ANABEL TERNÈS (ED.)

International Digitalization Trends

and how pioneering companies implement them

Mit Beiträgen von:

Vikas Chikmagalur Maheshwarappa, Szu-Han Chen, Skolastika Grazia Esmeralda Tjahyadi, Ali Hijazi, Min Chin Lee, Roza Hakobyan, Sebastian Kallies, Duygu Caliskan

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Prologue

The following book brings together international digitalization trends in different branches.

Each chapter describes at first the trend in general, followed by cases from pioneering companies in the respective field. Selected relevant graphics illustrate the respective topic.

In the interests of transparency, the summaries of the individual chapters precede this part of the book.

The book and the selected industries, company examples and representations don't claim completeness.

Dr. Anabel Ternès

Chapter Overview

1. Dr. Anabel Ternès: Digitalization of Companies Worldwide – Facts, Figures and Trends

2. Vikas Chikmagalur Maheshwarappa: Artificial Intelligence in Digitalization

Artificial Intelligence (AI) is a popularly escalating broad term covering different domains and technologies, with its multitude of uses have become more and more obvious in every corner of the world. Considering digital marketing (DM) a vanguard for marketing management system (MMS), which deals with AI and machine learning techniques to provide marketer overwhelmed pitch to promote their products. Few potential applications of DM like reading consumer behavior, product search, bracing of 4P's , revamping of product market structure, strategic marketing, etc. are highly influential in marketing decision making. Hence, DM can be called as a combo of analysis and decision which involves a huge degree of intuition and expertise which are necessary for the management to take decisions. Therefore here AI can play an important role in digital marketing, where Machine Learning (ML) is an AI component that observes historic data of actions and does experiential learning by putting the knowledge to use to perform similar process in new computational settings.

This paper describes about the potential benefits associated with the application of machine learning techniques to the field of digital marketing for marketing management system. It also includes the fundamental techniques focused mainly on digital marketing fields to which AI plays a vital role in digital trends, followed by few cases and live examples of industries completely depending on AI for their marketing strategies. Finally, this paper also tries to figure out the future of AI which could play a vital role in digitalizing the world.

3. Szu-Han Chen: Digitalization in Virtual Reality

Virtual reality is a cutting-edge technology applied not only in entertainment industry but also in a range of healthcare, manufacturing, real estate and education. This paper aims at revealing the development of virtual reality and its digital trend in the future. It is essential for everyone to perceive how virtual reality is going to shape our future and how can we

adopt this innovative technology to make good use of it in various aspects. Some forward-thinking companies are revolutionizing their approaches of marketing by utilizing virtual reality. After better understanding the digital transformation of virtual reality, you are also able to discover the potential and application of VR to optimize your business.

4. Skolastika Grazia Esmeralda Tjahyadi: Digitalization in Lifestyle

The rapid takeover of digital technology in our lives is re-shaping our lifestyle in tremendous ways. The different areas of lifestyle such as luxury fashion, fitness, relaxation, and digital assistant are deeply affected by digital technology, thus resulting in those aforementioned areas undergoing major transformations in new products, business models, and distribution channels. Companies like Burberry, Nike, and Amazon are the leading companies in their respective industries digitally. Following the success of leading digital companies, more and more companies will invest in technology and innovation. By 2050, it is expected that our future will be completely digital and we will be eroding human power in our lives.

5. Ali Hijazi: Digitalization in the Food Industry

All of us love food, and many are a digital enthusiast but did you know that both are very connected. I didn't. My family owns a steakhouse in Berlin, and I always thought what can I do to make it better where is the missing link and how can I get it to the top. I am Ali Hijazi international management graduate from SRH Hochschule Berlin. In the following, you will see this relationship between food and technology. And to what extent technology and the machine can change our daily and future lives.

6. Min Chin Lee: Digitalization in Healthcare – eHealth

The goal of this paper is to have a deeper look in the digitization in Healthcare Industry so called eHealth. It illustrates the definition of eHealth and its various usages eHealth in the article as well as some related, practical but also interesting cases which happened lately. It is hoped this article will inform the readers about the eHealth trending knowledge and a bigger picture of eHealth.

7. Roza Hakobyan: Digitalization in Mobility

Disruptive changes that brought Digitalization is a hot topic nowadays for everyone and for all industries. Automotive industry is also not an exception for those global changes. Due to those changes many new business models appeared in current economy and started changing it gradually from today´s economic model to shared one. For automotive industry digitization means shifting technological focus from physical to IT and maintaining new types of cross-company cooperations for value creation. Several vivid trends of digitization that we have experienced so far are autonomous driving, car sharing models, electrification of the cars and connectivity of IT devices with vehicles. These trends promise to make peoples´ trips safer, cheaper, faster and will reduce the environmental pollution from CO2 in the future. Despite the consumer continual car demand according to some surveys within future 10 years a new trend of car sharing has already become a part of people´s daily life. That would be a choice for future young generation and also families with low financial income in coming years. This trend would create more and more business models like strategic alliances, joint ventures and cross company cooperations and is foreseen to generate $7 billion globally by 2024. Another trend is autonomous driving model which has already been experienced by TESLA ´´Autopilot´´ car models in 2016, and will be widely manufactured by more than 10 vehicle producers probably soon in 5 years period.

This paper basically describes current trends in mobility due to disruptive process of digitalization. It emphasizes future opportunities for car industries and advantages both for business units and public which will be generated from that new business models. It also tries to predict those fundamental changes that will happen in future by 2050.

8. Sebastian Kallies: Digitalization of Product Delivery and Travel

Politicians and economists agree that the progressive digitalization is going to launch a new age. A new era of cross-linking, automatization, flexibility and disruption. An age within which Start-ups are revolutionizing the established industries with new customer-centric platforms and business models.

What means digitalization? It means the transformation of business models and identification of growth- and turnover increasement potentials through digital technologies. Alexander Dobrindt, Germanys federal

minister of transport and digital infrastructure points out: At unprecedented speed, digitalization creates one of humanity's greatest revolutions. But what does digitalization mean in a specific com-pany case? Within the following company cases, I am going to point out the process, status and importance of digitalization within product delivery and travel by means of the examples: Deliveroo, Uber and Airbnb – companies which are revolutionizing the way individuals or-der food, get from one location to another and book apartments. The final forecast gives a direction for the next decades, it points out possible and probable future developments of the sector of product delivery and travel, but it also states a critical acknowledgement of the current development along with necessary changes for a positive future.

9. Duygu Caliskan: Digitalization in Hotel and Hospitality, Real Estate

The hotel and hospitality industry is moving towards an increasingly networked future in which digital platforms, individualization and integrated technology play a central role. Predictions for the near future are a wake-up call for all incumbent businesses.

This paper explains the current status of the hotel and hospitality industry, with the focus on current digitization technologies. Furthermore, it will highlight important digital trends, which will be established in the short term and continue the essay with three cases, each of them about a luxury hotel and their digitization incentives. The last part will consist of a prospect for year 2050.

1. Digitalization of Companies Worldwide – Facts, Figures and Trends

By Dr. Anabel Ternès

Digitalization is hugely important for 21st-century businesses – and it involves far more than simply getting to grips with the internet. Digitalization is defined as "the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business" (Gartner 2017). That means a truly integrated digitalization process will affect every part of a company, sometimes transforming the very core of its business strategy.

The digital world is home to a dizzying level of online activity, as we exchange ideas and knowledge around the globe in a digital world without borders. In just 60 seconds, over 3.6 million Google searches take place, over 450,000 Tweets are sent, 154,200 Skype calls are made and a staggering 4,146,000 YouTube videos are watched (Daily Infographic 2017). That's a lot of data. And it's only set to rise; industry experts predict that data production will be 44 times greater in 2020 than it was in 2009 (Wikibon Blog 2012).

1.1 Why are companies making the move to digitalization?

To compete in the digital world, companies need to embrace digitalization. Early adopters are already seeing the benefits. Digital systems often improve efficiency, as well as cutting costs and streamlining workflows. Expanding business operations onto a global stage becomes possible with effective digitalisation. And in today's digital era, businesses who offer their users a comprehensive online service are ahead when it comes to customer satisfaction. As you might expect, tech companies lead the way in rolling out digitalization but you'll also find companies in more traditional sectors, such as agriculture and manufacturing, enjoying the fruits of their digitalization investments (see figure 1).

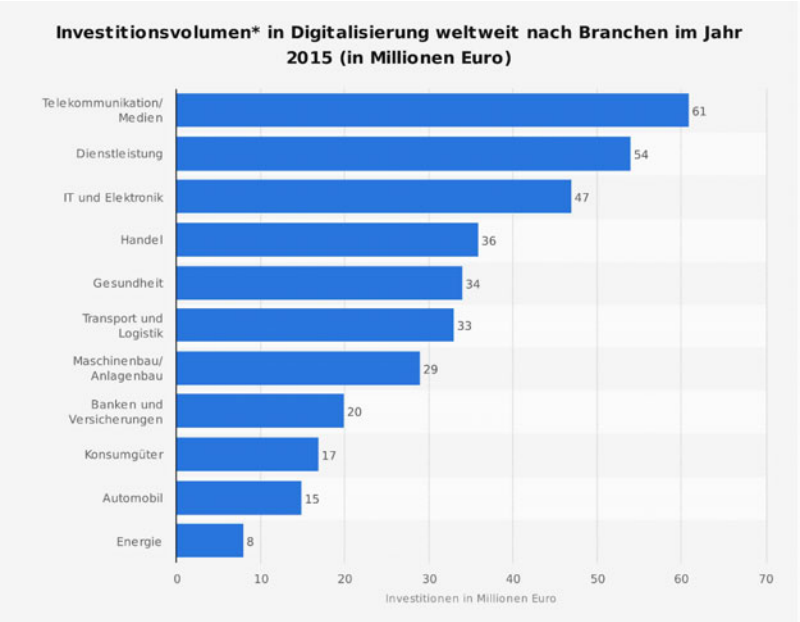

Figure 1: Investment volume in digitalization worldwide by sector in 2015 (in million euros) (Ernest & Young 2015)

On a grander scale, countries like Singapore, Hong Kong and the UK, who have been identified by the Digital Evolution Index as the current digital elite, are enjoying flourishing international trade, access to global finance options and a thriving start-up culture that helps them stand out at an international level. Innovation, trust, infrastructure and government backing are identified as key factors in achieving digital excellence (see figure 2). (Mastercard 2017)

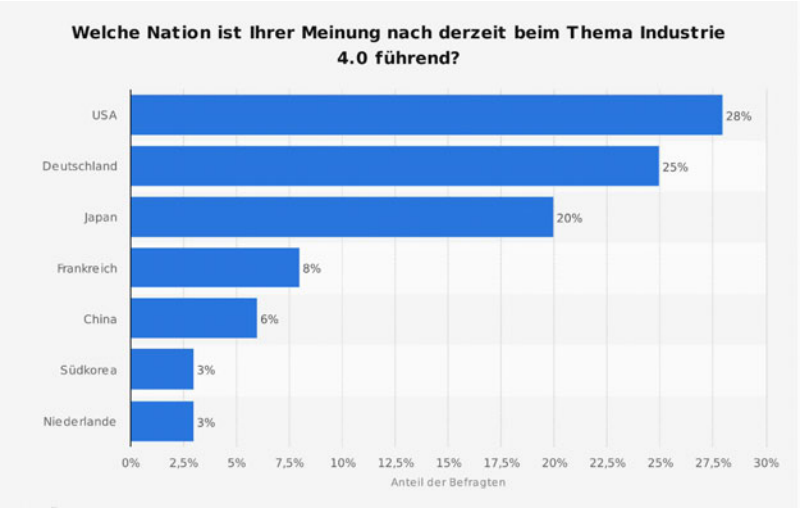

Figure 2: The leading countries in Industry 4.0 worldwide (Bitkom Research 2016)

1.2 Is it too late to get on board?

Companies, who are yet to fully embrace digitalization yet, perhaps stand to gain the most. The infrastructure and technology needed to adopt digitalization have been developed and honed over recent years, and while they of course continue to develop, businesses are able to introduce the necessary tech with relative ease. In essence, they can benefit from the learning experiences of those initial pioneers. But the small companies, being in the front, are startups, often well known as small tech related companies (see figure 3).

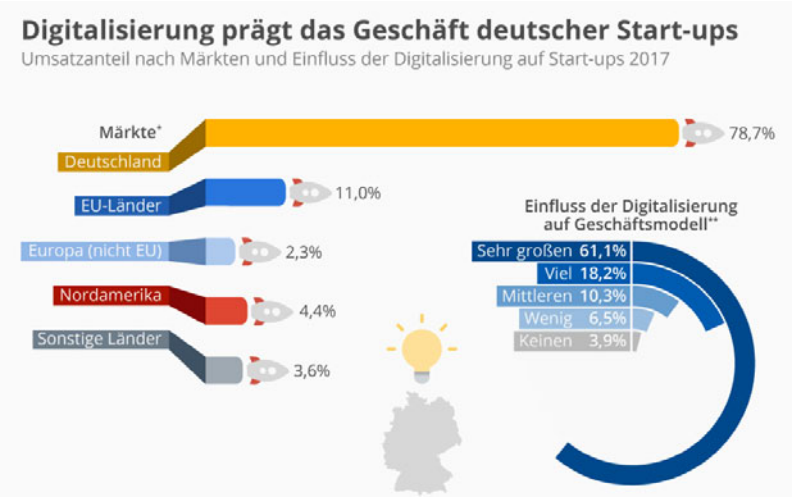

Figure 3: Sales share by market and influence of digitalization on German Start-ups (Loesche 2017)

The beauty of digitalization is that there is no minimum scale required. Just as developing countries can dramatically boost their economic growth by investing in digitalisation, so too can small companies, and even individuals. A lone freelancer can make international contacts, small businesses can access huge global marketplaces like eBay, and microenterprises can access funding from all over the world through platforms like Kickstarter, whose 3.3 million users are made up of people from almost every country in the world. (McKinsey 2017)

1.3 Digitalization trends

Businesses around the world must constantly find new and innovative ways of embracing digitalization to make it work for them.

Top global digital trends of the moment include:

1.3.1 Globalization

The traditional process of globalization, which focusses on the international movement of goods and money, is said to have slowed since the