

Future of Nordic Retail | Second edition

How data and digitalization are shaping the future of
Nordic retail





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01

Could your biggest challenge today be how you think about tomorrow?

Retail is about to enter the most turbulent time in history. We will likely see more changes in the next 10 years than we have seen in the past decades. What does the future of Nordic retail look like?

In this report, we focus on how data and digitalization are shaping the future of Nordic retail. We focus on understanding the leading markets and industry players, what they are doing and what the envisioned data-driven future of Nordic retail looks like. We seek to highlight what could be expected to impact the retailers in the Nordics based on what is happening already in the US and China. We have gathered insights for this study from the top professionals among the leading retailers and consumer product companies in the Nordic countries.

So much data is available today; yet, few really know how to get the most value out of it. Ask yourself: are you making the best business decisions today? Because if not, someone else will be. And we think it's time for you to fully realize the gold mine of available data.

We hope you will enjoy reading this report and that it will give you thoughts and tools to navigate in the new data-driven world.



Henrik Kronborg Iversen
EY Nordic Consumer Products & Retail Leader

02

Executive summary

Retail is entering the most turbulent time in history; but all segments of retail and all countries are not necessarily affected in the same way. There are indications that the Nordic countries may lag behind many other countries in certain areas of retail and digitalization.

But, development is fast and disruption may be around the corner. When Amazon bought Whole Foods, many retailers seemed surprised. This reflects an insufficient preparation for the scenarios we may encounter.

The future is uncertain and hard to predict; but this does not justify ignorance. A management team of a retailer or consumer products company that is unaware of what Chinese Tencent and Alibaba are doing, or fail to learn from the lessons the media industry has been through, need to know better.

In 2017, we launched our first edition of *Future of Nordic Retail* report, which focused on the overall development, starting out with broad trends in society among consumers, retailers and the shopping process. The overall picture of the first study, we believe, is still valid. In this edition, we focus on a particular and important area of the future – how data and digitalization are shaping the future of retail and consumer product companies.

We included “data” in the report title to stress its importance as it has become increasingly looked upon as an asset. By “data” we refer to all kinds of data and not just the one derived from digital channels. While the term “big data” seems a little less trendy today, managing data is increasingly seen as a key element in the success of retailers, consumer product companies as well as many organizations. Most retailers and consumer product companies are aware of this, but very few have the experience and competence needed to harness this.

In this report, we aim to understand the leading markets and industry players, with advanced examples from the US and China, what they are doing and the tools they use. We also present a future road map for Nordic retailers and thoughts on how to handle the future. We have gathered knowledge for this study from the top professionals among the leading retailers and consumer product companies in the Nordic countries.

Eighty-one percent of the respondents in the survey of this study say that data is the most important driver of the future of

retail. On the other hand, only 5% believe that most people in the management team know what Tencent is and what they are doing. A lack of understanding of companies such as Tencent is a clear indication that most of us need to learn more about what is transforming retail and consumer product companies today.

We can have an approach of staying with the business that works, or try to balance the new and the old, or go full-on into the new paradigm. Whichever option we choose, we need to gain more knowledge and continually learn where to be and what to do.

Based on our study results, we propose the following four areas for you to consider today when preparing yourself for the future:

■ **1. Store transformation:** The role of the physical stores will change, but how? Experts surveyed in this study have a number of predictions. The common denominator is that few of them believe status quo will be successful.

■ **2. Ecosystem partnering:** The new market is a world with powerful platforms and ecosystems. In China, these have become so powerful that they are known as “superintegrators.” How to compete, cooperate and navigate in this new world will be more important. Looking at the old competitors will not give enough guidance to the future.

■ **3. Key performance indicator alignment (KPI):** KPIs need to acknowledge the new paradigm and not the old. Our survey indicates that current KPIs are good only for short-term and not long-term performances. Can the industry maintain this and stay relevant?

■ **4. Culture shift:** Culture remains perhaps the biggest challenge. Our survey reveals a clear message: even average performers will change their focus and employees will work a lot more with data. Among top performers – even more so.

We do not believe that those who change first or the most will be the winners. We do believe, however, that the average performance of those who change more will be better than those who change less.

Understand the future consumer now to shape your business for tomorrow – go to ey.com/futureconsumernow

Methodology

Data for this report has been gathered primarily during the time period of October 2017- February 2018, in three steps:

1. Thirteen individual in-depth interviews
2. A future retail survey, responded by 63 Nordic retailers, consumer product company representatives and other industry professionals
3. Two workshops, one in Stockholm and one in Oslo, with panels consisting of a total of 38 participants - preliminary findings of the study were discussed and refined in the workshops

The list of people who have contributed to this report can be found in the Appendix section.

Three ways of addressing the future

During the individual in-depth interviews and workshops in January 2018, we encountered three different perspectives on how to be successful in the retail and consumer goods environment. These could be seen as rather general attitudes and behaviors:

- 1. Staying with the status quo:** You stay with the existing experience of what works and try to improve from that position and knowledge.
- 2. Navigating between the new and old paradigm:** You acknowledge that some new things may disrupt business, but you want to understand the new business logic and business case before you fully embrace them.
- 3. Embracing uncertainty before you know where it ends:** You believe the future is very different and if you want to understand everything before you try it, you will not stay relevant in the future. You have to embrace uncertainty and bet on things with limited knowledge of the outcome.

All changes are, of course, not driven by data and digitalization. In our interview with Jacob Wall, Head of Business Development at Axel Johnson, a major Swedish retailer, he explained that consumer changes in many parts of the world seem to be ahead of that in the Nordics. He noted that one of the drivers of change is online retail. He also explained the importance of economic difficulties and recessions. Recessions have been a catalyst for both online retailing and low-cost players such as Aldi and Lidl.

In the UK, the discounters' rapid development has resulted in grocery retailer's margins dropping from above 5% to around 2%, since 2014. A recession and the rise of Lidl have also resulted in price pressure in Finland.

On the right are quotes taken from our in-depth interviews with the Nordic retailers and other industry experts, indicating the three different ways of addressing the future.



Staying with the status quo

Our individual interviews provided a number of examples that support the notion of continuing with existing practices, as opposed to embracing new ones.

"AI is wildly overrated. At Amazon, I now get suggestions to buy things for the bath, but I don't have a bath tub. They try to sell me a book I have already bought – from them."

"There are no economies of scale in e-commerce."

"We looked into store preference and the most important factor was accessible parking."

"We are not London, we are not the US, we are not Amazon."

"We've been struggling with massive amounts of data for 30 years, and will probably continue to do so for another 30 years."

"We have restrictions on the data we share between the companies within the group."

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Navigating between the new and the old paradigm

Given below are several quotes reflecting the ambiguity of dealing with both the new and the old paradigms:



"We need to prove the business case of using data. We have to make our solutions valuable to the organization."

"If you get into a cockpit, more charts may not make you a better pilot. If people aren't competent to analyze the data, it is not providing value."

"Brands want to take control of staffing in stores as this is increasingly important for brands. Brands are aware that a lot of purchases end up online and they have to support high-quality experience instore."

"Countries that have experienced a recession have seen a large boost in online and discount stores."

"The prescriptions from a restricted set of experiment have to be handled."

Embracing uncertainty before you know where it ends

These are quotes from our interviewees who most eagerly address the need for immediate change:



"I agree with everything you talk about. It's not a question of 'if,' it's a question of 'when' we will do this."

"WeChat in China is amazing, it's like a CRM system to companies."

"Alexa and Google will soon suggest things consumers needed before they knew it."

"Everything becomes dynamic – pricing, offering, storefronts, warehousing."

"I don't know how we are going to handle the new superpowers with data. I think there will be a hyper intellectual forum, probably closed, that is going to advise presidents on these matters."

"I have a rather negative outlook on both online and offline retailers – who don't manage to provide a differentiating offer to the global platform companies."

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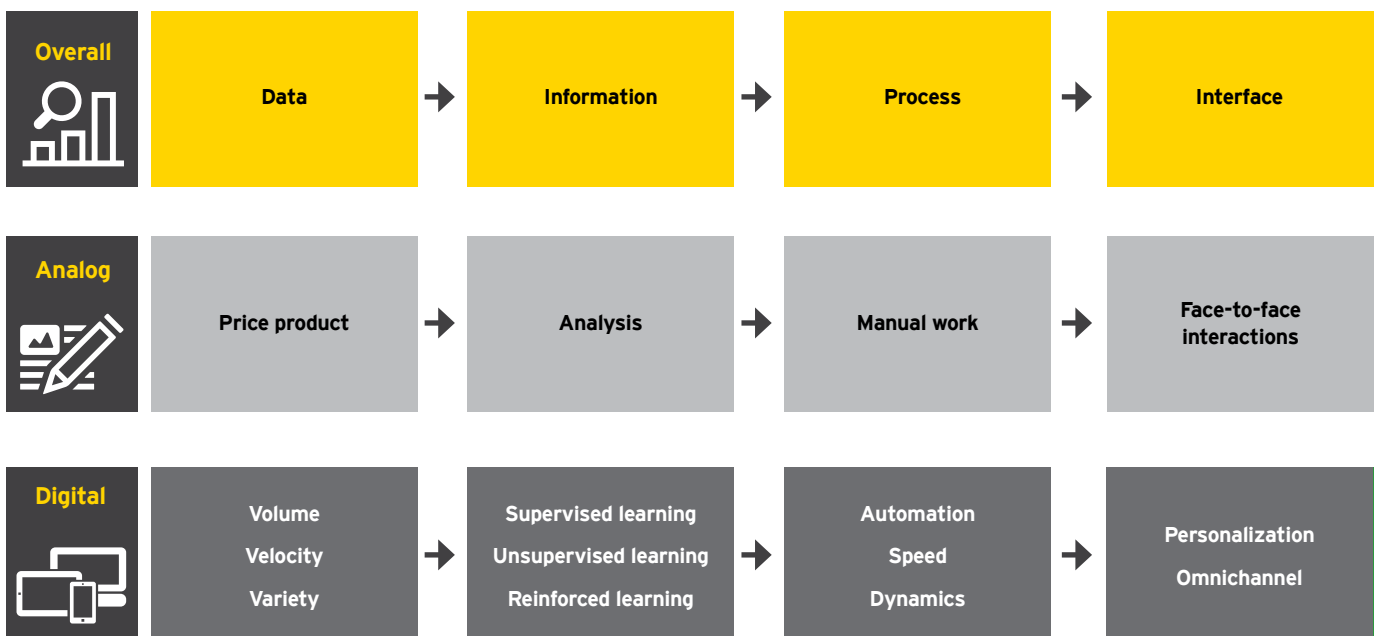
The emerging tools

This section describes the new tools and the new context that retailers operate within, detailing what they are doing and the obstacles they face.

If we look at the overall business process of a service or knowledge, it could be structured as depicted in the picture below. We begin with facts and observations or what is seen as the old description of data. In the second phase, this data is interpreted into meaningful information. The work is then structured into a process in order to act upon this information and create a value-adding process. In the end, this process meets a user in an interface.

In the old world, where most data was analog, the analysis was done by people, the work was manual and the interface was face-to-face interactions between people. With the advent of digitalization, there occurred many changes within this overall workflow – including the amount of data collected; the lowered cost and increased capacity to store the data; the variety and flexibility of use; and the multiple interfaces. Together, these form a new and rapidly evolving context.

Below is an illustration where “Analog” represents the past and “Digital” shows changes in the workflow with the advent of digitalization.



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The emerging tools

The tools available for retailers and consumer goods companies are constantly evolving though they have been around for some time. A previous failure may become a future game changer.

This includes examples from the past, such as the WAP phone – an attempt to move to the smartphone or predecessors of iPads that failed and then became implemented in a fast and successful way. The advent of data and analytics means activities that were considered impossible or possible only in a very distant future may indeed be possible today.

Given below are a number of developments and their uses in the retail environment.

Areas of action driven by data

Stores

Format frenzy
Smart stores

Analytics

Supervised AI
Unsupervised AI

Marketing

Voice and botification
Data-assisted marketing

Valuechain

Platform business
Partnering

“The next big step of e-commerce is the last mile. We have still a lot to do in this area – if you compare with Amazon in the states – even though some transportation partners in Europe are starting to offer this alternative. You need to create significantly better flexibility for the customer to choose, both payment and delivery options.”

Magnus Emilson

Chairman of the Board, NA-KD

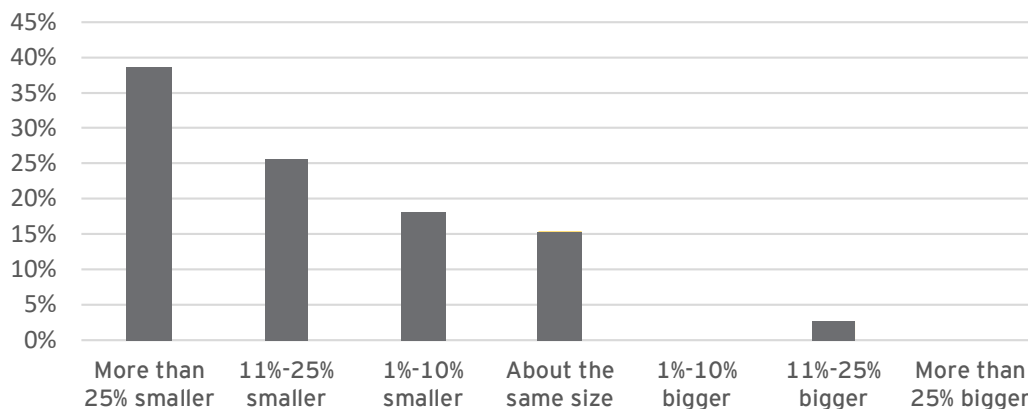
Format frenzy

One of the most interesting questions of the future is the role of physical stores. A big challenge for retailers and shopping centers today is the decreasing footfall. For quite some time, the reduction in footfall has been compensated for by larger basket size. Many shopping centers have fewer consumers buying more. Many people spend time in shopping centers because they like to be there. Getting these people to your store and keeping them there has become an increasing challenge.

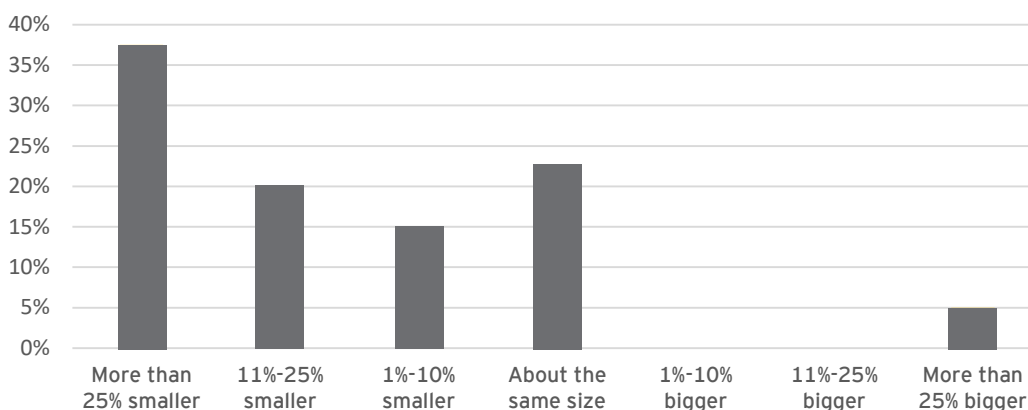
One reflection from our *Future of Nordic Retail 2017* study was that stores should become larger. When a retailer manages to get a consumer to his store, he should be able to attract the person with broad and attractive offerings and make the most out of that. Size of the store and its role seem to be quite uncertain aspects of the future of retail.

Considering the expectations on total store space and size, both are likely to shrink in the future, according to our study.

Total store space



Store size in 10 years



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The emerging tools

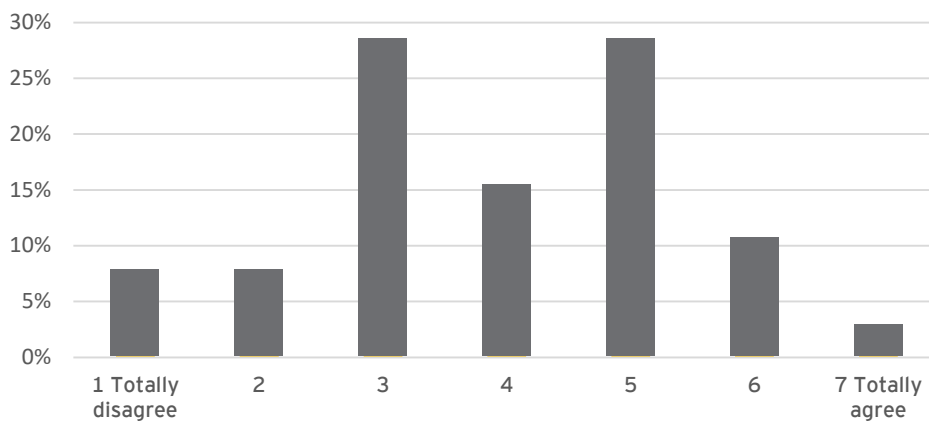
Buy online, pickup in store (BOPIS) and buy online, return in store (BORIS) are two major developments in the buying process that the stores need to be more adapted to. Fulfillment within cross-channel shopping will generate traffic to physical shopping places. The delivery revolution might be the next big unique selling point (USP). IKEA has developed a mini IKEA pickup store concept that contains a unique mini display in the ceiling that boosts your shopping experience when collecting online parcels. Both Walmart and Inditex, parent company of Zara, have developed their consumer experience in click and collect via a new and smart self-service kiosk for delivery of products bought online. The Inditex kiosk can store 4,000 packages at a time and is equipped with self-learning in order to optimize its own handling by the registration of consumer behaviors. The plan is to launch this widely in the Zara store chain.¹

Another development where stores are being more oriented toward serving storage and returns of online purchases may also affect store size in different ways. Martin Coedo Mestre, IBM's Watson Commerce Leader Europe, says that many retailers in the US are restructuring their stores, but not making them smaller.

Instead of reducing store size, they close warehouses, increase average store size and let stores act as a combination of stores and warehouses.

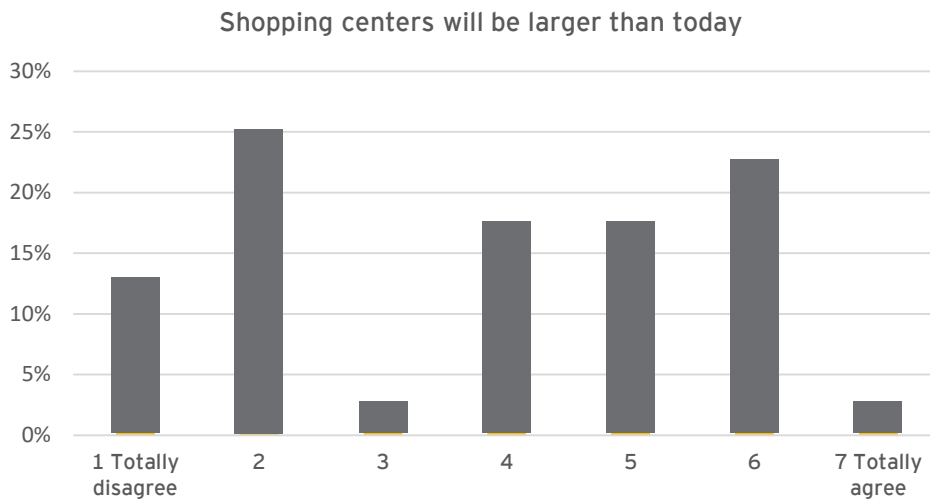
In our group, opinion was divided on this point; 40% thought there would be fewer and larger stores acting as combined stores and warehousing with 42% disagreeing and 15% unsure.

There will be fewer and larger stores that act as combined stores and warehouses



¹ "Zara launches AI-based self-service," *Handelstrender.se*, www.handelstrender.se/zara-lanserar-ai-baserad-sjalvbetjaning, 8 January 2018.

A similar uncertainty exists in the case of shopping centers. In our study, the respondents seem to be rather divided on the idea of shopping centers becoming larger than today.



Digital channels are of course one reason behind this development. Data and digitalization not only drive a reduction in the number of stores but also a development toward more stores from online retailers and consumer product companies. One reason for the increase in the number of stores from online consumer product companies is better control of data. This is also true for consumer packaged goods companies who develop branded stores to obtain unique data sources that can provide insights into consumer and shopper behavior. Lauge Valentin, Head of Corporate Advanced Analytics at LEGO, says that one of the benefits of LEGO stores is the possibility to capture data in near-real-time.

In China, the dominance of services from Tmall, JD and WeChat make consumer attention virtually impossible to get. It, therefore, becomes extremely expensive to buy top spots on these interfaces. Building physical stores is sometimes the only affordable way to get traction from consumers.

Smart stores

Apart from the challenge of deciding the role and the size of the store, digitalization offers opportunities to make stores more intelligent. An interesting example in the Nordic market is the e-tailer, SoffaDirekt. To enter their unmanned showrooms that are open 24/7, you just need to register with a code on your smartphone.

Chinese online giant JD.com is another retailer that has started opening of hundreds of unmanned service stores.² The shop solution includes Radio Frequency Identification (RFID), facial recognition and identification of products via image analysis. The store chain is part of a smart city project and will be equipped with an AI system that handles its operations. It claims to have an automated supply chain that integrates stock levels and daily care, in addition to driverless cars for goods' delivery. Another data-driven store is Amazon's Book Store that refers to the data from reviews and similar purchases. More recently, Amazon opened the Amazon Go store where cameras register consumers and their purchases in the stores without the need for cashiers.

"For Dustin, development means we can automate and streamline a value chain using digital self-learning systems. It can be a smart online interface to the customer or purchase robots and algorithms that make automatic orders. There can also be robots that automate our warehouses."

Georgi Ganey
Former CEO, Dustin Group

² "E-retailers open unmanned stores," *Handelstrender.se*, www.handelstrender.se/e-handlare-oppnar-obemannade-butiker, 3 January 2018

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The emerging tools

Store robots

In retail, robotization is observed at both ends of operations. At the front end are the more spectacular service robots. Many shopping centers, drug stores and restaurants have introduced robots that can converse with the customers, answer their questions in different languages and show them around the stores. Hilton Hotels received a lot of attention in the media in 2017 when they introduced the first robot concierge. Robot service may play out well among the young generation in the long run. Many of them do not ask a retail staff for help and prefer checking in their smartphones instead.

In the back end of retail, industrial robots have replaced humans who were traditionally doing various monotonous tasks. Robots clean, stock and restock shelves, and collect enormous amounts of data to be processed in order to give real-time updates to headquarters and provide digital versions of the store in multichannel versions. One example is the 4D Retail Technology robot, 4D Space Genius, which helps the store optimize product placement and sales.



Supervised AI

Despite the name, AI and the related areas of machine learning still require a lot of human intelligence and labor to function properly. To start with, much effort typically goes into cleaning data. Ensuring that the computer analyzes data that has not been manipulated and doesn't have any errors or misleading data points is one onerous human task.

Even after this job is done, making the analysis is far from easy. Valentin states the need to properly address the basics, i.e., diagnostic analytics. For example, long-term changes in consumer behavior have to be taken into account. When creating analytics, you have to be able to efficiently tackle both predictable and experimental works, and this means operating in more than one "mode." Also, make sure to focus on understanding both the long-term root causes and the near-term immediate causes.

A second problem discussed is that of durable goods. Understanding the effect on future consumption from a previous purchase – for example, a sofa – may be very difficult. Tobias Hoff, Customer Analytics and Insights Leader at IKEA, explained some of their difficulties. The frequency of buying sofas in a household is so low that it becomes difficult to run A/B tests on how and when to sell a new sofa to the same household.

On top of that, cultural differences may be substantial. A logic that works in one country or for one consumer segment may not work for another. After buying a new kitchen, the next room a customer starts with may be the living room in one country and the bedroom in another.

Unsupervised AI

Danny Lange, a computer scientist who has been programming on Amazon and Uber, defines AI in two keys aspects – the external view and the internal view.³ The external is the perception of outsiders. Do people think there is a human hiding behind the system – whether it's a chatbot or a telephone assistant? The second is the internal learning or self-learning. Can the computer learn from the data all by itself? Lange believes we are closing in on that parameter. Nevertheless, the AIs have to know how to interpret the rules and the end goal. At least for now, humans decide what the better outcome is.

On the other hand, when the definition of a good outcome is made, the improvements may continue with machine learning, and more data may reinforce learning quickly.

Georgi Ganev, former CEO of Dustin Group, says, "Our search engine becomes better and better the more data we get." Knowing this power given to the holder of a larger data set, he stresses the challenges from large companies and their massive amounts of data.

³ "The AI Guru Behind Amazon, Uber, and Unity Explains What AI Really Is," *Fast Company*, www.fastcompany.com/40491906/danny-lange-interview-what-ai-is-and-isnt, accessed 15 February 2018.

05

The emerging tools

Voice and botification

Robots were previously understood primarily as physical robots. In recent years, digital robots or bots have been more in focus. Both of these areas are interesting to look at. Consumers, especially in the US and China, are slowly getting more used to interacting with services such as Siri and Echo, and the quality of these interactions creates a demand for other services. A much-discussed example is that voice may make the owners of the voice tools powerful for product selection.

Chatbots are an increasingly popular tool in many top brands' toolbox in order to find new ways to interact with customers. When this is combined with more AI, the results can be exciting. Levi's is one of the players that have invested a lot in this field. Recently, they created a new online service called "Virtual Stylist," where they use their collected knowledge about style, shapes and design to become a virtual shopping assistant that guides the consumers through personal tips and advices. The service has a connection to a crowdsourcing platform where users can help and inspire each other. The function "See it Styled" is a service based on an image analytic technique that presents galleries with user-generated content that inspires consumers.⁴

A few months ago, a new type of chatbot – a humanized chatbot influencer – was successfully launched by the cosmetic brand CoverGirl. This is a new way to combine influencer marketing with a chatbot that simulates the personality of a real-life famous influencer. The influencer, Kalani, introduced the KalaniBot herself by the following words: "Hey there! It's me, Kalani. Meet KalaniBot, my new chatbot! She's a robot but thinks she's 'actually' me lol."⁵

Data-assisted marketing

Modern consumers are harder to reach in general. Ad blocking and new filtering techniques make the traditional marketing tools expensive and slow. The new marketing logic needed to win the loyalty of the empowered consumers of tomorrow demands more relevance. This means bigger volumes of data and a way to handle it in an integrated way, being able to process it in real-time and act on it immediately.

Development of a growing retail AI will be an important tool that marketers will have to rely on. Machine learning helps to automate activities and remove many repetitive tasks. Cognitive systems create predictive analytics and prescriptive recommendations in real-time. These build up marketers' ability to understand and create new and more dynamic connections and touch points with consumers, wherever they are.

Intelligent social media mining tools can infuse third-party data and cluster algorithms that increase marketers' ability to detect trend shifts in user behavior and better understand life style patterns or micro cultures. By learning to match broader customer behavior to individual preferences, machine learning shapes up targeting and helps marketers to engage in smarter, more relevant conversations with audiences of a greater variety and scale.

Not only in online stores but also in physical stores, marketers will find better tools to measure shopper behavior and how they react on instore displays. Internet protocol (IP) cameras and smart evaluation programs give immediate insights on how to improve the physical appearance.

The key thing for effective marketing is being relevant for the consumer. NA-KD achieves this through active cooperation with thousands of social influencers within fashion. Magnus Emilson, Chairman of the Board of NA-KD, a rapidly growing online fashion brand, talks about the importance of influencers:

"Now we make 2,000 campaigns per month with different influencers. Some of them, we have a special relationship with and create co-labs, a unique fashion collection for them. Another trend is the direct involvement from our customer base where we will see significantly more customer involvement in our own product development."

Magnus Emilson

Chairman of Board of NA-KD

⁴ "Levi's Virtual Stylist helps you slip into the jeans of your dreams," *Digital Trends*, www.digitaltrends.com/mobile/levi-virtual-stylist, 31 August 2017.

⁵ "CoverGirl's Influencer Chatbot Is Smart, Funny and Responsive," *AdAge India*, www.adageindia.in/digital/covergirls-influencer-chatbot-is-smart-funny-and-responsive/articleshow/55875637.cms, 8 December 2016.

Platform businesses

A frequently discussed new power in the retail industry is the platforms, known as marketplaces. They are not necessarily new in the sense that marketplaces have been around for several thousands of years. More recently, they are called shopping malls or shopping centers. At the turn of the millennium, new forms of digital marketplaces were defined – the portal and the vertical. Some of them looked very successful but many of them failed. Today the digital marketplaces have re-emerged as the new superpowers, dominating the list of the world's most valued companies. Their ability to collect and analyze data is one of their strengths.

Now other organizations have to locate themselves in this new landscape. Adjusting to this new landscape has made more organizations announce that they will cooperate rather than compete with them. Building your own marketplace seems very difficult, especially in markets such as China and the US. The classical focus on being a product specialist is becoming increasingly difficult, and companies are striving to become even more specialized – either by becoming super-focused or shifting toward being an authority with the ability to offer a full-service to a particular consumer segment.

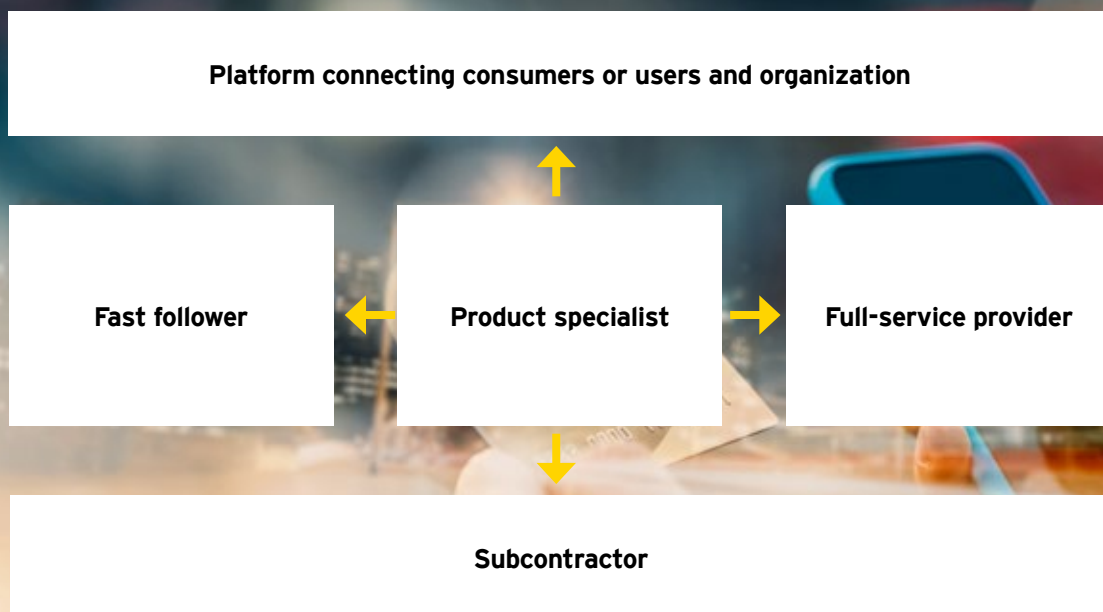
This is, for example, common in the travel industry, where companies such as SkiStar, Thomas Cook and TUI try to control

their consumers' experiences long before the trip starts. This can come in the form of tax-free sales, magazines, rentals, ownership of resorts and loyalty cards, for example.

Another strategy is to be a fast follower and attempt to understand and benefit from the changes in power that occur as a result of these new platforms. Examples include influencer brokers such as Splay. Emilson describes the role of the influencer as someone consumers identify with when they buy and wear clothes used or promoted by the influencer. The increasing role of these as a media and marketing channel is a new opportunity that some fast followers take advantage of.

The following model illustrates the emerging business landscape. Data rich market places increase their power. Both product specialists and traditional multi-brand retailers find this a tough environment but new entrants and fast followers seize the opportunity. So product specialists and retailers curate toward stronger brands or become a full-service provider. At the bottom, there are volume producers who deliver capacity and make it easier to launch new products.

Ecosystem market place model



05

The emerging tools



Partnering in the data ecosystem

Marketing and media are examples of where data has already changed operations dramatically. Very few marketing people in the Nordic region knew about real-time bidding (RTB) or programmatic five years ago. This technology is now an integral part of online marketing, but it has also been challenged by the power of some of the largest platforms. RTB made it possible to automate selling and buying of consumer attention online. This allowed selling of less attractive spaces that was previously difficult to market since the transaction cost of finding an advertiser was too high. This is something which can now be automated. Denmark-based Adform is a major actor in this space.

It should be possible for retailers to establish a similar market, given that there are also restrictions with the General Data Protection Regulation (GDPR), for example.

Sofie Perslow, Head of Market Insights at ICA, a leading Swedish grocery retailer, says that ICA is aware of the very high value of their point of sale (POS) data and other loyalty data; and that they are investing a lot in creating customer and business value from it. The professionals in the survey agree with this; 93% of them believe that the data provided to suppliers, i.e., consumer product companies, will be a top three differentiator for retailers within 10 years.

While companies such as IKEA and H&M have been restrictive with their use of data, this may be about to change. They have, at least, announced that they will cooperate with large online platforms, which will result in them receiving sales data, among other things.

Stockmann, a department store in Finland, has started offering Alipay as a payment alternative. Interestingly, this is made possible through a cooperation between ePassi, a major mobile payment solution in Finland, and Alipay. This is an example of the new market where cooperation and engaging in larger ecosystems are becoming more crucial for success. Kenneth Nielsen, Executive Vice President, E-commerce and Digital, Dansk Supermarked, with a background at both Apple and Amazon, also emphasizes the need for cooperation. If the larger companies don't join forces, they will have a difficult time competing in a landscape with data-rich platform companies.

06

The game changers

When looking into the future of retail, few would doubt that large companies such as Apple, Alphabet, Amazon, Facebook, Alibaba and Tencent will be increasingly important. Understanding the future marketplace means looking at the technology in the forefront and, perhaps even more so, looking at the markets and organizations in the frontline.

There are three specific areas that we have picked outside of home market retailers and consumer product companies, which can provide guidance as to how the future marketplace will evolve. They are: **1. the media industry; 2. tech giants; and 3. China.**

→ The media industry

The media industry has already gone through a dramatic transformation that is still ongoing. If retail is to experience a paradigm shift, media companies should provide some lessons for the changes that are to come. Retail is dependent on media and marketing. Many marketing professionals believe that media and retail are about to merge. Differences between the two are getting smaller over time.

The media industry has been through a dramatic change for at least 10 years, and is still changing rapidly. We don't expect retail to undergo the same dramatic shift as media, in particular print media or paper; changing physical retail to digital will take longer time. At the same time, lessons from media are abundant.

→ Tech giants

Large tech companies continue to grow more powerful and have been doing so since the IT boom and bust around the millennium. Their power and widespread influence on society appears to have grown well beyond their original core businesses. Judging

by the valuations of the top five firms, their combined share of total corporate profits is likely to increase from the current 7% to 13% in a decade.⁶ This impressive growth not only outstrips the traditional retail sector but also gives the tech giants the funds to reinvest.

→ China

The growing importance of China has been discussed for 25 years. Until about two years ago, Western business leaders and newspapers maintained that creativity and innovation could never be overtaken by a nondemocratic country with restrictions on public opinions. The summer of 2016 could be seen as a turning point, however. An example of this was Uber, which left China as a result of its local competitor, Didi Chuxing. Around this time, *The Economist* began to acknowledge the role of China's WeChat as a powerful app.⁷ At the same time, *The New York Times* also published an online video detailing the impressive coverage of WeChat's services.⁸

⁶ "Who is afraid of disruption," *The Economist*, www.economist.com/news/business/21729769-business-world-obsessed-digital-disruption-it-has-had-little-impact, 30 September 2017.

⁷ "WeChat's world," *The Economist*, www.economist.com/news/business/21703428-chinas-wechat-shows-way-social-medias-future-wechats-world, 6 August 2016.

⁸ "How China Is Changing Your Internet," *The New York Times*, www.nytimes.com/video/technology/100000004574648/china-internet-wechat.html, 9 August 2016.



Game changer core ideology

Game changer tools

Game changer-envisioned future

In the rest of the chapter we try to grasp the main characteristics, the working methods used and the objectives by which the tech giants, China and media are guided. This is not meant to become a guide for retailers and consumer product companies to imitate. It is more of a guide to the business environment that is emerging, and the market that you will have to handle.

Inspired by James Collins and Jerry Porras, we may say that there is an element of “core ideology” and “envisioned future.” Together with these, we introduce the tools used. We then try to understand the new powers in terms of game changer core ideology, game changer tools and game changer-envisioned future.

Game changer core ideology: exponential growth, long-term thinking, culture, ambition

Exponential growth

Conferences on the future talks about exponential change. Exponential growth implies that the effect of a trend increases over time. For example, if Alibaba grows by 50%, their impact on the market will be four times that of today in just three years. In 10 years, they will be 58 times their size today. Alibaba is perceived as extremely powerful today; what would they become if they were 58 times the size of today?

The question is, how this will play out in the future.

In our survey we asked: When will the two top 10 European retailers grow faster than Amazon or Alibaba?

The answers were:

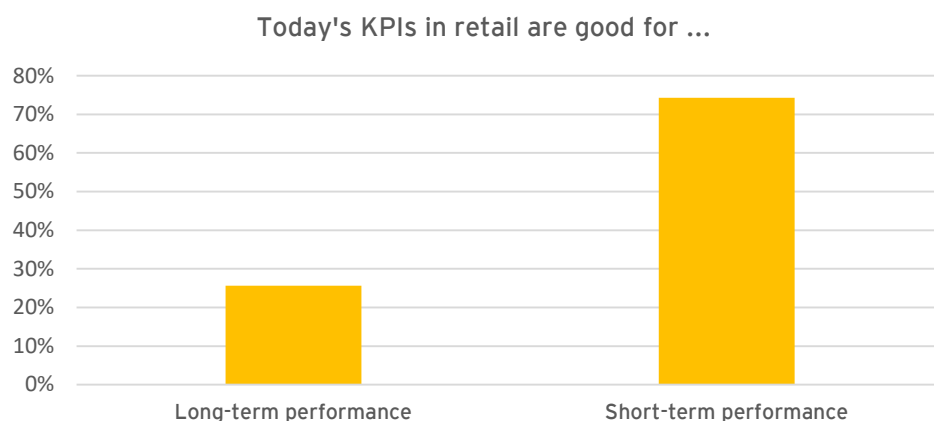
- **Faster than Amazon: in 17 years**
- **Faster than Alibaba: never**

China has, for a long time, focused a lot on growth and later incorporated aspects of sustainability, but is still primarily focused on growth. IT and media companies seem to be embracing this focus. This leads to a number of questions: If Alibaba continues to grow faster than the top competitors in the next 25 years, what will the retail industry look like? What is a consumer product company? What do consumers do?

06

Game changer core ideology

Results from our survey



Long-term thinking

"It's all about the long term" – the first headline in Amazon's 1997 letter to shareholders.

There seems to be an obvious difference between the KPIs of most retailers and consumer goods companies on the one hand, and Amazon on the other. Long-term performance seems to be much more in focus at Amazon. When we put this topic in our workshops, there was also a discussion that long-term thinking and long-term strategies may be hard to realize. In a turbulent market environment, you will have to adapt quickly enough; focusing on the long term may be harmful. If you have to revise strategies every six months, do they have any value?

Taking a look at the media industry, this has been the case. The CEO of Metro Sweden said that 10 years ago, he didn't use strategies because he would just seem stupid if he had to change them all the time. His preference was not to have management meetings either. Agility and short-term focus were his number one priorities. This may also be true in retail. Fabian Bengtsson, Chairman of NetOnNet, an electronics retailer, who was selected as EY Entrepreneur Of The Year® Sweden 2015, said that one of the key elements of the turnaround was looking at conversion rate on a daily basis. What can we do to make people who come into the store buy?

A reflection from one of the participants in the workshop: "It was great to spend an afternoon thinking about these interesting long-term changes. We spend most of our time thinking of tomorrow, or in fact most of the time is spent looking at the problems for the day."

Culture

Company culture is an important factor for success. Many big players emphasize the importance of maintaining strong entrepreneurial culture along with growing business. Attracting and stimulating talent is a key element for growing companies.

When we asked Kenneth Nielsen, a former Amazon employee, about their greatest challenges, he said: "If you ask Amazon, they will say talent."

If we look at the expectations of data analytics people among top performers in 10 years' time, there is quite a dramatic change expected. Improvement in competences can, for example, be achieved by education, recruiting or acquisitions, but the challenge will be substantial in either case.

From our survey, we find that:

There is a risk that data is ...

... misunderstood because of lack of competence among employees

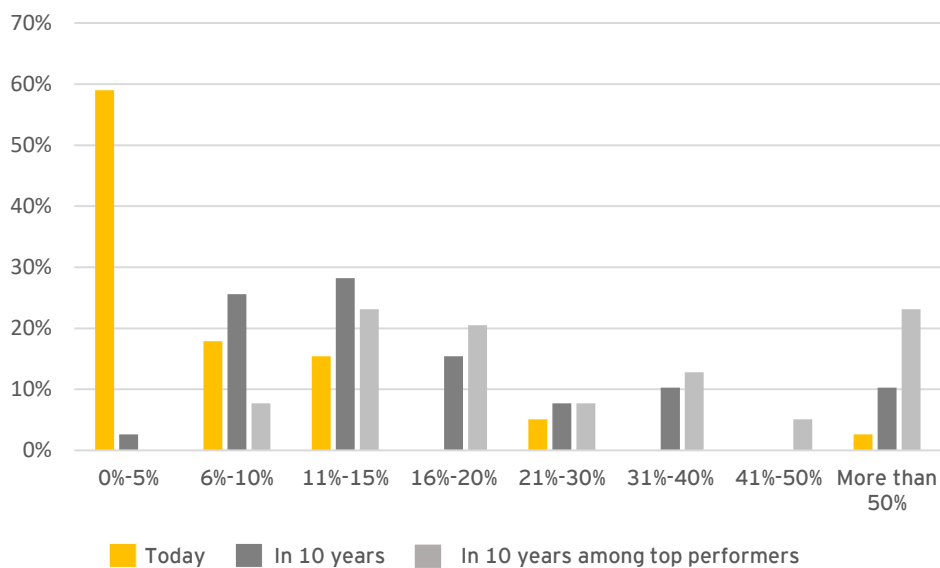
... misunderstood because it's poorly presented or visualized

... misused since it stimulates gathering of a lot of irrelevant data

... misused since it pacifies and doesn't stimulate action

... misused because it makes the company more sensitive to data theft and fraud

Data analytics - share of employees

**Ambition**

Ambition is a key element for success. The largest companies as well as the successful start-ups seem to have very few limits with their ambitions, for good and bad.

Many larger tech companies are, in essence, trying to create their own jurisdictions and citizens. Both Alibaba and WeChat have started projects with regions in China that will give legal status to their identification of individuals.

Even small start-ups who succeed seem to have few limits with their ambition. The growing popularity of the word “scale-up” reflects this.

Game changer tools

These are the areas that can be considered as the tools actively used by leading markets and companies:



06

Game changer tools

Infinite data

One thing that surprised us in our *Future of Nordic Retail 2017* survey was the number of data points or touch points for a given purchase, which the actors would have compared with today.

→ **Fifty-three percent of respondents believed that they will have no change in the number of touch points per purchase, five years from now.**

If a majority of people believe that data is the most important driver of change in retail and consumer goods, it is quite surprising that retailers and consumer product companies don't expect to get more data per purchase in the future.

In the survey, when we asked about the amount of data per purchase that companies such as Google, Amazon and Facebook are expected to have, the respondents said 10 times or even 100 times the number of data points per purchase they have today. There might be some misinterpretation of a touch point (equals consumer's each interaction with a business) vs. a data point (equals single fact or piece of information); but it seems obvious that the gap in data points will grow.

Mobile, groceries and payments attract interest because they have high frequency. Data from cars, packages and streaming services are gaining momentum. The ambition now seems to be to get infinite data.

Latest technologies take data collection even further. In-store cameras are constantly collecting information that is uploaded to the cloud. The data is then structured and classified with the help of deep-learning algorithms. Additionally, the collection of customer data increasingly takes place in our own homes. When these services become mainstream, data collection will be more or less infinite.

→ **Forty-five percent of our respondents believed Google, Amazon, Alibaba, and Facebook will have 10-100 or 100+ more data points per purchase, five years from now.**

Blockchain data

Blockchain has recently become a buzzword across industries, including retail. Briefly, blockchain technology is a way of securing data by linking it in an encrypted chain. Individual blocks are timestamped and cannot be manipulated, provided that the blockchain is set up appropriately. Although blockchain data can be anonymous, it is always confirmable and, hence, transparent. Therefore, it has applications in the situations where

trust deficiency is an issue, and where increased trust can give reduced transaction costs. This is where blockchain's greatest promise lies.

Blockchains also have the potential to increase supply chain transparency by recording each step along the supply chain – for example, in farming, manufacturing and transportation of food. Subsequently, consumers would be able to see a product's every touch in the supply chain. This is not entirely new, but the ability to create a chosen level of anonymity makes it possible to participate without handing over all sales data to a central database.

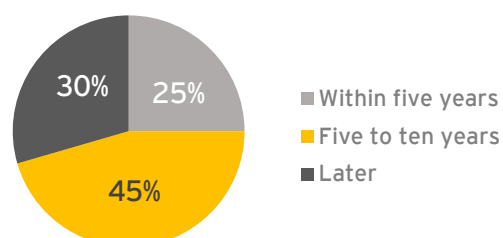
A number of retailers and consumer product companies are currently exploring this potential. Axfood and Martin & Servera, a part of retail group Axel Johnson, are engaged in a project around food traceability and control in Sweden.

Another example is a blockchain-based tracking system for the wine industry devised by EY for food transparency and the prevention of fraud in Italy. This has the potential to increase food security and help consumers make sustainable choices. Customers with allergies or special dietary requirements can easily confirm the individual ingredients in a product as well as the touch points of those specific ingredients. Making the supply chain transparent also informs consumers of which products are grown locally, enabling them to avoid out-of-season ingredients that are imported from afar. For retailers, a better knowledge of origin can also reduce the cost of recalls substantially.

Many retailers are currently displaying a tentative interest toward blockchain technology. A practical adoption of it is likely to increase over the next few years.

Results from our survey

When will 5% of retailers track majority of their goods in the supply chain with a blockchain or distributed ledger?



Mixed reality

Augmented reality (AR) is a technology that adds a virtual layer on top of the user's view of reality, usually utilizing smartphone cameras. Smartphones with the capability of AR applications are now so common that more and more retailers are looking at incorporating this new technology into their marketing strategies. Seventy percent of our respondents believe that majority of retailers will use AR as part of their strategy within 10 years, while 26% believe it will take 10 to 20 years. In any case, it appears inevitable that AR features will become an important part of retail strategies in the smartphone age. In a recent interview, Apple CEO Tim Cook said: "I don't think there is any sector or industry that will be untouched by AR."⁹

There are multiple ways in which retailers can benefit from AR technology. It can, for instance, enable customers to "test" products before purchasing them. These features are particularly advantageous for the industries that rely heavily on visual appeal, such as fashion and design. For example, IKEA launched its AR app IKEA Place in 2017. The app creates realistically sized 3D renderings of furniture in the customer's home, enabling them to try out products without physically entering the store. Tobias Hoff at IKEA sees this as a potentially very important way to collect data and understand what people are about to buy to their homes. The ability to provide relevant personalized offerings to the consumers can be substantial. Similarly, the Chinese e-commerce app, Tmall, recently launched a mobile virtual fitting room with AR features. In addition, a French cosmetics company, Sephora, launched an app that allows a user to virtually test makeup products on their own face.

The immersive nature of AR also boosts engagement as seen with the massive success of the Pokémon GO app. Retailers are trying to tap into the commercial potential of this with AR games that enhance the link between online and offline retail. An example of this is the Taobao and Tmall mobile apps that now include an AR game called "Catch a Cat." The game enables users to earn rewards, such as coupons, by catching the virtual Tmall cat mascot inside supporting physical stores.¹⁰

The key advantage of AR is its fast adoption potential because consumers are already in the habit of using their smartphones. There are few barriers to using AR apps or the website features launched by retailers. In fact, consumers seem to have a positive attitude toward AR features. Research by Digital Bridge shows that 70% of customers expect retailers to launch new AR features soon, while data from Google reveals that 61% of users would prefer to do business at shops that offer AR.¹¹ All of this indicates that AR features are here to stay and retailers would be wise to adopt them as a part of their strategy.

⁹ "Apple's Tim Cook On The Future Of Fashion & Shopping", *Vogue*, www.vogue.co.uk/article/exclusive-apple-ceo-tim-cook-future-of-fashion-augmented-reality, accessed 6 March 2018.

¹⁰ www.alizila.com/wp-content/uploads/2017/11/Factsheet_11.11-Global-Shopping-Festival-Technology_final-1.pdf?x95431, accessed 6 March 2018

¹¹ Augmented Reality Is Set To Transform Fashion And Retail, *Forbes*, www.forbes.com/sites/rachelarthur/2017/10/31/augmented-reality-is-set-to-transform-fashion-and-retail/#44dae1973151, accessed 6 March 2018

Micropayment opportunities

The mobile payment infrastructure has been growing in recent years. This is especially the case in China, where mobile payments are used for almost any transaction and mobile payment volume is now 50 times that of the US. Mobile payment volume is growing in other parts of the world as well, and the trend is expected to continue.

One of the key advantages of mobile payments for retailers is reduced transaction costs. The ability to manage very small payments without added fees is opening up new possibilities and, for instance, facilitating the sharing and circular economy.

In the future, it is likely that micropayments will replace cash in most situations. This is happening in China, where parts of the retail environment have already become cashless and even the smallest neighborhood stores and food stalls accept mobile payments.

In China, specific business models based on micropayments – for example, mobile transactions of as little as a cent – have emerged in recent years. An example of such business models is the “rental economy” businesses, which include station-free bike rentals and rental of mobile phone batteries. Other business models enabled by micropayments are: online literature platforms, where each chapter can be purchased individually; Q&A sites, where users pay to have their questions answered; and livestreaming platforms, where viewers use micropayments to give virtual gifts to contributors.

In each of the abovementioned examples, the value of each individual payment is very small, typically RMB1 (US\$0.16). However, low transaction costs and high volume of transactions make the business models successful. In China, livestreaming platforms have an audience of more than 200 million, while online novels are being read by more than 300 million users. The large user bases even in niche markets, in combination with the comprehensive infrastructure, are enabling the effective use of micropayments in retail.

Although the prospective audiences may be smaller in the West, the principle of getting value out of high-volume, low-cost micropayments is still valid. For example, micropayments could be used to gain revenues from the “long tail” of infrequent users of a service. Traditional subscription models used by some services cut off the long tail of less frequent users by offering only two options – no or full subscription. Conversely, micropayments can be used

to allow users to pay precisely for the specific content they wish to consume. Payments with companies such as Klarna have also helped media companies survive, since smaller payments become possible on a large scale. Nets has quickly driven contactless payments in Denmark and a mobile payment app, Vipps, has been downloaded by half the population in Norway, showing the speed of innovation in payments.

From static to dynamic

The age of fixed prices and static web pages is over as retailers are increasingly moving toward dynamic pricing, based on context and identity. This dynamic approach is not only applied to pricing, but also to the offering on display, warehousing, product development and marketing. The transformation is driven by big data and predictive analytics – as retailers are finding out what makes their customers tick – and putting that information into practice.

Non-static pricing typically takes one of the two common approaches – dynamic or personalized. The key difference is that dynamic pricing is based on non-customer-centric factors such as time of day, while personalized pricing is based on analyzing customer information. In other words, dynamic prices are the same for all customers visiting the shop or the product page at a given time, while personalized prices depend on who is viewing the item.

Electronics retailer NetOnNet is already recalculating prices four times a day. Dynamic pricing is a natural next step. It is also emerging in the offline retail environment as physical stores are introducing “smart shelves” with display prices depending on the time, status of supply and other predetermined factors.¹²



Half of our respondents believe that within five years, majority of the top 20 online and mobile retailers will have dynamic pricing that adapts to onsite consumer behavior; one-third believe this will take 5-10 years.

However, dynamic pricing models still have some significant hurdles. From the retailers’ point of view, developing effective models for dynamic pricing can be difficult. In fact, a recent report by RSR found that retailers’ interest in dynamic pricing has slightly fallen; conversely, interest in personalized pricing has been increasing.¹³ Consumers might also find dynamic pricing unfair in situations where it is transparent and the product is obviously identical despite the variation in price.

¹² “How much ...? The rise of dynamic and personalised pricing”, *The Guardian*, www.theguardian.com/global/2017/nov/20/dynamic-personalised-pricing, accessed 6 March 2018

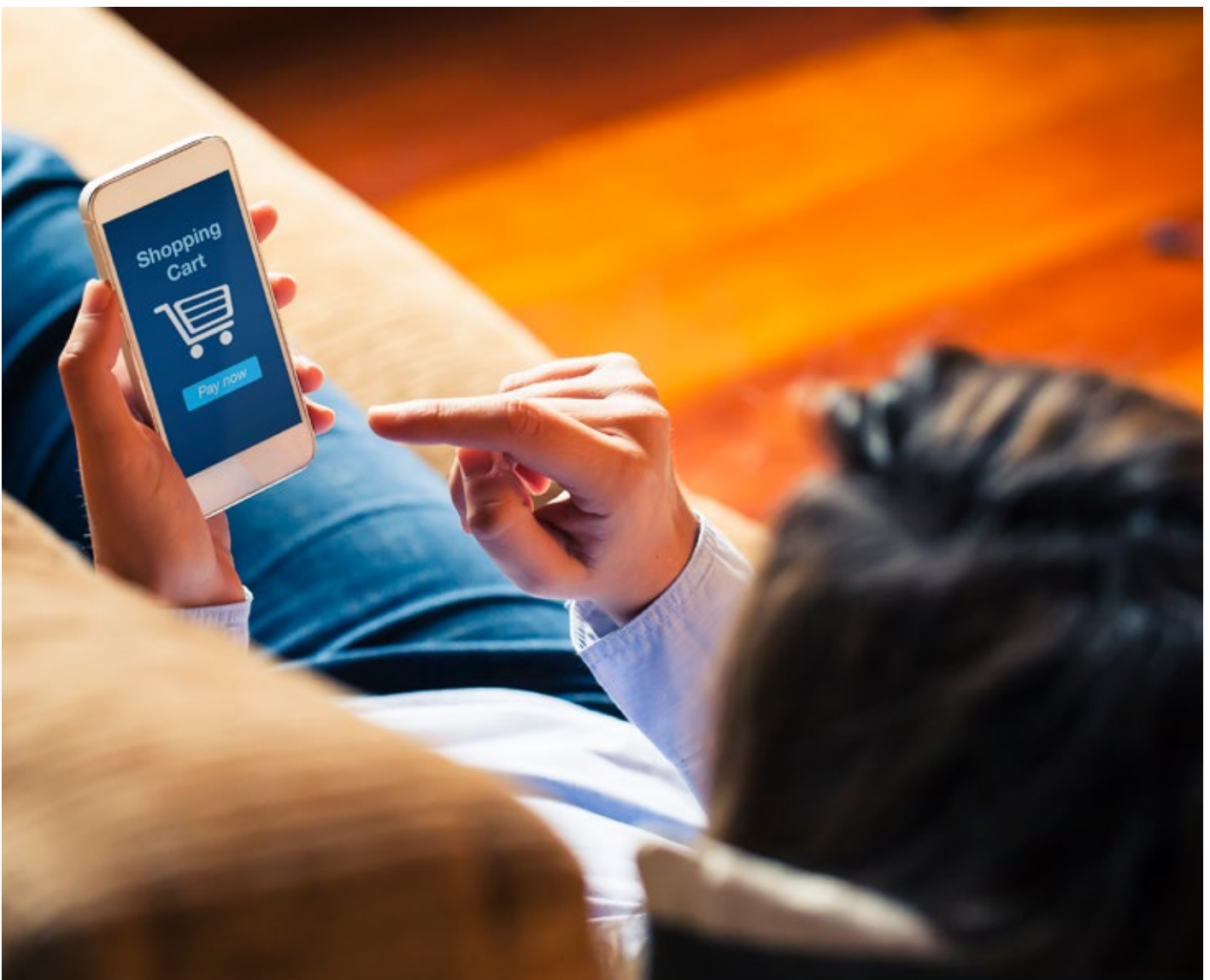
¹³ “Retail Pricing 2017: The Dawn Of Personalized Prices”, *Retail Systems Research*, www.rsresearch.com/research/retail-pricing-2017-the-dawn-of-personalized-prices?EID=63466417&CID=9980974, accessed 6 March 2018

For that reason, CocaCola has scrapped plans of weather-dependent pricing in vending machines almost two decades ago.¹⁴

In the age of infinite data, tailoring prices based on consumer information is increasingly possible. In some industries, such as travel, personalized prices have been commonplace for years; interest is now growing in other industries as well. A move toward dynamic models is demonstrated by media outlets using A/B

testing to select the most engaging version of displayed pages to increase ad revenues.

While the specific business models vary, the trend away from static to dynamic management of many functions and areas of businesses is here to stay. And data is a main driver of this development.



¹⁴ "Why Variable Pricing Fails at the Vending Machine", *The New York Times*, <http://www.nytimes.com/2005/06/27/business/why-variable-pricing-fails-at-the-vending-machine.html>, accessed 6 March 2018

06

Game changer tools

Everything as a service

Ownership is becoming less obvious – and less important – for both consumers and retailers. For consumers, the rise of the sharing economy or “collaborative consumption” has transformed the way in which services are being used. The shift from owning to using is being pushed further by the companies offering services on a pay-per-use basis. A few examples of companies with such service offerings are Uber for car rides, Mobike for bike rides, Airbnb for accommodations and AnkerBox for mobile phone charging. Infrastructure for mobile payments and micropayments is facilitating the shift toward customers paying just for what they need, when they need it.

Everything as a service is also closely connected to resource efficiency and circular economy. Circular economy pioneer, Vigga Svensson, founder of Vigga.us A/S in Denmark (a subscription model for receiving, using and returning baby clothes) points to the difference of the sharing economy and the circular economy. According to her, the sharing economy is not necessarily circular. But with low transaction costs of micropayments, we clearly make better use of resources at an unprecedented level.

For retailers, new franchise schemes are integrating high-performing, independent stores and service providers, instead of setting up new ones. China is leading the current movement toward franchise integration, with Alibaba integrating offline retailers in a franchise concept, controlled by its Alipay and Tmall platforms.

In Alibaba's franchise concept scheme, the highest performing retailers are allowed to use the highly valued Tmall brand and their own shop sign with the Tmall sign. In 2018, the number of shops that have been transformed into Tmall franchises is estimated to reach 10,000. Alibaba is here doing something completely different from traditional franchising; rather than giving franchise rights to new stores, it has found a mechanism for co-opting stores that are already high-performing and professionally operated.

Relations

While the case for search and data has been strong for a long time, the value of managing people's relations has taken longer to understand.

In a market where consumers are more and more difficult to reach, managing relations becomes more valuable. For example, WeChat has built their power by starting with a messaging app. From this platform, just about every service is now developed. Companies who used to think of emails as confidential information now use WeChat for business communication. The list of clients and the relationships with these are now in the hands of WeChat.

The hardware comeback

Technological development is rekindling interest toward controlling hardware and fixed installations. With commoditization, hardware has seen a decrease in interest; but this may be about to change. Hardware is also a vehicle toward the information-driven value chains in the digital domain. Examples of this are provided by smart home and health devices, which are becoming part of the digital ecosystems.

Part of the growing interest in hardware is the control of data. Controlling hardware can be used for managing operating systems and accessing third-party services, thereby, serve as a tool to access data.

As per the old business logic, hardware gets depleted. The more we used it, the less it was worth. Data has made this upside down. The more we use something, the more worth it has. This has put a renewed focus on hardware. Apple launched a watch and the main purpose was, of course, not challenging Swiss watchmakers. One prospect was, perhaps, a better access to health data.

Just like how stores are not dead, smart hardware is increasing in interest.



Game changer-envisioned future

The envisioned future of the dominant companies is quite impressive. We have described them as companies who want to:

- ▶ Become platforms of platforms
- ▶ Be with proprietary infrastructure and content
- ▶ Have the ability to predict and prescribe actions and outcomes
- ▶ Enable personalization at an unprecedented level

Platforms of platforms

While platforms and marketplaces have been on the radar for some time, the companies in the lead seem to have a vision of controlling a better part of business life and want to become platforms of platforms or “super integrators.” These are the companies who offer a myriad of functions and services combined into one platform. Examples of such companies are Alibaba and Tencent, which on their platforms offer functions ranging from gaming and social networking to shopping and finance. Although this trend has been strongest in China, elements of it can be seen on the Western platforms also. It is time for retailers worldwide to take the emergence of these platform companies into account in their strategies.

While Western management thinking has tended to recommend a focus on core competencies, the Chinese paradigm, instead, is to put customers’ needs at the center and design an offering around them. This has led Chinese companies to build whole ecosystems around consumers, even when this has meant leaping into areas where the companies have no competitive advantage. For example, Alibaba did not have any advantage over its competitors when it first launched into consumer-focused e-commerce. Today, it has, nevertheless, managed to build a market-leading ecosystem that incorporates logistics, warehousing, cloud services, e-commerce, mobile payments, personal credit services and much more – all of which have strong synergies with each other.

Tencent now owns 5% of Tesla, 9% of Spotify and 12% of Snap, a majority of Supercell, as well shares in Uber, and several international gaming companies. In China, it has invested in various companies including taxi-hailing company Didi Chuxing, biotech start-up iCarbonX and e-commerce platforms JD and Xiaohongshu. Many of these investments have no clear connection to Tencent’s core business, showing how broadly Tencent defines its ecosystem role. Alibaba has been more focused in its overseas investments, targeting companies in e-commerce and mobile payments. In China, Alibaba’s 2017 investments included companies in brick-and-mortar retail, logistics and bike sharing. These investments have added even more components to Alibaba’s ecosystem.

These platforms build data-based monopolies’ benefits from the network effect, where value per participant increases with size. These large datasets also mean increasing the learning effect.

Competing with these “platforms of platforms” is not a viable option for most retailers. In both the Chinese and the Western markets, giant e-commerce platforms are now making the rules of retail. Competing against them is increasingly difficult. Many small- and mid-size retailers are today embracing collaboration with platform owners such as Amazon and Alibaba to position themselves as part of leading ecosystems, rather than attempting to beat them.¹⁵

¹⁵ “Retailers And Brands Must Use Four Critical Partnership Platforms To Compete In An Amazon-Led World”, *Forbes*, www.forbes.com/sites/deborahweinswig/2016/06/14/retailers-and-brands-must-use-four-critical-partnership-platforms-to-compete-in-an-amazon-led-world/#840161113673, accessed 6 March 2018

06

Game changer-envisioned future

Proprietary

Being open and embracing free and freemium do seem to be challenged. We see a trend change from being open to being owned. Open networks and access to online content are being replaced by company-owned networks and streaming services. While earlier data used to be published on open platforms, they are now increasingly published on closed platforms. People who used to do blogging are now significantly more difficult to be found on open platforms. They are now seen mostly on platforms such as Snapchat and Instagram, where access for outsiders is restricted, thus empowering the owners of the data. While public authorities like to talk about open data, companies are quickly moving in another direction.

Apart from owning the platforms, even paid content is getting significantly more interests. Companies want to make sure that they are getting their share of the revenues generated by online users; investing in and buying content has, therefore, become a key strategy. Big players, such as Amazon, are increasingly developing their own content, while midsize ones such as Spotify focus on paying for rights and selling content as a subscription-based service.

Developing original content is a relatively recent business strategy, but competition in the sector has been heating up fast.

Video content competition has been heating up recently and interest in sports content has also been increasing. For example, Alibaba and Tencent are in the video streaming and content production business as well.

A local example of movement into content is the audiobook library Storytel. Buying various major publishers, such as Norstedts in Sweden and People's Press in Denmark, have made content ownership an integrated part of their distribution and shaken up the Nordic book publishing business.

While focus on free content formed the basis for the success of some platform companies in the past, this is now in some cases also a problem with having to handle with trolls and fake news. On the other hand, paid content for media companies now have a revival. Norwegian media company Schibsted, owner of major news outlets such as VG in Norway and *Aftonbladet* in Sweden, merely saw a business value from these operations five years ago. Time has changed and they are now gaining some profit that seems to be possible to maintain. Paid content is far from dead.

Personalization

The deepening of behavioral customer data is driving personalized retail to a new level. The development toward infinite data described in this report, driven by more and higher frequency touch points, improved the technologies such as facial recognition

and voice analytics. The quantified self-movement, where consumers use activity trackers, and the rise in smart home appliances, are changing the conditions for personalization. It is becoming possible, not only for online retailers but also for brick-and-mortar retailers, to personalize the most important aspects of the customer experience.

The Chinese e-commerce giant, Alibaba, provides an example of how online retailers can utilize AI, machine learning and cloud computing to personalize the retail experience. During the 11/11 shopping holiday in 2017, Alibaba managed a peak of 325,000 orders per second using these new models and technologies. Ninety-five percent of the customer service inquiries were handled by a chatbot, more than 400 million customized display ads were automatically generated by an AI-based marketing design platform and an AI-based recommendation engine automatically generated and distributed more than 60 billion personalized web pages on the Taobao and Tmall apps.

Many tax authorities around the world have started to demand more data from individuals and companies – Brazil, the US and Spain are some examples. The Norwegian tax authority also has shown interest in centralizing more data. In China, the state is taking this to a new level. The state is pushing for a social credit system that should encompass every individual and organization in China. Critics believe the system would give the state a tool for social engineering on an unprecedented scale. Although the project timeline initially stated that the social credit system should be in place by 2020, difficulties in integrating different actors, such as the Chinese tech giants, have delayed the schedule.

At the present moment, the main application of personalization is still in the retail sector, where customer data analysis can be used to maximize revenues.

From our survey:

When will the majority of large retailers analyze their consumers as segments of one (individuals can be segments)?

- ▶ **41% believe within 5 years**
- ▶ **53% believe within 5-10 years**

When will the majority of personnel in stores get digital information on what they should offer to whom in their stores?

- ▶ **41% believe within the next 5 years**
- ▶ **45% believe within in 5-10 years**

Predict and prescribe

"With predictive models, consumers in the future will no longer need to make simple purchasing decisions. It is proposed or taken automatically, which will have a huge impact on how we buy the next 10 years. This development will go with rocket speed. Within a few years, Alexa will propose a purchase," says Georgi Ganey, former CEO, Dustin Group.

Earlier data used to be focused on descriptions; but now the accuracy of prediction models is rapidly increasing.

- ▶ **Seventy-five percent of our respondents believe that within five years, Amazon Alexa will be able to suggest products and services before they have been asked for.**
- ▶ **Sixty-seven percent believe that within the same time frame, Google will be able to provide search results, before the user has started to type.**

Predicting demand on an aggregate level has always been possible; what is new is the ability to make predictions on the level of individual customers and products.

The improved accuracy is primarily driven by two factors – the increase in data points and the development of prediction models based on machine learning. The former is caused by the advent of "infinite data." EY has made a project with an insurance company in the US where the tonality of the respondents can be understood through voice analysis. Information that once used to be difficult to classify can now be interpreted.

Deep learning techniques do a good job of disentangling complex dependencies and identifying relationships between large sets of factors that interact in nonlinear ways. In a retail environment, a purchase may depend on a combination of factors, including

"People often say they want predictive analytics. What they probably need is prescriptive analytics."

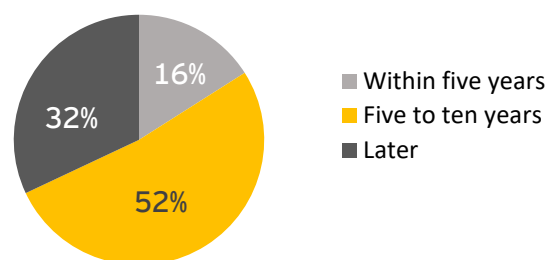
who the customer is, time of the day, weather, the product's shelf position and the other items that have already been placed in the shopping basket. Predicting relationships between such factors can provide retailers a set of options for increasing the likelihood of a purchase.

Meanwhile, approaches that used to be relevant only in the data-rich online domain (for example A/B testing) are now increasingly used in brick-and-mortar retail environments. As a consequence, analysis of retail data is less and less concerned with explaining why customers behave in certain ways. The focus is instead on systematic, data-driven iterations to optimize factors.

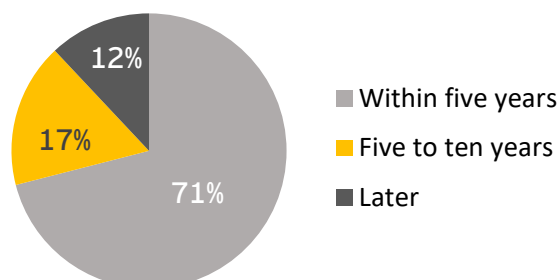
One of the downsides with machine learning approaches is that with an increase in the accuracy of predictions, transparency is reduced. A deep-learning neural network that has been trained to predict consumer behavior is too complex for humans to interpret, which implies that there is a risk that errors might go undiscovered. This trade-off between accuracy and transparency is something that analysts increasingly need to deal with.

The vision of leading companies is not merely personalizing but predicting what consumers want before they know it. On top of that, they need to understand the effects from suggesting different alternatives. They need to understand the effect from different prescriptions. How much will this offer drive loyalty, referrals, profit and brand awareness?

Offline retailers are better than consumers at predicting what the consumer will buy than consumer himself/herself.



Online retailers are better than consumers at predicting what the consumer will buy than consumer himself/herself.





The future road map

In our survey, we asked questions about what and when data will change in retail in the next decade. It is based on educated guesses and should, therefore, be handled with caution and seen as an inspiration and something to be seriously considered. While, many of the themes depicted below have been discussed in other parts of the report, this section seeks to pinpoint the year on which an average answer falls out in the overall timeline.

08

12 years

Biometric identification (such as fingerprint, eye scanning, face recognition) will be made of the majority of consumers in retail stores.
Avg. guess: **Within 12 years**

17 years

Revenue growth of two top 10 European retailers will be larger than that of Amazon.
Avg. guess: **Within 17 years**

2027 2028 2029 2030 2031 2032 2033 2034 2035

Five percent of physical retail stores have face recognition that identify the identity of majority of consumers.
Avg. guess: **Within 10 years**

10 years

Revenue growth of two top 10 European retailers will be larger than that of Alibaba.
Avg. guess: **Never**

07

The future road map

Our observations from the timeline:



Next three years: predictive is here for those born digital

Global e-commerce actors are disrupting local markets. They are born digital, very data-driven and agile. Many of these digital giants are now investing in brick-and-mortar stores and physical presence in homes and on roads in order to reinvent the market.

During this period, we will see intensified experimentation with big data and analytics in traditional retail. New structures and new positions will develop. Data asset management will become prime in organizations. Voice is growing and chatbots will become more common in the sales process.



Next five years: mobile connects to intelligent stores

The study shows that within five years, mobile commerce will rule online in order to make it almost effortless to navigate between channels and off-channels. Consumers are more frequently using their mobiles to shop and compare prices when visiting offline stores. Better mobile technology and intelligent systems such as predictive search tools will create new behaviors and increase the demand to shop, wherever you are. Marketing will have to change in order to keep up with the trend. Our panel believes that real-time algorithms and dynamic pricing will emerge into to behavior-based pricing.



Next eight years: the era of dynamic personalization

Our panel believes that within eight years, a majority of e-commerce disruptors would create tougher competition in all channels with their already agile digital structures and increase their competitive edge with AI-based supply chain and dynamic warehousing. By learning to match broader customer behavior to individual preferences, machine learning shapes up targeting and helps retailers to be proactive in their responses. Future physical stores level with online retail in terms of anticipating consumer needs.



Next 12 years: biometrics and AR are real

Our study results show that within 8-12 years, physical stores would have transformed to a combination of the best of the two worlds. Not only in online stores but also in physical stores, marketers will find better tools to measure shopper behavior and how they react on in-store displays. They will be goldmines of valuable data, where IP cameras and smart evaluation programs give immediate insights on how to improve the physical appearance. Our study indicates that within 10 years, 5% of retailers would have developed environments where facial recognition and sensors identify consumers and send their historical shopping data to the sales clerk in order to give conversational support and the possibility to predict and prescript individualized sales.



Very distant future: the catch-up with the platforms of platforms

The time when existing European retailers will catch up with giants such as Alibaba and Amazon looks very distant. Many respondents of our survey said "never."

08

How to handle the future?

Much of this report is describing the future of leading industry players and advanced examples from China and the US. This is partly because we wanted to understand the leaders in the market. Experience from the interviews with Nordic retailers confirms the importance of data and the ongoing disruption of retail and consumer products. How to handle this development is indeed difficult, but here are some thoughts summarized in four areas:

- 1. Key performance indicator (KPI) alignment**
- 2. Ecosystem partnering**
- 3. Store transformation**
- 4. Culture shift**



08

How to handle the future?

KPI alignment

In our *Future of Nordic Retail* report 2017, we claimed that KPIs seemed inappropriate. This year, we wanted to test this hypothesis, and indeed this seems to be right. KPIs have to be revised to handle data and long-term success. If everyone agrees that KPIs are good for short-term performance and bad for long-term performance, that is hard to maintain.

KPIs have to value experiments, data and learning of the emerging and increasingly disruptive society and business landscape.

One way to value data is to assign someone in charge of measuring and managing it – such as a chief data officer. When companies such as Zalando change their core business to big data from retail, other retailers and consumer product companies have to reflect on their own actions in the area.

One measure of how data is valued is to assess the increased value of use, something that is mainstream in media and marketing. Footfall in physical stores might be decreasing as there is too little improvement over time. If online platforms get better when used, physical formats have to be better as well.

Stores, products and services have to become part of the flipped industrial logic – increased use doesn't deplete, instead, it improves the value to the consumer.

Ecosystem partnering

The expected size of the large platform companies in the European retail market implies an entirely reshaped competitive landscape. According to our survey respondents, Alibaba is expected to have an increased impact for as long as we can envision, and Amazon is expected to do similar for the next 17 years. Consolidation among top e-commerce players in Europe is also expected.

This implies a completely reshaped competitive landscape where direct contact with consumers and transactions will be more and more difficult to achieve.

If we look at the US and China, where dominance is already evident, the power and the transformational impact is already difficult to understand for an outsider. But, defying to their platforms may come at a high cost. Many consumer brands have been successful at Amazon, only to be replaced by private label and other brands giving up more margin to the platform.

Large companies now realize they have to partner than just others with the largest platforms, to maintain their core competence. This may also be true in Denmark, Norway, Sweden and Finland. NA-KD is a platform for other fashion retailers. Storytel and Komplet have made acquisitions. Nets has started cooperation with Klarna. Banks in Norway may prefer to use platforms such as payment solution Vipps, controlled by DNB, the largest competitor, rather than being overtaken by Apple Pay or Alipay.

Store transformation

There has been a lot of talk about the changing retail arena. Format frenzy was discussed 10 years ago. For outsiders, this may not be so obvious today. A majority of physical stores look fairly similar. This may be about to change. The expected size of future stores and the total store space are expected to decrease dramatically over the next 10 years. Cities, shopping malls and streets may look entirely different if the estimate of the respondents of this survey become real. Store size as well as total store space will decrease.

Store and distribution changes will also affect brands, which have to open their own stores and take greater responsibility for brand experience in multi-brand stores.

Distribution in itself must be more convenient and efficient. Uber and Didi Chuxing became two of the top three start-up companies in the world who received the most funding because of their potential transformational role for retail and distribution in general. Can anyone compete with the most efficient distribution system? Will stores be completely mobile in the future? The store and shopping experience also have to address the changing needs of consumers. Time and money are spent, to a smaller extent, in shopping environments. Attracting consumers' desire for entertainment, experiences, education, socialization and work need to be addressed. Food service is an area where more and more retailers, shopping centers and grocery retailers are focusing.

- ▶ **Sixty-one percent of the respondents of the survey believe that previously nonfood retailers will focus more on food.**

Culture shift

"It doesn't make sense to hire smart people and then tell them what to do; we hire smart people so they can tell us what to do."

Steve Jobs

Apple

(Source: *Steve Jobs: His Own Words and Wisdom*, 2011)

When we discussed the need for competence in our focus group, there was a widespread understanding that data will be more important. It may, however, not be given that there will be a greater need for programmers, for example. The tools for working with data and programming are continuously improving, and AI as a service seems to become more common to offer by giants such as Google, Microsoft and IBM. Large IT firms in India are hiring fewer people than they have done in many years because the opportunity to use better and cheaper tools is hard to escape. Using data analytics and AI may be as exotic as using email today.

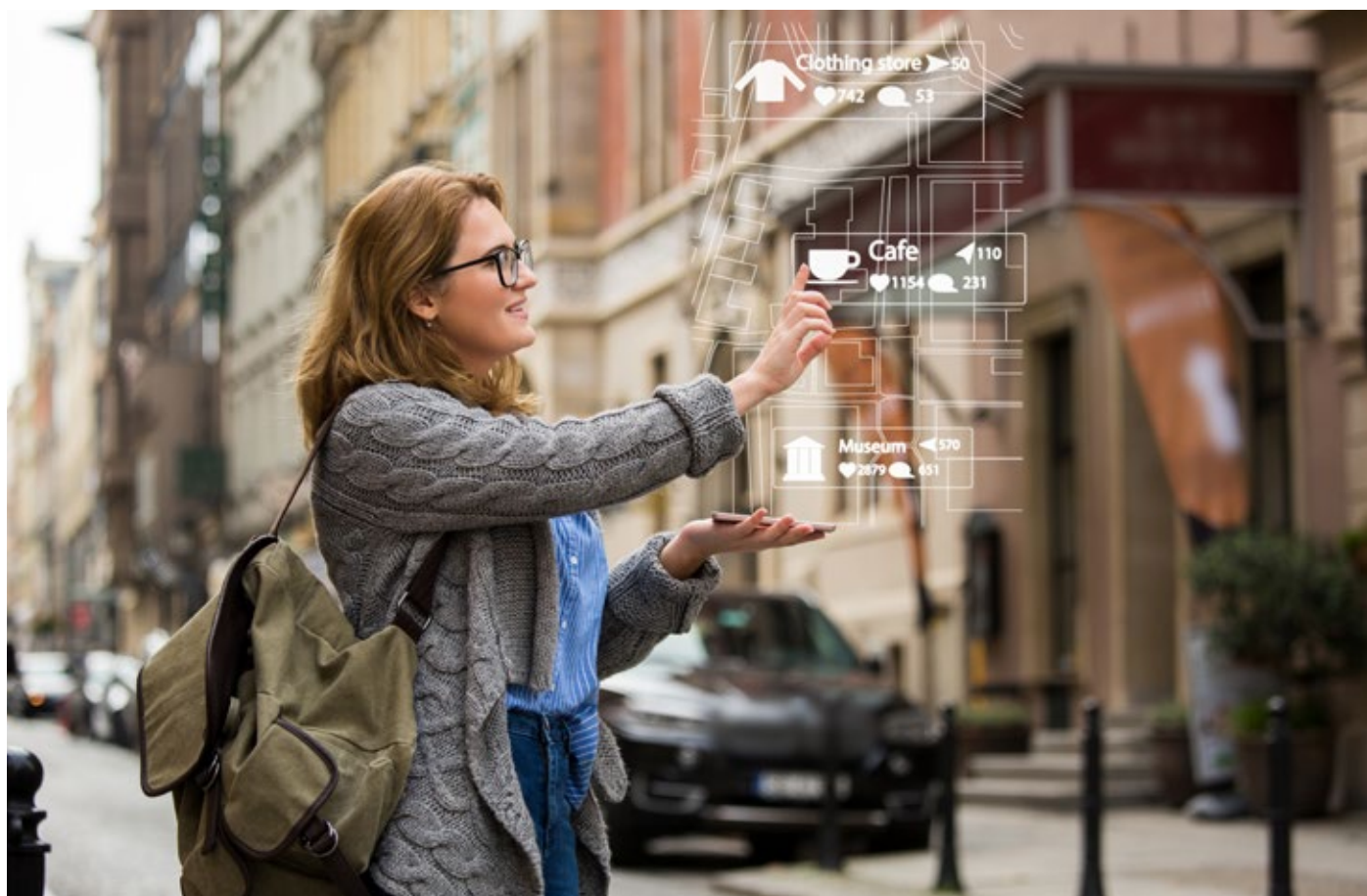
“Amazon is born digital; so they are very, very, very data-driven and base their decisions on facts and data.”

Kenneth Nielsen
Dansk Supermarked

What we need competence within is, however, something coined in the workshop in Oslo as “digital translators” – the people who are able to interpret results from the data and analysis and advise on how it can be understood to improve operations. On top of that, we see the need for “digital receptors,” who can understand the advice and implement them. Thirdly, operations have to be structured to give incentive to improve value creation. Incentives have to be adapted to new forms of value creation. A support or maintenance department may be paid for the amount of work they make and their speed. Their incentive to implement a data-driven solution that lowers maintenance cost and interruptions may be hard to identify. Sometimes, businesses seem to focus too much on the use of a digital system rather than value creation from the system.

A good idea is to learn from people who know how to work successfully with data and other technologies. Within professional services, it is a well-known fact that buying people is difficult, if you don't give freedom to act. You hire people to transform yourself, not the other way around.

Your biggest challenge today may indeed be how you think about tomorrow. It may be hard to predict the future but you can better prepare yourself for it with the actions you take today.



People who contributed to this report

Interviews

- ▶ Tobias Hoff, Customer Analytics and Insight Leader, IKEA
- ▶ Jacob Wall, Head of Business Development, Axel Johnson
- ▶ Vigga Svensson, Founder, Vigga.us A/S
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- ▶ Thomas Anglero, Director of Innovation, IBM Norway
- ▶ Georgi Ganey, former CEO, Dustin Group
- ▶ Sofie Perslow, Head of Market Insights, ICA
- ▶ Marc Schlaeger, Partner, Ernst & Young P/S
- ▶ Magnus Emilson, Chairman of the Board, NA-KD

Survey

64 Nordic retailers, consumer product company representatives and other industry professionals answered the retail survey, conducted in November-December 2017.

Workshop participants

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How EY can help

At EY, we believe a better working world means solving big, complex industry issues to provide outcomes that grow, improve and protect EY clients' business. Our understanding that an organization's process, culture and human element are just as critical as technology to realizing true value from data inspire us to ask better questions. We team globally with you to create more answers, using data to discover opportunities, manage risk and give customers what they really want. Combining an issue-led and technology-enabled approach, we drill down to the very heart of how you can transform around data.

EY Nordic Consumer Products & Retail sector professionals operate under one highly integrated global organization. This allows us to offer a broader range of services, skills and experiences to all our clients. The insights and quality services we provide include assurance, tax, transaction and advisory services – including services around robotics (RPA), VR and AR, AI and machine learning, big data and analytics, block chain and digital supply chain.

Besides your dedicated account team at EY, you are always welcome to reach out to our Nordic CPR contacts. We can ask better questions and collaborate with you to implement the answers.

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Appendix

About EY

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