Digital transformation and business model innovation:
a multiple case study of consulting companies from Germany

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Abstrato

Esta dissertação fornece um status da transformação digital na indústria alemã de consultoria informática em 2022 e examina a influência da digitalização no desenvolvimento do modelo de negócio (BM) das consultorias. O artigo estuda os determinantes que levaram as consultorias a chegar ao seu atual nível de digitalização, como são caracterizados os seus atuais BMs, como é composto o processo de desenvolvimento induzido pela digitalização, e eventualmente os fatores de sucesso que precisam de ser cumpridos para superar potenciais barreiras de crescimento futuro. Na revisão da literatura, são discutidas definições do conceito de BM e inovação em BMs. Com base nestes conhecimentos, são identificadas as características de BMs na indústria de consultoria ed é criada uma compreensão profunda do fenómeno da digitalização. Com base nos conhecimentos teóricos, é realizado um estudo de caso múltiplo abrangendo quatro empresas de consultoria de IT diferentes que investiga os desenvolvimentos do BM dessas consultorias, conduzindo duas entrevistas semiestruturadas com consultores relacionados por caso, complementadas com dados secundários geradores de triangulação de dados. A dissertação identifica os requisitos em mudança das partes interessadas e, em particular, dos clientes como os determinantes mais relevantes para inovação do modelo de negócio. As conclusões da tese sublinham a importância de um enfoque desequilibrado no negócio das pessoas e nos aspetos tecnológicos da consultoria em IT. Como fatores de sucesso mais críticos, foi identificada uma mudança de mentalidade e cultura empresarial que abraça essa mentalidade e, consequentemente, permite uma estrutura organizacional para executar a vontade de mudança.

Abstract

This dissertation provides a status quo of the digital transformation within the German IT consulting industry in 2022 and examines the influence of digitalization on the business model (BM) development of consultancies. The paper studies the determinants which led consultancies to arrive at their current digitalization level, how their current BMs are characterized as well as how the development process induced by digitalization is composed, and eventually which success factors need to be fulfilled to overcome potential future growth barriers. In the literature review, definitions of the concept of BM and the innovation on BMs are discussed. Based on those insights, the characteristics of BMs in the consulting industry are identified and a deepened understanding of the phenomenon on digitalization is created. Grounded on the theoretical insights, a multiple case study spanning four different IT consulting firms is performed which investigates the business model developments of those consultancies

by conducting two semi-structured interviews with related consultants per case complemented with secondary data generating data triangulation. The dissertation identifies changing requirements of stakeholders and in particular clients as the most relevant determinants for business model innovation. The findings of the thesis stress the importance of an outbalanced focus on the people business and the technological aspects of IT consulting. As most critical success factors a change affine mindset and company culture have been identified which embraces that mindset and consequently enables an organizational structure to execute the willingness for change.

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Keywords: Business Model Innovation, Digitalization, Digital Transformation, IT Consulting

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Introduction

The world is in constant transforming change, which is driven by huge trends like digitalization. Businesses and industries are affected by those impacts and their business models (BM) are either transformed by these influences or companies actively develop new business models to fit new conditions. Due to the increasing complexity of business environments, more and more companies are searching for advice and support in coping with these everchanging requirements. This support pictures the value proposition of consulting firms. The question this dissertation is trying to answer is how the BMs of these advisers themselves are influenced and developing under the current global trends while working on their clients' BMs. Therefore, **the research objective of this thesis is to recognize the digitalization-related determinants, processes, and success factors of business model innovation of consulting companies**. In order to address this overall objective and to provide guidance for the intended research, three research questions have been formulated:

(1) Which external and internal digitalization-related determinants have affected business model innovation performed by consulting companies?

(2) How have the digitalization-related determinants affected business models of consulting companies?

(3) What are the barriers and success factors of the business model innovation among consulting companies, induced by digitalization-related determinants?

To further narrow the research scope, the focal point of this dissertation shall be the BMI of IT-consulting firms, which arouses special interest as their main consulting project topic is the digital transformation. Therefore, IT consulting firms are expected to experience the influence of digitalization on two fronts – on their own organization and on their service offer. The relationship of these two shall find attention in this dissertations research.

The study investigates the just introduced aspects through a multiple case study on basis of an extensive literature review. For the empirical research, four case companies have been selected and in total eight interviews (two per case) were held with consultants currently employed by the case companies. Additionally, secondary data was added to enrich the interviews' findings and to reach a data source triangulation. This dissertation neither discloses the name of the consulting companies investigated nor the interviewees' names since anonymity was a prerequisite to receive acceptance to conduct the interviews.

The structure of this dissertation is composed of the following parts: Firstly, it reviews relevant literature to build a theoretical foundation. The research contributes to the literature by

comparing various definition approaches for the concept of BM and synthesizing two definitions based on BM core elements. This synthesis is applied on the BM model characteristics of IT consulting firms and on the case companies in the empirical part of the thesis. Second, the methodology in use is described. Third, the cases are introduced linked with the within case analysis. Subsequently, the four cases are compared with each other in the cross-case analysis before the discussion of the empirical findings synthesizes the literature review and the results from the multiple case study. In the cross-case analysis, the comparison reveals differences between the BM elements of the case companies as also common trends in their development. Lastly, the conclusion part summarizes the study's key findings, places limitations of the paper and points towards possible future research.

The research concludes that changing requirements of key stakeholder and in particular of clients are the most relevant determinants for the business model innovation (BMI) of It consulting firms. As subsequently critical stakeholders and the internally within the consultancy organization addressed requirements have been identified. The findings of the thesis stress the importance of an outbalanced focus on the people business and the technological aspects of IT consulting. To be able to take a share of the forecasted continued growth in the IT consulting industry a change affine mindset and company culture which embraces that mindset have been revealed as most critical success factors and which consequently enable an organizational structure to execute the willingness for change. This foundation creates the basis for the capability to cope with rapidly changing requirements and to respond quickly and effectively with digital solution and technological innovations.

Chapter 1. Business model innovation of consulting companies

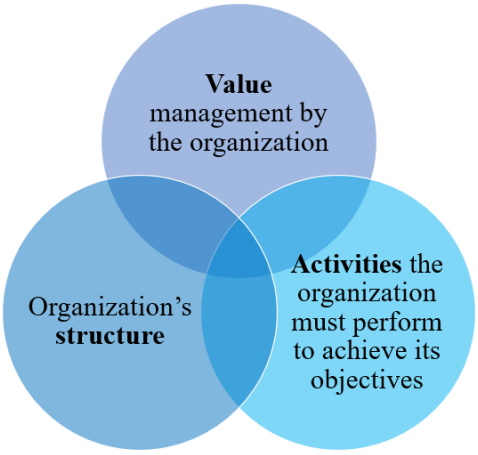
In the following first chapter of the literature review the term business model will be defined based on a structured analysis of the common definition concepts in academic literature. The structure is based on increasing concreteness of analyzed definition concepts. Secondly, a working definition will be established. Thirdly, the development of business models will be examined including business model innovation (BMI). Afterwards, the term consulting will be conceptualized aiming to identify a differentiation between general management consulting (GMC) and IT consulting (ITCO). Lastly, the characteristic BM core element peculiarities of IT consulting will be identified and described including the current trends.

1.1. Definition of the business model and identification of its core elements

Available definitions differ from very abstract and vague descriptions to precise lists of elements contained by a business model. According to Massa & Tucci (2013) the perspectives on BMs depend on the degree of abstraction, unfolding varying depth and complexity (Massa & Tucci, 2013, p. 431). In this paper, definition ideas will be presented emphasizing that this presentation is not aiming for completeness. Rocha et al. (2018) refer to Porter's statement from 2001 still being true that "the definition of a business model is murky at best" (Rocha et al., 2018, p. 498). Rocha et al. (2018) extensively described the existing work on business model definitions and identified the timeframe with the greatest number of contributions from 1996 to 2016. Three general approaches in attempting to formulate a definition were found by Rocha et al. and these thought directions seem to be included even in the most abstract attempts. They can be visualized in a Venn diagram which is depicted in Figure 1.

According to Massa & Tucci (2013) the BM study was traditionally focused on business activities. However, "the emergence of new organizational structures designed for purposes other than economic profits, such as solving social problems and sustainability issues" started also gaining the focus of BM scholars. Research increasingly employs the BM term for referring to the ways organizations operate to capture value whose nature not necessarily is economic. (Massa & Tucci, 2013, p. 423).

Figure 1. Venn diagram of common centered thoughts in business model definitions



Source: work based on Rocha et al., 2018, p. 501

The Venn visualization (see Figure 1) makes clear that in most definitions not only one central thought is captured but often two or even three are incorporated and connected. We can also observe that in most definitions based on a combination of central thoughts a more sophisticated structure is used which introduces different core elements implied in the business model. Johnson et al. established a BM concept consisting of "four interlocking elements" which are customer value proposition (CVP), profit formula, key resources and key processes, which together "create and deliver value" emphasizing the prominent role and importance of the CVP (Johnson et al., 2008, p.60).

Amit & Zott (2020) suggest a model with a similar structure also based on four pillars which they describe as four dimensions answering four questions of: What? How? Who? Why? The dimensions are (Amit & Zott, 2020, p. 10):

1. BM content, "i.e., what activities the business model is composed of",
2. BM structure, "i.e., how these activities are linked in the business model",
3. BM governance, "i.e., who performs the activities that are enabled by the business model",
4. BM value logic, "i.e., why does the business model create value and why does it also enable value appropriation through a revenue model".

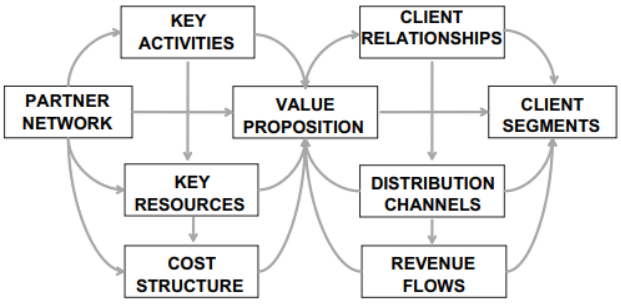
Emphasis is put on the interconnectivity of the four dimensions of the model which incorporates the company itself as also the ambient industry. Despite classified as a definition describing an activity system, the model also includes the aspect of value creation. It is stressed that the value creation is aimed for all involved stakeholders (ibid.).

The model by design is kept unspecific regarding the concrete what, how, who and why questions as it does not want to limit in that regard and shall be applicable for all companies and industries (Amit & Zott, 2020, p. 19). The model by Amit and Zott (2020) sets the level of analysis of a BM as spanning the boundaries of the focal firm and may include the firms exchange partners (Amit & Zott, 2020, p. 47). However, the authors do explicitly point out that the BM is not " all-encompassing" (Amit & Zott, 2020, p. 48). At this point they do directly disagree with other established BM model approaches, concretely addressing the Business Model Canvas by Alexander Osterwalder which is based on the definition which will be introduced in the following paragraph. Amit & Zott (2020) oppose here the approach of finding core elements to holistically and detailed describe the parts which in their sum add up to the BM of a company as Amit and Zott argue this "pre-formulated schema" (Amit & Zott, 2020, p. 48) is too narrow and predefined to be able to display all BM possibilities.

In contrast to the four-dimensional vague model of Amit & Zott (2020), the two models by Osterwalder (2004) and Rocha et al. (2018) basing their definitions strongly on the identification of specific core elements of BMs by following a similar approach. Both definition approaches are formulated based on the results of meta-analysis of the existing definition attempts until 2004 for Osterwalder and more recent until 2014 for Rocha et al. As these are meta-analyses, they provide collections of many previous concepts and should be built on a good empirical basis.

Osterwalder's collection of BM building blocks is an often-cited benchmark publication in the BM field of research. His goal for his thesis was creating a business model ontology. Osterwalder tried to create a common understanding of the ambiguous term business model by combining all relevant existing definitions. Though, he identified, based on his meta-analysis of the current available research on BM definitions until 2003, 9 core elements of a BM (Osterwalder, 2004, p. 43). He arranged the identified elements in a map based on the Balanced Scorecard by Kaplan & Norton (1992) in four main views (product, customer interface, infrastructure management and financial aspects) (Osterwalder, 2004, p. 42). The composition is depicted in Figure 2. Based on this composition later the business model canvas was developed and the book "Business Model Generation" about the canvas published in 2009 (Osterwalder et al., 2009, p. 274).

Figure 2. Business model 9-point decomposition organized in four pillars based on BSC by A. Osterwalder



Source: Chesbrough (2010), p. 359

In the meta-analysis of Rocha et al. (2018) eleven core elements have been identified (Rocha et al., 2018, p. 506). One can easily recognize that this list of elements has imported many ideas and aspects introduced by previous authors and studies and provides a very complete and concrete set of BM components which is expected by a more recent collection of existing research on a topic. Therefore, the similarity to Osterwalder's list which was incorporated in Rocha et al.'s list is recognizable. Furthermore, it seems reasonable that the more recent list comprises of more elements than the older one (9 vs. 11).

Rocha et al. (2018) explain in their work that they did not directly inherit the 11 most often referred to elements from the results of their meta-analysis, but that they changed certain elements and included some which aim to cover more contemporary aspects of business, and which might grow in importance in the future even further. Thus, the two lists by Rocha et al. (2018) and Osterwalder (2004) will be compared. It is clearly visible that all three lists of elements have the value proposition in common. Despite it was not clearly stated by the authors that the sequence of the elements has special relevance in listing the core BM elements, it is notable that the value proposition is always first and also through the description of the element composition it becomes clear that they attribute to the value proposition a core function within the elements. For the compiled list of most mentioned core elements in Rocha et al.'s analysis, a list of sub elements as further explanation was added. These sub elements are incorporated in the designated description column of Table 1. However, there was not for every element further subcategorization provided as also no further descriptions. If this is the case, it will be relied on Osterwalder's description if applicable and otherwise marked with "n/a". The still great variance between the three lists, despite these lists already consisting of collections of different definitions, was a surprising result. The goal is now to match them by avoiding repetition and overlaps and still not missing critical aspects.

Table 1. Comparison BM core elements by author

	Osterwalder 2004 (established definition)	**Description**	**Rocha et al. (2018)** (meta-analysis results)	**Description/ Sub-elements**	**Rocha et al. 2018** (established definition)	**Description**
1	**value proposition**	"an overall view of a company's bundle of products and services that are of value to the customer"	**value proposition**	see Osterwalder	**value proposition**	"must lay out the customer needs that the model meets, the problems it solves for them, the value it provides to them, and must describe the customer experience and the aspects that differentiate the company from its competition"
2	**target customer**	"a segment of customers a company wants to offer value to'	**revenue stream**	"price decisions and discounts that affect price"	**customer segmentation**	"the identification of key customers, and the management of a differentiating relationship with each segment"
3	**distribution channel**	"a means of getting in touch with the customer"	**customers**	"customer relationship management (CRM)"	**channels for accessing customers**	"communication channels and commercial and logistical relations with said customers"
4	**relationship**	"the kind of link a company establishes between itself and the customer"	**target market/ segmentation**	n/a	**talent management**	"all aspects related to recruiting and retaining talent, access to human capital, developing corporate DNA, employees' focus on the customer and their identification with the organization's business model"
5	**value configuration**	"the arrangement of activities and resources that are necessary to create value for the customer"	**key resources**	"installed production capacities"	**revenue stream**	"revenue stream and its sustainability"
6	**capability**	"the ability to execute a repeatable pattern of actions that is necessary in order to create value for the customer"	**value chain**	"company's position in the value chain"	**cost structure**	"aspects of risk, such as critical items, fixed and variable cost structures, degree of automation and economies of scale"
7	**partnership**	"a voluntarily initiated cooperative agreement between two or more companies in order to create value for the customer"	**key partners**	"suppliers of raw materials or parts of the process that are fundamental to providing the service (in the case of service companies)"	**required infrastructure**	"key partners and the degree of reliance on them, technology or the production of the good or service provided and corporate social responsibility; (…) all key aspects of the infrastructure depending on the business, such as those related to environmental protection, or collaboration with development and education in the community"
8	**cost structure**	"the representation in money of all the means employed in the business model"	**competitive strategy**	n/a	**corporate social responsibility**	n/a
9	**revenue model**	"the way a company makes money through a variety of revenue flows"	**differentiating competences**	n/a	**approach to security**	"sufficient guarantees of transparency with regard to their commitments and procedures related to security"
10	**n/a**	n/a	**product**	n/a	**code of ethics and regulatory compliance**	"sufficient guarantees of transparency with regard to their commitments and procedures related to [ethics and regulatory compliance]"
11	**n/a**	n/a	**organization and organizational culture**	n/a	**ability for transformation**	"guarantees long-term sustainability"; "the model's own ability for transformation, with innovation being included as an element that characterizes the business model itself"

Source: own work based on Osterwalder (2004), p. 43 and Rocha et al. (2018), p. 502.

The value proposition (VP) definition of Rocha et al. (2018) will be complemented for the proceeds of this dissertation with two important terms from Osterwalder: the product and services. The VP holds the core of the product and/or service, covers mainly which problem of the customer it solves and creates value by doing so (Osterwalder, 2004, p. 49).

The next element surrounds the customer, and the descriptions differ significantly from customer segmentation to customer relations management (CRM). The relevance of CRM shall not be neglected, rather shall the element incorporate the relationship management of all relevant stakeholders of the company. Osterwalder indicates examples for relevant stakeholders "such as partners, strategists, business process designers and information systems staff"(Osterwalder, 2004, p. 3).

To realize relationships with stakeholders, key resources are needed which comprise the next element in the model. This element shall go beyond "installed production capacities" (Rocha et al., 2018, p. 503) but be connected to Osterwalder's (2004) value configuration and capabilities, as it shall include all infrastructural resources which are necessary to enable value generation. It also inherits parts of Rocha et al's. (2004) required infrastructure as it can include technology, but also know-how or whatever is needed in the specific company case. The aspects of corporate social responsibility in the required infrastructure from Rocha et al. (2018) however despite their great relevance, seem repetitive here as they build a separate element in their model.

Another core perspective of a business is its cost structure which goes hand in hand with its counterpart, the revenue model (Rocha et al., 2018, p. 504). Osterwalder's (2004) description of the cost structure as "the representation in money of all the means employed in the business model" seems quite vague and too extensive. Therefore, Rocha et al.'s (2018) description seems more suitable. Especially valuable appears the inclusion of risk and of a kind of growth potential (economies of scale) within this element.

Each of the three lists offers a different focus for defining a revenue model ranging from pure price and discount decisions which clearly does not capture the whole spectrum of a revenue model to the aspect of sustainability of the revenue stream. Therefore, combining the ideas of the three lists seems legitimate.

Rocha et al.'s (2018) "talent management" and "organization and organizational culture" from the meta-analysis results list seem to describe the core of an organization. Also, their claim for a code of ethics and regulatory compliance in place (Rocha et al., 2018, p. 504) seems reasonable here. It is notable that Osterwalder (2004) did not mention this aspect specifically.

The last core element for this thesis is the ability for transformation by Rocha et al. (2018). It works like a hedge for the BM as it protects it from being outdated and becoming obsolete by binding the BM to innovation and the constant reflection of the status quo combined with the lookout for new opportunities (Rocha et al., 2018, p. 504).

There are still elements from Table 1 left which were not obviously translated into the list for this paper. One of them is "competitive strategy" from the aggregated results by Rocha et al. (2018). This element seems not to be necessary as an own core element as the competitive advantage shall be created by the design of the other elements of a BM (Osterwalder, 2004, p. 44). Also "differentiating competences" seem already incorporated in mainly the VP.

In Rocha et al.'s (2018) definition list, CSR did also not translate into a separate element in the new list. Nonetheless, its importance is acknowledged, and the CSR aspect can be seen as incorporated in the organization element, building the responsibility mindset as well as culture and is also included in the relationship element because here the responsible behavior will become visible in the interaction with all surrounding stakeholders That customers will to a certain degree control for CSR compliance by companies is in line with Osterwalder (Osterwalder, 2004, p. 19). Furthermore, the "approach to security" was not further elaborated as transparency and security indeed are relevant aspects to consider in pursuing a business. However, for transparency should apply the same contextualization as for CSR. Besides, the most security-related factor might be risk which is categorized within the cost structure element.

All other elements have somehow already been mentioned despite not every exact formulation was repeated, but the meaning should have been clearly translated into the list which aims to depict the BM as a holistic model concerning all key aspects of the company and which will be used in the following chapters of this paper. This list was compiled by the author of this thesis as a result of the literature review on the works of Osterwalder (2004) and Rocha et al. (2018):

1. **Value proposition:** lays out the customer needs that the model meets, the problems it solves for them (with its products and services), the value it provides to them, and must describe the customer experience and the aspects that differentiate the company from its competition
2. **Customer segmentation:** the identification of target markets and key customers
3. **Relationships:** describes the kind of link a company establishes between itself and its stakeholders and the management of a differentiating relationship with each of them

4. **Value chain:** company's position in the value chain including distribution channels (communication channels and commercial and logistical relations with said customers)
5. **Key resources:** all infrastructural resources which are necessary to enable value generation like production capacities, technologies, or know-how
6. **Cost structure:** includes aspects of risk, such as critical items, fixed and variable cost structures, degree of automation and economies of scale
7. **Revenue model:** the way a company makes money through a variety of revenue flows, their sustainability and including price decisions and discounts that affect price
8. **Organization:** the organization with its people and organizational culture with a code of ethics and regulatory compliance including all aspects related to recruiting and retaining talent, access to human capital, developing corporate DNA, employees' focus on the customer and their identification with the organization's business model
9. **Ability for transformation:** guarantees long-term sustainability and described as the model's own ability for transformation, with innovation being included as an element that characterizes the business model itself

As exceptional cases such as operating several BMs, here also the unique situation of a company shall be recognized. "The core components of a business model depend on both individual cognition and the specific characteristics and necessities of a company, and thus differ from business to business." (Cavalcante et al., 2011, p. 1330) Therefore, even if a general working definition was established, we might have to expect no perfect fit when applying it to the industry and case studies in focus in the empirical part of the dissertation.

1.2. The different forms of business model innovation

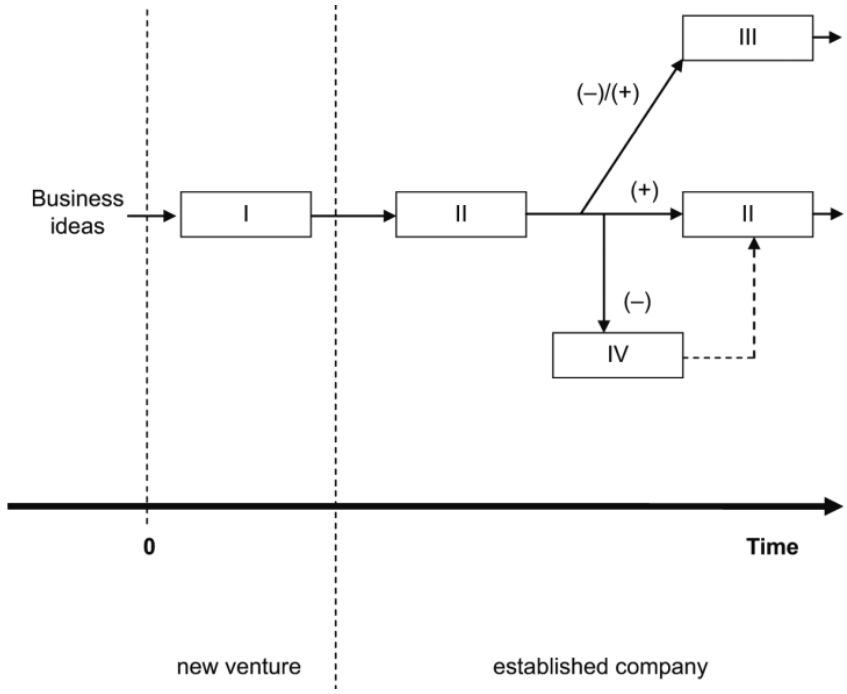
Frequent and fundamental innovation becomes in increasingly global markets with competition under ever-changing conditions necessary to sustain competitiveness and survival as the final goal of a company (Taran et al., 2015, p. 301). Changes particularly due to innovations in computing and information technologies are "profound, holistic, and may shake firms to their core." (Amit & Zott, 2020, p. 3). Andreini et al. (2021) report that business model innovation (BMI) aims for these central goals of sustainable competitiveness and survival (Andreini et al., 2021, p. 16). BMI processes can be considered evolutionary which is defined by Van de Ven & Pooles (1995) "as a sequence of variation, selection, and retention of events among entities in competitive contexts with scarce resources." (ibid.).

Cavalcante et al. (2011) established four different types of business model change:

I. Business model creation
II. Business model extension
III. Business model revision
IV. Business model termination

An overview of all four types and how they fit together was taken from Cavalcante et al. and is shown in Figure 3 (Cavalcante et al., 2011, p. 1331).

Figure 3: Business model change by Cavalcante et al. (2011)



Source: Cavalcante et al., 2011, p. 1331

BM creation focusses on starting a new venture with a BM that is of course new, as it is the first one for the new venture. Likewise, Massa & Tucci (2013) propose, there should be a distinction between BM development of incumbents and of new ventures and call them BM reconfiguration and BM design, respectively (Massa & Tucci, 2013, p. 420).

Massa & Tucci (2013) argue that BMI in incumbent firms is a difficult task and mention, in line with Chesbrough, several obstacles to business model reconfiguration. These obstacles are having a too strong dominant logic of the prevailing model or inertia as a structural barrier due to the complexity of the reconfiguration of assets and operations or cognitive barriers of managers which makes them either not seeing novel opportunities or not acting to seize them

(Massa & Tucci, 2013, p. 427; Chesbrough, 2010, p. 359). This risk construct might apply mostly to the following BM change types, BM extension and most significantly to BM revision.

BM extension is depicted in Figure 3 by the transition from II to II and means other core elements or variants of core elements are added. The growth by "extending the business model may also involve initiatives such as offering more and/or better lines of products/services, which can occur gradually over the years."(Cavalcante et al., 2011, p. 1332) According to Cavalcante et al. the extension does not need to happen in a pre-established pattern or track.

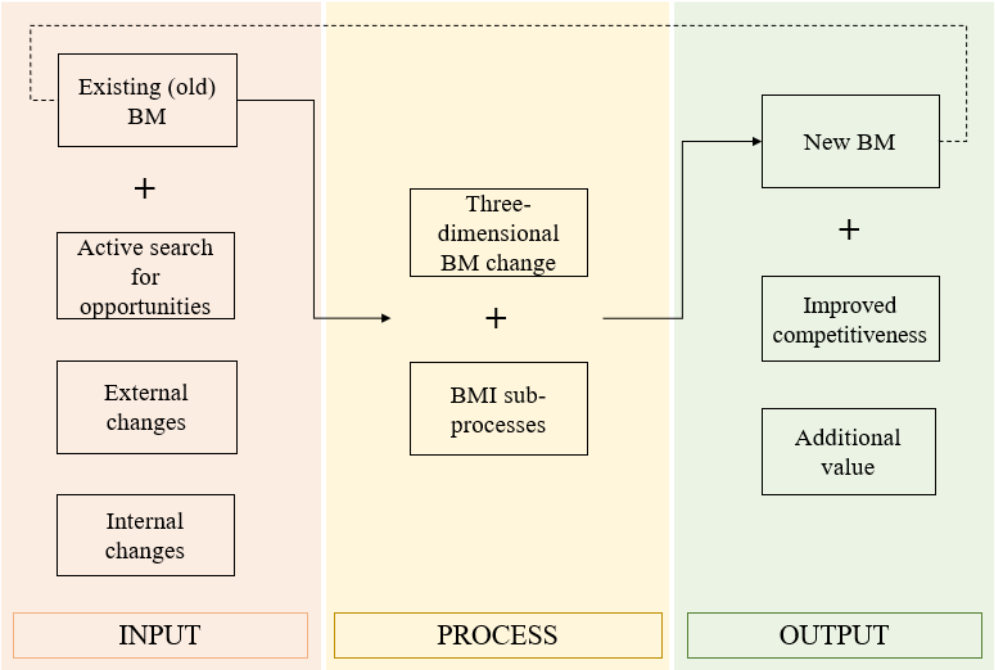
BM revision is depicted by the movement from II to III (see Figure 3). Here it is not about addition, but substitution where existing elements or its parameter value is removed, and a new version installed. This action can be triggered by various determinant types (Cavalcante et al., 2011, p. 1333 ff.). Cavalcante et al. include here forms of all later in this chapter listed determinants except from the proactive search and improvement approach. Excluding this motivation here makes sense as removing a working concept and replacing it by a new untested model would involve a high level of risk with unknown rewards. BM revision accommodates the most possible risks of the four types as it requires more fundamental changes. Some of them are organizational inertia, path-dependency, cognitive manifestations of employees or problems of power and politics (ibid.).

The fourth type of BM change seems to attract less attention by researchers and scholars and is illustrated by the path from II to IV (Figure 3). BM termination describes a removal of processes or elements. This can imply closing a business area/unit where the remaining business processes are being further developed or closing the entire company (Cavalcante et al., 2011, p.1334).

Cavalcante et al. (2011) underline that despite the theoretical clear distinction of the four types, in practice this differentiation is not always as obvious "since different elements of change will often be present in a variety of different combinations, and business model extension and revision in particular often go 'hand-in-hand'"(Cavalcante et al., 2011, p.1335).

According to Taran et al. (2015) BMI can be interpreted in two ways: "(i) as a process and (ii) as an outcome" (Taran et al., 2015, p. 304). The development of BMs in three stages of inputs, triggers, or determinants (internal and external), the changing process and the outputs can be modeled in an input-process-output structure in the style of the Input-Process-Output Model of SE of Hitt et al., depicting the value creating process of SEs (Hitt et al., 2011, p. 60). Figure 4 shows an input-process-output approach in the BMI context.

Figure 4: BMI input-process-output model based on Hitt et al.



Source: own work based on Hitt et al., 2011, p. 60

1.2.1. Internal and external determinants of business model innovation

In most academic papers regarding BMI (e.g., Massa & Tucci, 2013 p.425, Taran et al., 2015, p. 305; Dymitrowski & Mielcarek, 2021, p. 2111) process is presented as a proactive initiative by the company, either as a search the firm is engaged regularly with or induced by changes in the business environment. If there is a regular search for new suitable BMs, this suggests a search for new opportunities despite the old model might be still working. "BMI results from a continuous process of refinement that connects individuals, teams, organization units, markets, and institutions" (Andreassen et al., 2018; Forkmann et al., 2017; Inigo et al., 2017 in Andreini et al., 2021, p. 8). Amit & Zott stress the aim of BMI to better address not only the needs of customers but also other stakeholders (Amit & Zott, 2020, p. 8).

In the opposite direction, it might also be possible that a BMI involves changes in a subtle way in smaller steps over time. In this case, the change might not be one obvious effect, but consisting of a more incremental change. "Trial-and-error processes, by contrast, relate to a knowledge-shaping activity without a formal and explicit plan" (Andreini et al., 2021, p. 14). Further, Andreini et al. (2021) suggest that this can happen "sometimes even through unintended activities" (ibid). These unintended BMI processes can arise based on experiences building tacit knowledge (Andreini et al., 2021, p. 14).

Companies operate in a micro and macro environment in which events can happen that create external triggers for BM change. Well known key structuring models of those contextual levels are Porter's Five Forces (1979) framing the microenvironment and PESTEL (political, social, technological, ecological, legal) describing the macro level. Massa & Tucci describe some environmental changes like technological discontinuities or dramatic shifts in government policy and regulation as "tectonic" industry changes which are characterized by lower predictability compared to customer centered market-driven circumstances initializing BM reconfiguration (Massa & Tucci, 2013, p. 435). According to Dymitrowski & Mielcarek (2021) technology has a prominent role as activator for BM development. They state there exists "a two-way relationship between BMI and technology. On one hand, BMI exploits the value of technology and helps companies deliver value, but on the other hand technology can be seen as a trigger for BMI."(Dymitrowski & Mielcarek, 2021, p. 2118).

1.2.2. The process of business model innovation

Massa & Tucci (2013) see a chronological pattern in the order of innovation in businesses, namely following the market development of the industry the company is currently operating in. The suggested order is product innovation, followed by process innovation and latest BMI, when the market is most mature (Massa & Tucci, 2013, p. 436). The different innovation kinds of innovation within an industry according to Massa & Tucci (2013) show a pattern of staggered curves, similar to technology S-curves (ibid.). This indicates that BMI is considered to be on a much higher level of radicality. Consequently, the question comes up, when is a BM development process considered BMI and how can the BMI be further categorized. A starting point can be defining an innovation. Taran et al. (2015) refer in that regard to one of the first scholars studying innovation:

> *"(1) The introduction of a new good . . . (2) The introduction of a new method of production . . . (3) The opening of a new market . . . (4) The conquest of a new source of supply . . . (5) The carrying out of a new organization . . . .*"

by Schumpeter (1934) (Taran et al., 2015, p. 303 f.).

The determining critical factor Schumpeter stresses is obviously the novelty and therefore Massa & Tucci argue that the BMI should be characterized by a degree of novelty or uniqueness (Massa & Tucci, 2013, p. 425). However, when a change in an organization can be called BMI is questioned by Taran et al (Taran et al., 2015, p. 304). Referring to several scholars like Abell (1980), Magretta (2002), Osterwalder et al. (2005), and Skarzynski & Gibson (2008)

they conclude that "any change in any of the building blocks could be considered as a form of business model innovation. A change in one of the building blocks would constitute a simple innovation, while simultaneous changes in all of the building blocks would be the most complex form of business model innovation."(Taran et al., 2015, p. 306)

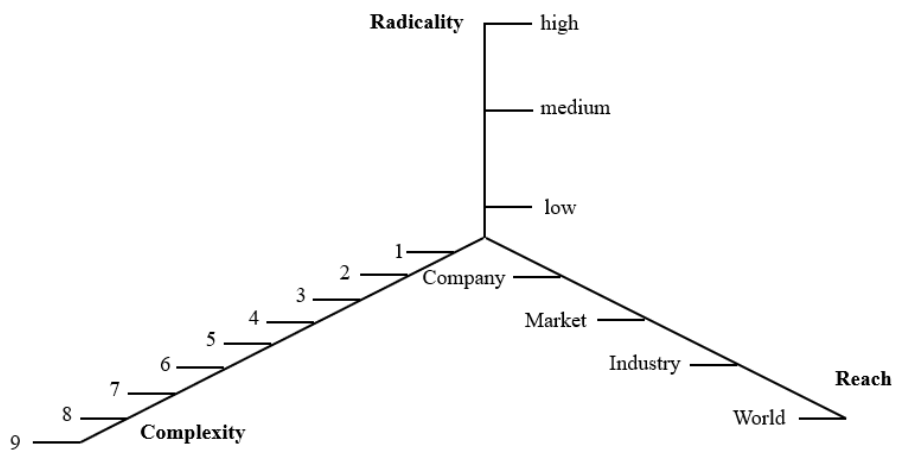
Looking at the process of BMI, Andreini et al. (2021) have identified five interrelated types of BMI sub-processes in their meta-analysis of the current literature on BMI from the process perspective. The five intertwined strings of processes are: "cognition processes for BMI, knowledge-shaping processes for BMI, strategizing processes for BMI, value creation processes in BMI, and evolutionary learning processes as the glue of BMI processes" (Andreini et al., 2021, p. 7). The start of the process accordingly is a cognition process and concerns the belief systems, psychology and mindset inside the organization which are needed for the generation of ideas (Andreini et al., 2021, p. 8). After idea selection and strategy creation testing (BMI prototyping), knowledge spread within the organization are stressed as critical success factors by Andreini et al. (Andreini et al., 2021, p. 13). To create value, not only the entire own organization needs to be involved, but also external stakeholders. The value creating processes are the end and start for BMI (Andreini et al., 2021, p. 16) and let deduce the importance of involving and engaging all affected stakeholder parties (internal and external) during the whole course. The fact that at the end of a BMI process, there will start at a certain point of time a new BMI process is illustrated by the dotted line in Figure 4 of the BMI input-process-output model.

1.2.2. The content and outcomes of business model innovation

A noteworthy approach for positioning BMIs in a three-dimensional space was developed by Taran et al. (Taran et al., 2019, p. 92). This model makes a comparison between different BMI types, based on three criteria. The classification is performed according to the level of radicality, reach and complexity. Radicality means how extreme the change is in the way a company does business (Taran et al., 2019, p. 92). In the model of Taran et al. (2019) the scale for radicality is labeled "low", "medium" and "high" which indicates a range from incremental until radical, respectively. BMI can be regarded as "radical" or "disruptive" innovation (Cavalcante et al., 2011, p. 1335). Cavalcante adds that an innovation taken without context cannot be considered disruptive or incremental but is only more or less disruptive within the context of a specific organization and its core processes (Cavalcante et al., 2011, p. 1335). This is in line with Taran et al.'s (2019) suggestion for the second dimension which is the reach of the innovation and which shall answer to whom the change is new. The possible stages of reach are ranging from the company as the smallest reach until the world as greatest reach. The

third dimension is complexity and means the number of core elements affected by the BMI (Taran et al., 2019, p. 92). The original scale by Taran et al. shows a range between 1-7 building blocks. Here, however, the model shall be adjusted for the continuation of this thesis and the scale increased to nine as previously nine core elements were identified as applicable for this paper. This scale model is summarized in Figure 5. Taran et al. (2019) explain additionally that based on their studies BMI failures happen mostly "at the "extremes" of: 1) low radicality and reach, and 2) high radicality and reach"(Taran et al., 2019, p.96).

Figure 5: Three-dimensional BM innovativeness scale adopted based on Taran et al.



Source: Taran et al., 2015, p. 309 and Taran et al., 2019, p. 92

As previously stated, in the assumed case of conscious intended BMI, the final goal of BMI is to create competitive advantage for the survival of the firm. According to Massa & Tucci (2013), BMI can thereby support in seizing new opportunities through

1. A new VP for better serving existent customers
2. Attracting new customer segments
3. Entering new industries with a specially designed VP (Massa & Tucci, 2013, p. 435 f.)

The three ways of opportunity seizing conform with the growth strategies by Ansoff of market penetration or product development to address unsatisfied jobs for existing customers, market development for reaching new customer segments and diversification in new unknown areas (Ecobici, 2017, p. 144). Taran et al. (2015) suggest that success of BMI "should be measured in terms of the extent to which the new model enables the company to generate revenue and help the company to achieve a sustainable competitive position by creating and delivering value to its customers"(Taran et al., 2015, p. 310).

1.3. Business model innovation in consultancies

The BM and its dynamics presented in the previous subchapter shall now be applied to the industry of interest, in this case, consulting, and IT consulting in particular. To be able to do so, firstly the industry of management consulting will be defined including the classification of different types of business consulting and afterwards will the industry be examined in the perspective of trend evolution.

1.3.1. Definition consulting and the distinction between management and IT consulting

Kipping & Clark (2012) define management consulting according to the Association of Consulting Management Engineering (ACME) as:

> *"professional service performed by specially trained and experienced persons in helping managers identify and solve managerial and operating problems of various institutions of our society. This professional service focuses on improving the managerial, operating, and economic performance of these institutions"*(Kipping & Clark, 2012, p. 2).

This is in line with Deelmann (2019) who argues that "Consulting is a professional, contractually appointed service and transformation process of an intervening attendance by a consultancy system for the description, analysis, and solution of a problem of the client system with the goal of transformation." (Deelmann, 2019, p. 33). Other authors focus their definitions on the relationship between the consulting firm and the client. In that sense Kaas & Schade (1995) see consulting as a contracted good created in cooperation between the agent and principal (Saam, 2012, p. 210 f.) Nissen (2019) points out consulting to be one of the major service industries mentioning the industries' growth and influence on "virtually all other branches of industry" (Nissen, 2019, p. 1).

Nissen (2019) explains that "business consulting" is not consistently defined in the academic literature because of the various research and differentiation purposes and additionally due to the broad usage of the term in colloquial language which creates confusion (ibid). Salaman (2002) adds that consulting still needs to find "its ´grand´ theory" and that it is an industry hard to define due to "its unclear and fluid boundaries, and partially due to the reluctance of the main actors to share information for fear of breaching client confidentiality" (Salaman, 2002 in Kipping & Clark, 2012). According to Nissen, referring to data from the BDU e.V. (Association of German Business Consultants), four main business consulting segments

can be identified which are strategy consulting, organization consulting (including process improvement), IT-oriented consulting and HR consulting (Nissen, 2019, p. 2). However, authors like Treichler (2019) state that the boundaries between the traditional lines of consulting are blurred and still are softening because of digitalization (Treichler, 2019, p. 254).

IT-consulting is defined in this context based on its topics of consulting service provided based on Bensberg et al. (Bensberg et al., 2019, p. 342). The selected technology topics can also be summarized as transformational IT-topics. IT consulting developed from management consulting, and both have become distinct segments (Galal et al., 2012, p. 125). Galal et al. (2012) reveal that not only management consultancies, but also technology companies and accounting and auditing firms began to introduce IT consulting services to the market (Galal et al., 2012, p. 118).

1.3.3. Business model elements of (IT) consultancies

Scholars agree that there has for a long period of time not been a major change in the fundamentals of the business of management consulting (Treichler, 2019, p. 254). "It has always been based on the superior knowledge, resources and skilled personnel to help clients deal with their most challenging problems and to recommend smart solutions"(ibid). Bensberg et al. (2019), however, report based on Christensen (2013) that the whole consulting industry currently undergoes a deep transformational process (Christensen et al., 2013, p. 108 in: Bensberg et al., 2019, p. 354).

1. ***Value proposition:*** *lays out the customer needs that the model meets, the problems it solves for them (with its products and services), the value it provides to them, and must describe the customer experience and the aspects that differentiate the company from its competition*

Scholars predict that the demand for innovative digital solutions will be further growing. However, companies mostly will not set up permanent IT teams to tackle that demand (Piumelli, 2019, p. 359). Cost-related aspects might be the strongest reasoning behind that development. Here consulting and particularly IT consulting steps in and provides value to companies. The core competencies, whose concept originates from production-related business can also be identified in the field of consulting where their capabilities are determined by their human capital (Nissen, 2019, p. 18) and knowledge (Christensen et al., 2013, p. 108).

A general VP which holds for most IT consultancies can be formulated as: IT consulting is aiming to improve the use of data and information through technology (Petmecky & Deelmann

2004 in Deelmann, 2019, p. 44; Bensberg et al., 2019, p. 341 f.). As already discussed, companies are in pressure to innovate constantly to stay competitive. A core theme to achieve that goal is digital transformation and here companies strongly rely on the support of IT consultancies (Bensberg et al., 2019, p. 341 f.). Treichler (2019) adds that the VP of consultancies has moved "from (only) providing smart people to solve clients' problems to providing clients access to the consulting firm's knowledge base, tools and methodologies" (Treichler, 2019, p. 267). Vasil'ev (2010) points out to a theoretical foundation and consulting methods to build the basis where process-oriented consulting will improve the client's efficiency which will help in achieving business goals and eventually creates competitive advantage (Vasil'ev et al. 2009 in Vasil'ev et al., 2010, p. 1718). Nissen & Machts(2029) refer that "professional content, consulting methodology, average project duration, as well as communication and working style" are differentiation factors for consulting companies and that those differ between management and IT consulting (Nissen & Machts, 2019, p. 301).

2. ***Customer segmentation:*** *the identification of target markets and key customers*

Business consulting companies operate in the B2B sector and provide their advice to public or private organizations (Nissen, 2019, p. 4). Usually, consultancies decide individually for which industries they offer their services. Additionally, especially in the IT consulting field, advisories provide their support and tools also to other consulting firms, mostly more established ones which currently lack the technological know-how in a certain IT field, for example, to realize the automation of subtasks in the consulting process (Nissen et al., 2019, p. 331). Bensberg (2019) adds that customers mostly require support in "setting up, controlling, and implementing projects for enterprises from a broad range of sectors"(Bensberg et al., 2019).

3. ***Relationships:*** *describes the kind of link a company establishes between itself and its stakeholders and the management of a differentiating relationship with each of them*

Regarding the consultancy–client relationship, which is the most important relationship of advisories to stakeholders, the most general distinction is to separate internal and external consulting (Mohe 2002; Wurps & Musone Crispino 2002; Deelmann et al. 2006b in Deelmann, 2019, p. 36). Internal consulting implies providing consulting services as a consultancy within a greater company to the own organization whereas external consulting means providing these services to another organization. Treichler (2019) emphasizes that clients usually look when selecting a consultancy "first for the right set of team expertise, skills, functional and industry knowledge" (Treichler, 2019, p. 257). Furthermore, consulting approaches, methodologies and

roles need to fulfill the project requirements and the client's needs (Treichler, 2019, p. 257). Typical functional roles of consultants are "information gathering/analysis, design and conceptualization (problem solving) and implementation support" following the typical steps of a consulting project (Treichler, 2019, p.265). Besides the functional roles of consultants the mode of intervention was defined by Deelmann (2019) and confirmed by Nissen (2019) to have four basic kinds which are expertise-oriented consulting, expert-oriented consulting, process-oriented consulting, and systemic consulting (Deelmann, 2019, p. 38; Nissen, 2019, p. 2). These modes are applied by the advisory based on the perception of the client organization.

There is a trend in the consulting industry observable that clients buy advisory services separated and go for different specialists, also called "«best-of-breed» expertise" (Treichler, 2019, p. 261). Therefore, consultancies have according to Treichler (2019) to work even more in a client-oriented manner as they will not differentiate and convince any longer with the offered services, but with the way they serve their clients. Customization and being flexible in the consulting approach will determine successful advisories. Examples for ways of responding to client demands are "team staffing, mode and intensity of collaboration with clients, pricing models, tools provided". These aspects are touching the core assets of a consultancy and therefore might be difficult to keep dynamic (Treichler, 2019, p. 265). Another aspect to add here is the increasing sophistication of client organizations which decreases the value of consulting's "superior topic or methodological expertise and knowledge" (Treichler, 2019, p.264). Reasons for employing consultants nonetheless those constraints are project speed advantages and reduced internal barriers for externally proposed initiatives (ibid).

4. ***Value chain:*** *company's position in the value chain including distribution channels (communication channels and commercial and logistical relations with said customers)*

Consultancies seem to perform their value-creating activities relatively independently and without being integrated in a greater and strict value chain, e.g. there seem to be no major supplier relationships. What could be considered as a supplier relationship are the cooperation consultancies hold with external partners to acquire new knowledge and capabilities. This can be talent or technology. Here a difference between IT consultancies and management consultancies is observable: "technical universities versus business schools; hardware, software, and information services providers (with whom ITCO firms often have strong, formal, and long-term relationships) versus market research firms (with which GMC firms usually maintain weaker ties"(Galal et al., 2012, p. 128). However, different consulting services provided by different advisories can be assembled together for one bigger project in the

mentioned "best-of-breed" approach. In this sense strategic consulting is involved usually in an earlier project stage than IT consulting (Nissen & Machts, 2019, p. 300). New business models of consultancies offering innovative types of consulting services and delivery models tend to offer not the whole value proposition incumbent management consultancies are claiming for, but function as a link in the value chain and can bring certain advantages to clients like "greater speed, responsiveness, pragmatism and lower costs than their more traditional competitors." (Treichler, 2019, p. 259) The context in which a consulting company operates can, however, be classified as dependent if the suggestions given to the client are not completely neutral because of tendencies towards certain technologies or the opportunity of a follow-up engagement for the advisory (Deelmann, 2019, p. 36). If prior project cooperation experiences exist between the client and a consultancy, this can often be the determinant for further engagement. If this does not apply, clients often draw on trusted third-party opinions regarding the capabilities of a consulting firm. Otherwise, the perception of the consultancy in the market can be used for assessment (Nissen & Machts, 2019, p. 302). Classic advertisement seems rather rare for attracting potential clients. Still, reputation has in the past been essential in the consulting field. Treichler (2019) states that despite clients tending to still rely often on bigger and international advisories, scale and brand of consultancies decrease in importance (Treichler, 2019, p. 254). Nissen also argues that "asset and platform-based consulting concepts render geographic borders and distances irrelevant, thus extending the reach of providers." (Nissen, 2019, p. 6) Additionally, consulting based on tools and software (asset-based consulting) makes project contributions more repeatable and comparable and thus easier to evaluate for clients (ibid.).

5. ***Key resources:*** *all infrastructural resources which are necessary to enable value generation like production capacities, technologies or know-how*

"The core competence-approach, originally developed for manufacturing industries, can be transferred to knowledge-intensive service companies, where the "production skills" are determined by human capital." (Nissen & Machts, 2019, p. 301) Following this logic which is in line with Christensen (Christensen et al., 2013, p. 109), the consultants are the most essential resource consultancies are based on. Therefore, Nissen & Machts (2019) further contend that consulting management is responsible for creating an environment where consultants can establish and expand their competencies (Nissen & Machts, 2019, p. 301). Galal et al. (2012) argue that despite general management consultancies (GMCs) and IT consultancies being both knowledge-intensive, they are sourcing different sorts of know-how for their workforce. Applicants for IT consultancies shall feature in the best case a combination of commercial and

technological skills. Specifically, often proficiency in programming languages or software applications is required. In contrast, GMCs focus more on generalists having academic degrees in management or related fields (Galal et al., 2012, p. 128). For acquiring new knowledge as an organization scholars refer as the easiest way to the use of knowledge which is close to already existing knowledge within the organization and build from there. Within its essential role in consulting, this knowledge needs to be managed to benefit in the greatest extent possible from it. Therefore, different knowledge management approaches have been developed. Hansen et al. (1999) introduce two contrasting knowledge management strategies used by consulting firms. (Hansen et al., 1999, p. 1). These strategies are "personalization" (Hansen et al., 1999, p. 2) which maintains knowledge by the transmission from expert to expert, so the know-how is kept within people, whereas the "codification strategy" focusses on a "people-to-document" approach (Hansen et al., 1999, p. 3) in which knowledge is codified and storage in databases easily accessible for everyone eligible. Hansen et al. (1999) emphasize a tendency of GMCs relying more on the personalization strategy but ITCOs using to a greater extend codification (Hansen et al., 1999, p. 3). However, they stress that every company usually utilizes to a certain degree both of the two opposing strategies, one with main focus and the other one as supplement. (Hansen et al., 1999, p. 7).

As already mentioned in different contexts throughout this thesis, the influence and importance of technological innovations is growing and moving the reliance of consultancies also away from pure staff talent for their success. New tools and software enable the development of "new business and delivery models, automation, and cost-efficient consulting services" (Treichler, 2019, p. 263). Traditionally IT consultancies have used "IT-based systems such as groupware, document-sharing systems, and databases containing information on employee know-how" to a greater extent than GMCs which focus more on "prior project reports, general frameworks, and market analysis reports" (Galal et al., 2012, p. 128). Galal et al. (2012) however state that these differences become more and more blurred over time (ibid.). Also, regarding the organizational structure, there are differences as Galal et al. (2012) note, for example, IT consulting companies are usually bigger as a corporation and have therefore higher capital needs and require larger office infrastructures compared to GMCs (ibid.).

6. ***Cost structure:*** *includes aspects of risk, such as critical items, fixed and variable cost structures, degree of automation and economies of scale*

The digital transformation, advisories' clients go through and with which consultancies help them, also influences consultancies themselves. Not only differentiation and growth can be

achieved this way, but also cost reduction which enables greater margins despite generally decreasing prices for consulting services (Nissen et al., 2019, p. 318). As the biggest cost factor for the human capital-based industry of consulting, personnel costs can be considered. Nissen (2019) recommends achieving reduced operating costs besides accomplishing growth by "virtualization" (ibid.). Here on-site consulting services are transferred to digitalized forms. In 2022, home office and communication via information and communication technologies (ICT) has become normal for most of us during the pandemic. Nissen (2019) saw those advantages already earlier as a "complement (for) classic business consulting services in order to optimize performance and supplement the existing service portfolio and delivery options" (ibid.). In that way efficiency, agility and effectiveness of consulting services can be increased. Nissen (2019) further explains that combined with standardization, fully automated consulting services are possible which enable the entering of new market segments which have previously not been in reach (geographically or capability related). Treichler (2019) supports that view and stresses the enablement of cost reduction and efficiency increase "through technology, streamlined workflow, and alternative staffing models. "(Treichler, 2019, p. 254)

7. ***Revenue model:*** *the way a company makes money through a variety of revenue flows, their sustainability and including price decisions and discounts that affect price*

Galal et al. refer to Engwall & Eriksson's (2005) conclusion that IT-related consulting services are commonly offered in bundles. Further, IT consulting projects can have a project duration of several years which is significantly longer than in general management consulting. Following this tendency, also larger teams are usually involved in IT consulting engagements. Galal et al. (2012) stress in that regard the complex nature of large IT projects and see evidence here in the fact that these projects often involve the whole client organization. This consequently requires "coordination across multiple functions and hierarchical levels" (Galal et al., 2012, p. 127). To be able to manage these coordination tasks according to Bloomfield & Danieli (1995), consultants in the IT field need socio-political skills and symbolic resources to handle the complexity of the consulting projects which exists despite the relatively high degree of standardization and predictability (ibid.). Galal et al. (2012) see the high failure rate of IT consulting projects as indicator for the complex nature of IT consulting projects. Besides this traditional IT consulting revenue model of performing large-scale, complex projects in a quite stable project team, some alternative models are starting to spread. Those are according to Piumelli (2019) outsourcing of individual projects to other consulting firms, outsourcing of entire processes, body leasing and the use of professional employer organizations (PEO). In the

context of alternative ways to perform consulting projects, also the concept of "productivizing" by Huczynski (Heusinkveld & Benders, 2012, p. 268) is notable which tries similar to asset-based consulting, which unbundles consulting services to offer them as individual tools and methods (Treichler, 2019, p. 266), to give advisor methods a more transparent and repeatable character. The productivizing model is also called "commodifying" and transforms "management knowledge into a sellable form that is expected to meet the need for managerial solutions" (Fincham 1995; Suddaby & Greenwood 2001; Collins 2003; see Clark, Bhatanacharoen, and Greatbatch 2012 in Heusinkveld & Benders, 2012, p. 268). These new concepts are developed on the one hand to handle the changing and increasingly complicated client demands, but also to drive consultancies revenue and their connected financial gains, when the concept is accepted on the market (Heusinkveld & Benders, 2012, p. 267). Also, those concepts make consulting firms less dependent on individual consultants' personal skills and expertise and can decrease therefore costs for the consulting firm (Treichler, 2019, p. 266). Scholars like Treichler (2019) expect these concepts supported by intelligent machines to take over a significant portion of the market share, but not to become talented consultants obsolete (ibid.).

Not only the delivery model is evolving, but also consulting pricing models. Here, Nissen points out to „one-off package prices and the combination of base price and variable cost rate (pay-per-use models)" (Nissen, 2019; Nissen et al., 2019, p. 335) as new billing models for digital consulting services. According to Nissen, especially for the previously mentioned new digital consulting services, use-oriented pricing instead of classical consulting rates are expected to permeate. Irrespectively of these new pricing trends, for IT consultancies their pricing has always been connected to project success. Particularly implementation support as a central part of the VP is a key aspect here. Therefore, payment is often connected to the point of time when introduced systems and processes are up and running (Galal et al., 2012, p. 129). Compared to GMCs, IT consulting firms tend to widespread accept payment based on results. Also, fixed prices for projects or project modules are more commonly used according to Galal et al. (2012), they connect this fact to the belief of IT consultancies that "with proper specification of project outcomes and milestones, they are able to estimate the time at which such results are achieved and the resources needed to do so with some precision" (Carr 2003 in Galal et al., 2012, p. 129). Galal et al. (2012) further explain that "the procedural nature of much of ITCO firms' services and the resulting division of labor allows them to exploit the economies of scale resulting from relatively large upfront investments, which in turn call for longer-term

contracts with customers" (Clark, Zmud, and McGray 1995; Bahli & Rivard 2003 inGalal et al., 2012, p. 129).

8. ***Organization:*** *the organization with its people and organizational culture with a code of ethics and regulatory compliance including all aspects related to recruiting and retaining talent, access to human capital, developing corporate DNA, employees' focus on the customer and their identification with the organization's business model*

"The structure of a consultancy system can be described with the help of three aspects: Membership structure (or hierarchy), leadership structure, and geographical structure." (Deelmann, 2019, p. 39) Galal et al. (2012) add that additionally there is variance among IT consulting firms regarding their strategic orientation, organizational structures and processes and their service portfolio (Galal et al., 2012, p. 129). All these aspects are dependent on the general type of consulting firm based on a high degree on size and whose categories are large, international consulting firms, boutique consulting firms and independent consultants (Treichler, 2019, p.257). Morris et al. (2012) refer to consulting companies as distinctive organizations due to the partnership structure of ownership and governance which is widespread applied (Greenwood & Empson 2003; von Nordenflycht 2010 in Morris et al., 2012, p. 285). Within the partnership structure, there has long been a pyramid model prevailing which consists of a low number of senior staff which focus on managing client relationships and project oversight whereas the main portion of staff are junior consultants performing the actual consulting projects (Treichler, 2019, p. 267). There has a trend been observed in changing this structure by strengthening he "middle-layers" (ibid.), aiming to create a diamond or triangle form. This shall satisfy the demand of clients for more senior consultants while considering the much higher costs for senior consultants or partners. Still, according to Treichler (2019) the increasing need for flexibility is also affecting the staffing of projects and the consultancies organizational structures. For Galal et al. (2012) this need is also reflected in sophisticated human resource management systems and large investments in codification and "data warehousing" for a well-developed knowledge-management (Galal et al., 2012, p. 128).

9. ***Ability for transformation:*** *guarantees long-term sustainability and described as the model's own ability for transformation, with innovation being included as an element that characterizes the business model itself*

"Flexibility involves the ability of consulting firms to respond to the rapidly evolving clients' needs and expectations in every aspect related to improving customer value and to helping them transform their businesses and solve their most prevalent business challenges" (Treichler, 2019, p. 270). Treichler (2019) sees flexibility among other differentiation factors like "leadership,

culture, client engagement, service offering and pricing, business strategy, innovation and people management" based on Parakala (2015) as the most crucial success factor for the future (ibid.). Nissen reports that digital transformation can lead also in consulting to the different types of BMI covered earlier in this thesis, ranging from evolutionary to disruptive (Nissen et al., 2019, p. 331). This thought is in line with Rachinger et al. (2019) who call this ability "dynamic capability"(Rachinger et al., 2019, p. 1147).

1.3.4. Current trends in the consulting industry

The changing economic environment increases competition while still decreasing geographic boundaries and requires often fundamental and complex transformations of clients' business models, value chains and product/service offerings (Treichler, 2019, p. 254). As consulting is strongly connected to their client's competitive reality (Kohlen & Holotiuk, 2017, p. 175), client demand also increases and shifts the consulting's competitive dynamic as clients can choose between a growing number of potential advisors and they are less loyal to them. If clients feel they can benefit to a greater extend from changing their advice utilization, they will do so: to "benefit from greater speed, responsiveness, and control, they are willing to engage with alternative, more agile consulting service providers or smaller consulting service providers which specialize in supplying one specific aspect in the client engagement."(ibid.).

This development forces consulting companies to change, too. The aim for incumbents is to keep market share and clients or even further follow their path of growth. New entrants introduce new technologies and revenue models to deliver services based on these technologies (Christensen et al., 2013, p. 108). Keeping up with this new competition shall be realized by reducing costs and increasing efficiency (Treichler, 2019, p. 253). These goals of cost reduction and efficiency increase in turn are mainly realized by changing the delivery model or relying on digital transformation themselves and therefore imitating the strategy of their new entering competitors.

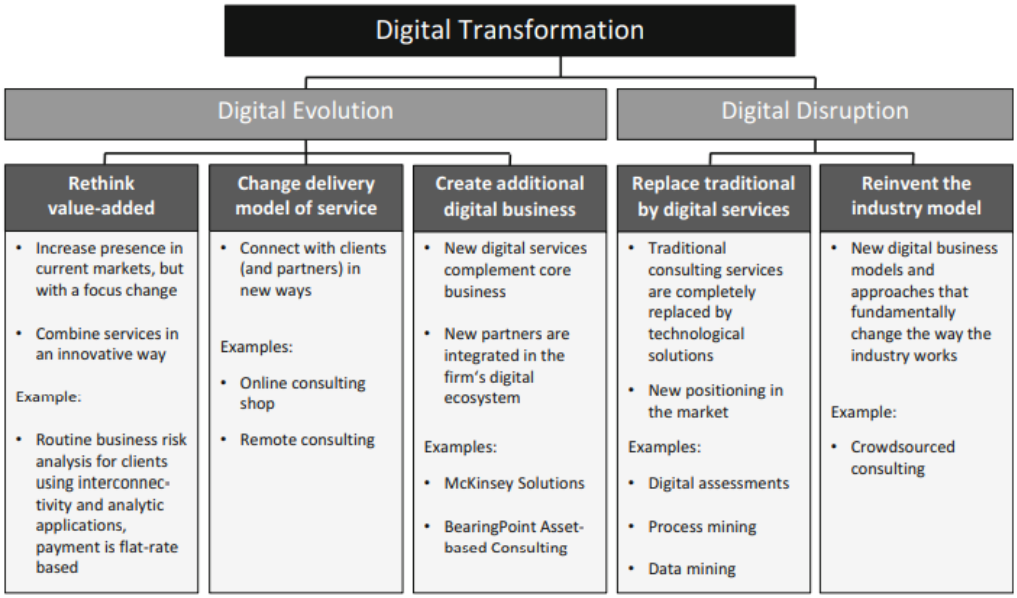
Some of the most notable developments regarding delivery model change are the unbundling and "modularization" of consulting services (Christensen et al., 2013, p. 110;Treichler, 2019, p. 263). This can be considered as a form of specialization of core competences and reducing the effort on supplemental functions.

However, in contrast, consultancies seem to also broaden their focus and the differentiation between strategy consulting and IT consulting is blurring (Treichler, 2019, p. 264). As capabilities are costly and time intensive to build up, different types of external

sourcing are flourishing (Treichler, 2019, p 259). Concerning change triggered by technology, the digital transformation initiatives cover the way consultants work which can be summarized as virtualization and second, which products and services they offer, such as asset-based consulting (Nissen et al., 2019, p. 319).

The whole change in the industry which is currently happening can be termed "consulting 4.0" borrowing the term from the past industrial revolutions. According to scholars the revolution in consulting has begun and is driven by interconnected digital technology (Treichler, 2019, p. 270). The results of this shift range from moderate evolution to digital disruption. Nissen (2019) classifies them similar to the general BMI type scheme by Cavalcante et al. (2011). He identifies the BM transformation in consulting ranging from "rethink value added", "change delivery model of service", "create additional digital business", "replace traditional by digital services" to "reinvent the industry model" (Nissen et al., 2019, p. 331). The whole concept is illustrated in Figure 6.

Figure 6: Five types of digital business model transformation in consulting by Nissen



Source: Nissen et al., 2019, p. 331.

Chapter 2. Digitalization phenomenon and business model innovation

In this chapter, the terms digitization, digitalization, and digital transformation will be defined. Afterwards, the effects of digitalization on BMs as a global trend are outlined and lastly, the impact of digitalization on the consulting industry is portrayed by examining the current determinants of the disruption in the industry, depicting the behavior of market participants, and providing an outlook on future developments.

2.1. Definition of relevant digitalization terms

Defining "digitalization" is strongly connected to separating the term from "digitization" (Larsson, 2018, p. 10), which are often confused and interrelated (Brennen & Kreiss, 2014), but are not interchangeable (Schallmo & Williams, 2018, p. 4; Ritter & Pedersen, 2020, p. 181; Brennen & Kreiss, 2014; Larsson, 2018, p. 10). Additionally, the terms virtual, electronical and digital are used to a great extent interchangeably and describe "the efficient and effective use of information and communications technology (ICT) concepts" (Johann et al. 2016 in Werth & Greff, 2018,p. 119).

Digitization is the first step of three (Crișan & Stanca, 2021, p. 4) towards facilitating the power of recent technologies (Parviainen et al., n.d., p. 64) and is the process of "converting analogue data into digital data sets" (Schallmo & Williams, 2018,p .5; Rachinger et al., 2019, p. 1144), namely into digital bits (Brennen & Kreiss, 2014) and works with existing processes (Ritter & Pedersen, 2020, p. 180). Concrete examples are "building an operational backbone or introducing ERP (enterprise resource planning) systems" (Ritter & Pedersen, 2020, p. 181) where it relates to the "ability to collect relevant information, analyze it and translate into actions, which is linked to the topics of big data and analytics" (Schallmo & Williams, 2018, p. 9). It can be considered as the basis for digitalization as digitization is only of interest to an organization if digitalization follows it to utilize the gained capability in a BM (Ritter & Pedersen, 2020, p. 183).

Digitalization can be defined as "fundamental changes made to business operations and business models based on newly acquired knowledge gained via value-added digitization initiatives" (Schallmo & Williams, 2018, p. 6). It is a major trend that will have effects in the near and later future (Parviainen et al., n.d., p. 64). It can be considered a driver "for changes in the corporate world because they establish new technologies based on the internet with

implications for society as a whole (Unruh & Kiron, 2017 in Rachinger et al., 2019, p. 1145). Ritter & Pedersen (2020) add that it "concerns digital value propositions in the marketplace" (Ritter & Pedersen, 2020, p. 180). Scholars stress the potential of digitalization for innovation by combining different technologies like cloud technologies, sensors, big data, 3D printing (Rachinger et al., 2019, p. 1144). "Digitalization is not about turning existing processes into digital versions but rethinking current operations from new perspectives enabled by digital technology" (Parviainen et al., n.d., p. 74).

Digital transformation consists of "redefining a business, digitizing processes, and expanding relationships across multiple value-added chains. "(Schallmo & Williams, 2018, p. 9) It builds an even higher or later level than digitalization as it restructures economies, institutions and society on a system level (Rachinger et al., 2019, p. 1145). Ritter & Pedersen (2020) formulate it in the following way that "digitalization is the impact of digitization on society" (Ritter & Pedersen, 2020, p. 181 f.) In the business context this society is defined as the firm and the market. Schallmo explains that some scholars identify similarities between digital transformation and Business Process Reengineering (BPR) which "is the rethinking and reengineering of business-related processes to reduce costs and improve products and services" (Schallmo & Williams, 2018 p. 6 f.).

Schallmo & Williams (2018) argue that the implementation of technologies into the business model requires the creation of additional value for customers, the business itself, and other essential stakeholders to be called digital transformation. Two activities are proposed to succeed in facilitating digital transformation which are "reshaping customer value propositions and transforming their operations using digital technologies for greater customer interaction and collaboration" (Berman 2012 in Schallmo & Williams, 2018, p. 3 f.). Parviainen et al. (2017) refer to digital transformation as "changes in ways of working, roles, and business offering caused by adoption of digital technologies in an organization, or in the operation environment of the organization" (Parviainen et al., 2017., p. 64). They introduce different levels which are affected and name a process level in which manual procedural steps are reduced through digital tools, an organizational level which focusses on offering services in a new way, introducing new services and removing obsolete services. On a business domain level roles and value chains in an ecosystem are changed whereas the fourth level, labeled society level, covers societal structures such as type of work or means of influencing decision making (Parviainen et al., 2017., p. 64). These levels resemble strongly to the BMI concept and show the holistic character of digital transformation which is supported by Schallmo (Schallmo & Williams, 2018, p. 12).

2.2. Digitalization as a major determinant of business model innovation

The relevance of digitalization is undeniable today and the effects of this global trend on all industries and businesses are predicted to further grow (Parviainen et al., 2017., p. 64 ff.). As already raised, digitalization is strongly connected to BMI and can manifest in the different types of BMI such as BM revision or extension."(Schallmo & Williams, 2018; Rachinger et al., 2019, p. 1155). Different scholars agree that there exists a great need for companies "to innovate their BMs to be successful in the digital world" (Rachinger et al., 2019, p. 1145). Parviainen et al. (2017) stress that a proactive approach is required by companies because otherwise they will lose their current market position (Parviainen et al., 2017, p. 74). Chesbrough (2010) adds that technologies and BMI must be complementary (Chesbrough, 2010, p. 355).

As digitization is the foundation for digitalization certain skills to perform digitization are required by firms. Ritter & Petersen (2020) identified three necessary skills which are "data, permission, and analytics."(Ritter & Pedersen, 2020, p. 182) On the other hand, digitization seems to be a business necessity to have great general capabilities. (Parviainen et al., 2017, p. 66; Gandhi et al., 2018 in Ritter & Pedersen, 2020, p. 183) Ritter & Petersen further explain that "the application of data for capability optimization is internally driven and, for the most part, invisible to customers"(Ritter & Pedersen, 2020, p. 183). Kohlen & Holotiuk (2017) point out the necessity of organizational agility to be able to develop capabilities for digital innovation (Kohlen & Holotiuk, 2017, p. 175).

The BM elements which are mainly influenced by digitalization are "the value proposition, internal infrastructure management and customer relationships" (Arnold et al., 2016; Kiel et al., 2017 in Rachinger et al., 2019, p. 1146). As the elements of BMs are interconnected, the digitalization of one element will likely have an impact on other elements (Ritter & Pedersen, 2020, p.185). This can be described as a domino effect and could explain the disruptiveness of many digitalization-initiated BMIs. "It can be argued that technology characteristics play a crucial role in the incremental or radical nature of BMI" (Bouwman et al., 2018, p. 119).

2.3. The role of digitalization in the consulting business

"Big changes are happening in the business world. Consulting firms are not immune to these changes, particularly technological breakthroughs that redefine business models and change client expectations (Flynn & Kowalkiewicz, 2018, p. 102). Steady growth is according to Nissen's findings (2018) predicted for the German consulting market. Although, he also

warns for laziness and inattention due to continued success (Nissen, 2018, p. 2). He further states that despite consultancies being constantly confronted with "new challenges and changing market conditions" faced by their clients, advisories own operations are often less digital developed and the services only performed in "the traditional face-to-face approach" (Nissen, 2018,p. 13). This view is in line with Deelmann (2018) who criticizes that though consultants being great advisors for others on digitization, "internally, they are much more reluctant." (Deelmann, 2018, p. 76) and Llewellyn (2017), who states in agreement with Deelmann (2018), that consultancies risk becoming victims of the digital disruption just like their clients as many advisories have not changed their BMs for decades (Llewellyn, 2017, p. 251) and "relied heavily on talent as a key differentiator"(Llewellyn, 2017, p. 254). Crișan & Stanca (2021) emphasize also on the needed effort investment for internal development (Crișan & Stanca, 2021, p. 28). Seifert & Nissen (2018) unfold that "internal" in this context represents processes not involving the client such as HR or accounting whereas "external" covers client-facing processes (Seifert & Nissen, 2018a, p. 299 f.). Greff et al. (2017) accredit consulting a "surprisingly low level of digitization" although it drives digitalization in other industries (Greff et al., 2017, p. 115). Academia seems very well in line with the call for consulting to engage in digitalization which is repeatedly called a "megatrend" (e.g. Kohlen & Holotiuk, 2017, p. 175 or Nissen, 2018, p. 13) and to rethink their BMs.

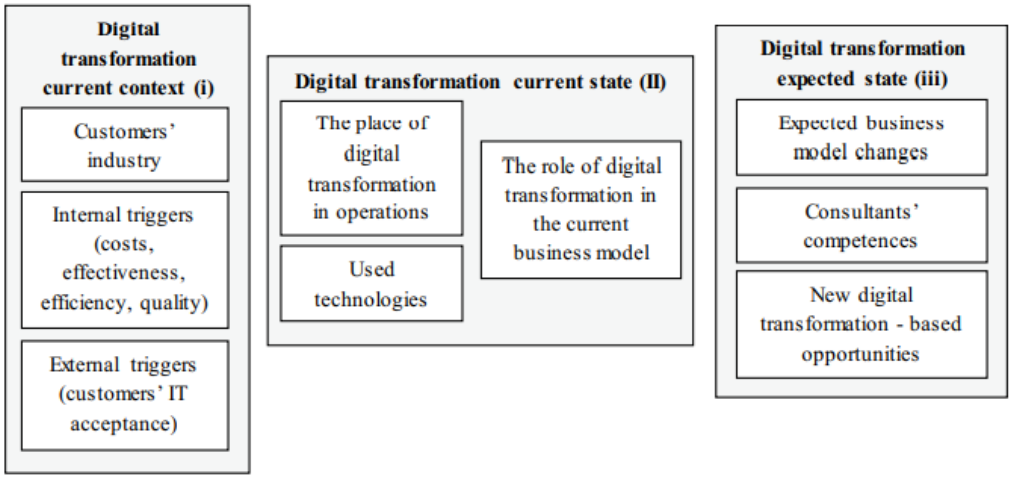
In the consulting context digitalization research often refers to the term "virtualization" of consulting services. Nissen (2018) provides examples of synonyms to virtualization such as "e-consulting, electronic consulting, internet consulting, online consulting or distance consulting" (Allegra et al. 2000; Wurdack 2001; Türk 2004; Deelmann 2009 in Nissen, 2018, p. 28). He also explains that virtualization can be considered as "a spectrum of possible services, where the extreme points of these services are determined, on the one hand by a mere supportive use and on the other hand by an exclusive use of information and communication technology" (Nissen, 2018, p. 17). On the latter side of this spectrum stands full virtualization where all services are technology-based and clients will use these solutions in most cases autonomously (Nissen, 2018, p. 17). The mechanisms of this, according to Nissen (2018), "omnipotent" phenomenon are digitalization and networking (Nissen, 2018, p. 16). Most consulting companies are currently focusing on low levels of virtualization (Nissen, 2018, p. 14). Nissen (2018) classifies the characteristics of virtual consulting services as level of interactivity, degree of digitalization, degree of standardization, integrativity and modularity (Nissen, 2018, p. 19).

Scholars conclude that already the first level of digitalization, namely digitization, can bring advantages for consultancies. Deelmann (2018) suggests three different views should be

considered, namely, digitization as consulting topic, digitization for increasing internal efficiency, digitization as a first step towards consulting services automation (Deelmann, 2018, p. 87). As already covered, the first aspect seems already to be incorporated by consultancies. For the second, Deelmann (2018) proposes technology adoption of "web-conferences, knowledge management systems and techniques for data analytics" (Deelmann, 2018, p. 87). Furthermore, internal functions like sales, intelligence, analytics as well as sourcing and the combining of resources can be digitized in consulting (ibid.).

As already demonstrated during this paper, digitalization facilitates BMI. The strong connection becomes also visible by the parallels between the introduced BMI input-process-output model and digital transformation models like the one constructed by Crisan & Stanca (2021). Their model depicts an evolutionary development of digital transformation in the consulting context (Crișan & Stanca, 2021, p. 3) and is built on "three dimensions: the context, the current state, and the expected state of digital transformation" (Crișan & Stanca, 2021, p. 3) which are results of previous digital transformation processes as well as determinants for future ones (see Figure 7).

Figure 7: Dimensions of the digital transformation factors in consulting



Source: Crișan & Stanca, 2021, p. 7.

In line with Crisan & Stanca's model (2021), other scholars establish different triggers for BMI due to digitalization in consulting. Llewellyn (2017) identifies the following aspects of new business environments as external determinants: democratized knowledge, self-sufficiency, digital entrepreneurialism, modular offerings, productization, transparency, commoditization, client sophistication, borderless competition and connectivity and democratized technology.

These developments enable BMs such as (digital) associate-based consulting, productized expertise, or peer-to-peer consulting (Llewellyn, 2017, p. 253 ff.).

Innovative new competitors are challenging incumbents and their currently widespread "one-stop-shopping" (Nissen, 2018, p. 6) BM. Examples of consulting specialization focus areas of new entrants are "automated data analysis and interpretation (e.g. Narrative Science, Inspirient), process mining and modeling (e.g. Celonis), or creating innovative solutions with the help of an international community of experts (e.g. 10EQS, Wikistrat, Kaggle)"(Nissen, 2018, p. 6). Kaggle is also recognized by Flynn & Kowalkiewicz (2018) as an inspiring example for incumbent consultancies on how to acquire the needed resources for complex client issues in an innovative and technology-supported way (Flynn & Kowalkiewicz, 2018, p. 105). As "technologies like machine learning and analytics" are advancing, Nissen (2018) expects that future growth in the consulting industry will be distributed "to those who successfully create technology-based business opportunities and delivery models that better meet client requirements at lower cost." (Nissen, 2018, p. 3)

Crisan & Stanca (2021) stress the role of clients as triggers for starting digital transformation in consultancies (Crișan & Stanca, 2021, p. 27). This view is aligned with Nissen & Seifert (2018) who connect the success of virtualization in consulting to the expectations and acceptance of clients (Nissen et al., 2018, p. 137). They conclude in their studies that consultants themselves do not see "know-how, technology and resources" as determining factors but client demand and acceptance for investing in digitalization (Nissen & Seifert, 2018, p. 188). According to their results, this demand is lacking and consequently, the level of virtualization is correspondingly low (ibid.).

Nissen & Seifert (2018) conducted together with the Association of German Business Consultants a study investigating the status quo of digital transformation in German Business Consulting in 2015 which provided great insights in the level of digitalization at that point of time (Nissen & Seifert, 2018, p. 153 ff.). Some of the most interesting results are that most respondents "rate virtualization as a chance to make use of the possibilities and potential of technologies during consulting. "(Nissen & Seifert, 2018, p. 156). However, over one third expect virtualization not to have a major impact, neither as threat nor as a chance (Nissen & Seifert, 2018, p. 157). Also, only a low fraction of below ten percent see virtualization as unimportant for their companies BM (Nissen & Seifert, 2018, p. 158). Among the interviewed consulting sectors, IT consulting assigned virtualization the greatest significance, a fact which is explained by Nissen & Seifert (2018) by the naturally strong technology drive in this sector

and the competitive pressure within IT consulting (Nissen & Seifert, 2018, p. 159 f.). Deelmann (2018) grants IT and financial consulting the most whereas strategy the least automation potential (Deelmann, 2018). Larger consulting firms and here again especially large IT and HR advisories assign virtualization higher importance compared to other smaller firms (Nissen & Seifert, 2018, p. 160). Future importance increase, however, was regarded with insignificant differences by different fields of consulting (Nissen & Seifert, 2018, p. 162). Also, the actual use of virtualized practices today is highest in IT followed by HR consulting within the investigated fields (ibid.), and therefore their maturity can be considered highest (Nissen & Seifert, 2018, p. 183). As already mentioned, there exist different levels of virtualization applications. Sophisticated services like self-service consulting have according to Nissen & Seifert's (2018) investigation had in 2015 only been used by one percent on a regular basis (Nissen & Seifert, 2018, p. 166). On basis of such findings, they conclude that most advisories interrogated are at the beginning of their digitalization journey (ibid.). Fully virtualized and automatic services have perceived minor relevance for the questioned consultants (Nissen & Seifert, 2018, p. 186) and mainly supporting technologies with low levels of virtualization are implemented (Nissen & Seifert, 2018, p. 187). That's in line with Larssons (2018) results, while respondents in his research collectively acknowledged the advantage of an increased number of project engagements possible by full automation of monotonous activities (Larsson, 2018, p. 33 f.). "Automation, Virtual Reality and Artificial Intelligence are still in the early stages"(Nissen & Seifert, 2018, p. 187). Greff et al. (2017) refer to these results and add that there have been at this point of time only a few digital productized consulting services available like "McKinsey solutions or Inspirient that can be regarded as domain specific consulting software" (Greff et al., 2017, p. 116 f.). Only few incumbents like McKinsey, Deloitte or Bearing Point have according to Nissen already adopted their offerings and included e.g. asset-based consulting services in their portfolios (Nissen, 2018, p. 8; (Seifert & Nissen, 2018b). The lack of many other incumbents to follow those examples led to consolidation and increased M&A activity (ibid.). According to Nissen & Seifert's research (2018), the descending order of priority for virtualization applications is: 1. Online collaboration, 2. Remote analysis, 3. Online coaching, 4. Information distribution via the internet, 5. E-learning, 6. Data mining and big data, 7. Virtual project management, 8. Virtual assessment, 9. Online knowledge management, 10. Test of IT solutions (Nissen & Seifert, 2018, p. 169). Condensing the provided literature on the current state of the consulting industry: "At this point, the German consulting branch seems

to be in a standby situation. Virtual consulting services are thus only developed when the client directly asks for them" (Nissen & Seifert, 2018, p. 174).

In his study on improved knowledge transfer in consultancies, Larsson (2018) concluded that digitalization can support consultancies in leveraging their competitive advantage by improved knowledge management which could in turn enable "future autonomous productions of projects" which will lead to increased scalability (Larsson, 2018, p. 38). Werth & Greff (2018) see four different approaches for generating new consulting BMs that leverage scalability for consulting services by digitalization. Those are (Werth & Greff, 2018, p. 125):

- "Core-only-consulting": transferring information-based activities to ICT leading to more efficient use of consultant's time
- "Platform consulting": leveraging assets and sharing economy by the use of external consulting resources
- "Self-service consulting": strong involvement of customers and outsourcing processes to them
- "Algorithmic consulting": automation and algorithmic processing of core consulting firm processes, which are only supervised by the consultants

Flynn & Kowalkiewicz (2018) identified analytics and algorithms, technology platforms, and disintermediation as the most relevant areas for digital transformation in consulting (Flynn & Kowalkiewicz, 2018, p. 102). Nissen & Seifert (2016) anticipate that digitalization in consulting will create different application types and use cases and mention here "Virtual Assessment, Remote Analysis, Virtual Collaboration, Virtual Communication, Online Knowledge Management, Virtual Coaching, E-Learning, Virtual Project Management, Online Marketing, Network Building as well as Remote Testing" (Nissen & Seifert 2016 in Seifert & Nissen, 2018a, p. 301 f.). Concerning concrete technologies, they attest "technologies like audio- and video-tools, groupware, social software, data and process mining tools, voting tools, presentation tools and websites" the greatest significance (ibid.). The participating consultants in Nissen & Seifert's (2016) study from 2015 rated greater temporal flexibility, more spatial flexibility, working across times zones, shorter reaction times, time savings, cost savings, better use of colleagues' knowledge, better availability of resources, optimization of work-life-balance, better availability for the client, higher working rate and better pricing options for the services as greatest chances of virtualization. The greatest risks they saw are weaker client-consultant relationships, IT-security and data safety problems, increasing coordination and alignments efforts, communication, coordination and cooperation difficulties, insufficient

individualization, and uncontrollable project complexity (Nissen et al., 2018, p. 141). Nissen stresses the risk of weaker client-consultant relationships, which is an essential resource of consultancies as the greatest risk (Nissen, 2018, p. 52) while he expects virtual services not to replace classic consulting completely but to function as complementation (Nissen, 2018, p. 36). He refers to Forrester (2016) that due to digital solutions and innovative concepts such as asset-based consulting, cloud applications, or agile methodologies, smaller and more iterative projects might be more frequent performed by "more cross-disciplinary with higher seniority and specialization due to the complex demands of transformational client projects." (Nissen, 2018, p. 7) To be able to guarantee an acceptable success rate for future projects, advisories need to utilize the gathered knowledge from previous projects and leverage it with technology (Larsson, 2018, p. 8). Consultancies "must develop digital business models and services, create an agile organization, develop new skills, change existing mind-sets, digitalize processes and redesign them with a strong customer-focus." (Nissen, 2018, p. 31) Larsson (2018) emphasizes that the implementation of digital solutions will demonstrate clients that the consultancy is "a competitive and straightforward thinking company, which will be seen as positive by the customers" (Larsson, 2018, p. 32). Nissen & Seifert (2018) conclude: "The significance of virtualization as an innovation driver that paves the way for new business models and consulting services, will increase in the consulting industry" (Nissen & Seifert, 2018, p. 184).

Chapter 3. Empirical study: A multiple case-study of business model innovation of German IT consultancies

The research objective of this thesis is to **recognize the digitalization-related determinants, processes, and success factors of business model innovation of consulting companies**. In order to address this overall objective and to provide guidance for the intended research, three research questions have been formulated:

(1) Which external and internal digitalization-related determinants have affected business model innovation performed by consulting companies?

(2) How have the digitalization-related determinants affected business models of consulting companies?

(3) What are the barriers and success factors of the business model innovation among consulting companies, induced by digitalization-related determinants?

3.1. Research design

The empirical research shall depart from the insights gained by the literature review. Therefore, the point of departure on which special emphasis should be put on is the anthology by Volker Nissen with the title "Digital Transformation of the Consulting Industry. Extending the Traditional Delivery Model". Especially one contribution of Nissen & Seifert within this anthology has been valuable by presenting the results of a quantitative survey conducted together with the Association of German Business Consultants, investigating the status quo of digital transformation in German Business Consulting in 2015 (Nissen & Seifert, 2018, p. 153).

It is acknowledged that Nissen & Seifert's findings are based on quantitative research whereas for this thesis qualitative research will be conducted. However, it is not the goal of this paper to replicate and directly compare the results from 2015 with a new version of 2022 but to provide deeper insights into how the IT consulting industry in Germany has further developed regarding digital transformation and why selected cases arrived at their current level of digitalization until today. Yin suggests for "why" or "how" research questions the use of the case study method to receive an in-depth description of a social phenomenon (Yin, 2014, p.4). This method will not be able to provide universal representative results and a generalizable whole picture of the current situation of the industry but will be concerned with the rigorous and fair presentation of empirical data (Yin, 2014, p. 5) regarding the development of single

consultancies and the perception of individual consultants through a multiple case study. Other scholars like Crisan & Stanca also suggest case studies for the research of digital transformation in consulting, namely to first use "models, frameworks, and concepts, which describe the conditions faced by the consulting industry and to present evidence in the form of examples or case studies of these models" (Crișan & Stanca, 2021, p. 5).

The impulse to conduct indirectly comparable research seven years after Nissen & Seifert's work is justified in the fast-pacing development of the business environment. It seems particularly interesting to investigate the current status quo as major global events occurred in the timespan, mainly the global pandemic and the current war in Europe and their consequences. "The COVID-19 crisis has driven many industries, including management consulting, to reexamine the potential for digital transformation - which, we emphasize, is not primarily about optimizing processes but, rather, about new business models and customer interface innovations." (Crișan & Stanca, 2021, p. 29) A change in perception of the relevance of digitalization is expected after the radical changes in the environment disrupted in 2019 the natural flow of the digital transformation spread.

However, not only do global events provide reasons to reassess the current state of digital transformation but also leads the constant technological progress to assume a significant change in the situation compared to 2015 and provides a motive to investigate the development. Nissen confirms that technology and its tools "are continuously actualized. Thus, functions and product features, which exist today, may be gone tomorrow or exist in a changed from "(Nissen et al., 2018, p. 269).

In accordance to the here presented evidence of scholars, for this dissertation a multiple case study is conducted as empirical research. Yin defines a case study as "an empirical inquiry that investigates a contemporary phenomenon ("the case(s)") in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident."(Yin, 2014, p. 16 f.) Furthermore, according to Yin case studies involve situations in which the number of variables in interest will go beyond the number of data points and therefore depends on various sources of evidence that shall be converging in a data triangulation. Additionally, case studies benefit from the prior development of a theoretical proposition as a guide for the data collection and analysis (Yin, 2014, p. 16).

3.1.1. Case selection criteria

A multiple case study, in contrast to single case study, has been chosen. According to Yin, results from multiple case studies can be considered more “robust” (Yin, 2014, p.57). compared to the results of a single case study. Furthermore, performing a single case study requires special preconditions such as the assumption of one “unusual or extreme case" (ibid.). Such one outstanding case is not expected for this research based on the literature review and therefore a multiple case study is preferred. Therefore, various companies are chosen holding several attributes of resemblance and a certain number of distinctive factors. These selection attributes are based on the categorization criteria by Nissen & Seifert of “enterprise size, consulting field, client branch and consulting experience”(Nissen & Seifert, 2018, p. 154) and extended accordingly to address the research objective of this paper.

First, regarding the similarity factors, the focus of this empirical study shall be on IT consultancies (first similarity) operating in Germany (second similarity factor). Advisories that operate an office in Germany and publicly claim to offer services in the IT consulting sector will be considered. The first similarity factor is related to Nissen & Seifert’s criteria of “consulting field” (ibid.). The geographic containment, besides being a key aspect of the research objective, provides the advantages of greater feasibility and better comparability: BMs and their development might be influenced by their macro environment. Therefore, choosing the same country should be helpful. Thirdly, as the literature review is focused on established companies, empirical research follows this decision which refers to the characterization criteria of “consulting experience” (ibid.) as third connecting factor.

For differing factors, the company size in reference to Nissen & Seifert (“enterprise size” (ibid.)) will be used to differentiate the consulting firms according to their employee number. These numbers are gathered from the respective LinkedIn account page of the consultancies. Additionally, the cases are selected based on the spectrum of client industries they serve which correlates with “client branch” (ibid.), considered as a second differing factor. The number of industries are clustered in three segments of a “wide”, “medium” and “narrow” spectrum. The information on the industries served can be found on the consulting companies’ websites. Finally, the third distinctive factor is an extension to the second one as it also frames the targeted clients of the consultancies not only regarding the industry but also the client and project size. Here two categories have been established with the first category covering a focus on large corporations which usually quest advise for projects with greater scope and the second category contrasting a focus on the “German Mittelstand”, which are mostly mid-sized

companies (Pahnke & Welter, 2019, p. 346) with the corresponding project scope. The information on these project-related decisions can be found on the consulting firm's website. A comprehensive overview of connecting and distinctive factors is presented in Table 2.

Table 2. Case selection criteria

	1	2	3
Similarity factors	IT consulting and technology implementation projects	Operation in Germany	Established consultancies (between 20-30 years in business)
	1	2	3
Differentiating factors	Company size (number of employees)	Client industry segments reach	Project orientation (customer segment)

Source: own work based on Nissen & Seifert (2018)

3.1.2. Characteristics of the selected IT consultancies

For this multiple case study, four cases were selected based on the previously defined case selection criteria. An overview of the characteristics of the chosen cases can be found in Table 3.

Table 3. Case selection

	Similarities			**Differences**		
Case	IT consulting and technology implementation projects	Scale and scope of operations (registered in Germany as ASG)	Age (no. of years of operation)	Company size (number of employees)	Client industry segments reach	Project orientation (customer segment)
A	yes	Global reach	~30	10.001+	Wide industry scope	Focus on large corporations
B	yes	Global reach	~20	1.001 - 5.000	Medium industry scope	Focus on large corporations
C	yes	ASG +	~30	201 - 500	Medium industry scope	Focus on German Mittelstand
D	yes	ASG +	~30	1.001 - 5.000	Narrow industry scope	Focus on German Mittelstand

Source: own work

It is recognizable that the connecting factors are fulfilled. All cases offer IT consulting services and perform technology implementation projects. They all operate in Germany and German-speaking countries which is here indicated as ASG (Austria, Switzerland and Germany). Moreover, they operate in various other countries signaled by the plus sign (+) or have even a global reach. All chosen cases are established companies which means the

exclusion of startups and the cases can be further split in two age groups of companies with an age of around 20 or 30 years. In regard to the first distinctive factor, company A stands out as the largest among the four companies with over 10.000 employees. Company B and D range in the middle of the selected cases according to their size by fitting in a spectrum between 1001 and 5000 employees. Company C is significantly the smallest of the investigated companies with 201 - 500 personnel. Respectively to its size, company A has a wide industry scope listing more than 40 industries on its company website whereas company D in contrast is quite specialized in specific industries serving only a range of eight different industries according to their website. Companies B and C, despite to C's smaller size, have a very similar scope of industries, covering 15 and 17 industries, respectively. The project orientation of company A is corresponding to its own attributes focused on advising large corporations. Similar can the client size and project orientation of company B be categorized whereas it was stated in one of the interviews that the focus is not mainly towards a certain size but that clients are usually well renowned brands, which often correlates with greater size. Company C and D, however, clearly positioned themselves with a focus on the "German Mittelstand" (which commonly refers to SMEs in Germany (Pahnke & Welter, 2019, p. 346)) with accordingly smaller project dimensions than large corporations. It shall be mentioned that these are tendencies and there can be outliers, e.g., a mid-sized client calling for tenders for a huge and holistic project. Additionally, there might be cases of company A accepting also selected smaller projects requested by mid-size companies.

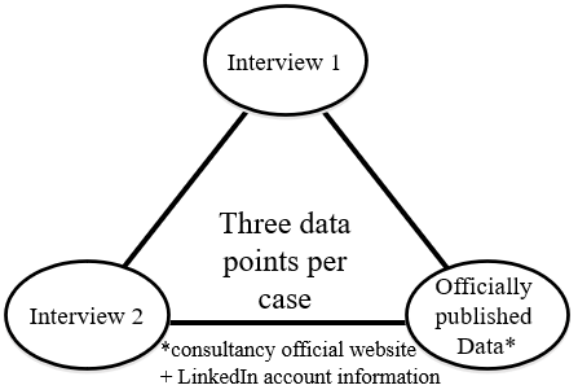
3.1.3. Data collection and analysis

The research of this dissertation uses a combination of primary and secondary data as a basis for the case study. The data collection per case is based on two kinds of data sources: (1) two interviews with consultants of the consulting firm in focus, (2) officially published data (companies' homepages and information available on the official LinkedIn accounts of the studied companies). The combination of these two data sources as the third basis of information was chosen on the fact that these data sources are commonly available for consulting companies, the information is published by the company itself and these sources are commonly accepted and used as reliable data sources for general information about companies (which is evident due to the fact that these two data sources are ranging repeatedly under the first five search results when conducting a Google search using the company name as a keyword).

It needs to be clarified that the secondary data is only used for triangulating information from the interviews and that no direct citation is used in this case as cases in focus stated great

emphasis on anonymity which clearly could not be fulfilled by quoting their company website. Triangulation of data sources is recommended by Yin (2014) to improve the reliability of the case study research (Yin, 2014, p. 119) Based on Yin's suggestion a convergence of evidence is aimed to achieve, thus the findings from the different data sources will be combined to create findings that are supported by all three sources. (Yin, 2014, p. 121).

Figure 8: Triangle of data points per case



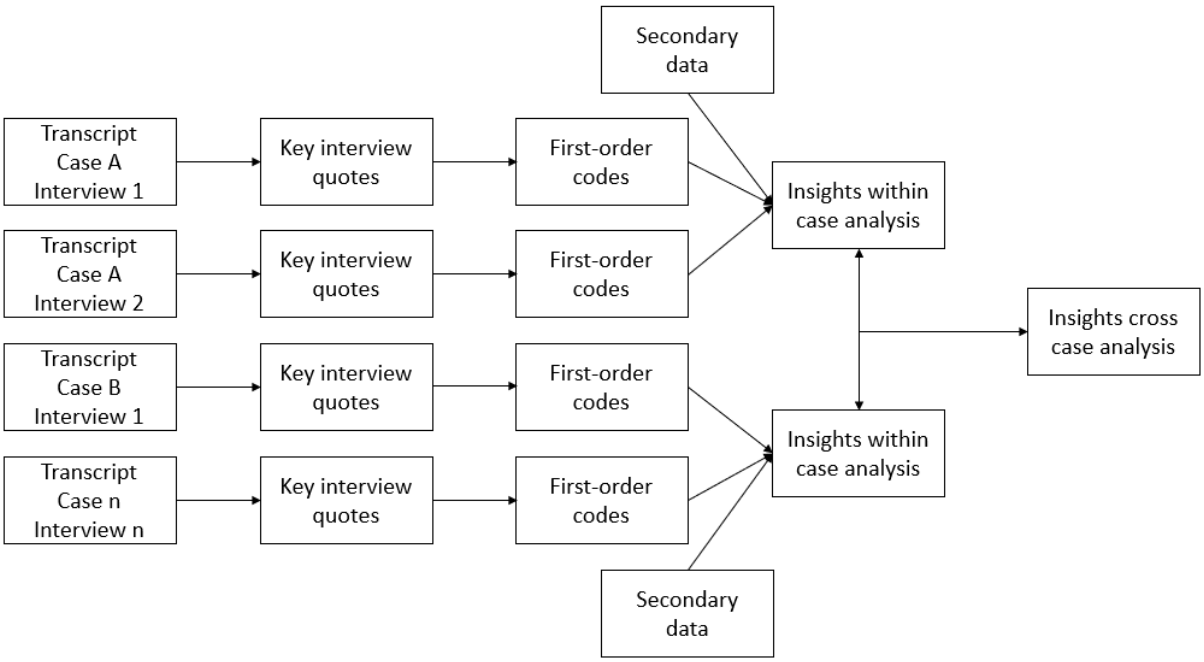
Source: own work based on Yin (2014)

Insights are gathered through two semi-structured, shorter case study interviews (Yin, 2014, p. 110) per case, with selected consultants. The interviews will be recorded and transcribed before the insights can be coded according to the coding approach proposed by Saldaña (Saldaña, 2009) and be put in the context of the theoretical concepts in the study.

Interviewees have been identified via the professional network of the researcher and the search on related networking platforms, i.e. LinkedIn. The potential to provide complementary viewpoints have been considered in the course of interviewees selection process – variety in terms of consulting areas, gender, seniority, and work tenure. The interview length ranged from about 20 to 40 minutes and were conducted on Microsoft Teams.

After transcription, anonymization and translation from German into English, the interviews were analyzed via coding technique regarding the most relevant characteristics of the companies' business models and their development. Afterwards, the cases were studied using cross-case analysis in order to identify differences and commonalities among the case companies. For the cross-case analysis, the structure of key areas from the interview guide which is based on the BM approach as offered by Amit & Zott (2020) was used. More in-depth categorization is further performed according to the business model canvas elements based on Osterwalder (2004) and Rocha et al. (2018).

Figure 9. Scheme of data coding and analysis



Source: own work based on Saldaña (2009)

3.2. Study findings

The analysis part is covering two parts, firstly the within case analysis and departing from there the comparative cross case analysis. The coding table used as a bridge translating the interview transcripts into codes can be found including the complete interview summary coded on level one in the appendix. The subjacent structure for the interviews which is based on the research questions for this thesis and for all following processing of the interview material is displayed in Table 4. The detailed interview guide including specific questions as inspiration and orientation for the interview partners is available in the appendix.

Table 4. Structure of the interview areas

Interview Area:
1. Company history/ growth
2. Current strategy and business model
3. Digitalization
4. Change process in the business model (due to digitalization)
5. Internal and external determinants of business model change (through digitalization)
6. The consequences of business model changes due to digitalization

Source: own work

3.2.1. Within case analysis

The within-case analysis will summarize the condensed key statements from the interviews per case and cover the statements the consultants developed for each topic area.

Case company A:

> *"It has always been a management consultancy, not like IBM, they started with computers and then changed at some point. Company A is a bit different. They used to be called something else in the past, and they were part of the Big Five, but now they're just Big Four. And that's why we've always been in consulting "(Interview A1, 2022, p. 3).*

As expressed by the quote from interview A1, company A has been founded and developed later always as a consulting firm with focus on technology. In its past, company A experienced several strategic changes and restructurings to adopt to changing market requirements with the last bigger restructuring happening two years ago: "when I started two years ago, there was a restructuring and the slogan for this strategy concept was called (…) Growth Model" (Interview A2, 2022, p. 2f.). According to interview A2 this was initiated as "Company A recognized that certain divisions fit together better. Value Towers were restructured. Certain colleagues were assigned to certain areas so that the orientation of company A would better fit the market requirements" (Interview A2, 2022, p. 3). The organizational structure which was described as central point within the most recent restructuring in company A, was expressed as an essential topic for the company throughout the two interviews. There is a strong emphasis on the people within the organization and this is also viewed as a success factor of company A: "I also believe that company A with the corporate culture and with the resources and with the employees that company A now has, is also really in a position to help shape the future" (Interview A2, 2022, p. 10). Interviewee A2 formulated it in the following way:

> *"At company A, we are a people business, so we are all people and we are not robots and therefore it is also very important to maintain personal contacts with colleagues with employees and this human culture is very important, also within company A, but also with a customer."(Interview A2, 2022, p. 8)*

Consequently, the BM of company A is centered strongly around the quality and performance of its employees:

"The cornerstones of the business model, well, we always have a purpose or a slogan that we use to describe our strategy, and that is, for example, to deliver on the promises of human ingenuity (...) this means that we deliver what we promise, and we do this by using our spirit, our skill, and our creativity to find solutions for our customers"(Interview A2, 2022, p. 4)

The focus on the organization enables company A according to interview A1 to be very dynamic:

"The business model of company A. As a consulting company, you have the claim to be as innovative as possible and company A is (...) one of the most innovative management consultancies of the larger ones, I don't know, of the largest 10 perhaps. So also in that respect, to seize markets quickly, for example, very currently with the cloud" (Interview A1, 2022, p. 2).

As one of the largest IT consulting firms, company A has gathered over the timespan since its foundation a lot of experience in incorporating this change-affine mindset in its organization and bring it in its projects:

"Value Comes from Change, and of course that's also our DNA. So, what I described earlier, that the world is changing a lot, company A can of course play its trump cards and say: Hey, we know how change works. We know how to change and we also help customers to change" (Interview A2, 2022, p. 5).

They aim to position themselves as first point of contact and trusted adviser for their clients' big change challenges and corresponding projects:

"Company A is also the first point of contact. We also want to be the first point of contact for our customers in order to provide answers to these questions. (...) we proactively approach our customers and say: We know that you are facing challenges. How can we help? (...) Here are our suggestions, we want to work with you to find answers to the questions" (Interview A2, 2022, p. 4).

Clearly, one the greatest of these mentioned challenges is digital transformation and company A tries according to A1 to answer it with innovative solutions:

"At Company A there is (...) a department that just looks at all this innovation and also invents new things together with Google and other companies, so actually technical things. (...)

Company A has a whole department that only deals with digitalization" (Interview A1, 2022, p. 5).

In following this approach, they want to offer their clients a broad repository of strategic solutions to choose from and applying in this way a more independent consulting approach. Interviewee A2 describes it as "you can imagine it like a buffet and on the buffet we have a whole lot of different things [applicable technology strategies] to choose from [for] the customer" (Interview A2, 2022, p. 5). The cooperation within the project work is an essential success factor for advantageous project completion for both parties. "Company A is also changing the world together with the customers, and that is always such an interplay. So, I think it's a kind of cross-fertilization" (Interview A2, 2022, p. 8). Another interplay is happening regarding the drivers for digitalization:

> *"I think it's an interplay (of the organization driving the digitalization and digitalization driving the changes in the organization) (...) we do want digitization and we are also actively working on it, but if now somehow big innovations happen from the outside, of course that also influences us" (Interview A1, 2022, p. 6)*

Besides innovations affecting company A and its client work, the phenomena affecting the world on a (globally) basis influence the situation of businesses and therefore the requirements they pose to their advisors. The current situation based on the year 2022 of an outstanding high number of drastic events by A2 is referred to as compressed disruption:

> *"requirements of the customers, that's also always a topic (...) we currently have a phenomenon, a market phenomenon, that we have compressed disruption (...) we have many, many things that are changing, so we have for example the Covid crisis as point one, then we have the political crisis that we all recognize right now, with the conflict in Ukraine and Russia and accordingly also high energy prices, inflation rates, hacker attacks and these are just all things, challenges that our customers are facing." (Interview A2, 2022, p. 3)*

Case company B:

Company B has its origin in the BigFour and after a legal separation and bankruptcy a European MBO (management buyout) set the foundation for the organization how is exists today: "And that's when the European partners decided to buy (…) in, and we repositioned and redeveloped

ourselves in the European market (…) so that today we are again active worldwide" (Interview B1, 2022, p. 2). Regarding this early organization there is currently an evolution happening:

> *"We emerged from a single company but are now in the process of successively establishing individual companies, so that as Company B we are becoming more and more of a group. Products that we launch on the market are definitely a support, but so are cross-divisional functions such as IT (...) which (...) also work for third parties" (Interview B1, 2022, p. 3).*

Strategically, they are aiming to offer support along the end-to-end process of IT projects providing a complete service package from strategy to implementation and technology support: "we're trying to put together more and more of a total package for the customer, really from strategy to technical implementation and then to support, although support makes up a very small part" (ibid.). The client focus according to B2 is characterized by a large share of commonly known brands/companies and public clients:

> *"When I think about the projects my colleagues are on, they are often larger, well-known customers who (...) [can be recognized]. I know that in terms of clients, we also have quite a few public agencies and federal agencies (...) as clients. In most cases, when a colleague tells me what project he's on, I can relate to the name" (Interview B2, 2022, p. 5)*

To satisfy the requirements of these clients, they work "process-focused, i.e. we follow requirements and understand technology as a control instrument (…) technology is actually only the instrument to achieve the goal" (Interview B1, 2022, p. 4). Besides technology as tool to solve client challenges, also speed was emphasized by both interviewees as critical success factor:

> *"When the outside world changes, we change immediately with it, we are very fast. As fast-moving or as little fast-moving as the business is fast-moving or not fast-moving. We always react directly. And we're also able to do that (...) without having these frictional losses, that we say we have to retrain people first, because we don't have that, we train ourselves permanently and on a broad level" (Interview B1, 2022, p. 7).*

Interviewee B2 supported the notion by B2 in the following way: "I think every IT consultancy is constantly somehow in a transformation, because you always try to stay on the ball and just try to work as efficiently, logically, as possible" (Interview B2, 2022, p. 2). One art of this

transformation company B is currently experiencing is the development of software products in collaboration with clients or software partners:

> *"the development in products, so we are in a product partnership with SAP and in this development we are often in discussion with SAP, whether SAP wants to offer a product or whether we develop a product and bring that to the market in connection with SAP. And that's where I would see our strength, that we are developing products and in this context we are increasingly setting ourselves up as a larger company" (Interview B1, 2022, p. 3).*

In addition to the technological investments, according to the two interviews conducted, a great focus is also put on the development of their consultants through the setup of a matrix organization "like a chessboard pattern (…) structured like a matrix (…) it is organized in such a way that virtually everyone has their service line and their segment (…) and there is a lot of communication"(Interview B2, 2022, p. 4) and an elaborated knowledge management system. The two interviewees stated both the importance of a balance between technology and human relations, "this personnel model, is at least as important as the technical know-how or the products that you offer on the market. You can't separate the combination, and you should never separate them" (Interview B1, 2022, p. 14).

Case company C:

> *"the thing that I think particularly distinguishes us is that the people who are responsible in the organization, who founded this company, have put a very specific form of cooperation at the center and have also shaped that positively as a success factor for their organization and the growth over all these years and make sure that this culture is maintained despite all the growth that we have" (Interview C2, 2022, p. 8).*

Company C can be considered in their size as significant smaller than the other examined cases. They are according to both interview partners strongly growing and are offering support along the process steps of BMI projects of their clients which distinguishes them from other consulting firms in their size category:

> *"we can not only conceptualize such business model innovations, but also completely accompany them through to implementation, realization, and operation. And other market players can certainly do that, too. If you look in the direction of large consultancies, the Big Five consultancies, they have also set up and developed similar units, but if we look at our scale, not so many can do that" (Interview C2, 2022, p. 4).*

Another USP of company which was stressed is their company culture, "we (…) hold the Company C culture in high esteem" (Interview C1, 2022, p .2). This was explicated further by C2:

> *"people are at the center, consultants and their development is a personal concern of the executives. And that's definitely a big difference compared to other consultant cultures, and it contributes to the fact that very personal individual career paths or further development paths are also made possible, which ultimately help us to ensure that we are also highly motivated as individual employees of the company to work for the company" (Interview C2, 2022, p.8).*

Regarding the relation to their clients, company C identifies itself as innovation facilitator:

> *"As Company C (...) we see ourselves as an impulse generator and innovator, so we also drive the customer ahead of us, or with him, but we do not leave them after two or three weeks like other strategy consultancies, but we advise strategically, but then also help with the implementation and not in the sense that we then press the button ourselves necessarily in the system" (Interview C1, 2022, p. 7).*

Despite greater focus on the strategic consulting on digital transformation, the addressed growth of company C was also reached by engaging in research projects, investing in relevant startups developing digital tools:

> *"we are very much involved with the topic of digital transformation, not just since yesterday or the day before, but for several years now, and therefore also have a good understanding of how to expand the consulting approach for digital transformation. In recent years, we have already created a great many tools with Industry 4.0, with the research projects around it" (Interview C2, 2022, p. 1).*

Company C is developing their own practices. However, they are not in partnership with larger software providers:

> *"I think we manage to look at it in a different way than other management consultancies perhaps, a bit more neutrally. We don't have any partnering with any other manufacturers (...) which gives us the opportunity to react really flexibly. This is reflected in many topics, whether it's IT implementation and IT selection or the consideration of IT architectures, we are relatively free in finding solutions and can also make flexible proposals" (Interview C1, 2022).*

Instead, they are building up subsidiaries with various software specializations:

> *„in the last few years, a whole series of partner startups have been added (...) some of which are spin-offs, some of which are investments by us, where we basically bring a business model idea that we have developed with or for customers or partly for ourselves into a company. Company C takes a stake in the company, and we profit as consultants from the fact that we have completely new tools of our own at our disposal" (Interview C2, 2022, p. 2).*

This supplement to their classic consulting pillar can be classified as "definitely a change in our business model, away from classic consulting, towards a company that builds tools, supports consulting digitally or realizes digital business models together with customers" (ibid.). It shall be mentioned that company C was the only case which specifically stated BMI projects as part of their service portfolio. To align the mother consulting company and their subsidiaries and be able to maintain the stressed company culture, they created an organizational structure to facilitate the integration:

> *"the innovation alliance of company C, that practically company C as a consulting company and all the other subsidiaries run together, (...) has been developed (...) because an Artificial Intelligence Service Company has a different culture. A company that builds and develops digital twins has a different culture than a consulting company. A training company has a different culture (...) and it's good that each company has the opportunity (...) shape its own culture. Nevertheless, there are a lot of commonalities that we can then use together in the projects" (Interview C2, 2022, p. 5).*

Case company D:

The peculiarity of company D is its strongly technical focused as it identifies itself not only as an IT consulting firm, but as software development provider and IT consulting: "we are not a consulting company in the sense, we are more of an ERP company, with ERP consulting and also consulting in related areas" (Interview D1, 2022). This implies structural specifications as "management consulting is structured differently than a software development company. A software company is more of a product manufacturer" (Interview D2, 2022, p. 3).They have strong geographic focus on ASG: "Our goal is to further increase the benefits for our customers by providing local support for our core customers (…) in Germany, Austria, Switzerland and their subsidiaries" and are specialized to target mid-sized customers "we are specialized in

medium-sized businesses and our focus is medium-sized businesses and there we just bring a very large USP in the area" (Interview D1, 2022, p.3). The strategic goal of company D is to further grow which they partly try to achieve by acquisitions:

> *"to try to buy strategic partners to expand and improve our product portfolio. It's not about buying up companies that now have a different ERP software, that are also active in the midmarket, and then replacing their ERP solution and introducing the ERP solution from Company D there" (Interview D1, 2022).*

This growth induces great changes within company which led to the transformation into a corporation with various subsidiaries:

> *"We have the D Group, which also includes our subsidiaries, and we have company D (...) until the last fiscal year it was still divided into Consulting and Business Solutions. Business Solutions was just the software development and Consulting was (...) the whole sales plus consulting and implementation" (Interview D1, 2022).*

This development naturally comes not without challenges: "We now have to do fully with the integration of our subsidiaries into the company. That's one of the main topics that we're focusing on internally in the business unit" (Interview D1, 2022). As company D is offering their own enterprise resource planning software (ERP) they have a high ratio of long-term client relationships. Technologies they are focusing in their consulting work are firstly the cloud:

> *"we're just evolving towards a cloud provider, software as a service provider, platform as a service provider. Which then also fundamentally changes the way we deal with the customer. Until now, it was possible to offer individual solutions for the customer. Very customer-specific, customizable for the customer, which meant a lot of effort for us to keep the know-how internally and pass it on, in addition to these standard offerings that you can offer in the cloud, but which is then no longer so tailored to the individual customers" (Interview D2, 2022, p. 2).*

From this quote of interview D2 also the organizational consequences become evident, and it shows how interconnected the different BM aspects are within the consulting company. Besides the transformation towards cloud also the related development of interfaces is a prevailing topic at company D as the following quote shows:

> *"customer systems are becoming more and more networked, so it is not an ERP system that is in use, these customers may still exist, but it is often the case that a completely networked*

IT architecture exists at the customers and that is extremely complex to control the whole thing from the customer's point of view" (Interview D1, 2022).

It can be interpreted that due to the increased complexity of the IT architecture, the need for specialized IT consulting services will grow accordingly. Still, it can be further consequences drawn from the establishment of these technologies:

"this cloud development, that just the requirements are driven towards these newer technologies, newer interfaces, and that that also has an impact on firstly the business model, keyword software platform as a service, but also the skills of the employees, away from the old programming languages towards newer and smaller ones that are designed for PaaS" (Interview D2, 2022, p. 4).

3.2.2. Cross-case analysis

Based on the design of the case study, there exist similarities and differences between the four case companies. Besides those intended distinctive factors, other differences have been identified within the study of the single cases. These aspects will be depicted in the following subchapter. Table 5 at the end of this subchapter shows the comparative overview of the synthesized key statements (first-order codes) of the interviewees per each case. It needs to be pointed out that due to interconnected character of the topics discussed in the interviews and due to the fact that there are extremely strong ties between the different interview areas, i.e. history of the company, the aspects of the current BM, determinants of the BM, changes of BM and consequences of BM and expected future BM developments which cannot be separately considered, the categorization of the relevant topics mentioned in the different interview areas can be debatable as other interpretations are possible. The categorization shown is based on the understanding of the interviewer of the intentional expression of the interviewee in the conversation.

3.2.2.1. Companies' growth

Comparing the foundation and first development of the four cases, it can be recognized that three have been established as consulting firms from their beginning, whereas company D has always been a software development company with related IT consulting. As determined in the case selection criteria, all four companies are incumbents and therefore it is not surprising that most of them mentioned during the interviews that they already experienced some fundamental turns in their company history and legal changes. This was explicitly expressed by

company A and company C. Company D was described to have changed in that regard only by growing through acquisition activity. Company C did not disclose any legal changes in the past but is currently also starting to add subsidiaries and with this developing towards a group structure. Regarding strategic orientation and organizational structures, company C also was portrayed as rather stable. Similarly, after company B's MBO, they committed to constant flexibility which might have lifted the need for greater restructuring activities. In contrast, company A and D mentioned explicitly a recent restructuring project to adopt to changed market requirements.

3.2.2.2. Current strategy and business model

Value proposition:

The VP has been defined as core promise of a company. Consequently, it appears natural that the VP aspects which have been extracted in the empirical research are differing substantially among the cases.

Table 5. Different value propositions of the different case companies

Cross case analysis of Value Propositions	
Company A wants to make clients future ready: "Those are transformation projects, after all. And I can really say the projects that I'm on, those are really the ones that are changing the world and if companies are now prepared to enter into such transformations, then this will also make them future-ready, so that they can keep their finger on the pulse for the next 20 years" (Interview A2, 2022, p. 7).	**Company C** formulates its VP as three roles it fills for the client: "we are (…) innovators (…), we (…) help them to build digital business models around their products and service spectrum. We help to anchor this in the organizations because, there's a lot of change involved and integrating (…). And transformator, (…) we also bring companies together and participate in companies that are developing digital business models in order to bring them to market together and make them successful" (Interview C2, 2022, p. 2).
Company B's VP can be understood based on the case study as focusing on very fast acceptance of requirements and answering them with technology: "we are process-focused, i.e. we follow requirements and understand technology as a control instrument" (Interview B1, 2022, p. 4).	**Company D** describes themselves as "an ERP company, with ERP consulting and also consulting in related areas" who wants to provide "added value for customers" by improving their product portfolio (Interview D1, 2022, p. 5).

Source: own work

Customer segmentation:

Some of the most fundamental customer segmentation criteria have already been sorted by the case selection criteria as all customers in this regard are looking for support within the subordinate consulting sector of IT consulting. Among the distinctive factors different customer segments have been selected based on the industry of the client and the client size where an assumption of a general correlation tendency between client organization size and project scope is made. Throughout the case study the tendency solidified that many IT consulting companies focus on long term client relationship and repeating customer engagement. This was especially strongly expressed by consultants from company D and B. The accentuation by case D in that regard seems logical as the binding moment in their BM is not only the repeating advise and service but also the IT architecture provided: "directive are actually our existing customers decisively, which we have, because we want to keep them also and then (…) [bring them to] also higher software conditions" (Interview D1, 2022, p.11). In the interviews regarding company B it was also reported that demand is extremely high and prioritization of projects needs to be performed posing questions like: "What are our main customers that we want to serve first?" (Interview B1, 2022, p. 13).

Relationships:

The two most important relationship which were indicated throughout the case study are the internal relationship with employees and the external relationship with clients. These strong relations among two key stakeholders can offer various advantages for the consulting company, as interviewee B2 explains why referring to the trust built up during the timespan of collaboration which increases the pleasure of work for consultants as also the loyalty at the client side (Interview B2, 2022, p. 3). In interview B1 a distinctive emphasis on the leverage of customer retention was confirmed: "once a customer has the feeling that he's being well looked after, it's a fast-selling item." (Interview B1, 2022, p. 13). It can be concluded that a high quality of client relations also functions as marketing activity in the form of word-of mouth. Subsequently, relations to technology partners, i.e. innovation partners and service/software providers like SAP have been pointed out in the case study.

Value chain:

Picking up from the thought on relationships, some of the investigated case companies intensively work together with others to create value for the customer. However, different approaches have been identified. Whereas companies B, C and D expressed that they added subsidiaries to their groups to improve the value chain, company B emphasized also on the partnership with larger software providers to develop and market new products and services. This might create to a certain degree of dependencies between the partners. Explicitly stating that they want to avoid such dependencies, company C stresses its independent consulting approach. Still, they are engaging a lot in R&D and also commercialization activities with technology startups: "there are quite a number of joint projects where we have developed a business idea, a solution approach with a company" (Interview C2, 2022, p. 3). This could suggest that a perceived relation between the consulting dependency, which is aimed to avoid, and the maturity of the partner organization exists.

Key resources:

Two connected key resources have been identified. These are skilled and committed employees and the knowledge on which they act on. Therefore, training and knowledge management are the enablers to utilize the key resources in the best way. All case companies seemed to be in consensus about this logic and from here other competitive advantages such as models or products can be developed. Interviewee C2 explains this context:

> *"Company C takes a lot of time and puts a lot of energy into training people. And especially in the age of digitalization, where new tools, where new skills and abilities are always in demand, it is also important that we as an organization invest in the training of our employees. Because that's the only way we can ensure that the knowledge we bring to the project is always state-of-the-art. The training in the profession, the lifelong learning is a very, very important element" (Interview C2, 2022, p. 10).*

The results from the case study suggest further that this emphasis on elaborate knowledge management does not indicate a preference between the two general knowledge management strategies of personalization vs. codification.

Cost structure:

One of the most critical cost and risk factors the interview partners reported is the need to keep up with trends. Following those trends and new requirements will determine the value of a company, irrespective for consulting or any other industry. The goal of every company is usually to survive and increase their value, so they are posing themselves the question on how

to do so. Interviewee B1 explained the phenomenon of a changing valuation panel which adds factors that contribute to the valuation of a company. The most important factor which is currently in the process of being incorporated in this panel is the sustainability of a company. Nearly all interview partners mentioned sustainability in various areas such as business travel or pursuing green consulting projects (how can a client become more sustainable?) as fundamental factor influencing the business world. This can also lead to a reevaluation of product and companies: "the instrument panel will change. If I'm valuable today because I've brought a great product to market, in the future people might ask, well, is this great product sustainable (…)?" (Interview B1, 2022, p. 8) Accommodating this new valuation criteria will be related with partly significant costs to carry and a certain risk.

Revenue model:

The predominant revenue stream for companies A – C is suggested to be according to case study findings the classic consulting project fee charges. However, as all examined case started engaging in the development and commercialization of products as additional pillars, licensing fees can be applied, especially for cloud-based SaaS and PaaS (software/platform as a service) products. As company D has naturally two main pillars, it indicates that their revenue streams are as well twofold, and a great proportion originates from software license fees. Company C revealed in one interview also the spin-off of developments and invested startups. They describe the current revenue composition as based on the consulting part still as main financial contribution, but that the number of subsidiaries growing and that they are working jointly to increase the revenue contribution by those (Interview C2, 2022, p. 3).

As one of the strongest factors influencing the prices consulting firms can charge seems to be the degree of skill and experience of consultants. Personnel consequently might also contribute to a great degree to the operating costs posed to a consulting firm and correspondingly better skilled and experiences consultants will demand higher salary, therefore cause increased cost to the consulting firm, but will also allow it to charge higher fees from its clients. To balance that relationship out, in interview B1 the approach used at case company B1 was explained as creating a mix of very well-connected junior and senior consultants on a project where junior consultants can always approach seniors where needed and still gain experience and grow professionally while also giving the client the feeling of being served with a network of expertise and competences. Otherwise, interviewee B1 would see the risk that clients request to work only with costlier seniors while wanting to simultaneously have lowest costs possible:

"you'd have the problem that somehow everyone only wants seniors, and seniors are usually expensive, and there are some customers who only want seniors, but others want seniors at a reasonable price, and you can only really achieve that with a mix like that" (Interview B1, 2022, p. 13).

Organizational structure and culture:

As already stated throughout this dissertation, the organization and its underlying culture are crucial aspects for the positioning of the consulting firm and its sustainable success. Therefore, many related topics like talent attraction, recruiting and training as well as retaining talent, developing corporate DNA, employees' focus on the customer and their identification with the organization's business model, communication within the organization or actual working conditions like remote vs. onsite work and the topic business travel are just a few topics that have been covered in all case study interviews. To dive deep on all these topics will exceed the frame of this dissertation, but the main conclusion that shall be made here is the importance all investigated consulting firms by both, the employees, and the companies themselves, is attributed on these cohesive topics. These topics not only need to be recognized but also acted on to manifest in concrete structures like the matrix-organization company is operating on and be revised regularly as the interviewees state like interviewee B2: "(change) somehow belongs to the job description for me" (Interview B2, 2022, p. 2). To be able to act on organizational requirements addressed to the consulting firm is also considered a success factor: "Company C has managed, unlike other management consultancies, to create models that are also attractive to what I would now call minorities." (Interview C1, 2022, p. 15). In the case study interviews also topics have been revealed where the interrogated consultants are not satisfied yet with the response of the consulting company. Topics like sustainability in the consulting workday, i.e. decisions on whether to travel or not and if they decide for travelling which means to use, have not been made yet. Additional questions are whether virtual communication from the home office is sufficient and will be dominant in the long term or if the return to offices and a face-to-face communication (also between consultants) is more efficient and effective.

Ability for transformation:

The crucial importance of this BM element has already been pointed out. Still, according to the results from the case study, this relevance will further increase in the future. As the term "compressed disruption" (Interview A2, 2022, p. 3) indicates, the pace of changing requirements and consequently, the pace of adoption by the consulting firm and the development of solutions is also expected to speed up as reported in interview D1: "what you

also notice is that the innovation cycles are getting shorter and shorter. The whole software is actually developing at a rapid pace" (Interview D1, 2022, p.12). The cases expressed consensus on the priority "to always stay on the ball and quickly provide solutions, new solutions, to the respective industry requirements" (Interview D1, 2022, p.12). According to the case study results it is a necessity and success factor to "think forward, think solution-oriented and not problem-oriented as before and (…) also offer many professional impulses" (Interview C1, 2022, p. 8).

3.2.2.3. Digitalization impact on business models

As expected, all four cases emphasized a great importance of technology for their business as well internally by using various tools (e.g. Microsoft Teams and other virtual communication software, tools for project planning, online data repositories or ServiceNow in the case of company D) as also externally in client projects. In the latter case greater differences have been identified as company A, B and D expressed the relevance of ERP tools in their work. Particularly for company D this seems logical as they are offering their own ERP system to clients for which they are aiming to add modules and interfaces to increase the functional spectrum and moving the systems to the cloud, whereas company A and B pointed towards the ERP system of SAP as a great topic for client projects and especially the implementation of their recent ERP version S/4HANA. Company C also performs ERP introduction or upgrade projects. However, their focus seems to be not as strong. Furthermore, company C stressed its independent consulting approach, not partnering with large software providers like SAP. In contrast, company B pointed towards their product partnering with SAP and joint development and marketing of products. There was consensus about the relevance of cloud systems, which is expected to further increase in future. Especially for company A and D cloud strategies were mentioned with the difference that in the interviews regarding company A it was described that performing cloud strategy projects are one of their strengths whereas is currently in the transition from on-premises towards cloud.

3.2.2.4. Change process in the business model (due to digitalization)

To achieve the mentioned growth possibilities for IT consulting, success factors need to apply to be able to overcome barriers which have the potential to hinder that growth. The investigated consulting firm cases seem according to the consulted data to experience stable growth. Still, they also expressed the awareness about the need to be agile and adoptive to changes: "we're very innovative we want this change. We want this progress and that makes it

easier, of course, because then we don't inhibit or stop all these processes (…) this mindset alone, I think, facilitates digitalization, no matter at what point it comes" (Interview A1, 2022, p. 6). Organizational structures have been created to avoid falling into a standstill: "(we) also permanently reorganize ourselves according to the market, so that is actually so that we always see how the market is organized and how we have organized the consulting strands of our segments" (Interview B1, 2022, p. 6).

Therefore, based on the case study a certain degree of constant change is happening due to a change affine mindset and company culture embracing that mindset and consequently an organizational structure executing that willingness for change. This basis in turn drives developments and improvements in operations in many cases by intensified use of digital solutions. All cases interviewed confirmed that online consulting is today prevailing compared to onsite offline consulting latest since the start of the covid pandemic in 2020. Furthermore, it was confirmed that a great repository of digital tools and methods is used for consulting activities like paperless office, working mobile, various extensions on classic office tools like Microsoft PowerPoint, queries via websites like Menti.com (Interview A1, 2022, p. 5) to list only a few examples indicated during the interviews. The constant development of digital solutions for clients has already been addressed. In this context one finding was outstanding which is the focus on the buildup of products by consulting firms. All consultants expressed the orientation towards commercializing of tools and software products.

Another aspect related to the concrete workday of consultants has already been addressed and is still undecided, which is the location and mode of work, i.e. onsite or (home) office and consequently offline or online and the option of any mixed models. The consultants asked within the case study had no clear opinion here and varying predictions on how the new mainstream might look like.

3.2.2.5.. Internal and external determinants of business model change (through digitalization)

The case study results show that the interplay of internal and external determinants is shaping the requirements for a consulting firm. One of the most significant findings from the case study is the fact that consulting firms are determined by requirements and try to fulfill these requirements. This might be applicable for all businesses. However, it seems consulting firms are extremely dependent on these requirements and successful (IT) consulting firms are based on the results from the case study very ambitious to react on the requirements. Those are fast and effective in adopting to these usually dynamic requirements.

As internal determinant, a flexible mindset and a corresponding culture has been identified. This culture shapes together with the placed requirements by key stakeholders and the organizational structure of a consulting firm. According to the performed case study and already revealed in the section on the BM elements of the case companies in this chapter, the most important stakeholder groups are clients and employees. The influence of the internal group of employees was explained in interview A1: "you have the internal employees that you want to satisfy, but also to remain attractive compared to your competitors and to recruit or attract new employees, you have to keep up and also offer a lot" (Interview A1, 2022, p. 10). The effort to satisfy employees was especially strongly perceived according to the interview statements in company A and C. To achieve that attractiveness company C addresses topics of "New Work" which are in the field of consulting according to the consensus of the investigated interviewees still often underdeveloped:

> *"we are now also taking up new topics that play a role in the context of New Work to a greater extent, such as diversity, equal opportunities, and reconciling work and family life, regardless of whether it is the father or the mother who is taking parental leave" (Interview C2, 2022, p. 8).*

In that regard, consulting firms also face challenges when they do not manage to stay lastingly attractive as according to interview B2 fluctuation is high in the industry also due to often greater promotion and incentive opportunities by switching employers. This in turn creates challenges for project planning and staffing and can also negatively affect team dynamics (Interview B2, 2022, p. 6).

Concerning external determinants all cases confirmed that circumstances are changing a lot and rapidly and respectively are doing the markets: "the markets and the industries have very different developments and some of them are not so easy to predict" (Interview C2, 2022, p. 6). Therefore, "it is the challenge for companies to be in uncertain worlds in big transformation cycles, just think about the energy transition think about climate protection, think about sustainable living"(ibid.). These transformation cycles shape then the requirements of clients to be addressed to consulting firms. One of these elements of the compressed disruption are the consequences of the pandemic:

> *"the impact of Corona will be felt for a long time, doesn't necessarily have to be negative, but that definitely has an impact on the business model and how we work and also how the job of the consultant is changing compared to 5 years ago or 10 years ago" (Interview A1, 2022, p.11).*

It can be concluded that there is also an expectation of new opportunities inherent in these events. Similar views have been expressed regarding sustainability which was mentioned in seven out of the eight case interviews. Great demand is forecasted for sustainability IT projects as requirements from various stakeholders are signaled to the client companies which are then forwarded to the consulting firms. For example, indicated interview B2 the demand of employees to push sustainability activities: "there are also a lot of sustainability issues, which (…) [are driven] by the employees, because they say, "Hey, sustainability is super important to us " (Interview B2, 2022, p. 7). Even more powerful are the demands by society and consequently set up regulations was illustrated in interview C2:

> *"The 17 SDGs, these goals that exist at the global level, which will lead to massive changes in industries in the next 10/15 years, and everything that takes place in terms of industrial change always has the opportunity for a consulting firm to accompany companies in this transformation" (Interview C2, 2022, p. 6).*

3.2.2.6. The consequences of business model changes due to digitalization

The main outcome of the BM change initiatives of the investigated case companies is a constant ability to transform whenever needed and in whatever direction. This will manifest then in the capability of faster solution development: "you also expect faster release cycles, that is, the speed will increase for new features and at the expense of individualization, but that doesn't have to be a disadvantage now either for us or for the customers" (*Interview D2*, 2022, p. 5).

Based on the data of the case study, the investigated case companies are very active in building knowledge, models and products to answer new requirements of clients:

> *"The more tools we bring with us, the more things we can also support in the realization, the greater the range of solutions for the company. And the better we can ultimately position ourselves through new tools, through new subsidiaries, to accompany such processes and to offer special solution offerings for them with tools, with implementation processes, with digital processes" (Interview C2, 2022, p. 7).*

The results from the case study suggest that there is currently great demand for IT consulting and digital solutions existent which is expected to grow in the next years: *"*we believe that growth is possible in all areas, and that is definitely open, and we also see it sportingly and also support each other in continuing to realize this growth*"* (Interview C2, 2022, p. 6). The investment in digital tools and software is resulting for the examined case companies in a

broader revenue foundation and greater diversification. Partnering with other IT companies so far enabled the IT consulting firms to faster facilitate new technologies and create advantages for themselves and their clients. For example, according to interview D1 the move to the cloud decreases the operative costs of IT systems and will lower the costs for future software update consulting projects due to reduced effort (Interview D1, 2022, p.15). It is expected that these trends will continue and possibly even intensify. Thus, missing demand can currently not be considered as a barrier to further growth, however, fulfilling this demand might be a limiting factor: "With all the workload (…) we have right now, because it's really just the case that we can't fill some of the projects and have to turn down some projects because we say we can't staff it" (Interview C1, 2022, p. 11). The limiting growth factor seems to be the human aspect of attracting enough skilled consultants who can contribute positively to the company culture and mindset.

The examined case companies stressed the combination of technology and human performance as indicators for long term success: "people business is just one of the most important things (…) because we work just always between people. That's important, but the workshops revolve around technical topics and the focus is clearly on the technical aspects" (Interview D1, 2022, p.15). The human aspect shows to be challenging, not only internally but as well for successful collaboration with clients. Which has been stressed by C1: "with every IT introduction, if it failed afterwards, what was the reason? Yes, usually because of the people who were not taken along" (Interview C1, 2022, p. 8). Therefore, interviewee C1 emphasizes: "you always have these three levels, process, organization and system, which always play together (…) you have to pay extreme attention to it"(ibid.).

Table 6. Cross-case analysis based on first-order codes

Interview Area:	A	B	C	D
Company history outline	➔ Past foundation and growth as a consulting firm with focus on technology ➔ Established company with several turns in the past ➔ Two years ago, last restructuring for adoption to market requirements ➔ Achievement of becoming one of biggest consulting firms	➔ Origin in Big Four ➔ After legal separation and bankruptcy → European MBO ➔ Covid as recent changing point of the consulting industry ➔ Established position as trusted adviser over time developed	➔ Maintained company culture despite organizational growth (in the past and today) ➔ Pandemic as short-term change moment inside the organization ➔ Historically high importance of internal company events ➔ Culture and cooperation forms as USP since foundation ➔ Years long experience gathered in digital transformation and related tool creation	➔ Early close cooperation and integration (acquisition activity) of partner firms ➔ Recent restructuring and renaming of business units ➔ Huge software customization efforts of clients in the past accompanied ➔ Strong organizational growth in the past years
Current strategy and business model	➔ People Business ➔ Employee perception of clearly formulated purpose of the company ➔ High value of personal contacts (internal and external) ➔ Great innovation effort ➔ Quick market capture capability ➔ Linked internal network (knowledge sharing) ➔ Value of knowledge and organizational experience ➔ Company values and inclusion ➔ Leadership effort and employee commitment ➔ Customer value proposition to deliver promises to clients ➔ Change important part in the company ➔ Expertise in change management ➔ Projects aiming for future-readiness of clients	➔ Offering a complete service package from strategy to implementation and technology support ➔ Strong market orientation and organization structured accordingly ➔ Matrix-organization: communication along segments and service lines ➔ No special industry focus → high industry flexibility ➔ Internal knowledge sharing network via experts + topic database ➔ Well-connected mix of junior and senior staffing within projects ➔ Three career paths: adviser, project manager and business architect ➔ Self-development of software products ➔ Change as part of a consultant's job ➔ Long and close customer relationships with recurring project orders ➔ Cooperative working atmosphere with clients (not seen as service provider) ➔ Transparency approach (top down)	➔ People at the center ➔ Culture of teamwork and inclusion ➔ Efforts to maintain company culture when hiring: Personal fit ➔ Long term-oriented employee management: Skilled employees as competitive advantage ➔ Five functional specialization paths ➔ Position as three consulting roles: innovator, change manager and transformator ➔ Focus on strategic advice (on technology topics) ➔ Besides consulting additional business pillars which support the consulting business unit ➔ Joint ventures beyond conceptualization, but product development and commercialization ➔ Particularly in BMI projects, whole process supervision from conceptualization, implementation, realization, until operation ➔ Superordinate alignment organization for all business units:	➔ ERP software development provider and related consulting firm ➔ Structural differences between management consulting and software consulting (more product focused) ➔ Strong geographic focus on ASG ➔ Geographic customization of consulting (e.g. language) ➔ Company as group structure with various subsidiaries ➔ Growth through strategic software company acquisitions ➔ Topic-specific, implementation and (software) upgrade consulting projects ➔ Industry specific solutions with special focus on automotive ➔ Specialized to target mid-sized clients (German Mittelstand) ➔ People business as basis to cover the technological topics ➔ Employee focus perceived

		➔ Great share of commonly known brands/companies as clients + public clients	independent organizational cultures within Bus + solution elements by different BUs within projects ➔ Training employees as knowledge management strategy	
Digitalization	➔ Great emphasis on technologies (internal and external) ➔ Cloud-first strategy projects as strength ➔ Great experiences in IT- security projects ➔ SAP S/4HANA introduction as high impact technology ➔ Stable IT working-environment (also remote) for consulting work established ➔ High fraction of virtual meetings established ➔ Safe shared data repositories	➔ Process-focused work with technology as control instrument of requirements ➔ Balanced importance of technological know-how and personnel model ➔ Emissions calculator developed ➔ Awards by SAP for software developments (recently for contract management tool) ➔ Tools offered in SAP store	➔ High demand for technology projects experiencing ➔ No partnering with technology solution providers ➔ Independent and neutral consulting ➔ Systems engineering and product lifecycle management (tools) ➔ Self-developed consultants' capacity planning tool ➔ Efficient travel accounting tool ➔ Extensive use of the possibilities of Microsoft Office (Teams, Sharepoint) ➔ Building SaaS in the subsidiaries → Network collaboration of subsidiaries for different performance components ➔ Increased toolbox for remote consulting work	➔ ERP software development and related consulting ➔ Acquisition of digital tool developers for production automation ➔ Entry in module portfolio of integrated analysis tools, document management systems, CRM ➔ Great emphasis of cloud solutions ➔ Shorter innovation cycles → need to adopt quickly ➔ Interconnectivity of systems via interfaces (between software and software versions) ➔ Shorter innovation and release cycles → advantages for company and clients ➔ Service Now introduction for software support department
Change process in the business model (due to digitalization)	➔ Internal work: Paperless office ➔ Agile working ➔ Mobile focus of solutions ➔ Own developed tools for the consulting work ➔ Own technology R&D department ➔ Innovation collaboration partnerships ➔ First point of contact → preferred adviser ➔ Broad repository of strategic solutions ➔ Personal development options for employees	➔ Worldwide expansion also in partnership with local consulting firms ➔ Product partnership with SAP → joint product development ➔ Development into a company group by product, IT service and strategy consulting subsidiaries ➔ New valuation for company value including sustainability aspect ➔ Constant transformation and efficiency improvement in consulting ➔ Increased (digital) communication since Covid ➔ Ever faster changing circumstances	➔ Push for solution and future oriented thinking ➔ Focus on change management ➔ Attention to the interplay of process, organization and system ➔ Restructuring of data/knowledge repository ➔ Open innovation to gain new consulting tools ➔ Away from classic consulting towards digital tool creation (in collaboration with customers) ➔ New Work topics in focus: diversity, equality, reconciliation of work and family life	➔ Organizational and technological integration of acquisitions as transformational process ➔ Increase of product portfolio → Added value by new functionalities for the ERP system ➔ Internal use of third-party software like project management tool ➔ ISO certification ➔ Transition towards Cloud provider/SaaS/PaaS provider → changes in client relationship ➔ From customizing towards standardization ➔ Flexibilization of work

				➔ Superregional online teams
Internal and external determinants of business model change (through digitalization)	➔ Internal organizational drive and wish to develop ➔ Fight for skilled staff ➔ Interplay of internal and external drivers ➔ Climate change → new market opportunities ➔ Impacts of the pandemic sustainable changing the workday of consultants ➔ Compressed disruption (health, political, economic current crises) influencing customer requirements ➔ Cross-fertilization → interplay between consulting firm and client	➔ New requirements for companies → new requirements for consulting ➔ New (joint) technology developments ➔ Covid influencing the consulting workload in different industries ➔ Changed customer preferences regarding onsite vs remote consulting ➔ Sustainability guidelines in consulting ➔ High demand requires project/customer prioritization ➔ Product changes of technology providers ➔ Employee fluctuation as a challenge ➔ Global employee sourcing ➔ Sustainability as internal and external influence	➔ Need of embrace sustainability in the whole organization ➔ Sustainable change in consultant work due to corona → onsite presence not mandatory any longer ➔ War in Ukraine and its consequences ➔ Transparent leadership communication from leadership + Incorporation of staff opinions in decisions ➔ (Hardly predictable) market and industry developments ➔ Big transformation cycles: energy transition, climate protection, sustainably living ➔ Global (sustainability) goals as change determinants of industries → offer consulting market opportunities	➔ Customer retention and recurring revenues ➔ Technological customer requirements ➔ Covid impact on consulting everyday work ➔ Cloud development impacting the client requirements and requirements on consultants
The consequences of business model changes due to digitalization	➔ Less simple work tasks due to new technologies → changed working conditions for consultants ➔ Sustainability (ecological + long term value) as project themes → adoption by consulting firms ➔ Potential to quickly jump on new technology driven market opportunities ➔ Corporate culture and employees as resources to make an impact for future ➔ Goal and expectation of high (sales) growth ➔ Transformation projects based on technology products with long-term impact on client business ➔ Internal and external recognition of leadership guiding performance	➔ Fast reaction to business changes due to flexible structure ➔ Working time and travel blurry into mobile time ➔ Word of mouth as growth driver ➔ Technologies permeated during pandemic eased consulting work ➔ New working reality as mix of onsite and remote ➔ New ways of generating customer loyalty	➔ Fast adoption to new technological possibilities ➔ Unfilled demand due to lack of consultants ➔ Sustainable form of online and offline consulting work required ➔ Further possibilities to co-innovate ➔ Diversity offers growth potential ➔ Consulting product portfolio as competitive advantage	➔ Synergies due to the software portfolio and internal use ➔ Moving to the cloud reduces (update) project costs ➔ More complex and networked IT-systems → Increased support by companies demanded ➔ Remote online work offering greater geographic flexibility to consultants ➔ Better IT solutions expected in the future due to standardization ➔ Central data pools connected to various tools ➔ Increased contract management → easier maintenance and data exchange

Source: own work

Chapter 4. Discussion of research findings

In the discussion part of this dissertation the stated research questions shall be answered by confronting the insights from the literature review with the results from the multiple case study. Accordingly, the discussion will be organized in the sequential order of the three research questions and synthesize the findings from the literature review and multiple case study.

4.1. Internal and external determinants of business model innovation

Llewellyn (2017) identifies in his research the following external determinants: democratized knowledge, self-sufficiency, digital entrepreneurialism, modular offerings, productization, transparency, commoditization, client sophistication, borderless competition and connectivity and democratized technology (Llewellyn, 2017, p. 253). Some of these topics have been directly indicated by the interviewees of the case study as relevant aspects for the development of BMs in the consulting industry like the importance of knowledge and its management in combination with transparent communication within the consulting organization, digital entrepreneurialism and consequently strong focus on productization of consulting solutions and therefore greater spread of technologies, i.e. democratized technology. Some have been covered in a more indirect way like self-sufficiency which is achieved by the establishment of additional pillars and increased diversity. However, it was also discovered in the case study that great emphasis is put on the collaboration with other IT companies such as software providers which decreases self-sufficiency but offers advantages like the acquisition of new know-how. Modular offerings have been confirmed as a relevant aspect for company D and its strategy to move from customization of its ERP system towards cloud based standardized modules which can easily implemented and used via various interfaces of the whole connected IT architecture. Here also the determinant of connectivity fits in as it was confirmed by the case study that IT systems become increasingly interconnected and elaborate which also requires greater sophistication of clients. However, it was observed within the case study that the speed of changing requirements and solutions outperforms the pace clients can acquire adequate sophistication on the various topics and thus the need for increased consulting support is rising greatly.

In line with Kohlen & Holotiuk (2017) who point out the fact that consulting is strongly connected to its client's competitive reality (Kohlen & Holotiuk, 2017, p. 175) the case study results suggest that the most important determinant for BMI at IT consulting firms is changing

client requirements. As already covered, those can have their origin in various changing factors affecting the client business and these factors currently occur in a fashion of "compressed disruption" (Interview A2, 2022, p. 3). Subsequently and related are also the requirements by other key stakeholders, mainly the consulting firm employees relevant to consider.

4.2. Business model innovation due to digitalization

Werth & Greff (2018) have identified four different approaches for generating new consulting BMs that leverage scalability for consulting services by digitalization ("Core-only-consulting"; "Platform consulting"; "Self-service consulting" and "Algorithmic consulting" (Werth & Greff, 2018, p. 125). Aspects of two of those have been identified in the case companies' digitalization process which are Algorithmic consulting and Platform consulting. Algorithmic consulting refers to an automation and algorithmic processing of core consulting firm processes, which are only supervised by the consultants. Application of this approach can be observed in the digital support of data analysis by various tools. Particularly company A and D expressed the great focus reliance on the use of digital solutions in their daily consulting work. Even stronger application was expressed by case companies of the concept of platform consulting. This should be related to virtualized asset-based consulting (Nissen et al., 2019, p. 319),i.e., the development of digital tools and software which can be sold or licensed by consulting firms like assets. The investment in the development and commercialization of digital solutions and tools (mainly through R&D cooperation) occupied a great focus in this dissertation. Therefore, this trend identified by academia can clearly be confirmed by the results of this case study.

Nissen (2019) postulates that digital transformation can lead also in consulting to the different types of BMI which range from evolutionary to disruptive (Nissen et al., 2019, p. 331). Based on the results from the case study, the transformation the case companies are currently experiencing is assessed as rather evolutionary than disruptive. This might have two reasons. Firstly, as already elaborated, have the case companies already managed in the past to equip their BMs with the capability to constant transformation. This should, if implemented acted on accordingly, prevent the need for disruptive transformation as a constant comparison with the current BM and the holistic environment is performed. However, this might still entail the need for corrective restructurings which company A and D reported. Still, those seemed not to have a disruptive character for the interviewees. This relates two the second reason which refers to Cavalcante (2011) who indicates that an innovation taken without context cannot be considered disruptive or incremental but is only more or less disruptive within the context of a specific

organization and its core processes (Cavalcante et al., 2011, p. 1335). Therefore, the performed BM changes by the case companies can be considered more or less disruptive dependent on the context taken into consideration. Referring to Taran et al. (2015) who describe incremental innovations as minor changes such as extensions (McDermott & O'Connor, 2002) or improvements in the BM (e.g., Tidd & Bessant, 2009), which in sum generate a large impact (Taran et al., 2015, p. 306) extensions and improvements in the BMs of the case companies have been identified which indeed are showing a positive effect on the total performance. The results of those BM changes on the individual BM elements have been disclosed in the cross-case analysis and will be picked up again in the following answer on relevant success factors.

4.3. The consequences of business model changes due to digitalization

According to the performed literature review, continued growth in the German IT consulting industry is expected by scholars (Nissen, 2018, p. 2). This assessment is in line with the opinion stated in the case study interviews performed. To achieve that predicted growth possibilities, success factors need to apply to be able to overcome barriers which have the potential to hinder that growth. Nissen (2018) addresses as one of the most critical pitfalls and barriers to future success in the IT consulting industry in continued success which "can make you lazy and inattentive for potentially disruptive competitors" (Nissen, 2018, p. 2). The investigated consulting firm cases seemed according to the consulted data experiencing such a continued success, but they also expressed the awareness about the need to be agile and adoptive to changes. Organizational structures have been created to avoid falling into a standstill and enable fast reorganization and reaction to changing realities in the market (Interview B1, 2022, p. 6).

Therefore, based on the case study some of the most critical success factors are a change affine mindset and company culture embracing that mindset and consequently an organizational structure executing that willingness for change. Following Nissen's argumentation, he states that despite consulting firms are advising companies on digital transformation topics, their own operations are often less digital developed and the services e.g. only performed in "the traditional face-to-face approach" (Nissen, 2018, p. 13). This conclusion can, based on the results of the empirical research of this dissertation, not be supported. All cases interviewed confirmed that online consulting is today prevailing compared to onsite offline consulting latest since the start of the covid pandemic in 2020. Also, it was confirmed that a great repository of digital tools is used for consulting activities.

Llewellyn (2017) poses the risk for consulting firms to rely mainly on talent as USP (Llewellyn, 2017, p. 254). Based on the results of the case study it can be affirmed that the quality and level of skills of consultants is still seen as an important success factor. However, the examined case companies stressed the combination of technology and human performance as indicators for long term success.

Nissen mentions a success factor leverage effect which was also stressed in several case study interviews, i.e. that future growth in the industry will be distributed to who manages to create (technology-based) business opportunities and can provide solutions to meet these client requirements for a lower cost than competitors (Nissen, 2018, p. 3). The fact that consulting firms always need to closely follow client requirements was already made clear throughout this paper. The business opportunities creation can according to interview B1 be explained in the following way that, either (external or internal) factors initiate for businesses the need to change and this forced change creates requirements which are posed to the consulting firm or the client itself develops, e.g. invents a new technology and wants to integrate this new aspect in its business, for example requires a suitable BM for the new technology and looks for help to create this BM (Interview B1, 2022, p. 4).

Based on the data of the case study, the investigated case companies are indeed building knowledge, models and products to answer new requirements of clients. Furthermore, the results from the case study suggest that there is currently huge demand for IT consulting which is also forecasted to continue in the next years and thus does not need to artificially be generated. Hence, missing demand can currently not be considered as a barrier to further growth, however, fulfilling this demand might be a limiting factor as the case companies reported challenges to staff all requested projects (Interview C1, 2022, p. 11). The price or cost factor for consulting services which was referred to by Nissen as success factor, was not covered in any case interview. Therefore, no statement can be made here, but it suggests that this aspect does not rank under the most important success factors or barriers. However, what was expressed was the fact that due to newer technology and in the specific case of bringing ERP systems to the cloud, long term costs for software can be reduced. According to interview D1, through the move to the cloud the operative costs of the IT system will be decreased and furthermore the costs for future software update consulting projects due to reduced effort.

Conclusions

The dissertation aims to answers the stated research questions on basis of the literature review and a multiple case study. The conducted research identified several external and internal digitalization-related determinants which are affecting the BM of IT consulting firms. Firstly, it needs to be stressed that all four examines cases expressed an outbalanced importance between the people business and the technological aspects of their consulting work. These two dimensions imperatively need to go hand in hand to be successful as IT consulting firm. Therefore, the most important internal determinant is the organization itself. A clearly defined culture sets the foundation for an effective organizational structure which enables the company to operate flexibly and fast according to the clients' requirements.

Clients changing requirements have been identified as the most relevant external determinants introducing changes in the operation of consulting companies. In particular and unsurprisingly, the most drastic determinants for the client business are firstly, the increasing focus on sustainability in business and the related consequences. Secondly, the current revolution in the workday of businesses which have been at least partly induced by the COVID-19 pandemic and its consequences. Corresponding to these determinants and drivers, consulting firms are adopting their organizational set up and their offers. In regard to changing offers by IT consulting firms, the increased development and commercialization of own software products and tools needs to be pointed out. Therefore, it can be observed as an BMI outcome that many IT consulting firms are establishing additional pillars besides their classic consulting activities. A related consequence of these trends is the increased complexity and interconnectivity of IT systems which is induced by businesses and the support of consulting firms but also poses challenges to both. Ultimately, as the most critical success factors have a change affine mindset and company culture been identified which embraces that mindset and consequently enables an organizational structure executing that willingness for change. This sets the basis to be able to quickly adopt to any changing requirements posed to the consulting firm.

Comparing to the assessment of Nissen in 2015, this thesis sees a great progress in the digital transformation in Germany and especially in the German IT consulting industry. Still, great evolution is expected to happen in the next years.

Limitations

Despite the chosen methodological approach for this dissertation helped to extract relevant insights to satisfy the stated research objective, there must be considered several limitations. First, this study was designed to analyze the business model of specifically selected case companies and to gain certain tendencies which might apply to a greater for the IT consulting industry in Germany. Thus, the scope of the research is restricted to those examined cases and their connecting attributes. This focus limits the ability to generalize the results.

Secondly, for each case two interviews have been conducted as main data source. These interviews have been performed with consultants employed by the consulting firm. Therefore, the interview insights portray the opinion and experiences of these consultants and cannot necessarily depict the whole business model of the consulting firm. Additionally, it needs to be mentioned that consultants have been interviewed with varying hierarchical level within the consulting firm and thus not all might have extended access to knowledge about strategical decisions and the decisions backgrounds. Furthermore, consultants with varying tenure within the firms investigated have been interviewed which also offers a great variance in opinion about the firm and knowledge about the firm's development. Lastly to add to this point is the fact that by speaking to different individuals, always different personal perceptions and priorities of aspects worth describing in an interview are expressed. Thus, there will always be a spectrum of answers to any question. Also, the precondition of anonymity of the case companies limited the use of secondary data which would potentially have allowed to dive deeper on the analysis of the BMs and would have strengthened the data triangulation.

Lastly, general research limitations of conducting any academic study shall not be ignored. Despite the research was performed by the researchers best of her knowledge, humans work tends not to be completely free of errors which can occur by processing the different data forms or the interpretation of literature as well as the interview statements.

Future research

Further research will be helpful to deepen the understanding about the development trends gained from this thesis. Therefore, more intense case study work with an increased number of interviews per case and additional data sources can be beneficial to depict a holistic picture of the BM of a consulting firm. As the client relation is an essential part of any consulting firm and the client requirements immensely impact the work of consulting firms, the client point of view should also be included in such an in-depth investigation. For gaining more generalizable insights on the digital transformation of the IT consulting industry, conducting additional

quantitative research is necessary. This could be realized on basis of the work performed by Nissen.

References

Amit, R., & Zott, C. (2020). *Business Model Innovation Strategy. Transformational concepts and tools for entrepreneurial leaders*. WILEY.

Andreini, D., Bettinelli, C., Foss, N. J., & Mismetti, M. (2021). Business model innovation: a review of the process-based literature. *Journal of Management and Governance*. https://doi.org/10.1007/s10997-021-09590-w

Bensberg, F., Buscher, G., & Czarnecki, C. (2019). Digital Transformation and IT Topics in the Consulting Industry: A Labor Market Perspective. In *Advances in Consulting Research. Recent Findings and Practical Cases* (pp. 341–357). https://doi.org/10.1007/978-3-319-95999-3_16

Bouwman, H., Nikou, S., Molina-Castillo, F. J., & de Reuver, M. (2018). The impact of digitalization on business models. *Digital Policy, Regulation and Governance* , *20*(2), 105–124. https://doi.org/10.1108/DPRG-07-2017-0039

Brennen, S., & Kreiss, D. (2014, September 8). *Digitalization and Digitization*. Culture Digitally.

Cavalcante, S., Kesting, P., & Ulhøi, J. (2011). Business model dynamics and innovation: (re)establishing the missing linkages. *Management Decision*, *49*(8), 1327–1342. https://doi.org/10.1108/00251741111163142

Chesbrough, H. (2010). Business model innovation: Opportunities and barriers. *Long Range Planning*, *43*(2–3), 354–363. https://doi.org/10.1016/j.lrp.2009.07.010

Christensen, C. M., Wang, D., & van Bever, D. (2013). CONSULTING ON THE CUSP OF DISRUPTION. *Harvard Business Review*, 106–114.

Crișan, E. L., & Stanca, L. (2021). The digital transformation of management consulting companies: a qualitative comparative analysis of Romanian industry. *Information Systems and E-Business Management*. https://doi.org/10.1007/s10257-021-00536-1

Deelmann, T. (2018). *Does Digitization Matter? Reflections on a Possible Transformation of the Consulting Business* (pp. 75–99). https://doi.org/10.1007/978-3-319-70491-3_3

Deelmann, T. (2019). Consulting: Characterization of Concepts and Connections. In *Advances in Consulting Research. Recent Findings and Practical Cases* (pp. 31–52). https://doi.org/10.1007/978-3-319-95999-3_2

Dymitrowski, A., & Mielcarek, P. (2021). Business model innovation based on new technologies and its influence on a company's competitive advantage. *Journal of Theoretical and Applied Electronic Commerce Research*, *16*(6), 2110–2128. https://doi.org/10.3390/jtaer16060118

Ecobici, M. L. (2017). THE USE OF ANSOFF MATRIX IN THE FIELD OF BUSINESS. *Annals of the „Constantin Brâncuşi" University of Târgu Jiu Economy Series*, *II/2017*.

Flynn, M., & Kowalkiewicz, M. (2018). *Opportunities and Risks of Digital Business Model Innovation for Behemoths in Consulting* (pp. 101–116). https://doi.org/10.1007/978-3-319-70491-3_4

Galal, K., Richter, A., & Wendlandt, V. (2012). IT CONSULTING AND OUTSOURCING FIRMS: EVOLUTION, BUSINESS MODELS, AND FUTURE PROSPECTS. In *The Oxford Handbook of Management Consulting* (pp. 117–136).

Greff, T., Johann, D., & Werth, D. (2017). *Service Digitization in the Consulting Domain-Classification and Service Implementation for a Digital Consulting Front Store Pilot*.

Hansen, M. T., Nohria, N., & Tierney, T. (1999). *What' s Your Strategy for Managing Knowledge?* www.hbr.org

Heusinkveld, S., & Benders, J. (2012). CONSULTANTS AND ORGANIZATION CONCEPTS. In *The Oxford Handbook of Management Consulting* (pp. 267–284).

Hitt, M. A., Ireland, R. D., Sirmon, D. G., & Trahms, C. A. (2011). Strategic Entrepreneurship: Creating Value for Individuals, Organizations, and Society Executive Overview. *Academy of Management Perspectives*.

Johnson, M. W., Christensen, C. M., & Kagermann, H. (2008). Reinventing Your business model. *Harvard Business Review*, 57–68.

Kipping, M., & Clark, T. (2012). Researching Management Consulting: An introduction to the handbook. In *The Oxford Handbook of Management Consulting* (pp. 1–26).

Kohlen, J., & Holotiuk, F. (2017). Consulting firms under the influence of digitalization: The need for greater organizational agility. *SIGMIS-CPR 2017 - Proceedings of the 2017 ACM SIGMIS Conference on Computers and People Research*, 175–176. https://doi.org/10.1145/3084381.3084421

Larsson, A. (2018). *Utilizing digitalization for improved knowledge transfer in Project-Based Organizations A single case study of a management consulting firm*.

Llewellyn, R. (2017). How Digital Democratized Consulting. In *Phantom Ex Machina* (pp. 251–262). Springer International Publishing. https://doi.org/10.1007/978-3-319-44468-0_17

Massa, L., & Tucci, C. (2013). Business model innovation. *The Oxford Handbook of Innovation Management*.

Morris, T., Gardner, H., & Anand, N. (2012). *STRUCTURING CONSULTING FIRMS* (pp. 285–302).

Nissen, V. (2018). Digital Transformation of the Consulting Industry—Introduction and Overview. In *Digital Transformation of the Consulting Industry. Extending the Traditional Delivery Model* (pp. 1–58). https://doi.org/10.1007/978-3-319-70491-3_1

Nissen, V. (2019). Consulting Research: A Scientific Perspective on Consulting. In *Advances in Consulting Research. Recent Findings and Practical Cases* (pp. 1–27). https://doi.org/10.1007/978-3-319-95999-3_1

Nissen, V., Füßl, A., Werth, D., Gugler, K., & Neu, C. (2019). On the Current State of Digital Transformation in the German Market for Business Consulting. In *Advances in Consulting Research. Recent Findings and Practical Cases* (pp. 317–339). https://doi.org/10.1007/978-3-319-95999-3_15

Nissen, V., & Machts, T. (2019). How to Successfully Position New Consulting Services with Clients: Insights from the Theory of Planned Behavior. In *Advances in Consulting Research. Recent Findings and Practical Cases* (pp. 299–313). https://doi.org/10.1007/978-3-319-95999-3_14

Nissen, V., & Seifert, H. (2018). *Digital Transformation in Business Consulting—Status Quo in Germany* (pp. 153–190). https://doi.org/10.1007/978-3-319-70491-3_7

Nissen, V., Seifert, H., & Blumenstein, M. (2018a). *A Method to Support the Selection of Technologies for the Virtualization of Consulting Services* (pp. 243–274). https://doi.org/10.1007/978-3-319-70491-3_10

Nissen, V., Seifert, H., & Blumenstein, M. (2018b). *Chances, Risks and Quality Criteria of Virtual Consulting* (pp. 137–151). https://doi.org/10.1007/978-3-319-70491-3_6

Osterwalder, A. (2004). *THE BUSINESS MODEL ONTOLOGY A PROPOSITION IN A DESIGN SCIENCE APPROACH*.

Osterwalder, A., Pigneur, Y., Clark, T., & Smith, A. (Designer). (2009). *Business model generation : a handbook for visionaries, game changers, and challengers*.

Pahnke, A., & Welter, F. (2019). The German Mittelstand: antithesis to Silicon Valley entrepreneurship? *Small Business Economics*, *52*(2), 345–358. https://doi.org/10.1007/s11187-018-0095-4

Parviainen, P., Tihinen, M., Kääriäinen, J., & Teppola, S. (n.d.). *Tackling the digitalization challenge: how to benefit from digitalization in practice*. www.sciencesphere.org/ijispm

Piumelli, F. (2019). Consulting in the Age of Digital Transformation. In *Advances in Consulting Research. Recent Findings and Practical Cases* (pp. 359–370). https://doi.org/10.1007/978-3-319-95999-3_17

Rachinger, M., Rauter, R., Müller, C., Vorraber, W., & Schirgi, E. (2019). Digitalization and its influence on business model innovation. *Journal of Manufacturing Technology Management*, *30*(8), 1143–1160. https://doi.org/10.1108/JMTM-01-2018-0020

Ritter, T., & Pedersen, C. L. (2020). Digitization capability and the digitalization of business models in business-to-business firms: Past, present, and future. *Industrial Marketing Management*, *86*, 180–190. https://doi.org/10.1016/j.indmarman.2019.11.019

Rocha, A. O., Pérez, C. G., Romero, F. C., & Núñez, M. T. D. V. (2018). The business model and its core elements. Proposal of definition and table of core elements. *Contemporary Economics*, *12*(4 Special Issue), 497–518. https://doi.org/10.5709/ce.1897-9254.293

Saam, N. J. (2012). Economics approaches to management consulting. In *The Oxford handbook of management consulting* (pp. 207–224).

Saldaña, J. (2009). *The Coding Manual for Qualitative Researchers*. SAGE Publications Ltd.

Schallmo, D. R. A., & Williams, C. A. (2018). *Digital Transformation Now! Guiding the Successful Digitalization of Your Business Model*. http://www.springernature.com/series/8860

Seifert, H., & Nissen, V. (2018). *Crowd Workplace—A Case Study on the Digital Transformation Within IT- and Management-Consulting* (pp. 299–321). https://doi.org/10.1007/978-3-319-70491-3_12

Taran, Y., Boer, H., & Lindgren, P. (2015). A Business Model Innovation Typology * Subject Areas: Case Studies, Organizational Theory, and Strategic Decision Making. *Decision Sciences*, *46*.

Taran, Y., Goduscheit, R. C., & Boer, H. (2019). Business Model Innovation-A Gamble or a Manageable Process? In *Journal of Business Models* (Vol. 7, Issue 5).

Treichler, C. (2019). Consulting Industry and Market Trends: A Two-Sided View. In *Advances in Consulting Research. Recent Findings and Practical Cases* (pp. 253–272). https://doi.org/10.1007/978-3-319-95999-3_12

Vasil'ev, R. B., Kalyanov, G. N., & Levochkina, G. A. (2010). Directions of strategic IT consulting. *Automation and Remote Control*, *71*(8), 1718–1726. https://doi.org/10.1134/S0005117910080205

Werth, D., & Greff, T. (2018). *Scalability in Consulting: Insights into the Scaling Capabilities of Business Models by Digital Technologies in Consulting Industry* (pp. 117–135). https://doi.org/10.1007/978-3-319-70491-3_5

Yin, R. K. (2014). *Case Study Research. Design and Methods* (5th ed.). SAGE Publications Inc.

Appendix. Interview guide and coding table

Interviewleitfaden Expertengespräch/
Interview guide expert discussion

zur empirischen Studie im Rahmen der Masterarbeit mit Titel/
on the empirical study within the scope of the master thesis with title

„Ein Status Quo der digitalen Transformation von Geschäftsmodellen in der Deutschen IT Beratungs Branche – eine multiple Fallstudie“ (vorläufig)

„A status quo of the digital transformation of business models in the German IT consulting industry – a multiple case study” (preliminary)

Von/ *by* Lisa-Maria Brunnthaler

im Fachbereich (internationales) Management/ *in the field of (international) management*

an den Universitäten Católica Lissabon und Kozminski Universität Warschau/
at the universities Católica Lisbon and Kozminski University Warsaw

unter der Betreuung von/ *under the supervision of*

PhD Piotr Wójcik

Forschungsziel: Erkennen der digitalisierungsbezogenen Determinanten, Prozesse und Ergebnisse der Geschäftsmodellinnovation von Beratungsunternehmen.

Research objective: *To recognize the digitalization-related determinants, processes, and outcomes of business model innovation of consulting companies.*

Anmerkungen:

- Alle Expertengespräche werden anonymisiert. Es werden keine Expertennamen und Unternehmensnamen genannt. Das Unternehmen wird lediglich anhand einiger Merkmale wie Alter, Unternehmensgröße, Unternehmensstandort Deutschland und beratener Industrien eingeordnet.
- Das Expertengespräch erfolgt als semi-strukturiertes Interview und fließt in die explorative Forschung der Masterarbeit ein.
- Um eine korrekte Auswertung zu ermöglichen, wird das Interview aufgezeichnet und transkribiert. Das Transskript wird auf English übersetzt für die Integration in die Arbeit, welche in englischer Sprache eingereicht werden muss. Eine Fassung der Transkription und Übersetzung kann zur Rückbestätigung an den Experten gesendet werden.

Notes:

- All expert interviews are anonymized. No expert names or company names are mentioned. The company is only classified based on certain characteristics such as age, company size, company location in Germany, and industries advised.

- The expert talk is conducted as a semi-structured interview and is included in the explorative research of the master thesis.

- To enable a correct analysis, the interview will be recorded and transcribed. The transcript will be translated into English for integration into the thesis, which must be submitted in English. A version of the transcription and translation can be sent to the expert for reconfirmation.

Leitfragen für das Gespräch:

Bereich	Fragen
Umriss Unternehmenshistorie	• Kurzer Abriss der Unternehmensgeschichte mit Angabe der wichtigsten Entscheidungen (Märkte, Produkte, Technologien, Wendepunkte) seit der Gründung des Unternehmens. • Wichtige Etappen des Wachstums und der Entwicklung des Unternehmens.
Aktuelle Strategie und Geschäftsmodell	• Welches sind die wichtigsten strategischen Annahmen für das Wachstum Ihres Unternehmens? • Was ist Ihr derzeitiges Geschäftsmodell (basierend auf der Geschäftsmodell Theorie von Amit & Zott, 2020) in Bezug auf: ➔ Kundensegmente, Produktkategorien und Wertversprechen ➔ Was sind die Schlüsselaktivitäten, Prozesse, die durchgeführt werden müssen, um einen Mehrwert für den Kunden zu schaffen? ➔ Was sind die wichtigsten Erlös- und Kostenkategorien?

	➔ Wer sind die wichtigsten Geschäftsmodel-Stakeholder, die diese Aktivitäten zur Wertschöpfung durchführen? ➔ Wie sind die Aktivitäten miteinander verbunden? ➔ Wie funktioniert die zentrale Werteidee? / Wie wird die geschaffene Wertschöpfung nutzbar? ➔ Was, denken Sie, schafft Wettbewerbsvorteil in Ihrer Branche?
Digitalisierung	• Welchen Stellenwert hat das Phänomen der Digitalisierung in der Beratungsbranche und wie beeinflusst es Ihr Geschäftsmodell und die Modelle Ihrer Wettbewerber (das Wer, Warum, Was und Wie - siehe Amit & Zott, 2021, S. 16)? • Wie wird die Digitalisierung im Arbeitsalltag Ihres Unternehmens umgesetzt? (Interne Aspekte und Projektmanagement-Aspekte, also neben den Inhalten der Kundenberatung) • In welchen Aspekten Ihrer Arbeit sehen Sie den stärksten Einfluss der Digitalisierung? • Welche Technologien bewerten Sie als besonders signifikant für die Veränderung Ihrer Arbeit und derer Ihrer Kunden?
Veränderungsprozess im Geschäftsmodel (aufgrund der Digitalisierung)	➔ Wie hat sich das Geschäftsmodell im Laufe der Jahre verändert/verändert sich gerade? Wann haben sich die Änderungen ergeben und welche Elemente waren davon betroffen, (basierend auf der Geschäftsmodell Theorie von Amit & Zott, 2020) in Bezug auf: ➔ Kundensegmente, Produktkategorien und Wertversprechen ➔ Was sind die Schlüsselaktivitäten, Prozesse, die durchgeführt werden müssen, um einen Mehrwert für den Kunden zu schaffen? ➔ Was sind die wichtigsten Erlös- und Kostenkategorien? ➔ Wer sind die wichtigsten Geschäftsmodel-Stakeholder, die diese Aktivitäten zur Wertschöpfung durchführen? ➔ Wie sind die Aktivitäten miteinander verbunden? ➔ Wie funktioniert die zentrale Werteidee? / Wie wird die geschaffene Wertschöpfung nutzbar? ➔ Was, denken Sie, schafft Wettbewerbsvorteil in Ihrer Branche?
Determinanten des Geschäftsmodel-Wandels durch Digitalisierung	➔ Warum und unter Einfluss welcher internen und externen Faktoren wurden Entscheidungen zur Änderung des Geschäftsmodells getroffen? Mit anderen Worten: Was hat das Unternehmen dazu bewogen, Änderungen am Geschäftsmodell vorzunehmen? Bitte geben Sie Beispiele (was hat diese Änderungen bedingt/bestimmt/geprägt?) ➔ Externe Faktoren (Veränderungen in den Bereichen Wettbewerb, Technologie, rechtliches Umfeld/Branchenvorschriften, Verfügbarkeit von Ressourcen, Lieferanten/Vertriebspartner/Kunden) ➔ Interne Faktoren (Unternehmensgröße, Organisationskultur und -struktur, vorhandene Ressourcen und Kompetenzen, die Vision der Unternehmensentwicklung, z. B. Diversifizierung der Tätigkeit, Auslandsexpansion, Wahrnehmung von Chancen und Gefahren) • Sind Änderungen an Ihrem Geschäftsmodell in den nächsten 5 Jahren geplant und warum? Wann und unter welchen Umständen wird eine Änderung relevant?
Die Folgen der Geschäftsmodel-	• Welche Auswirkungen haben die Veränderungen des Geschäftsmodells auf Ihr Unternehmen in den verschiedenen Phasen seiner Entwicklung (gehabt)? Wie bewerten Sie diese Veränderungen? Und warum?

Veränderungen durch die Digitalisierung	• Wie schätzen Sie den weiteren Verlauf der Geschäftsmodellentwicklung ein? Welche Auswirkungen erwarten Sie zukünftig? • Welche Determinanten werden Ihrer Meinung nach den stärksten Einfluss auf zukünftige Geschäftsmodellentwicklung haben und welche Folgen hervorbringen?

Guiding questions for the interviews:

Area	*Question*
Company history outline	• *Brief outline of the company's history, indicating the most important decisions (markets, products, technologies, turning points) since the company was founded.* • *Important stages of the company's growth and development.*
Current strategy and business model	• *What are the key strategic assumptions for your company's growth?* • *What is your current business model (based on the business model theory of Amit & Zott, 2020) in terms of:* ➔ *Customer segments, product categories and value propositions.* ➔ *What are the key activities, and processes that need to be performed to create value for the customer?* ➔ *What are the key revenue and cost categories?* ➔ *Who are the key business model stakeholders that perform these activities to create value?* ➔ *How are the activities interconnected?* ➔ *How does the core value idea work? / How does the value created become usable?* ➔ *What do you think creates a competitive advantage in your industry?*
Digitalization	• *What is the significance of the phenomenon of digitalization in the consulting industry and how does it influence your business model and the models of your competitors (the who, why, what and how - see Amit & Zott, 2021, p. 16)?* • *How is digitalization implemented in your company's day-to-day work? (Internal aspects and project management aspects, i.e., in addition to customer service content).* • *In which aspects of your work do you see the strongest influence of digitalization?* • *Which technologies do you rate as most significant in changing your work and that of your customers?*
Change process in the business model (due to digitalization)	• *How has the business model changed/is changing over the years? When did the changes occur and which elements were affected, (based on the business model theory of Amit & Zott, 2020) in terms of:* ➔ *Customer segments, product categories, and value propositions.* ➔ *What are the key activities, and processes that need to be performed to create value for the customer?* ➔ *What are the key revenue and cost categories?* ➔ *Who are the key business model stakeholders that perform these activities to create value?* ➔ *How are the activities interconnected?* ➔ *How does the core value idea work? / How does the value created become usable?* ➔ *What do you think creates a competitive advantage in your industry?*

Determinants of business model change through digitalization	• *Why and under the influence of which internal and external factors were decisions made to change the business model? In other words: What led the company to make changes to the business model? Please provide examples (what caused/determined/shaped these changes?)* ➔ *External factors (changes in competition, technology, legal environment/industry regulations, availability of resources, suppliers/distributors/customers)* ➔ *Internal factors (company size, organizational culture and structure, available resources and competencies, company development vision, e.g., diversification of operations, foreign expansion, perception of opportunities and threats)* • *Are changes to your business model planned in the next 5 years and why? When and under what circumstances will a change become relevant?*
The consequences of business model changes due to digitalization	• *What impact have the changes in the business model had on your company in the various phases of its development? How do you evaluate these changes? And why?* • *How do you assess the further development of the business model? What effects do you expect in the future?* • *Which determinants do you think will have the strongest influence on future business model development and what consequences will they produce?*

Within case analysis company A:

Interview Area:	A1 - Exemplary interview quotes	A1 - First-order codes	• A2 - Exemplary interview quotes	A2 - First-order codes
1. Company history outline	"it has always been a management consultancy, not like IBM, they started with computers and then changed at some point. Company A is a bit different. They used to be called something else in the past, and they were part of the Big Five, but now they're just Big Four. And that's why we've always been in consulting"	➔ Past foundation and growth as a consulting firm with focus on technology	• "company A has been around for a very long time. (…) I think it's been 30 years, if I remember correctly, and they used to be called something else, and then there were a few cutbacks and then at some point Company A also changed its name to Company A and then took the various steps in the history of Company A" • "when I started two years ago, there was a restructuring and the slogan for this strategy concept was called (…) Growth Model" → "Company A recognized that certain divisions fit together better. Value Towers were restructured. Certain colleagues were assigned to certain areas so that the orientation of company A would better fit the market requirements"	➔ Established company with several turns in the past ➔ Two years ago last restructuring for adoption to market requirements
2. Current strategy and business model	• "The business model of company A. As a consulting company, you have the claim to be as innovative as possible and company A is (…) one of the most innovative management consultancies of the larger ones, I don't know, of the largest 10 perhaps. So also in that respect, to seize markets quickly, for example, very currently with the cloud" • "we benefit from the fact that we are linked: if, for example, we now carry out a current project and then go live at the end of the year, we have learned a lot of things during the process, which we can then share internally, in company A, with others" • "we can simply bring so much knowledge and experience, even if it's not our own experience, but experience from colleagues" • "The values on the one hand (…) attention is paid to inclusion and how the employees are promoted, trained internally, that you have many benefits in the sense, even if not in money, but through other methods."	➔ Great innovation effort ➔ Focus on size ➔ Quick market capture ➔ Linked internal network (knowledge sharing) ➔ Value of knowledge and organizational experience ➔ Company values and inclusion	• "I think that is very important when I have a leadership and when they present something and I listen to them and then I ask myself: Okay, do I feel I want to be part of this journey or do I not feel like this journey and I can really say: yes, I felt like their journey" • "The cornerstones of the business model, well, we always have a purpose or a slogan that we use to describe our strategy, and that is, for example, to deliver on the promises of human ingenuity." → "this means that we deliver what we promise, and we do this by using our spirit, our skill, and our creativity to find solutions for our customers" • "Value Comes from Change, and of course that's also our DNA. So, what I described earlier, that the world is changing a lot, company A can of course play its trump cards and say: Hey, we know how change works. We know how to change and we also help customers to change" • "cultural things (…) at company A, we are a people business, so we are all people and we are not robots and therefore it is also very important to maintain personal contacts with colleagues with employees and this human culture is very very important, also within company A, but also with a customer."	➔ Leadership and employee commitment ➔ Purpose of the company clearly formulated ➔ Customer value proposition to deliver promises ➔ Change important part in the company ➔ Expertise in change management ➔ People Business ➔ High value of personal contacts (internal and external)

3. Digitalization	• "company A has a very big focus on technology" • "very big in the cloud market (…) this technology strand of company A is already pretty big"	➔ Great emphasis on technologies ➔ Cloud	• "you can choose a cloud-first strategy, so that you no longer have your IT systems traditionally in your basement, but you can have them hosted by a cloud hosting company, Hyperscaler, (…) Amazon, Google, Microsoft Azure. That's one option, we're very good at that" • "We're also very strong in security, so if, for example (…) had a hacker attack, then he can also talk to us and say: Hey, we've experienced this and that (…) can you help me? I want to make my IT systems Future ready, so that we are so secure that this will still work in the future and is also protected against attacks." • "just from the fact that we are now both talking to each other and that you are just sitting in Warsaw and I am sitting in Berlin, is (…) [a] form of digitalization and I can say we are now using Teams and that works and that is really a great achievement" → "it's a prerequisite that it works (…) but there are many small things in the background where company A makes sure that my IT systems that I'm sitting in front of right now, that they work." • "the strongest influence of digitization in my work is really the virtualization of the meetings, that I also communicate virtually with a customer 95% of the time" • "we also use common share points, that I then get access to the corporate network via special accesses with two-factor authentication and can then share my files with the customer there securely and reliably" • "SAP has now developed a new ERP, Enterprise Resource Planning system, called S/4HANA, and these are computer systems that have a very significant influence on business software"	➔ Cloud-first ➔ IT- security ➔ Stable IT working-environment (also remote) ➔ Virtual meetings ➔ Safe shared data repositories ➔ SAP S/4HANA introduction as high impact technology
4. Change process in the business model (due to digitalization)	• "digitalization is a very important topic for management consulting (…) paperless office or that you work very agile, that you can also control things from your cell phone (…) we work with very many tools that make our lives easier (…) This QPT from PowerPoint and these queries that we often make via Menti, these are small things, but I believe that if you are at the forefront and use many things that are newly created, it definitely makes your work easier and also your work with the customer."	➔ Paperless office ➔ Agile working ➔ Mobile focus ➔ Own developed tools for the consulting work	• "Company A is also the first point of contact. We also want to be the first point of contact for our customers in order to provide answers to these questions. (…) we proactively approach our customers and say: We know that you are facing challenges. How can we help? (…) Here are our suggestions, we want to work with you to find answers to the questions."	➔ First point of contact → preferred adviser

	• "At Company A there is (…) a department that just looks at all this innovation and also invents new things together with Google and other companies, so actually technical things. (…) Company A has a whole department that only deals with digitalization"	➔ Own technology R&D department ➔ Innovation collaboration partnerships	• "we have (…) you can imagine it like a buffet and on the buffet we have a whole lot of different things [applicable technology strategies] to choose from [for] the customer" • "we do have the need for personal development, and that is now also being pursued very strongly at company A. I, for example, have become a stress management coach at Company A. (…) Now I am a trained stress mentor and now I do stress management training once a week with colleagues"	➔ Broad repository of strategic solutions ➔ Personal development options for employees
5. Internal and external determinants of business model change (through digitalization)	• "we're very innovative we want this change. We want this progress and that makes it easier, of course, because then we don't inhibit or stop all these processes" → "this mindset alone, I think, facilitates digitalization, no matter at what point it comes" • "you have the internal employees that you want to satisfy, but also to remain attractive compared to your competitors and to recruit or attract new employees, you have to keep up and also offer a lot" • "I think it's an interplay [of the organization driving the digitalization and digitalization driving the changes in the organization]" → "we do want digitization and we are also actively working on it, but if now somehow big innovations happen from the outside, of course that also influences us" • "that came from the outside, climate change. The demand to finally do something (…) has just become bigger and because of the fact that there is a lot of pressure and you just see: Okay, the companies are now also the driving force (…) or pressure for the companies to become sustainable" → "In any case, a large market will emerge, is also just emerging. And that came from the outside." • "the impact of Corona will be felt for a long time, doesn't necessarily have to be negative, but that definitely has an impact on the business model and how we work and also how the job of the consultant is changing compared to 5 years ago or 10 years ago. "	➔ Internal organizational drive and wish to develop ➔ Fight for skilled staff ➔ Interplay of internal and external drivers ➔ Climate change → new market opportunities ➔ Impact of the pandemic	• "requirements of the customers, that's also always a topic. Just three days ago our (…) Europe boss made a call about this. She then also explained that we currently have a phenomenon, a market phenomenon, that we have compressed disruption, so she said that we have many, many things that are changing, so we have for example the Covid crisis as point one, then we have the political crisis that we all recognize right now, with the conflict in Ukraine and Russia and accordingly also high energy prices, inflation rates, hacker attacks and these are just all things, challenges that our customers are facing." • "company A is also changing the world together with the customers, and that is always such an interplay. So, I think it's a kind of cross-fertilization"	➔ Compressed disruption influencing customer requirements ➔ COVID-crises ➔ Ukraine war and its consequences ➔ Cross-fertilization → interplay between consulting firm and client
6. The consequences of business model changes due	• "in the long term, I think that digitalization will make that it will be a very different work then that we know digitalization will also make (…) and hopefully not so long that somehow the technology, make our work very easier, that we can somehow reduce to a 6 hour day or 4 day	➔ Less simple work tasks due to new technologies → changed working conditions for consultants	• "I also believe that company A with the corporate culture and with the resources and with the employees that company A now has, is also really in a position to help shape the future"	➔ Corporate culture and employees as resources to make an impact for future

to digitalization	week." → "that's really far in the future (…) will happen somehow in the next 10 years" • "what will come much more in the future is sustainability and creating added value for the customer by training experts and then sending them as external consultants. I also believe that as a management consultant, you have to be very up to date on many topics, otherwise you will quickly go under" → "a large market will emerge, is also just emerging" • "you just capture new markets quickly, now, also in terms of the whole cloud. (…) the market around the cloud topic, whether it's Google Cloud or SAP Cloud, no matter which cloud, that's something that's relatively fresh now and that doesn't necessarily change the business model per se, but the market is being expanded. So you're also very flexible in what you offer." • "growth will continue, because many companies now realize, not only because of the pandemic, but also in general, that you simply have to adapt to today's time and of course consultants who bring an expertise in this topic in this area are worth a lot."	→ Sustainability (ecological + long term value) as project themes → adoption by consulting firms → Potential to quickly jump on new technology driven market opportunities → Future growth expectation	• "three days ago (…) the head of Europe presented the new strategy, the 2025 strategy, and she also stated that the goal was to double sales" • "Those are transformation projects, after all. And I can really say the projects that I'm on, those are really the ones that are changing the world. SAP has now developed a new ERP, Enterprise Resource Planning system, called S/4HANA, and these are computer systems that have a very significant influence on business software, and if companies are now prepared to enter into such transformations, then this will also make them future-ready, so that they can keep their finger on the pulse for the next 20 years." • "Company A is also really the leader of the pack, we still get top marks in any studies and what I've noticed myself now, from what I see of our leadership, it's really outstanding."	→ Goal and expectation of high (sales) growth → Transformation projects based on technology products with long-term impact on client business → Projects aiming for future-readiness of clients → Internal and external recognition of leadership efforts

Within case analysis B:

Interview Area:	B1 - Exemplary interview quotes	B1 - First-order codes	• B2 - Exemplary interview quotes	B2 - First-order codes
1. Company history outline	"Company B comes historically from the big four, so very early." → "then there was a legal separation between consulting and auditing and (…) then we were bought by an American company at that time, at the time of the spin-off. They (…) went bankrupt in 2008 or 2009" → "And that's when the European partners decided to buy (…) to buy in, and we repositioned and redeveloped ourselves in the European market (…) under the same name (…), so that today we are again active worldwide"	→ Origin in Big Four → After legal separation and bankruptcy → European MBO	• "a milestone in general, consulting independent of IT, is (…) Corona, because that has changed the work and the and way you work with each other, or also work in general (…) because you just no longer sit in a room with your interlocutors and the work partly suffers from it" • "It's just a super pleasant way of working. I really like that, but of course it's also because you've built up a certain amount of trust in the past. So I know that my partner has been on projects with the customer for a longer period of time and that simply makes the relationship totally different when you also meet for dinner in the evening and so on and simply the customer loyalty goes beyond this normal nine-to-five job"	→ Covid as recent changing point of the consulting industry → Established position as trusted adviser
2. Current strategy and business model	• "we're trying to put together more and more of a total package for the customer, really from strategy to technical implementation and then to support, although support makes up a very small part" • "[we] also permanently reorganize ourselves according to the market, so that is actually so that we always see how the market is organized and how we have organized the consulting strands of our segments" • "from the work of the individuals we are very matrix-oriented, so I have no problem at all to work today in the public sector and tomorrow in the automotive industry and the day after tomorrow in the chemical industry" • "we've created two options. One possibility is that we have built up an internal network in which we have positioned ourselves (…) by saying that we know which colleagues are working in these structures. We know we have regular calls where questions can be asked. We have coaching for young colleagues who can simply ask questions" + "we have a database, I'll call it, in which you can search for topics. I'd say it's already quite well developed, from a technical point of view (…) as a know-how extension" • "we naturally want young people in particular to develop further, which means that they are sometimes passed on from one senior to the other, so that we have a seamless network at the end of the day to always give customers the	→ Offering a complete service package from strategy to implementation and technology support → Strong market orientation and organization accordingly → Matrix-organization → No special industry focus → Internal knowledge sharing network via experts + topic database → Well-connected mix of junior and senior people within projects	• "[a software product] has to be replaced somehow and maybe then you have something, you can fill the niche" "[change] somehow belongs to the job description for me" • "What I find especially with company B as a company is, with us, as with many consulting firms, it's very relaxed and you are very close with the customer and partly these are just decades-long customer relationships, not always the same projects, but customer relationships and through that the customer also always comes back to you" → "You're not just a service provider who works for them and somehow helps out, but you're simply a part of it, you belong to it, you're perceived in the same way, spoken to in the same way, your opinion is accepted and respected in the same way" • "we are set up like a chessboard pattern (…) structured like a matrix and then it is organized in such a way that virtually everyone has their service line and their segment, these are the upper categories, so to speak, and there is a lot of communication" • "Then some of the projects are presented to each other a little bit, if you still need support, that you say: hey, we are still looking for employees with this and that focus" • "There is already a lot of emphasis, also on transparency" • "When I think about the projects my colleagues are on, they are often larger, well-known customers who tell you	→ Self-development of software products → Change as part of a consultant's job → Long and close customer relationships with recurring project orders → Cooperative working atmosphere with clients → Matrix-organization → Communication via segments and service lines → Internal expert and support network → Transparency approach from top down

	feeling: Okay, if the person on site can't get anywhere, there are a whole series of people sitting in the background. That always gives young people the opportunity to say yes, we'll give these young people the opportunity to look after us, because otherwise you'd have the problem that somehow everyone only wants seniors, and seniors are usually expensive, and there are some customers who only want seniors, but others want seniors at a reasonable price, and you can only really achieve that with a mix like that” • “We have such a career model that goes in three directions. One is (…) the adviser track, so you (…) look after the customer on site, but I don't do any acquisition (…) Then there's the career of the manager, who has to write offers or conduct and manages projects (…) and do the invoicing and all the accounting for them. And then there's our business architect, who actually receives the requirements from the customer and does the technical implementation”	➔ Three career paths: adviser, project manager and business architect	something. I know that in terms of clients, we also have quite a few public agencies and federal agencies (…) as clients. In most cases, when a colleague tells me what project he's on, I can relate to the name”	➔ Usually commonly known brands/companies as clients + public clients
3. Digitalization	• “we are process-focused, i.e. we follow requirements and understand technology as a control instrument (…) technology is actually only the instrument to achieve the goal” • “this personnel model, is at least as important as the technical know-how or the products that you offer on the market. You can't separate the combination, and you should never separate them”	➔ Process-focusd work with technology as control instrument of requirements ➔ Balanced importance of technological know-how and personnel model	• “there's a calculator that works out the emissions that purely companies produce through their field of business” • “we recently got another award from SAP for a software that we developed ourselves (…) t's a kind of contract management tool for Yellow Cap so something like construction vehicles, excavators and so on. That's also one of the ones that I thought was offered in the SAP Store.”	➔ Emissions calculator ➔ Awards by SAP for software developments ➔ Contract management tool ➔ Tools offered in SAP store
4. Change process in the business model (due to digitalization)	• “we are expanding more and more with our own offices worldwide (…) but we also quite often enter into partnerships with other consulting companies, so especially in Asia, but also in India. Right now we are in the process, so that we can offer our service and our products just worldwide” • “the development in products, so we are in a product partnership with SAP and in this development we are often in discussion with SAP, whether SAP wants to offer a product or whether we develop a product and bring that to the market in connection with SAP. And that's where I would see our strength, that we are developing products and in this context we are increasingly setting ourselves up as a larger company” • “We emerged from a single company but are now in the process of successively establishing individual companies,	➔ Worldwide expansion also in partnership with local consulting firms ➔ Product partnership with SAP → join product development ➔ Development into a company group by	• “I think every IT consultancy is constantly somehow in a transformation, because you always try to stay on the ball and just try to work as efficiently, logically, as possible” • “there's already a lot of communication about everything because it's now of course also become very easy with teams that all people pack a call together. I don't know what it was like before Corona, because I didn't work for the company then, but I wonder if we already had regular community calls” • “everything is moving super-fast, you don't feel like you're keeping up at all, you're actually always already late with your project when you start, because there's never enough time. There's always way too much to vote on”	➔ Constant transformation and efficiency improvement in consulting ➔ Increased (digital) communication since Covid ➔ Ever faster changing circumstances

	so that as Company B we are becoming more and more of a group. Products that we launch on the market are definitely a support, but so are cross-divisional functions such as IT (…) which (…) also work for third parties" + "We are moving more and more into the strategy sector, which is also more away from technology" • "we're in transition right now, so the influencing factor that we have today is the influencing factor of the external valuation of a company. So we are in capitalism and the trigger is how do I become more valuable in the capital market as a company. Company B itself, but also the companies that we work for" → "the instrument panel will change. If I'm valuable today because I've brought a great product to market, in the future people might ask, well, is this great product sustainable (…)? We look rather and we as company B certainly also (…) companies that want to make their share more valuable on the capital market, must position their products, namely what is the quality of a product? And that will also be, among other things, am I produced green"	product, IT service and strategy consulting subsidiaries → New valuation for company value including sustainability aspect		
5. Internal and external determinants of business model change (through digitalization)	• "we are basically driven from two aspects: one is of course the customer, which is developing and about this development of the customer there are always new requirements. There are new markets, which is how we are developing, and there are new requirements in terms of external and internal reporting" • "the other pillar is that the customer comes with requirements, because he has developed technologically and needs solutions for this (…) a customer (…) develops his own development and (…) be a patent that can also be sold to other companies"→ "you can just, as a vehicle (…) sell your model that you have developed for it at the same time. But, of course, it's always only together with the customer, but there are also customer-driven further developments at that point, not always just out of some regulations" • "Corona was actually a nice example. Some have reduced working hours, especially here in the automotive industry, which has cut back everything (…) and we had other industries, however, where you could not work fast enough and they just needed a lot of expertise and have then soaked up these consultants"	→ New requirements for companies → new requirements for consulting → New (joint) technology developments → Covid influencing the consulting workload in different industries	• "such small changes, (…) we do a lot of SAP topics for example, SAP takes some module (…) from the market and somehow that has to be replaced, because customers need that anyway, because they were expecting it" • "Fluctuation is a very big issue because it's just very common in the industry that you don't necessarily stay with the same employer for a long time, but maybe jump back and forth a little bit because with each jump there's simply promotion and more salary possible than you might get in your own company then. Of course, that's a huge aspect when you have to rearrange yourself on projects that may run for a longer period of time, and you have to reorient yourself in the team" • "What is also partly an issue with us is that when it comes to any technical topics, we work a lot with our colleagues from India" → ", that also changes the collaboration, because somehow the culture is also partly just different, the way people talk to each other, of course you do everything in English, and then you also have a time difference " • "Sustainability is a priority for us, and I think it's the same for every large company these days: if you don't do anything with sustainability, you're already out of the	→ Product changes of technology providers → Fluctuation as a challenge → Global employee sourcing → Sustainability as internal and external influence

	• "were all traveling before Corona. All the consultants were kind of on the road" → "there were travel expense guidelines that made everything possible. Of course, there were a few rules about what was still economically viable. But in the past, no one ever thought about what was environmentally friendly (…) then Corona came along and (…) the customer is rethinking, the customer suddenly realizes that you don't actually have to sit with him anymore (…) because that also costs space, administration costs, it costs jobs (…) We don't want to pay travel expenses anymore and we realize that the results that come out of these [online meetings], (…) are not worse at all, sometimes they are even better and more efficient" • "We also have guidelines that say we will halve our CO2 emissions by 2025 (…) let's work in a different way (…) There are many aspects where you can say afterwards, yes, my CO2 emissions have actually been halved. We're giving it a lot of thought." • "we're growing so much at this point, we have, I mean well, we all have in consulting at the moment, considerably more orders than we can actually handle. So, we have to look ok: what do we really do? What are our main customers that we want to serve first?"	→ Changed customer preferences regarding onsite vs remote consulting → Sustainability guidelines in consulting → High demand requires project/customer prioritization	game, and there are also a lot of sustainability issues, which is also driven a bit by external factors, but partly also by the employees, because they say, "Hey, sustainability is super important to us"	
6. The consequences of business model changes due to digitalization	• "But when the outside world changes, we change immediately with it, we are very fast. As fast-moving or as little fast-moving as the business is fast-moving or not fast-moving. We always react directly. And we're also able to do that (…) without having these frictional losses, that we say we have to retrain people first, because we don't have that, we train ourselves permanently and on a broad level" • "if I actually have to travel, then travel time is always an absolute time-eater. This definition of mobile working, we no longer define, I have working time and I have travel time, but I define mobile working. Whether I'm sitting in a café in Mallorca, I'll say provocatively, whether I'm on the train to Munich or whether I'm sitting at home, it no longer makes any difference at all" • "once a customer has the feeling that he's being well looked after, it's a fast-selling item. For example, we have an area in the public sector where one area talks to the other area and gradually I've already got three customers from this public sector area in this one category"	→ Fast reaction to business changes due to flexible structure → Working time and travel blurry into mobile time → Word of mouth as growth driver	• "(the online work due to Covid) also has advantages when you can share your screen and everyone sees it the same way, it makes the work a bit easier" • "in the short to medium term, the travel theme will increase again (…) we really only hung out in front of teams and (…) depending on (…) how tech-savvy the people are, it's just a little bit tougher online, and when you go there (…) it's much more efficient when you look each other in the eye and (…) you talk about it briefly and then it's done (…) I think that this will increase a bit, but that it will also be a slow process, because people are of course very comfortable in their home offices (…) this will also influence the industry to a certain extent, because it won't be a hundred percent back-to-normal (…) you won't be making 150 flights a year, but you won't be sitting at home all the time either (…) the industry will have to learn to deal with that, and then look: okay, the issue of customer loyalty can perhaps be strengthened in other ways"	→ Technologies permeated during pandemic eased consulting work → New working reality as mix of onsite and remote → New ways of generating customer loyalty

Within case analysis C:

Interview Area:	C1 - Exemplary interview quotes	C1 - First-order codes	C2 - Exemplary interview quotes	C2 - First-order codes
1. Company history outline	• "we've grown (…) In the last two and a half years, a lot of new people have joined us (…) and there is still a natural fluctuation, which, I don't know, but I think it's lower at Company C than at other consulting firms" • "So there is, I think, currently not the point, but it's expressed in a lot of different things, among other things, how this Corona phase is dealt with" → "That was very difficult in Corona and now it [internal company events] will soon be carried out, we are all very, very, very much looking forward to it, and that somehow shows that it is very important to the company"	→ Organizational growth → Pandemic as short-term change moment inside the organization → Historically high importance of internal company events	• "the thing that I think particularly distinguishes us is that the people who are responsible in the organization, who founded this company, have put a very specific form of cooperation at the center and have also shaped that positively as a success factor for their organization and the growth over all these years and make sure that this culture is maintained despite all the growth that we have"	→ Culture and cooperation forms as USP since foundation → Maintained company culture despite organizational growth
2. Current strategy and business model	• "we (…) hold the Company C culture in high esteem, which I noticed quite strongly when a colleague who worked with me in the S 4 Hana environment was not taken on (…) after the probationary period, even though we absolutely needed technical support" → "instead of saying, like any other company, yes, then we'll take him, because that will generate stable sales for us, and perhaps cause some friction among the existing employees, but so what?" → "we don't take someone who we think is like this, who doesn't fit in with us, who has a blatant elbow mentality" + "Company C has managed, unlike other management consultancies, to create models that are also attractive to what I would now call minorities. In management consulting, it is classically the case that these are typically men, young men, who can be taken on and exchanged, and here it is the case that we have, I believe, a very high proportion of women for a management consulting firm, and it is also not interpreted in a disadvantageous way if one goes on parental leave and men also go on sabbatical with us, and there are models where one says okay, one only works two days out of five, i.e. part-time." • "We have a kind of campus, an annual thing, where all the employees of Company C get together (…) for three days on site and give a lot of lectures, show each other things (…) and also just to strengthen the culture" • "always have training sessions, meetings and other things, sometimes on site, and unlike other companies, I have the	→ Efforts to maintain company culture when hiring → Personal fit over sales generation → Culture of team work and inclusion → Emphasis on internal meetings for corporate culture and knowledge exchange	• "[we] have 3 roles (…) we are (…) innovators, we help companies to develop digital business models, i.e. companies that today perhaps only sell products or services, we (…) help them to build digital business models around their products and service spectrum. We help to anchor this in the organizations because, (…) this does not happen automatically (…).There's a lot of change involved and integrating (…). And Transformator, (…) we also bring companies together and participate in companies that are developing digital business models in order to bring them to market together and make them successful." • "there are now even more mainstays that have been added. At the moment (…) we have more subsidiaries that are doing new business models. From a financial point of view, the consulting part is still a very strong part, and we hope and work together with our colleagues from the portfolio companies on projects, so that we can let this part grow exponentially" • "there are quite a number of joint projects where we have developed a business idea, a solution approach with a company and when the company then said we would do it, we didn't just paint slides, but we (…) build an MVP, let's discuss it with companies and let's then also cast it into a business model in the next step and let's now develop and	→ Three consulting roles: innovator, change manager and transformator → Besides consulting additional business pillars which support the consulting BU → Joint ventures beyond conceptualization, but product development and commercialization

	feeling that we take the time to talk about people and allow for emotions” • “we have a fair salary model, which is the same throughout the bank” → “from a certain rank you can overachieve. That is, at the lower ranks, it is not so that people completely spend themselves and are exploited” + “where you do not automatically rise, so to speak, but just through good performance” • “We have five roles that everyone can consider growing into. (…) the classic team leader, who is responsible for the people, disciplinarily, but not professionally. (…) the product manager, who is responsible for people professionally. (…) the complex project manager, who is assigned to really complex projects (…) the expert, who is deployed primarily with many customers, has a lot of know-how, and always offers support to the project team on a situational and selective basis (…) the business unit manager, who is responsible for driving forward the acquisition and sometimes also manages a project, but primarily develops new customer business or existing customers” • “this bonus area is again divided into two parts, one part is performance targets (…) and then there is quasi the second part. These are the personal goals and they are (…) such as collaboration in the sales box, you have led a training or brought it to life” → “you have active time through this structure to somehow bring the knowledge that you have into the organization, or to also profit from it” • “As Company C (…) we see ourselves as an impulse generator and innovator, so we also drive the customer ahead of us, or with him, but we do not leave them after two or three weeks like other strategy consultancies, but we advise strategically, but then also help with the implementation and not in the sense that we then press the button ourselves necessarily in the system.	→ Professional and personal development efforts → Long term-oriented employee management → Different functional specialization paths → Incentives for knowledge sharing → Positioning as impulse generator and innovator → Strategically advises (on technology topics) → No implementation	market a product together with the company in the next phase that is coming up.” • “we can not only conceptualize such business model innovations, but also completely accompany them through to implementation, realization, and operation. And other market players can certainly do that, too. If you look in the direction of large consultancies, the Big Five consultancies, they have also set up and developed similar units, but if we look at our scale, not so many can do that” • “the innovation alliance of company C, that practically company C as a consulting company and all the other subsidiaries run together, (…) has been developed (…) because an Artificial Intelligence Service Company has a different culture. A company that builds and develops digital twins has a different culture than a consulting company. A training company has a different culture (…) and it's good that each company has the opportunity (…) shape its own culture. Nevertheless, there are a lot of commonalities that we can then use together in the projects (…) i.e. we can dock into mixed teams very quickly and, with the joint solution portfolio (…) and that's why we have different solution competencies, and each of these sub-areas or each sub-organization has a clearly defined solution element, but they fit together very well and help customers, if they are put together in the right way, to realize things successfully from the idea to implementation” • “people are at the center, consultants and their development is a personal concern of the executives. And that's definitely a big difference compared to other consultant cultures, and it contributes to the fact that very personal individual career paths or further development paths are also made possible, which ultimately help us to ensure that we are also highly motivated as individual employees of the company to work for the company” • “The fact that we experience ourselves as a team, that we come together as a group, even in new constellations, and that we try things out is something that I believe we also shape very strongly”	→ In BMI projects, whole process supervision from conceptualization, implementation, realization, until operation → Superordinate alignment organization for all BUs → Independent organizational cultures within BUs → Combination of different solution elements by different BUs within whole project → People at the center and individual career paths → Employee motivation → Perception as a Team → Great emphasis on training (of new

			• "Company C takes a lot of time and puts a lot of energy into training people. And especially in the age of digitalization, where new tools, where new skills and abilities are always in demand, it is also important that we as an organization invest in the training of our employees. Because that's the only way we can ensure that the knowledge we bring to the project is always state-of-the-art. The training in the profession, the lifelong learning is a very, very important element."	technologies and tools) ➔ Training employees as knowledge management tool ➔ Skilled employees as competitive advantage
3. Digitalization	• "With our current workload, that's not a problem at all, that we can keep busy there and that shows but a little bit that regardless of what the workload situation is right now, that they are true to themselves" • "I think we manage to look at it in a different way than other management consultancies perhaps, a bit more neutrally. We don't have any partnering with any other manufacturers (…) which gives us the opportunity to react really flexibly. This is reflected in many topics, whether it's IT implementation and IT selection or the consideration of IT architectures, we are relatively free in finding solutions and can also make flexible proposals" • "we are very strongly represented in many (…) Hospital Future Act topics, because we have helped many hospitals. And we now have a very large team that works really well, which is great because we are also growing very closely together, from (…) classic IT implementations to (…) topics, i.e. the health care sector • "where I see Company C very strongly at the moment is in this whole area of SEPLM, i.e. systems engineering and product lifecycle management, and these tools" • "we have our own tool which helps us extremely in planning our respective capacities. That's a special feature, everybody is a little bit responsible for himself, even directly when he joined, and these tools are always developing" • "travel accounting, there is now finally a new tool soon, where we can account for trips with it, because the previous tool is simply insanely time-consuming (…) It's far too inefficient" • "where we are still very strong (…) is in the use of the new possibilities of MS Teams. (…) everything is created in Teams and we work not only in Teams, but there is also the underlying Sharepoint"	➔ High demand for technology projects ➔ No partnering with technology solution providers ➔ Independent and neutral consulting ➔ IT implementation in healthcare sector ➔ Systems engineering and product lifecycle management (tools) ➔ Self-developed consultants capacity planning tool ➔ Efficient travel accounting tool ➔ Extensive use of the possibilities of Microsoft Office (Teams, Sharepoint)	• „SaaS, at least for some of our subsidiaries, is an important outcome of their performance, and that's a great fit with the consulting portfolio" → "there are other things that play a role, namely hosting this software in an operational model as well, running it, training people in these tools. So there are other subsidiaries that then bring performance components." • "now we don't have to get on a plane once or twice every week to do our job, but we can do a lot from home. We can do a lot with new tools, really learned a lot there in the last few years and made our toolbox a lot bigger as well."	➔ Building Saas in the subsidiaries ➔ Network collaboration of subsidiaries for different performance components ➔ Increased toolbox for remote consulting work

4.	Change process in the business model (due to digitalization)	• "we have a very strong influence in the direction of: think forward, think solution-oriented and not problem-oriented as before and we also offer many professional impulses" • "this people change management is (…) a very big issue. That means (…) with every IT introduction, if it failed afterwards, what was the reason? Yes, usually because of the people who were not taken along" → "you always have these three levels, process, organization and system, which always play together (…) you have to pay extreme attention to it" • "there are also new possibilities on Sharepoint Online. We are completely detaching ourselves from this folder structure." → "we are just starting to work (…) with tags"	→ Push for solution and future oriented thinking → Focus on change management → Attention to the interplay of process, organization and system → Restructuring of data/knowledge repository	• "we are very much involved with the topic of digital transformation, not just since yesterday or the day before, but for several years now, and therefore also have a good understanding of how to expand the consulting approach for digital transformation. In recent years, we have already created a great many tools with Industry 4.0, with the research projects around it" • „in the last few years, a whole series of partner startups have been added (…) some of which are spin-offs, some of which are investments by us, where we basically bring a business model idea that we have developed with or for customers or partly for ourselves into a company. Company C takes a stake in the company, and we profit as consultants from the fact that we have completely new tools of our own at our disposal" → "that is definitely a change in our business model, away from classic consulting, towards a company that builds tools, supports consulting digitally or realizes digital business models together with customers" • "we are now also taking up new topics that play a role in the context of New Work to a greater extent, such as diversity, equal opportunities, and reconciling work and family life, regardless of whether it is the father or the mother who is taking parental leave" • "this topic of sustainability also as a task for consulting"→ "I've been doing consulting projects for two years now with also a whole bunch of new companies and I've been on a plane one time. And it's going very well actually"	→ Years long experience gathered in digital transformation and related tool creation → Open innovation to gain new consulting tools → Away from classic consulting towards digital tool creation (in collaboration with customers) → New Work topics in focus: diversity, equality, reconciliation of work and family life → Remote consulting work as a sustainability consequence
5.	Internal and external determinants of business model change (through digitalization)	• „the issue of climate change is a very, very big issue" → • „There are still a lot of colleagues who just fly again or don't try to get an electric car at Sixt, but rather the big car. I don't think we've really developed ourselves yet. That's one aspect directed internally and directed externally, I believe that there will be an extremely high demand. If I introduce IT now, how do I manage to make it green? Green IT." • „the influence of Corona, is actually greater (…) because the consultant life (…) has changed sustainably. People have found you don't always have to be on-site every day.	→ Climate change → Sustainability not embraced by (all) consultants yet → High demand for green IT Projects expected → Sustainable change in consultant work due to corona → onsite presence not	• "the markets and the industries have very different developments and some of them are not so easy to predict" → "it is the challenge for companies to be in uncertain worlds in big transformation cycles, just think about the energy transition think about climate protection, think about sustainable living" • "the 17 SDGs, these goals that exist at the global level, which will lead to massive changes in industries in the next 10/15 years, and everything that takes place in terms of industrial change always has the opportunity for a consulting firm to accompany companies in this transformation"	→ (Hardly predictable) market and industry developments → Big transformation cycles: energy transition, climate protection, sustainably living → Global (sustainability) goals as change determinants of

	You can also hold meetings via teams and work, make progress” • “omnipresent (…) is of course something like a war in Ukraine. (…) clients that I advise, one of them has a plant in Russia for example. They have extreme effects on logistics at one time“ → “This in turn has an impact on the introduction of IT or other issues that we are currently working on, because they say okay: first we have to make sure that we somehow keep our current operations alive, so we can't worry about introducing new IT” • “we have a board of directors who is very transparent (…) in these communications it is always clear: ok, these are the topics that are now just pending. (…) of course, they decide that in a small circle, but it's not like they don't listen, I think”	mandatory any longer → War in Ukraine and its consequences → Transparent and clear communication from leadership → Incorporation of staff opinions in leadership decisions		industries → offer consulting market opportunities
6. The consequences of business model changes due to digitalization	• “I think we're faster, significantly faster than other companies in adapting the possibilities (of technology tools)” • “With all the workload (…) we have right now, because it's really just the case that we can't fill some of the projects and have to turn down some projects because we say we can't staff it” • „I also see a change coming where the companies have to follow suit, because (…) you're in (online) meetings from 8 a.m. to 6 p.m (…) and you have to give a hundred percent in every meeting (…) and that's just insanely exhausting to sit in front of the PC all the time, talk a lot, listen a lot. And this (…) changed working environment (…) and I don't believe that this is a permanent solution in this form” →” there are appointments on site again, but there is no longer any travel time (…) it has simply been rationalized away, because you have appointments until Monday evening at 6:00 p.m. and then on Tuesday at 9:00 a.m. the on-site appointment begins at the other end of Germany”	→ Fast adoption to new technological possibilities → Unfilled demand due to lack of consultants → Sustainable form of online and offline consulting work required	• “new companies will be added, new areas will be added, new industries will be added (…) and also go out with impulse consulting (…) and make proposals to companies as to who can realize which business model with which partner for which challenges for which issue on the market at the moment” • “we believe that growth is possible in all areas, and that is definitely open, and we also see it sportingly and also support each other in continuing to realize this growth. In sum (…) we will have in the breadth, in the diversity, significantly more realization options than classic consulting” • “the more tools we bring with us, the more things we can also support in the realization, the greater the range of solutions for the company. And the better we can ultimately position ourselves through new tools, through new subsidiaries, to accompany such processes and to offer special solution offerings for them with tools, with implementation processes, with digital processes.”	→ Further possibilities to co-innovate → Diversity offers growth potential → Consulting product portfolio as competitive advantage

Within case analysis D:

Interview Area:	D1 - Exemplary interview quotes	D1 - First-order codes	D2 - Exemplary interview quotes	D2 - First-order codes
1. Company history outline	• "On the history, founded in 1992 and then just gradually came the first acquisitions." → "software houses were also bought up years ago, which (…) worked for Company D but have now been integrated into the Company D Group" • "We have the D Group, which also includes our subsidiaries, and we have company D (…) until the last fiscal year it was still divided into Consulting and Business Solutions. Business Solutions was just the software development and Consulting was just the whole sales plus consulting and implementation."	→ Early close cooperation and integration of partners → Recent restructuring and renaming of BUs → Company as group structure with various subsidiaries	• "Not in my current company" • "customization is necessary in detail, but not as big as it is lived. Other customers that I have looked after in the past in other projects, they bought the software, but then converted it"	→ No drastic changes in the last 2 years identified → Huge customization efforts of clients in the past accompanied
2. Current strategy and business model	• "we are not a consulting company in the sense, we are more of an ERP company, with ERP consulting and also consulting in related areas" • "Our goal is to further increase the benefits for our customers by providing local support for our core customers or our main customers or customer focus in Germany, Austria, Switzerland and their subsidiaries" • "the strategy is just to try to buy strategic partners to expand and improve our product portfolio. It's not about buying up companies that now have a different ERP software, that are also active in the midmarket, and then replacing their ERP solution and introducing the ERP solution from Company D there." • "there are technical topics where colleagues are sought in consulting who can (…) advise (…) also new implementation projects, where there is a very classic project management (…) and the individual project members, who are then also selected industry-specifically (…) And then they look after the project until it goes" + "during the update project a group is put together, a team and they take over the new implementation and with the go live there is then just a follow-up support, but at the latest then the support is also dissolved again and then it goes back to standard support" • "industry-specific solutions (…) we have individual core industries with which we offer added value to our customers (…) we have the automotive industry, in which we have our own team of experts and consultants, who	→ ERP software development and related consulting → Strong geographic focus on ASG → Own ERP software → Growth through strategic software additions → Topic-specific, implementation and (software) upgrade consulting projects → Industry specific solutions → Special focus on automotive	• "What I find significant now as an employee is (…) that they make an effort to be clearly employee friendly" • "simply management consulting is structured differently than a software development company. A software company is more of a product manufacturer"	→ Employee focus → Structural differences between management consulting and software consulting (more product focused)

	then also carry out project-specific programming and this then also flows back into our software development and thereby we also improve our core competence in the individual industries. We have also received awards for our special core competence in the automotive sector." • "we are specialized in medium-sized businesses and our focus is medium-sized businesses and there we just bring a very large USP in the area" • "people business is just one of the most important things in sales, which then also lead to sales success(…) and also within the projects is quite important, because we work just always between people. That's important, but the workshops revolve around technical topics and the focus is clearly on the technical aspects"	➔ Specialized to target mid-sized customers ➔ People business as basis to cover the technological topics		
3. Digitalization	• "We have also acquired many subsidiaries in recent years (…) companies for digital purchasing processing, BI tools for data analysis and data research, or partner companies for PDA and MES solutions, i.e. everything that falls into the area of production automation" • "integrated analysis (tool)" →"good for mass data processing, and if you consider that the amount of data will continue to increase in the future, then that's just a great point and key fact within our company" • "the product portfolio, here you can also see it again in the area of CAQ, MES, document management system. In the area of CRM, that we continue to position ourselves and offer customers added value" • "one of the biggest structural changes that are now being driven internally is the trend within the industry, but also for Company D, that you can offer customers added value with cloud solutions" • "what you also notice is that the innovation cycles are getting shorter and shorter. The whole software is actually developing at a rapid pace" → "important to always stay on the ball and quickly provide solutions, new solutions, to the respective industry requirements"	➔ ERP software development and related consulting ➔ Digital purchasing processing ➔ Data analysis/research ➔ Production automation ➔ Integrated analysis tools ➔ Document management systems ➔ CRM ➔ Cloud solutions ➔ Shorter innovation cycles → need to adopt quickly	• "interfaces are here always a topic (…) a relevant area that ever more interfaces between the individual software systems are needed" • "you also expect faster release cycles, that is, the speed will increase for new features and at the expense of individualization, but that doesn't have to be a disadvantage now either for us or for the customers" • "I use the term interface very broadly (…) for successive software versions, you could also call it contract management (…) these contact points between, either different versions of the same software or between different types of software or manufacturers"	➔ Interconnectivity of systems via interfaces ➔ Shorter innovation and release cycles → advantages for company and clients ➔ Interfaces: between software and software versions
4. Change process in the business model (due to digitalization)	• "1200 employees (today) and also growing strongly in the last few years" • "We now have to do fully with the integration of our subsidiaries into the company. That's one of the main topics that we're focusing on internally in the business unit. And creating all these interfaces"	➔ Strong organizational growth in the past years ➔ Organizational and technological	• "If you look at it towards the customer, it's, we're just evolving towards a cloud provider, software as a service provider, platform as a service provider. Which then also fundamentally changes the way we deal with the customer. Until now, it was possible to offer individual solutions for the customer. Very customer-specific, customizable for the customer, which meant a lot of effort for us to keep the	➔ Transition towards Cloud provider/SaaS/PaaS provider → changes in client relationship

	• "the goal is to provide on-site consulting in the local language using the local version of Company D" • "we try to increase our product portfolio for our customers, to expand" → "from the company acquisition we have definitely felt added value (through a company), which is a product for integrated analysis evaluation, that's what we call it, to really export from the ERP of company D and not to export normally in a CSV or XML file, but that you can also make more detailed evaluations with this program, so that's a big gain" • „we also use third-party products internally (…) to process our service (…) and we recently switched to ServiceNow. We have introduced a new project management tool in project management, simply to be more transparent and to be able to map our processes better. Yes, we have also recently been ISO certified, which means that all our processes are also certified accordingly" • "we are just about to bring our software solutions into the cloud. And that of course makes it much easier to connect our partner systems when you're in the cloud." → "this is actually the biggest internal transformation process that we are currently experiencing and designing" • "this is also a transformation process that doesn't happen overnight. We have seen that three companies were acquired in 2021, which had already been partners of Company D for many years, but where it is not possible to provide a standard interface in all modules in all software areas and in all versions, which are also used by the customers, the most diverse versions of the Company D system overnight, so that is a growing process. But for example, for one of our subsidiaries, their product is a fully integrated software module in the Company D system, which can be licensed, which is then simply installed and can then be used and is fully available"	integration of acquisitions → Geographic customization → Increase of product portfolio → Added value by new functionalities for the ERP system → Service Now introduction → Project management tool → ISO certification → Transformation process to integrate acquired software → Transformation to cloud	know-how internally and pass it on, in addition to these standard offerings that you can offer in the cloud, but which is then no longer so tailored to the individual customers" • "what is now becoming more and more prevalent, not only because of Corona, but that may have already started before, is the flexibilization of working hours, not always having to go to the office, and breaking up the teams (...) a very regional structure, which also made sense in the past, because you simply had to know the customer on-site and then look after them (…) which also saved employees travel time" → "more supra-regional teams. My team is now a blatant counterexample, we are distributed in Germany and Austria, are virtually only online together, home office is working and that the employees also want greater flexibility"	→ From customizing towards standardization → Flexibilization of work → Superregional online teams
5. Internal and external determinants of business model change (through digitalization)	• "directive are actually our existing customers decisively, which we have, because we want to keep them also and then (…) [bring them to] also higher software conditions" → "we just notice that more and more customers insist that we offer a cloud solution." • "the aspect Corona (…) or consulting everyday life has changed a little bit" → "workshops (…) which is just nicer when you are on site and also with a larger number of people and then conduct the workshop and can look into	→ Customer retention and recurring revenues → Technological customer requirements → Covid impact on consulting everyday work	• "this cloud development, that just the requirements are driven towards these newer technologies, newer interfaces, and that that also has an impact on firstly the business model, keyword software platform as a service, but also the skills of the employees, away from the old programming languages towards newer and smaller ones that are designed for PaaS"	→ Cloud development impacting the client and employees requirements

	the eyes, see the reactions immediately, that is of course better. But you can also do it relatively well online (…) and many topics can also be handled online”			
6. The consequences of business model changes due to digitalization	• “you can already see synergies and added value. And we actually use this tool internally when we want to evaluate data, so it's also a great tool to use internally.” • “update projects are relatively complex, especially with customers who have their own modifications (…) their own program adaptations, their own developments, which were perhaps developed by company D or also programmed by the customer himself (…) and these are just cost drivers (…) which then often make the updates more complex and also more expensive and if you are then in a cloud environment, then it is (…) the goal of us that we can also centrally import updates for our customers at much shorter notice. And that will also reduce the effort required for updates” • “customer systems are becoming more and more networked, so it is not an ERP system that is in use, these customers may still exist, but it is often the case that a completely networked IT architecture exists at the customers and that is extremely complex to control the whole thing from the customer's point of view” • “it ran completely online and also worked. So, it's quite interesting what you can see, what's possible and, speaking off topic, it would also be possible to sit somewhere in a vacation resort and do the consulting from there. The most important thing is a decent Internet connection. If you can ensure that, then there's really nothing to stop you.”	➔ Synergies due to the software portfolio and internal use ➔ Moving to the cloud reduces (update) project costs ➔ More complex and networked IT-systems → Increased support by companies demanded ➔ Remote online work offering greater geographic flexibility to consultants	• “with us it's still very much customer-specific on premise, so the installation at the customer's site. But that is changing right now (…) in the next 2 years (…) the switch is carried out, that then only cloud offers go out” • “where is it going in the future, is again the topic of cloud (…) Because it simply makes the local teams no longer so necessary (…) it will address that there are rather features that are rolled out directly for all customers, they can then use it or not (…) more standard than customization, individualization” • “there will be better, more sensible solutions in the future due to standardization (…) data can be moved more quickly from A to B, which also involves the issue of data sinks or data pools. This means that all tools access a central data pool and only take out what they need, where it was previously the case that each software had its own data pool and that these were partially incompatible” • “That there are increasingly contracts, i.e. contracts (…) which then leads to the fact that software is firstly better maintainable (…) and also that it is easier to exchange data back and forth, because you then know which information comes via which hype and then accordingly only really has to be linked in the respective tool and not still between the two different tools, different versions. So that would be a topic that, in my view, will be one of the big topics in the next few years”	➔ Move from on premise to cloud systems expected ➔ Less individual local care needed due to Cloud → standardized portfolio features to use ➔ Better solutions expected in the future ➔ Central data pools connected to various tools ➔ Increased contract management → easier maintenance and data exchange