

Analogical Thinking in Business Model Innovation Ideation

A descriptive study of managers' use of analogies

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In increasingly competitive environments and maturing markets, companies can no longer solely rely on product or process innovations to survive. Instead, scholars are advocating Business Model Innovation (BMI), i.e. the innovation of a firm's value creation and capturing mechanisms, as a solution to outperform competition in the future. Recently, research has started to investigate the process of how organizations are in fact innovating their Business Models (BMs). Within this innovation process, ideation, i.e. the phase in which the new BM ideas are formed, stands out in importance as it directly impacts the BMI outcome. Given this significance, it is necessary to understand the governing mechanisms of the ideation phase, which are the responsible managers' cognitive processes that form the ideas. However, these have not been investigated and defined yet. Meanwhile, psychology research has identified analogical thinking, i.e. the cognitive process of drawing parallels between two situations (domains), as the main cognitive driver in ideation. Analogical thinking has been studied in other, more 'mature' areas of innovation, where it has contributed to a better understanding of the ideation phase. However, it has not been studied in the context of BMI Ideation yet. Therefore, this study aimed to describe *the extent to which, and how, managers use analogies in the context of BMI Ideation*. To answer the question, a simulation exercise with 31 managers was conducted, in which an existing BM was innovated in teams. The collected verbal protocols were analysed based on a conceptual framework developed from analogy literature in the ideation context. The findings show that analogical thinking is employed frequently in BMI Ideation, during which managers draw parallels between underlying relations of situations, instead of transferring mere attributes. Moreover, they access knowledge from within and between-domains, i.e. closely and less obviously related domains. Furthermore, they do so for four different purposes in the context of BMI Ideation: Generating, explaining, developing or arguing for an idea. Additionally, the findings give first indications on patterns of interaction between certain analogical combinations that occurred more frequently than expected. This study contributes to the nascent literature on BMI by shedding light on the managerial cognitive processes in the context of BMI Ideation. It thereby extends the research on analogical thinking to another critical ideation context. It further integrates other discussions in the research on BMI, and provides a framework for the study of analogical thinking in the context of BMI Ideation. Lastly, it contributes by providing a research design that can advance the concurrent studies of the BMI process, compared to the historical focus dominant in research today.

Keywords Business model innovation, ideation, managerial cognition, analogy, descriptive study

Supervisor Erik Wetter

Presentation Fall 2014

Word count 19973

(excluding: Front Page, Acknowledgements, Table of Contents, List of Figures, List of Tables, Figures, Tables, Captions, Footnotes, Bibliography, Appendix)

Acknowledgements

First of all, we want to thank the Stockholm School of Economics, Karin Fernler and Erik Wetter for their flexibility and the accommodation of the specific time requirements we had due to our dual master studies. In this regard, we want to thank Erik Wetter for his support as a supervisor. Moreover, we want to express our gratitude to Pernilla Bolander, whose help in the critical phase of producing this thesis has been invaluable.

Second, we want to thank the managerial participants in this time-intensive study. Without their valuable time and effort, this thesis would not have been possible. We also want to specifically thank Linus Malmgren and Philip Runsten for their engagement in establishing a majority of the connections to the participants.

Third, we want to thank Massimo Garbuio for the inspiration to this study, which has been an insightful task and exciting topic for both of us.

Lastly, we want to express our gratitude to Anna Blitz, Nils Neubauer, Patric Jakobsson and Yaroslava Obertas for participating in the pilot study. A special thanks also goes to Martin Hodosi, Eva Kolker, Catharina Kulldorff, Marie Kusche, Nils Neubauer, Anna Schrum for their helpful feedback on the study.

Stockholm, July 7th 2014



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1 Introduction

This chapter commences by introducing the background of this study (1.1): On the one hand, Business Model Innovation (BMI) is increasingly relevant and its ideation phase is very important (1.1.1). On the other hand, analogical thinking, that could describe the critical, underlying cognitive processes in this phase, has not been researched in the BMI Ideation context (1.1.2). Based on that, the research purpose and question concerning the extent and particularities of analogical thinking in the context of BMI Ideation is presented (1.2). This is followed by an outline of this study (1.3).

1.1 Background

In increasingly interconnected and fast changing environments, companies have to find new ways to outperform competitors. One solution that has been growing in support is BMI, i.e. to innovate the logic of how a firm creates and captures value (Mitchell & Coles, 2003a; Massa & Tucci, 2014). Early in the process, managers need to form new ideas (Frankenberger, Weiblen, Csik, & Gassmann, 2013) that will dictate the whole process and outcome (Björk, 2012). Thus, there are substantial benefits to understanding this fuzzy “front end” (Günzel & Holm, 2013, p. 1340002) of BMI. One cognitive process that can explain the forming of ideas is analogical thinking, i.e. the novel re-combination of existing ideas (Holyoak & Thagard, 1996), as it is the main driver of creative thought (Perkins, 1997; Ward, 1998; Hofstadter, 2001). While research has addressed analogical thinking in other innovation fields (Dahl & Moreau, 2002; Christensen & Schunn, 2007), scholars have not provided empirical insight into managers’ analogical thinking in BMI Ideation yet. Thus, investigating analogical thinking in this context will be the focus of this study.

1.1.1 Increasing Relevance of BMI and Importance of Ideation

Recently, the topic of BMI for incumbent firms in mature markets has gained increasing attention in academia and practice (Sosna, Trevinyo-Rodriguez, & Velamuri, 2010; Frankenberger et al., 2013), and scholars have argued for BMI leading to competitive advantage (Zott & Amit, 2008; Teece, 2010) and higher firm performance in increasingly competitive environments (Hamel, 2000; Mitchell & Coles, 2003a; Mitchell & Coles, 2003b; Pohle & Chapman, 2006; Zott, Amit, & Massa, 2011; Massa & Tucci, 2014). The move to BMI as the source to competitive advantage, replacing the previous focus on product and process innovation (Amit & Zott, 2012; Massa & Tucci, 2014), is motivated by several reasons as shown in Table 1.

Reason for increasing relevance of BMI	Authors
Maturing markets , where offerings become commodities, require solutions to competitive advantages that are more complex than product and process innovations.	Johnson, Christensen, & Kagermann, 2008; Johnson, 2010; Massa & Tucci, 2014
Increased pace of market and technological change require “agile improvement steps” (Mitchell & Coles, 2003, p. 20) and adaptations only possible through BMI.	Hamel, 2000; Johnson et al., 2008; Casadesus-Masanell & Ricart, 2010; Demil & Lecocq, 2010; Doz & Kosonoe, 2010; Wirtz, Schilke, & Ullrich, 2010
Globalisation offers access to new resources and partners and enables BMI, but can also force BMI through exposure to new competitors.	Pohle & Chapman, 2006; Casadesus-Masanell & Ricart, 2010; Doz & Kosonoe, 2010; Wirtz et al., 2010
Resource scarcity is a constant burden for companies, and	Mitchell & Coles, 2003; Chesbrough, 2007a;

BMI is regarded as less resource intensive or expensive and more sustainable than product innovation.	Santos, Spector, & Van der Heyden, 2009; Sosna et al., 2010; Amit & Zott, 2012
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Table 1: Reasons for advancement of BMI

This movement towards BMI can be supported with facts from practice, where it has been argued that BM innovators were 6% more profitable (average over five years) than innovators who focused only on product or process innovation, and that BMI returns were more sustainable (BCG, 2008; Lindgardt, Reeves, Stalk, & Deimler, 2009). Managers perceived BMI as more important (Mitchell & Coles, 2003b; Borzo, 2005; Pohle & Chapman, 2006) or on par with product and process innovation in gaining a competitive advantage (Giesen, Berman, Bell, & Blitz, 2007).

Given the above reasons, BMI is not only an opportunity, but can become a necessity in adapting to the competitive environment (Mitchell & Coles, 2003a; Johnson et al., 2008; Demil & Lecocq, 2010; Wirtz et al., 2010). Due to the impact of BMI on firm performance and the hypothesis that BMI is “more complex than innovating an isolated product or process” (Frankenberger et al., 2013, p. 255), research has recently moved from a static, or “snapshot” perspective on BMs and their ontologies (i.e. conceptual mappings) to trying to answer the question on how organizations are actually innovating the BM (Aspara, Lamberg, Laukia, & Tikkanen, 2013, p. 459). Yet, the available literature on BM dynamics, or on how BMI takes place, is scarce (Tikkanen, Lamberg, & Parvinen, 2005; Demil & Lecocq, 2010; Wirtz et al., 2010). So far, scholars suggest that the BMI process can be categorized into four steps: Initiation, Ideation, Integration and Implementation (Frankenberger et al., 2013).

Out of these steps, ideation plays a key role in the process: “From the initial ignition of an innovation project, as well as over its journey over time, ideas play an essential role. [...] The process of creating and developing ideas for innovation, commonly referred to as ideation, is therefore an important part of the innovation process” (Björk, 2012, p. 17, in referring to Day, Gold, & Kuczmarski, 1994; Vandenbosch, Saaticioglu, & Fay, 2006). Also Eppler, Hoffmann and Bresciani (2011) acknowledged that forming “novel and sustainable business model ideas is a crucial yet challenging innovation task” (p. 1323). While the integration and implementation phase gave managers the possibility to validate and adapt their ideas, the reason why models ultimately failed were wrong initial assumptions (Magretta, 2002). Given the importance of ideation for the BMI outcome, it is key to understand the underlying cognitive processes that govern ideation.

1.1.2 Analogical Thinking Could Describe the Cognitive Processes in Ideation

To gain insight into the ideation phase, the underlying cognitive processes based on which managers form the ideas (Newell, Simon, & Shaw, 1962; Kant 1990) need to be defined. The individual manager’s cognition has been identified as the key determinant in BMI Ideation (Tikkanen et al. 2005; Sosna et al. 2010) and Aspara, Lamberg, Laukia and Tikkanen (2011) highlighted “the involvement of the decision-makers [...] and their cognitions in mechanisms that explain the causalities between business model changes vis-à-vis business performance” (p. 643). However, most research has been prescriptive in trying to advise managers how to innovate or which ideas to use (e.g. Osterwalder & Pigneur, 2010; Teece, 2010), or has hypothesized around the cognitive barriers in idea generation (e.g. Chesbrough, 2010). Likewise, the little empirical research has either

discovered the use of certain strategies (Enkel & Mezger, 2013), tested the effect of certain tools (Eppler et al., 2011), or identified how beliefs dominate the decision making (e.g. Tikkanen et al., 2005; Aspara et al., 2013). However, it has not looked at how managers actually form the ideas. This is further impeded as most empirical research is based on retrospective analysis and historical cases (e.g. Tikkanen et al., 2005; Sosna et al., 2010; Aspara et al., 2011, 2013; Enkel & Mezger, 2013; Frankenberger et al., 2013), and cannot capture the actual, real-time cognitive processes.

Meanwhile, numerous studies in the innovation and psychology theory have addressed the cognitive processes that enhance creativity and underlie ideation in many innovation processes, also known as creative cognition or creative thought (e.g. De Bono, 1990; Finke, Ward, & Smith, 1992; Amabile, 1996; Marsh, Landau, & Hicks, 1999). Out of the cognitive processes identified in cognitive science (Thagard, 2005), analogies or analogical thinking has gained broad support as the predominant driver of creative and innovative thought (e.g. Roukes, 1988; Boden 1994; Holyoak & Thagard, 1996; Hofstadter, 2001; Holyoak, Gentner, & Kokinov, 2001; Schild, Herstatt, & Lüthje, 2004). Analogical thinking is defined by scholars as a core component of cognition that enables humans to retrieve existing knowledge from memory (the base domain) in order to apply it to a new and unfamiliar situation (the target domain) (e.g. Gentner & Clement, 1988; Hofstadter, 2001; Holyoak et al., 2001). Although research on analogical thinking in new product development (NPD) and design engineering has contributed to a better description of the ideation phase of these innovation processes (e.g. Dahl & Moreau, 2002; Ball, Ormerod, & Morley, 2004; Hey, Linsey, Agogino, & Wood, 2008), analogies have been mentioned anecdotally (e.g. Mullins & Komisar, 2009) or inferred (Enkel & Mezger, 2013), but not studied in the BMI Ideation context yet.

Given the need to identify the cognitive processes underlying ideation in BMI, it is thus highly relevant and promising to study the analogical thinking by managers during ideation in BMI.

1.2 Research Purpose and Question

Studying the use of analogies in the BMI context could describe the managers' cognitive processes critical to the BMI outcome. Therefore, the purpose of this study is investigating analogical thinking in the context of BMI Ideation and to answer the following research question:

To what extent, and how, do managers use analogies in the context of BMI Ideation?

By answering this question in a descriptive study, we expect to progress the nascent theory on BMI, as called for by Teece (2010). We especially contribute to the underresearched field of managerial cognition in the BMI Ideation phase by studying the phenomenon of analogical thinking in this context and by developing a framework for the future study of analogical thinking in BMI Ideation. We further contribute to the field by employing a simulation as our research design, which enables studying the processes of BMI in real-time, compared to the prescriptive or historical research focus currently dominating the field.

1.3 Outline

This study is structured according to the following outline.

2. In the subsequent **Literature Review**, the concepts of BMI and analogies are reviewed to provide a general understanding and to elaborate the research gap. Moreover, based on the review on analogies, we operationalize our research question and build a conceptual framework that helps study it.
3. In the **Methodology**, we present our choice of a qualitative, descriptive study employing a simulation exercise, and our abductive approach. Moreover, we present our choices in analysing the data and assess the data quality.
4. In the **Empirics**, we present our data collected in the simulations according to the categories that we identified with the help of our conceptual framework and thematic analysis.
5. In the **Analysis**, we analyse our empirical data against our conceptual framework and present our findings in the structure of the framework. We also present additional observations beyond the research question.
6. In the **Conclusion**, we present our results in the form of our developed and adapted framework for analogical thinking in the context of BMI Ideation. We also summarize our additional observations.
7. In the **Discussion**, we further discuss our results and integrate our contributions into the current literature, given certain limitations. We discuss managerial implications and give directions for future research.

2 Literature Review

Our literature review is structured into three main areas outlined below. The approach to the literature search can be reviewed in Appendix 9.1.

BMI Literature

Given the relevance of BMI, research has called for a more dynamic view on its process (Aspara et al., 2013). Yet, much research has taken a conceptual view aiming to define and delimit BMI (2.1.1-2.1.2). Only recently, scholars converge to a four-step process view on BMI (2.1.3).

Out of these four steps, ideation has been identified as key to the BMI process and outcome. However, the manager's underlying cognitive processes critical to the phase (2.2.1) are underresearched (2.2.2.) and hence there is no understanding of how ideas are formed in the context of BMI.

Analogy Literature

Cognition research has identified analogies as the driver of creative and innovate thought, and empirical studies in other innovation fields have investigated and confirmed the use of analogical thinking, while it also bears potential in a business context (2.3). After a short introduction to the concept (2.3.1) we therefore review the extent to which, and how, practitioners use analogies in real-time (2.3.2).

Combining the Literature

In combining the predominance of analogies with the underresearched cognitive processes in BMI, we will summarize the research gap, i.e. the extent and particularities of analogical

thinking in BMI (2.4). Based on the understanding gained through the review, we operationalize our research question to four sub-questions. To answer these, we develop a conceptual framework based on a more detailed review of analogical dimensions, which was not necessary for the previous understanding (2.5).

2.1 Introduction to BMI

As indicated previously, BMI has recently gained importance for incumbent firms in mature markets (Massa & Tucci, 2014). Much effort has been dedicated to defining and delimiting BMI, but recently scholars apply a more process-based view (Aspara et al., 2013).

2.1.1 BMI Definition

The BM can be defined¹ as “the rationale of how an organization creates, delivers and captures value” (Osterwalder & Pigneur, 2010, p. 14), which happens “in relationship with a network of exchange partners” (Massa & Tucci, 2014, p. 7). Based on this, **BMI² “can be defined as “a novel way of how to create and capture value, which is achieved through a change of one or multiple components in the business model”** (Frankenberger et al., 2013, p. 255, in referring to Amit & Zott, 2001; Mitchell & Coles 2003a; Chesbrough, 2010; Demil & Lecocq, 2010; Teece, 2010).

2.1.2 BMI Delimitations

In progressing the research field, scholars have delimited the BMI concept from other business and innovation areas.

Strategy

The general consensus emerging among researchers is that a firm’s competitive strategy and BM are two separate matters³. They claim that strategies are used to realize a BM, i.e. that BMs are the results of strategies (Yip, 2004; Casadesus-Masanell & Ricart, 2010; McGrath, 2010). Further, scholars agree that the BM is the “logic of the firm” (Casadesus-Masanell & Ricart, 2010, p. 195), whereas strategy defines how the firm will compete in an environment with multiple actors (Chesbrough & Rosenbloom, 2002; Magretta, 2002; Casadesus-Masanell & Ricart, 2010; Teece, 2010). In line with this distinction, this study treats **strategy and the BM as separate concepts**.

Initial Business Model Design versus BMI

Scholars have acknowledged that many new-to-the-market BMs may come from new entrants, but that BMI is a major opportunity for incumbent firms (Mitchell & Coles, 2003a; Giesen, Berman, Bell, & Blitz, 2007). They suggest that initial BM Design and BMI are two distinct forms (Massa & Tucci 2014), as the processes involve different challenges and

¹ Despite the increase in attention for the BM concept (Zott et al., 2011), there is still no dominant definition for it (Morris, Schindehutte, & Allen, 2005; Zott et al., 2011; Frankenberger et al., 2013; Foss & Stieglitz, 2014). For the purpose of this study, we adopted a definition which is perceived to subsume the various definitions identified for BMs (for a comprehensive list of available Business Model definitions, See Appendix 9.2).

² Given the nascent state of theory, scholars have yet to agree on a definition for BMI. For the purpose of this study, the above definition was adopted, as it was perceived to subsume the understanding of the most dominant researches in the field. For a list of definitions on BMI, See Appendix 9.3.

³ As indicated by the number of authors separating the concepts, for example: Chesbrough & Rosenbloom, 2002; Magretta, 2002; Mitchell & Coles, 2003; Yip, 2004; Morris et al., 2005; Zott & Amit, 2008; Santos et al., 2009; Casadesus-Masanell & Ricart, 2010; McGrath, 2010 and Teece, 2010.

proceed differently (Sosna et al., 2010; Massa & Tucci, 2014). This study focuses on **BMI for incumbent firms**.

Business Model Improvement versus BMI

Notably, in the area of BMI for incumbent firms, a recurring theme has been the attempt to differentiate between a mere BM change or improvement and a BMI (Mitchell & Coles, 2003a; Yip, 2004; Teece, 2010; Foss & Stieglitz, 2014; Massa & Tucci, 2014). While scholars have difficulties determining objective criteria, they agree that BMI is more than a simple change, as it involves more radical strategies (Yip, 2004) “with the potential to shake whole industries” (Demil & Lecocq, 2010, p. 228). They claim that BMI is “game-changing the industry or market” (Johnson et al., 2008, p. 65), and that it needs to “be characterised by some degree of novelty or uniqueness” (Massa & Tucci, 2014, p. 9). This study focuses on this imprecise, but **radical understanding of BMI**.

Product Innovation and Process Innovation versus BMI

Some scholars argue that BMI starts from a new customer offering (Johnson et al., 2008; McGrath, 2010; Osterwalder & Pigneur, 2010; Enkel & Mezger, 2013) or is technology-induced (Mendelson, 2000; Chesbrough & Rosenbloom, 2002; Johnson et al., 2008; Zott & Amit, 2008), whereas others insist that BMI does not necessarily include a new offering (Hamel, 2000; Mendelson, 2000; Mitchell & Coles, 2003a; Chesbrough, 2007; Frankenberger et al., 2013) but can be based on new activities or structures of activities (Zott & Amit, 2008; Santos et al., 2009; Zott & Amit, 2010; Amit & Zott, 2012). Overall scholars agree that the BM should be the subject, rather than a vehicle, of innovation (Amit & Zott, 2001; Chesbrough, 2007, 2010; Sosna et al., 2010; Teece, 2010; Zott et al., 2011; Foss & Stieglitz, 2014; Massa & Tucci, 2014). This discussion also highlights the importance of distinguishing between product innovation and BMI research, as this leads to a more comprehensive understanding of the respective fields (Björk, 2012). Hence, this study focuses on BMI with the BM as the **subject of innovation**. This does not exclude the BMI from starting at a redefined value proposition, but stresses approaching the BM holistically in the attempt to innovate.

2.1.3 The BMI Process

Lately, research is progressing a more dynamic view on BMI, investigating how BMI takes place (Santos et al., 2009). Scholars agree that the process of BMI involves specific phases (Sosna et al., 2010; Massa & Tucci, 2014), which Frankenberger et al. (2013) summarised as “initiation, which focuses on the analysis of the ecosystem; ideation, which refers to the generation of new ideas; integration, which deals with the building of a new business model; and implementation, which focuses on the realization of the new business model” (p. 253) (see Figure 1). Importantly, the process is iterative, especially when adapting the different BM components to the idea and testing the BM in the marketplace, i.e. between integration and implementation (Dunford, Palmer, & Benveniste, 2010; Sosna et al., 2010; Frankenberger et al., 2013). Moreover, while research assumed that the process of initiating and ideating the BM can span from a few hours or meetings (Eppler et al., 2011; Frankenberger et al., 2013) to a few weeks (IBM Global Business Services, 2009), the integration and implementation phase can take several years (Sosna et al., 2010; Dunford, Palmer, & Benveniste, 2010).

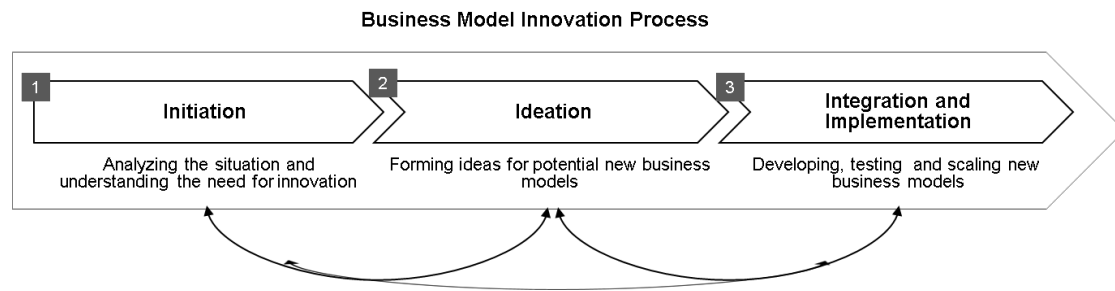


Figure 1: The BMI process, adopted from Frankenberger et al. (2013) and modified to account for the intertwined steps of integration and implementation

Within these phases, authors have followed various directions, such as the importance of trial-and-error learning and experimentation (e.g. Sosna et al., 2010), organisational inertia (e.g. Chesbrough, 2010) or strategies in dealing with multiple BMs (e.g. Markides & Oyon, 2010), all of which are reviewed in Appendix 9.4. Importantly, the ideation phase is key to the process and stands out among the other phases, as the ideas formed dictate the other BMI steps (Eppler et al., 2011; Björk 2012) and directly impact the success or failure of the BMI outcome (Magretta, 2002; Zott, 2003; Demil & Lecocq, 2010). As Sosna et al. (2010) argued, a BM's "successful design and continuous development is - to a large degree - fueled by using imagination" (p. 403), where an incremental decision in the design of the BM made "a significant difference to its success." (p. 401). Hence, it is highly important to understand the governing mechanisms in the ideation phase.

2.2 Underresearched Ideation

In the following, we review the responsibility and activities in the ideation phase. The governing mechanisms for ideation in BMI are the managers' cognitive processes (2.3.1), which are however not sufficiently researched to provide an understanding of the ideation process (2.3.2).

2.2.1 Managerial Cognition Governs Ideation

Who

Most articles do not directly refer to the responsibility for BMI in organisations,⁴ but do so implicitly by commonly referring to experienced managers, leaders, or executives in writing about guidance or activities in BMI (see Appendix 9.5 for an analysis of managerial titles in BMI literature). Moreover, the responsible managers are likely to ideate in teams, as Björk (2012, in referring to Leonard & Sensiper, 1998), in the context of BMI argued that "innovation is normally a collective endeavor" (p. 17). Also the little empirical research on BMI Ideation indicates that managers ideated within teams.⁵

⁴ Chesbrough (2007a, p.16) actually argues that companies have a BMI "leadership gap": no one in a firm has the "authority and capability to innovate the" BM, a problem also discussed by Bucherer et al. (2012).

⁵ In a historical case study on BMI, the responsibility for BMI laid by the owner-manager and his top management team (Santos et al., 2010). In interviews on BMI, respondents were senior managers and other organisational members "significantly involved" in the BMI process (Frankenberger et al., 2013, p. 259), or managers "involved within a small team" (Enkel & Mezger, 2013, p. 1340005-13). Lastly, Eppler et al. (2011) also studied managers in teams when conducting their experimental study on the impact of artefacts on BMI collaboration and creativity.

What

The core activity in ideation is to form ideas for the new BM (Frankenberger et al., 2013). It is widely acknowledged that an idea is formed by mental effort (Newell, et al. 1962) and that “ideas are products of the mind” or developed from cognition (Vandenbosch et al., 2006, p. 261, in referring to Kant’s critique of pure reason, e.g. 1990). Hence, the subjective managerial cognition governs the idea creation that underlies the ideation phase, and has great impact on the BMI process, as indicated by the sources below (See Table 2).

Authors	Relevance of managerial cognition in BMI Ideation
Hedman & Kalling (2003, pp. 53-54)	Were the first to include “the scope of management” as a component in the BM concept, which they did to “cover the dynamics of the business model over time and the cognitive and cultural constraints that managers have to cope with” and to “understand the factors of success and failure”
Tikkanen et al. (2005)	Also highlighted that the functioning of a BM depends on the manager’s subjective decisions.
Sosna et al. (2010, p. 386)	Found that “the main decision-maker, with his cognition and sense-making provid[ed] the most important input into the initial business model design process”
McGrath (2010; p. 260)	Recognised that “there is a human dimension to competing on new business models that we are also beginning to understand”
Aspara et al. (2011, p. 642)	Showed that managers make decisions regarding the BM components based on their cognitions and are affected by “personal values, beliefs and backgrounds” and that cognition “strongly influenced the choice of strategic alternatives and, eventually, business model transformation”
Aspara et al. (2013, p. 459)	Showed that “executives’ cognitive processes can influence corporate business model transformation decisions”

Table 2: BMI research indicating the relevance of managerial cognition in Ideation

2.2.2 Lacking Insight into Cognitive Processes in Ideation

Given the relevance of ideation, it is key to understand the underlying managerial cognitive processes that define where the ideas come from and what they are made of. However, current research shows little insight into managers’ cognitive processes that govern the ideation in BMI in practice, as outlined below.

Prescriptive Research

Most studies involving BMI Ideation are “prescriptive accounts of ‘how to’ innovate” (Aspara et al., 2013, p. 459), suggesting tactics for managers to consider when designing the new BM (e.g. Teece, 2010). Additionally, prescriptive studies have hypothesized that cognitive barriers were *preventing* managers from effective BMI, yet they did not conceptualize the cognitive processes that *form* the ideas (e.g. Chesbrough, 2010). Table 3 summarizes the prescriptive literature in BMI Ideation.

Topics in prescriptive literature involving BMI Ideation	
Strategy for BMI Ideation	Authors
Various tactics for managers to consider when designing the new BM, such as checklists or common value drivers	Mitchell & Coles, 2004b; Casadesus-Masanell & Ricart, 2010; Teece, 2010; Zott & Amit, 2010; Amit & Zott, 2012
Focus on the customer’s job to be done	Johnson et al. 2008
Use BM ontologies, i.e. conceptual maps or models, such as the BM Canvas	Baden-Fuller & Morgan, 2010; Doz & Kosonoe, 2010; Osterwalder & Pigneur, 2010; Zott & Amit 2010; Zott et

	al., 2011; Massa & Tucci, 2014
Engage in open innovation with partners for co-development of new BMs	Chesbrough, 2007b, 2013
Use imitation strategies for complete BMs	Zott 2003; Mitchell & Coles 2004a; Santos et al., 2009; Teece, 2010
Vary and copy parts of other BMs and recombine them or use "analogues" (Mullins & Komisar, 2009, p. 17)	Gassman, Frankenberger, & Csik, n.d.; Baden-Fuller & Morgan, 2010; Doz & Kosonoe, 2010
Cognitive Barrier	Authors
Managers are ruled by the dominant logic of how the business works	Tripsas & Gavetti, 2000; Chesbrough, 2003 & 2010; Sosna et al., 2010; Teece, 2010; Zott et al., 2011; Massa & Tucci, 2014
Managers face difficulties in thinking holistically about the BM and in leaving product thinking behind	Doz & Kosonoe 2010; Zott & Amit 2010

Table 3: Prescriptive research on BMI Ideation

Empirical Research

The small body of empirical research on ideation also lacks insight concerning the *real-time* cognitive processes that *form* (not restrict) ideas. Recently, two experiments (Björk, 2012; Eppler et al. 2012) addressed ideation, yet they did not research the underlying cognition. Other previous empirical research was based on historical case studies and retrospective interviews, and also did not focus on the cognitive processes that form ideas (e.g. Sosna et al., 2010; Enkel & Mezger, 2013). Table 4 summarizes the empirical research encompassing ideation.

Overview of empirical studies involving BMI Ideation	
Research Design	Research focus
Experiment	• Eppler et al. (2012) looked at the impact of artefacts on perceived creativity and collaboration • Björk (2012) researched the performance of ideas from innovators who engaged in both incremental and radical innovation ideas
Historical case study	• Velamuri, Bansemir, Neyer and Möselein (2013) suggested integration of products and services as a valuable strategy • Enkel & Mezger (2013) confirmed the usage of imitation strategies, where companies imitate BM components across industries, and hypothesized analogical search • Frankenberger et al. (2013) developed the 4I BMI process and confirmed the dominant logic and BM thinking challenges in Ideation • Sosna et al. (2010) focus on the importance of knowledge transfer mechanisms from individuals to the organization and vice versa • Aspara et al. (2011) showed that managerial cognition affected the choice between strategic alternatives (i.e. already formed ideas) and hence business model transformation • Aspara et al. (2013) showed that inter-organizational cognition, i.e. shared views among executives about the business in the firm, affect business model transformation decisions • Tikkanen et al. (2005) focused on how dominant rules and beliefs dictate decisions

Table 4: Empirical research encompassing BMI Ideation

In conclusion, neither the prescriptive literature nor the empirical research gives insight into how ideas are actually cognitively generated in practice, which is critical for a better understanding of the important ideation phase. In line with our argumentation, Frankenberger et al. (2013) pointed out that their interviewed practitioners, while providing answers for the other BMI process phases, could not articulate how they formed ideas. Also Schneider and Spieth, (2013) acknowledged that the understanding of the idea creation

process for incumbent firms is limited and call for future research in this domain. Moreover, scholars have recently called for a better understanding of the managerial cognition in BMI (Tikkanen et al., 2005; Aspara et al., 2013).

Therefore, we review the predominant cognitive processes in ideation, i.e. analogical thinking, in more detail. Investigating the particularities of the use of analogies in the context of BMI Ideation would contribute to a better understanding of this critical phase.

2.3 Analogical Thinking in Ideation

It is widely accepted among researchers that the prime cognitive process that underlies creativity and idea generation is analogical thinking (e.g. Gentner, 1983; Clement, 1988; Hofstadter, 2001; Holyoak et al., 2001). In addition, several empirical studies have investigated and confirmed the use of analogies during ideation, both in other innovation fields, such as NPD and design engineering (e.g. Dahl & Moreau, 2002), and in a business problem solving⁶ context (Bearman, Ball, & Ormerod, 2002, 2007). Concerning the latter, Gavetti and Rivkin (2005) argue that managers were using analogies in strategic decision making, but could also do so “for other purposes”, where analogies were “catalysts for generating creative options.” (p. 61). Moreover, Enkel and Mezger (2013) hypothesized that imitation strategies often based on analogical thinking, and Mullins and Komisar (2009) prescribed to use “analogs” (p. 17) as a strategy in evaluating ideas for BMI. Thus, in this section we first introduce analogical thinking by defining what an analogy is and how the cognitive process works. Afterwards, we review the use of analogies in ideation to gain a better understanding to what extent and how practitioners use analogies in real-time.

2.3.1 Introduction to Analogies

Analogy has been defined in many different ways in cognition literature. To establish an unambiguous understanding of analogy, **this study defines analogy as a cognitive process underlying creative tasks, in which people retrieve information from a familiar setting (the base domain) in order to form an idea in a new setting (the target domain)** (Gentner, 1983; Dahl & Moreau, 2002; Gassmann & Zeschky, 2008). This definition of analogy indicates that analogies consist of two domains: the target domain, which requires the construction of a novel idea, and the base domain, which serves as a knowledge base and source of inspiration and creativity (Finke et al., 1992; Amabile, 1996; Holyoak & Thagard, 1996; Perkins, 1997).

Scholars in cognitive psychology have suggested that people who are confronted with a creative task start the process of analogizing by browsing through a space of possibilities in memory (Newell, 1990; Perkins, 1997). This cognitive quest for a base domain that is analogous to the target is the first sub-process of analogical thinking and is commonly referred to as the access phase (Falkenhainer, Forbus, & Gentner, 1989; Hall, 1989; Hummel & Holyoak, 1997). After a base has been successfully accessed, it is connected to the target in a second sub-process, which is widely accepted as the mapping phase

⁶ Two recent studies by Bearman et al. (2002, 2007) researched spontaneous analogizing in a business context. Importantly, however, their studies did not investigate the use of analogies in BMI, but during case cracking sessions, such as industry analyses. Further, participants in their experiment were not experienced managers, but management “novices” and “postdoctoral academics in management science”. Lastly, they did not investigate differences in analogical distances.

(Gentner, 1983; Holyoak & Thagard, 1997). Finally, in a third sub-process, the knowledge from the base is adapted to the target, which is referred to as the transfer phase (Gentner, 1983; Hall, 1989).

2.3.2 The Use of Analogies in Ideation Practice

Recently, scholars have begun to empirically study analogical thinking in ideation processes in order to gain a better understanding of the extent to which, and how, analogies are used in ideation practice (Dahl & Moreau, 2002; Casakin, 2004; Ball et al., 2004; Christensen & Schunn, 2007; Hey et al., 2008; Kalogerakis, Lüthje, & Herstatt, 2010). Hereby, scholars have investigated the frequency of analogy use as well as a set of analogical dimensions that allow for a more in-depth analysis of the cognitive process: the structure, distance, and purpose of analogy.

Frequency of Analogy Use

Several empirical studies have provided evidence that analogies are used by practitioners in ideation tasks. In one of the first empirical studies, Dahl & Moreau (2002) investigated the influence and value of analogical thinking during the ideation stage of new product development. Their research demonstrated that spontaneous analogizing is common among product developers during ideation (see also Ball et al., 2004) and that analogy plays an important role in the early stages of product development: Based on their findings, several studies followed, showing that analogies were also frequently applied in other ideation tasks, such as design engineering (Christensen & Schunn, 2007) or business case solving (Bearman et al., 2007)⁷.

Analogical Structure

To identify analogies and assess how frequently they are used in practice, it is necessary to first determine what an analogy is. The analogical structure describes the type of information that is mapped between a base and target domain (Gentner, 1983; Falkenhainer et al., 1989) and can thus be utilized for a clear distinction between analogy and non-analogy. Surprisingly, very few scholars have addressed the analogical structure in empirical studies, and it is often unclear what was counted as analogies and what not. One rare exception are Bearman et al. (2002, 2007), who differentiated between object-and-attribute analogies⁸ (cases in which a base and target share superficial features) and relational analogies⁹ (cases in which a base and target share structural relationships). They found that “expert analogising was dominated by analogies that mapped relational structures between base and target domains” (Bearman et al., 2007, p. 25).

Analogical Distance

Another important dimension of analogical thinking that is recognized in literature is the analogical distance (or range), which depicts the sources where a thought or idea originated from. The distance provides a measure of how far apart an analogy’s base and target domain are (e.g. Dunbar, 1997) and thus indicates how creative or original an idea is

⁷ By postdoctoral management students.

⁸ For example, “a crosswalk is like a zebra” (here both objects share superficial attributes, i.e. stripes).

⁹ For example, “the human circulatory system is like a subway system” (here both objects share structural relations, i.e. the flow of blood in the system is analogous to the flow of subways in the system).

(Holyoak & Thagard, 1996). Hereby, the analogical distance can be described on a continuum from “near” to “distant” (Ward, 1998, p. 221). Several empirical studies suggest that distant analogies or “mental leaps” (Ward, 1998, pp. 221-222) have a greater potential to result in breakthrough ideas than near analogies. Dahl and Moreau (2002), for instance, showed that especially the use of distant analogies and from different knowledge bases had a positive effect on originality in product designs (see also Christensen & Schunn, 2007; Kalogerakis et al., 2010; Chan, Schunn, Cagan, Wood, & Kotovsky, 2011). Although those distant analogies require more cognitive effort, as they share less obvious (surface) features between the base and target domain (Holyoak & Koh, 1987; Johnson-Laird, 1989; Gentner, Rattermann & Forbus, 1993; Ward, 1994), studies have shown that distant analogies occurred almost as frequently as near analogies (e.g. Christensen & Schunn, 2007).

Analogical Purpose

Holyoak and Thagard (1997) claim that the use of analogy is always guided by purpose, i.e. the “reasoner’s goal – what the analogy is intended to achieve” (p. 36). Numerous empirical studies on ideation have analysed the different purposes or reasons why analogies are used by practitioners (e.g. Dahl & Moreau 2002; Kalogerakis et al., 2010). Hereby, studies have shown that analogies are not merely used for idea generation, but that they can serve a wide range of purposes that support the ideation process (e.g. Christensen & Schunn, 2007). Further, scholars have suggested that the purpose, as a trigger of analogical thinking, impacts or controls both the analogical structure (e.g. Gick and Holyoak, 1983) and the analogical distance (e.g. Dunbar, 2001). Several scholars have researched this interaction between the dimensions in order to identify analogy patterns in the ideation process (e.g. Bearman et al., 2007; Christensen & Schunn, 2007).

2.4 Summary of the Research Gap

The literature review on BMI revealed that there is little empirical research on the ideation phase of BMI, despite its critical role in the innovation process. Hereby, several scholars point out that the managers’ cognitive processes that underlie ideation are especially relevant and hence in need of further research and investigation. One cognitive process that is at the core of human cognition is the concept of analogy or analogical thinking. It is widely accepted among cognitive scientists that analogy sparks creativity and innovation and its use has been empirically verified in recent studies on product and design ideation. Importantly, however, no study has investigated the real-time use of analogy by managers in BMI, although it has been mentioned anecdotally. As a result, currently there is no information available on the extent to which or how analogies are used during BMI Ideation.

For a more in-depth analysis of analogical thinking, researchers have, besides providing evidence for the frequent use of analogies, studied the structure, distance, and purpose of analogy. Additionally they have researched the interaction of analogical purpose with the other dimensions to identify patterns of analogy use. Hence, the extent of analogical thinking can be defined by the frequency of analogies used, whereas the answer to how analogies are used is defined by the dimensions of analogies. Therefore, we will attempt to answer our research question “*to what extent, and how, do managers use analogies in the context of BMI Ideation*”, by investigating the following four sub-questions:

1.1 How frequently do managers use analogies in BMI Ideation?

1.2 Which structures of analogies do managers use in BMI Ideation?

1.3 Which distances of analogies do managers use in BMI Ideation?

1.4 Which purposes of analogies do managers use in BMI Ideation, and how do they interact with structures and distances?

In the next chapter, we will introduce our conceptual framework that is based on analogy literature and reviews the analogical dimensions in more detail. The framework will enable us to analyse the frequency of analogies and how they are used during BMI Ideation.

2.5 Conceptual Framework

Given that existing literature does not provide a ready-made framework for the identification of analogies and the analysis of their dimensions in the BMI Ideation context, it was necessary to build a conceptual framework on a more detailed review of the existing ideation literature that is most applicable to the BMI context. Since an analogy can only be identified by building the structure of it, identifying the structure serves both to answer our first and second sub-question. Identifying the distance and purposes answers the third and fourth question respectively. The section ends with a summary and illustration of the conceptual framework, which then serves as a lens through which we analyse the use of analogies during ideation in BMI.

2.5.1 The Structure of Analogy

The first dimension that is extracted from the literature review and included in the conceptual framework is the analogical structure.

To identify analogies and to analyse structural differences, Bearman et al. (2002, 2007) adapted a structure-mapping scheme by Gentner (1983) that is widely acknowledged in analogy theory (see Table 5 below). In fact, Bearman et al. (2002, 2007) categorized analogies into object-and-attribute analogies (Gentner (1983) calls them mere-appearance matches) and relational analogies (Gentner (1983) refers to analogies and literal similarities) in order to make the scheme more practical. They argued that literal similarities (mappings that include both relations and attributes) should be counted as analogies since “few cases of analogising reach the status of being exclusively relational in nature” (p. 10). Additionally, they demonstrated that mere appearance matches (mappings that only include attributes) are “worthy of analysis” (p. 16) as they were frequently used for the illustration of ideas in their study. Like Gentner, (1983), Bearman et al. (2002, 2007) further differentiated between first-order and second-order relations for a more in-depth analysis of analogies. Second-order relations can be interpreted as sophisticated analogical structures that involve causality¹⁰ or implications and thus require more cognitive effort. Given that the structure scheme by Bearman et al. (2002, 2007) is based on theory, yet more practical in use, it will be selected for our framework. Table 5 summarizes the scheme and provides

¹⁰ Such causal relations are the most common form of second-order relations (Holyoak & Thagard, 1995), yet a wide range of other second-order relations was identified by scholars, such as explain, imply, entail, presuppose, facilitate, hinder and prevent (Holyoak & Thagard, 1995; Bearman et al., 2007).

examples of relational analogy (both first- and second-order), literal similarity, and mere appearance matches in order to illustrate differences in their propositional structure.

Analogy	Example	Propositional Structure	Read	Interpretation
Analogy First-order Relation (Gentner, 1983)	"The flow of cars in a tunnel is like the flow of electrons in an electrical circuit."	Relation: PASS THROUGH (electrons, electrical circuit), just as PASS THROUGH (cars, tunnel)	Electrons pass through electrical circuit, just as Cars pass through a tunnel	The comparison is based on relations (both objects pass through a tube) and not on object attributes (cars do not physically resemble electrons)
Relational Analogy Second-order Relation (Gentner, 1983) First- and second-order (Bearman et al. 2007)	"Installing a resistor in series in the electrical circuit is like installing a traffic light in the tunnel"	Relation: CAUSE [ADDED TO (resistor in series, electrical circuit), SLOWS DOWN (resistor in series, flow of electricity)] just as CAUSES [ADDED TO (traffic light, tunnel), SLOWS DOWN (traffic light, flow of cars)]	A resistor added to an electrical circuit causes the resistor in series to slow down the flow of electricity, just as a traffic light added to a tunnel causes the traffic to slow down the flow of cars	The comparison is based on relations between relations, as the flow of the object (base: cars / target: electrons) is impeded by another object (base: traffic light / target: resistor in series)
Literal Similarity (Gentner, 1983)	"Milk is like water"	Relation: FLOWS INTO (milk, glass) just like FLOWS INTO (water, glass) Attribute: LIQUID (milk) Just like LIQUID (water)	The milks flows into a glass just like water flows into a glass Milk shares the same superficial attributes (liquid) with water	The comparison includes both object attributes (e.g. milk and water are both liquid and flat-top) and relations (e.g. milk and water both flow and vaporize when heated).
Attribute Analogy (Bearman et al., 2007)	Mere - appearance match (Gentner, 1983)	"Sunflowers look like the sun" Attribute: YELLOW (sunflower) just like YELLOW (sun)	The sunflower shares the same superficial attributes (yellow, circular) with the sun	The comparison is only based on object attributes (e.g. sunflowers and the sun are both yellow and circular), but no relations are shared.

Table 5: Overview of Analogical Structure

2.5.2 The Analogical Distance

The analogical distance is a second dimension of analogy that is derived from the literature and implemented in the framework.

The analogical distance has been researched in several empirical studies on ideation (e.g. Dahl & Moreau, 2002; Kalogerakis et al., 2010). Hereby, most studies applied a dichotomous scheme, based on Ward's (1998) distinction between "near" and "distant" (p. 221) analogies, in order to analyse the difference between the source and the target domain. Dahl and Moreau (2002), for instance, labelled the analogical distances "near" and "far" (p. 55), whereas Casakin (2004) and Christensen and Schunn (2007) referred to "within-domain" and "between-domain" (pp. 29-30 in Christensen & Schunn, 2007).

Christensen and Schunn (2007) pointed out that they used the level within-domain for base domains from the same company or from competitors and the level between-domain for more distant domains, such as biology or sport. Given that this distinction can also be applied in BMI context, within-domain and between-domain are selected as categories for the analogical distance in the conceptual framework. Table 6 below depicts this distance scheme.

Analogical Distance	Description of Distance
Within-domain	The distance between the base domain and the target domain is small. "Within-domain analogies were defined as analogical mappings within the domain of medical plastics (for example, to existing products from the same company or from competitors)." (Christensen & Schunn, 2007, p. 33)
Between-domain	The distance between the base domain and the target domain is large. "Between-domain analogies were analogies made to domains outside of medical plastics (for example, to the auto industry, biology, or sports)." (Christensen & Schunn, 2007, p. 33)

Table 6: Overview of Analogical Distance

2.5.3 The Analogical Purpose

The final dimension identified in literature and selected for the conceptual framework was the analogical purpose.

An extensive review of literature on the purposes of analogies showed that several empirical studies provided insight into the reasons why practitioners drew analogies during ideation (e.g. Hey et al., 2008, Christensen & Schunn, 2007). The most comprehensive list of potential purposes was presented by Dahl and Moreau (2002), who classified the analogical purposes into idea generation, clarification, modification and evaluation. This is in line with Gavetti and Rivkin (2005), who hypothesized that managers use analogies for creating creative options, like the purpose of idea generation. Moreover, Mullins (2009) suggests evaluating BM ideas based on other successful cases. Hence, this scheme is chosen as the basis for our framework. In addition, Christensen and Schunn (2007) found that analogies were repeatedly used as explanations in the product ideation phase "as a way of enhancing and ensuring comprehension" (p. 31), which differs from clarification as it does not involve questioning (See Table 7). Further, Enkel and Mezger (2013) argued that analogies were used for the imitation of ideas from BM components across industries. In order to complement the list, both explanation and imitation are added to the framework. Table 7 below summarizes the six adopted purpose categories.

Analogical Purpose	Description of Purpose
Idea Generation	"an idea was generated in the form of an analogy" (Dahl & Moreau, 2002, p. 49)
Idea Clarification/Elaboration	"the design team asked one another questions about the ideas presented" (Dahl & Moreau, 2002, p. 49). Clarification follows up on (goes beyond) explanation.
Idea Modification	"When the design team evaluated an idea and decided to modify it to better meet the required attributes" (Dahl & Moreau, 2002, p. 49)
Idea Evaluation/Arguments	"When the design team passed verbal judgment on an idea" (Dahl & Moreau, 2002, p. 49)
Explanation	"The function of the analogy could be to explain a design to the other designers" (Christensen & Schunn, 2007, p. 33)

Idea Imitation	Imitation of BM components from other (cross-) industries (Enkel & Mezger, 2013, p. 2)
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Table 7: Overview of Analogical Purposes

2.5.4 Summary of the Conceptual Framework

In order to study the extent to which, and how, managers make use of analogies during ideation in the BMI context, the conceptual framework was developed based on existing literature. The framework consists of a categorization of the analogical structure, purpose, and distance and serves as guide for the data collection and analysis (see Figure 2). The three categories of analogical structure guide the identification of analogical thinking and therefore provide answers to the first and second sub-question of *how frequently managers use analogies in BMI Ideation* and *which analogical structures are used by managers in BMI Ideation*. Similarly, the two categories of analogical distance direct the quest for answers to the third sub-question of *which analogical distances are used by managers in BMI Ideation*. And lastly, the six categories of analogical purpose guide and structure the study to the fourth sub-question of *which analogical purposes are used by managers in BMI Ideation*, and *how they interact with structures and distances*. Importantly, the different categories derived from literature will be tested against the empirical data and are thus subject to change.

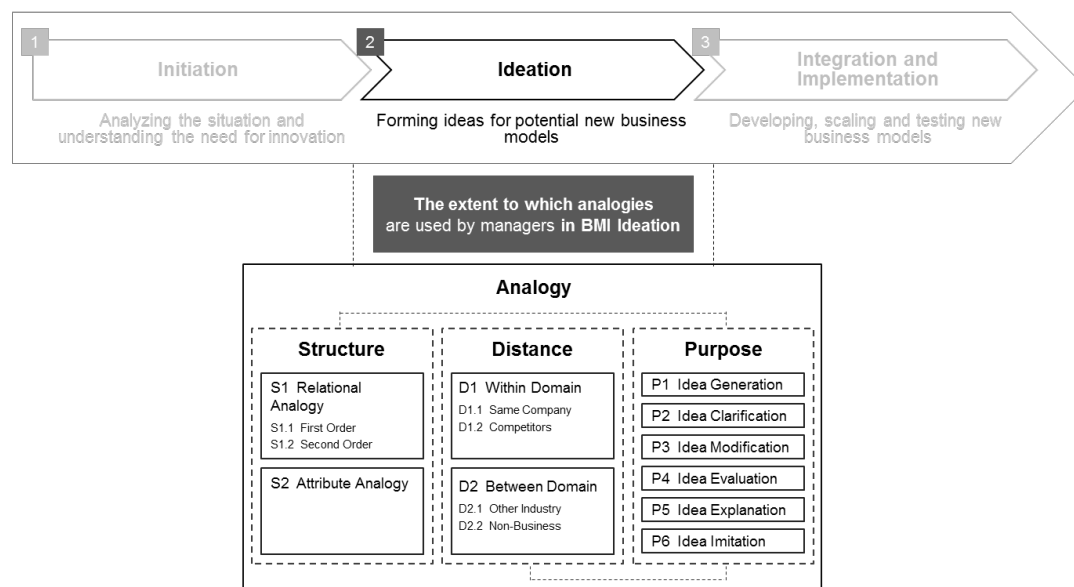


Figure 2: The Conceptual Framework

3 Methodology

This section introduces the methodological choices we made in designing our study (3.1-3.3) and analysing the data (3.4). The choices were taken with the aim to increase the overall quality (3.5), i.e. reliability and validity, of our study.

3.1 Methodological Fit

The theoretical review indicated the lack of insight into managers' cognitive processes in ideation in BMI. In order to build theory in such an unexplored area, a qualitative approach

is suggested (Edmondson & McManus, 2007) and applied. In order to specifically answer our sub-questions revealing the extent and particularities of analogical thinking in BMI Ideation, we further chose to conduct a descriptive study. Describing the status quo and identifying patterns in the data enables us to contribute with information on the phenomenon and to understand how analogies are used (Goodwin, 2010).

3.2 Research Approach

While “induction starts from facts and deduction from theory” (Arbnor & Bjerke, 2009, p. 92), we have taken the stance of a deductive and inductive, i.e. an overall abductive approach, as the analysis of our data will be “combined with existing theory in the literature [...] as a source of inspiration to discover patterns for further explanations” (Arbnor & Bjerke, 2009, p. 92). More specifically, we were guided by existing theory in extracting and structuring analogies but also moved between induction and deduction in finding additional (compared to our framework) themes for analogical purposes and distances (See Figure 3).

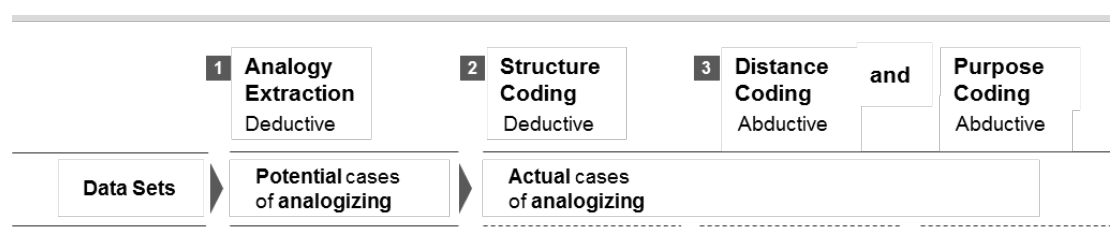


Figure 3: The abductive approach in our study: Moving between Deduction and Induction

In a first step, potential cases of analogizing were extracted from the qualitative data sets deductively, based on Clement’s (1988) analogy extraction coding scheme (see 3.3.5). In a second step, the list of potential analogies was studied through the lens of our framework, and by applying the structure codes deductively, actual analogies were identified (see 3.4.1). Lastly, in a third step the analogical purposes and distances were coded in an abductive approach with the help of thematic analysis (Braun & Clarke, 2006) (see 3.4.2). Taking the lens of our framework, we analysed the data for the dimensions of purpose and distance, i.e. we approached “the data with specific questions in mind” that we wished “to code around”, i.e. we were “theory driven” (Braun & Clarke, 2006, p. 18). However, within these dimensions, we coded the data inductively by giving meaning to the phenomena. In a next step, the codes were condensed into themes. This was done with the help of our conceptual framework (deductively), but we also let sub-categories emerge (inductively) where we believed the themes were not able to represent the information fully, or we adapted the themes to match the allocated sub-categories better. In reviewing and refining the themes and testing them against the framework, we challenged our analysis and realized that we had to drop some themes since they were not supported by enough data, or had to merge them as they were overlapping with other themes.

3.3 Research Design: Simulation

Descriptive studies aim to study the occurrence of a phenomenon in a specific context. Usually, the environment is studied without manipulation, as the study aims to describe the world as it is and relies on naturally occurring data. For that purpose, we should study managers’ cognitive processes in their natural environment when ideating the BM.

However, studying the context of BMI Ideation in reality bears its difficulties. Aiming to study cognitive patterns in real environments complicates this even further.

While BMI should take place regularly, given the length of the implementation phase ideation only takes places every few years (Mitchell & Coles, 2004b; Yip, 2004). Moreover, to capture the ideation phase from its beginning, one would need to observe managers already in the initiation phase, as it is unknown when the transition to ideation takes place. However, even the question of when managers engage in initiation cannot be answered explicitly. Furthermore, since BMI is a competitive move, information prior to exploitation of the BM is unlikely to be public. A reason for the little empirical research and the reliance on historical cases or retrospective interviews in the current research on BMI might in fact be this difficulty inherent in accessing and observing the process.

However, using retrospective verbal reports, where managers would reconstruct their thought processes, is not a reliable research design for capturing the real-time cognitive processes and performing a valid data collection without omissions or fabricated accounts. Instead, concurrent verbal reports, where managers think aloud are recommended. (Ericsson & Simon, 1984; Van Someren, Barnard, & Sandberg, 1994). Validity problems that arise from this unnatural behaviour of thinking out loud while solving a task can be remedied through naturally occurring dialogues, as in the case of group discussions (Van Someren, Barnard, & Sandberg, 1994). Therefore, we decided to conduct a simulation of ideation, where we studied the managers in teams to observe their cognitive processes. Besides, the literature review indicated the likelihood of managers ideating in teams, hence this decision is also a reflection of reality. Moreover, simulation studies are the dominant research design in studies of analogical thinking in other fields (e.g. Bearman et al., 2002, 2007), and also Eppler et al. (2011) solved the above dilemma by simulating the ideation phase for their experiment. The simulation study involved several methodological choices, which will be explained in the following.

3.3.1 Simulating the Ideation Phase

Given that the ideation phase was the focus of this study, we simulated the ideation task in BMI. This was based on the acknowledged BM Canvas method (see below), due to several reasons: First, the BM Canvas is a common tool in ideation in practice. (IBM Global Business Services, 2009; Osterwalder & Pigneur, 2010). Second, the BM ontology acts as a boundary object, which “allow[s] members of different groups to attribute different meanings particular to their needs from the same material, while cognition is distributed through verbal and non-verbal means” (Eppler et al., 2011, pp. 1326-1327). Hence, using the BM Canvas supports the production of concurrent verbal protocols for studying the cognitive processes. Lastly, Eppler et al. (2011) used this approach in their first real-time study in BMI Ideation and hence confirmed this method in the research field.

The BM Canvas is a graphical map of nine BM components¹¹ and helpful in innovating the BM (Demil & Lecocq, 2010; Osterwalder & Pigneur, 2010; Zott & Amit, 2010). Importantly, the components are connected and influence each other (Hedman & Kalling, 2003; Morris

¹¹ Specifically, the components are: Value proposition, Customer Segments, Customer relationships, Distribution Channels, Key resources, Key Processes, Value Network, Cost structures and Revenue streams (Osterwalder & Pigneur, 2010)

et al. 2005; Johnson et al., 2008; Foss & Stieglitz, 2014). The Canvas used in our groups was branded by Cordial, the Stockholm based PSF, given our collaboration with their CEO. However, the components correspond to the originally developed ones in the Canvas of Osterwalder & Pigneur (2010) (See Appendix 9.6).

According to the method, the empty BM canvas was printed and mapped out on a large piece of paper and placed on a meeting table (See Figure 4). Further, each participant received an A4 version of the canvas for individual reflection. The participants were sitting around the table and discussed their ideas. They could use pens to write on sticky notes, which they could attach to the large canvas and its building blocks as this “helps in identifying [...] new opportunities.” (Fritscher & Pigneur, 2010, p. 32).



Figure 4: Example from simulation from pilot study



Figure 5: Filled out canvases by manager teams

The time for solving the task was controlled by us, as we invited and ended the discussions based on a timer. The groups had 85 minutes to solve the task, which is comparable to previous studies on analogies (Bearman et al., 2002, 2007) or BMI Ideation (Eppler et al., 2011). In the end the filled out Canvases (with sticky notes) were collected (See Figure 5).

3.3.2 The Case

Basis for the ideation task was a case study firm. Using a case study is considered a realistic simulation of managerial tasks (Easton, 1992), and represents reality in that multiple solutions and no objective metrics exist (Van Lehn, 1989). The use of the case study method in this research field is confirmed by studies of Bearman et al. (2002, 2007) and Eppler et al. (2011) who also relied on this approach.

The case used in our study was published by the Darden Business School (Freeland, 2010) and is concerned with BMI at Dell, the infamous computer manufacturer. In short, the case gives an overview of Dell's BM in 2010, its internal difficulties and the environmental drivers changing the environment, which together led to losses in market share. The case was considered particularly suitable, as the company's BM is fairly well-known, the industry was considered not to require too specific knowledge, and the length of the case or amount of information provided was considered adequate given the timing of the sessions. Further, the content was structured fairly well according to the BM Canvas components, which should facilitate the common understanding of the current BM by the managers and enable moving to ideation faster (Santos et al., 2009; Wirtz et al., 2010; Aspara et al., 2013), hence allow studying ideation in a denser time frame. The participants

should assume that Dell's situation in the case was Dell's situation today, i.e. they could ideate based on the current environment.

3.3.3 Presentation of Information and Task

Prior to the simulation exercises, the participating managers received the case study to be read via email. While managers could have gathered additional information, this choice was taken to ensure that all managers had at least covered the same basic information required. At the sessions, managers were welcomed and received the exact same presentation on the concept of BMs and BMI, in order to anchor BMI as distinct from BM improvement, product- or process innovation, and to leave all managers with the same preconceptions. Before starting the timed ideation part of the sessions, all managers received the same more detailed instructions and limitations for the task, to avoid misunderstandings and inference during the process. Once the time was over, the managers received ad-hoc feedback from us on their processes and were thanked for their participation. The presentation, instructions and feedback can be reviewed in Appendix 9.7 and the standardised script in Appendix 9.8.

3.3.4 Choice of Managers

Based on the literature review, experienced managers working in incumbent firms were recruited for our simulation study. Notably, given the simulation design, the managers were not innovating their own firm's BM, which led to divergence from reality.

The recruitment of participants was carried out through various channels, as indicated in Table 9Table 8. First, we contacted Linus Malmberg, contributor to the book "Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers" by Osterwalder and Pigneur (2010) and CEO of Cordial Business Advisors, a Professional Service Firm (PSF) specialised in business architecture. Malmberg established contact with clients willing to participate. Second, we collaborated with Philip Runsten, a visiting researcher at the Stockholm School of Economics (SSE) and CEO of the PSF Influence, which consults on team dynamics. Runsten established contact with clients willing to participate and additionally recruited Influence's top management team. Lastly, we pitched the exercises on the SSE alumni LinkedIn groups, and selected several respondents. The participants did not receive any incentives for participation.

To establish sufficient similarities between the managers, and to account for the responsibility for BMI in reality, all established contacts were evaluated for their suitability. Qualification criteria concerned the job title (that infers experience and seniority), professional working experience in years, or budget- and personnel responsibility. Based on these criteria, 31 participants were selected, a number considered sufficient in this study's type of qualitative research (Bazeley, 2013). Table 8 below reveals the information on our sample (for a detailed list of the participants and their qualifications, see Appendix 9.9).

Criteria	Values
Job Title	Include "CEO", "Director", "Head", "Senior", "Manager", "Business Development", "Strategy" or similar
Years of professional work experience	70% had 16-30 years of professional working experience
Personnel and Budget responsibility	45% had budget responsibility, 55% had personnel responsibility

Table 8: Recruitment criteria of participating managers

None of the managers had internal experience from Dell. To ensure that the participants reflected reality, we also paid attention to demographics. Out of the recruited participants, 77% were male, and the average age group was 41-45. This was considered to be representative of the still rather male dominated, and also more aged experienced management.

While in the majority of cases the recruitment of single managers led to the recruitment of that manager's respective company team (four teams), other managers were randomly assembled into teams that fit their time requirements (two teams). This led to a total of six simulations with four to seven participants held in the Stockholm area in Calendar Week 20, 2014 (see Table 9). Two exercises were held with management teams at their offices, whereas the other simulations were held at conference locations.

Session	Monday	Tuesday	Wednesday	Thursday	Friday1	Friday2
Location	Conference Location	Conference Location	Conference Location	Corporate Office	Corporate Office	Conference Location
Recruitment	Malmberg	Runsten	LinkedIn		Runsten	
Team assembly	Mixed team	Established team	Mixed team	Established team		
Managers in the sessions (each manager received a unique code)	M1	M8	M14	M18	M22	M27
	M2	M9	M15	M19	M23	M28
	M3	M10	M16	M20	M24	M29
	M4	M11	M17	M21	M25	M30
	M5	M12			M26	M31
	M6	M13				
	M7					

Table 9: 31 managers studied in six teams over a week of data collection

3.3.5 Data Collection and Documentation

The sources of data were the verbal protocols of the managers at the simulations. Patrick and James (2004) suggested several methods for data collection in studies on the cognitive processes, such as recording, videos, interviews or observation, and recommend using multiple data sources. Given that we wanted to study the concurrent verbal reports, we observed the managers in real time and in addition recorded the group discussions.

The observation was structured, as we entered the observation with a checklist to identify and extract analogies (Fisher, 2007) and non-naturalistic, given the simulation study (Goodwin, 2010). A structured observation was suggested to be a superior design for descriptive studies where attention can be paid specifically to the potential variables of interest (Bell, 2005), in this case analogies. The checklist based on which we extracted potential cases of analogizing in real time was originally developed by Clement (1988) and later complemented by Bearman et al. (2007).¹² Following their approach, the observers

¹² Clement (1988) proposed four criteria for recognizing an analogy: (1) To include attempts to produce a base domain that is similar to, but different from, the target domain; (2) to include such attempts, whether or not they ultimately yield an answer; (3) to separate analogy generation from other problem-solving processes, such as generating extreme cases,

extracted potential cases of analogizing every time a participant made “a comparison between the existing situation and a previous situation, and it could be seen that some aspects of the two situations were equivalent” (Bearman et al., 2007, p. 16). This allowed for a large pool of potential cases of analogical thinking. Hereby, we always noted the source analogy, the participant that employed it, and the time it was stated. Those notes were taken on laptops in a prepared Word template. The real-time observation specifically allowed for contextual understanding of the process phase the group was in and the general inferences several expressions had.

In addition, we recorded the discussions. All recorded verbal protocols were listened to at least one more time, in order to revise and complement the transcriptions taken during the discussion and to complete the list of analogy extractions in the rare event that a potential case of analogising was missed by both of us during the discussion.

3.3.6 Pilot Study

In order to stress-test the design, a test round with four students from SSE was conducted. This helped us to familiarise with the case, to identify potential questions to account for in the instructions, to define the time required to solve the case, and to test other technicalities. Moreover, we could practice the structured observation skills in terms of recognizing analogies instantaneously.

3.4 Data Analysis

In the present study, the process of data collection, documentation and data analysis is intertwined, as the data analysis is partially already incorporated in the other processes (Edmonson & McManus, 2007). The study’s 4-step data collection, documentation and analysis process is again illustrated below (see Figure 6) and will be explained in more detail in the following sub-sections.

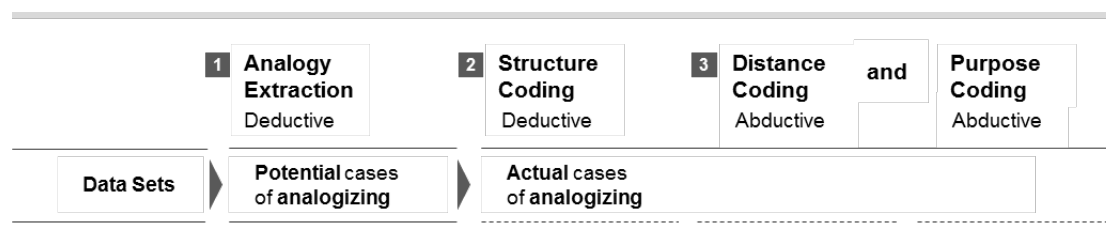


Figure 6: 4-step data collection, documentation and analysis process

3.4.1 Coding of Analogical Structure

During observation and by listening to the verbal protocols, we already reduced our data to potential cases of analogising based on Clement (1988) and Bearman et al. (2007). The potential cases of analogising were then analysed according to their propositional structure in order to identify the actual cases of analogizing and to exclude others. The analysis was conducted according to our framework, i.e. actual cases of analogizing were split into

breaking a solution into independent parts, and analysing the problem in terms of a theoretical principle; and (4) to exclude trivial cases that involve only surface similarity (i.e., mere-appearance matches) without relational similarity. Following Clement’s (1988) first three principles we likewise defined an analogy as a comparison between the existing situation and a previous situation, and it could be seen that some aspects of the two situations were equivalent.

attribute analogies, first-order relations and second-order relations based on Bearman et al. (2007). Importantly, all second-order analogies were additionally coded according to a second scheme developed by Blanchette and Dunbar (2000)¹³. This comparison should show if an analogy was correctly categorized as a second-order relational analogy. For an example of the structure coding, see Figure 7 below.

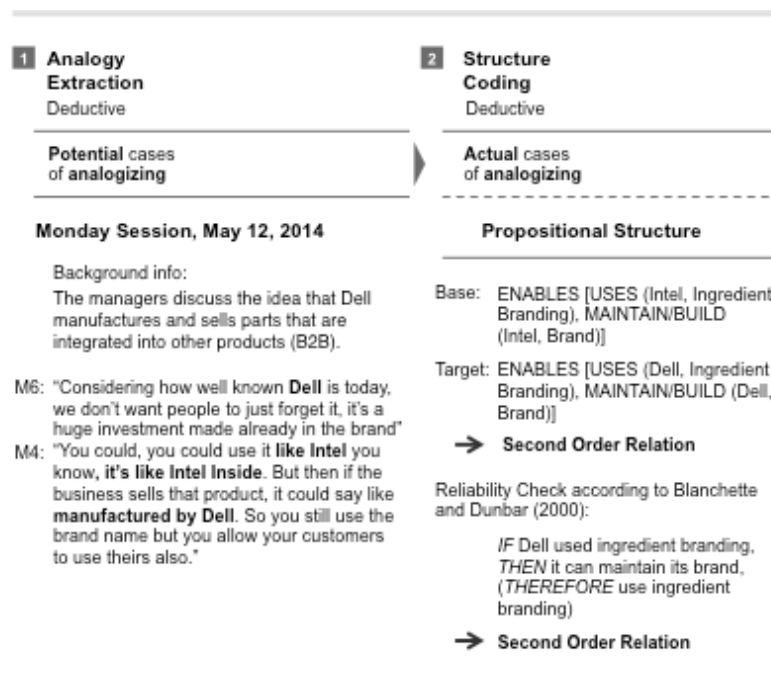


Figure 7: Example of structure coding

As pointed out by Falkenhainer et al. (1989), structure mappings "can include additional knowledge in the base that can be transferred to the target. These are the candidate inferences" (p. 2). In the formulation of the propositional structure of an actual case of analogizing, it was sometimes necessary to draw these inferences in our study. More precisely in a few cases, we had "to reduce the amount of information in the episode to its core, explicit, ideational and relational constructs; and [...] to draw the minimal inferences necessary to capture missing relational constructs that were sometimes omitted in the analogical episode." (Bearman et al., 2007, p. 17). For example, in the analogy presented in Figure 7 above, it was not explicitly stated by the participant that Intel makes use of ingredient branding ("Intel Inside"), but the group had to implicitly draw this inference in order to understand M4's suggestion.

3.4.2 Coding of Analogical Purpose and Distance

Once an actual case of analogizing had been identified, the analogical purpose and distance was coded. The analysis of purpose and distance was based on a thematic analysis of the verbal protocols, given that the purpose and distance of analogies has not been researched in the context of BMI: We wanted to test the applicability of our framework to

¹³ Blanchette and Dunbar (2000) instructed students to generate analogies for a political campaign on public deficits, and were hence not included in our framework on Ideation, but can serve to double-check the structures. Blanchette and Dunbar's (2000) coding is based on variables, relational terms and logical connectives, following the propositional structure "If ..., Then ..., (Therefore ...)".

the BMI context, but also build context-specific new themes emerging from the data (Braun & Clarke, 2006).

The familiarization with the data, which is suggested as a first step in thematic analysis (Braun & Clarke, 2006) happened through re-listening to the data, transcribing the analogical cases and especially through coding the analogical structures. In a second step, we coded the analogies based on recurring topics concerning the distance and purposes. This was done by re-reading the original transcript and 1) coding the base and target domains, which resulted into codes describing the distance between the domains and 2) understanding why a manager drew an analogy in the context of the discussion. In several cases we used multiple codes which were condensed later, once more data had been coded. Afterwards, a deductive approach was applied when sorting the codes into categories. This was achieved by using our conceptual framework as basis for categorization while also creating new, emerging categories or sub-categories. See Figure 8 for an example of the distance and purpose coding.

1 Analogy Extraction Deductive	3 Distance Coding Abductive	and	Purpose Coding Abductive
Potential cases of analogizing	Actual cases of analogizing		
Monday Session, May 12, 2014 Background info: The managers discuss the idea that Dell manufactures and sells parts that are integrated into other products (B2B). M6: "Considering how well known Dell is today, we don't want people to just forget it, it's a huge investment made already in the brand" M4: "You could, you could use it like Intel you know, it's like Intel Inside. But then if the business sells that product, it could say like manufactured by Dell. So you still use the brand name but you allow your customers to use theirs also."	Distance Base: Intel = Computer Industry Target: Dell = Computer Industry → Code: Within Industry After Thematic Analysis: → Sub-cat.: Same Industry → Category: Within Domain		Purpose The managers discuss the risk that Dell's brand would not be visible to customers anymore. Hence, M4 suggests to use ingredient branding like Intel does. → Code: Idea Development After Thematic Analysis: → Sub-cat.: Idea Modification → Category: Idea Development

Figure 8: Example of distance and purpose coding

We both coded and categorized all analogies separately, and merged first our codes and later our themes through discussions. In doing so, we also challenged our identified themes in respect to their fit with the theoretical framework and reviewed the correct understanding of the analogical case by looking again at the respective original transcript.

3.4.3 Example of Data Coding Process

Figure 9 below provides a complete example from this study's data coding process. The complete list of all coded analogies can be reviewed in Appendix 9.10.

1 Analogy Extraction Deductive	2 Structure Coding Deductive	3 Distance Coding Abductive	and	Purpose Coding Abductive
Potential cases of analogizing	Actual cases of analogizing			
Monday Session, May 12, 2014 Background info: The managers discuss the idea that Dell manufactures and sells parts that are integrated into other products (B2B). M6: "Considering how well known Dell is today, we don't want people to just forget it, it's a huge investment made already in the brand" M4: "You could, you could use it like Intel you know, it's like Intel Inside. But then if the business sells that product, it could say like manufactured by Dell. So you still use the brand name but you allow your customers to use theirs also."	Propositional Structure Base: ENABLES (USES (Intel, Ingredient Branding), MAINTAIN/BUILD (Intel, Brand)) Target: ENABLES (USES (Dell, Ingredient Branding), MAINTAIN/BUILD (Dell, Brand)) → Second Order Relation Reliability Check according to Blanchette and Dunbar (2000): IF Dell used ingredient branding, THEN it can maintain its brand, (THEREFORE use ingredient branding) → Second Order Relation	Distance Base: Intel = Computer Industry Target: Dell = Computer Industry → Code: Within Industry After Thematic Analysis: → Sub-cat.: Same Industry → Category: Within Domain		Purpose The managers discuss the risk that Dell's brand would not be visible to customers anymore. Hence, M4 suggests to use ingredient branding like Intel does. → Code: Idea Development After Thematic Analysis: → Sub-cat.: Idea Modification → Category: Idea Development

Figure 9: Complete coding process exemplified

3.4.4 Descriptive Statistics

While the use of numerical data in qualitative studies has been discussed controversially (Maxwell, 2010), we applied simple counts to analyse and support our qualitative findings as suggested by Becker (1970). Also Sandelowski, Voils, and Knafl (2009) agree that descriptive statistics in qualitative research can help to give relevance to the data and facilitate pattern recognition, which is a goal in our study. In that realm, we do not claim to use mixed-methods, but to rather add support and meaning to our data through numbers. Hence, we agree with Maxwell (2010, in referring to Becker, 1970), who argued that "the use of numbers per se, in conjunction with qualitative methods and data, does not make a study mixed-method research. Specifically, numbers in the sense of simple counts of things [...] are a legitimate and important sort of data for qualitative researchers." (p. 478).

To answer our first research question concerning how frequently managers use analogies in BMI Ideation, we identified the range of analogies (i.e. minimum and maximum number of analogies) and calculated the average number of analogies used per hour of ideation. We also calculated the median and mode of the analogical frequencies per hour of ideation in order to account for outliers. To provide insight into how the data is distributed, we illustrated the numbers of analogies used by managers with a histogram. In that realm we calculated the standard deviation, in order to see how symmetric the distribution is, or around which values our findings cluster.

By counting the number of 'unique' managers that used an analogical dimension, we could analyse the support for the dimensions identified through the thematic analysis. In order to compare our findings with other studies, we at times calculated the share of analogical dimension in the overall number of analogies used. Moreover, to answer our fourth research question on the interplay between analogical purpose/structure or distance, we used cross-tabulations to explore unexpected frequencies.

3.5 Data Quality

While "method-appropriate" criteria for judging quality in qualitative research have been developed, these have been criticized to be impractical or limited to certain approaches.

Therefore we relied on the modified (to match qualitative research) traditional criteria of reliability and validity in planning for a high quality research (Flick, 2007).

3.5.1 Reliability

In qualitative research, reliability “refers to the degree of consistency with which instances are assigned to the same category by different observers or by the same observer on different occasions.” (Hammersley, 1992, p. 67). Reliable results are the ones that other researchers would have also arrived at if they had used the same methodology (Silverman, 2010).

To account for reliability, we first of all recorded the observations, rather than to analyse the data based on memory and notes, hence acted as “low-inference descriptors” (Silverman & Marvasti, 2008, p. 271, in referring to Seale, 1999). In transcribing the analogies, we included all interjections and fillers, such as “yeah” or “uhm”, as we intended to “be as true to the conversation as possible” (Bazeley, 2013, p. 73) and to avoid wrong inferences (Silverman & Marvasti, 2008).

A limitation particular relevant to structured observation is the coding methodology, as the “decision rule relies considerably on the subjective impressions of the coder and thus is a threat to reliability” and we agree that “there is a delicate balance between the advantages and disadvantages of replicating existing coding conventions and developing new and/or improved coding methods” (Martinko & Gardner, 1985, pp. 687, 691). In fact, we found the approaches for identifying analogies were quite diverse, i.e. we had to choose between developing yet another coding method for analogical structure, in the quest of mitigating identified deficiencies, or to adopt an existing method in order to produce data that is comparable with other studies. As we want to progress the coherence in the field, we chose to stick to the definition of Bearman et al. (2007) and documented the coding method to make it transparent for future studies. We further coded 100% of the second-order relational analogies with a second coding scheme to increase reliability. To minimize subjective interpretation in coding the distances and purposes, we engaged in investigator triangulations (Denzin, 1970) by identifying and coding the analogies and engaging in thematic analysis separately, and discussing disagreements.

3.5.2 Validity

In qualitative research, construct validity refers to “the extent to which an account accurately represents the social phenomena to which it refers” (Hammersley, 1990, p. 57), or to the “credibility of a description” (Maxwell, 1996, p. 87). We have aimed to increase validity by accounting for differences from reality that resulted from our simulation. For example, managers did not ideate their own business, which could affect the inclination to ideation and hence the frequency of use of analogies. Also, the distance of analogies could be affected, as managers could be more willing to draw from other industries. Therefore, the managers were advised to use business sense and to put themselves in Dell’s managers’ role when ideating, and we reminded them that the end goal was an innovative, but profitable BM. Besides, potentially identifying near distances despite this circumstance would add relevance to the findings. Moreover, some managers ideated in groups and locations that were not their natural environment. However, given that a multitude of managers can be involved in ideation sessions from different departments, random sampled teams with members foreign to each other were considered fairly realistic. Also the different

locations were considered realistic, as management teams were considered likely to ideate in their meeting rooms or alike, but also to hold BMI sessions at separate locations, similar to strategic agenda days. Besides, these differences can also increase validity, i.e. strengthen the relevance of the commonalities in the findings (Bearman et al., 2007; Flick, 2007) as these occurred despite the differences in data collection.

Furthermore, while the methods chosen for data collection and analysis, i.e. observing the dialogues and analysing the verbal protocols, are the prior types suggested for capturing cognitive processes (Martinko & Gardner, 1985; Van Someren, Barnard, & Sandberg, 1994) we could only capture the cognitive processes to the verbalized extent. The verbalization may however be affected by the fact that the sessions were held in English, which was not the managers' mother tongue. However, occasional Swedish words slipping out left the impression that managers did not refrain from verbalizing their thoughts. Moreover, English was the corporate language for most of the cases.

This goes in hand with the extent to which the findings and conclusions are generalizable beyond this study, which is referred to as external validity (Gill & Johnson, 2010). Extending the sample size of the observed managers, which is otherwise a common deficiency in structured observations (Martinko & Gardner, 1985), helped to move away from "anecdotalism", i.e. relying on "a few well-chosen examples" (Silverman, 2010, p. 276) and increased validity as recommended (Martinko & Gardner, 1985). Furthermore, we increased validity by "extending the perspective in the research process", (Flick, 2007, p. 36), i.e. by studying the behaviour at different dates, places and from different persons (Denzin, 1970).

Moreover, we aimed to avoid two specific threats to validity in qualitative research: researcher bias (or reflexivity) and reactivity (Maxwell, 1996). We ourselves may be biased and "influence the conduct and conclusions of the study" by selecting data that fits "the researcher's existing theory or preconceptions" (Maxwell, 1996, pp. 90-91). As we were new to the area of analogies, we were careful in analysing the data and did not draw conclusions about the identification or classification of analogies too quickly, but re-examined case by case and were critical to our framework. The problem of reactivity was more specifically accounted for, as this refers to the influence the researcher may have on the setting studied and is particular important when trying to observe behaviour that would naturally happen without such interference (Maxwell, 1996). We avoided biasing the managers by not mentioning the real purpose of the study, i.e. analogies, at any point during recruitment or the exercises. Moreover, all managers received the same presentations and instructions by following strict scripts to avoid e.g. giving examples that could be used as analogies. To further avoid interference, during the observations no questions were answered from our side and we sat in the back of the rooms without eye contact to the managers.

4 Empirics

In the following, we present the findings from our study. For that, examples from our empirical data will be presented according to our sub-questions, i.e. the number of analogies used (4.1), and the structures (4.2), distances (4.3) and purposes (4.4) employed by managers using analogies.

4.1 The Frequency of Analogies Used by Managers in BMI Ideation

We will first present our overall analogy findings. However, only an analysis of the structure could confirm the identification of a pure analogy. Due to this reason, each analogical instance will have a structure coding attached to serve as evidence for the analogy and to summarize how it is constructed. Moreover, to improve readability we omitted duplications and fillers of recorded speech. However, a list of the coded analogies and their full transcription can be found in Appendix 9.10.

In total, we identified 86 analogies across all observations (See Table 10).

Monday		Tuesday		Wednesday		Thursday		Friday1		Friday2	
M1	0	M8	3	M14	5	M18	16	M22	7	M27	2
M2	1	M9	2	M15	5	M19	1	M23	2	M28	4
M3	5	M10	0	M16	2	M20	5	M24	1	M29	0
M4	1	M11	2	M17	9	M21	6	M25	1	M30	0
M5	1	M12	3					M26	1	M31	0
M6	1	M13	0								
M7	0										
Total Number of Analogies used: 86											

Table 10: Overview of the number of analogies used per manager

4.2 The Structure of Analogies Used by Managers in BMI Ideation

The structure of analogies gives insight into the sophistication of the mapping or into how much information is mapped from the base to a target and of which kind: transferring relations or mere attributes. Table 11 gives an overview of the frequencies of the structural dimensions.

Structure	# of Managers	Sum
Relational	24	85
First-order	20	48
Second-order	17	37
Attribute	1	1

Table 11: The structures of analogies used in BMI Ideation

Overall, in all sessions the managers mapped relations from knowledge bases to the target case, but only one manager transferred mere attributes.

4.2.1 Relational Analogies

All analogising managers (24) used relational analogies, which can be further distinguished into first-order and second-order relations.

Overall, 20 out of 24 analogising managers used first-order relational analogies, where a comparison to another case is drawn but no inference is made. Given that some managers drew multiple analogies, a total of 48 first-order relational analogies was identified.

The below example illustrates the use of first-order relations, where a manager transferred the offering characteristics of software to the case of hardware.

M20: What I like with [...] the whole idea with Dell, is what you said the price of course, and [...] it was tailor-made. But it was just tailor-made once. At the time when you bought it

M18: Yes

M19: You can't change it otherwise

M20: There is no one who had the concept to tailor [...] product life time

M18: Replaceable

M20: [...] so it will be tailor-made li-like [...] software I mean you buy a subscription something and then you could [...] upgrade it up to 1 year... if there is a way to upgrade hardware, I mean...

BASE	UPGRADES (software customer, software)
TARGET	UPGRADES (hardware customer, hardware)

Compared to that, 17 out of 24 analogising manager used second-order relational analogies, where the mapping of information is taken a step further (amounting to 37).

An example following the above dialogue illustrates the second-order proposition well, where a manager transferred the offering from mobile operators to the case of Dell, and mapped further implications from this for the revenue model as well.

M21: [...] then I think we can talk things like [M20] suggested with the [...] subscription service [...] it's a value proposition. It's like when you talk about mobile phones that you don't really charge for the phone. You have a 24 month subscription and you pay 299 a month and for that you get a mobile phone every 24 months, but you also get free calls and you get some data so it's IT as a service. And IT there [...] it's like a subscrip[tion] [...] it could be a value proposition, that how do we charge, either you pay 5000 crowns for this computer or you pay 400 crowns every month and for that you get.. [...] You have a recurring fee instead of a fixed upfront fee for your service

BASE	ENABLES [SELL (mobile operators, subscriptions), GENERATE (mobile operators, recurring fee)]
TARGET	ENABLES [SELL (Dell, subscriptions), GENERATE (Dell, recurring fee)]

4.2.2 Attribute Analogy

An attribute analogy was only used by one manager, where the physical appearance of Dell computers is related to the appearance of standardized boxes.

M22: When I think of Dell I also think of standardized, grey squared boxes

BASE	(Box) shares superficial attributes (standardized, grey, squared)
TARGET	with (Dell Computer)

4.3 The Distance of Analogies Used by Managers in BMI Ideation

The analogical distance gives insight into the base domain, i.e. where an idea is coming from. In our sessions, we could identify sources from within the domain and other domains (See Table 12). In comparison to our framework, additional sub-categories were identified, which will be discussed in the

	# of Managers	Sum
Within-domain analogies	19	40
Same Industry	14	25
Close Industry	9	10
Same Company	3	5
Between-domain analogies	15	46
Far Industry	14	38
Saying/Expression	4	7
Non-Business	1	1

Table 12: Distribution of analogical distances across sessions

analysis.

4.3.1 Within-Domain Analogies

Overall, 19 managers used within-domain analogies, and 15 managers supported between-domain analogies. Specifically, 14 managers drew from same-industry sources, 9 from close-industry sources, and 3 managers also drew from same-business sources.

An example of an analogy drawn from a same-industry source is the below quote from a manager who drew an analogy to Intel to modify the idea based on a previous evaluation.

M23: I was thinking of another key process when you were talking [M22]. [...] integration. And then I mean with the customer, that's a key process for them. Which is sort of the onboarding process

M22: Yeah, because they need to be, probably they need to be involved in their customers' product development [...]

*M23: But isn't that like a partnership. **Like Intel Inside, but it's sort of a Dell Above***

BASE	: PARTNER UP WITH (Intel Inside, customers)
TARGET	: PARTNER UP WITH (Dell Above, customers)

Another manager provided an example of a close-industry case, where an analogy from a network provider was drawn to generate an idea by imitating parts of a BM.

*M17: How is it, **Ericsson is building one of the world's [...] biggest server farms** [...] in Sweden [...]*

M16: [...] square miles of servers

*M17: **I mean Dell could actually be a provider in this case to Apple [...] server parks in North Carolina and state of Washington and Facebook in Luleå and so forth***

M15: So no laptops anymore. Server parks

BASE	: BUILD (Ericsson, server farm)
TARGET	: BUILD (Dell, server farm)

Lastly, the example below illustrates a case where a manager was generating an idea by reusing the old BM, and hence sourced the idea from the same business.

*M23: **I was thinking about new products, maybe whole system of products.** In maybe [...] your home you have a lot of [...] devices that should be linked together. And you can buy them as a whole package and just sort of plug it in and it works and then you have this upgrade coming in*

M22: Eeh, I was also thinking about other products, new ones using same distribution channel, using same models. With maybe cars, you could have a car delivered to you

*M23: **So you leverage the fact that you have an infrastructure, but you distribute different things through it***

M22: Yes, yes, the distribution thing. And you can [...] do your own sort of

M23: **Configure your own sofa**

M22: Yeah, and then [...] they sort of distribute it to you. And all sorts of vehicles and cars, and phones, and systems like that

BASE	CONFIGURE (Dell, computers)
TARGET	CONFIGURE (Dell, other products)

4.3.2 Between-Domain Analogies

Overall, 15 managers drew analogies from between-domain sources. Specifically, 14 managers drew analogies from far-industry sources, whereas the cases of sayings/expressions (4 managers) and non-business sources (1 manager) were less frequent.

An example for a far-industry source is an analogy a manager drew from the hospitality industry, in order to illustrate the kind of value proposition he was thinking of.

M27: [...] When I was in Berlin and **checked in the hotel, in my room they had this button. It's like instant service for anything you want anytime.**

M29: This could be our slogan.

M30: You go into the app and then you press the button.

M27: **That is us**

BASE	CAUSE [OFFERS (hotel, service button in room), RECEIVE (customer, instant/24h service)]
TARGET	CAUSE [OFFERS (Dell, service button in app), RECEIVE (customer, instant/24h service)

Further, the below quote illustrates the case of sayings/expressions, where a colloquial saying was used to communicate an idea.

M9: It is a challenge to reach a new segment but **we need to turn an old ox to a race horse**

BASE	CONVERT (old ox, race horse)
TARGET	CONVERT (Dell, race horse, i.e. an innovator)

In another case, an analogy was drawn from a natural occurrence to develop an idea further. This was the only case of a non-business source:

M6: Yeah I think we would need to build some kind of competitive advantage, because you would be able to buy the components from other manufacturers. So I think that one of our key strengths here is that Dell is a large company with huge resources compared to almost everyone else. **So you could put together this ecosystem of all these different types of components that work together and [...] connecting them and so on**

M3: Yeah so if you buy your toaster from Dell you know that it will also talk to your water sprinkler

BASE	LINKS (ecosystem, organisms)
TARGET	LINKS (Dell, components)

4.4 The Purpose of Analogies Used by Managers in BMI Ideation

The purpose of the analogies clarifies in more detail why an analogy is used within ideation. Table 13 shows the purposes the managers used the analogies for and therefore differs from our conceptual framework, which will be addressed in the analysis of the purposes.

Functions	# of Managers	Sum
Idea generation	18	39
Novel Idea	12	21
Imitation of existing BM	6	10
Recycling of own BM	5	8
Explanation	13	17
Illustrating an Idea	10	14
Sense Making	3	3
Idea Development	11	17
Modification	10	13
Advancement	3	4
Argumentation	7	13
Justification	5	5
Evaluation	4	8

Table 13: Distribution of Functions over the sessions

4.4.1 Idea Generation

Out of the analogizing managers, 18 used analogies to generate ideas. Specifically, we found that 12 managers used analogies to generate novel ideas, but 6 managers also drew analogies when imitating components of other BMs or, in 5 cases, when recycling ideas from the old BM, i.e. the one subject to the innovation.

A case where an analogy helped a manager to develop a novel idea is illustrated below:

*M20: Because **I was thinking about comparison with [...] the car manufacturers.** They are delivering cars with heated seats and everything. It is in the car but when you buy it you say ah no I can't afford to have heat in the seat. [...] But it's already in the car. **But they are not switch it, they then switch it on, and then they say so it's much cheaper without. I mean if you deliver, you could deliver hardware that could prestandard [be] 150% of what you are paying so then you could always switch it on...***

M18: Modularized

M20: ...through online. After 6 months or after 3 months or whenever you regret what you bought 3 months ago

BASE	OFFER [SELL (car manufacturers, modularized products), CHOOSE (customers, car options)]
TARGET	OFFER [SELL (Dell, modularized products), CHOOSE (customers, hardware options)]

Another example indicates a case where a manager was imitating the revenue model from a car manufacturer and generated a new value proposition idea:

M8: Like a car lease solution. A lease to a newest [...] coolest computer.

BASE	OFFER (car company, lease solution)
TARGET	OFFER (Dell, lease solution)

On the other hand, the below example indicates a case where an idea was generated by reusing existing capabilities in a new way:

[coming from the discussion about Dell's core competencies on custom built computers]

*M28: **Is it something else that customer wants to have custom built today?**
Something you want to design your own, make your own...*

M29: Clothes...

M28: Cars...

M29: Your Facebook account. Someone has to handle it. Take photos and...

BASE	CUSTOMIZE (Dell, computer)
TARGET	CUSTOMIZE (Dell, clothes/cars/Facebook)

4.4.2 Explanation

Overall, 13 managers used analogies for the purpose of explaining an idea. More specifically, 10 managers drew the analogy to illustrate their idea, but 3 managers also used it for their individual sense making.

For example, a manager used an analogy to explain an idea better with a well-known business model, to make it easier to illustrate the idea for others.

*M1: Sell you know only cheap, low, fair prices. We sell just you know computers between 500 dollars; you know this kinda stuff and focus completely on that. **Norwegian of the computer** or something like that*

BASE	ACHIEVES (Norwegian Airlines, cost leadership)
TARGET	ACHIEVES (Dell, cost leadership)

The example below shows that managers also used analogies to make sense out of an idea, where a comparison was drawn to understand the new BM idea.

*M28: So then... In that case we would have... In the same way **we have IBM versus Dell we would have H&M versus Dell**. Clothing. Or I mean is that what we are thinking of?*

BASE	CAUSE [OPERATES IN (IBM, computer industry), COMPETES WITH (IBM, Dell)]
TARGET	CAUSE [OPERATES IN (H&M, textile industry), COMPETES WITH (H&M, Dell)]

4.4.3 Idea Development

Out of the analogizing managers, 11 managers drew analogies to develop ideas. Specifically, 10 managers modifying it based on a preceding evaluation, and 3 managers advanced the idea on their own, once they understood the implications an idea had.

The example below illustrates how a manager was using an analogy to modify an idea based on the preceding doubts about it from another manager:

M8: If our partners are selling [...] complete pieces [...] then they are no longer interested [...] in cooperating, because [...] they don't gain anything. They can't sell their components to us anymore; they sell their own computers

*M12: **I mean Intel sells their processors to all***

M8: Then we should sell components of the same kind in a larger volume

M13: Okay, so they will still be interested in that

M8: I think so, too

BASE	SUPPLIES (Intel, high-volume components)
TARGET	SUPPLIES (Dell, high-volume components)

However, managers also applied analogies to advance an idea, as illustrated below where a manager realised the idea needed further specifications to be truly innovative.

M1: We need to find these immature products

M3: Yeah, how do we find them?

(...)

M1: So that means the company is not connected to, like Dell is not a computer company. [...] it's more like a start-up company, for products

*M3: **It should be like a distributor, a configurator for start-up companies that invents lot of things that get like funding [...] Kickstarter or something** and then they can use Dell to get started and get quite high volumes*

BASE	ENABLES [SUPPORTS (Kickstarter, start-ups), BUILD (start-ups, products)]
TARGET	ENABLES [SUPPORTS (Dell, start-ups), BUILD (start-ups, volumes)]

4.4.4 Argumentation

Out of all analogizing managers, 7 used analogies to argue around an idea. More specifically, 5 managers used analogies to justify an idea, and 4 managers used analogies to evaluate an idea.

The following example illustrates how a manager drew an analogy to a situation in another industry with the same relations to evaluate the target idea.

M20: I need [an] extremely good graphic card and then I go to the it desk and [...] it [is] something I would just put in here or whatever

*M18: **Even the phone industry looked a lot on this** because they [...] realized there would be some sort of environmental laws at some point because people threw away their phones after 18 months. **But it was too complex***

BASE	CAUSE [BUILT (phone industry, modular phones), FACES PROBLEMS WITH (phone industry, environmental laws)]
TARGET	CAUSE [BUILT (computer industry, modular components), FACES PROBLEMS WITH (computer Industry, environmental laws)]

In comparison, the following example illustrates a case where a manager drew an analogy to a different company that successfully pursued an idea of the same underlying relations in order to justify his idea.

M26: I mean, the only question I have to sort of see if this flies now, is that: Why should Dell do this?

M22: Yeah, I know

M26: Do they have an advantage? Do they have [...] the customer base? No. Do they have the distribution channels? No

*M22: I don't know. **But [...] it's also like Amazon started selling books and now they are one of the biggest [...] cloud service providers so [...] it's not impossible I guess***

BASE	ENABLES [REINVENTS (Amazon, business), BECOME (AMAZON, market leader for future products)]
TARGET	ENABLES [REINVENTS (Dell, business), BECOME (Dell, market leader for future product)]

5 Analysis

In the following, our research sub-questions concerning the *frequency* (5.1), *structure* (5.2), *distance* (5.3) and *purpose* (5.4) of analogies used by managers in BMI Ideation is addressed by analysing our empirical data through the lens of our framework. In line with our last research sub-question, an analysis of the interplay between the dimensions will be provided (5.4.1).

5.1 The Frequency of Analogies Used by Managers in BMI Ideation

The analysis of the frequency of analogies used in BMI Ideation depends on the amount of time the managers spent ideating. On average, we observed that the managers applied 60 out of the 85 minutes on pure ideation (in addition to initiation and ideation, See Section 5.5). As we are focusing on the ideation phase in this study, 60 minutes will thus be taken as the basis for our calculations and analyses.

Addressing the first research question of

Statistic	Value
Share of managers who used analogy	24/31 (77%)
Share of managers who did not use analogies	7/31 (23%)
Mean	2.77 (without M16: 2.33)
Median	2
Mode	1
Std. Deviation	3.39 (without M16: 2.38)
Variance	11.51 (without M16: 2.38)

how frequently analogies are used by managers in BMI Ideation, we identified that overall, 24 out of 31 managers (77%) used analogies (see Table 14). On average, a manager employed 2.77 analogies per hour of BMI Ideation. The number of analogies used per participant and hour range from 0 to 16 analogies.

	5.68)
Minimum	0
Maximum	16

Table 14: Analysis on the number and frequency of analogies used per managers

Hence, participant M18 who used 16 analogies per hour sticks out as an outlier among participants. The median, (i.e. the value in the middle of a sorted range,) is 2 analogies, whereas the mode, (i.e. the most frequent value,) is 1 analogy. Given large range, the variance is 11.51 (S.E. 3.39). The average number of analogies per manager without the outlier is 2.33 and the according variance is 5.68 (S.E. 2.38). The frequency distribution shows this variance in frequencies (see Figure 10).

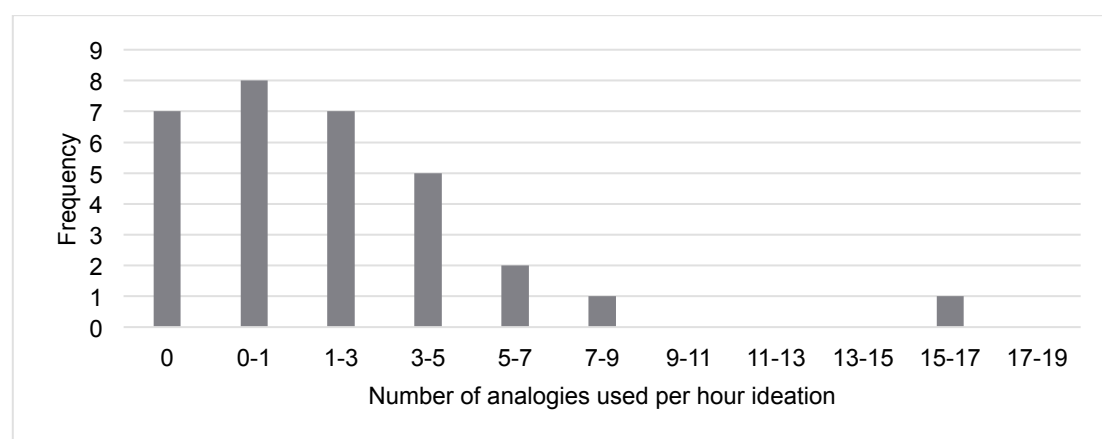


Figure 10: Frequency of analogies used per hour by managers in BMI Ideation

In light of the fact that analogies are frequently used by product developers and design engineers during ideation (e.g. Dahl & Moreau, 2002; Christensen & Schunn, 2007), it is not surprising that the vast majority of our participants (77%) used at least one analogy in the ideation phase. However, as one can see in the distribution, the values are not normally distributed and tend to cluster around the lower end of the scale (except for the outlier).

Given that we identified analogies based on the coding scheme by Bearman et al. (2007), whose findings have indicated that analogies are frequently used in management or business context, it is relevant to compare the frequency of analogies used across the two studies (see Table 15). Bearman et al. (2007) identified a total of 34 analogies generated by postdoctoral management academics within 6 hours of discussion, compared with a total of 86 analogies employed by our participants in the same time period. The experienced managers as a group roughly drew twice as many analogies. Possible explanations for the variance in the number of analogies between the two studies are the following. First of all, the subjects in the two studies were not the same, which naturally accounts for differences. Second, our task to innovate Dell's BM called for more creativity than the task by Bearman et al. (2007), who instructed participants to analyse and solve business problems presented in different case studies. Lastly, even though we applied the same coding scheme and we took critical measures to increase the validity and reliability of our data, it does not mean

that the observers in Bearman et al.'s (2007) study would have extracted and identified exactly the same analogies, and vice versa.

	Our Study	Bearman et al. (2007)
Participants	31	32
Number of analogies used	86	34
Duration of recordings	6 hours	6 hours

Table 15: Comparison of number of analogies used by managers in our study and by postdoctoral students in Bearman et al.'s (2007) study

Additionally, we compared our findings with the results from Christensen and Schunn (2007), who studied the use of analogies in design engineering. Table 16 shows that the number of analogies used per participant and hour was higher in our study. This result is somewhat unexpected given that Christensen and Schunn (2007) assigned participants to design and improve new products, which is a very creative task. One possible explanation for the difference in the frequency between the studies is arguably that the coding of analogical structure in the two studies differed. Whereas our coding was based on structure mapping theory (Gentner, 1983), Christensen and Schunn (2007) coded an analogy "any time a designer referred to another base of knowledge to explain, create, modify, or evaluate a design" (p. 33).

	Our Study	Christensen & Schunn (2007)
Number of analogies used per participant per hour	2.8 (2.3)	1.8

Table 16: Comparison of number of analogies per participant between our study and Christensen & Schunn's (2007)

Another interesting finding is the wide range of analogies used per person (0-16) in our study, especially given the limited time frame of 60 minutes ideation. We argue that individual managerial differences account for the variance, as we could not observe a pattern for specific groups.

5.2 The Structure of Analogies Used by Managers in BMI Ideation

Addressing the second research question of *which analogical structures are used by managers in BMI Ideation*, we identified that relational analogies were employed by 24 out of 24 analogizing managers, which confirms the use of relational analogies during ideation in the BMI context. In contrast, attribute analogies were only used by 1 out of 24 managers, i.e. the use of attribute analogies during ideation in BMI cannot be generalized.

5.2.1 Relational Analogies

Out of the total 86 analogies identified across all observations, 85 analogies were relational. It is not unexpected that our participants made almost exclusively use of relational analogies as the task of innovating a BM is highly strategic and thus requires managers to think about interrelationships that hold both in the base and in the target domain. A comparison between the results of our study and those of Bearman et. al (2007) in Table 17 shows that relational analogies were also dominant in their study, even though they were employed less frequently.

	Our Study	Bearman et al. (2007)
Relational Analogies	85	25
Total number of Analogies	86	34
Share of Relational Analogies	99%	74%
Duration of recordings	6 hours	6 hours

Table 17: Comparison of number of analogies used by managers in our studies and by postdoctoral students in Bearman et al.'s (2007) study

A distinction between first-order and second-order relations shows that out of the 24 managers that employed analogies, 20 managers used first-order relations and 17 managers produced second-order relations. Hereby, 13 managers employed both first *and* second-order relational analogies. Those results clearly confirm the frequent use of both types in BMI context. The number of first and second-order relations was quite balanced (48 vs. 37 analogies) providing evidence that ideation in BMI in many cases requires the identification and analysis of relations between relations (i.e. second-order relations, such as causalities) and that managers were also actually able to cognitively process and communicate them.

5.2.2 Attribute Analogies

Given that 85 out of 86 analogies were relational, only 1 analogy represented an attribute analogy. In other words, different from our framework, attribute analogies are non-essential in BMI context and cannot be generalised. Attribute analogies are based on surface similarity or features (e.g. Gentner, 1983) and qualify mostly for illustration purposes. Interestingly, Bearman et al. (2007) found that attribute analogies were used by postdoctoral participants in every fourth case when they progressed problem solving during industry analysis and marketing case discussions (see Table 18). Possible explanations are that those variations are based on differences in the subjects or coding of attribute analogies¹⁴.

	Our Study	Bearman et al. (2007)
Attribute Analogies	1	9
Total number of Analogies	86	34
Share of Attribute Analogies	1%	26%
Duration of recordings	6 hours	6 hours

Table 18: Comparison of analogical structure between our study and Bearman et al.'s (2007)

5.3 The Distance of Analogies Used by Managers in BMI Ideation

This section analyses the empirics with regard to our third research question of *which analogical distances are used by managers in BMI Ideation*. While we could identify both distances from our conceptual framework, i.e. within-domain and between-domain sources, additional sub-categories (close industry and saying/expression) were formed, as the larger themes did not give insight into the substantial differences between the sub-categories relevant to the context of BMI. Another sub-category (non-business) however was dismissed in the context of BMI Ideation. Figure 11 shows the dominance of the distances accessed.

¹⁴ Bearman et al. (2007) did not present any examples of attribute analogies produced by participants in their study.

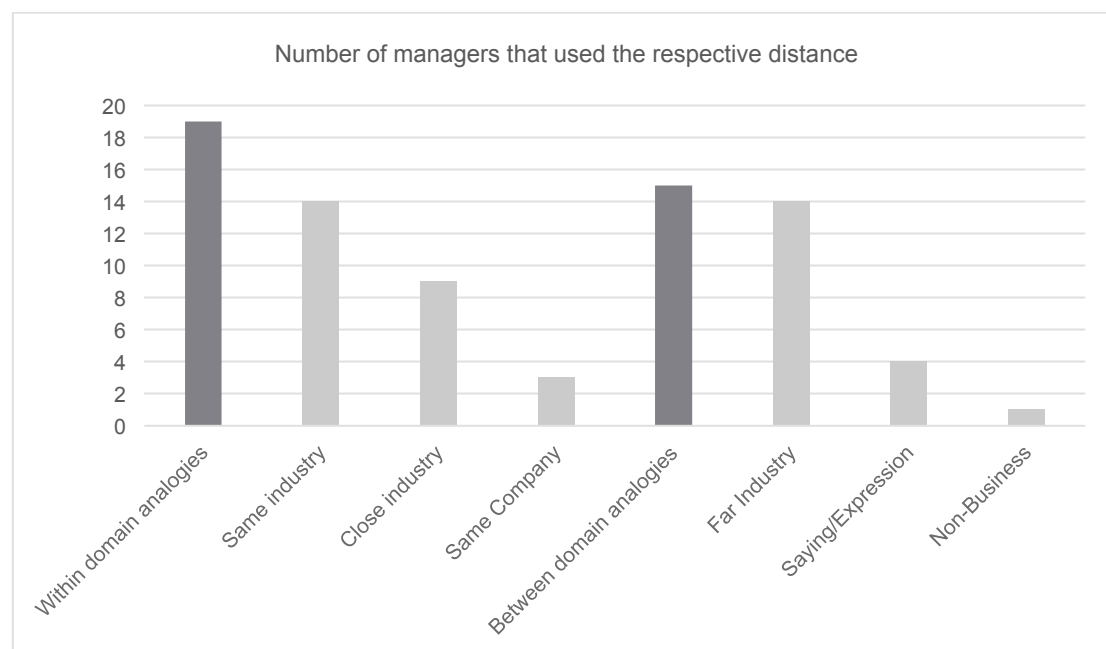


Figure 11: Managerial cases that support the respective distance

5.3.1 Within-domain

Overall, the majority of the analogizing managers (19 out of 24) accessed within-domain analogies. Out of the 86 analogies used in our study, about half (47%) were coded as within-domain. This result is somewhat lower than expected given that these near analogies are easier to access than between-domain (far) analogies (e.g. Dahl & Moreau, 2002). Yet, our findings are similar to those by Christensen and Schunn (2007) in product ideation, who counted 55% of analogies as within-domain.

Concerning the sub-categories of within-domain, we categorised analogies drawn from actors in the computer manufacturing industry, i.e. competitors like Apple, providers like IBM, or suppliers like Intel as same-industry. Out of the 24 analogising managers, 14 drew analogies from such sources and can hence be said to be a common source in the context of BMI Ideation. This can be related to the findings by Christensen and Schunn (2007), where in the context of product ideation, analogies were drawn to existing products from industry competitors. Moreover, they identified analogies drawn from existing products of the subject company. In line with this, we found that managers drew analogies from the same business, i.e. from Dell's previous BM. However, this happened only in 3 of the managerial cases.

We additionally identified analogies drawn from close industries, i.e. when a manager drew an analogy from a related industry, e.g. the telecom industry (as phones transmit data like computers, and as the hardware of the two industries becomes more and more integrated), e-businesses (as they are accessed via the computer) or cloud providers (as they are starting to compete with hardware solutions). Out of all analogizing managers, 9 cases supported this category. While this case is not addressed in previous research, we saw this sub-categorization as relevant in explaining the ideation phase of BMI: Accessing bases from such close industries requires less cognitive effort than retrieving a source from a highly unrelated industry and is less likely to result in novel ideas in other contexts (e.g. Dahl & Moreau, 2002; Chan et al., 2011). Overall, the use of within-domain analogies in our study

complements Enkel and Mezger's research (2013), as we show that managers do not only imitate across industries, but also accessed inspiration from within-domain (the own industry).

5.3.2 Between-domain

The use of between-domain analogies can be confirmed in the context of BMI Ideation, as 15 out of the 24 analogising managers applied them. For between-domains, we specified both other commercial industries (e.g. car manufacturing) and the public sector as far-industry. This domain was accessed by 14 managers of the analogising managers which supports the use of other-industry analogies in the context of BMI Ideation in a similar vein as predicted by our conceptual framework and in the context of product ideation. Moreover, it adds support to Enkel and Mezger's findings, as managers are actually thinking across industries for BMI Ideation in real-time.

However, the use of non-business analogies as found by Christensen and Schunn (2007) and as in our conceptual framework could not be confirmed in the context of BMI Ideation. Only one manager drew an analogy to nature, which is not considered as generalizable. Instead, we found that four managers used sayings or expressions. The case was defined as common or colloquial expressions that include a relational analogy, such as "the tip of the iceberg". While the iceberg occurs in nature, i.e. might be non-business, we believed it was not comparable to the non-colloquial knowledge mapping in the case of Christensen and Schunn's study (2007).

5.4 The Purpose of Analogies Used by Managers in BMI Ideation

This section analyses the empirics with regard to our fourth research question of *which analogical purposes are used by managers in BMI Ideation, and how they interact with analogical structures and distances*. We could identify all five functions from our conceptual framework, however only if moved to a sub-category level, if complemented by additional sub-categories or if merged with new categories. Moreover, the purposes of modification and evaluation are overlapping in terms of the evaluative extent, but modification was included to compare the field of BMI Ideation to the field of product ideation. Figure 12 shows the dominance of the purposes for which analogies were drawn.

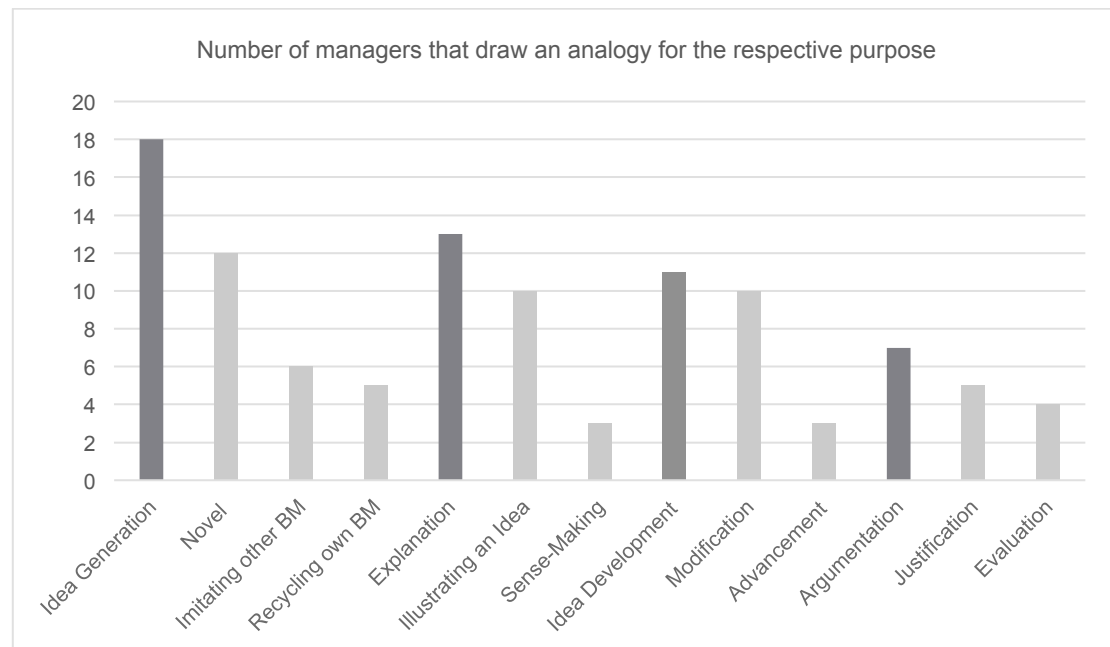


Figure 12: Managerial Cases that support the respective purpose

5.4.1 Idea Generation

Out of the analogising managers, the majority (18) drew analogies for the purpose of idea generation, which confirms its use in the context of BMI Ideation. Further, we identified several sub-categories that we believe are relevant in the context of BMI Ideation. Specifically, 12 managers used analogies as an inspiration for novel ideas, which highlights that mere references to other bases, with a more or less sophisticated transfer of information, can generate ideas. It is not necessarily a complete idea or solution that needs to be transferred. Yet, this case was also identified in the context of BMI Ideation, based on 6 managers who imitated components of other BMs. Interestingly, 5 of the analogising managers applied analogies to recycle components of the existing BM. Most of the times they wondered how the existing capabilities or strengths could be used in a new way. This can be connected back to the discussion about the inducement of BMI, i.e. whether it starts from a new customer offering (Johnson et al., 2008; McGrath, 2010; Osterwalder & Pigneur, 2010; Enkel & Mezger, 2013) or bases on new structures or activities (Zott & Amit, 2008; Santos et al., 2009; Zott & Amit, 2010; Amit & Zott, 2012). Several managers started innovating around a new customer offering (which may be biased given the case, where the value proposition is clearly outdated), whereas others, by recycling components of the existing BM, were asking themselves how the existing structures and activities can be used in a new way (despite the simulation, where managers might not have in-depth knowledge about structures).

Given these findings, we can on the one hand complement existing research (Enkel & Mezger, 2013; Gavetti & Rivkin, 2005; Mullins, 2009), by providing real-time evidence for analogical thinking for the purpose of idea generation, and on the other hand add to existing research (Enkel & Mezger, 2013, Mullins, 2009) by identifying that managers in addition to BM imitations use analogies for the generation of novel ideas and for the recycling of ideas derived from the own BM.

5.4.2 Explanation

Overall, 13 out of the 24 analogising managers used analogies for explaining. In contrast to our conceptual framework, the purpose of explanation in terms of communicating a design to others, was re-labelled to idea illustration and identified as a sub-category in BMI Ideation. Out of the analogising managers, 10 used analogies to illustrate an idea. Additionally, 3 managers used analogies for their own, personal sense-making in the context of BMI Ideation. By referring to a knowledge base in memory, they tried to understand the other managers' ideas. Dahl and Moreau (2002) referred to the purpose of Clarification or Elaboration in the context of product ideation, which refers to the case "When the design team asked one another questions about the ideas presented" (p. 49). However, in the context of BMI Ideation, sense-making also happened without necessarily asking a question, but rather by expressing the own line of thought.

5.4.3 Idea Development

Out of the 24 analogising managers, 11 used analogies for idea development. Moreover, 10 did so after a previous evaluation, which Dahl and Moreau (2002) in the context of product ideation identified as idea modification. Hence, this circumstance could also be transferred to the context of BMI Ideation. However, 3 managers additionally drew analogies for continuous advancement, e.g. when realising themselves that their idea was not innovative enough or needed adjustments to become feasible. In both cases, it can be argued that the analogical search was initiated based on a complication with the idea. This illustrates well how the process of analogising is one of browsing through a space of possibilities in memory (e.g. Newell, 1990; Perkins, 1997) also in the context of BMI Ideation.

5.4.4 Argumentation

Lastly, 7 out of the 24 analogising managers drew analogies for the purpose of arguing around an idea. Interestingly, in the context of BMI Ideation, 5 managers drew analogies to a comparable situation in order to justify their idea. Moreover, 4 managerial cases gave evidence for the purpose of evaluation in the BMI Ideation context, which supports another of Dahl and Moreau's (2002) functions from product ideation to be applicable in the context of BMI Ideation. Moreover, we can support Mullins (2009) in providing evidence that managers in fact use analogies in real-time to evaluate the likelihood of success for an idea.

5.4.5 The Interaction Between Purpose and Structure or Distance

In order to address the second part of our fourth research question, i.e. *how the purposes interact with structure and distance* in the context of BMI Ideation, we calculated the occurrence of all possible combinations of purpose and structure as well as purpose and distance analogies by conducting cross-tabulations.

Analogical Purpose and Structure

The cross-tabulation between analogical purpose and structure returns the below results (see Table 19). The table reads from the column value to the row value, e.g. 7 first-order relational analogies were used for argumentation, compared to 6 second-order relational analogies. Out of the 13 analogies used for argumentation, that equals 54% and 46%

respectively. Thus, there are no observed differences in the number of first or second-order relational analogies for the purpose of argumentation.

Structure Purpose	Relational Analogy (first-order)		Relational Analogy (second-order)		Total purpose analogies
Argumentation	7	53.8%	6	46.2%	13
Explanation	7	43.8%	9	56.3%	16
Idea Development	7	47.1%	9	52.9%	17
Idea Generation	25	65.8%	13	34.2%	38
Total structural analogies	47		37		84

Table 19: Cross-tabulation results between analogical purpose and structure

While for most purposes first and second-order structures were used almost equally, the case of idea generation still delivers unexpected frequencies: Almost twice as many first-order relational analogies compared to second-order relational analogies were used to generate ideas (25 compared to 13). A more detailed investigation revealed the following frequencies (see Table 20).

Purpose within Idea Generation	Structure	Relational Analogy (first-order)		Relational Analogy (second-order)		Total purpose analogies
	Novel	13	65.0%	7	35.0%	20
	Imitating other BM	5	50.0%	5	50.0%	10
	Reusing own BM	7	87.5%	1	12.5%	8
	Total structural analogies	25		13		38

Table 20: Cross-tabulation results between idea generation purpose and structure

This supports the previous mentioned finding where managers drew analogies for the purpose of generating *novel* ideas in the context of BMI Ideation, where analogies are used as *inspiration*, and not only as imitation strategies or copying *relations* from other BMs. It further highlights how the existing structures of a company are recycled and used to generate new ideas, i.e. find new applications, rather than using the same cause and effect relationships.

Analogical Purpose and Distance

The cross-tabulation between analogical purpose and distance returns the following results (see Table 21):

Distance Purpose	Between-domain		Within-domain		Total purpose analogies
Argumentation	8	61.5%	5	38.5%	13
Explanation	12	75.0%	4	25.0%	16
Idea Development	6	35.3%	11	64.7%	17
Idea Generation	18	47.4%	20	52.6%	38
Total structural analogies	44		40		84

Table 21: Cross-tabulation between Purpose and Distance

The individual categories are fairly small at this level of break-down, yet we can still observe differences in the actual and expected frequencies that could suggest a trend. Specifically, for the purpose of explaining, managers tended to draw more analogies from between-domains (75%) than from within-domains (25%). This finding is not surprising given that Christensen and Schunn (2007) had already provided evidence that “explanatory analogies mainly used between-domain sources” (p. 35) and given that the category includes colloquial sayings. Additionally, it appears logical to explain an idea with an example from a different context (domain) that is more familiar and easier to comprehend than the target domain. Another interesting finding is that managers made mostly use of between-domain analogies (62%) for the purpose of argumentation, compared to 39% of within-domain sources. A likely explanation could be that managers generated *innovative* ideas, i.e. the ideas were not currently existing within the domain, so that managers had to draw to between-domains to be able to evaluate whether an idea was worth pursuing or not.

Within-domains were on the other hand used almost as much as between-domains (53% compared to 47%) for the purpose of idea generation and used almost twice as much for the purpose of idea development (11 compared to 6, or 65% compared to 36%). The equal share for idea generation can be described with a more detailed cross-tabulation (see Table 22):

Distance Purpose within Idea Generation	Between-domain		Within-domain		Total purpose analogies
Novel	9	45.0%	11	55.0%	20
Imitating other BM	7	70.0%	3	30.0%	10
Reusing own BM	2 ¹⁵	25.0%	6	75.0%	8
Total structural analogies	18		20		38

Table 22: Cross-tabulation idea generation purpose and distances

Again, the individual categories are small at this level of investigation. Yet, Table 22 suggests that managers accessed both within and between-domains for novel idea generation, but relied more on between-domains for imitating BM components and naturally within-domain for reusing the own BM.

Lastly, the higher use of within-domain analogies for idea development could be explained with the nature for that purpose: a closer reassessment of the idea is done and it is adapted to certain implications.

5.5 Observations Beyond the Research Questions

While the previous sections focused on answering our research questions, we made additional observations in the manager’s processes that we believe are relevant to the

¹⁵ While between-domain analogies can seem surprising for the purpose of reusing the own BM, these frequencies refer to cases where a manger for example compared Dell’s existing capabilities to “Lego” capabilities.

understanding of BMI and can thus contribute to the current state of literature. In the following, we will present our experiences.

5.5.1 Confirming the Process

Frankenberger et al. (2013) were the first to conceptualize the 4I Framework for the process of BMI based on previous literature. We can add support to Frankenberger et al.'s findings (2013), as we could encounter the phases even in the shorter termed group discussions. While the simulations were designed around the ideation phase, the managers still went through phases of initiation and integration. When starting to ideate, managers went back to *initiation* to understand "what is really the problem here" (M28), and established a common understanding of the current BM as suggested by literature (e.g. Santos et al., 2009; Wirtz et al., 2010; Aspara et al., 2013). Moreover, they usually started with ideating one component or set of components of the BM, and afterwards *integrated* e.g. the value network (partners) or revenue model for the new idea. Given new reflections in this phase, the managers *iterated back* to ideation, developing the original idea, generating a new idea or making the components that were supposed to be integrated the focus of innovation.

5.5.2 Use of Analogies in Other Phases

Given our focus on observing the analogies, we noted each time a potential case of analogy was drawn. Therefore we could observe that managers were not only using analogies for ideation, but also in the phase of *initiation* for different purposes (15 managers), such as understanding the current BM or identifying the problems to the current BM by employing analogies. Moreover, four managers drew analogies when *integrating* the BM, i.e. when identifying strategies on how to achieve the new BM. This adds to the relevance of analogical thinking in the BMI context, as is used within ideation, but could also be observed in the other phases.

5.5.3 Managers' Feedback

The managers who participated in our simulation exercise confirmed the relevance of BMI in the current competitive environment across industries. However, they were missing guidance in the process, despite the available prescriptive literature. The reactions towards our ad-hoc feedback, which was based on a checklist developed from inferential research on analogical thinking in product ideation (See Appendix 9.7), were overwhelmingly positive and was experienced in each simulation. This indicates the great uncertainty managers perceive when ideating the BM and the need for future inferential studies in the context of BMI Ideation. Given that our findings provide a starting point for this research, the managers' feedback highlights the relevance of the contribution of this study.

6 Conclusion

In the following section the summary of our findings is presented and developed into a framework of analogical use in the context of BMI, structured according to our operationalised research questions (6.1). We will further briefly summarize our additional observations (6.2).

6.1 Addressing the Research Question

The aim of our study was to describe *to what extent, and how, managers use analogies in the context of BMI Ideation*. By summarising the answers to our operationalised sub-questions, and by comparing our findings to our previous conceptual framework, we can provide a holistic view of the use of analogies in the context of BMI Ideation in our adapted framework (see Figure 13).

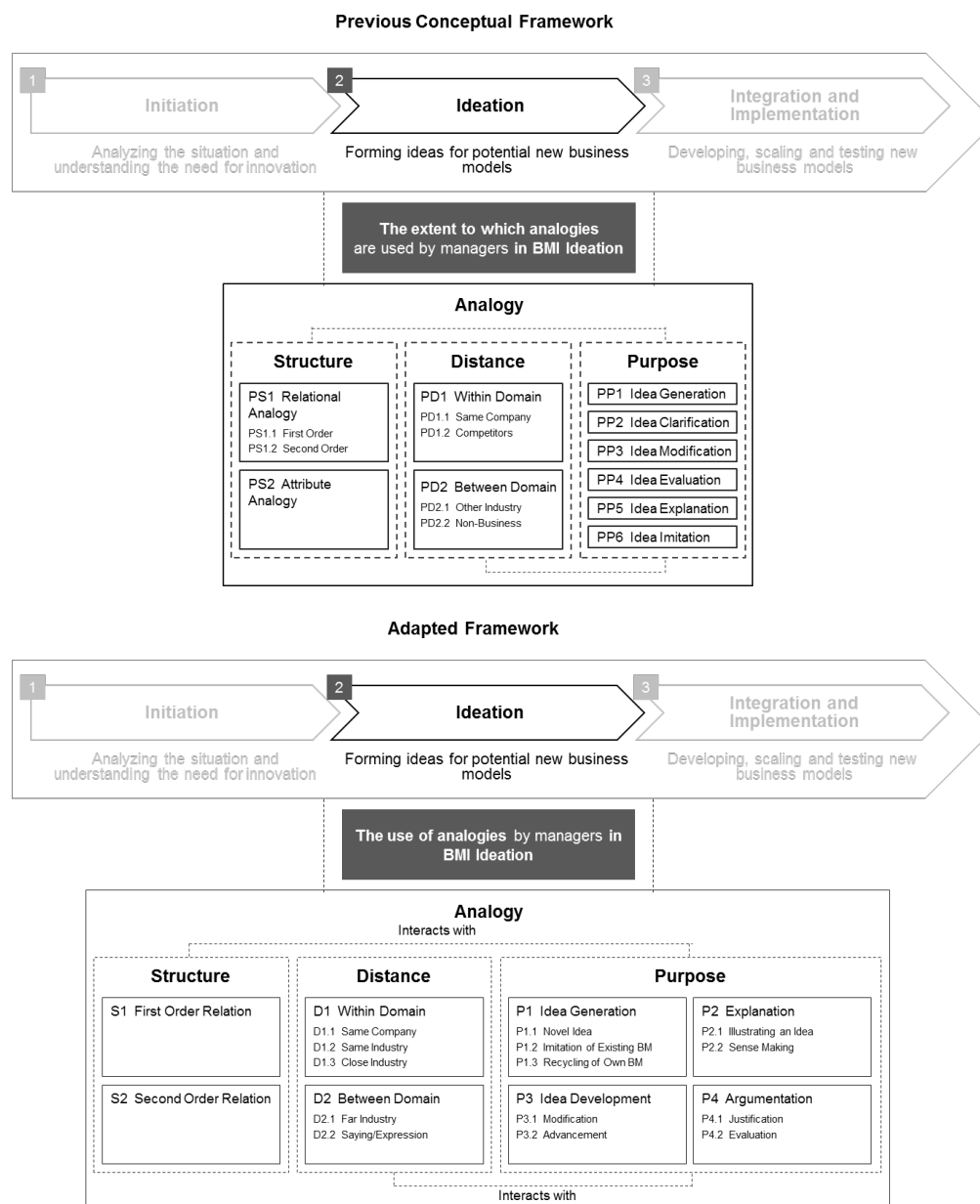


Figure 13: Comparison of previous and adapted framework for analogical thinking in the context of BMI Ideation

Overall, our findings evidence that the phenomenon of analogical thinking occurred **frequently (first sub-question)** and is highly applicable the context of BMI Ideation. The majority of managers (77%) used at least one analogy during a BMI Ideation session (of one hour).

Concerning the **structure (second sub-question)** of analogies used in BMI Ideation, our study demonstrated that only two out of three expected structures occurred frequently: first-order relations and second-order relations (S1 and S2). In contrast, attribute analogies (S3) were only used once and are therefore excluded from our framework.

Concerning the **distances (third sub-question)**, we identified that both dimensions, within-domain and between-domain (D1 and D2), were frequently used by managers. Our study further revealed that adaptations to the sub-categories were required to match the context of BMI Ideation. Concerning within-domain sub-categories, while same company analogies (D1.1) could be confirmed, competitors (PD1.2) has been replaced to reflect the use of same industry (D1.2) and close industry (D1.3) analogies. For between-domain sub-categories, the sub-category other industry (PD2.1) has been relabelled to far industry (D2.1) and is complemented by the sub-category sayings/expressions (D2.2). Moreover, the sub-category of non-business analogies (PD2.2) has been omitted, as it could not be generalised in the context of BMI.

Our study further found that analogies are used for several **purposes (fourth sub-question/first half)** in the context of BMI. In comparison to our initial framework, we found that the analogical purposes in the context of BMI are four, with several sub-categories. First, Idea Generation (P1) has been extended by three sub-categories; novel (P1.2), imitating other BM ideas, which was put under the umbrella of Idea Generation (PP6→P1.2), and recycling of own BM ideas (P1.3), to reflect the novelty of the idea in the ideation process. Second, the Explanation purpose (P2) has been extended by the sub-categories of idea illustration (P2.1) or personal sense-making (P2.2), which absorbs the previous clarification/elaboration purpose modification (PP2). Third, modification has been placed under the umbrella (PP3→P3.1) of the identified Idea Development (P3) purpose. This has been additionally extended by an idea advancement sub-category (P3.2). Lastly, the evaluation purpose has been put under the umbrella (PP4→P4.2) of the new category Argumentation (P4), together with the emerged sub-category of justification (P4.1).

Moreover, we found differences in the observed frequencies of specific analogical **interactions (fourth sub-question/second half)**. Analogies that were used to for the purpose of novel idea generation and for the purpose of recycling the own BM were mostly build on first-order relational structures. The other purposes however were built on the two relational structures to an almost equal share. Furthermore, on the one hand we found that analogies used for Explaining or Argumentation, were based on information from more distant, i.e. between, domains. On the other hand, for the purpose of Idea Development, managers used knowledge from within the domain. The purpose of novel idea generation was however fed with information from between and within the domain to almost equal shares, whereas imitating other BM and reusing own BM logically drew from between- or within-domains respectively.

6.2 Beyond the Research Question

Given the little empirical research on BMI Ideation, we provided insight into additional observations we made alongside our research questions. First, we found that the large-scale project process of BMI is also applicable in real-time, shorter termed meetings, and that managers moved between phases of initiation, ideation and integration. Second, we found that managers used analogies not only for ideation, but also in initiation and in integration. Lastly, we observed the great uncertainty managers perceive when ideating the BM and their quest for guiding principles or reference points in ideation.

7 Discussion

Following, we go beyond the frame of our descriptive findings and discuss our results (7.1). Afterwards we come back to our descriptive study and its contributions in the current BMI literature (7.2) and refer to its limitations (7.3). Subsequently, based on our interpretations, descriptive findings, and additional observations we provide managerial implications (7.4) and directions for future research (7.5).

7.1 Discussion of Results

As this study is descriptive, we refrained from any subjective interpretations in analysing our data, but tried to describe the situation ‘as is’ and provided explanations that were data driven. At this point though we discuss and interpret our results beyond the frame of our research questions and framework. First, we connect our interpretations of the analogy findings with the overarching field of creativity, and second we assess the impact of analogical thinking in BMI Ideation on the BMI outcome.

7.1.1 Complexity of BMI and Creativity

The BM has intertwined elements, which have to be ideated holistically. This may have led to a constant cognitive struggle, as the managers always needed to consider the implications for the entire BM, when changing one of the elements. Specifically, we believe that this complex nature of the BMI task may interact with analogical thinking in a number of ways.

First, the observed difference in frequencies of analogical thinking among the managers may be an indicator for the capability to deal with such complexity. As Amabile (1996) suggested, people differ in their creative thinking skills and the cognitive effort it takes them to generate analogies. Moreover, the industry background could account for differences in the frequency of analogies. More specifically, participants who have worked in a wide range of industries or are regularly dealing with different industries might find it easier to use analogies as they can draw from a wide range of knowledge bases stored in memory as potential sources of ideas. This access phase (see sub-section 2.3.1) is a first and inevitable step in analogizing (Falkenhainer, Forbus, & Gentner, 1989). While the experienced managers in our study produced more analogies than the postdoctoral students from Bearman et al. (2007), there were still individual differences among the managers. Given that the use of analogies has proven to increase originality and novelty in other innovation fields (e.g. Dahl & Moreau, 2002; Kalogerakis et al., 2010), this highlights the urgency of discussing the BMI “leadership gap” (Chesbrough, 2007a, p. 16) or responsibility for BMI.

Second, the managers used analogies with both first- and second-order relational structures, and did not apply attribute analogies. A possible explanation is that, in contrast to product innovation and design engineering, BMs are conceptual and not tangible and thus basically impossible to physically describe. Given that the different elements in the BM are interconnected, managers needed to think about interrelationships between objects, including causality and implications, in order to manage the BMI task. Moreover, one can argue that attribute analogies are less sophisticated in terms of knowledge mapping and transfer, and that the more experienced managers in our BMI study therefore drew more relational analogies. However, they still miss out on attribute analogies as a potential source of inspiration (Bearman et al., 2007).

Lastly, managers relied mainly on knowledge domains closer in distance to the task at hand, potentially as the difficulty of the task had already introduced too much uncertainty and as near analogies helped them to deal with this complex situation. Given the evidence from product innovation literature, where analogies to sports or nature are considered key for breakthrough innovations (e.g. Christensen & Schunn, 2007; Kalogerakis et al. 2010), the question arises whether this is problematic and whether the use of far analogies should be encouraged in the context of BMI Ideation.

7.1.2 Analogies and the Impact on BMI Outcome

Moreover, we found analogical thinking to be especially helpful for a set of purposes in the context of BMI. Specifically, we found that managers recycled ideas derived from the own BM. By investigating the analogical structure, we further discovered that managers used the existing capabilities as a starting point for idea generation, trying to find innovative applications for them, rather than transferring the same cause and effect relationships. This strategy may very well coincide with the notion of scholars that BMI may be less resources intensive (e.g. Amit & Zott, 2012) than a strategy of isolated product innovation: If innovation starts from the product, the required capabilities need to be build, which may be quite resource intensive. If, in contrast, existing capabilities can be used to satisfy unmet customer needs, organisations can benefit double from this strategy. Hence this may be a very fruitful and cost efficient innovation strategy, where existing capabilities are leveraged in a new, uncontested area.

Whereas analogies can be a powerful cognitive process for ideation, we also saw some danger to the use of analogies. Given that analogical thinking often implies inference making about the base domain, the use of analogies for explanation may lead to misperceptions and miscommunications within the team that only reveal themselves later. Also the purpose of argumentation should be handled with care in the context of BMI Ideation. While this purpose can lead to implementation of breakthrough ideas – which managers might not have dared to try or been sceptical about otherwise – reliance on a few successful cases is usually suboptimal. Hence, while analogies work perfectly fine as a source of inspiration in ideation, misunderstandings, reliance on a few successful cases or transfer of superficial relations may be detrimental if carried over to integration and implementation (Gavetti & Rivkin, 2005), where already first investments are made (Sosna et al. 2010; Frankenberger et al., 2013).

7.2 Theoretical Contributions

This study contributes to the limited research on the cognitive processes of managers in a number of ways.

First of all, we extended the research on analogical thinking from product ideation or design engineering (e.g. Dahl & Moreau, 2002; Christensen & Schunn 2007) and problem solving (Gavetti & Rivkin, 2005; Bearman et al., 2002, 2007) to the context of BMI and the subject of managers. To our knowledge, we are the first to provide answers to the extent and particularities of analogical thinking in the context of BMI and to identify it as an underlying cognitive process for BMI Ideation. We hence added to the understanding of ideation and specifically the cognition in BMI Ideation as called for by research (Tikkanen et al., 2005; Aspara et al., 2013; Frankenberger et al., 2013; Schneider & Spieth, 2013).

Second, through operationalizing our research question, we produced findings that described the particularities concerning analogical structure, distance and purposes for the context of BMI. Adding to the research on analogical thinking, we could identify unique domains and purposes for the context of BMI, and disconfirm the applicability of others. Further, we could confirm Enkel & Mezger's (2013) and Mullins' (2009) claims that managers employed analogies for the purpose of imitating BM components, or to evaluate ideas respectively, and Gavetti & Rivkin's (2005) hypothesis that managers used analogies to generate creative options. However, we could add additional purposes such as the *novel* idea generation and the *recycling* of the own BMI, as well as indicate the use of not only "cross" but also same industry or same business domains. Further, we contribute first findings on the interaction between the dimensions of analogical thinking in BMI Ideation, and hence extended also this area of analogical thinking to the context of BMI. The delivered framework including all identified dimensions and potential interactions can be used as a tool in the future and is an initial step towards inferential studies in the context of BMI Ideation, as called for by Teece (2010).

Third, identifying analogies for purposes such as novel idea generation and recycling the own BM further shows that the discussion about the inducement of BMI, i.e. whether it starts from a new customer offering (e.g. Johnson et al., 2008; McGrath, 2010) or bases on new structures or activities (e.g. Santos et al., 2009; Amit & Zott, 2012), is not an either or.

Lastly, we support future research on the cognitive processes in BMI Ideation by contributing a research design that enables the study of the concurrent thinking in BMI Ideation. While little empirical research exists, those empirical studies on BMI Ideation rely on retrospectively collected data (e.g. Tikkanen et al. 2005; Enkel & Mezger 2013, Frankenberger et al. 2013; Aspara et al. 2011, 2013). We used a simulation study that allowed researching a process that is otherwise hardly accessible. We hope that the proliferation of this design in the future can encourage more empirical and more concurrent research on BMI. Progressing the nascent theory on BMI in a more rapid pace is relevant, as the research area is widely considered important for business.

7.3 Limitations to Contributions

While the simulation design is one of our contributions, the risk inherent in non-naturalistic observation is acknowledged. We simulated the ideation process as realistic as possible and have taken several choices to increase validity, but we cannot ensure that it reflects reality. We also need to acknowledge that the participants innovated the BM of a specific firm, i.e.

we cannot guarantee the generalizability of the findings across other BMs. Furthermore, our sample of managers was limited to 31 managers. Besides, most were Swedish, which limits the generalization to other nationalities.

Moreover, we focused on one phase, i.e. ideation, in a normally iterative process. While we paid attention to the tasks the groups were moving between, we cannot guarantee that we allocated all analogies to the right phase in each instance.

Lastly, differences in the current literature on analogies show that subjective interpretations of analogy and non-analogy may lead to difference results. Besides, we could only code those analogies or cognitive process that we could extract from the verbal reports, i.e. we can only account for the verbalized extent. This could affect the share of the themes within the dimensions.

7.4 Managerial Implications

As this is a descriptive study, we cannot provide inferential recommendations. However, we provided insight into the topic of BMI, potential ideation sessions and managers' cognitive processes in ideation. In doing so, we support managers in their BMI endeavours by equipping them with secondary experience in such an uncertain task, and by providing evidence that spontaneous idea generation for BMI is in fact possible, if time and people are allocated to it. Given the complexity of the BMI Ideation task that we infer from our findings, we propose management to plan for ideation and to structure the phase into manageable steps. Moreover, we would like to draw attention to the observed differences in analogical frequency. While there is no correlation established in the context of BMI yet, it still highlights individual differences in cognitive abilities and hence underlines the importance of team compositions for BMI Ideation. An interesting finding from our study was the use of recycling analogies, i.e. the re-usage of existing capabilities, which may be a cost-efficient strategy in practice. Lastly, our interpretation of explaining or argumentation analogies basically underlines that ideas are great inspiration, but should be handled with care when implementing.

7.5 Directions for Future Research

Due to the nascent state of theory, there is vast potential for future research in the field of BMI Ideation, which can draw from our findings, interpretations and additional observations.

First, we recommend future research to use our developed framework in investigating the relationship between analogical thinking and creativity in the context of BMI Ideation, as studied in the context of other ideation fields (Dahl & Moreau, 2002; Casakin, 2004; Hey et al., 2008). In that realm, the patterns of interconnections that we discovered between our identified dimensions could be first supported with a larger sample, and later studied for causality. As indicated in the above section, we hypothesize that the complex nature of the task may impact analogical thinking, and hence creativity. Identifying creativity enhancing strategies concerning the use of analogies in BMI would also be highly relevant to practice.

Second, it would be of interest to study the impact of individual differences on analogical thinking in the context of BMI Ideation. For that, future research could use our developed framework and run simulations across various groups of subjects, where variables such as industry background, seniority, title and potential other ones are controlled for. Combining

the results from that study and the one recommended above would provide practice with an answer to who should innovate the BM.

Third, we can develop directions based on our additional observations. For one, given that the dynamic, process based view on BMI is only recently advanced (Aspara et al., 2013; Frankenberger et al., 2013), it was interesting to observe the prescribed phases in our short termed session. Especially the iterations between the phases helped the teams progress in their process, and future research could investigate the significance of this flexibility in an experimental study. Moreover, using our framework as a base, our study and simulation design could be replicated to research how managers use analogies in the phases of initiation and integration, as we observed the use of analogies in these phases but did not analyse our empirics in that regard, given that it was out of scope. Lastly, Morris et al. (2005) or Casadesus-Masanell and Ricart (2010) suggest that future research needs to develop measures of model innovativeness, something we saw our studied managers call for. A longitudinal study involving multiple case studies, where the ideation process is observed in real-time and later the BMI outcomes are compared would be most optimal to answer managers' quest for guidance in BMI – however, we believe that this is hard to achieve. Potentially, extensive computer simulations, (for example extending the research of Zott (2003) and Gavetti, Levinthal, and Rivkin (2005) to the specific context of BMI Ideation) would be an alternative solution.

8 Bibliography

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9 Appendix

9.1 Literature Search

Articles on BM, BMI and cognition were identified performing a google scholar search on relevant keywords (see below). This search revealed a first set of peer-reviewed publications. Importantly, this first set was continuously complemented with publications referenced in the already reviewed ones, leading to a second set of articles.

Specifically for BMI, performing a regular google search on the BMI process led to more recent publications on BMI, advanced especially by the “Swiss and German School” (including authors such as Gassman et al., n.d.; Gassman & Zeschky, 2007; Eppler et al., 2011; Bucherer et al., 2012; Enkel & Mezger, 2013; Eppler et al., 2011; Frankenberger et al., 2013; Schneider & Spieth, 2013). Being published in recent online journal issues dedicated entirely to BMI and referencing to additional sources, they opened up to a third set of articles. Practitioners’ advice and studies that were discovered along the way were mentioned to illustrate that the same relevance and stream of thoughts for BMI were found in practice, but were at no point used as evidence for argumentation or for concluding the research question.

Keywords

BM and BMI: “business model” or “business model innovation”

Analogical thinking: “cognitive processes ideation”, as “cognitive processes idea creation” “creative cognition” “creative thought” “use of analogies managers” or “analogy idea generation”.

9.2 Table of Business Model Definitions

Author	Definition of Business Model
(Amit & Zott, 2001, p. 493)	"A business model depicts the design of transaction content, structure, and governance so as to create value through the exploitation of business opportunities."
(Amit & Zott, 2012, p. 42)	"We define a company's business model as a system of interconnected and interdependent activities that determines the way the company "does business" with its customers, partners and vendors. In other words, a business model is a bundle of specific activities — an activity system — conducted to satisfy the perceived needs of the market, along with the specification of which parties (a company or its partners) conduct which activities, and how these activities are linked to each other."
(Chesbrough & Rosenbloom, 2002, pp.532-534)	"The business model provides a coherent framework that takes technological characteristics and potentials as inputs, and converts them through customers and markets into economic outputs. The business model is thus conceived as focusing device that mediates between technology development and economic value creation" "We offer the following, more detailed and operational, definition: The functions of a business model are to: - o articulate the <i>value proposition</i>, i.e., the value created for users by an offering based on technology; - o identify a <i>market segment</i>, i.e. the users to whom technology is useful and for what purpose, and specify the revenue generation mechanism(s) for the firm; - o define the structure of the <i>value chain</i> required to create and distribute the offering, and determine the complementary assets needed to support the firm's position in this chain; - o estimate the <i>cost-structure</i> and <i>profit potential</i> of producing the offering, given the value proposition and value chain structure chosen; - o describe the position of the firm within the <i>value network</i> linking suppliers and customers, including identification of potential complementors and competitors; - o and formulate the <i>competitive strategy</i> by which the innovating firm will gain and hold advantage over rivals."
(Frankenberger et al., 2013, p. 254)	"To describe the business models throughout our study, we employ a conceptualisation that consists of four central dimensions: the Who, the What, the How, and the Why"
(Hedman & Kalling, 2003, pp. 52-53)	"we would propose a generic business model that includes the following causally related components, starting at the product market level: (1) customers, (2) competitors (3) offering, (4) activities and organisation, (5) resources, and (6) supply of factor and production inputs. These components are all cross-sectional and can be studied at a given point in time. To make this model complete, we also include a longitudinal process component (7), to cover the dynamics of the business model over time and the cognitive and cultural constraints that

	managers have to cope with.”
(Johnson et al. 2008, pp. 60-61)	“A business model, from our point of view, consists of four interlocking elements that, taken together, create and deliver value. The most important to get right, by far, is the first. Customer value proposition (CVP). [...] Profit Formula. [...] Key resources. [...] Key processes.”
(Magretta, 2002, p. 4)	“They are, at heart, stories – stories that explain how enterprises work. A good business model answers Peter Drucker’s age-old questions: Who is the customer? And what does the customer value? It also answers the fundamental questions every manager must ask: How do we make money in this business? What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?”
(Massa & Tucci, 2014, p. 7)	“The BM may be conceptualized as depicting the rationale of how an organization (a firm or other type of organization) creates, delivers, and captures value (economic, social, or other forms of value) in relationship with a network of exchange partners”
(Mitchell & Coles, 2003b, p. 12)	“It’s simply a way of organizing a company to permit it to serve its customers in an effective way. A business model is composed of seven key elements—the who, what, when, where, why, how, and how much— that are viewed from the perspective of all direct and indirect stakeholders: 1. “Who?” defines all the stakeholders you are serving or affecting. 2. “What?” describes the offerings and their benefits and negative influences that affect each stakeholder. 3. “When?” captures the timing of offerings’ effects on stakeholders. 4. “Where?” identifies the location for delivering benefits and other impacts. 5. “Why?” gives the rationale for providing the stakeholder benefits you deliver. 6. “How?” explains your method of providing your offerings and being compensated for them. 7. “How much?” states the price customers pay and costs they incur”
(Morris, 2005, p. 727)	“A business model is a concise representation of how an interrelated set of decision variables in the areas of venture strategy, architecture, and economics are addressed to create sustainable competitive advantage in defined markets.”
(Osterwalder & Pigneur, 2010, p. 14)	“ A business model describes the rationale of how an organization creates, delivers and captures value”
(Santos et al., 2009, pp.11, 13)	“A business model is a configuration of activities and of the organizational units that perform those activities both within and outside the firm designed to create value in the production (and delivery) of a specific product/market set.” [...] “Our definition then identifies four separate but interrelated components in a business model:

	• A set of elemental <i>activities</i>. • A set of <i>organizational units</i> that perform the activities (some of these units are internal to the firm, others external). • A set of <i>linkages</i> between the activities, made explicit by an isomorphic set of physical <i>transactions</i> (between the organizational units that perform the activities) and human <i>relationships</i> among the individuals who supervise and/or manage the linked organizational units. • A set of <i>governance mechanisms</i> for controlling the organizational units and the linkages between units.”
(Teece, 2010, p. 172)	A “business model describes the design or architecture of the value creation, delivery, and capture mechanisms [an enterprise] employs. The essence of a business model is in de- fining the manner by which the enterprise delivers value to customers, entices customers to pay for value, and converts those payments to profit. It thus reflects management’s hypothesis about what customers want, how they want it, and how the enterprise can organize to best meet those needs, get paid for doing so, and make a profit
(Tikkanen et al., 2005, p. 7)	“We define the business model of a firm as a system manifested in the components and related material and cognitive aspects. Key components of the business model include the company’s network of relationships, operations embodied in the company’s business processes and resource base, and the finance and accounting concepts of the company”
(Winter & Szulanski, 2001, p. 731)	Business model is typically a complex set of interdependent routines that is discovered, adjusted, and fine-tuned by “doing.”
(Wirtz et al., 2010, p. 274)	“A business model reflects the operational and output system of a company, and as such captures the way the firm functions and creates value. It can be thought of as consisting of several submodels or domains, specifying which resources go into a company (sourcing domain); how they are transformed (value generation domain) into marketable products or services (value offering domain); how the products and services are transferred to the customer (distribution domain) and how revenues are generated and obtained from business partners (revenue domain).”
(Zott & Amit, 2008, p. 1)	“The business model is a structural template that describes the organization of a focal firm’s transactions with all of its external constituents in factor and product markets.”
(Zott & Amit, 2010, p. 216)	“Building on existing literature, we conceptualize a firm’s business model as a system of interdependent activities that transcends the focal firm and spans its boundaries. The activity system enables the firm, in concert with its partners, to create value and also to appropriate a share of that value.”

Table 23: Table of Business Model Definitions

9.3 Table of Business Model Innovation Definitions

Author	Definition of Business Model
(Amit & Zott, 2012, p. 44)	"Business model innovation can occur in a [number] of ways: 1. By adding novel activities, for example, through forward or backward integration; we refer to this form of business model innovation as new activity system "content." 2. By linking activities in novel ways; we refer to this form of business model innovation as new activity system "structure." 3. By changing one or more parties that perform any of the activities; we refer to this form of business model innovation as new activity system "governance."
(Giesen et al., 2007, pp. 27-29)	"Because business leaders interviewed had difficulty defining business model innovation, we developed a framework that identified three main types: Industry model: This approach involves innovating the "industry value chain." This can be accomplished via horizontal moves into new industries as Virgin has done with its moves from its beginnings in music and retail into such diverse industries as airlines, railways, beverages, financial services, etc., thus leveraging its superior skills in consumer management. It can also be accomplished by redefining existing industries as Dell has done by eliminating intermediaries and going directly to customers and as Apple has done by delivering music directly to customers via iTunes. Perhaps most dramatically, industry model innovation can also involve the development of entirely new industries or industry segments as Google and other search engine companies have done in the past decade with the advent of the Internet. This dimension leverages white spaces in the competitive environment as well as unique assets. Revenue model: This approach involves innovations in how companies generate revenues by reconfiguring offerings (product/service/value mix) and/or by introducing new pricing models. This is a dimension that leverages customer experience, choices and preferences and that can also leverage new technologies. A good example of an offering innovation is Cirque du Soleil's redefinition of the circus experience, recombining new and old elements to change the value proposition and reach a new target audience. A classic example of a pricing innovation is Gillette's strategy of underpricing razors to sell razor blades. Another more recent example is Netflix's introduction of a new kind of movie rental option, offering consumers monthly subscriptions rather than the once prevailing product-based rental structure. New pricing models also can be seen in digitized modern markets with such offerings as music subscriptions and clips of music for ring tones. Enterprise model: This approach involves innovating the structure of the enterprise and the role it plays in new or existing value chains. This dimension focuses on redefining organizational boundaries. Innovations here can be achieved through integration as in the Japanese kiereitsu framework, where what might typically be a supply chain is owned and managed by one firm or conglomerate.

	Clothing retailer Zara, for example, manages design through delivery, creating feedback loops from customer data at stores back to designers through manufacturing[4]. Enterprise model innovation can also be accomplished via specialization, wherein organizations focus on core competencies or high-margin activities and outsource the rest. The Indian telecommunications company Bharti Airtel, for example, focuses on marketing, sales and distribution, outsourcing much of the actual IT and networking functions to external partners[5]. Finally, enterprise model innovation can be accomplished via network plays, wherein companies rely on external collaboration. For example, illy caffè has partnered with various other companies along its value chain, such as manufacturers of coffee-makers and others, to improve the overall coffee-drinking experience[6]. “
(Magretta, 2002, p. 4)	“Creating a business model is, then, a lot like writing a new story. At some level, all new stories are variations on old ones, reworkings of the universal themes underlying all human experience. Similarly, all new business models are variations on the generic value chain underlying all businesses. Broadly speaking, this chain has two parts. Part one includes all the activities associated with making something: designing it, purchasing raw materials, manufacturing, and so on. Part two includes all the activities associated with selling something: finding and reaching customers, transacting a sale, distributing the product or delivering the service. A new business model’s plot may turn on designing a new product for an unmet need, as it did with the travelers’s check, or it may turn on process innovation, a better way of making or selling or distributing an already proven product or service”
(Massa & Tucci, 2014, p.2)	“we introduce the notion of BMI and define it as an activity of designing – i.e. creating, implementing, and validating – a new BM”
(Mitchell & Coles, 2003a, pp.16-17)	“Changing a single business model element in a way that substantially enhances a company’s ongoing performance versus the competition in sales, profits and cash flow is a <i>business model improvement</i>. Merely matching the competitor’s offerings is a <i>business model catch-up</i>. A <i>business model replacement</i> entails improving at least four of these business model elements versus the competition. [...] When a company makes business model replacements that provide product or service offerings to customers and end users that were not previously available, we refer to those replacements as <i>business model innovations</i>.”
(Pohle & Chapman, 2006, p. 36)	“Innovation types defined • <i>Business model</i>. Innovation in the structure and/or financial model of the business”
(Santos et al., 2009, p. 14)	“Business model innovation (BMI) is a reconfiguration of activities in the existing business model of a firm that is new to the product/service market in which the firm competes.”
(Sosna et al., 2010, p. 401)	The business model perspective is unique in one crucial respect: it embraces system wide changes that include <i>both</i> value creation <i>and</i> value exploitation, so requiring that the focal firm create value for all stakeholder groups – customers, suppliers, employees, and partners (such as franchisees in our case) – <i>and</i> capture value for itself. A firm that is able to come up with new transaction content, structure and governance configurations that can fulfill these requirements <i>simultaneously</i> can be said to have a sustainable new business model: neither creating stakeholder value nor capturing value for itself are sufficient by themselves to ensure viability and

	robustness.”
(Zott & Amit, 2008, p. 4)	“Novelty-centered business models refer to new ways of conducting economic exchanges among various participants. The conceptualization and adoption of new ways of conducting transactions can be achieved, for example, by connecting previously unconnected parties, by linking transaction participants in new ways, or by designing new transaction mechanisms”

Table 24: Table of Business Model Innovation Definitions

9.4 Detailed Categorization of Research on BMI

Note: the process phases (under “what” column) are iterative (e.g. Frankenberger et al. 2013; Sosna et al, 2010)

What	How	Challenges	Timing
Initiation – Realize the need for BMI	•Analyze the external environment, identify changes in customer behavior, competitive moves (Mitchell & Coles, 2003b; Markides & Oyon, 2010) or structural changes such as technology or regulation (Volberda, Baden-Fuller, & van den Bosch, 2001); Yip, 2004; Giesen et al., 2007; Johnson et al., 2008; Demil & Lecocq, 2010; Doz & Kosonoe, 2010; McGrath, 2010; Teece, 2010; Wirtz et al., 2010; Bucherer, Eisert, & Gassman, 2012; Frankenberger et al., 2013). •Pay attention to internal triggers such as poor performance and inconsistencies (Demil & Lecocq, 2010; Bucherer et al., 2012).	•Sharpen foresight and anticipation (Doz & Kosonoe, 2010; Teece, 2010) •Understand the current BM in depth (Gassman et al., n.d.; Mitchell & Coles, 2004b; Giesen et al., 2007; Johnson et al., 2008; Lindgardt et al., 2009; Santos et al., 2009; Wirtz et al., 2010; Aspara et al., 2013).	•BMI is not on the yearly agenda (Yip (2004) but recurring (Mitchell Coles 2003a, 2004b, Bucherer et al. (2012) •Proactive (Volberda et al., 2001; Yip, 2004) Pohle & Chapman, 2006; Johnson et al., 2008; Teece, 2010, Bucherer et al., 2012). or Reactive (Sosna et al., 2010; Aspara et al., 2011; Aspara et al., 2013) initiation possible
Ideation – Form ideas for the new BM	•Starting point may be the realized opportunities or complications in the initiation phase (Frankenberger et al 2013) •Innovate around the customers job to be done Johnson et al.(2008) • Turn product offerings into services (Velamuri, Bansemir, Neyer, & Möslin, 2013) • Stick to listed questions or choices at various steps for managers to consider when engaging in BMI (Mitchell & Coles, 2004b; Casadesus-Masanell & Ricart, 2010; Teece, 2010; Zott & Amit, 2010; Amit & Zott, 2012) •Stick to identified value drivers or patterns from the most successful BMIs (Mitchell & Coles, 2004a; Mitchell & Coles, 2004b ; Amit & Zott, 2012)	•Cognitive barrier can prevent managers them from effective BMI, as they are ruled by the dominant logic of how the business works (Gassman et al., n.d.; Tripsas & Gavetti, 2000; Chesbrough, 2003; Tikkanen et al., 2005; Chesbrough, 2010; Sosna et al., 2010; Teece, 2010; Zott et al., 2011; Aspara et al., 2013; Frankenberger et al., 2013; Massa & Tucci, 2014) •Sosna et al. (2010) have argued for performance crisis and Chesbrough (2010) for the process of experimentation and change leadership to overcome such barriers. •Another identified challenge was for managers to think holistically about the BM and to leave “product thinking” behind (Frankenberger et al., 2013).	•In practice, the first conceptual phases (initiation, ideation and parts of integration) should not take longer than 16 weeks. IBM's Global Business Services (2009) •In Frankberger et al.'s (2013) only response on ideation specifically for BMI, the inquired firm used few meetings •Eppler et al. (2011) used 2h group sessions to simulate the ideation process.

	• Engage in open innovation with partners to co-develop new BMs Chesbrough (2007b, 2013)¹⁶ • Use imitation strategies for complete BM (Zott 2003; Mitchell & Coles 2004a; Santos et al., 2009; Teece, 2010). • Vary and copy parts of other BMs and recombine (Gassman et al. n.d.; Mullins & Komisar, 2009; Baden-Fuller & Morgan, 2010; Doz & Kosonoe, 2010; Enkel & Mezger, 2013)	• Doz & Kosonoe (2010) and Zott & Amit (2010) have repeatedly suggested that the use of BM ontologies such as the canvas can help overcome this barrier as it funnels BM thinking	
Integration & Implementation Developing, scaling and testing new BMs	• In the integration phase, the generated idea is more refined and integrated with the other components of the BM (Teece, 2010, Wirtz et al., 2010; Frankenberger et al., 2013). • For example, this refers to the alignment of the resources and capabilities to the new value proposition or first discussions with partners that are started as the idea becomes more tangible. (Frankenberger et al., 2013). • Implementation is concerned with the launch of the new BM. (Wirtz et al., 2010; Frankenberger et al., 2013) • Due to these risks, companies choose “pilots, trial-and-error, and experimentation” as implementation approaches • Sosna et al. (2010) distinguished between an exploration and an exploitation phase from their case observation, in which exploration	• This “typically involves huge investments to be made and risks to be taken” as “In contrast to product innovation, where early prototypes can be shared and evaluated with customers during their development, a new business model often needs to be implemented before it can be tested in reality”. Frankenberger et al. (2013, p. 263) • The majority of scholars advocate the significance of organizational learning and low-cost experimentation in the market before scale-up and exploitation of the new BM (Magretta, 2002; Mitchell & Coles, 2003b; Zott, 2003; Mitchell & Coles, 2004a; Mitchell & Coles, 2004b; Chesbrough, 2007a; Johnson et al., 2008; Mullins & Komisar, 2009; Chesbrough, 2010; Demil & Lecocq, 2010; Doz & Kosonoe, 2010; McGrath, 2010; Teece, 2010; Thompson & MacMillan, 2010; Foss & Stieglitz, 2014).	• There is no consensus among scholars or practitioners concerning the duration of integration and implementation. • Mitchell & Coles (2003a) claim that the “most successful business model innovations are in place within a year of beginning implementation and repay their investments within six months”. • Chesbrough (2007a) argues that two to three years were too little for BMI, stressing the time it takes to “develop business-model experiments, obtain clear results, interpret and understand the results, and then carry out a broad deployment of those results”. • Sosna et al.’s (2010) case company’s trial-and-error process took 5 years, while the first experiment (store) was set up in the first year. • In general, most articles emphasize the

¹⁶ However, practice has shown that external collaboration is very difficult in BMI (Giesen et al., 2007).

	included low-resource intensive experiments to test the BM in the market and adaptations to new BM based on market insights. Only once the BM was found to be stress-tested sufficiently did their case scale-up the new BM and exploit its benefits. The case company further engaged into international BM replication, where subsidiaries motivated further BM refinements that helped to company grow and build its competitive advantage; a strategy that could also be observed in the case of ING direct (Dunford et al., 2010).	•A common challenge in the reviewed literature is the issue of organisational inertia (Mitchell & Coles, 2003a; Morris et al., 2005; Chesbrough, 2010; Doz & Kosonoe, 2010; Sosna et al., 2010; Wirtz et al., 2010; Zott et al., 2011; Foss & Stieglitz, 2014; Massa & Tucci, 2014) and resistance (Santos et al., 2009; Sosna et al., 2010; Frankenberger et al., 2013). •Linkages between BM elements are deeply embedded, and “inertia emerges because of the complexity required for the re-configuration of assets and operational processes” (Massa & Tucci, 2014 in referring to Chesbrough, 2010). •Especially in the case of external triggers initiating the BMI, “a strong internal fit can undermine the firm’s adaptability” (Morris et al., 2005). •Organizational resistance was especially mentioned in the case of profitable current BMs, where support for a new BM was hard to acquire as the need for change was not obvious (Frankenberger et al., 2013) or organizational members may resist as they fear the new BM to have negative consequences for their area (Santos et al., 2009; Sosna et al., 2010). •Experimentations mentioned above help in overcoming these barriers (Chesbrough, 2010) and effective leadership (Chesbrough, 2010; Doz & Kosonoe, 2010; Foss & Stieglitz, 2014) that sets incentives to experiment (McGrath, 2010) and agendas for disrupting instead of improving own BMs (Mitchell & Coles, 2004a; Morris et al., 2005) as well as builds capabilities to engage in BMI (Mitchell & Coles, 2004a; Mitchell & Coles,	experimentation and learning phase of BMI takes its time (Johnson et al., 2008). •Discussion of scholars on strategies in dealing with multiple BMs (Volberda et al., 2001; Johnson et al., 2008; Chesbrough 2010; Doz & Kosonoe, 2010; Markides & Oyon 2010; Sosna et al., 2010), i.e. the choice to completely adopt a new BM or to have two separate business models, avoiding threats to current profits (if applicable) and the problems of inertia and resistance, or midway strategies in order to benefit from synergies, or strategies that phase the BM in our out over time to benefit from knowledge or monetary resources (Markides & Charitou, 2004; Johnson et al., 2008; Foss & Stieglitz, 2014). •
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		2004b) has been stressed repeatedly as a solution and key activity in this phase, which has also been linked to the organisational change literature (Santos et al., 2009; Chesbrough, 2010; Sosna et al., 2010; Wirtz et al., 2010; Foss & Stieglitz, 2014).	
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Table 25: Detailed categorization of research on BMI

9.5 Assumed BMI Responsibility

Assumed BMI responsibility	Authors
CEOs	Mitchell & Coles, 2004; Bucherer et al., 2012
Managers or management	Magretta, 2002; Hedman & Kalling, 2003; Tikkanen et al. 2005; Casadesus-Masanell & Ricart, 2010; Chesbrough, 2010; Demil & Lecocq, 2010; Teece, 2010; Wirtz et al., 2010; Zott & Amit, 2010; Aspara et al., 2013
Leaders	Mitchell & Coles, 2003b, Mitchell & Coles, 2004, Doz & Kosonoe, 2010; McGrath, 2010
Executives	Doz & Kosonoe, 2010; McGrath, 2010
Top management	Demil & Lecocq, 2010; Wirtz et al., 2010; Bucherer et al., 2012
Top management teams	Doz & Kosonoe, 2010; Aspara et al., 2011; Foss & Stieglitz, 2014

Table 26: Comparison of implicit responsibilities in BMI

9.6 Cordial BM Canvas

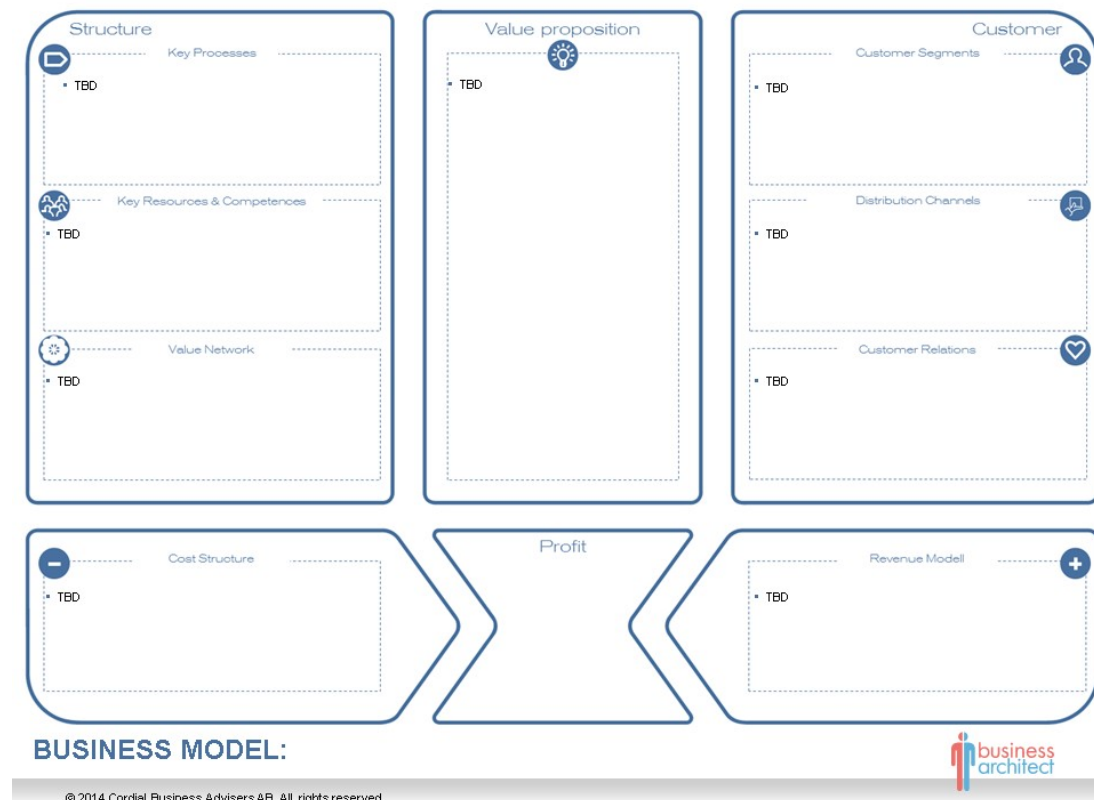


Figure 14: The Cordial Business Model Canvas. Reprint with permission of the owner.

Figure 14 above shows the Cordial Business Model Canvas. It differs from the Osterwalder & Pigneur (2010) Canvas in that it includes the profit cell, which is only inferred in the other one. We advised our participants that they did not have to fill it out, i.e. calculate a business case. However, we saw it as a helpful reminder in that the end goal should be a profitable BM, which corresponded with our instructions to apply a business sense.

9.7 Presentation for Simulation Exercise

The presentation includes the instructions (Slide 21-24) and feedback checklist (Slide 26)

Welcome!

1

Synthesized Definition of a Business Model

>> A business model describes the rationale of how an organization creates, delivers, and captures value in relationship with a network of partners

3 (Hesse & Tucci, 2014; Afshar & Tucci, 2001; Osterwalder, Pigneur, & Tucci, 2005; Zott et al., 2011)

Business
Model

2

Business Model Ontologies

Business Model tools or frameworks have mainly three key functions in business practice

1. They offer a 'reference language' that fosters dialogue, promotes **common understanding**, and supports collective sense-making inside the company
2. They allow managers and entrepreneurs to **communicate** the value of their venture and to support the engagement of external audiences so as to gain legitimacy, activate resources, and foster action.
3. They **simplify cognition** and offer the possibility of virtually **experimenting** with Business Model Innovation.

4

The Cordial Business Model Canvas

5

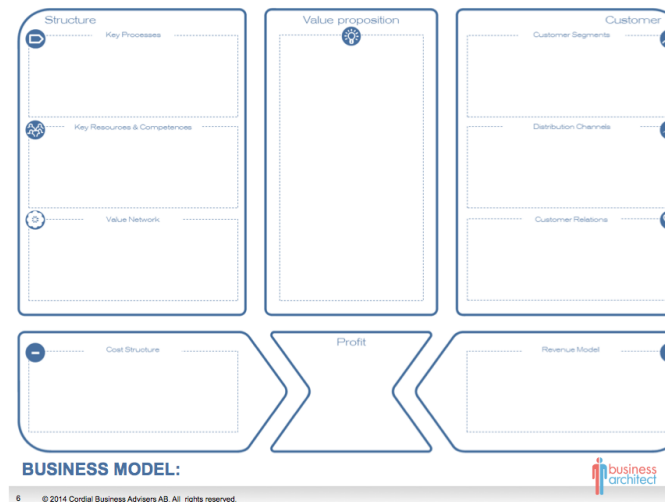
Customer Segments



Describes the different groups of individuals or organizations an enterprise targets

- ➔ To better satisfy customers, a company may group customers into distinct segments according to e.g.
 - Customer needs
 - Channel requirements
 - Resource requirements
 - Profitability
 - Willingness to pay
- ➔ A business model may include one or several, large or small Customer Segments
- ➔ Once this decision is made, a business model can be carefully designed around a strong understanding of specific customer needs

7



6

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Value Proposition



Describes the bundle of products and services that creates value for each customer segment

- ➔ The Value Proposition presents the reason why customers choose one company and its offering over another
- ➔ The Value Proposition
 - Solves a customer problem
 - Satisfies a customer need
 - Quantitative
 - Qualitative
- ➔ A company can have different Value Propositions tailored specifically to each customer segment and its problems and needs

8

Distribution Channels



Describes how a company communicates and delivers its value proposition to a specific customer segment

- Channels (communication and distribution) are customer touch points that play a critical role in the customer experience
- The Channel phases are:
 - Awareness
 - Evaluation
 - Purchase
 - Delivery
 - After sales
- There are different Channel types
 - Direct vs. indirect

9

Key Processes



Describes the processes that are key in making the business model work

- Key Processes are required to
 - Offer and deliver value to the customers
 - Establish and maintain customer relationships
- A company has to analyze and understand
 - Which Key Processes are required?
 - How should they be linked and sequenced?
 - Where should they be carried out?

11

Customer Relations



Describes the types of relationships a company establishes and maintains with its customer segments

- A company must define the type of relationship it wants to establish with each customer segment, e.g.
 - Personal
 - Self-service
 - Co-creation
- Customer Relationship Management involves both
 - Customer acquisition
 - Customer retention

10

Key Resources & Competencies



Describes the most important assets needed to perform the key processes

- A company has to analyze and understand
 - What are the key resources required
 - What are the key competencies required
- Key resources can be of different nature, e.g.
 - Physical
 - Financial
 - Intellectual
 - Human

12

Value Network



Describes the **network** of suppliers and partners that are critical to operate the business model

- A company needs to analyze and understand
 - Which processes should be outsourced or insourced?
 - Which resources are provided by partners?
- Acquisition of assets
- There are different types of partnerships, e.g.
 - Strategic alliances between non-competitors
 - Coopetition (strategic alliances between competitors)
 - Joint ventures
 - Buyer-seller
- Purchase vs. lease

13

Cost Structure



Describes the costs incurred by operating the business model and the different factors driving them

- Costs are incurred and driven by:
 - Key Processes
 - Key Resources & Competencies
 - Value Network
- Cost structures can have the following characteristics:
 - Fixed vs. variable
 - Direct vs. Indirect
 - Operating vs. non-operating

15

Revenue Model



Describes how the company **generates cash** from its customers, i.e. **monetizes** its products and services

- A company needs to understand for what value(s) each customer segment is truly willing to pay
- One or more revenue streams can be generated from each customer segment (e.g. product and/or service)
- In general there are two different types of revenue streams:
 - One-time payment
 - Recurring payments
- One of the most critical decisions is the pricing decision:
 - Value-based vs. cost-based
 - Undifferentiated vs. Differentiated
 - Fixed vs. Dynamic

14

Business Model Innovation

16

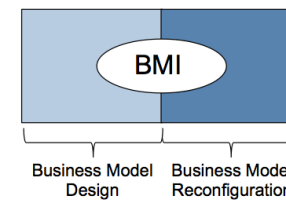
Synthesized Definition of Business Model Innovation

- >> Business Model Innovation entails the introduction of a business model with a **degree of novelty and uniqueness** to the respective industry
- >> In order to truly innovate a Business Model several of the nine business model elements should be changed
- >> The result should lead to a competitive advantage

17 (Massa & Tucci, 2014; Mitchell & Coles, 2004; Amit & Zott, 2012; Teece, 2010)

Synthesized Definition of Business Model Innovation

- >> Business Model Innovation entails the introduction of a business model with a **degree of novelty and uniqueness** to the respective industry



18 (Massa & Tucci, 2014)

Synthesized Definition of Business Model Innovation

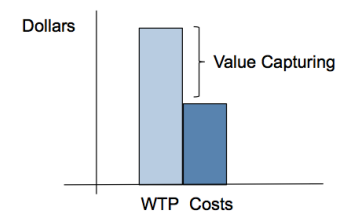
- >> In order to truly innovate a Business Model several of the nine business model elements should be changed



19 (Mitchell & Coles, 2004)

Synthesized Definition of Business Model Innovation

- >> The result should lead to a competitive advantage



20 (Amit & Zott, 2012; Teece, 2010; Ghemawat & Rivkin, 1998)

Instructions

- Please innovate Dell's Business Model and provide us with a new Model
- Please deliver your result in the form of a filled out canvas and include bullet points in the elements that you want to optimize (suggestion: use post-its as bullets)
- You can use other frameworks and tools in the process
- No need to present your result to us afterwards. The filled out canvas will be collected by us in the end

21

Limitations

- Please do not use laptops and phones
- Please do not do any research online
- No questions can be answered from our side during the sessions

23

Instructions

- Assume that the 2010 situation in which the case ends is Dell's situation today in 2014, i.e. you can assume the current external environment
- Feel free to make assumptions
- Feel free to be creative, but use common business sense
- Make a qualitative analysis (no need to calculate a business case or to fill out the profit cell)
- You can name the business model if you want to
- Please stick to English throughout the discussion

22

Reminders

- >> Business Model Innovation entails the introduction of a business model with a degree of novelty and uniqueness to the respective industry
 - >> In order to truly innovate a Business Model several of the nine business model elements should be changed
- >> The result should lead to a competitive advantage

24

Case Solving & Observation



25

Business Model Innovation Checklist

Did you design a truly innovate and originate model? Is the model sustainable? Did you apply sufficient business sense?

- ➔ **Creativity:** How original is the new business model?
 - Is the new business model truly novel to the respective industry?
 - Use of within domain references: Personal computer industry
 - Use of outside domain references: Other industries, sciences, arts etc.
 - Number of business model patterns used
- ➔ **Sophistication:** How easily and quickly can any competitor copy the new model?
 - How many of the nine elements were revised?
 - How well are the elements aligned?
 - Were isolating mechanisms used, and if, how many?
- ➔ **Feasibility:** Is it viable to implement the new model?
 - Did the team stress-test its business model?
 - Were any obviously dubious assumptions made?

26

Thank You!

27

9.8 Script for Simulation Presentation

Slide 1

- Hi and a warm welcome to our session on Business Model Innovation.
- We are very happy to be here and we want to thank you for taking the time and participating in our study.
- And, of course, we hope that in return we can provide you some new insights into business model innovation and that you will all benefit from the joint case cracking session. Just to let you know: We will send you this presentation next week, so that you can revisit the information if you are interested.
- Now, you might be wondering why we are holding notes. The reason is that our presentation needs to be highly standardized and consistent as its part of a research experiment. And therefore, we would also ask you to save all your questions for the very end of the session.
- So what can you expect from us today: We will start with a brief introduction to business models and business model innovation, our topics of today.
- Then we will give you some instructions on the case cracking.
- And afterwards we will start the actual case discussion and you will have 1h and 25 minutes to solve the case and to innovate Dell's business model.
- When the time is up, we will give you a brief feedback and wrap up the session.

Slide 2

- Alright, so let's dive into our first topic of the day, the concept of Business Models.

Slide 3

So in the last years many scholars have agreed on the significance of the understanding of business models for managers. And hence, there has been an exponential growth in the number of articles published on the subject. However, as it often is with nascent theories, the scholars have not agreed on a single definition yet. That's why we provide you today with a definition of "business model" that integrates most of the definitions out there, so

>> A business model describes the rationale of how an organization creates, delivers, and captures value in relationship with a network of partners

- And the focus here lies especially on the word how. So the business model describes how the mechanisms that a company uses to create, deliver, or capture value are designed and it also maps out the key decisions involved in that

Slide 4

- So that is a definition of business model. And usually this concept comes with an ontology, which is a framework or conceptual tool that you can use and this mainly for the following purposes:
- First, as a common language in talking about the concept to ground a common understanding which makes it easier to collectively brainstorm and reflect about it
- Second, as a framework to communicate a business to company outsiders such as shareholders
- And lastly, as a framework to experiment theoretically with a business model, just like we are doing later today

Slide 5

- So the framework that we will use today to analyse and innovate the business model is the cordial business model canvas:
- We are using this canvas, because Cordial is a professional service firm that we are working with. And their CEO Linus Malmberg has actually worked with Alexander Osterwalder, who originated the idea of using the business model canvas.

Slide 6

- So that is the canvas.
- It comprises nine different elements, and in the following, we will go through all the elements and explain which key decisions need to be considered in each one.
- Importantly, all these decisions need to be made holistically, because all elements in the business model are intertwined and need to be aligned with each other, and this is exactly what makes the business model concept quite tricky

Slide 7

- So let's start with the first element: the decision on the customer segment
- Of course, each company needs to decide which customer segment it wants to target, and the segments can be defined depending on different criteria:
- I always used to think of demographics and psychographics here, but you can also segment customers for instance, depending on the problems they face, or the channels they use, or their profitability level

- And of course, a firm can serve various segments, and they can differ in size, for example, mass market vs. niche.
- And importantly, once the segment is defined, the rest of the business model elements can be tailored to the specific needs of the different segments

Slide 8

- So the second element is the value proposition, which defines what you are actually going to offer and promise to your customer segments
- The value proposition can basically be a service or a product, and either way your value proposition should solve a problem or satisfy a need that the customer has
- The value proposition can be quantitative, such as the price of your offering, or qualitative, such as the emotional value attached to it
- And as you can have various customer segments, you can also have different value propositions for each of the segments

Slide 9

- The next decision then is: how to communicate and deliver this value proposition to the different customer segments
- Generally, you can have different channels for different segments and you can also have different channels for different phases in the sales process, for example for raising awareness or for the actual customer purchase decision
- And then of course a company can have different types of channels, indirect channels such as affiliate programs or direct channels such as the company's own online shop

Slide 10

- The fourth element are a company's customer relations
- So you can have a very personal relationship with your customer, or you may offer customers self-services
- Moreover, a company may need the customer to co-create a service or product or even create an environment where customers can help and serve each other C2C, for example by sharing experiences or knowledge in forums and communities
- You also always need to consider whether you want to acquire new customers and/or tie and retain your existing ones
- Great, so those first four elements in the middle and on the right side are all critical for the delivery of value to the customer and now we are moving to the left side that describes the actual creation of value:

Slide 11

- So we will start by thinking about the processes. CLICK. that make the model work:
- First, we need to understand and decide which processes are really key for the value creation. And, second, we have to define how we are going to link and sequence these different processes.
- And lastly, we need to decide where we want to carry out each process geographically and whether the process should be centralized or decentralized within the organization.

Slide 12

- So when we know what our key processes are, then we CLICK have to understand next, which key resources and competencies we need in order to perform these activities or processes
- And these key assets can generally be of tangible nature such as raw materials and human resources or be more intangible such as marketing and branding

Slide 13

- Then after defining the key processes and resources CLICK we also need to define our network of partners.
- So we need to analyse which processes should be outsourced or insourced and which of our resources are supplied by partners.
- And here the type of partnership is another critical decision as you can for example form a strategic alliance or opt for a simpler buyer-seller relationship
- And lastly, if you are dependent on partners, the decision on purchasing or leasing from partners can make a big difference. Or you might even consider acquiring the partner or parts of it, such as a particular business unit.
- So to quickly sum up again:
- First, we have talked about the right side of the business model, the value delivery, that means our decisions about the customer segments, our value proposition, our customer channels and our customer relations
- And then we have talked about the left side, the value creation, so the key processes and resources required to make the model work, and our partners in the value network that we rely on.
- Now we will take a look at the bottom line by first looking at the revenue model and then at the cost structure, the elements 8 and 9.

Slide 14

- So the revenue model basically defines the income generated from its various customer segments
- So you need to understand what exactly is it in your proposition that drives customer value?
- How many sources of revenue do you have and are the payments made by customers one-time or recurring?
- And importantly, you also have to define your pricing strategy. So do you have fixed prices, or do you differentiate prices
- That are the main questions for the revenue model, now we also need to understand our cost structure.

Slide 15

- Because all the resources and processes that are required to make the model work incur costs, and
- Thus, you need to understand what it is in your business that drives costs. And of course you have to analyse the structure of your costs: fixed vs. variable costs, direct vs. indirect costs and so on.
- So that was a quick introduction to the nine elements that form the business model canvas:

Slide 16

- As I mentioned before, it is important that you look at the model holistically and understand how the nine elements interrelate so they should constantly be evaluated both individually and collectively in the process.
- Alright that is all you need to know about the model. And Anna-Lena will now continue with the topic of business model innovation.

Slide 17

- Alright, so let's jump into our topic of the day, Business Model Innovation. So what is Business Model Innovation

Slide 18

- The topic of business model innovation is so to say brand new among scholars
- That does not mean that companies haven't done it, but as often academia lags behind practice
- So based on the study of the literature on business model innovation that currently exists, we have synthesized this following definition which we will go through step by step

Slide 19

- So,
 - >> Business Model Innovation entails the introduction of a business model with a degree of novelty and uniqueness to the respective industry
- So when a start up creates its business model, scholars have called it business model design
- When an incumbent firm changes its business model, its been called business model reconfiguration
- But only when there is a part that's truly novel to the respective industry it can be called business model innovation
- Respective industry is the industry the business is operating in or wants to enter, so it doesn't have to be new to all industries

Slide 20

- Moreover,
 - >> In order to achieve this novelty and uniqueness, several of the nine business model elements have to be changed
 - Also, due to the interrelations between the elements, changing one element should naturally lead to changing other elements as well
- And please be aware, the definition of business model innovation might sound a bit ambiguous or not concrete.
- But that is the point, the theory is not matured yet where there is a clear definition on what is is and what it is not.
- But what is happening is that companies are disrupting industries or gaining competitive advantages, and that not through mere product or process innovations anymore
- the really successful ones have in fact innovated the whole business model and aligned all parts to support the core.
- And so this perspective, thinking of the whole business model, is what we want to do today

Slide 21

- So this was our introduction
- And now we will give you the final instructions for the case session and get started then
- And you also find a sheet in front of you with the instructions, so you can use that in the sessions and we will just go through the points now

Slide 22

- So we want you to innovate Dell's Business Model and to provide us with a new model
- You can see, you have the empty big canvas in front of you, and please fill that out with the information in bullet points

- For that you can for example use these post its as bullet points and then you can just put them in there and move them or take them away if necessary
- And you can use other tools or techniques that you want for analysing or for something else, but in the end the deliverable is the canvas
- You do not need to allocate time to present your result to us, we hear what you decide, but please have a result when the time is over
- And we will collect the big canvas afterwards

Slide 23

- So here are some more detailed instructions for when you are actually working on the case
- You can assume that the situation in the case is today's situation
- So the case stops in 2010 and you just assume that that's Dell' situation today and you can use the current external environment
- And that also links to that you can make assumptions about the information you need, so you do not need to only stick to the information that's provided in the case
- Also, please be creative, but also come up with a model that you think would be feasible
- Next, when you have the revenue model, you do not need to calculate numbers given that we have limited time today, so you don't need to fill in the profit cell
- But we want you to have an understanding of how you make a profit or what the main drivers are for the profit
- Some of you may have seen that there is space below the canvas, that is if you want to give the business model a name you can write it there
- And then lastly, please stick to English!

Slide 24

- So these were the instructions, and then we have some more limitations that we need to mention
- Please avoid using your laptops and phones, and especially do not do any research online
- Lastly, we cannot interfere in the process. So from now we cannot answer any questions anymore, and please just make assumptions if some questions come up

Slide 25

- To give you a final reminder
- So when you go about innovating the business model, just bear in mind that your model must have a degree of novelty to the respective industry, otherwise its not an innovation
- And you should normally change a few elements to really make a sufficient change and to turn the model around
- So now the time is ___, and you have 1h 25 min to solve the case, so you have until ___.
- Please start and have fun.

After case cracking session:

Slide 26

- Ok, great! The time is over so great job everyone, very interesting to hear your discussions
- We hope you enjoyed the session and got some valuable inspiration for your work
- Great, so we were interested in the process of how you come up with a new model and especially in your discussions and idea generations
- But maybe you also want to hear a bit about how you did
- So here is a small checklist we generated just to have some reflections on how you went about this
- So if we go through this, we can say that

Slide 27

- Ok, so that was it for today
- Again, great job everyone and thank you very much for participating
- We hope we could provide you with some insights on business models and business model innovation and that you can take some of this back to your work
- We will provide you with the presentation of today, and of course everybody who is interested can also have the final study when we are done
- So thank you and have a nice rest of the day!

9.9 List of Participating Managers

Name and employer information was suppressed for confidentiality reasons, but is available upon request. Information on the participants' gender, age group, professional working experience and responsibilities is available in Table 27: List of participating managers below. Out of the participating managers, all had minimum 6 years of working experience, with the majority ranging 16-20 years of professional work experience (See Figure 15).

Out of the participating managers, 45% had budget responsibility and 55% had personnel responsibility. Moreover, 42% ranged 41-45 years of age, 77% were male, and 90% were Swedish.

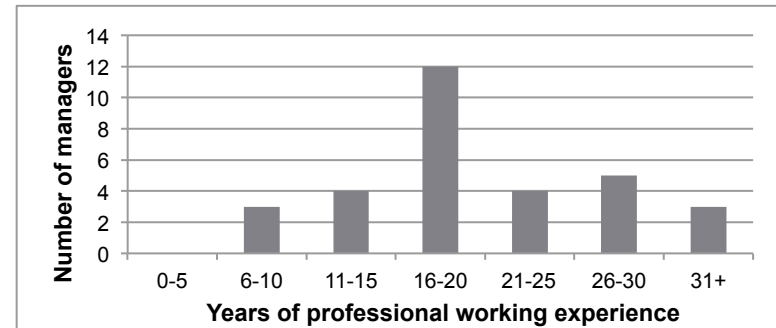


Figure 15: Age distribution of participating managers

Session	Manager	Sex	Age Group	Nationality	Professional working experience (in years)	Job title	Budget responsibility	Personnel responsibility	People directly reporting to	People indirectly reporting to
Monday	M01	M	41-45	Serbian	16-20	Business Development Manager	Yes	Yes	6-10	21-50
Monday	M02	M	36-40	Swedish	16-20	Business Developer	Yes	Yes	6-10	11-20
Monday	M03	M	41-45	Swedish	16-20	Solution Architect	No	Yes	0	1-10
Monday	M04	M	31-35	Swedish	6-10	Business Developer	No	No	0	0
Monday	M05	M	51-55	Swedish	26-30	Business Development Manager	Yes	Yes	6-10	n/a
Monday	M06	M	46-50	German	21-25	Enterprise Architect	No	No	0	0
Monday	M07	M	51-55	Swedish	31+	Business Development Manager	No	No	0	0
Tuesday	M08	F	41-45	Swedish	11-15	Head Of Finance & Legal	Yes	Yes	6-10	21-50
Tuesday	M09	M	36-40	Swedish	16-20	Senior Project Manager	No	No	0	0
Tuesday	M10	M	56-60	Swedish	26-30	Risk Manager	No	Yes	1-5	1-10
Tuesday	M11	F	41-45	Swedish	11-15	Head Of Legal	No	Yes	1-5	0

Tuesday	M12	F	61-65	Swedish	26-30	Accounting Specialist	No	No	n/a	0
Tuesday	M13	M	41-45	Swedish	16-20	Finance & Risk Manager	Yes	Yes	0	1-10
Wednesday	M14	M	61-65	Swedish	31+	Director/Corporate Advisor	Yes	Yes	0	11-20
Wednesday	M15	F	51-55	Swedish	26-30	Head Of Department	Yes	Yes	6-10	1001+
Wednesday	M16	M	56-60	Swedish	31+	CEO	Yes	Yes	0	21-50
Wednesday	M17	M	36-40	Swedish	6-10	Principal Consultant	No	No	0	0
Thursday	M18	M	41-45	Swedish	16-20	Strategy Manager	Yes	Yes	0	1-10
Thursday	M19	M	41-45	Swedish	16-20	Strategy Manager	No	No	0	0
Thursday	M20	M	46-50	Swedish	21-25	Strategy Manager	Yes	Yes	n/a	1-10
Thursday	M21	F	41-45	Swedish	16-20	Strategy Manager	No	No	0	0
Friday1	M22	M	41-45	Swedish	16-20	Partner	Yes	Yes	1-5	11-20
Friday1	M23	M	41-45	Swedish	21-25	COO	No	Yes	0	21-50
Friday1	M24	M	41-45	Danish	16-20	Senior Consulting Member	Yes	Yes	6-10	1-10
Friday1	M25	M	36-40	Swedish	11-15	Partner	No	No	0	0
Friday1	M26	M	31-35	Swedish	6-10	Business Area Manager	Yes	Yes	6-10	1-10
Friday2	M27	M	46-50	Swedish	21-25	Group Controller	No	N/A	0	0
Friday2	M28	F	41-45	Swedish	16-20	Group Controller	No	N/A	0	1-10
Friday2	M29	M	41-45	Swedish	11-15	Group Controller	No	N/A	0	0
Friday2	M30	M	46-50	Swedish	26-30	CEO	Yes	No	0	0
Friday2	M31	F	36-40	Swedish	16-20	Group Controller	No	N/A	0	0

Table 27: List of participating managers

9.10 List of Coded Analogies

Session	Manager	Verbal Protocol	Propositional Structure	Structure	Base	Target	Distance Code	Distance Sub-Cat.	Distance Category	Purpose Code	Purpose Sub-Cat.	Purpose Category
Monday	M2	"... sell you know only cheap, low, fair prices. We sell just you know computers between 500 dollars, you know this kinda stuff and focus completely on that. Norwegian of the computer or something like that."	Base: ACHIEVE (Norwegian, Cost Leadership) Target: ACHIEVE (Dell, Cost Leadership)	Relational Analogy (first-order)	Norwegian, Airline Industry	Dell, Computer Industry	Other-Industry	Far Industry	Between-domain	Illustrating, case in point	Illustrating an Idea	Explanation
Monday	M3	"And then another way is to have a procurement services and sell this services to others, like a consultancy firm , something like that. And then sell their assembly lines to I wrote Lego companies, but I think someone else mentioned this that you put together other things for others."	Base: SELLS (Consulting Firm, Services) Target: SELLS (Dell, Services)	Relational Analogy (first-order)	Consulting Industry	Dell, Computer Industry	Other-Industry	Far Industry	Between-domain	Idea Generation, Imitate	Imitation of existing BM	Idea Generation
Monday	M3	"And then another way is to have a procurement services and sell this services to others, like a consultancy firm, something like that. And then sell their assembly lines to I wrote Lego companies, but I think someone else mentioned this that you put together other things for others."	Base: ASSEMBLE (LEGO, Bricks) Target: ASSEMBLE (Companies, Components)	Relational Analogy (first-order)	Toy Industry	Computer Industry	Other-Industry	Far Industry	Between-domain	Illustration, Lego	Illustrating an Idea	Explanation
Monday	M3	"But it won't really work together, I mean like the smoke detector and the plant watering system, they won't really work together. I mean" "And then you have like an app store. We could, yes we could that. We can have an App Store . That you have independent developers, yes, connecting the smoke detectors and plant watering systems."	Base: ENABLES [OFFERS (Company, App Store), CONNECT (Company, Devices)] Target: ENABLES [OFFERS (Dell, App Store), CONNECT (Dell, DEVICES)] If a company offers an App-Store, Then this enables it to connect devices to each other	Relational Analogy (second-order)	Computer Industry	Dell, Computer Industry	Within-Industry	Same Industry	Within-domain	Developing the Idea	Modification	Idea Development

Monday	M3	"Yeah I think we would need to build some kind of competitive advantage, because you would be able to buy the components from other manufacturers. So I think that one of our key strengths here is that Dell is a large company with huge resources compared to almost everyone else. So you could put together this ecosystem of all these different types of components that work together and äähm connecting them and so on." "Yeah so if you buy your toaster from Dell you know that it will also talk to your water sprinkler."	Base: LINKS (Ecosystem, Organisms) Target: LINKS (Dell, Components)	Relational Analogy (first-order)	Biology	Dell, Computer Industry	Non-Business	Non-Business	Between-domain	Developing the Idea	Advancement	Idea Development
Monday	M3	"We need to find these immature products" "Yeah, how do we find them?" (...) "So that means the company is not connected to, like Dell is not a computer company. Ääh it's more like a start-up company, for products" "It should be like a distributor, a configurator for start-up companies that invents lot of things that get like funding äähm Kickstarter or something and then they can use Dell to get started and get quite high volumes"	Base: ENABLES [SUPPORTS (Kickstarter, Start-ups), BUILD (Start-ups, Products)] Target: ENABLES [SUPPORTS (Dell, Start-ups), BUILD (Start-ups, Volumes)] If a company support start ups, Then this enables them to innovate products.	Relational Analogy (second-order)	Financing Industry	Dell, Computer Industry	Other-Industry	Far Industry	Between-domain	Developing the Idea	Advancement	Idea Development

Monday	M4	Either we manufacture what other companies need, then Dell is not a brand that you know, ääh Dell is only a brand for other companies. Or we ääh assemble products that we sell under Dell's name." "So white labeling or Dell" "You can do both" "Considering how well known Dell is today, we don't want people to just forget it, it's a huge investment made already in the brand" "You could, you could use it like Intel you know, it's like Intel Inside . But then if the business sells that product, it could say like manufactured by Dell. So you still use the brand name but you allow your customers to use theirs also."	Base: ENABLES [USES (Intel, Ingredient Branding), MAINTAIN/BUILD (Intel, Brand)] Target: ENABLES [USES (Dell, Ingredient Branding), MAINTAIN/BUILD (Dell, Brand)] If a company applies ingredient branding, Then it can maintain and strengthen its brand.	Relational Analogy (second-order)	Computer Industry	Dell, Computer Industry	Within-Industry	Same Industry	Within-domain	Developing the Idea	Modification	Idea Development
Monday	M5	"Stop selling computers, ääh rent them. Ääh a lot of businesses already do, but individuals don't. So you sign up for a monthly fee and you get a PC for your configurations and if something happens you just replace it. "And you ääh you could move that to virtual PCs. PCs as a service."	Base: RENT, NOT BUY (Business Customers, Computers) Target: RENT, NOT BUY (Private Customers, Computers)	Relational Analogy (first-order)	Computer Industry	Computer Industry	Within-Industry	Same Industry	Within-domain	Idea Generation	Novel Idea	Idea Generation
Monday	M6	"and ääh I really believe in ähm two of the next big things we spoke about, like robots and 3D printers those are huge markets that are going to open up and ääh the great thing about both of those it's that they are both pretty close to Dell's core competence. So they could start moving into that direction."	Base: REQUIRE (Robots/3D Printers, Assembling Competence) Target: REQUIRE (Dell's Products, Assembling Competence)	Relational Analogy (first-order)	Electronics Industry	Dell, Computer Industry	Close Industry	Near Industry	Within-domain	Idea Generation, Reusing existing capabilities	Recycling of own BM	Idea Generation
Tuesday	M8	"Like a car lease solution . A lease to a newest ääh, coolest computer."	Base: OFFERS (Car Company, Lease Solution) Target: OFFERS (Dell, Lease Solution)	Relational Analogy (first-order)	Automotive Industry	Dell, Computer Industry	Other-Industry	Far Industry	Between-domain	Idea Generation, Imitate	Imitation of existing BM	Idea Generation

Tuesday	M8	"But it's much more about design. I think so. And, and younger people would like you know an orange äähm computer, because they need to, with clothes and everything, they need to express who they are and then the laptop is important for them. That's part of their expression."	Base: REFLECT (Clothes, Person's Character) Target: REFLECT (Laptops, Person's Character)	Relational Analogy (first-order)	Textile Industry	Computer Industry	Other-Industry	Far Industry	Between-domain	Idea Generation	Novel Idea	Idea Generation
Tuesday	M8	"I thought about äähm, what I said before about HM. That could be a way to display our. Couldn't, maybe not HM something cooler than HM." "Hollis" "Hollis, yes exactly, what I thought about. Hollis. We could have our computers" (...) "And then you could combine, you could display the computers there together with clothes or outfits more or less. And ääh and we are in the store you could tries and you know it's a very good way of displaying because then you see the whole outfit idea"	Base: ENABLES [DISPLAY (H&M/Hollister, Products), OFFER (H&M, Touch&Feel)] Target: ENABLES [DISPLAY (Dell, Products), OFFER (Dell, Touch&Feel)] If a company displays products in a retail store, Then customers can test (touch and feel) the products.	Relational Analogy (second-order)	Textile Industry	Dell, Computer Industry	Other-Industry	Far Industry	Between-domain	Idea Generation	Modification	Idea Development
Tuesday	M9	"Is pricing important then? Is it important to be most cost-efficient, I mean for the customer to be cheapest" "Maybe not on if you are on this hot market, if you are selling this hot product. Because, for example Apple . Then you could take, you could take whatever you want."	Base: ENABLES [SELLS (Apple, Hot Products), CHARGE (Apple, Premium Prices)] Target: ENABLES [SELLS (Dell, Hot Products), CHARGE (Dell, Premium Prices)] If a company sells attractive products, Then it can charge premium prices.	Relational Analogy (second-order)	Computer Industry	Dell, Computer Industry	Within-Industry	Same Industry	Within-domain	Developing the Idea	Modification	Idea Development
Tuesday	M9	"It is a challenge to reach a new segment but we need to turn an old ox to a race horse "	Base: CONVERT (Old Ox, Race Horse) Target: CONVERT (Dell, Race	Relational Analogy (first-order)	Saying/Expression	Computer Industry	Saying	Saying/Expression	Between-domain	Illustration	Illustrating an Idea	Explanation

			Horse/Innovator)									
Tuesday	M11	"But it doesn't need. I, I think that at least now in 2014 I think some people at least buy computer products because ääh they like it." "Because it's a well known brand" "Yes exactly. They don't need to, to, to actually experience that before they buy it they just know it's a good product and its cool" "You choose Acer. You know it's good" "Exactly"	Base: CAUSES [STANDS FOR (Company X, Quality), TRUST (Customers, Company X)] Target: CAUSES [STANDS FOR (Acer, Quality), TRUST (Customers, Acer)] If a company stands for quality, Then customer trust the products.	Relational Analogy (second-order)	Computer Industry	Computer Industry	Within-Industry	Same Industry	Between-domain	Explanatory/ Illustrating the idea	Illustrating an Idea	Explanation
Tuesday	M11	"And the software that we have added is more intelligent. So they have this clout solutions into the software intelligence. If they are buying a computer, ääh the software intelligence is higher ääh so everything they are storing and doing on the computer is more connected to an account with an somehow like Dropbox or on a clout solution where they are storing pictures and documents and everything. Could that be an additional solution and also increasing the change of the computers in the future."	Base: ENABLES [OFFERS (Dropbox, Clout Solution), STORE (Customers, Pictures/Documents)] Target: ENABLES [OFFERS (Dell, Clout Solution), STORE (Customers, Pictures/Documents)] If Dell offers a clout solution, Then it can offer customers additional service and stay competitive	Relational Analogy (second-order)	Online Service	Computer Industry	Close Industry	Near Industry	Within-domain	Explanatory/ Idea Illustration	Illustrating an Idea	Explanation
Tuesday	M12	"But they also need added-service or" "And that is party because new segments are coming in, private customers that don't have their own help desk as they do in big organizations"	Base: NEED (Big Organizations, Help Desk/Added Services) Target: NEED (Private Customers,	Relational Analogy (first-order)	Computer Industry	Computer Industry	Within-Industry	Same Industry	Between-domain	Idea Generation	Novel Idea	Idea Generation

			Help Desk)									
Tuesday	M12	"If our partners are selling ähh, ähmm complete pieces (...) then they are no longer interested in, in, in cooperating, because they gain, they don't gain anything. They can't sell their components to us anymore they sell their own computers" "I mean Intel sells their processors to all" "Then we should sell components of the same kind in a larger volume" "Okay, so they will still be interested in that" "I think so too."	Base: SUPPLIES (Intel, High-Volume Components) Target: SUPPLIES (Dell, High-Volume Components)	Relational Analogy (first-order)	Computer Industry	Dell, Computer Industry	Within-Industry	Same Industry	Within-domain	Problem solving	Modification	Idea Development
Tuesday	M12	"Which customer segment do we believe is the most profitable for Dell. Is it the 15 years old, the 20 years old, the 30 years old. Because we have to I think we have to who is going to buy and be most profitable and then decide on how to market it to" "That might not be I mean. Grown-ups pay for phones, but kids decide what phones to use. "So its teenagers"	Base: CAUSE [INFLUENCE (Kids, Parents' Purchase Decision), MARKET PRODUCTS TO (Telecom Suppliers, Kids)] Target: CAUSE [INFLUENCE (Kids, Parents' Purchase Decision), MARKET PRODUCTS TO (Dell, Kids)] If kids influence their parent's purchasing decision, Then companies should target kids.	Relational Analogy (second-order)	Telecom Industry	Dell, Computer Industry	Close Industry	Near Industry	Between-domain	Developing the Idea	Advancement	Idea Development

Wednesd ay	M14	"If you look at the hardware side there is no at least in this part of the world, there is no really or partnership integrated between the tele operators the poor ones Telia Sonera I mean they will struggle to survive why don't they team up with a hardware manufacturer like Dell and brand their own terminals [...]" "That's another way to go. Because the telecom operators they will have problems in the future or they already have with the traffic, and voice going down, data communication going up." "I think its two different industries. We will have a test now with Microsoft and Nokia . We will see."	Base: ACQUIRE (Microsoft, Nokia) Target: ACQUIRE/PARTNER UP WITH (Dell, Telecom Company)	Relational Analogy (first-order)	Computer Industry	Dell, Computer industry	Within-Industry	Same Industry	Within-domain	Evaluating an idea	Evaluation	Argumentation
Wednesd ay	M14	"Sorry just to fillin on your... you said logistics provider . Maybe that is something that Dell could take a position in that sense. To be some kind of a technical provider or delivery provider of these type of systems that we talked about"	Base: PROVIDE SERVICES TO (Logistics Company, Other Companies) Target: PROVIDES SERVICES TO (Dell, Tech Companies)	Relational Analogy (first-order)	Logistics Industry	Dell, Computer industry	Other-Industry	Far Industry	Within-domain	Idea Generation	Novel Idea	Idea Generation
Wednesd ay	M14	" Like automobile " "Yeah its no difference" "So if we are talking about Dell's skills its still going to be manufacturing skills"	Base: MANUFACTURE (Car, Parts/Modules) Target: MANUFACTURE (Dell, Parts/Modules)	Relational Analogy (first-order)	Automotive Industry	Computer industry	Other-Industry	Far Industry	Between-domain	Understanding and Integrating the Idea	Sense Making	Explanation
Wednesd ay	M14	"But then you would be like an electricity provider . You would have some [...] lines and you hook on that and you can you have a menu you have SAP you have different software providers Microsoft etc. You both have thick clients and thin clients"	Base: ENABLES [PROVIDES (Electricity Provider, Lines), Hook to (Consumers, Lines)] Target: ENABLES [PROVIDES (Dell, Lines), Hook to (Customers, Lines)] If a company provide the infrastructure (lines), Then customers can easily connect to different	Relational Analogy (second-order)	Energy Industry	Computer industry	Other-Industry	Far Industry	Between-domain	Developing the Idea/ Understanding the Idea	Advancement	Idea Development

			services.									
Wednesday	M14	"Do you think this strategy is risky? "Well when I look at this one Lenovo has done it, Dell doesn't have a choice. HP done it"	MANAGED (Lenovo/HP, Risk) MANAGES (DELL, Risk)	Relational Analogy (first-order)	Computer Industry	Dell, Computer industry	Within-Industry	Same Industry	Within-domain	Justifying an Idea	Justification	Argumentation
Wednesday	M15	"One strategic partner here could be for Dell to integrate and sell with one extremely talented software developer like SAP. Because the success of Apple today when it comes to school and education is the easy to use end user friendliness so it's a one stop shop you buy the software and you buy the hardware"	Base: CAUSE [BUILD (Apple, One Stop Shop: Software and hardware), ACHIEVE (Apple, Success in Education Market)] Target: CAUSE [INTEGRATE (Dell, Software from SAP and own hardware), ACHIEVE (Dell, Success)] If Dell integrates software and hardware, Then it will have success, (Therefore Dell should partner up with SAP)	Relational Analogy (second-order)	Computer Industry	Dell, Computer industry	Within-Industry	Same Industry	Within-domain	Idea Generation	Novel Idea	Idea Generation

Wednesday	M15	"It's a completely new road and I mean some of them have done it. So Siemens done it but now we are talking about 10, 15 years ago. IBM has done, once again also a number of years ago. But none of the HP has done, HP had Postnord for example before Atos took it over and they provide their hardware but there are definitely a number of these providers that don't have their own hardware providers" "That could be the niche for Dell so to say to be a hardware provider to one of those that we talked about because building up the consultancy side that's too many competitors"	Base: PROVIDE (Siemens/IBM, Hardware) Target: PROVIDE (Dell, Hardware)	Relational Analogy (first-order)	Computer Industry	Dell, Computer industry	Within-Industry	Same Industry	Within-domain	Idea Modification	Modification	Idea Development
Wednesday	M15	"We outsourced a year ago from Västerås by a work done by KPMG they did all the work as we don't have that knowledge, so they did the work and we outsourced to finally it went to sege e. But very few municipalities have actually outsources. I think its, we in västerås maybe 2 or 3 more. But the trend is actually towards outsourcing"	Base: OUTSOURCE (Västerås Municipality, IT) Target: OUTSOURCE (Public Sector, IT)	Relational Analogy (first-order)	Public Sector	Public Sector	Within-Industry	Same Industry	Within-domain	Idea Generation	Novel Idea	Idea Generation
Wednesday	M15	"It is, that's right. Its like the charter companies . Its actually financial" "Yeah because you are never on the plane" "Yeah because you pay in advance"	Base: CAPITALIZE ON (Charter Companies, Sophisticated Revenue Model) Target: CAPITALIZE ON (Dell, Sophisticated Revenue Model)	Relational Analogy (first-order)	Airline/ Finance Industry	Computer Industry	Other-Industry	Far Industry	Between-domain	Clarifying, Making Sense of the Idea	Sense Making	Explanation
Wednesday	M15	"That's very true because they stick to the core business I mean like charter business airline they stick to the core business and this is outsourced to experts so you don't keep that kind of buyers side has actually changed a lot"	Base: OUTSOURCE (Airlines, Non-core Business) Target: OUTSOURCE (Dell's Clients, Non-core Business)	Relational Analogy (first-order)	Airline Industry	All Industries	Other-Industry	Far Industry	Between-domain	Supporting an idea	Justification	Argumentation

Wednesd ay	M16	"Yeah I don't know where is the market for Dell, where is the future market, I mean where what will grow" "Take IBM" "What are the needs" "They made a very easy choice they sold all the PCs to Lenovo and part of the lower end service. Now they sold more all the what they call the x savers the standard service is sold to Lenovo and they focus on their own machines whats called the p service and some of the other big ones SAP and so on and they are now selling solutions they as you say integrated totally with software so you actually buy something that's supposed to do something regardless of the colour of the machine or exactly whats included"	Base: CAUSE [SOLD (IBM, PC Division), FOCUSED (IBM, Service Solution)] Target: CAUSE [SELL (Dell, PC Division) FOCUS (Dell, Service Solution)] If a company sells PC Division, Then it can focus on service solution.	Relational Analogy (second-order)	Computer Industry	Dell, Computer industry	Within-Industry	Same Industry	Within-domain	Idea Generation	Novel Idea	Idea Generation
Wednesd ay	M16	"Dell could offer mobil server containers" "Like a hybrid. A plug and play car it's a running computer on four wheels"	BASE: CAUSE [BUILD ON (Hybrid Car, Plug&Play Technology), ACHIEVE (Hybrid Car, Mobility and High Tech)] TARGET: CAUSE [BUILD ON (Server Containers, Plug&Play Technology), ACHIEVE (Server Containers, Mobility and High Tech)] If a company uses plug&play technology, Then products are both mobile and high tech	Relational Analogy (second-order)	Automotive Industry	Computer industry	Other-Industry	Far Industry	Between-domain	Illustrating the Idea	Illustrating an Idea	Explanation

Wednesd ay	M17	"But also for Dell. I mean if you catch them young then they start to require the schools they go to to keep to provide them with Apple and then when they get to ewor, you get the next trend which is bring your own device, because then these kids come out of school and say independent where I work I want to have my Macbook Air and then the it departments just have to figure it out how to intgrate it"	Base: CAUSE [TARGET (Apple, Students/School Kids), LOCK IN (Apple, Long Time Customers)]Target: CAUSE [TARGET (Dell, Students/School Kids), LOCK IN (Dell, Long Time Customers)]If a company, targets customers early, Then they can become long-time customers	Relational Analogy(se cond-order)	Computer Industry	Computer industry	Within-Industry	Same Industry	Within-domain	Idea Generation	Novel Idea	Idea Generation
Wednesd ay	M17	"To just end the discussion on the low end side, I mean Google is trying that (...) They are basically trying to do exactly what you said they're taking the Dell market and there they are coming with their software knowledge and providing cloud solutions for the actual content of the computers. ...choosing a solution I think we are kind of ending up with a discussion on the business side, If I am not mistaken."	Base; OFFERS (Google, Low Cost Software/Hardware/ Clout Solution) Target: OFFERS (Dell, Low Cost Software/Hardware/ Clout Solution)	Relational Analogy (first-order)	Advertising / Services Industry	Computer industry	Other-Industry	Far Industry	Between-domain	Evaluating an idea	Evaluation	Argumenta tion
Wednesd ay	M17	"What are their delivery requirements? I mean I work in sourcing and you know our company ends up writing these big contracts for 100 millions of providing solutions and services and servers and so forth and then its usually a couple of months delivery time so I am just thinking [...] So Dell's current model in fact direct sales not purchasing anything before its being ordered could be used in that sense."	Base: USES (Dell, Demand-driven Sourcing for Hardware) Target: USES (Dell, Demand-driven Sourcing for Services)	Relational Analogy (first-order)	Dell, Computer Industry	Dell, Computer industry	Within-Business	Same Company	Within-domain	Idea Generation	Novel Idea	Idea Generation

Wednesd ay	M17	"Power computer, not innovative computers. Because then they need to have more their own R&D. So its using standardised components of the top nodge with the highest" "You can go to Intel. You can go to Intel and you will have it. They have a huge research division. The only or not the only, but one of the problems was when we had the not this enourmous but the other problems in Philippines and China also was that there was a lack of components. There was an issue. "And that's one of the reason why Apple now starts to develop some of these key components on their own. So for example the glass panel and they are doing their own semiconductors"	Base: CAUSE [FACED (Intel, Component Shortage), DEVELOP (Apple, Own Products) Target: CAUSE [FACED (Suppliers, Component Shortage), DEVELOP (Dell, Own Products) If a company outsouces production, Then it might have delivery problems, (Therefore it builds its own R&D and develops own parts independently)	Relational Analogy (second-order)	Computer Industry	Computer industry	Within-Industry	Same Industry	Within-domain	Evaluating the Idea	Modificatio n	Idea Developm ent
Wednesd ay	M17	"So what you could connect you are talking about who you should connect to if you want to find a partner who else is low cost I would say the Indian providers. And the Indian providers are the ones who are growing the fastest in wester Europe" "That's Tata and Witpro" "So they are in the same customer proposition...low cost"	Base: PRODUCES (Dell, Low Cost) Target: PRODUCES (Tata/Witpro, Low Cost)	Relational Analogy (first-order)	Computer Industry	Service Industry	Other-Industry	Far Industry	Between-domain	Idea Generation	Novel Idea	Idea Generation
Wednesd ay	M17	"Why hasn't Dell done it yet" "Because its hard to turn a ship around"	Base: TURN AROUND (Ships, Slowly) Target:TURN AROUND (Dell, Slowly)	Relational Analogy (first-order)	Saying/ Expression	Dell, Computer Industry	Saying	Saying/Exp ression	Between-domain	Evaluating an idea	Evaluation	Argumenta tion
Wednesd ay	M17	" But then that's why I said you could cushion your fall. By moving your existing workstation business into the same channels. Because then you would have an existing product portfolio but you would start using the new segments"	Base: SOFTENS (Cushion, Fall) Target: SOFTENS (Existing Product Portfolio, Transformation to New Business	Relational Analogy (first-order)	Saying/ Expression	Computer Industry	Saying	Saying/Exp ression	Between-domain	Idea Generation	Novel Idea	Idea Generation

			Model)									
Wednesd ay	M17	"How is it Ericsson is building one of the world's two of the world's biggest server farms right one in Sweden one "Square miles of servers" "I mean Dell could actually be a provider in this case to Apple an Apple server parks in North Carolina and State of Washington and Facebook in Luleå and so forth" "So no laptops anymore. Server parks" "Laptops comes with servers because you have to have a management system"	Base: BUILD (Ericsson, Server farm) Target: BUILD (Dell, Server farm)	Relational Analogy (first-order)	Electronics Industry	Computer Industry	Close Industry	Near Industry	Within-domain	Idea Generation, Imitate	Imitation of existing BM	Idea Generation
Wednesd ay	M17	"So one of the problems for the computer providers is the fact that they need to have up cash, because they need to pay for the hardware at the beginning of the contract but then they get paid for a number of years for that. And after a 5 year year contract for example 3 years in that's when they actually start making money on the contract. So if we push that situation one level down in the hierarchy down to Dell so that they can they don't have these fixed costs they only they pay for hardware the same way their clients pay for hardware today"	Base: PAY (Providers, Upfront Costs) Target: PAY (Dell, Upfront Costs)	Relational Analogy (first-order)	Computer Industry	Dell, Computer industry	Within-Business	Same Company	Within-domain	Idea Generation	Novel Idea	Idea Generation
Thursday	M18	"So I think they would more ha-have to do something more Amazon like something more dramatic connected with service or ehm really go away from the hardware" "What do you mean together with Amazon or" "They have to" "Like" "To reinvent themselves away from the hardware, reinvent themselves away from the hardware flexibility to some other flexibility like you say over time to extend the	Base: ENABLES [ACHIEVES (Amazon, Service Flexibility) REINVENT (Amazon, Business) Target: ENABLES [ACHIEVES (Dell, Service Flexibility) REINVENT (Dell, Business)	Relational Analogy (second-order)	E-Commerce	Computer Industry	Close Industry	Near Industry	Within-domain	Generating an Idea, Recombining old BM Components	Recycling of own BM	Idea Generation

		concept of flexibility because they still stand for that"	If X achieves service flexibility, Then X reinvents business.									
Thursday	M18	"So its partnerships and like trying to form something around them I don't know now we cannot ask these questions but I guess we could still propose that they would do something drastic like buy something or they would do it like Amazon with their äh Amazon Fresh. To use you know your existing infrastructure to continuously expand your business"	Base: EXPANDS (Amazon, Business)Target: EXPAND (Dell, Business)	Relational Analogy(first-order)	E-Commerce	Dell, Computer Industry	Other-Industry	Far Industry	Within-domain	Generating an Idea, Reuse own BM	Recycling of own BM	Idea Generation
Thursday	M18	"I would say I am not s[ure] when I was with Ericsson when they had still they still have it the HP contract because they were so upshit creek with their whole finances in 2002 so they they outsourced all IT to HP. All the guys I mean they slashed 10000 people. [...] and then they took and also they provided and still do all the PCs and all the servicedesks and everything and all the olden-[burg] and all the guys that we have here everything is HP, nothing is Ericsson. [...] So HP is doing this so if Dell would go into this they would be more competitive to HP than they ever did before so this is like going into HP domain because they have professional services they have IT services but dell is still very are still very good at at providing it for the mid, midsized companies. HP is for big companies."	Base: PROVIDE IT SERVICES TO (HP, Ericsson) Target: PROVIDE IT SERVICES TO (Dell, SMEs)	Relational Analogy (first-order)	Computer Industry	Dell, Computer Industry	Within-Industry	Same Industry	Within-domain	Identifying the Customer Segment, Develop Idea	Modification	Idea Development

Thursday	M18	"You need local presence. [...] You have to have a Dell network of service providers that you could call Dell. They would drive up in their car which is striped Dell but its like Telia. "No yeah" "I have these guys installing fiber yesterday they had 3 different logos. They were working for Telia but then theyre working for Rellacom but then there was another guy that worked for Rellacom and he hired some guys. So it was four levels. He was the fourth guy. But this car was still Telia."	Base: USE [Telia, Network of External Service Providers Under Own Brand Name), ACHIEVES (Telia, Local Presence) Target: USES [Dell, Network of External Service Providers Under Own Brand Name), ACHIEVES (Dell, Local Presence) If you partner with other providers, Then you have local presence	Relational Analogy (second-order)	Telecom Industry	Computer Industry	Other-Industry	Far Industry	Between-domain	Idea Generation	Novel Idea	Idea Generation
Thursday	M18	"we are still on the assumption that its all about the hardware and so on. But I know we used to sell this stuff we used to say well you look at the hardware costs its like this, it's the like the iceberg. The problem is that this is the iceberg so the hardware is just 20% of the iceberg. Basically all the stuff that all the software all the downtime things that would happen the logistics that would go wrong ehm all the well the the education anything that goes into a laptop basically 20% is hardware. And the rest is 80."	Base: MAKE UP (Tip of Ice Berg, 20% of Ice Berg) Target: MAKE UP (Hardware, 20% of Laptop)	Relational Analogy (first-order)	Saying/Expression	Computer Industry	Saying	Saying/Expression	Between-domain	Illustration	Illustrating an Idea	Explanation

Thursday	M18	"Yeah a one stop shop and instead of having the customer its that they did on hardware that they integrated the different parts and pieces that the customer wanted but I mean as a end consumer and I would say since the business or business to consumer whats hardware whats software you want something that doesn the thing that works and if you want Photoshop or if you want some kind of advanced gaming or if you want Word then you could buy that . And you have it preinstalled and delivered to you with all the bells and whistles that you bought. That you add some revenue to Dell"	Base: OFFERS (One stop Shop, Everything a Customer Needs) Target: OFFERS (Dell, Everything a Customer Needs)	Relational Analogy (first-order)	Some Industry	Dell, Computer Industry	Other-Industry	Far Industry	Between-domain	Exempifyin g Idea, Illustrating idea	Illustrating an Idea	Explanatio n
Thursday	M18	"Even be so critical at some point that they would have to acquire something, now I am back to when I used to work with the competitor. We actually had a financing institute ourselves Fujitsu-Siemens , but the Dell guys they worked with GE Capital at that point but maybe at some point they would need to actually do what we did take their own money"	Base: SET UP (Fujitsu-Siemens, Own Financing Institute) Target: SET UP (DELL, own Financing Institute)	Relational Analogy (first-order)	Computer Industry	Dell, Computer Industry	Within-Industry	Same Industry	Within-domain	Identifying what is necessary to make the Idea work, Capabilitie s required	Modification n	Idea Developm ent
Thursday	M18	"But still if you have this close to the market kind of factory whatever maybe just screwdriver factories because that's what Dell has"	Base: ASSEMBLES (Screwdriver, parts) Target: ASSEMBLES (Factory, parts)	Relational Analogy (first-order)	Constructio n Industry	Dell, Computer Industry	Other-Industry	Far Industry	Between-domain	What Capabilitie s you need to build	Modification n	Idea Developm ent
Thursday	M18	"I need extremely good graphic card and then I go to the IT desk and then its this big and it something I would just put in here or whatever" "Even the phone industry looked a lot on this because they they realized there would be some sort of environmental laws at some point because people threw away their phones after 18 months. But it was too complex"	Base: CAUSE (CAUSE (BUILT (Phone industry, Modular Phones), FACE PROBLEMS WITH (Phone Industry, Environmental Laws) Target: CAUSE (CAUSE (BUILT (Computer industry, Modular Components), FACE PROBLEMS WITH	Relational Analogy (second-order)	Telecom Industry	Computer Industry	Other-Industry	Far Industry	Between-domain	Evaluating an idea	Evaluation	Argumenta tion

			(Computer Industry, Environmental Laws) If you use a modular component architecture, Then you produce electronic waste and face problems with environmental laws.									
Thursday	M18	"But the IT industry moves so fast and there is Moore's law and everything which was interesting in the case that when they start to go into producing stuff up front at some point you did in the 80s and they realized that shit they would have the same effect as everyone else [...] It took 3 months and then their product was obsolete because the you know Intel would bring out a new 12 nanometer based chips...and they would just be really stinky old fish that you would have to throw away"	Base; CAUSE [ARE SUBJECT TO (IT Products, Moore's Law), BECOME (IT Products, Obsolete)Target: CAUSE [ARE SUBJECT TO (Dell's Products, Moore's Law), BECOME (Dell's Products, Obsolete)If you produce tech products, Then your products will become obsolete	Relational Analogy(second-order)	Computer Industry	Computer industry	Within-Industry	Same Industry	Within-domain	Idea Evaluation	Evaluation	Argumentation
Thursday	M18	"It took 3 months and then their product was obsolete because the you know Intel would bring out a new 12 nanometer based chips...and they would just be really stinky old fish that you would have to throw away"	Base: CAUSE [DISLIKE (Consumers, Stinky Old Fish), THROW AWAY (Consumer, Stinky Old Fish)Target: CAUSE [DISLIKE (Consumer, Old Dell Products), THROW AWAY (Consumer, Old Dell Products)	Relational Analogy (second-order)	Saying/Expression	Computer Industry	Saying	Saying/Expression	Between-domain	Idea illustration	Illustrating an Idea	Explanation

			If consumers dislike sth., Then they throw it away.									
Thursday	M18	"Yeah we started up a service kind of company , or a professional services, but realized soon it was it was...either you were like HP and that was in you do outsourcing completely but we couldn't do that we actually realized that we had to differentiate in a different way and we said well selective insourcing it might be good to you (...) you need 3 very important guys. The rest you can outsource to to India, but you have to know which ones are the most important. Because IT is critical and if you just give it to HP, they would just take your costs and then they would say we can do it 5% cheaper (...) But you will have downtime. Which is exactly what Ericsson is doing right now. Even the HR is in india so that would be an Indian engineer that would go through the criteria when they are hiring a Swedish engineer. So its not qualitative."	Base: ENABLED [USED (Service Company X, Selective Insourcing), OFFER (Company X, Quality Services/Products) Target: ENABLED [USED (Dell, Selective insourcing), OFFER (Dell, Quality Products) If companies use selective insourcing, Then they can offer high quality products.	Relational Analogy (second-order)	Computer Industry	Computer Industry	Within-Industry	Same Industry	Within-domain	Idea Development	Modification	Idea Development
Thursday	M18	"Its not so easy for Dell to be disruptive on this... There are some companies that tried to come back, but that failed. They tried to come up with ääh some innovation, but couldn't do it. I mean a company wouldn't go Blackberry today. Its too risky" ..	Base: CAUSE (FAILS TO (Blackberry, Innovate), AVOID (Customers, Blackberry) Target: CAUSE (FAILS TO (Dell, Innovate), AVOID (Customers, Blackberry) If a company fail to	Relational Analogy (second-order)	Telecom Industry	Computer Industry	Other-Industry	Far Industry	Within-domain	Idea Evaluation	Evaluation	Argumentation

			innovate, Then customer avoid it									
Thursday	M18	"If Dell would go into that, you would go into outsourcing. And then its not. But that's a different story. And then you compete with HP and then you compete with Magnus Oldenburgh himself and then you would strive the concept of Christmas to the turkey . And you are not going to sell."	Base: CAUSE [SELLS CHRISTMAS TO (Company X, Turkey); NOT SELL (Company X, Christmas) Target: CAUSE [SELLS SERVICES TO (Dell, IT Companies); NOT SELL (DELL, Services) If you sell the wrong service to the wrong customer, Then you are not going to sell	Relational Analogy (second-order)	Saying/Expression	Computer Industry	Saying	Saying/Expression	Between-domain	Idea Evaluation	Evaluation	Argumentation
Thursday	M18	"Everyone is going out of the consumer business. I mean Lenovo all these guys are struggling. ASUS. Apple"	Base: CAUSE [STRUGGLE (Lenovo, Consumer Business), EXIT (Lenovo, Consumer Business) Target: CAUSE [STRUGGLE (Dell, Consumer Business), EXIT (Dell, Consumer Business) If companies struggle in the consumer business, Then they exit the	Relational Analogy (second-order)	Computer Industry	Computer Industry	Within-Industry	Same Industry	Within-domain	Idea Justification	Justification	Argumentation

			consumer business.									
Thursday	M18	"Dell's serviceability must be really easy to replace parts and if you paid by the lowest or guaranteed total cost of ownership you must your cost I mean it has to be cost obsession around serviceability. Its like some cars that have easier with maintenance and the parts and everything is cheaper"	Base: ENABLE [FOCUS ON (Car Manufacturer, Low Maintenance Cost), OFFERS (Car Manufacturer, Low TCO) Target: ENABLE [FOCUS ON (Dell, Low Maintenance Cost), OFFER (Dell Computers, Low TCO) If a company focuses on low maintenance costs, Then it can offer customers low total cost of ownership	Relational Analogy (second-order)	Automotive Industry	Computer Industry	Other-Industry	Far Industry	Between-domain	Illustrating the Idea	Illustrating an Idea	Explanation

Thursday	M19	"You also need to have uptime or you know this flight engine thing that I mean if I want to run [...] if I have a problem I need I need someone to fix so I can keep on running" "Not just the best price it has to work and every downtime will probably co[st] If I am a company or an organisation every down time every minute I have to go to the desk or whatever the servicedesk to ask for some stuff that we lost time so uptime must be ... if you can guarantee uptime, if you guarantee the lowest TCO if you can guarantee that you get stuff on the minute"	Base: CAUSE [SUFFERS (Flight Engine, Downtime), INCURS (Airlines, Costs) Target: CAUSE [SUFFERS (Computer, Downtime), INCURS (Companies, Costs) If you have downtime, Then you have additional costs	Relational Analogy (second-order)	Airline Industry	Computer Industry	Other-Industry	Far Industry	Between-domain	Idea Generation	Novel Idea	Idea Generation
Thursday	M20	"What I like with their ehm with the whole idea with Dell is what you said the price of course and and the other thing was it was tailor-made. But it was just tailor made once. At the time when you bought it. There is no one who had the concept to tailor what should we call it, what should we could a life time not life time but I mean product life time relation so it will be tailor-made li-like when you with software I mean you buy a subscription something and then you could you could upgrade it up to 1 year... if there is a way to upgrade hardware"	Base: UPGRADE (Software Customer, Software)Target: UPGRADE (Hardware Customer, Hardware)	Relational Analogy(first-order)	Computer Industry	Computer Industry	Within-Industry	Same Industry	Within-domain	Idea Generation	Novel Idea	Idea Generation
Thursday	M20	"The whole value network needs to be shifted and distribution channels would have to be you have to buy whatever service companies if you don't have it in that country and you would probably will upset your customer you are selling today a piece of hardware (...) and say tomorrow that by the way we are going to take your job" "It's a copy cat on what Ericsson did with TV4" "In a way" "But I mean it could also be hardware"	Base: CAUSES (OPERATES (Ericsson, TV4's Services), REPLACES (Ericsson, TV4's Internal IT Provider) Target: CAUSES (OPERATES (Dell, Company X's Services), REPLACES (Dell, Company X's internal IT Provider) If a company	Relational Analogy (second-order)	Computer/ Electronics Industry	Computer Industry	Within-Industry	Same Industry	Within-domain	Illustrating the Idea, Understanding the idea	Illustrating an Idea	Explanation

			operates another company's IT services, Then it may replace the internal IT team									
Thursday	M20	"Because I was thinking about comparison with with with with the car manufacturers . They are delivering cars with heated seats and everything. It is in the car, but when you buy it you say ah no I cant afford to have heat in the seat. [...] But its already in the car. But they are not switch it they then switch it on and then they say so its much cheaper without. I mean if you deliver, you could deliver hardware that could prestandard is 150 percent of what you are paying so then you could always switch it on" "Modularized" "Through online. After 6 months or after 3 months or whenever you regret what you bought 3 months ago"	Base: OFFER [SELL (Car Manufacturers, Modularized Products), CHOOSE (Customers, Options) Target: OFFER [SELL (Dell, Modularized Products), CHOOSE (Customers, Hardware Options) If companies modularise, Then they can offer customers options	Relational Analogy (second-order)	Automotive Industry	Computer Industry	Other-Industry	Far Industry	Between-domain	Idea Generation	Novel Idea	Idea Generation
Thursday	M20	"But I mean what happens if the tailor made is not a deal today, but if we move because the old tailor made was done in the factory, what happens if we moves [...] the tailor made madish thing in to my desk. And that means, the laptop is quite empty I mean its just [...] the keyboard its I mean it is a keyboard and the rest could be like Lego " "Modular product"	Base: SELL (Lego, Modular Products) Target: SELL (Dell, Modular Products)	Relational Analogy (first-order)	Toy Industry	Computer Industry	Other-Industry	Far Industry	Between-domain	Generate Ideas, own BM	Recycling of own BM	Idea Generation

Thursday	M20	"Yeah but what I know what I am saying now I was I was proposing now that you as a private customer to Dell should do exactly what Dell did with its first computer offer. He put it together of cheaper parts. And he is now offering you to do exactly the same on your desk"	Base: ASSEMBLE (Mr. Dell, Computer Parts) Target: ASSEMBLE (Private Customer, Own Parts)	Relational Analogy (first-order)	Computer Industry	Dell, Computer Industry	Within-Industry	Same Industry	Within-domain	Generating an Idea, Recombining old internal BM Components	Recycling of own BM	Idea Generation
Thursday	M21	"I think we can talk things like he suggested with the more like a subscription service where you subscribe to [...] it's a value proposition. Its like when you talk about mobile phones that you don't really charge for the phone. "You have a 24 month subscription and you pay 299 a month and for that you get a mobile phone every 24 months but you also get free calls and you get some data so its IT as a service and IT there includes so it's like a subscrip[tion], instead of,its, it could be a value proposition, that how do we charge, either you pay 5000 crowns for this computer or you pay 400 crowns every month and for that you get.. and then you have... and you have a recurring, you have a recurring fee instead of a fixed upfront fee for your service. So if I think when you talk IT as a service its not an upfront fee and I think that's the business model that Dell had before. They charged x crowns for a hardware. And now we are talking about a different[...] before it was one off and now its more of a recurring fee"	Base: CAUSE [SELL (Mobile operators, Subscriptions), GEENRATE (Mobile Operators, Recurring Fee)] Target: CAUSE [SELL (Dell, Subscriptions), GENERATE (Dell, Recurring Fee)] If Dell offers a subscription service, Then Dell makes money from recurring fees.	Relational Analogy (second-order)	Telecom Industry	Dell, Computer Industry	Other-Industry	Far Industry	Between-domain	Idea Generation, Imitate BM	Imitation of existing BM	Idea Generation
Thursday	M21	"This is just like like they had on their webpage that if the computer is not working give them a call and they'll drive out and give you a new PC the same day. Something like that and I mean its an insurance . You pay for for having your working environment up and running."	Base: ENABLE [OFFER (Insurance Company, Replacement Service), AVOID (Customer, Loss)] Target: ENABLE [OFFER (Dell, Replacement Service,) AVOID (Customer, Down	Relational Analogy (second-order)	Insurance Industry	Computer Industry	Other-Industry	Far Industry	Between-domain	Understanding the idea	Illustrating an Idea	Explanation

			Time) If a company offers replacement service, Then it helps customers avoid a loss									
Thursday	M21	"The other thing that I was thinking about another way of making money that we talked about, one is this, the other one is software, and I mean it's like Ryainair . they don't make money out of selling the flights. They make money out of everything else. I mean that's a way that I don't how much innovation it is, more observation"A business model innovation""That they on top of selling their hardware they add extra services and it could be service like this insurance, it could be that they sell software from Microsoft from adobe from whomever and they could sell games anything that you want on your laptop and they get a percentage from those software sales."	Base: ENABLES [DEBUNDLES (Ryanair, Services), CHARGE (Ryanair, Extra Services)Target: ENABLES [DEBUNDLES (Dell, Services), CHARGE (Dell, Extra Services)If Dell debundles services, Then it can charge for extra services.	Relational Analogy(se cond-order)	AirlineIndu stry	Computer Industry	Other-Industry	Far Industry	Between-domain	Generating the Idea, Imitating other BM	Imitation of existing BM	Idea Generation

Thursday	M21	"I am talking about the Ryanair business sample. We sell a low price airline we don't make money from flying people from place a to place b, we make money from rental cars, hotel bookings, luggage, eh, selling things on the flight, taxfree, all the things around and there we don't produce anything ourselves, we just work with partners that supply hotels, rental all those things are just a value value networks that we have partnerships and we make a deal if someone on my side purchases a a hotel then I want 10% for every time someone clicks from my page to your hotel booking page I want money and it's a way of making making money without being the I mean we I think its difficult for Dell to go from producing hardware to producing software or a service like insurance or leasing. But we can have a partnership with someone who takes care of the leasing solution for us. That we can sell to our partners."	Base; CAUSE [PARTNERS UP WITH (Ryanair, Service Provider: Rental Car Firms/Hotels etc.), GENERATE (Ryanair, Commission Fee) Target: CAUSE [PARTNERS UP WITH (Dell, Service Providers), GENERATE (Dell, Commission Fee) If a company partners up with service providers, Then it can generate commissions.	Relational Analogy (second-order)	Airline Industry	Dell, Computer Industry	Other-Industry	Far Industry	Between-domain	Idea Generation, adding revenue sources	Imitation of existing BM	Idea Generation
Thursday	M21	"But talking about brands and you are talking about it from a completely different point of view. I, talking about customizations I mean its also a service that you could eh sell a way to differentiate that you could actually as a B2B company get your own brand not your own brand but instead of having Dell you would have Terracom, Boxer on the front" o [...] "But these guys they'd never pay for it [...] would never pay [...] We want a nice, tailor made... Boxer looking...product. "Oh come on...they buy these mugs I mean how much noo if you have a, they pay how much have they paid for the new brand for the stuff that we have the mugs"	Base: SELLS (Company, Customized/Branded Cups) Target: SELLS (Dell, Customized/Branded Computers)	Relational Analogy (first-order)	Kitchenware Industry	Computer Industry	Other-Industry	Far Industry	Between-domain	Idea Justification	Justification	Argumentation

Thursday	M21	"So its kind of... and I was thinking if we call look at the marketplace model where you buy all the stuff that you need. This could be the same thing that you have the Dell store where you buy all the things that you need for your Dell and it could be a recurring fee all the services that you add to your experience. [...]. And then the business model is of course that you get money from your partners that sell through your store."	Base: CAUSE [OFFERS (Company, Online Marketplace) GENERATE (Company, Revenue From Third-Party Sellers) Target: CAUSE [OFFERS (Dell, Dell Store) GENERATE (Dell, Revenue From Third-Party Sellers) If you offer an online marketplace, Then you can generate income from third-party sellers.	Relational Analogy (second-order)	E-Commerce	Computer Industry	Other-Industry	Far Industry	Within-domain	Idea Generation	Imitation of existing BM	Idea Generation
Friday 1	M22	"One idea was to completely redefine the customer concept. You don't sell to people anymore, you sell to machines . Ääh and I, it sounds weird, but, yeah but I am thinking like the internet of everything concept. Every freaking appliance is going to be hooked up soon, ääh and I think that more computing power and data traffic will be driven by machines than people in the future. (...) "So I am a fridge, but I am a stupid fridge. And all I do is send data and then something happens to it on the Dell side"	Base: DRIVE (People, Computing Power/Data Traffic) Target: DRIVE (Machines, Computing Power/Data Traffic)	Relational Analogy (first-order)	Electronics / Computer Industry	Dell, Computer Industry	Within-Industry	Same Industry	Within-domain	Idea Generation	Novel Idea	Idea Generation
Friday 1	M22	"When I think of Dell I also think of standardized, grey squared boxes . They are so boring that I fall asleep, just by thinking about a Dell computer."	Mere-appearance Match	Attribute Analogy	Boxes	Dell, Computer Industry	Saying	Saying/Expression	Between-domain	Idea Generation	Novel Idea	Idea Generation

Friday 1	M22	"The whole infrastructure and, and data and everything as a service, everything as a software. You not even need to buy hardware anymore you can buy software that pretends it's hardware. So what if they just, they become something like Amazon and all the other big service providers of storage and computing power etc. So they, they cut the relationship the physical relationship with the end consumer completely and they just become a clout-based company that offers everything as a service"	Base: IMPLIES [OFFER (Amazon, Storage and Computing Power in the Clout), CUT (Amazon, Physical Relationship with Customers)] Target: IMPLIES [OFFERS (Dell, Storage and Computing Power in the Clout), CUT (Dell, Physical Relationship with Customers)] If a company provides storage and computing power in the clout, Then they cut the physical relationship with customers.	Relational Analogy (second-order)	Online Computer Service	Dell, Computer Industry	Close Industry	Near Industry	Within-domain	Idea Generation	Imitation of existing BM	Idea Generation
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Friday 1	M22	"If you are, you are Electrolux or you are BMW, or you are anyone of these physical world manufacturers where your devices and appliances are actually becoming online, I would assume that, that they are all kind of building their own infrastructure for that right now. That the BMW sends signals to the BMW computer somewhere in Bayern that says service needed etc. Electrolux probably does the same. So what if you try to take a jump ahead and say that all these companies that are now because it's an emerging phenomenon are building their own infrastructure, we create it for them. So we create the, the clout service to which all of these can plug in. So if I'm Electrolux I can buy as a service the whole infrastructure that will tell me how all the fridges that I have sold are doing and whether they need repair or service and how long their life plan is. And BMW can do the same. So in that case if I am Dell I am actually selling a clout service B2B but that the, my customers can use to plug in to use service that they want to deliver to their customers"	Base: BUILD (BMW, Infrastructure for Internet of Things)Target: BUILD (Dell, Infrastructure for Internet of Things B2B)	Relational Analogy(first-order)	Automotive Industry	Dell,Computer Industry	Other-Industry	Far Industry	Between-domain	Idea Generation	Novel Idea	Idea Generation
Friday 1	M22	"All this talk about big data. Like take, take the telecom operators for instance. They are moving early they know that they have a lot of information about you and I and they are trying to find ways to make money off of it. But it's consumer data. So what if you take the same way of thinking. How can I capitalize on information that I sit on but you apply it towards machines instead. I read somewhere not too long ago that the ratio between online machines and online humans right now it's like one to three. It's gonna be like a hundred to one not too far from now. So all information, if you, if you sit on the information generated by machine to machine communication then you will have an enormous advantage in terms of volume and granularity and frequency." "Lets do this"	Base: CAUSE [OWN (Telecom Operators, Consumer Data), GENERATE (Telecom Operators, Revenue) Target: CAUSE [OWN (Dell, machine Data), GENERATE (Dell, Revenue) If a company owns consumer data, then it can monetize it.	Relational Analogy (second-order)	Telecom Industry	Dell, Computer Industry	Other-Industry	Far Industry	Between-domain	Idea Generation	Novel Idea	Idea Generation

Friday 1	M22	"I mean, the only question I have to sort of see if this flies now, is that: Why should Dell do this?" "Yeah, I know" "Do they have an advantage? Do they have, do they have the customer base? No. Do they have the distribution channels? No." "I don't know. But ääh it's also like Amazon started selling books and now they are one of the biggest ääh clout service providers so it's, it's not impossible I guess"	Base: ENABLE [REINVENTS (Amazon, Business), BECOME (Amazon, Market Leader for Future Product)] Target: ENABLE [REINVENTS (Dell, Business), BECOME (Dell, Market Leader for Future Product)] If Dell reinvents its business, Then it can become a market leader for a future product.	Relational Analogy (second-order)	E-Commerce	Computer Industry	Close Industry	Near Industry	Within-domain	Idea Justification	Justification	Argumentation
Friday 1	M22	"But the thing is that the service that is standing in the Amazon and ääh Google data warehouses is probably Dell and the likes. So maybe we still wanna have that control over that market" "But then maybe we can, I mean how can we know. I think one way to go is to actually buy the storage from someone else. But you do it like Halebop, you exist within the network of Telia kind of, but you still profile yourself as something or you build it yourself"	Base: EXISTS WITHIN (Halebop, Telia Network) Target: EXISTS WITHIN (Dell, Partner Network)	Relational Analogy (first-order)	Telecom Industry	Computer Industry	Other-Industry	Far Industry	Between-domain	Idea Generation	Imitation of existing BM	Idea Generation
Friday 1	M23	"Ääh I was also thinking about other products, new ones using same distribution channel, using same models. With maybe cars, you could have a car delivered to you" "So you leverage the fact that you have an infrastructure, but you distribute different things through it" "Yes, yes the distribution thing. And you can use, you can have furnitures, you do your own sort of" "Configure your own sofa" "Yeah, and then it, then they sort of distribute it to you. And all sorts of vehicles and cars, and phones, and systems like"	Base: CONFIGURES (Dell, Computers) Target: CONFIGURES (Dell, Cars/Sofas/Phones)	Relational Analogy (first-order)	Dell, Computer Industry	Dell, Computer Industry	Within-Business	Same Company	Within-domain	Idea Generation, using old internal BM components	Recycling of own BM	Idea Generation

		that."										
Friday 1	M23	"I was thinking of another key process when you were talking Fredrik. Maybe, so integration. And then I mean with the customer, that's a key process for them. Which is sort of the onboarding process." "Yeah, because they need to be, probably they need to be in vault in their customers' product development in order to understand how to" "But isn't that like a partnership. Like Intel Inside, but it's sort of a Dell Above."	Base: PARTNERS UP WITH (Intel , Customers) Target: PARTNERS UP WITH (Dell, Customers)	Relational Analogy (first-order)	Computer Industry	Dell, Computer Industry	Within-Industry	Same Industry	Within-domain	Understanding an Idea, Developing an Idea	Modification	Idea Development
Friday 1	M24	"I mean there is bundling going on in that business to bundle things. But what, what I haven't seen is really that they when you are into the Entertainment, broadcasting etc. More like if you buy your phone from Telia you get your Spotify free of charge for a certain amount of time. So more of that service bundling, I am also thinking. And I am also thinking ääh, ääh towards the consumer segment. Like solution customized so that you, you buy it for gaming or entertainment or something else and it becomes configured more from a solution perspective more than a process or storage size kind of ääh stuff."	Base: BUNDLES (Telia, Spotify)Target: BUNDLES (Dell, Gaming/ Entertainment)	Relational Analogy(first-order)	Telecom Industry	Computer Industry	Close Industry	Near Industry	Between-domain	Idea Generation	Novel Idea	Idea Generation

Friday 1	M25	"I'm thinking that to the individual you should go computer and some, some kind of service. Service is like ääh customer experience, ääh broad ääh, portal, broadcasting, storage for the, the client, like, like Dropbox or etc. And then a help desk that those individuals can really have a help desk when they run into problems with their computer so that's Dell's value proposition to the individual."	Base: OFFERS (Dropbox, Storage Service) Target: OFFERS (Dell, Storage Service)	Relational Analogy (first-order)	Online Computer Service	Dell, Computer Industry	Close Industry	Near Industry	Within-domain	Illustrating an Idea	Illustrating an Idea	Explanation
Friday 1	M26	"But I think also this is the typical type of business model like Blocket . That is really the worst site for buying things but it's the only one, because they were first. Or, no they were not even first, but they, they made sure they became the biggest. It's the same thing here as long as you become the big one. That's the thing"	Base: BECAME (Blocket, Biggest Player) Target: BECAME (Dell, Biggest Player)	Relational Analogy (first-order)	Online Service	Computer Industry	Close Industry	Near Industry	Between-domain	Idea Generation, Copying other BMs	Imitation of existing BM	Idea Generation
Friday 2	M27	"I have to show you a picture [...]. It's about what we are going to do. This, look. When I was in Berlin and checked in the hotel , in my room they had this button. Its like instant service for anything you want anytime" "This could be Dell's slogan" "You go into the app and then you press the button" "That is us"	Base: CAUSE [OFFERS (Hotel, Service Button in Room), RECEIVE (Customer, Instant/24h Service)] Target: CAUSE [OFFERS (Dell, Service Button in App), RECEIVE (Customer, Instant/24h Service)] If Dell offers a special service button, Then customers can get instant/24h service.	Relational Analogy (second-order)	Hotel Industry	Dell, Computer Industry	Other-Industry	Far Industry	Between-domain	Explaining the idea/Illustrating the idea	Illustrating an Idea	Explanation
Friday 2	M27	"Should we change the name of the...?" "But it still works" "Dell" "Its well known" "Its like General Electrics "	OWNS (General Electrics, Strong Brand) OWNS (Dell, Strong Brand)	Relational Analogy (first-order)	Conglomerate	Dell, Computer Industry	Other-Industry	Far Industry	Between-domain	Evaluating an idea,	Evaluation	Argumentation

Friday 2	M28	"But I in the factories I mean Dell cannot start to create clothes there instead or anything ... should be something like technical" "Or some other electronic [...] What electronic devices do they have except phones?" "Maybe games"	Base: PRODUCES (Dell, Computers) Target: PRODUCES (Dell, Other Electronics)	Relational Analogy (first-order)	Dell, Computer Industry	Dell, Computer Industry	Within-Business	Same Company	Within-domain	Generate Ideas through recombining existing BM	Recycling of own BM	Idea Generation
Friday 2	M28	"Is it something else that customer wants to have Dell custom built today? Something you want to design your own, make your own" "Clothes" "Cars" "Your Facebook account. Someone has to handle it. Take photos and..." "Yeah store them" "Make your personality"	Base: CUSTOMIZES (Dell, Computer) Target: CUSTOMIZES (Dell, Clothes/Cars)	Relational Analogy (first-order)	Dell, Computer Industry	Dell, Computer Industry	Within-Business	Same Company	Within-domain	Generate ideas through recombining existing BM	Recycling of own BM	Idea Generation
Friday 2	M28	"So then.. in that case we would have e.. in the same way we have IBM vs. Dell we would have H&M vs. DELL. Clothin. Or I mean is that what we are thinking of?"	Base: CAUSES [OPERATES IN (IBM, Computer Industry) , COMPETES WITH (IBM, Dell)] Target: CAUSES [OPERATES IN (H&M, Textile Industry), COMPETES WITH (H&M, Dell)] If Dell enters the textile industry, Then Dell faces new competitors such as H&M	Relational Analogy (second-order)	Computer Industry	Textile Industry	Other-Industry	Far Industry	Within-domain	Understanding an Idea	Sense Making	Explanation

Friday 2	M28	"We are making clothes like down here on Birger Jarlsgatan very cheap. Delivered at home with your own brand" "But isn't that what they are trying to do with this Zalando or whatever they are calling it this..." "Yeah" "If this is the strength we have how can we use them in another way"	Base: HOME DELIVERS (Zalando, Clothes) Target: HOME DELIVERS (Dell, Clothes)	Relational Analogy (first-order)	E-Commerce	Dell, Computer Industry	Other-Industry	Far Industry	Between-domain	Idea Development	Modification	Idea Development
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Table 28: List of coded analogies