**Innovativeness to enlarge digital readiness - How to avoid digital inertia?**

Paul Morsch

HU University of Applied Sciences

**ABSTRACT**

*Technological developments go fast and are interrelated and multi-interpretable. As consumer needs change, the technological possibilities to meet those needs are constantly evolving and new technology providers introduce new disruptive business models. This makes it difficult to predict what the world of tomorrow will look like for an organization and that makes the risks for organizations substantial. In this context, it is difficult for organizations to determine what constitutes a good strategy to adopt digital developments.*

*This paper describes a first step of a study with the objective to design a method for organizations to formulate a future-proof strategy in a rapidly changing, complex and ambiguous context. More specifically, this paper describes the results of a sequence of three focus groups that were held with a group of eight experts, with extensive experience as members of the decision making unit in organizations. The objectives of these sessions were to determine possible solutions for the outlined challenge in order to provide direction for continuation and scoping of the following research phases.*

**Keywords**: Strategy Development, Digital Strategy, Digital Transformation, Innovation

**INTRODUCTION**

The environment of organizations is changing faster and faster under the influence of technological evolution. The rapid succession of these developments, changes people's behaviour and expectations (Karimi and Walter, 2015) creating new needs and demands and thus directly impacting organizational strategy. According to Millar et al. (2018) this creates a competitive advantage for organizations that are able to adapt quicker than their competitors to this changing environment. Organizations that do not adapt in time to new customer desires and social changes as a result of this digital transformation run the risk of creating insufficient value for their customers, which can lead to loss of turnover or even bankruptcy (Mazone, 2014; Karpunina, 2020). Besides this effect, the exploitation and integration of new digital technologies often affect large parts of organizations and even go beyond their borders, by impacting products, business processes, sales channels, and supply chains (Matt, et al., 2015).  The speed of this unpredictability and complexity of the changing environment is higher than it was in the past, making existing techniques and tools for strategic adaptation no longer sufficient (Warner & Wäger, 2019).

The new reality requires organizations to develop dynamic capabilities to cope with this fast changing environment (Teece et al., 1997) such as a certain degree of environmental sensitivity, especially with regard to digital developments (Fainshmidt et al. in 2019).

The alignment of IT processes with the processes of the rest of the organisation is a complicating matter when it comes to the timely adaption to rapidly changing circumstances. The alignment between business and IT (BITA) has been a thorny subject in practice since the start of automation and digitalisation and is much discussed in literature (Luftman and Brier, 1999, Bharadwaj et al., 2013, Kahre et al. 2017). Various models have been developed over the years (Jonathan, 2018) to achieve this alignment. So the challenge for organizations in a rapid digital transforming world increases further. In a rapidly changing complex environment, organizations have to be agile and determine a futureproof strategy in the digital field where BITA has traditionally been a problem (Zhang et al., 2018).

Based on the above we find that organizations are often unfamiliar with:

* The extent to which they are digital ready and how to determine this.
* What risk (chance and impact) they run, not being (fully) digital ready.
* What measures and efforts, will have what effect on their digital readiness (risks).

This paper describes the first results of a larger research project that aims to develop a framework that organizations can use to develop their digital transformation strategy such that they will increase their digital readiness and can make well informed strategic choices, based on insights into risks and provide possible measures to influence these risks.

In scientific literature little research is found on the integral process to make the translation, reasoning from the rapidly changing and unpredictable digitising reality in which organizations have to work into the concrete measures they have to take to be future proof (Korachi and Bounabat 2019, Teichert 2019). There are also few case studies available in this field that provide scientific insights from practice (Warner & Wäger, 2019, Liu, 2011).

Despite the long standing practical need for such a framework and some practical evidence for the effectiveness of it, science currently doesn't provide in such a method. The objective of this paper is to share the results of a first practical exploration of this problem by means of a sequence of three sessions with a focus group.

**THEORETICAL BACKGROUNG**

In this section we describe the concepts of dynamic capabilities, digital readiness and digital transformation which form the foundation for this study.

According to Teece at al. (1997) earlier research on different perspectives on strategy didn't fully embrace the two key aspects that are part of the dynamic capabilities theory. Teece et al. state that "*The term ‘dynamic’ refers to the capacity to renew competences so as to achieve congruence with the changing business environment; certain innovative responses are required when time-to-market and timing are critical, the rate of technological change is rapid, and the nature of future competition and markets difficult to determine. The term ‘capabilities’ emphasizes the key role of strategic management in appropriately adapting, integrating, and reconfiguring internal and external organizational skills, resources, and functional competences to match the requirements of a changing environment.*" (Teece et al., 1997)

As described in the introduction the aim of this study is to develop a framework that can be used in support to the digital transformation strategy in order to enhance digital readiness. For the definition of digital readiness we follow Walczuch et al. (2007) who state that digital readiness is "*the degree and speed with which an organization can develop innovative capabilities and apply new technologies in order to effectively achieve its goals and results*" (Walczuch et al., 2007). For digital transformation we combine the notion of Fitzgerald et al. (2014) who describe this concept as follows:

"*The use of new digital technologies (social media, mobile, analytics or embedded devices) to enable major business improvements such as enhancing customer experience, streamlining operations, or creating new business models.*" ([Fitzgerald et al., 2014](https://www.sciencedirect.com/science/article/pii/S0024630117303710?casa_token=hkg3bGBZx_oAAAAA:n7ZUwX57Mj8-Z-H-ADvxEuUsXDGo0_VThAA3yVcQ49LfKC4MXF5GxsyTPqDre45yacZ5mlvaaA#bib39)) with the description of Warner & Wäger. (2019) who define digital transformation as "*An ongoing process of using new digital technologies in everyday organizational life, which recognizes agility as the core mechanism for the strategic renewal of an organization's (1) business model, (2) collaborative approach, and eventually the (3) culture.*" (Warner & Wäger, 2019). For us digital transformation is the ongoing use of new digital technologies to realise collaborative agile improvements to an organization's processes and business model in order to enhance customer experience as well as fulfilling new needs and desires.

**METHODOLOGY**

In this research we use focus groups as a first step to further clarify the problem and develop more insights to be able to define a more precise research question. Focus groups are particularly suitable in qualitative studies in which a design question arises out of a complex, often social process (Morgan, 1996). Furthermore, focus groups are often combined with other research methods like surveys and literature reviews (Morgan, 1996), this is something we foresee in future research phases.

Morgan mentions that a simultaneous (dis)advantage of focus groups is that the moderator/researcher directs the group through participation in the process (Morgan, 1996). By dividing the moderation between two researchers with both substantial experience in the field of strategy development within organizations, this study tried to limit this disadvantage and increase the advantage.

Based on the experience of the two moderators the maximum of participants for the focus group is set at eight.

The NCD-network (NCD is the Dutch association of executives and non-executives) was used for the invitation to participate in the focus group. An expert group was composed by selecting applicants to our invitation who had thorough practical experience in and knowledge of the field of strategy development. Furthermore, an attempt was made to compose the group in such a way that they differed on several other dimensions such as: profit/non-profit, role, gender and organizational size (see table 1).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Role** | **Industry** | **Employees** | **Gender** |
| P1 | Executive officer | Healthcare | 350 | M |
| P2 | Executive officer | Education | 1000 | M |
| P3 | HR Executive officer | Construction | 20.000 | F |
| P4 | Non-executive board member  | Technology  | 50 | M |
| P5 | Non-executive board member  | Education | > 500 | F |
| P6 | External consultant | Lean agile | Freelancer (SME) | M |
| P7 | External consultant | Innovation | Freelancer  | M |
| P8 | Advisor of the board (internal) | Education | 3000 | F |

**Table 1: Participants and their discriminating characteristics**

Note:

P1 combines his director role with a non-executive role in an advisory foundation.
P4 is non-executive board member in 2 different smaller tech-company. Besides this he is owner/director of two small consultancy companies (1 in the investment sector and 1 in marketing & sales).

P5 is a non-executive board member in 3 different educational organizations.
P7 combines his consultant role with a non-executive role in a company of approximately 1000 employees.

In the third focus group session P4 and P5 were missing. Their views on the questions addressed were collected individually in a Teams session after the third meeting. The results of the focus groups were noted by the moderators during the sessions for everyone to see. After each session, the moderators processed the recorded results and the audio recordings into reports that were reviewed with the participants and approved by them as a good representation of the meetings.

During the focus group sessions, we explored the following topics with the group of subject matter experts:

* The problem of digital strategy developement.
* What factors make this problem so hard to solve?
* What are possible (directions for) answers to the research question?

In preparation of the group discussions the moderators used the questions of ‘The VUCA audit’ (Baran and Woznyj, 2020), see appendix A. When new insights or concepts were brought forward by the participants, these insights were discussed with the other participants and in-depth questions were asked.

**FOCUS GROUP SESSIONS**

First we shared our understanding of the concepts underlying this study (as described in the theoretical background) to create a common understanding from where to start the focus group sessions.

Furthermore, we explained how the focus group sessions fit in the larger research program, some basic rules of conduct during the sessions (based on the rules of brainstorming), and we explained the objective of this study: to develop a better understanding of the problem for all the participants and get their thoughts about possible solutions to the research question.

As a guideline for the focus group sessions, we used the aforementioned questions and those described in Appendix A.

***Results***

***The first objective*** in the discussion was to determine different opinions by the experts on the described (research) problem. The fast changing and complex environment in which organizations nowadays operate were fully recognized by the participants as well as the difficulty organizations have in determining a future-proof strategy that diminishes the risk they take in such an environment.

The focus on the digital aspect and on the development of strategy were not acknowledged. In fact the outcome of this discussion was that the traditional strategy process was still adequate to provide a future-proof strategy. The opinion of the participants was in fact that not the process of strategy development should be changed but the innovativeness of the organization should be increased to become future ready.

Appendix B consists of an overview with several statements of the participants referring to this part of the discussion.

***The second objective*** of the discussion was to gather expert opinions on the reasons why it appears to be so hard to solve this problem, given that the problem has been in existence for a long time and the stakes for organizations are high.

The outcome of this discussion was that the participants stated that being innovative is not very easy to achieve. It is a complex process and it is hard to give way to innovative processes in an effective and at the same time efficient way.

Furthermore, several different forces prevent organizations of being adaptive and innovative. One of the main reasons is that organizations need to become more agile and increase their adaptability and this sometimes means that they need to let go of products, processes and structures that were the basis of yesterday’s successes.

In extent to the previous aspect, there is in many organizations an understandable, strong urge to get profits and losses into a planning and control cycle. And this is in many cases not supportive to the creative process that is needed to increase innovativeness. Another reason for organizations, why it is so difficult to solve the problem of being future-proof is the existence of blind spots that prevent them of being effective in general and especially in becoming more innovative.

Appendix C consists of an overview with several statements of the participants on these insights.

***The third objective*** of the discussion was to gather ideas from the participants on how organizations can increase their digital readiness.

In line with earlier insights from the focus group, this part of the discussion reasoned on how to improve the innovative power of organizations and how to reduce the blind spots

The main insights can be summarized as follows:

* Avoid focusing on just a single aspect such as one product, a specific idea or way of thinking. In extent to this, to provide diversity in teams and cherish any existing views on problems and possible solutions. Embrace other thoughts and friction and make it functional in teams. Friction can be functional or dysfunctional.
* Reflect on individual people, processes and teams at all levels within the organisation and make sure there are well functioning feedback loops. Reflection and feedback is necessary on all the before mentioned insights. Reflect on them, discuss them and dissolve the existing barriers.

Appendix D consists of an overview with several statements of the participants on these insights.

**CONCLUSIONS, FURTHER RESEARCH AND LIMITATIONS**

The experts in the focus group provided the researchers with several insights that can help to answer the research question: *how can organizations construct their digital strategy such that they will increase their digital readiness and can make considered strategic choices, based on insights about risks and provide possible measures to influence these risks?*

This section contains some of the main conclusions, ideas for further research and limitations to this research.

***Conclusions***

On a more abstract level the participants suggested:

* That one should not speak of finding methods to increase the digital readiness of organizations but of finding methods that increase the innovativeness of organizations;
* That more inductive methods (instead of the improvement of the deductive process of strategy development) like increasing the innovativeness (adaptiveness) of organizations would be appropriate to enlarge the (digital) readiness of organizations;
* That any method that aims to increase the (digital) readiness of organizations should include ways to define the context of organizations.

Organisations shouldn't go through a digital transformation just because it’s a trend. It depends on context and specific circumstances to decide to initiate a digital transformation or not. In addition to that no separate digital strategy is required just because there is a conviction that every organisation should have one. Organizations should do what the specific circumstances demands them to do, given their organizational mission and goals. Innovation can be seen as the cure for digital inertia and helps organizations to achieve digital readiness. A good focus on innovation helps organizations to keep alert and be attuned to their environment.

Stimulate actions and processes that enforces innovative processes. Reduce opposing forces of innovation. In regard to this, special effort should be taken to cope and diminish the blind spots in organizations. These blind spots can occur on an individual level, a team-level and on organizational level.

To diminish the blind spots it can be very useful to invite help from outside the organisation to add knowledge and to take a fresh look (because there are causes or forces that maintain the blind spot(s)).

Based on these focus groups several new research questions arise, like:

* Will digital readiness provide an organisation to innovate in time or is it the other way around?
* Are there any specific innovative skills which contribute to a higher level of digital readiness?
* Does the reduction of blind spots contribute to a higher state of digital readiness?

***Ideas for further research***

For the follow up to this research we find that our study shouldn’t be limited to deductive methods like improving the process of strategy development in order to find ways to enlarge the digital readiness of organizations. Instead, the research should include more inductive methods as well as improving processes that increase the innovativeness of organizations.

Innovativeness and digital readiness are multi-dimensional concepts. An organization can be very innovative in adapting new technologies, but when the new applied technologies are not matching the needs of customers the value of new technologies has limited impact on business. More insights are needed about the relationships and the mutual influences between the concepts:

* Organizational context;
* Digital readiness;
* Digital strategy;
* Organizational competences (for example related to innovativeness).

Furthermore, research focused on the relationship between organizational blind spots and innovativeness, and organizational blind spots and digital readiness is needed.

***Limitations***
As with all studies this research also has several limitations. First, the scope and scale of this research was limited, because only eight experts participated. Nevertheless the findings are valuable and worthy for further research, however the current results are indicative and cannot yet be generalized to a broader context.

Second, a focus group gives the participants more space to direct the discussion and thus the results than, for example, when a Delphi study was applied and consensus needs to be reached. Third, despite the fact that the moderation was in hands of two researchers, there is still the chance that the researchers introduced their own bias.

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**Appendix A: Questions for “**The VUCA audit” (Baran and Woznyj, 2020)

To get a sense of anticipated volatility, uncertainty, complexity, and ambiguity overall:
1. What might change quickly about the organization or industry? What is “trending”?
2. What aspects of the organization or industry are unpredictable?
3. How is our work interconnected with or dependent upon other stakeholders?
4. What about our organization or industry lacks clarity or has multiple implications?

To get a sense of one’s own sensing and monitoring behaviors:
1. How might I stay in touch with trends in my organization, industry, or function?
2. How often am I surprised by decisions or events, and why?
3. What resources or relationships do I have or need to keep abreast of ongoing changes?
4. How much time do I spend listening to others, inside and outside of my organization?

To get a sense of trends inside the organization:
1. What do people talk about the most in meetings?
2. What are the most common topics “in the grapevine” among coworkers?
3. What are the key focal areas of our strategy documents and policies?
4. What do key leaders–—both formal and informal–—talk about the most?

To get a sense of trends outside the organization:
1. What regulations or laws influence what we do and how likely are they to change?
2. What aspects of our clients or customers are changing with regard to what we do?
3. What are our competitors doing that we are not doing, and why?
4. What aspects of the industry could fundamentally influence our success?

**Appendix B expert’s vision on**: The context of organizations is changing faster than before and because of this organizations should redesign their digital strategy development processes.

P1-8 refer to the persons characterized in table 1 in the methodology section.

* P7: Indeed, context is changing rapidly. Much faster than before due to the digital and technological developments.
* P2: The direct context (technological developments, competitors, customers, regulation, regional aspects, other relevant circumstances) of organizations determine to a significant extent how innovative an organization should be.
* P3: Sooner or later every organization will have to deal with the digital transformation and it will have consequences for business operations to a certain extent depending on the specific circumstances.
* P5: One way or the other, organizations should be aware of radical developments in their direct context. The nature of many of these developments will be technological or digital, but not all.
* P6: The context analysis is (still, as it was ever before) *the* crucial step in the process of determining (digital) strategy for organisations.
* P3: Because of its impact, the influence of context is growing.
* P1:There is no need to adjust the strategy process to the new circumstances due to the digital transformation. The traditional process contains all the activities necessary to get the right strategy for the organization if the analysis is done right.
* P4: Every organization has a corporate goal, and to achieve this goal organizations make a corporate strategy. If circumstances make it desirable/necessary the corporate strategy will lead to actions in the digital domain or specific actions that enlarge their digital readiness.
* P7: The context of organizations is rapidly changing and the digital transformation is a fact of life. So organizations should continuously be focused on innovations, digital or not, to make sure that they keep adding value for their customers.

**Appendix C expert’s vision on**: Why is it so hard to solve the problem of digital readiness?

P1-8 refer to the persons characterized in table 1 in the methodology section.

* P1: Organizations often hold on to cash cows (confidence that successes from the past, will last).
* P7: One of the main challenges for organizations is the awareness and management of ‘organizational blind spots’.
* P2: Profit and loss responsibility is often organized too low in the organisation. Some innovations are rewarding for the organization as a whole, because several business units (BU’s) benefit from it, but for none separately the costs outweigh the profits.
* P7: The decisions regarding innovation (making (financial) space for exploration and new ideas) is made by management that is accountable for the ‘old’ business that can be cannibalized by the new business/developments.
* P5: Structures that try to control innovation or structures that try to capture innovation in the planning and control cycle. Innovation flourishes when creative processes get space and can fail without consequences.
* P8: Lack of awareness or misjudgement of new developments in the environment (regarding technology, customers, etc).
* P5: Often management really wants to make the organisation more innovative, but they are not willing to bear the consequences (for example budget, patience, make difficult choices and keeping distance).
* P8: Often co-workers in organizations don’t know how to bring their innovative ideas to the next level, idea, feasibility study, business case, pilot, action plan, implementation (or some sort of process like this).
* P6: Often the HIPO, highest important Person, dominate discussion and decision units (like the Board or innovation teams).
* P3: Perceptions and convictions that interpret the environment and technological developments in a narrow minded way (too little diversity in the Board).
* P6: Convictions that are not helping the innovation, like: Innovation costs more than it yields, or innovation is an expensive hobby of technicians/IT/Business development/Marketing.
* P1: Sometimes the right competences to be innovative are missing.
* P7: Sometimes organizations developed a certain ineffective self-assurance.
* P3: Sometimes in organizations there is a blind trust in kpi’s, numbers. Trusting on the weather app that the sun is shining instead of looking outside and see for yourself it is raining.
* P8: Ineffective culture aspects, like being directive to your millennial co-workers.
* P2: Sometimes in organizations failure experiences from the past prevent new look alike initiatives to get a chance to prove themselves.
* P4: Sometimes ego-behaviour will prevent initiatives to get a chance to prove themselves.

**Appendix D expert’s vision on**: How can organizations improve their digital readiness? (the experts transformed this question in, how can organizations be more innovative and solve their blind-spots?)

P1-8 refer to the persons characterized in table 1 in the methodology section.

* P2: Reschedule profit and loss in a way the perverse incentives will be solved. Reward the development you want in all parts of the organisation (executing level as well as in de CDU and in managing levels) and make sure that the way
* P2: By extension, make sure the way you assign responsibilities authorisations in your organisation is supportive to your innovation goals.
* P3: Active attitude to find blind spots by the board and be willing to do something about them (take action).
* P1: When you feel any resistance on the content or on a personal level, discuss it and make it functional and constructive.
* P3: Cut the operational connections between the existing organisation and the make the innovative/ explorational department complete.
* P2: Multidisciplinary teams. Acquire and select co-workers with additional skills. In extent to that, introduce colleagues in your direct team that irritate you.
* P3: Introduce people with additional competences in the board (or the Centra Decision making Unit).
* P1: Organise reflection. (this aspect came back several times in the discussion).
* P6: SCRUM methodology and reporting the progression.
* P8: Facilitate experiments. Give co-workers space to be creative.
* P2: Tell everyone (all levels, starting at the top) that innovation and creativity is important and act to this conviction.
* P1: Organise an inspiring challenge regarding the innovation you want as an organization.
* P7: Dare to think in (doom)scenario’s. What if competition will do ‘x’ or will...
* P6: Be aware of all changes in the DESTEP evaluation including adaptions in regulation.
* P6: Provide good antenna’s for all relevant aspects in your environment. Get the outside world inside: thoughts, ideas, processes.
* P7: Stretch your thinking about your own products and services by, for example, applying services in other industries to your own organization or by imagining your own organization in another industry.
* P1: Do things that are strategy-proof.
* P7: Provide a stimulating atmosphere and culture for innovation. For example make people proud on the innovativeness of the organisation.
* P2: Selection of the co-workers that have the competences to innovate/create.
* P6: Just do it (creation/innovation) and learn.
* P8: Embrace crazy ideas.
* P7: Embrace disruptive trends and get them inside (act on it by facilitating brainstorms or inviting forces from outside your organization).
* P3: Board that dares to be vulnerable. Saying, we don’t know it ourselves, but we are going to find out (instead of pointing a direction or denying the development without knowing).
* P1: Organise innovation in an organised way (derived from strategy).
* P7: Create an innovation platform where anyone in the organisation can find answers to the question, how to bring initiatives to the next level of the innovation process.
* P8: Clear and transparent decision process for innovation ideas.
* P3: Introduce innovation coaches.
* P2: Innovation budget per Business Unit (when necessary on a higher level, budget must meet the level on which innovation is profitable).
* P8: Trust on peoples (co-workers, customers) perceptions on development.