Umeå University

Managing the Digital Enterprise

Individual Assignment 4

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October 29, 2023

Contents

1 Definitions of Digital Transformation

1.1 Paper: Digital doesn't have to be disruptive

The authors Nathan Furr and Andrew Shipilov described digital transformation in *Digital doesn't have to be disruptive: the best results can come from adaptation rather than reinvention* [3] as "adapting an organization's strategy and structure to capture opportunities enabled by digital technology" [3, p. 96]. The main aspects of digital transformation are listed as automation, virtualization, more targeted product and service customization, more informed decision making and machine-driven recommendations. Those technologies can be applied at almost every company and in almost every step of their processes. [3]

It can be difficult for companies to create a plan on how to act and execute their digital transformation. But radical replacements are only sometimes necessary – digital transformation means incremental steps to improve the processes. This includes getting more efficient and user-friendly using digital tools, finding the best way to reach the company's goals through digital tools or to overcome previous challenges. [3]

1.2 Paper: Five myths about digital transformation

Stephen J. Andriole stated in *Five myths about digital transformation* [1] that the path to digital transformation can be risky, even if it might lead to efficiency, innovation and competitiveness. According to the author, companies will fail to implement digital transformation unless it is extremely well planned and executed. There were five myths about digital transformation collected and presented to raise awareness to the risks and dangers of digital transformation. The resulting guidelines from those five myths are summarized in the following. [1]

1. "Not every company, process, or business model requires digital transformation" [1, p. 20]
2. Digital transformation does not necessarily use emerging or disruptive technologies.
3. If the company is already thriving, the transformation will not have a meaningful impact.
4. Disruptive transformation does usually not begin with the market leaders.
5. The executives do not necessarily want to transform digitally.

1.3 Paper: IT-enabled business transformation

In *IT-enabled business transformation: from automation to business scope redefinition* [13] by Nramanujam Venkatraman was stated that IT has a distinctive role in shaping the future's business operations while being a fundamental enabler in creating and maintaining competitiveness. Five levels of digital transformation were introduced and it was suggested that companies should

at first estimate the costs and efforts in comparison to the benefits and then move to higher levels of the transformation. Those levels are summarized in the following. [13]

Level 1 Localized Exploitation:

Deployment of standard IT applications with minimal changes to the business processes.

Level 2 Internal Integration:

Deployment of IT applications in the entire business process.

Level 3 Business Process Redesign:

Renewing of processes to improve efficiency with IT applications.

Level 4 Business Network Redesign:

Execution of digital transformation not only within the organization but with partners or suppliers.

Level 5 Business Scope Redefinition:

Redefining the market and the company's goals and potentially outsource tasks to third party companies.

1.4 Paper: Understanding digital transformation

Gregory Vial in *Understanding digital transformation: A review and a research agenda* [15] stated that digital transformation consists out of 8 building blocks: Digital technologies, disruption, strategic responses, value creation paths, structural changes, organizational barriers and positive and negative outcomes. Those building blocks and their connection build a framework, that was visualized. This can be seen in Figure 1. [15]

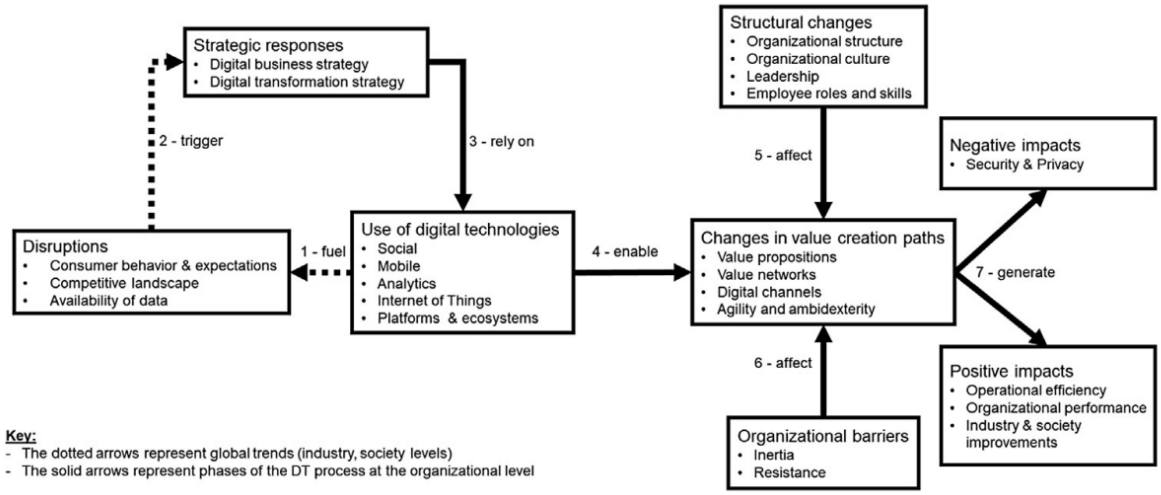

Figure 1: Digital transformation framework [15]

The framework shows the process of digital transformation where digital technologies creates disruptions in the global market, triggering global strategic responses from organizations. The organizations then rely on the use of digital technologies. Those technologies enable changes in value creation paths within the organization, which are based on structural changes in the organization and limited by organizational barriers. This results into positive and negative impacts for the organization. [15]

1.5 Paper: Digital Transformation versus IT-Enabled Transformation

Lauri Wessel, Abayomi Baiyere, Roxana Ologeanu-Taddei, Jonghyuk Cha and Tina Blegind-Jensen in *Unpacking the difference between digital transformation and IT-enabled organizational transformation* [16] focus on the difference between digital transformation and IT-enabled transformation. In previous literature, digital transformation and IT-enabled transformation was often examined regarding the strategic significance while emphasizing the similarities of those two concepts. In contrast to this, the authors stated that digital transformation can lead to a new organizational identity while IT-enabled organizational transformation is the enhancement of an existing organizational identity. [16]

2 Section 2

In the following, the key attributes for the definition of digital transformation from each of the in Section 1 described papers are listed.

Key attributes [1]

Five myths about digital transformation [1]

- Not every company or process needs digital transformation
- Radical replacements are often not necessary (no disruption)

Key attributes [3]

Digital doesn't have to be disruptive [3]

- Incremental steps to improve processes
- Radical replacements are often not necessary (no disruption)

Key attributes [13]

IT-enabled business transformation [13]

- Incremental steps to improve processes presented as levels (no disruption)

Key attributes [15]	Key attributes [16]
Understanding digital transformation [15] • Changes are responses to disruption that happen through the use of digital technologies (disruption)	*Digital vs. IT-enabled transformation* [16] • Digital transformation can lead to a new organizational identity (disruption)

One key aspect that was emphasized in the literature, is the aspect of realizing digital transformation incremental and step by step [1, 3, 13]. This is reasoned by several advantages:

- **Risk reduction:**

  Digital transformation can be complex and risky. Incrementally introducing changes allows organizations to identify and address issues one by one. This can prevent failures on a larger scale. [1]

- **Resource Management:**

  Smaller changes can help managing the budget and employees. [1, 3, 13]

- **Acceptance:**

  Employees are more likely to accept changes when it happens gradually and smaller steps can create more opportunities for training and adaptation. [8, 18]

- **Testing:**

  Step by step transformations allow for testing and learning from mistakes, which can lead to better outcomes in the next steps. [13]

- **Avoiding disruption:**

  Incremental transformation can help to ensure that the core business functions are not disrupted by implementing many changes at once. [1, 3, 13]

A step-by-step approach to digital transformation allows organizations to reduce risks, manage their resources, engage employees, adapt to changes and ensure that the transformation aligns with the expectations of the company itself and their customers.

Another aspect that was mentioned in the literature is the disruption: Disruption refers to a significant and abrupt change in the way a industry, business or processes operates. This can happen through the integration of digital technologies. One examples for disruption is the rise of e-commerce. The retail industry was transformed, because it allowed all companies to have access to a global marketplace. [14, 15, 16, 17]

According to *Understanding digital transformation* [15], digital transformation happens as a response to disruptions. This can be seen in Figure 1 in Section 1.4.

3 Section 3

Definitions of *Scale* and *Scope*

Scale	describes the size and reach of an organization, for example the rate at which products are created. [5, 6, 14]
Scope	describes the investment in customer relationships or physical distribution. [5, 6, 14]

When initiating a digital transformation, a manager should be prepared for changes in *Scope* and *Scale* of the company. Some of those changes are listed below:

- **Digital technologies:**

  Digital transformation involves the introduction of new digital technologies or upgrades to existing ones. Managers should understand the capabilities and limitations of these technologies and how they will impact their company and processes. These new technologies can influence a company's *Scale* and *Scope* and include artificial intelligence (AI), blockchain, Internet of Things (IoT) and the use of data analytics. [2, 10, 11, 19]

- **Market transformation:**

  Digital transformation can disrupt existing market dynamics. Managers should be prepared for changes in customer expectations and competitive environment. This can even lead to a company's shifting their market position. [14, 15, 16, 17]

- **Focus on customers:**

  During a digital transformation, managers could get focussed on the technical aspects of the change, concentrating mostly on the digital transformation and technologies. But it is important to remember that the primary goal of digital transformation is the enhancement of the customer experience. A successful digital transformation should be a balance between integrating new technologies and keeping the customer experience in focus. Prioritizing the customer's perspective ensures that the changes lead to a satisfying result. [18]

Managers should consider the following aspects when aiming to transform a company digitally:

- **Current state:**

  Before taking part in the digital transformation, internal and external factors of an organization have to be assessed. This includes conducting an analysis of the company's current technological infrastructure and readiness, an evaluation of market trends, competitive landscape, laws and customer expectations. [4, 7]

- **Vision and strategy:**

A strong vision for the transformation and a strategy that describes the expected outcome should be defined. This should be communicated for example in form of a roadmap to the employees, stakeholders and other parties. [7, 14, 17]

- **Risk assessment:**

  Potential risks and challenges that might occur during the transformation should be identified and plans to solve those issues should be created beforehand. [7, 9]

- **Data-driven decision-making:**

  Data and analytics can be used for decision-making and to measure progress. Data can be analysed to gather information about insights, predictions, and informed decision-making. This can be used to understand customer behaviour, optimize operations, predict trends or find new opportunities for improvement. [10, 12]

- **Feedback:**

  Feedback from customers and employees can be gathered to ensure that the digital transformation aligns with customer expectations and finds acceptance within the company or to find opportunity for improvements. [7]

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