DIGITAL STRATEGY
Building your company’s vision and journey towards being digital
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Digital strategy

Being Digital: For succeeding in a digital world, the inevitable fusion of business strategy and IT strategy is required: A digital strategy. From a strategic perspective, the challenge is to find answers to questions like: how do we act in a digitized world? What is our position in any ecosystem? How do we respond to external digital opportunities and threats (big data, internet of things, cloud computing, networks, and cybercrime)? Today, technology and data shape business strategy. Business strategy is becoming more and more synonymous for digital strategy: discovering the best possible ways to succeed in this digital world.

What being digital means for your organization depends on what future you see for your organization. Understanding and "reading" the trends in your industry or sector are key. In this white paper we introduce a simple 2x2 model to guide you in choosing a strategic direction for your digital ambition. Do you focus on digitizing your processes and products or are you striving for the full package of building a platformed business?

This white paper is a product of our own Anderson MacGyver ecosystem of customers, Anderson MacGyver consultants and universities. The ambition, creativity, and energy of the colleagues actively participating in our digital strategy guild led to this new innovative white paper. We expect this white paper to be an inspiration for you in order to build your own successful strategy towards being digital.

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1. Introduction

Nowadays we are challenged to evolve from doing digital to being digital. A phrase that now sounds so familiar, but which took its time to find a place in the vocabulary spoken in the boardroom. The man who coined the phrase already had a clear vision of what being digital meant in 1995.

Nicholas Negroponte (1995) stated the following: “We’re discussing a fundamental cultural change: Computing is not about computers, it’s about life: being digital is not just being a geek or internet surfer or mathematically savvy child, it’s actually a way of living and is going to impact absolutely everything.”

Negroponte stresses that the human aspects in the movement towards digitization is at its centre of success but a common pitfall is to think that digitization is only about moving offline services online or by only working smarter by means of technology. Both aspects are valuable efforts which are needed for digitization. This is a phenomenon that has been happening over the past 15 years and continues to happen within organizations every day. Even though it might be hard to explain what digitization exactly entails, we all instinctively know and praise companies that have truly gone digital. What Spotify, Uber and Airbnb are doing is revolutionary and should inspire traditional companies to change. Be that as it may, voicing the aspirations to become more like Spotify, Uber and Airbnb doesn’t quite get you there. This is even more true if your company offers a physical product or service. A bus company might change from gasoline to electric busses, but its physical form will remain. So, what does being digital imply for these companies?
In searching for the common characteristics between these successful digital companies, again looking at Negroponte’s prediction of the 1990’s, we find that these companies are structured in a way which centres the customer within the organization’s existence and reasoning. Technology is used to create a better customer experience and to enable and amplify the potential of the workforce to deliver this experience. While this might sound simple, this implies that the organization needs to adopt a new mindset towards business models, technology and processes, as well as the role of the employees and customers within this new mindset. A striking example of this mindset and the consequences of failing to adopt it is detailed in the book *Exponential Organizations* (Ismail, 2014). Nokia (with a value of $140B at the time) bought Navteq for $8.1B in 2007 as entry in the smart navigation market and Waze, a start-up founded in the same year, bypassed the sensor infrastructure of Navteq by using moving sensors within the individual smartphones of users. Waze was built upon and around the customer, whereas Nokia built its product around technology. Ultimately both companies were acquired. Nokia was bought by Microsoft for $7.2 billion in 2014 and Google bought Waze for $1.1 billion in 2013.

This whitepaper will go into detail about what being digital encompasses, the strategic considerations you should make while choosing/developing a digital strategy, and how to make this digital strategy a success.
2. The evolution of strategy and IT

Three elements are key for developing a strategy: the ability to create a vision of the future within the organization, the ability to plan and execute the activities for realizing those plans, and the ability to respond to both threats and opportunities in a timely manner. Information technology is one of the driving forces (as an influencer but also as an enabler) behind any strategy.

In the early days of IT (the 1960’s and 1970’s), the technology itself was the dominant factor to be managed by an organization. IT was managed on a departmental level without any form of IT strategy and was considered as a specific local company resource. The use of IT was mainly focussed on the exploitation of computing power to reduce labour intensive administrative activities or to perform complex calculations. In the 80’s, the focus evolved to the planning of the information systems’ resource. IT was more and more seen as an information system (IS) in support of different business activities. The strategic use of information systems was seen as an opportunity
Digital strategy

Figure 1 – The evolution of IT strategy

- **'60 – '70**
  - IT as a resource
  - IT resource planning

- **'80 – '90**
  - Competitive advantage of information
  - Planning the information system’s resource

- **'90 – '10**
  - Business value
  - Alignment between business and IT

- **'10 – …**
  - Being digital
  - Fusion of business and IT strategy

**Figure 1:** Evolution of IT strategy
to obtain competitive advantage mostly through cost leadership or through product differentiation. This development was followed by thinking in terms of Strategic alignment between IT, IS, and business strategies in the 1990’s. IT became an integral part of the business solution. Enterprise-wide systems were implemented to create business value.

Nowadays IT is everywhere. Products and services are embedded with IT and most interactions between consumers, providers, and systems are taking place based on information technology. The things around us and our interactions are all a part of a digitized and connected world. For succeeding in a digital world, the inevitable fusion of business strategy and IT strategy is required: a digital strategy.

From a strategic perspective, the challenge is to find answers to questions like: how do we act in a digitized world? How do we interact and communicate with our customers? How do we transform the traditional value chain into a network of business partners? What is our position in any ecosystem? How do we respond to external digital opportunities and threats (big data, internet of things, cloud computing, networks, and cybercrime)? IT changes the interaction between organizations and between the organizations’ relationships with consumers. This makes markets more dynamic and uncertain than before. Today, IT shapes business strategy. Markets are changing rapidly under the influence of IT. Business strategy is becoming more and more synonymous for digital strategy: discovering the best possible ways to succeed in this digital world.
3. Understanding the digital context

The evolution of business strategy and IT stresses the necessity of responding to the emerging challenges posed by digital strategies in a timely fashion and raises the question concerning where to begin. On the importance of having a strategy, Sun Tsu stated “Strategy without tactics is the slowest route to victory, tactics without strategy is the noise before defeat.” The necessity of a strategy is further emphasized in the current business environment due to the decreasing information asymmetry in favor of the customers, resulting in a greater backlash of negative press.

The essence of a digital strategy is setting the digital direction for the organization. Before setting direction, however, both the external environment and organizational capabilities have to be analyzed (see Figure 2). The outcomes of that analysis should result in a basis for the identification of organizational digital. Grasping the relative significance of both the external and internal environment for the organization provides input for the commitments that the digital ambition warrants and the time span in which action is needed.

The timelines for becoming digital are flexible as the need for action varies tremendously per industry. Industries that have been dealing with digital competitors and sales for years, like travel and publishing, require a considerable shorter time span for actions than industries in which strong digital threats have yet to materialize, such as the pharmaceutical or the utility industry. Organizations are faced with several key decisions that must be made with regards to addressing digital strategy. Understanding the digital context is the starting point for these organizations.

3.1 Understanding the broader digital context and its implications

Before looking at the organization or the industry, the relevance of digital on the macro-level must be understood as it ignites a transformation transcending the scope of organizations and industries. Grasping the digital context therefore requires analyses of the breadth and depth of digital trends by understanding their timelines and assessing their current impact and future impact. A pitfall in this process is focusing solely on technology as this is one of the most tangible digital aspects. A broader understanding of the long-term effects on the impact of technology and digital information is required. Technology will, however, be the lens through which the analysis is conducted. Although organizations have been using technology for several decades, this use of technology no longer revolves around the current set of technologies.
Figure 2: Digital context

MACRO
- Economical
- Political

INDUSTRY
- Threat of Substitution
- Competition
- Rivalry
- Buyer Power
- Social
- Technological

ORGANIZATION
- Threat of new entrants
- Supplier Power
available on the market. It is crucial to focus on the new capabilities that those technologies can create. These new digital capabilities in turn are increasingly influencing all kinds of factors of the organizations’ environment which makes it a complex issue without the certainty of obtaining the projected results. Using a framework to perform the external analysis such as the PEST analysis, which includes political, economic, social, and technological factors (additional factors can be included depending on the industry), ensures that these macro-environmental factors are taken into consideration and that the changes in these macro-environments can be monitored, adapting strategy if needed. To illustrate the use of the framework in the digital context, we identified four trends that should be considered in the strategic decision-making process of all organizations (see Table 1).

### 3.2 Mapping the industry and finding opportunities

While a broad view of the environment serves as a starting point to formulate the strategic direction, a closer examination of the industry and ecosystem is needed as well. Every organization needs to have a critical look at what their industry encompasses. These factors concern how digitization blurs the boundaries between industries, which is primarily driven by the irrelevance of asset ownership and the other quite important factor: how to become an industry leader. Uber became the world’s largest taxi company with no vehicles, Alibaba the most valuable retailer with no inventory, and Airbnb the world’s largest accommodation provider without owning real estate. The present state of industries is like a game of chess where the pawn can become queen in six turns. It also raises questions about what the implications are for those who own or produce the goods being used in these examples. To fathom the scope and dynamics of an industry, we leverage the five forces framework of Porter to identify the edge of the organization in relative to their competitors and the areas of the industry that are yet untouched from a digital standpoint.

<p>| Table 1: Summary of four inspiring examples of digital trends |</p>
<table>
<thead>
<tr>
<th>POLITICAL</th>
<th>ECONOMICAL</th>
<th>SOCIAL</th>
<th>TECHNOLOGICAL</th>
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<tbody>
<tr>
<td><strong>Inspiring examples of digital trends</strong></td>
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<tr>
<td>• In the disrupted industries there is an increasing trend that innovation trumps legislation. Nowadays, innovation advances so fast that legislation only later catches up with the industry as shown by the lawsuits of Uber and Airbnb</td>
<td>• The OECD estimates that the global middle-class (households with daily expenditures of $10-100 per person) will swell to 4.9 billion people by 2030, from 1.8 billion in 2009</td>
<td>• An increasing information asymmetry in favor of the customers results in lesser image control for organizations. Billboards have been replaced with online customer reviews and adds on television with viral YouTube clips showing praise or indiscretions</td>
<td>• New technologies are applied to aid specific areas of the value chain rather than providing the end-to-end solution encouraged by shortened development cycles. A striking example is Groupon, which started out as a WordPress blog with only a widget for sending e-mails</td>
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<td>• Attracting and stimulating innovation remains one of the key concerns of governments with supporting funds as well as creating an attractive investment climate.</td>
<td>• Two-thirds of those numbers are expected to reside in Asia which will transform a region known as global manufacturing hub into a consumption powerhouse</td>
<td>• The world-wide and omnichannel availability of information empowers customers and magnifies the impact of national brand or even single employees activities on the corporate brand</td>
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<tr>
<td><strong>Implications</strong></td>
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<td>• First-movers advantages in the digital industries, if capitalized on correct, remain vital for brand recognition and customer loyalty. However, due to the novelty of new products and services there is likely to be a lack of legislation. A fallback scenario is advised to handle legislation that will follow</td>
<td>• Emerging economies create short-term opportunities due to their digital susceptible population which will only grow in relevance in the long-term due to the shift of wealth</td>
<td>• Repercussions of negative information highlights the need for a global vision on the digital organizational profile aimed at creating an integrated experience</td>
<td>• A switch from the holistic approach of value chains towards a reductionist approach, which should result in a MVP-based delivery of products with shorter timelines</td>
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<td></td>
<td>• Organizations need to find the correct tone of voice to address this new customer base, as their advancements through different technologies differs from Western standards. For example, in Africa there is greater mobile penetration than electricity penetration</td>
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<tr>
<td></td>
<td></td>
<td>• Repercussions of negative information highlights the need for a global vision on the digital organizational profile aimed at creating an integrated experience</td>
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<tr>
<td></td>
<td></td>
<td>• Organizations have omni-channel presence whether they intend to or not as consumers take matters into their own hands. This underlines the need for customer involvement to benefit from the developing flow of information</td>
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The PEST-analysis illustrates that the bargaining power of buyers is increasing through higher customer expectations and information asymmetry developing in favor of the buyer. In addition, the primary concern of suppliers and providers is to create “lock-ins” to retain buyers by enticing them to invest time and effort in their platform or product. Organizations are to a greater extent going back to their core business by leveraging partners to co-create and suppliers to outsource their supporting processes by forming partner networks. As partners and suppliers become more networked than ever before in the business processes and data generation, the supplier dependence of organizations expands.

The threat of new entrants has accelerated due to the macro-environmental developments on technology. New players need less (financial) resources to enter an industry with products from an unexpected angle and these new players can scale faster than traditional organizations. The same goes for the threat of new entrants where digital alternatives for physical resources and processes have gained a lot of traction. These digital platforms are essentially virtual copies of the real world. An e-store uses the same basic business model and processes as a physical store, but are way more efficient and supply a greater reach. Virtualization of processes is taking place everywhere where, for example, when planning activities are taking place: matching supply and demand (digital market places) or planning of resources (Uber, Airbnb).

The trends on an industry level should not be perceived as threats but rather as opportunities for expansion. Acquiring a detailed picture of the industry exposes the uncultivated areas as well. These areas are described as a “blue ocean,” a new market in which the rules are yet to be set and thus competitive advantage can be obtained quickly. The cultivated areas are referred to as a “red ocean,” a competitive market full of existing rivals and corresponding rules. With the launch of iTunes in 2003, Apple set step into a blue ocean by augmenting their iPod which enabled their customers to buy only a single song instead of a full CD. As the illegality of sharing music files became increasingly popular and more and more visible, Apple was the first to offer a legal alternative. Three years later, they entered a new market by completely changing the experience with integrating the functionality of the iPod to a touch screen smartphone. By eliminating the need to use a stylus and smoothening the overall user experience, Apple once again made an innovative turn in the market.
3.3 Understanding organizational capabilities

The strategic direction should be a derivative of the current organization and therefore capture an internal landscape overview which is essential in deciding what digital opportunities fit best. The Operating Model Canvas provides a shared understanding of the business activities and is used to provide a detailed view of the processes, information domains, and the supporting IT services (see Anderson MacGyver’s whitepaper 5: operating model canvas – a picture is worth a thousand words). Besides analyzing the fundamentals of the organization, a thorough understanding needs to be formed of the digital assets owned by the organization and the resources that are being deployed. Whatever the digital ambition may be, every organization has a consumer base, digital brand, infrastructure, and data that can be leveraged in order to create a better customer experience. It is important to note that physical resources should be taken in account, as well as the aim to combine the digital and the physical resources in order to create great customer experiences. The bargaining power of the customer accentuates the need to analyze the current digital efforts, considering, for example, budget allocation, identification of online platforms, and the management of those: online profiling and customer involvement.

Organizations need to embrace innovation, but the organization’s core values and corporate cultures should not be disregarded. The quality of the company that ensures its relevance for years doesn’t vanish in the digital environment. The analysis of the external and internal environment should be considered as a means to an end; to setting a direction for your digital strategy. There are various directions to go when setting a digital strategy and all of them can be successful, but it is best fit to have a proper understanding of the external and internal environment. The next chapter will dive more in-depth into setting the company’s digital direction.
4. Choose your digital strategic direction

One of the main purposes of an organization is to provide products and services fulfilling the needs of customers. Strategy is about finding the best value proposition to match customer needs, which ultimately results in a competitive advantage. The attractiveness and value of the value proposition is determined by the customer. This is not any different for a digital strategy. Successful organizations have propositions which make the interaction between provider and customer a great experience or make the product or service outstanding. The latter is often neglected in the huge amount of literature written about being digital. Being digital influences both the interaction with customers and the product. The interaction between customer and seller can improve greatly by using digital techniques: data analytics, data gathering, machine learning, profiling, personalization, and relationship marketing. The product, its design, and the manufacturing process are influenced by digital techniques such as robotics, internet of things, smart factories, sustainable production technology, and smart sourcing, which turns the product into a service including financing, maintenance, and refurbishing. Products are becoming more complex as more and more digital components and digital services are integrated into the product. Product design is more customized: fitting the specific needs of customers customization, offering enhanced functionality, connectivity and sustainability. The trend in customer interaction is using more and more digitization in order to create greater value in the relationship with the customer: perceived value for the customer and transaction value for the reseller.

4.1 Define your business position and ambition

The digital context as described in the previous chapter is the basis for any strategic choice. Strategic activities such as assessing where we are today and where we want to be tomorrow are still necessary. The pace of making strategic decisions will be dependent on the dynamics of that specific context. Highly dynamic environments will require quick adaptation capabilities. Strategy can become a continuous process. A vision formulated like a Big Hairy Audacious Goal (BHAG) can support an organization focus on medium-long term ambitions.
A digital strategy is not a direction. It is about understanding your business position and choosing a strategic direction in a world (context) that becomes more and more digitized. There are many options to choose from in creating a digital strategy and there is no right or wrong option when considering making this digital business strategy. An informed decision is made based on the future you see for your organization.

In their strategic considerations, organizations should investigate two important strategic dimensions:

- the level of intensity in regards to interaction with customers
- the level of complexity in the components of products or services

A high level of interaction intensity with customers means that the organization has an external focus with the aim of building a long-lasting and sustainable relation with a customer by collecting data on preferences, personalized offers, and ultimately influencing customer behavior through “hooked cycles.” The customer becomes “hooked” when the interaction gives rewards or when the investment made through previous interaction creates a threshold for leaving. Typically, revenue streams are increased by continuously adding new services derived from new customer journeys. A low level of intensity of interaction (internal focus) means that interaction with a customer is limited and primarily focused on completing a transaction. Strategic focus here is on continuous improvement of processes and products, based on requirements instead of customer journeys. Interaction can be indirect via, for example, a resellers network or direct via more traditional sales channels and customer groups. However, for the avoidance of doubt, a low level of interaction can still mean highly digitized environments with the aim of high automation for quality and cost purposes.

A high level of complexity means that the offering for a customer is a product or service composed of many different functionalities which are integrated in a product design and require a complex production environment for assembling all these different components. These components are supported by digitized infrastructure and sophisticated architectures. Low level complexity products are product offerings that are characterized by only a few number of components or technologies: focus is primarily on production process and quality. Even these products can be highly digitized: like the production of digital sensors.

Based on these two dimensions, the 2x2 matrix can be drawn representing four positions for a digital strategy as shown in Figure 3, each having very different characteristics.
Figure 3: Four digital strategy positions

- Connected Customer
- Multi-sided Ecosystem
- Digitised Products & Processes
- Smart Integration

Building relationship with customer vs. complexity of product/service
4.1.1 Digitized Products & Processes

Interaction with customers is primarily focused on transactions where products are relatively “simple.” Organizations in this situation produce goods that are nice and simple. Goods that are easy to understand. Digital strategies in this situation create automation of production lines, end-to-end-processing, automated processing, robotics, IoT, data analysis for quality, and process engineering. Examples are basic goods, food, components such as Sonos smart speakers, Tata Steel, agriculture, and energy production companies.

4.1.2 Smart Integration

Interaction with customers is primarily focused on the specifications of the product and its design. The interaction can be intense dependent on the level of customization and complexity of the product. Products are complex, requiring a good understanding of customer needs. Transactions take place in the form of contracts. Services are often part of the offering. Digital investments in this box are primarily focused on product design as well as the integration of many different technologies like mechanics, electronics, optics, aerodynamics, hydro dynamics, digitization, product and process engineering, and manufacturing. Being digital encompasses developments like IoT, data gathering, data analytics, design, knowledge management, augmented or virtual reality, smart factories, research, software platforms, smart testing, training, maintenance, flexible infrastructures, and architecture. Examples are the high-tech and engineering sector, such as Boeing, Tesla, and ASML.
4.1.3 Connected Customer
Interactions with customers is key: collecting valuable data and giving the customer rewards in return. Services are segmented and targeted for specific customer groups. Offers to the customer are relatively simple. The key is to offer a good customer experience by knowing the customer needs. The customer invests through offering data and the service provider offers services in return. IT will support the entire customer journey. Connecting the customer means also offering multi-channel experiences: online, mobile, social media, and shops. Examples are digital financial services like insurance and payment services and web shops such as Cool Blue. Also, Polar and Garmin can be considered as a “Connected Customer strategy” as these companies provide online platforms to track, compare, and compete with other users next to their wearable products.

4.1.4 Multi-sided Ecosystem
Strategy is based on deep interactive collaboration between customers, users, and business partners in order to offer an ecosystem (or platform) for doing transactions. The customer and their journeys on the ecosystem are key. It integrates the services of different providers in customers’ journeys while being tailored to the needs of a specific customer group. The complexity of the platform is driven by the number of services that are offered through the platform. Digital platforms grow in complexity by continuously enhancing the customer experience and by offering more and more functionality through integrating more and more providers of services. Examples of ecosystems are Airbnb, Catawiki, Discogs, Marktplaats, and Parkmobile. The latter, integrating parking services by making arrangements with municipalities, car parks, financial services, geodata, and by offering parking services for fleet owners.
5. The strategy characteristics

Differentiation lies primarily in the competencies of any organization. It is not about IT itself, but about building the right competencies concerning how to use that technology. The main difference today is that IT permeates in every business activity and in all our interactions, so dull components become intelligent with communication. Data is collected and stored, detailing everything we do and showing what can be measured by sensors. The analysis of the external and internal environment shows which digital developments are of importance to our organizations, giving direction for developing the right competences to cope with these developments and to create new business opportunities. Competencies, unique data, and/or knowledge are the key enablers to develop unique propositions. The four boxes help to understand what the current position of an organization is in a more specific digital environment and where its digital future may lie. Table 2 provides an overview of the key characteristics (rows) of each digital strategy opportunity. Reading through the rows of the table will make the differences clear.

Table 2:
Characteristics of digital strategy options

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### Table 2 – Characteristics of digital strategy options

<table>
<thead>
<tr>
<th>DIGITISED PRODUCTS &amp; PROCESSES</th>
<th>SMART INTEGRATION</th>
<th>CONNECTED CUSTOMER</th>
<th>MULTISIDED ECOSYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategic value</strong></td>
<td>• Product quality through continuous innovation and improvement</td>
<td>• Smart customized integrated solutions</td>
<td>• Customer reach and understanding through intensified relationship building</td>
</tr>
<tr>
<td><strong>Main strategy concept</strong></td>
<td>• Differentiation through product quality</td>
<td>• Differentiation through superior Solution Design</td>
<td>• Differentiation through customer focus</td>
</tr>
<tr>
<td><strong>Digital strategy concept</strong></td>
<td>• Smart products and factories</td>
<td>• Industry 4.0 concepts</td>
<td>• Service design thinking</td>
</tr>
<tr>
<td><strong>Organizational focus</strong></td>
<td>• Internal focus at a specific unit / business / process</td>
<td>• Integrating organizational units – partners</td>
<td>• Flawless customer journeys to connect / hook customers</td>
</tr>
<tr>
<td><strong>Governance (leadership)</strong></td>
<td>• Product/Process Owner</td>
<td>• CCO/CMO</td>
<td>• CEO/CDO</td>
</tr>
<tr>
<td><strong>Technical complexity</strong></td>
<td>• Limited; scoped to a specific solution space</td>
<td>• Design complexity</td>
<td>• Limited; scoped to specific customer segments</td>
</tr>
<tr>
<td><strong>Technological implications</strong></td>
<td>• Robotics, Algorithms</td>
<td>• Enterprise wide systems</td>
<td>• Omnichannel solutions</td>
</tr>
<tr>
<td><strong>Digital capabilities</strong></td>
<td>• Process design, Lean, product design, IT, IoT</td>
<td>• IT, solution architecture, IoT, service integration</td>
<td>• UX design, social media, digital marketing</td>
</tr>
<tr>
<td><strong>Data perspective</strong></td>
<td>• Product and process data analytics</td>
<td>• Data integration &amp; exchange</td>
<td>• Customer data analytics</td>
</tr>
</tbody>
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6. Cases

6.1 Digitized products and processes

Focus upon digitized products and processes is a digital strategy in which digitization is embodied in a product or a process. This kind of digital strategy has a more internal focus instead of a customer focus and the technical complexity is limited. Often there is a combination of data and technology which is used in a stand-alone setting. A good example of such a strategy is automation by container terminals.

In the 1960’s and 1970’s, the container terminals started to focus upon mechanization and robotization of their processes. The 24-hour economy in the harbor enabled positive business cases to use advanced solutions like automated guide vehicles (AGV’s), advanced planning systems, paperless truck handling, and remote-controlled container cranes. This is all operational at a large scale in the APM terminal in the Rotterdam Maasvlakte and the next step is already on the horizon: unmanned cargo ships. In the example of APM terminals, the strategic advantage focus is upon optimizing internal processes to be more efficient than other terminals. APM uses their own resources and partners to develop solutions which can be applied in the terminals they operate all over the world.

Another example with a strategic advantage focus on digital products is smart thermostats. In the Netherlands in 2011 two products entered the market: the Essent E-thermostat and the Eneco Toon. Both offered remote control of the room temperature via a smartphone app. Within four years all boiler producers and the big multi model companies like Nest and Honeywell had similar products on the market. The main effort of all the companies was investing in new technology capabilities like wireless protocols, local hub technology, and back end development. The strategy execution was mainly driven by electrical engineers, IT engineers, and usability designers. Some of the parties had the capabilities in house, while others sourced them from the market.

Currently the market growth/ size is comparable to the one before the smart thermostats era and the market looks mature. There is no clear winner in the Dutch market. It is striking that no party has been successful yet in establishing an ecosystem themselves despite the strategic vision some of the parties such as Eneco have used in order to try to create an ecosystem.
6.2 Smart integration

Complex industries such as automotive, aircraft, and other high-tech industries require smart integration strategies to meet high quality standards, integrate an increasing number of technical components, produce more complex subassemblies, manage an advanced partner landscape, and enable product life cycle management with the lowest total cost of ownership of their product for their customers. Good examples of enterprises that fit this strategy are Airbus and Hydrauvision.

Airbus, together with Boeing, are the leading aerospace manufactures. The Airbus locations next to Bremen airport are increasingly using digital technologies and 3D printing. Airbus has introduced a mixed model assembly line for wing manufacturing for both the A330 and A350 on the same production line. This can lead to significant organizational challenges, particularly regarding components from different generations of products – the A350 was introduced only very recently, whereas the A330 has already been on the market for quite some time. Airbus could only make this work by enabling digital monitoring of the manufacturing process.
3D printing techniques (ALM) are used to create work pieces out of metal powder. It enables Airbus to quickly manufacture work pieces that are needed in small quantities, for example, if an individual component is missing during assembly. This creates a much reduced production time.

Hydraulvision is a Dutch engineering company established in 1973 and has become a leading specialist in the area of complete hydraulic drives and the related controls used in the offshore and maritime sector. The products are complex, are applied in environments that require specific technical capabilities, and are made upon customer requirements and preferences. As these products are used in offshore and maritime sectors, high reliability and compliance with regulations and legislation are essential and customers are dependent on these products. To address these high demands, Hydraulvision engineers designs the products completely digitally, levering collected general and measurement data. This digital process enables Hydraulvision to discuss the design in the early stage of the design process and give customers the comfort that regulation and legislation is considered and that requirements are met. To reduce the production costs and duration, the test and simulation activities are performed only digitally. In other words, there is no physical prototype. The first successful digital product produced will be the end product.

Both examples are about the digitizing of engineering, production, and supply chain. The main driver is the fact that companies have the ambition to design products with superior capabilities and qualities with the integration of different technologies. Lately, as a way of thinking, the concept of Industry 4.0 and smart factories has been introduced. The impact of these concepts should not be underestimated. While smart robots replace factory workers with executions of complex tasks, more digitized production requires different and higher educated skills, partnerships with research institutes, and the SME to enable these concepts. Thought leaders foresee that production capabilities can shift from, for example, China to Europe again. In Europe, Germany is taking a leading role as illustrated by the introduction of the Map of Industry 4.0 initiatives by Bundesministrium für Wirtschaft und Energie (see http://www.plattform-i40.de).
6.3 Connected customer

The digital area offers ample opportunities for organizations to stay intensively connected with their potential customers. A digital strategy that strives for the optimal customer experience is dependent on customer intelligence and creates more opportunities for organizations to stay connected. Organizations such as Coolblue and Picnic are examples that fit well into this quadrant.

Coolblue was founded in 1999 and has grown into an organization with over 293 specialized web shops and eight physical stores in the Netherlands and Belgium. Additionally, Coolblue offers rapid, next-day delivery, which is heavily supported by information systems. Coolblue’s mission translated to English is “Everything for a smile,” which symbolizes their strong and personalized customer focus. Technology is the driving force of Coolblue’s customer service. Customers can get in touch with Coolblue through multiple channels: telephone, social media, Coolblue’s website, and WhatsApp; with Coolblue aiming to respond within the hour. Additionally, Coolblue offers users personalized suggestions for purchases, based on one’s history and known complementary products.

Picnic is a Dutch supermarket without any physical stores, that aims to “be the friendliest supermarket.” Customers can order their groceries using the Picnic app and Picnic delivers them at the door in a desired timeslot. Technology allows Picnic to conduct their main business activities, for technology is the key resource in the ordering, collecting, and delivering processes. In addition, technology supports Picnic to stay in touch with their customers by offering them a minute-precise track-and-trace of their order. Picnic might appear as an organization that would fit better in the Digitised Products & Processes quadrant, having digitized the process of grocery shopping, however, Picnic’s digital strategy completely revolves around satisfying the customer and all digitizing has taken place with an external focus while keeping the customer in mind.

Both organizations have their strong customer relation-focused mindset in common. The key for these organizations is to use technology for the benefit of the customer experience and to “hook” the customer by being omni-channeled and using customer profiling to serve customers in order to best fit their needs. In this model, the organization can build sustainable relationships with their customers.
6.4 Multi-sided ecosystem

A digital strategy with the ambition to build a multi-sided business model within an ecosystem of businesses and consumers is the most complex strategy in which interdependent but distinct groups contribute and benefit from the digital platforms. Good examples of enterprises that fit this quadrant are Booking.com and FlexPort.

Booking.com has grown from a small Dutch start-up to one of the largest travel e-commerce companies with more than 15,000 employees in 198 offices within 70 countries. Booking.com connects travellers (one side) with a large selection of places to stay (other side), including apartments, vacation homes, and B&Bs. Each day they handle more than 1,550,000 room nights via their digital platform. Booking.com is typically a multi-sided digital business creating value through the large number of travellers/consumers and places to stay. They are expanding with other travel offerings such as trains, buses and are becoming even more multi-sided and multi-service oriented.

Flexport is a B2B example of a multi-sided digital and people platform with services in air freight, ocean freight, trucking, warehouse and fulfilment, customs brokerage, and cargo insurance. They operate as a licensed freight forwarder to manage complex international freight and supply chains. FlexPort does not own any asset but coordinates freight volumes on behalf of their customers using the capabilities of the different asset owners.

The key focus for these companies is building and maintaining their digital platforms and building the network of all the different parties and customers. Technology is key for these companies and everything is multiplied: multiple devices, multiple portals, multiple integrations, and multiple languages. These companies typically strive for global solutions though this is not required (bol.com in the Netherlands). Digital entrepreneurship is a part of the company’s genes and a part of the executive board’s blood.

Booking.com and FlexPort are examples of Digital native companies but also incumbents that can transform into a multi-sided platform business. Another good example is Royal FloraHolland who is transforming their traditional cooperative of growers using their physical auctions as their main trading platforms into a multi-sided growers and traders business-to-business digital platform. 


7. Conclusions

Being digital refers to the strategy of becoming a digital organization, where technology will be at the heart of all primary products, services, and processes. Digital technologies are strategic tools and are used to increase the performance or value of our products and services. Data is strategic in continuously improving processes and products for customers, in developing knowledge, and improving operational/strategic decision making.

There is not one direction for discussing being digital. What being digital means for your organization depends on what future you see for your organization. Understanding and "reading" the trends in your industry or sector are key. This is an important role in order for senior executives to develop a transformative vision. This means not only developing deep interaction with your customers, but with the entire ecosystem that your organization is a part of and also by creating awareness of important future trends. These new trends are possibly already visible in other business sectors.

The model as presented in this white paper explains different strategic positions and strategies for being digital. The model supports creating a digital vision and supplies what is required to achieve that vision. The model helps you to identify which technologies and which business partners are of importance. A digital strategy requires the development of new skills and capabilities. It requires an environment for experiments, a learning culture, and the flexibility to adapt strategies based on what is learned from own experience and from others.

Collaboration and working together with business partners is a key capability and a factor for future success. Digital technology is fundamentally important for being digital, but the most important factor for success is the human factor: knowledge, capability, and leadership.
Anderson MacGyver: Creating business value

Anderson MacGyver supports its clients in creating business value through establishing digital strategies, implementing business focused and agile IT organizations and selecting the right solutions and technology partners. We help our clients with their digital transformation.

Essential for the digital transformation is a clear and shared roadmap to a future where companies use data and technology to create competitive advantage. Anderson MacGyver challenges the business strategy of clients and helps to identify and realize innovative opportunities.

New business models
Markets are changing rapidly, existing business models are under a lot of pressure and put to the test by radical new business models delivered by new digital organizations (eg ‘Uber’ or FinTechs). During the last decade the increasing pressure on efficiency has caused IT environments to become outdated resulting into business managers dissatisfied with their internal IT organization. Smarter use of information becomes the key enabler of new business models.

“We create value for our customers by stimulating them to innovate, by improving the way they operate and by enabling the change they need.”

Partnering with the business
At Anderson MacGyver we believe that IT organizations should primarily act as a business partner and should constantly think and act in terms of added value to the business and its clients. As a result, opportunities involving technology and information will be seized more effectively. No longer ‘IT and the business’, but working together in multimodal teams towards a single vision and strategic approach to the client.

Digital transformation
Anderson MacGyver is dedicated to aiding clients in their transformation towards the digital future. A future in which organizations leverage data and technologies to create new opportunities and gain competitive advantage and possess the organizational adaptability to respond to and grow with the developing society and markets. Anderson MacGyver operates as a change agent throughout all stages of digital transformations.
Anderson MacGyver as a team

Anderson MacGyver supports organizations with its own authentic approach to realise the envisaged goals. We initiate innovation with true passion and together with our client we establish a challenging and exciting strategic digital agenda. With the resulting modern and focused organization, the business is ready to become leading in the digital world of tomorrow. We are committed to help our clients and apply the necessary changes to their organization.

We are recognised for the seniority, drive and experience of our teams, that are committed and result driven. Applying our methodologies, based on latest scientific insights, we are passionate to initiate innovation and help our clients transform.
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