Platform-Based Strategic Consulting for Digital Transformation

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Abstract

The digital age poses manifold challenges and difficult conditions for all sizes of organizations in all industries. Organizations need to adapt to complex challenges and difficult conditions and to plan and execute their digital transformation strategies. More and more organizations need support by strategic business consulting companies which must be offered in an effective and efficient way so that also small and medium sized companies can profit from it to stay competitive. Our research work focusses on the development of online strategic consulting tools offered as self-services on a web-based platform supporting the definition of digital transformation strategy. The so-called Digital Backpack Assessment (DBA) measures the digital maturity and proposes possible cases for changes. The tool follows the following principles: (1) A holistic approach with focus on the customer orientation, the business models, the organizational excellence, and the operational excellence. (2) An open strategy approach where several stakeholders from the company participate.

1 Introduction

Today in the digital age technology developments take place at an exponential pace. Industry boundaries become less of a hurdle and even vanish for new market entrants to compete and even disrupt with innovative and industry-different business models. Information is rapidly shared, time and location independent, increasing transparency and ubiquitousness of knowledge (Matzler, Bailom, Friedrich von den Eichen, & Anschöber, 2016).

These new circumstances result in increased challenges for decision makers to cope with complexity by analyzing their competitors and their customers, by gaining transparency about their own current position, and by taking decisions with testing available alternatives and predicting market developments as fast as possible. Organizations and their employees need to adapt to complex challenges and difficult
conditions, such as changing organizational structures and value chains, changing expectations and values of customers and employees, or cyber security risks.

Therefore, companies need support by strategic business consulting which must be offered in an effective and efficient way so that also small and medium sized companies can profit from it to stay competitive. Traditional global strategy consulting companies still show a significant growth.

Strategic business consulting underlies also changes since there is today not any more differentiation between business consulting and information technology consulting. In consulting today an extensive technical knowledge but also business skills, and a wide strategic scope are required (Krüger & Teuteberg, 2016). Over the last decades business strategy directed the IT strategy. Today digital business strategy gains in importance since digital technologies actively drive the business strategy of the enterprises (Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013). Since, digital technologies drive the business strategy, different opinions from business and IT are necessary. For this, today the notion of open strategy is used where different perspectives are included for the definition of the digital business strategy (Friedrich von den Eichen, Matzler, & Hautz, 2019) arises.

Furthermore, the digital business strategy also includes a digital transformation strategy (Hess, Matt, Benlian, & Wiesböck, 2016) which affects many segments within a company, like new business models, organizational structures, process digitalization, new leadership models and so on. Another trend is the digitalization of the consulting itself. Deelmann (2018) adds that through the increasing automatization of work tasks and processes, and the potential for threatening initiatives either from traditional competitors or from newcomers, consulting service providers need to critically evaluate and adjust their business model. Possible business models for digitalized consulting companies are given in Krüger and Teuteberg (2018).

Following these trends in strategic business consulting our work focusses on the development of online consulting tools which support the definition of a digital transformation strategy. We have developed two online tools: (1) the Digital Backpack Assessment (DBA) which measures the digital maturity and proposes possible cases for changes, and (2) the Transformation Compass which defines the area where a digital transformation takes place and which has been already discussed in (Graf, Peter, & Gatziu Grivas, 2019). The tools are offered as services on a web-based platform supporting the definition of digital transformation strategy and have been designed along the following principles: (1) a holistic approach with focus on the customer orientation, the business models, the organizational excellence, and the operational excellence, and (2) an open strategy approach where several stakeholders from the company participate.

In this paper we introduce the platform and the Digital Backpack Assessment tool, and we aim to show how the Digital Backpack Assessment supports organizations to collect data about their current state and to find out their transformation needs and possible actions to be done. Thus, the tool behaves like a human consultant, who collects manually data during customers workshops with several stakeholders and with using several checklists, and who analyses the current situation and gives recommendations. Thus, our approach allows platform-based strategic consulting and takes the form of a digital consultant.

First, the paper gives an overview over the currently discussed implications the digital transformation poses for the business and management consulting industry, and what challenges and requirements need to be considered for the future of consulting. Second, existing business and management consulting approaches are explored with regards to their ability to deal with the identified implications and challenges. Third, our own approach is presented, which offers the possibility to overcome limitations of the identified existing approaches. We discuss the underlying methodology and give details for the conceptual basis of our approach. Finally, we show our research approach and discuss the results of the conducted evaluation of the platform also including the presentation of areas for future research.
2 Research Approach

The design of the platform is done using an agile approach in combination with a design science research (DSR) approach for the whole concept. We have chosen the DSR since we have created an artefact to solve the problem of the digitalization of the strategic consulting. We rely on the phases as proposed by (Vaishnavi et. al., 2007) which are enhancement of the design science research approach as has been introduced by (Hevner, 2007). Below we shortly discuss the main phases.

Awareness Phase: It focused on a general literature review regarding digital transformation, and SME challenges using results of studies. We have retrieved secondary data by means of a thorough literature analysis regarding digital transformation, related frameworks and methods, and its application to businesses. In addition, several interviews were conducted to gather data to understand the problem and collect requirements for the development of the artifact.

Suggestion Phase: Based on the information from the awareness phase, the suggestion focused on the analysis of the findings to gain insight into the challenges and potentials of SMEs in the digital age and to identify (1) in which areas the digital transformation takes place, and (2) which functionality must be offered by a tool supporting the data collection during the strategy definition. The result of this phase helped us to define the conceptual foundation of the platform and the tools.

Development and Evaluation Phase: In this phase we have designed and developed the Digital Backpack Assessment in several iterations. Each iteration was completed with semi-structured interviews, focus groups discussion and/or workshops with SMEs to understand their challenges for digital transformation processes and to understand their needs during the initiation phase of a digital transformation. Hence, these findings and feedback from one iteration and its evaluation have triggered the refinement of the artefact which was again evaluated in the next iteration phase.

The results of the suggestion phase have been used in the first iteration for the development of the first draft of the artefact of the Digital Backpack Assessment as drawn pictures which went through the first evaluation. The first draft has included the definition of the dimensions/categories that should be asked by the Digital Backpack Assessment for the gathering of data about the current situation of the company and with the design of possible visualizations of the analyzed data.

In the next iterations we have started first to build mockups of the Digital Backpack Assessment and later to develop prototypes aiming to refine, adapt, and add the prototype with more information or content. Thus, each iteration was concerned about the data gathering exclusively for building the artifact. Whenever necessary we went back to the awareness or to the suggestion phase to address a deeper and more extensive literature research in the field of the dimensions that have been identified as the first iterations. A deeper analysis of all the interviews was conducted to define a set of requirements. The findings itself were a contribution to the requirements engineering and platform development.

3 Literature Review

The literature review first provides an overview over the development of strategic business consulting and then introduce critical success factors for new platform-based consulting approaches. Finally, existing platform-based consulting approaches are identified and discussed.

3.1 Development of Digital Consulting Models

When having now a closer look at the development of different digital consulting models in Figure 1 below, considering a study conducted by Nissen, Füssl, Werth, Gugler, and Neu (2019) in the German business consulting market in 2017, and considering four different digital consulting models as introduced by Werth and Greff (2018) “core only consulting”, “platform consulting”, “self-service
consulting”, and “algorithmic consulting”. In the following, the four models are briefly described before the results of the study are discussed. Core only consulting: Focus on consulting as knowledge-based task. Information technology supports the provision of the service to increase cost efficiency and flexibility. Platform-based consulting: A platform shapes a digital business model by connecting supply and demand, either by mediation of consultants or by mediation of consulting services. Self-service consulting: Customers are enabled to perform consulting service-related tasks, which originally would have been fulfilled by a consultant, by themselves. Algorithmic consulting: Algorithmic computations substitute or improve consulting services (formerly) conducted by human consultants.

Most of the study participants, regardless of the consulting field, claim to apply a “core only consulting” model.

Interestingly, “platform consulting”, “self-service consulting”, and “algorithmic consulting” are applied less often, respectively are applied only from a minority of the participants, leaving these models with a high potential for growth.

The study further supports this insight when having a look at what technologies are used for the provision of consulting services. Whereas audio and video conferencing are mentioned with 70.3 percent, means like self-service consulting, expert platforms or data mining are mentioned with 18.0 percent, respectively 10.3 percent, and 8.7 percent only (Nissen, Füssl, Werth, Gugler, & Neu, 2019).

Also due to COVID-19 audio and video conferencing tools to support communication and exchange are already well established. However, again platform-based approaches and intelligent solutions which apply for example data mining techniques or make use of collectively available expert knowledge are less common. Again, the potential for growth and, what stands out especially in this study, the potential for new, innovative, and transformative consulting services lies at hand.

### 3.2 Critical Success Factors for Platform-based Consulting

Also, Kaselow, Petrik, and Feja (2020) recognize this potential and write “digital platforms offer the potential to win new customer groups who have not previously purchased consulting services before” and add that new platform-based consulting approaches will appear. They furthermore identify fourteen interdependent success factors for a platform launch, respectively its practical application. These factors are “focus on value proposition”, “customer acquisition”, “customer loyalty”, “marketing”, “expansion in emerging markets”, “openness”, “platform competition”, “selection of value proposition”, “modularity”, “design”, “access”, “interfaces”, “price structure”, “communication”.

As will be discussed later in our contribution, with the presentation of the vision for the proposed own platform-based consulting approach, the above introduced success factors for platform-based consulting also serve as guiding principles for the authors.
3.3 Identified Existing Platform-based Consulting Approaches

There is trend towards the offering of online digital maturity assessments. For example, the “Digital Readiness Assessment” introduced by Ginko Management Consulting (2022), “Digital Maturity Assessment” introduced by Strategy & Transformation Consulting (2022), “Digital Maturity Assessment Tool” introduced by the Department of Business Development and Technology of the Aarhus University (2022). Maturity assessments offer support for consultants and valuable insights for organizations in terms of position assessments. Nevertheless, they do not make use of the full potential the above mentioned “platform”, “self-service”, and “algorithmic” consulting approaches offer. As described in section 4, the approach presented here goes beyond pure maturity analysis. Here, the classical maturity analysis is complemented with elements that allow to zoom into the different areas of interest, to get direct feedback, and to perform additional analyses.

The discussed implications of the digital age on the consulting industry show that a change from a traditional face-to-face, time and location dependent consulting towards an on-demand, intelligent, and platform-based consulting can be identified. This is, considering the discussion above, a promising approach for future consulting, not only because of the market growth potential, but also because of the possibilities for improvement of consulting services offered by (yet even unknown) technological possibilities, paired with human abilities, to allow organizations to stay competitive and to drive digital transformation even more so. In the next section, the authors therefore present their vision for an own approach on platform-based business consulting, incorporating as well self-service and algorithmic consulting properties to establish the basis for future oriented consulting.

4 The ABILI Platform-Based Methodology for Strategic Consulting

The focus of the ABILI Methodology lies on supporting the management of an organization in the strategic planning of digital transformation (Gatziu Grivas & Graf, 2020). The strategic planning shows how the organization will change to reach a new level in the digital age. The aim is not only to implement digital technologies, but also to adapt the company to the changed environment. The outcome of the strategic planning of the digital transformation is the digital strategy which closes the gap between the current state and the target state. It relates to the business strategy and reflects a change of a company to reach a new state in the digital age. The digital strategy also provides input to IT strategy in exploiting the potential of digital technology.

We consider that the strategic planning of the digital transformation takes place in two steps:

Step 1 – Strategic analysis with an internal and external view: With the internal view the current situation the organization is conducted focusing on current strategic orientation of the company and its own digital opportunities by means of assessments to measure the digital maturity. With the external view the aim is to understand the dynamics of digital transformation and to recognize the changes and influences on the organization. Out of this internal and external analysis possible cases for changes can be determined. They describe the need and the reason for shaping a certain situation in a different or new way.

Step 2 – Define the strategic goals and the digital roadmap: A comprehensive and effective roadmap serves as the basis for digital business transformation and is the key to achieving the strategic goals. A realistic action plan negotiates the risks and ensures that the initiatives and projects deliver return on investment (ROI).

The ABILI Tool-Based Methodology supports both steps of the strategic planning of the digital transformation with online tools offered on a web-based platform. For the internal view of the strategic analysis the self-service online tool, the Digital Backpack Assessment (DBA) to measure the digital
maturity and to propose possible case for changes is offered. As mentioned in the introduction the tool is built along the following principles:

- **Holistic**: the entire company is examined, and detailed analyses can be carried out as needed.
- **Objectivity**: participation of multiple stakeholders to obtain 360-degree transparency and break down silos. The platform supports the identification of divergences in the opinions of individual stakeholders.
- **“Self-image” vs. “external image”**: comparison of a company’s own strategy against the expert’s opinion.
- **Measuring progress**: the assessments can be carried out periodically and the platform shows the progress of the transformation.

For step 2 the tool Transformation Compass (Graf, Peter, & Gatziu Grivas, 2019) can be used. In thematic workshops with the stakeholders of the organization and with digital transformation consultants. Consultants are supported by the Transformation Compass.

The ABILI Methodology is considered as a human-machine hybrid consulting with a combination of digital consultants by means of the Digital Backpack Assessment (DBA) and the Transformation Compass as the machine, and the human consultants who use the tools.

### 5 Conceptual Basis for the Platform-Based Consulting

In this section we discuss the consulting process, and we show the computations and visualizations on the platform on which the Digital Backpack Assessment Tool is offered. Figure 2 shows an abstract view of the consulting process. As indicated by the outer dashed grid, steps 1 and 4 are only partially in the focus of the platform. This means that these sub-steps partially take place without the platform. This is one reason why we speak of hybrid consulting.

![Platform-based consulting process](image)

The first step is called Data Collection which includes the registration of an organization by entering certain profile data and the employees which are invited automatically by the platform to fill out the assessments, we call them platform users. The platform users fill out the assessment in a self-service manner and so data about the current position of the company as discussed below is gathered.

On this collected data in a next step the so-called Data Calculation, a data evaluation takes place. In this evaluation, various calculations can be made, which are also applied according to the maturity
model (Graf, Peter, & Gatziu Grivas, 2019). Furthermore, external knowledge is used to obtain results that are more suitable for the organization along the profile data.

In a next step, the so-called Data Visualization, the analyzed data becomes visible in a dashboard. The dashboard includes several charts and gives recommendations about the actions, which could be taken by the organization towards a digital transformation. These steps 1 to 3 take place with a self-service online tool without human interaction. In the next step, the so-called Consulting, the human consultants use the Transformation Compass as mentioned above. The focus of the paper is on step 1 to 3 and step 4 is target of our future work.

5.1 Data Collection

During the registration process the company administrator, a power user, fills out the company profile (like number of employees, business model related data or industry-specific profile questions) and defines with an appropriate platform interface the organizational structure. Along this structure the company administrator adds further employees and map hierarchies. This is an essential step, supporting the objectivity as one of the main features of the platform as mentioned above.

At the core of the data entry is the ABILI Methodology (see section 4). For the rough sequence of how this was implemented with the platform and how it was taken beyond, see Figure 3. First, the ABILI Methodology process captures the four core areas of “organizational excellence”, “operational excellence”, “customer centricity” and “business model” (1). The goal of this analysis is to identify, through self-assessment, the areas of the organization where priority for action should lie (2). For each of these areas, further content-related analyses can then be carried out, depending on the area and sector (3).

It follows the following question structure: for each topic (level 1) a strategy question is asked. Here, the organization determines whether it considers this issue to be strategically important. This is followed by the question structure for the sub-category (level 2). Here, a strategy question is also asked first, in the same form as at level 1. This is followed by the actual maturity questions (level 3). There are two question types for maturity questions, type A relates to importance and type B relates to the organization’s satisfaction with its own performance in this area. Main categories can have any number of subcategories, while subcategories each force both maturity questions. The question structure is shown in Figure 4. Building on this data input, the analysis can now be done using the ABILI Methodology.

Figure 3: ABILI Methodology used and extended
5.2 Data Calculation

The data processing also follows the ABILI Methodology. In this section, we present how the calculations are currently performed on the existing platform. The formulas are a representation of the calculations in the source code. The calculation is carried out as follows. Starting at level 3, the two maturity questions (importance, satisfaction) associated with a strategy question at level 2 are averaged and the need for action is derived from them (Equation 1). At level two, the relevance value is derived directly from the strategic question (Equation 2).

\[ NfA_2 = \frac{(SatVal_3 + ImpVal_3)}{2} \]

**Equation 1:** Need for action on level 2

\[ Rel_2 = StVal_2 \]

**Equation 2:** Relevance on level 2

From this together with the need for action the average is formed and from this the action priority is formed (Equation 3). The relevance value on level 1 results from the relevance values of the subcategories, as well as the strategic self-assessment of the company (Equation 4).

\[ ActPrio_2 = \frac{(NfA_2 + Rel_2)}{2} \]

**Equation 3:** Action priority on level 2

\[ Rel_1 = \frac{(StVal_2 + \sum_{k=0}^{n} Rel_{2k})}{2} \]

**Equation 4:** Relevance on level 1

At level 3, the need for action is accumulated from the subcategories (Equation 5). Finally, the action priority on level 1 is then derived from the relevance of the same level, as well as the average need for action on level 2 (as was shown in need for action at level 1) (Equation 6).

\[ NfA_1 = \sum_{k=0}^{n} \frac{NfA_{2k}}{n} \]

**Equation 5:** Need for action on level 1

\[ ActPrio_1 = \frac{Rel_1 + NfA_1}{2} \]

**Equation 6:** Action priority on level 1
In summary, these calculations form averages across the various categories. As can be seen, a weighting of individual values in this sense is not provided with a factor. Instead, the strategic value is used as a weighting.

5.3 Data Visualization

After conducting the assessment, the evaluation is presented in form of a user-friendly and easy to read dashboard. Various types of visualizations are illustrated in Figure 5.

First, the organization receives an overall view. In this, the results are presented in a condensed form at level 1 or level 2. Here, the priority for action, the focus areas, as well as an internal and external benchmarking are summarized on one page. Each of these elements can be accessed via a subpage to deeper levels of the results.

![Figure 5: Various types of visualizations](image)

The action priority shows the results calculated in the last section (see Figure 5, a). Here, one first sees the results at level 1 (relevance, need for action, and priority for action). Depending on the hierarchical level in the company, the accumulated results of the departments under this user are summarized here. The user can then zoom into the individual levels (b). At level 2, these are the same types of results, while at level 3, satisfaction, importance and need for action are displayed for the various response options. The results are displayed in three levels for all values: “low”, “medium” and “high”.

For both internal and external benchmarking, the priority for action value is displayed. In internal benchmarking (c), this is displayed for the individual departments or for each of the employees of a department. While in external benchmarking, other organizations in the same industry are grouped together.

Finally, in the focus area (d), the priorities for action (level 1) and the corresponding values for the need for action (level 2) are displayed. The grading is also the same as in the action priority area.
Evaluation and Future Research

After the development and implementation of the platform an extensive evaluation of the platform and the approach has been conducted. To obtain the broadest possible feedback, the evaluation was conducted in several rounds during the period of 18 months. On the one hand, technical requirements were tested and on the other hand, requirements of the individual industries were considered and validated.

Thus, two field tests are worth highlighting for the evaluation:

1. Hotel industry field test: the platform was offered with 53 different persons from management functions of different hotels in Switzerland. In each case, the assessment could be carried out without additional coaching.

2. Field test in the fiduciary sector: here 87 different assessments were carried out within one year. These were partly completed by the companies individually (12) or at evening events in a guided colloquium (75). In particular, the processes as well as the industry-specific functionalities of the platform were tested. The two groups showed that there were no differences in the use and execution/evaluation of the platform between these groups.

In addition to these two field tests, isolated applications were made in various industries like hospitality, trustee, and construction industry. Thus, the platform and the hybrid consulting approach were used by more than 200 different companies. It turned out that a majority found the approach to be target-oriented (about 80 percent) and would recommend the tool to others. About 45 percent found it easy to use, but relatively time-consuming due to the complexity of the questions. In the fiduciary sector in particular, the wish was expressed several times that several people from the same company should use the tool in order to enable a broadly based statement. About half of the participants from this sector criticized the fact that no concrete solution/software was proposed directly.

On the one hand, it was shown that this hybrid consulting can be applied well to the area of strategic management across industries and that this can be accomplished with an appropriate technological platform. On the other hand, additional features and improvements have also emerged from these field tests.

Out of the evaluation several areas for future research have been identified:

1. An internal GAP analysis: different people per company can perform the assessment. This allows benchmarking, normalization of the evaluation for the company. This feature has already been implemented.

2. An industry benchmark: a comparison of the own company within the industry.

3. Assessments for additional company areas and topics: topics such as corporate IT and leadership are to be increasingly considered. Various additional assessments are being prepared for this purpose.

4. Role-based assessments: diversified questions can be picked up depending on the role in the company. This should make it possible to request detailed assessments of individual subareas.

5. Further development of industry and organizations specific, even department or employee specific, assessment questions and evaluations, respectively dashboard output, and recommendations for actions, to further improve understandability and value added by offering tailored consulting for individual organizations.

6. Extension of the platform in terms of the integration of other technologies to support data input and output at the user interface. As the evaluation has shown, these include additional
visualization options, as well as the integration of further technologies to strengthen the 360-degree and digital transformations even further.

7. Integration of mobile devices to enable the areas identified as focus areas with additional concrete information for the transformation of employees on their end devices.

7 Conclusion

Nowadays, data is increasingly used as a basis for decision-making. Entire industries are therefore more and more in a state of flux and are attempting to generate decisive competitive advantages based on new possibilities that the use of data brings with it. The consulting industry is also facing this challenge, albeit at a slow pace. Simple consulting services are increasingly finding their way into companies, particularly in the form of self-services, but such opportunities are still very rare at the strategic level. Based on this insight, the authors propose an own platform-based strategic business consulting approach. This manifests itself in two different tools.

The first tool, the Digital Backpack Assessment enables strategic analysis with an internal and external view. For the internal view of the strategic analysis the self-service online tool measures the digital maturity and to propose possible case for changes is offered.

The second tool, the Transformation Compass supports in defining the strategic goals and the digital roadmap. Performed in thematic workshops with the stakeholders of the organization and with digital transformation consultants. Consultants are supported by the Transformation Compass.

The entire process as well as the tools and the platform itself have been tested by over 200 companies and customers. In the process, new requirements were constantly implemented in an agile procedure.

Overall, it can be said that now the introduced own strategic business consulting approach offers a sound basis for its further development into a smart and agile consulting solution, incorporating artificial intelligence and expert knowledge, to ultimately achieve the vision of offering affordable, science-backed, on-demand and tailormade guidance for organizations and their employees to drive digital transformation.

References


