Umeå University

Managing the Digital Enterprise

Individual Assignment 3

Pina Kolling

supervised by

Dr. Daniel Skog

and

M. Sc. Ramy Shenouda

October 26, 2023

Contents

1. Core assumptions in digital transformation literature

In this Section, the core assumptions of Venkatraman in *The digital matrix: new rules for business transformation through technology* [17] and Westerman, Bonnet and McAfee in *Leading digital: Turning technology into business transformation* [18] are presented.

Author of *The digital matrix*

Picture of Venkat Venkatraman[1]

Dr. Venkatraman holds a PhD from the University of Pittsburgh's (Katz Graduate School of Business, 1985). He specializes in the study of how established companies adapt to digital technologies. He published his knowledge in his book *The Digital Matrix: New Rules for Business Transformation through Technology* in 2017. [16, 17]

Authors of *Leading digital*

Picture of George Westermann[2]

George Westerman is a Senior Lecturer at MIT Sloan School of Management and Founder of the Global Opportunity Initiative. He has written award-winning books and conducted research on digital transformation. [10, 18]

Picture of Didie Bonnet[3]

Dr. Didier Bonnet is specialized on digital transformation. He is a Professor at IMD Business School (Switzerland) and co-author of the book *Leading digital*. He is featured on broadcasts like the BBC or CNN. [3, 9, 18]

Picture of Andrew McAfee[4]

Andrew McAfee is a principal research scientist at MIT and co-founder of the MIT Initiative on the Digital Economy. He has written numeral books, including *Race Against the Machine*, *The Second Machine Age* and *Leading digital*. [4, 5, 12, 18]

To effectively understand and use the literature and recommendations, it is important to critically analyse and understand the core assumptions that underlay their suggestions. These assumptions might be the reader's position, the nature and market of the organization in question or its geographical context.

[1]Picture from https://www.dukece.com/people/venkat-venkatraman/
[4]Picture from https://mitsloan.mit.edu/faculty/directory/george-f-westerman
[4]Picture from https://digitaltransformation2021.brightline.org/speakers/didier-bonnet/
[4]Picture from https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/the-strategy-and-corporate-finance-blog/leadership-rundown-is-technology-a-force-for-good

1.1. Top-down approach

In the books, the execution of the digitalization was suggested with a top-down approach. A top-down leadership approach in digital transformation can present challenges and lead to limitations. It often assumes that the employees are synchronized to a certain degree in terms of digital readiness and understanding. In reality, they might have different levels of digital understanding and readiness. In addition to this, top-down approaches can be slow in responding to challenges or changes, which can cause problems in the dynamic markets. Depending on the culture of the company or the location of the headquarter, a top-down approach might not find acceptance and employees do not feel valued in their opinions. The books assume a company and market environment, that is ready for digitalization and accepting a top-down approach to execute the changes. [17, 18]

An example for a country, that might not accept the execution of top-down leadership approaches due to cultural norms is Sweden. Swedish culture has a strong emphasis on equality and consensus. Open communication, collaboration, and participation in decision-making is highly valued. This promotes an inclusive bottom-up style of leadership and as a result, top-down leadership methods might not be accepted. [8, 15]

1.2. Example extraction

To assess the pre assumptions that were made by the authors, the companies that were mentioned as an example were extracted and analysed. This refers to the mentioning of their companies name in *The digital matrix: new rules for business transformation through technology* [17] and *Leading digital: Turning technology into business transformation* [18]. Those companies were not necessarily mentioned as a positive example, but analysing the similarities between the examples can give an insight about the authors (subconscious) assumptions. This extraction does not aim for completeness regarding finding every single example but there are enough data points to draw conclusions with. The extracted example companies and according headquarter positions and industries are listed in Appendices A and B and the results will be visualized and discussed in the following.

1.3. Geographical context

The geographical context in which a company operates is a critical factor. It has a big influence on the company's culture, employees, business environment, and technological infrastructure.

To analyse the assumptions about the companies' geographical contexts, the data that was gathered from the book is analysed and visualized. In *Leading digital: Turning technology into business transformation*, 14 of the 33 examined example companies have their headquarters in the USA. This can be seen in Figure 1. [18]

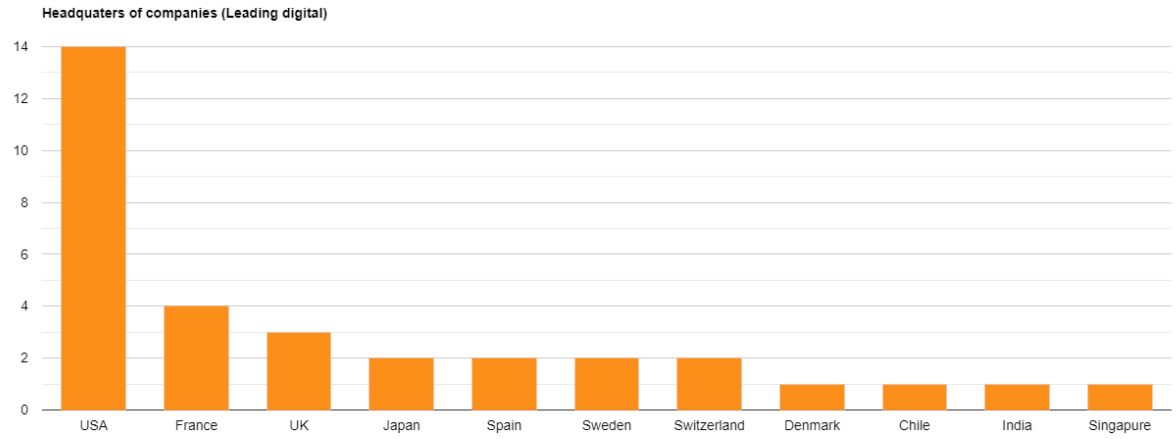

Figure 1: Headquarters of the example companies in *Leading digital* [18]

In *The digital matrix: new rules for business transformation through technology*, the majority of examined example companies is located in the USA, too. This can be seen in Figure 2.

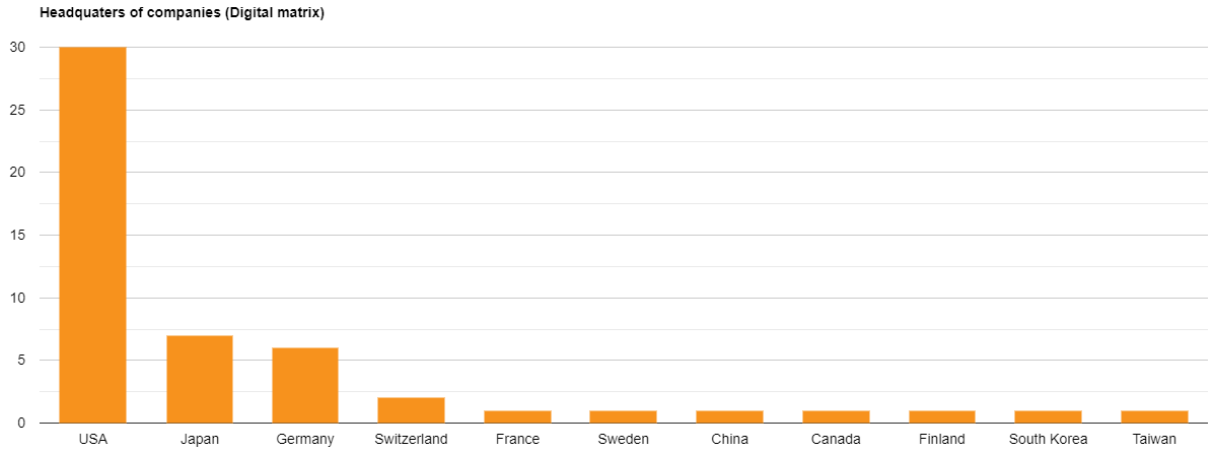

Figure 2: Headquarters of the example companies in *Digital matrix* [17]

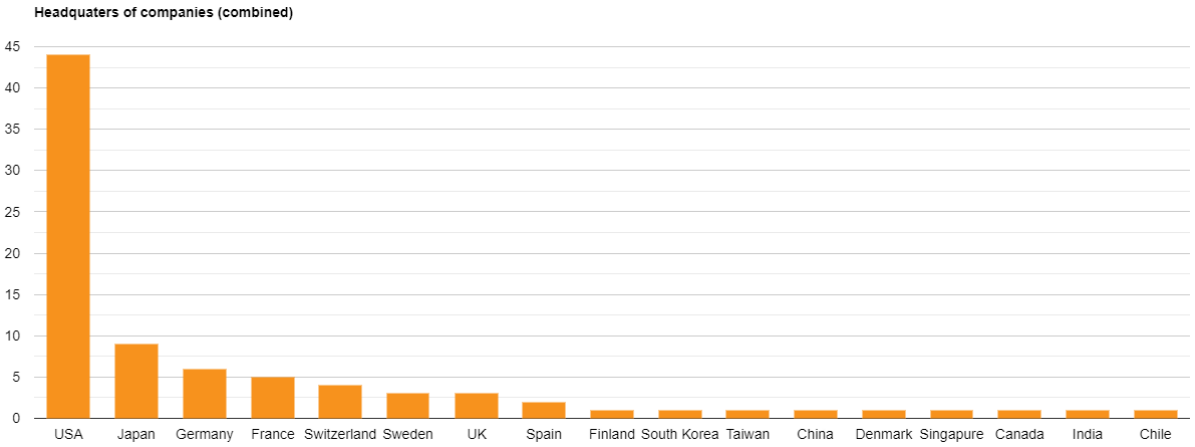

Figure 3: Headquarters of the example companies in both books [17, 18]

In the graph in Figure 3, the distribution of the combined examples of the companies' headquarters can be seen clearly, too. 30 of the 85 example companies are headquartered in the USA, which are around 35% of the examined example companies.

It has to be mentioned, that not only most companies are from the USA, the majority of countries that are listed are industrial countries. While Chile and India are developing countries, the USA, Japan, Germany, France, Switzerland, Sweden, UK, Spain, Finland, South Korea, Taiwan, Denmark, Singapore and Canada are industrial countries [11]. This leads to the conclusion, that the authors base their strategies on their experience with American companies. Because of this, they might even have overlooked the digitalization and development in other regions. But on the other hand it has to be considered that a significant number of global companies tend to be headquartered in these regions, because of the strong industrial and economic circumstances there. [2, 7]

Because of the companies' headquarter locations, the following core assumptions could have been made by the authors, regarding the majority of example companies having their headquarters in industrial countries:

- **Environment and readiness:**

  The industrial countries have more mature innovation ecosystems and an environment that supports digitalization. In Figure 4, the *World Digital Competitive Ranking 2022* can be seen, with the mentioned headquarter locations marked in orange.

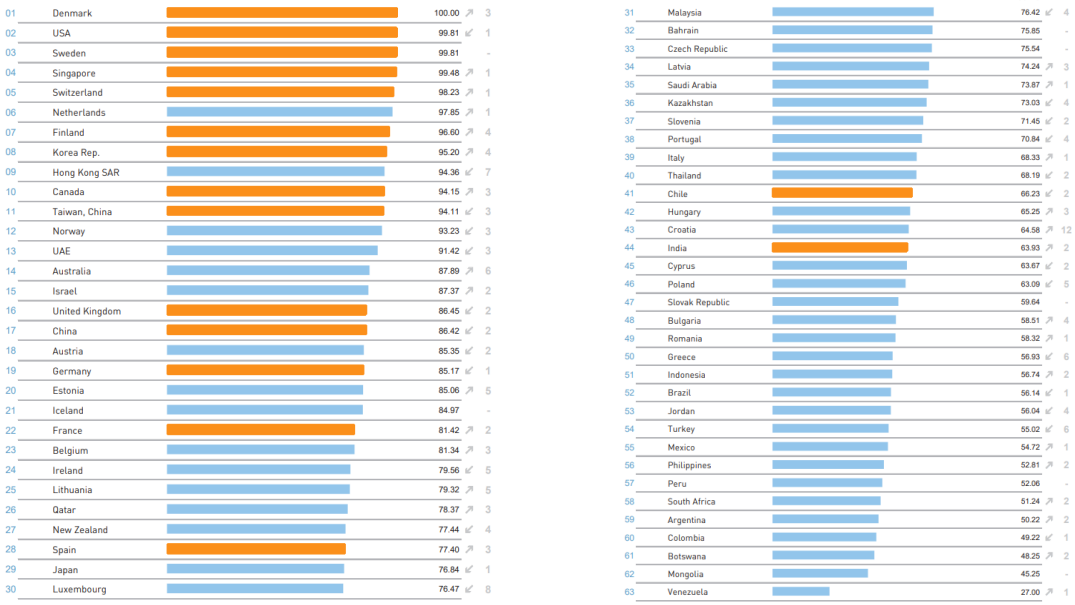

Figure 4: World Digital Competitive Ranking 2022 [6]

It can be seen that most of those countries are ranked high on the list. This means that the authors might be referring to companies that are already quite digitalized or at least

are ready for digitalization with an environment that is supporting this development, too. The factors for the ranking are knowledge, technology and readiness. [6]

- **Access to Resources:**

  Companies that are based in industrial countries have greater access to resources, including capital, talent, education and infrastructure. This can accelerate the process of digitalization. [1, 13]

- **Consumer Behaviour:**

  The consumer behaviours and preferences in industrial countries or the USA differs from the global digital consumer trends. [14]

It still has to be considered that the authors might focus on examples from industrial countries because they are more familiar with the regulatory and legal frameworks in these areas.

1.4. Market of the companies

The industry in which a company operates is a critical factor as well. It influences the company's approach, priorities, and potential challenges.

In *Leading digital*, the example companies seem to be engaging in different markets. This leads to the speculation, that there are less assumptions regarding the companies' industries than on the geographical context, that was discussed in Section 1.3. The graph can be seen in Figure 5.

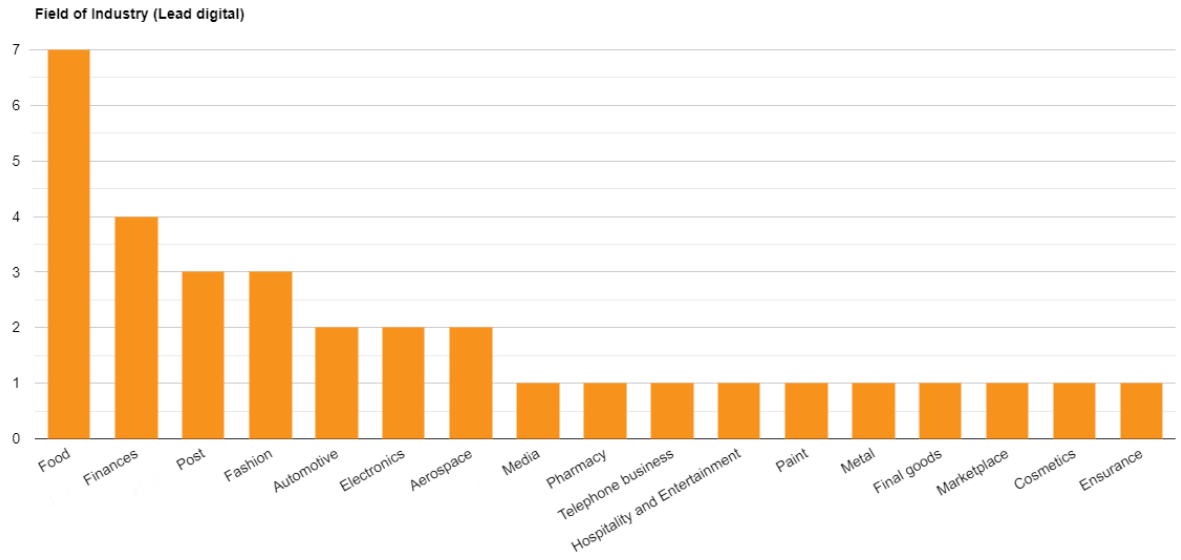

Figure 5: Industries of the example companies in *Leading digital* [18]

The majority of example companies in *Digital matrix* are engaging in the digital market already. This includes building and selling electric products or selling software solutions. Companies in

that field probably have an easier way into digital transformation but it is more crucial for them, too. This can be seen in Figure 6. [17]

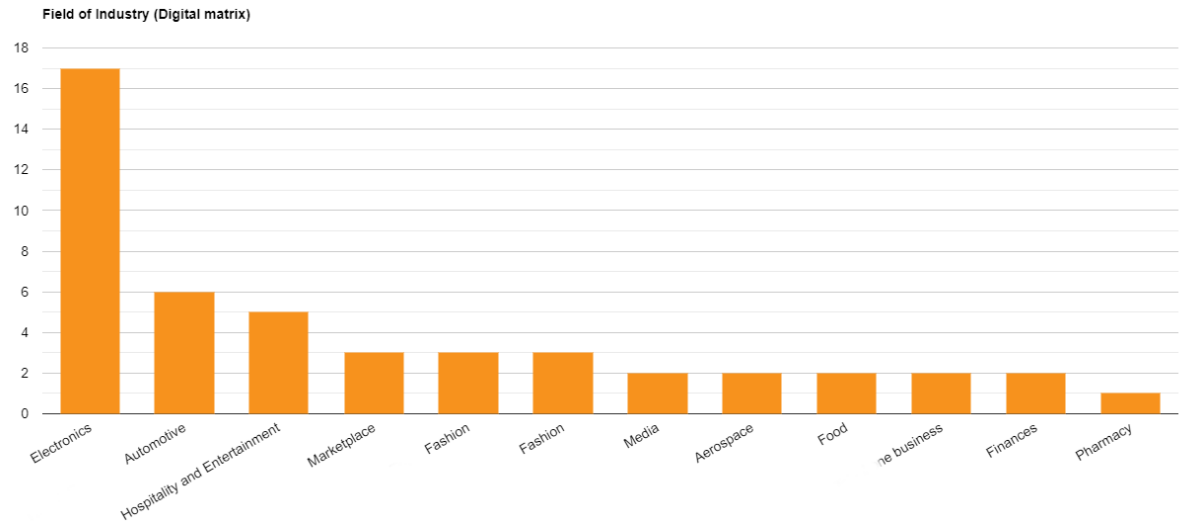

Figure 6: Industries of the example companies in *Digital matrix* [17]

The following graph (Figure 7) contains the combined industries of the examples of both books. Because the amount of examples per book differs a lot, this graph is not significant but included for completion. [17, 18]

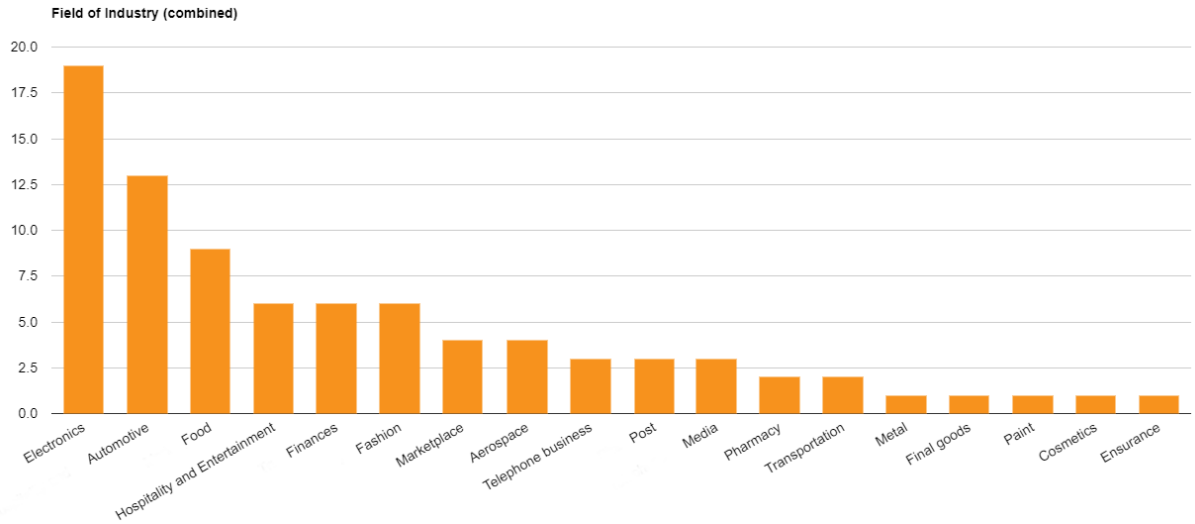

Figure 7: Industries of the example companies in both books [17, 18]

Different industries come with distinct demands and competitive landscapes. For example, the strategies required for a technology company might differ from those needed in the healthcare or manufacturing sectors. The following aspects could be core assumptions of the authors, regarding the industries of the example company data. It has to be considered, that the the

example companies full fill different tasks in their area and they are widely spread between different industries.

- **Consumer Behaviour:**

  The consumer behaviours and preferences differs across industries. [19]

- **Technological Advancements:**

  Different industries have different rates of technology adoption and innovation. Many of the example companies being a part of the technology sector gives them an advantage when it comes to technology advancements within the company. [19]

2. Consequences of assumptions in digital transformation

In this Section, potential consequences of the authors' core assumptions are discussed. Those core assumptions were analysed in Section 1.

2.1. Top-down approach

As already described in Section 1.1, the execution of the digitalization was suggested with a top-down approach. The example of Sweden, that might not accept the execution of top-down leadership approaches due to cultural norms was given there.

Companies that operate in countries with a culture that may not accept top-down leadership approaches should be cautious when planning for digitalization with the authors' concepts and instructions. They might encounter resistance from employees and stakeholders for trying to implement a strong top-down leadership approach. This could even lead to decreased employee morale, reduced engagement or changing the job to another organization.

In addition to this, a top-down approach can hinder innovation and creativity within the organization. It can limit the generation of new ideas and solutions, which are critical for a company's digital transformation. This can even result in a lack of agility. In the rapidly changing digital landscape, quick responsiveness to market changes are crucial and the strict hierarchical structures can slow down decision-making processes.

2.2. Geographical context

2.3. Market of the companies

3. Constraints on an example

Definitions

Text

References

[1] Philip G Altbach. "Higher education, democracy, and development: implications for newly industrialized countries". In: *Interchange* 23 (1992), pp. 143–163.

[2] Gabriel RG Benito, Randi Lunnan, and Sverre Tomassen. "Distant encounters of the third kind: Multinational companies locating divisional headquarters abroad". In: *Journal of Management Studies* 48.2 (2011), pp. 373–394.

[3] Didie Bonnet. *Didie Bonnet*. Website: https://www.didierbonnet.com/, accessed: 19.10.2023. 2023.

[4] Erik Brynjolfsson and Andrew McAfee. *Race against the machine: How the digital revolution is accelerating innovation, driving productivity, and irreversibly transforming employment and the economy*. Brynjolfsson and McAfee, 2011.

[5] Erik Brynjolfsson and Andrew McAfee. *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. WW Norton & Company, 2014.

[6] IMD World Competitive Center. *IMD World Digital Competitiveness Ranking 2022*. Available at: https://static.poder360.com.br/2022/09/Digital-Ranking-IMD-2022.pdf, accessed: 26.10.2023. 2022.

[7] Kimberly A Clausing. "Does tax drive the headquarters locations of the world's biggest companies?" In: *Transnational Corporations Journal* 25.2 (2018).

[8] Stockholm School of Economics Executive Education. *Leadership from the land of lagom - A global success story*. Website: https://exedsse.se/en/swedish-leadership-the-lagom-way/, accessed: 26.10.2023.

[9] Brightline Project Management Institute. *Didier Bonnet*. Website: https://digitaltransformation2021.brightline.org/speakers/didier-bonnet/, accessed: 19.10.2023. 2021.

[10] MIT Sloan School of Management. *George F. Westerman*. Website: https://mitsloan.mit.edu/faculty/directory/george-f-westerman, accessed: 19.10.2023. 2023.

[11] United Nations. *Country classification*. Available at: https://www.un.org/en/development/desa/policy/wesp/wesp_current/2014wesp_country_classification.pdf, accessed: 26.10.2023. 2014.

[12] Asutosh Padhi. "Is technology a force for good? A conversation with Andrew McAfee". In: *Leadership Runwodn* (Feb. 2023).

[13] Robert Perlman and Anthony Murray. "Resources and conflict: Requirements and vulnerabilities of the industrialized world". In: *Adelphi Papers* 21.167 (1981), pp. 51–59.

[14] M Sánchez, MJ Beriain, and TR Carr. "Socio-economic factors affecting consumer behaviour for United States and Spanish beef under different information scenarios". In: *Food Quality and Preference* 24.1 (2012), pp. 30–39.

[15] Peter B Smith, Jon Aarum Andersen, Bjørn Ekelund, Gert Graversen, and Arja Ropo. "In search of Nordic management styles". In: *Scandinavian journal of management* 19.4 (2003), pp. 491–507.

[16] Venkat Venkatraman. *N. Venkat Venkatraman — Questrom School of Business*. Website: https://www.bu.edu/questrom/profile/n-venkatraman/, accessed: 19.10.2023. 2021.

[17] Venkat Venkatraman. *The digital matrix: new rules for business transformation through technology*. LifeTree Media, 2017.

[18] George Westerman, Didier Bonnet, and Andrew McAfee. *Leading digital: Turning technology into business transformation*. Harvard Business Press, 2014.

[19] Prof. Dr. Manuel Wiesche. *Lecture notes in Digitalisierung*. TU Dortmund. 2021.

A. Example companies in Leading digital

Company name	Headquaters	Industry
Nike	USA	Fashion
Asian Paints	India	Paint
Air France	France	Aerospace
Burberry	UK	Fashion
Caesars Entertainment	USA	Hopsitality and Entertainment
Codelco	Chile	Metal
P&G	USA	Final goods
Pages Jaunes	France	Telephone business
Starbucks	USA	Food
Capital One	USA	Finance
Toyota	Japan	Automotive
Zara	Spain	Fashion
Apple	USA	Electronics
Nordic Post Danmark	Denmark	Post
Nets	Singapure	Finance
Nordic Post Sweden	Sweden	Post
Boeing	USA	Airline
Pernod Ricard	France	Food
Kraft	USA	Food
Nestle	Switzerland	Food
L'Oreal	France	Cosmetics
Volvo	Sweden	Automotive
Prisa	Spain	Media
CVS	USA	Pharmacy
Intel	USA	Electronics
Barclays Bank	UK	Finance
Coca-Cola	USA	Food
TetraPak	Switzerland	Food
Seven-Eleven	USA	Food
eBay	USA	Marketplace
UPS	USA	Post
Lloyd Banking Group	UK	Finance
Tokio Marine Holdings	Japan	Ensurance

Figure 8: Companies that were mentioned as examples in *Leading digital* [18]

B. Example companies in Digital matrix

Company name	Headquaters	Industry
BlackBerry	Canada	Electronics
Nokia	Finland	Electronics
Apple	USA	Electronics
Microsoft	USA	Electronics
Samsung	South Korea	Electronics
HTC	Taiwan	Electronics
Sony	Japan	Electronics
Toshiba	Japan	Electronics
Marriott Hotels	USA	Hopsitality and Entertainment
AirBNB	USA	Hopsitality and Entertainment
Walmart	USA	Marketplace
McDonalds	USA	Food
Uber	USA	Transportation
Netflix	USA	Hopsitality and Entertainment
Google	USA	Electronics
Honda	Japan	Automotive
General Electronics (GE)	USA	Electronics
GM	USA	Automotive
Ford	USA	Automotive
Toyota	Japan	Automotive
BMW	Germany	Automotive
Mercedes-Benz	Germany	Automotive
Tesla	USA	Automotive
Lyft	USA	Transportation
Amazon	USA	Marketplace
Nike	USA	Fashion
NewBalance	USA	Fashion
Adidas	Germany	Fashion
Facebook	USA	Media
Accor Hotels Group	France	Hopsitality and Entertainment
Honeywell	USA	Aerospace
Novartis	Switzerland	Pharmacy
IBM	USA	Electronics
Monsanto	USA	Food
InnoCentive	USA	Media
Nintendo	Japan	Hopsitality and Entertainment
Panasonic	Japan	Electronics
Siemens	Germany	Electronics
Lenovo	China	Electronics
Rethink Robotics	Germany	Electronics
Oracle	USA	Electronics
SAP	Germany	Electronics
BestBuy	USA	Marketplace
Comcast	USA	Telephone business
Ericsson	Sweden	Telephone business
John Deere	USA	Automotive
Local Motors	USA	Automotive
Boeing	USA	Aerospace
ABB	Switzerland	Automotive
Mitsubishi	Japan	Automotive
Goldman Sachs	USA	Finance
PayPal	USA	Finance

Figure 9: Companies that were mentioned as examples in *Digital matrix* [17]