schoemaker, 2005) and may over time develop to a mass market phenomenon. This implies that a weak signal will not come with complete information, in contrast to a strong signal where full information is available but competitive rivalry may also be strong. However, if we want to assess the future context of customers, engaging in trend research and looking for weak signals of change are prerequisites.

Scenario planning builds on weak signals to develop alternative, plausible pictures of the future (Ramírez, Churchhouse, Palermo, & Hoffmann, 2017; Ramirez & Wilkinson, 2016; Schoemaker, 1995). While acknowledging that the

Management Summary

Customer foresight is emerging as a new field of applied research which aims to study customers' future realities and needs with regard to tomorrow's products and services. The present article localizes the customer foresight territory within the methodological scope of both customer research and foresight and assesses which tools are most suitable for customer foresight research. Based on an overview of customer foresight methods, we sketch out an ideal-typical research journey that starts with relevant research questions derived from business needs and ends with the transfer of customer foresight insights into business value.

Fig. 1: The Customer Foresight Territory



Source: Eller, Hofmann, & Schwarz, 2020.

future cannot be predicted, scenario planning in the customer foresight framework permits the assessment of future possible realities of customers and their behavior.

Science fiction assumes that customers' reality is socially constructed and that this process of social construction is based on fictional narratives, such as movies or novels (Schwarz, 2015). Analyzing cultural products, such as novels and movies, therefore allows an understanding of the foundations upon which future realities are constructed and therefore provides further context for assessing the behavior of future customers.

In addition to these qualitative methods, there are quantitative foresight methods such as prediction markets (Eller & Schneider, 2016; Wolfers & Zitzerwitz, 2004), a method based on trading potential outcomes of an event in market environments, or statistical methods such as time-series analysis (Box & Jenkins, 1976), which allows for the projection of relevant values based on the analysis of sequences of data points.

Understanding the Interaction of Future Customers and Future Realities

Even if we had a clear picture of future technological, political and economic developments, the question of how people will react to future realities would still be a mystery. Some techniques of customer foresight stimulate an interaction and critical engagement of particular persons (i.e., agents of the new, Hofmann, 2011) with future realities to examine how the customer of the future may want to live.

The lead user method (Hippel, 2006) assumes that highly motivated and skilled customers or users may become involved in product development and thus in innovation processes, for instance by inducing technical alterations of a given product based on their usage experience and needs. Similarly, further types of agents of the new such as early adopters or influencers are used to approximate future customer realities (Schweitzer et al., 2019). The trend receivers concept (Hofmann, 2014) focuses on particularly visionary customers who perceive changes and potentials of the new in a specific domain in a highly sensitive and differentiated way. They usu-

ally have connections in many contexts and have discerning views of what drives people and which aspects are changing. Their visionary competence and the ability to imagine and project result from a combination of everyday experience (e.g., in the consumer arena, with a given product or service), curiosity, open-mindedness, the ability to observe and recognize patterns, life experience, networks, and intuition.

An effective way to identify trend receivers is pyramiding, where people are asked to suggest other people in their personal network who fit a particular search profile. These people suggest others, and so on (Hofmann, 2014).

The Customer Foresight Framework

The customer foresight territory reflects customer foresight as a multidisciplinary research field. Despite the field's novelty, and thus low maturity and a still rather blurry definition, the illustrated territory (cf. figure 1) gives the reader a fair understanding of the field. However, we also see the practical need for a more structured view of the customer

foresight territory that might be easier to work with operationally. We therefore suggest a framework that is a 3 x 3 matrix of the customer foresight perspectives mentioned above (i.e., understanding customers, understanding future realities, and understanding the interaction of customers and future realities) and the three major phases of any customer foresight research process (i.e., identifying relevant participants, generating insights, and data analysis; see figure 2).

There are several ways to conduct a systematic search for, or selection of, participants. We have already introduced pyramiding as a method that permits the identification of participants with a particular, often rare profile. Screening allows the identification of participants based on predefined criteria, such as age or personality (Schweitzer et al., 2019). Broadcasting and signaling are means of selection in which search profiles are published and potential participants decide for themselves whether they are suitable or not.

Whereas customer research is mostly based on customer elicitation, foresight research is often based on expert elicitation. There are several means of expert identification.

Fig. 2: The Customer Foresight Framework

Understanding Customers	Understanding the Interaction of Customers and Drivers of Change / Projected Future Realities	Understanding Drivers of Change and Projected Future Realities
Identifying relevant participants <ul style="list-style-type: none"> Screening Broadcasting ... 	Identifying relevant participants <ul style="list-style-type: none"> Pyramiding (e.g. of trend receivers, agents of the new, or lead users) Signaling ... 	Identifying relevant participants <ul style="list-style-type: none"> Superforecasting Evaluation of experience ...
Generating insights <ul style="list-style-type: none"> Quantitative and qualitative surveys Behavioral experiments and observations Ethnographic research Netnography ... 	Generating insights <ul style="list-style-type: none"> In-depth Interviews Workshops Simulation gaming, role play Dialogues ... 	Generating insights <ul style="list-style-type: none"> Scenario planning, roadmapping Weak signals, science fiction Prediction markets Statistical modeling, time-series analysis ...
Data analysis <ul style="list-style-type: none"> Value and motivation research Cultural analysis ... 	Data analysis <ul style="list-style-type: none"> Qualitative scenarios Future personas ... 	Data analysis <ul style="list-style-type: none"> Aggregation and projection Trend research ...

Source: Eller, Hofmann, & Schwarz, 2020.

Main Propositions

1. The new research field of customer foresight aims to understand future customers, their needs with regard to future products and services, and how they will deal with future realities.
2. Methods within the customer foresight territory aim to understand today's customers, to identify possible future realities, and to stimulate the interaction of selected persons with possible future realities.
3. Based on the tools of the customer foresight territory, practitioners can achieve strategic user centricity by following a structured process.
4. The research journey starts with the identification of relevant business needs and ends with practical guidance on how to transfer customer foresight insight into business value.

According to intuition research, the selection of experts should be based on an evaluation of their personal experience (Kahneman & Klein, 2009). The more experience an expert has in the relevant domain, and the more stable that domain is, the greater the potential accuracy of the expert's judgment. Systematic expert elicitation techniques such as superforecasting (Tetlock & Gardner, 2016) base their selection of experts on factors such as prior performance in comparable tasks and thinking style (e.g., looking at problems from an inside and an outside view).

On that basis, generating insights can be approached with the methods that we have already introduced in the customer foresight territory. What is particularly challenging is the approximation of the framework's middle cell (cf. figure 2): the generation of insights for understanding the interaction of customers and future realities. How can we ensure an effective interaction between identified agents of the new and possible future realities? Customer foresight methods such as the trend receivers concept mostly use qualitative interviews and workshops – or even just dialogues – to discuss future realities with specific individuals. In addition, simulation gaming and role playing allow participants to experience future scenarios and dynamics (Schwarz, 2009).

Ultimately, the gained insights need to be condensed in a comprehensible way to allow translation into value-adding practical implications.

The Customer Foresight Research Journey

The purpose of the customer foresight framework is to combine future realities, future customers, and their interactions, with selected tools from customer research and foresight to describe how customer foresight projects can be carried out. On that basis we want to provide an even more hands-on view of the customer foresight research journey (figure 3). The journey illustrates an ideal-typical research process that allows practitioners to create powerful insights that they can turn into value.

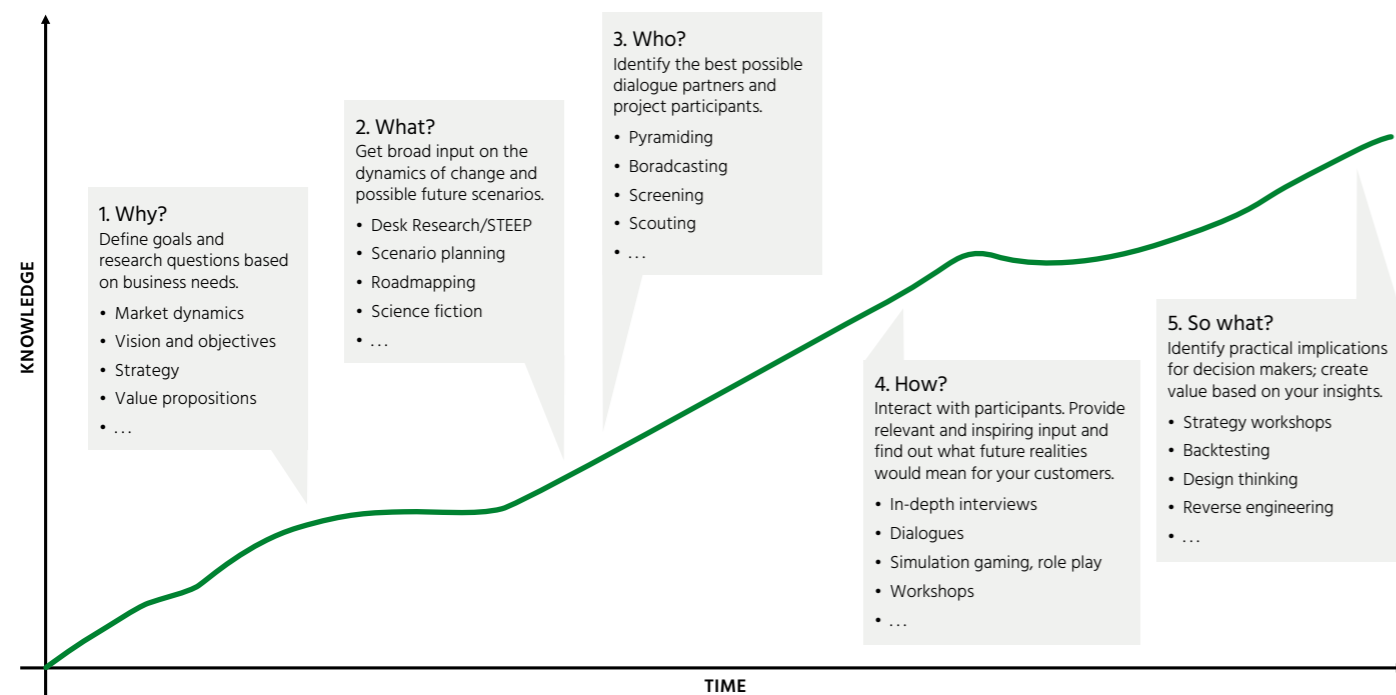
First, it is crucial that the business need (e.g., corporate strategy, innovation, product development, or production planning) is understood and that tangible research questions are defined based on business needs. It makes sense to describe the context and to understand future realities early on in the process. Above, we have argued that trend research, scenario planning, roadmapping, and science fiction are valuable tools from the field of foresight research to derive these future realities. And as customer foresight is mostly based on creating insights through interaction, study participants must be systematically identified. We have discussed techniques such as pyramiding, broadcasting, screening, and signaling as exemplary tools to select participants. Moreover, customer foresight researchers interact with participants to understand their views and reactions on future realities through techniques such as in-depth interviews, dialogue, simulation gaming, role play, or workshops. Finally, insights from customer foresight are only

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as valuable as the implications regarding the business needs addressed in the first step. Strategy workshops and techniques such as backtesting can help, as well as innovation techniques such as design thinking and reverse engineering (Jarvis, 2011).

Discussion

Customer foresight is a new research discipline. Instead of starting from scratch, it can build on insights and methods from related fields. New approaches are currently evolving at the intersection of customer research and foresight research

Fig. 3: The Customer Foresight Journey

Source: Eller, Hofmann, & Schwarz, 2020.

as well as at the intersection of industry and academia. For instance, companies such as Audi use the trend receivers approach regarding future customers' realities and needs (Hahn, Hofmann, Bilgram, Schwarz, Meinheit, & Füller, 2016). Customer foresight has also become a central element of the Foresight Academy, a novel research and exchange project involving 13 major international companies from 11 different industries, and is also part of Foresight Academy's self-description as "the cross-industry platform for future-oriented work and customer foresight expertise" (www.foresightacademy.com; public part available as of June, 2020).

In this article, we presented our view of the customer foresight territory that integrates approaches and methods from related fields. On that basis we provide a customer foresight framework and a customer foresight research journey that offer guidance to practitioners for how to plan, execute, and integrate customer foresight research.

We aimed for an integration and discussion of the methodological territory of customer foresight that will enable customer foresight practitioners to formulate meaningful research questions and to design studies that deliver valuable insights. In our opinion, customer foresight studies must be designed and conducted for business needs such as strategy identification, product development, or production planning. Therefore, internal decision makers should be deeply involved in the research process. Moreover, decision makers should be aware that the iterative study and reflection processes demand highly skilled experts as external partners. In this context, the paradoxical nature of customer foresight projects presents quite a challenge: tapping into fictional stories on future realities, and simultaneously trying to reveal the intangible while designing a structured process to gain insights. With this article, we hope to stimulate the discussion amongst researchers and practitioners on the definition of customer foresight and on the field's integration in related research disciplines. Additionally, we offer practitioners the methodological knowledge to conduct effective customer foresight research. 🚀

Lessons Learned

1. Successful companies are not only customer-focused today but center their strategic action on the realities and needs of their future customers.
2. The customer foresight framework points out suitable methods to study future customers, future realities, and their interaction.
3. The customer foresight research journey illustrates how customer foresight is based on business needs and results in business value.

Literature

- Ansoff, I. H. (1975). Managing strategic surprise by response to weak signals. *California Management Review*, 18(2), 21–33.
- Box, G., & Jenkins, G. (1976). *Time Series Analysis: Forecasting and Control*. Oakland, California: Holden-Day.
- Brown, T. (2008). Design thinking. *Harvard Business Review*, 86(6), 84–92.
- Brown, T. (2009). *Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation*. New York: Harper Collins.
- Brown, T., & Martin, R. (2015). Design for action: how to use design thinking to make great things actually happen. *Harvard Business Review*, September issue, 56–64.
- Cranz, G. (2016). *Ethnography for Designers*. London: Routledge.
- Day, G. S., & Schoemaker, P. J. H. (2005). Scanning the periphery. *Harvard Business Review*, 83(11), 135–148.
- Eller, E., & Schneider, E. (2016). No one knows as much as everybody: using the wisdom of crowds in risk management. Munich Re Emerging Risk Discussion Paper.
- Gabriel, Y., & Lang, T. (2015). *The Unmanageable Consumer*. City: Sage.
- Hahn, A., Hofmann, R., Bilgram, V., Schwarz, J. O., Meinheit, A., & Füller, J. (2016). Easy Rider. In T. Abele (Ed.), *Die frühe Phase des Innovationsprozesses* (pp. 75–98). Wiesbaden: Springer Gabler.
- Heckhausen, H., & Heckhausen, J. (2009). *Motivation und Handeln*. Berlin: Springer.
- Hippel, E. (2006). *Democratizing Innovation*. Cambridge: MIT Press.
- Hofmann, R. (2010). Mit wem reden? *GDI Impuls* 4/2010, 76–80.
- Hofmann, R. (2011). Trend Receiver – qualifizierte Visionskraft. Kriterien und Vorgehensweisen der Befragtenauswahl und Dialoggestaltung bei Studien zu zukünftigen Konzepten am Beispiel der AUDI AG. Cuvillier.
- Hofmann, R. (2014). Visionary competence for long-term development of brands, products, and services: The trend receiver concept and its first applications at Audi. *Technological Forecasting and Social Change*, 101, 83–98.
- Inglehart, R., & Baker, W. (2000). Modernization, cultural change, and the persistence of traditional values. *American Sociological Review*, 65, 19–51.
- Jarvis, J. (2011). *What Would Google Do?: Reverse-engineering the Fastest Growing Company in the History of the World*. City: Harper Business.
- Kahneman, D., & Klein, G. (2009). Conditions for intuitive expertise: a failure to disagree. *American Psychologist*, 64(6), 515.
- Kozinets, V. (2013). *Netnography: Redefined*. City: Sage.
- Liebl, F., & Schwarz, J. O. (2010). Normality of the future: trend diagnosis for strategic foresight. *Futures*, 42(4), 313–327.
- Liedtka, J. (2018). Why design thinking works. *Harvard Business Review*, September/October issue, 72–79.
- Ramirez, R., & Wilkinson, A. (2016). *Strategic Reframing: The Oxford Scenario Planning Approach*. Oxford: Oxford Publishing.
- Ramirez, R., Churchhouse, S., Palermo, A., & Hoffmann, J. (2017). Using scenario planning to reshape strategy. *MIT Sloan Management Review*, 58(4), 31–37.
- Ries, E. (2012). *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*. London, UK: Penguin Books.
- Rohrbeck, R., & Schwarz, J. O. (2013). The value contribution of strategic foresight: insights from an empirical study of large European companies. *Technological Forecasting and Social Change*, 80(8), 1593–1606.
- Rohrbeck, R., Battistella, C., & Huizingh, E. (2015). Corporate foresight: an emerging field with a rich tradition. *Technological Forecasting and Social Change*, 101, 1–9.
- Schoemaker, P. J. H. (1995). Scenario planning: a tool for strategic thinking. *MIT Sloan Management Review*, 36(2), 25–40.
- Schwarz, J. O. (2008). Assessing the future of futures studies in management. *Futures*, 40(3), 237–246.
- Schwarz, J. O. (2009). Business wargaming: developing foresight within a strategic simulation. *Technology Analysis & Strategic Management*, 21(3), 291–305.
- Schwarz, J. O. (2015). The "narrative turn" in developing foresight: assessing how cultural products can assist organisations in detecting trends. *Technological Forecasting and Social Change*, 90, Part B, 510–513.
- Schwarz, J. O., & Liebl, F. (2013). Cultural products and their implications for business models: why science fiction needs socio-cultural fiction. *Futures*, 50, 66–73.
- Schwarz, J. O., Kroehl, R., & von der Gracht, H. A. (2014). Novels and novelty in trend research – using novels to perceive weak signals and transfer frames of reference. *Technological Forecasting and Social Change*, 84, 66–73.
- Schweitzer, N., Hofmann, R., & Meinheit, A. (2019). Strategic customer foresight: From research to strategic decision-making using the example of highly automated vehicles. *Technological Forecasting and Social Change*, 144, April, 49–65.
- Tetlock, P. E., & Gardner, D. (2016). *Superforecasting: The Art and Science of Prediction*. New York: Random House.
- Ullrich, W. (2006). *Habenwollen: Wie funktioniert die Konsumkultur?* Frankfurt am Main: S. Fischer.
- Wolfers, J., & Zitzewitz, E. (2004). Prediction markets. *Journal of Economic Perspectives*, 18, 107–126.