Sustaining Digital Transformation in the Post-COVID Era: Nike Case Study

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ABSTRACT

Digital transformation is often a term that has a broad set of definitions, but consensus as to what it can mean has taken on increasing importance in an increasingly digital world. It is especially important for businesses to have a narrow definition so that they can focus on a particular strategy for digital transformation that can be most effective in this economic environment. The COVID-19 pandemic will become an inflexion point in history for many issues and one major topic will be how companies achieve innovative services and products, while also adapting to the future needs of the workforce. My research will focus on analyzing the latest academic frameworks that can help guide digital transformation strategies in the post-COVID era. By adopting a digital transformation strategy over the short term, business executives can accurately measure the impact their employees, products, services and customers will ultimately have on their longevity and long-term profitability.

To demonstrate successful implementations of these digital transformation frameworks, this research will focus on Nike Inc., (Nike) as a case study. Nike, one of the largest and most well-known sports brands in the world, is also a company that puts digital transformation at the forefront of its business strategy. The firm's goal of accelerating their digital transformation is aimed at better understanding and improving the customer experience. The study aims to demonstrate how Nike's customer focused digital transformation over the past decade has led to a competitive advantage and moving forward into the post-COVID era, will they be prepared for the rapidly changing needs of their consumers?

Thesis Supervisor: Michael Cusumano
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Table of Contents

1. INTRODUCTION

Digital transformation has become ubiquitous with corporations in order to create a competitive advantage and now there is a new wave of digital transformation occurring. Especially with the impact of COVID-19, it has expedited many businesses to transform into the digital age, some have found it easier than others. With so much emphasis on digital transformation at present, it is a topic that will continue to grow in the years to come. The New Elements of Digital Transformation by MIT Sloan Management Review highlights: *"Digital transformation has risen much higher on the corporate agenda since our article and book in 2014, and the drive to maintain operations disrupted by COVID-19 has made it an even higher priority"* (Bonnet and Westerman, 2020).

A few experts in the field of digital transformation have emerged to understand what successful companies have done to keep up with the exponential technological growth. Venkat Venkatraman, is one of those thought leaders and in 2016 wrote 'The Digital Matrix' which outlines the challenges in digital transformation. In 2020, Westerman, Bonnet and McAfee wrote 'The New Elements of Digital Transformation' in MIT Sloan Management Review where they advanced their previous 2014 model, 'The Nine Elements of Digital Transformation.' They still identified that leadership capabilities are still as important as ever and that the digital capabilities framework needed to be adjusted due to the rapid technological advances in recent years. All of the experts conclude that in today's world companies, especially those outside of the technology industry, have to embrace digital business models.

Although Nike is one of the world's largest retails brands, this research will demonstrate that Nike has transitioned from a traditionally retail and product-based business model to a digital business model in order to take advantage of the latest technologies. By examining how Nike measures against these frameworks, this research seeks to analyze how well Nike's current innovations to date will allow them to continue with the rapid pace of digital transformation in the post-covid era and will argue that their data driven customer focus is key to their digital future.

This thesis is organized into four parts. The literature review will provide an in-depth explanation of the latest academic research frameworks that have been conducted around

digital transformation. After follows an introduction to the case subject, Nike, and a description of its digital transformation journey. In this section, the thesis demonstrates how Nike's current and future digital transformation compare with the academic frameworks. The next section provides possible gaps in Nike's strategy according to the frameworks and recommendations for what Nike could do in the future in order to sustain their digital transformation in the post-COVID era. The final section concludes the thesis to demonstrate that digital transformation is a never-ending process that must be closely monitored and emphasizes the importance of digital transformation to Nike in order to sustain long-term success.

2. LITERATURE REVIEW

2.1 Digital Transformation: What it is and Why it is Important?

Digital transformation has become ubiquitous across the world. But how did we get here? Digital transformation's history so far can be broken down into three steps: 1) Shifting processes that were manual or analogue to a digital or electronic version, 2) Optimizing the digital processes by using digital technology (computers) and 3) Creating new businesses and business models that were not possible before the first two stages.

The first stage of shifting processes that were manual or analogue to a digital or electronic version is the digitization process of transforming analogue or manual into digital form. A simple example is converting handwritten records into computerized records. This provides the foundation for digital transformation and it is even more prevalent in the second stage.

The second step is where digitalization becomes apparent and the process of applying digital technology and capabilities are optimized to drive new and better ways for improved outcomes. For instance, bookselling is an old business that dates back centuries, but Amazon used software to create a virtual bookstore, with millions of titles. Amazon even goes one step further with their databases and algorithms to understand what their customer buys and may like to buy and make recommendations based on the customer's activity (Cusumano, 2004).

The third step of digital transformation is born out of digitization, whereby new businesses and business models are created out of a digital world. For example, Facebook, founded by a

Harvard college student, named Mark Zuckerberg, demonstrates a potential for a new business and a new business model that was created because of the digital infrastructure that was already in place. Facebook is able to connect billions of people from around the world whilst monetizing online advertisements to their users which would not have been possible before the first two steps.

Digital transformation as we have seen through the three steps is evolving and currently the third step is a place that is hard for any business to ignore. Venkat Venkatraman was right when he said that "digitization will pervade the very fabric of our society" (Venkatraman, 2016), this is especially catalyzed with the impact of COVID-19 as businesses and people's livelihoods have survived because of digital transformation.

How is Digital Transformation Changing Business?

Since COVID-19 has plagued countries across the world, business leaders whether they were focused on digital transformation before or not, have now escalated it to one of the top priorities of their organization. In a recent BCG study, 80% of business leaders across industries say they plan to accelerate their digital efforts and despite the downturn in business, 65% expect to increase the amount they're investing in it (Chakraborty, de Laubier et al, 2020).

The pandemic has seen many businesses have to change many aspects of the business. In the BCG study, it mentions that executives are focused on digitally enable goals to support business recovery. This includes new ways of working as many employees have had to adapt to working remotely, many for the first time. Working remotely adds an additional cyber risk to protect intellectual property and sensitive data. Other aspects, leaders are focusing on is refining their digital commerce and marketing capabilities; as well as increasing automation in operations and supply chain so less workers need to be on site at any given time. COVID-19 has led businesses towards an accelerated digital fitness program which will seemingly be part of organizations post-COVID-19. This new and heightened digital trajectory may have alerted executives to the business digital transformation that is required but executing the digital strategy in the correct manner could be difference between success and failure for a company in this new era.

What is a Digital Ecosystem?

Boston Consulting Group define a digital ecosystem where "many largely independent economic players join forces to create a digital offering that is more valuable than a single company's product or service. Some digital ecosystems develop solutions - like a connected car or a smart home. Others bring together buyers and sellers on a digital platform." The digital ecosystem is interoperable between many types of groups including customers, trading partners, applications, suppliers and all respective technologies.

2.2 Digital Capabilities

Leaders provide a fundamental role in the success of digital transformation in an organization. The statistics are worrying from a survey that Capgemini did in 2018, of 1,300 executives in more than 750 global organizations, only 35% of them said they had the leadership capability to become digital masters. This is down from a similar survey in 2012 where 45% of executives thought they had the leadership capabilities to lead a successful digital transformation.

Leadership capabilities can be categorized into three elements (Bonnet and Westerman, 2020):

Vision is a key first step in creating the blueprint of digital transformation, so others are able to follow the path. As one of the pioneers in the field of leadership studies, Warren Bennis says, "Leadership is the capacity to translate vision into reality." It is executives who tend to not have a clear vision or seek incremental improvements that are unable to digitally transform their organizations (Bonnet and Westerman. 2013).

After Bonnet and Westerman conducted their findings in 2014, it occurred to them that there were three distinct steps that companies who had become digital masters did to create their vision: 1) Define a clear target; 2) Engage the organization; 3) evolve the vision over time. The vision needs to provide enough guidance that is focused enough to rally a company but also flexible enough to allows employees to innovate and build upon it (Bonnet and Westerman, 2013).

Engagement of the workforce is a crucial leadership element that can lead to the difference between success and failure of digital transformation. Executives need to do their utmost to establish a gateway for employees to get involved and provide feedback on the digital transformation initiatives that take place. This is not only important process of agile work in the digital transformation process but also a way of sourcing new and untapped ideas from employees.

The ability to communicate early on in the digital vision can help reduce the organizational resistance. There are two main characteristics of communication in a digital process, firstly on top of applications such as email, the COVID-19 has seen an unprecedented rise in digital communications as a necessity rather than a choice. Secondly, collaborative tools such as shared drives or company Wikis to name a few are vital to sharing knowledge so employees feel that they are part of the process and can align themselves with digital objectives. In times of change, employees have questions or ideas that they want to convey, and communication is the key to continuous productivity and gaining trust to see through a successful digital transformation.

Governance is the vehicle that vision and engagement ride in to put the organization in motion. The successful companies who went through digital transformation operated a top-down approach as this promotes three dimensions: 1) Ambition setting; 2) Co-ordinating Mechanisms; 3) Monitoring progress through KPIs.

Setting ambitious KPIs on digital transformation from the executive level sends a clear message to the rest of the employees that digital should be taken seriously and in turn elevates performances company wide. When the ambition is clearly stated, the KPIs need to be transparent for everyone to see so executives as well as others in the workforce can constantly monitor and review progress towards the digital ambition which helps align the vision and engagement to track progress.

Since Bonnet and Westerman's study in 2014, they did not account for the rapid technological innovation that would occur as well as the COVID-19 pandemic occurring which has been a catalyst in the adoption of technology. They revisited their original framework in 2014 (Diagram 1) and adapted it to the current climate. Some of the original

dimensions remain such as business model, customer experience and operations. However, these have also been reconfigured along with element that have been added (see diagram 2). Notably, employee experience was under operations as 'worker enablement' previously in the 2014 framework, and now it has earned to be a dimension in its own right as employees make the digital vision work and have insights on where the business needs to improve. The foundation that underpins all the dimensions for successful strategy through digital capabilities is the digital platform. This is important to get right as 70% of all DT initiatives did not reach their goals and of $1.3 trillion spent in 2019, it was estimated that $900 billion went to waste (Tabrizi et al, 2019).

Diagram 1:
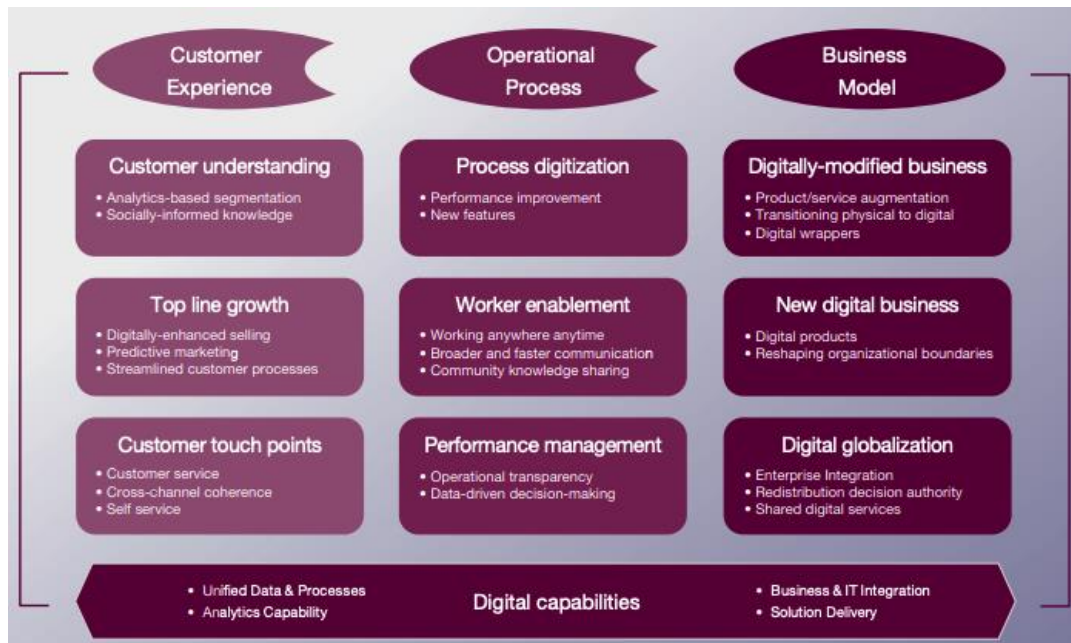
Source: Digital Transformation: A Road-Map for Billion-Dollar Organizations (Bonnet and Westerman, 2014)

Diagram 2:

BUSINESS MODEL		
Digital enhancements		
Information-based service extensions		
Multisided platform businesses		
CUSTOMER EXPERIENCE	**OPERATIONS**	**EMPLOYEE EXPERIENCE**
Experience design	Core process automation	Augmentation
Customer intelligence	Connected and dynamic operations	Future-readying
Emotional engagement	Data-driven decision-making	Flexforcing
DIGITAL PLATFORM		
Core		
Externally facing		
Data		

Source: The New Elements of Digital Transformation by MIT Sloan Management Review
Digital capabilities can be categorized into these elements (Bonnet and Westerman, 2020)

Business Models:

Previously, in 2014, Bonnet and Westerman found that only 7% of companies were using digital initiatives to launch new business, and only 15% were creating new business models with new technology. Since then, 2020 has shown businesses and executives in every industry are homing in on how digital prowess can yield business model innovation.

Digital Enhancements are becoming increasingly popular way for companies to improve their existing business model without causing major disruption to the business or traditional business model. For example, nearly 80% of traditional retailers in the UK are now meshing digital and physical channels through click and collect services (Ampersand, 2020).

Information based service extensions are a new way to create value and new sources of revenue for companies as they expand product-based business models by combining products with sensors, communication networks, app and analytics. This is not an easy journey as firms must ensure they have advanced analytic capabilities, end to end service design and tight integration with customer's devices and business processes.

Multisided platforms connect two or more interdependent user groups, by playing an

intermediation or a matchmaking role (Gawer 2014; Evans and Schmalensee, 2016). They been a large part of the digital transformation disruption and launching this platform requires specific economic conditions and heavy investment to reach profitable scale. Therefore, it is not always right that every company should create their own multi-sided platform but can use platform economics to partially transform their business models or find an economically viable role to play in platforms operated by others.

Customer experience:

Digital transformation study by McKinsey & Co stated that a focus on customer experience can generate a 20-30% increase in customer satisfaction and economic gains of 20-50%. Putting yourself in the customer's shoes has been as crucial today as it ever was, understanding and showing empathy to the customer and addressing their pain points can allow firms to reap the rewards of digital transformation.

Experience Design has the goal to deliver compelling customer experiences. This may be easy to design but it hard to design and deliver. This work requires two components: empathic creativity and technological prowess. Firstly, empathic creativity requires tools such as journey mapping, identifying customer personas, design thinking. These tools help companies understand human behaviors and helps surface customer insights through careful observations through skilled listening and regular iteration. Secondly, technological prowess is the more technical side where firms can digitally reengineer customer experiences in a seamless way.

Customer Intelligence is the process of gathering and analyzing customer data and turning it into actionable insight (Wintermeir, 2019). It has become imperative from the first stage of digital transformation to integrate customer data across the organization and understanding customer behaviour as result to deliver a better customer experience. With the progress of machine learning, it has meant that by placing emphasis on the customer and their data you can customize and improve the customer experience which will lead to increased customer loyalty, retention and conversion rates.

Emotional Engagement is crucial step in the customer experience as customers will not remember what you did but how you made them feel. One study suggests that 52% of

emotionally engaged customers are more valuable than highly satisfied customers (Magids, Zorfas and Leemon, 2015). Therefore, connecting with customers on an emotional level are just as important as the technology that goes into creating the captivating customer experience.

Operations:

The use of digital has made the operational processes in companies more efficient and effective. According to a recent BCG survey, digitization, when done right and at scale, yields impressive upsides: a 10% to 20% reduction in production and supply chain costs, a 15% to 30% cut in working capital, and an uptick in incremental revenue growth of up to 6% through enhanced productivity. Executives are seeing that digital operational excellence can be a competitive advantage in itself which enables engaging customer experience and unique business models.

Core process automation is defined by Gartner as the automaton of complex business processes and functions beyond conventional data manipulation and record keeping activities, usually through the use of advanced technologies (Gartner, 2021). The core process automation will be at the heart of the operational process where it would gather data to generate insights which can also incorporate machine learning, robotics and other technologies to enable digital expansion.

Connected and Dynamic Operations have the ability to create real-time insights and allow for shifts in operations that can be the difference between a poor or excellent operational process. Connectivity and dynamism through machines and processes can provide a data source to help constantly improve how operations are working.

Data-driven decision making is the process of using data to inform decision making process and validate a course of action before committing to it (Stobierski, 2019). The use of data throughout firms is becoming pervasive due to the value it has demonstrated and for digital mastery to occur; organizations are utilizing data by integrating it into operational and strategic decision making through new machine learning techniques, smarter experimentation and connected devices.

Employee Experience:

The workforce a company currently has already have an intimate knowledge about what works and what needs improving. It is therefore crucial to leverage your employee and receive buy in from them as McKinsey estimates that 70% of change programs fail to achieve their goals, in large part due to employee resistance. Therefore, employees can be the greatest enablers or greatest inhibitors to the success of digital transformation.

Augmentation is when firms understand they can aid the daily life of their employees by bringing in technological advances into the daily routine. There are a vast number of digital technologies that can augment employee productivity and performance which can enable a workforce to work faster, smarter and more safely in contributing to the success of digital transformation.

Future-readying is vital to the success of digital transformation because giving employees the training and skills they need to keep up with the constant rapid change in digital transformation. In 2017, Capgemini research revealed that over half (54%) of organizations agreed that the digital talent gap is hampering their digital transformation programs. The role of Chief learning Officers have, therefore, become more important to create a learning experience helps employees develop capabilities to adapt to an agile and strategic environment to drive business transformation.

Flex-forcing is a recent phenomenon that has been due to a direct result of the fast-paced nature of digital transformation in recent years. Firms need to look at their talent sourcing system in order to build agility so they can respond to digital threats and opportunities appropriately. This can be in the form of multiskilling workers as automation and AI replace the need for tasks performed by humans or companies are using contingent workers where they are supplementing talent on an as need basis which also provides flexibility in workers schedules and increases their options of where to work.

Digital Platform:

Underlying the digital elements that have come before is the platform which helps achieve the promise of fulfilling digital capabilities to have a successful digital transformation. Michael Cusumano, author of The Business of Platforms says, "platforms bring together different market actors in a way that generate network effect – positive feedback loops where the value each user experience increases as more users adopt the platform" (Cusumano, 2019).

Core Platform is the strong backbone to power a firm's core processes for operational and transactional systems. The architecture of the core platform needs to be well-structured and managed, so it forms a staple in an organization's digital transformation process.

External Facing Platform works in conjunction with the core platform to establish key exchanges such as payments and serve as an agile platform for conducting experimentational experiences to connect and better understand the customer ecosystem which could be in the form of websites, apps or other processes that the customer interacts with.

Data Platform gives the capability for a company to perform intense analytics as well as conduct A/B testing without disrupting company's operational system in either the front or back office. The data platform is a vital element in the digital transformation space as through the increase in unstructured data such as text, images and voice; this platform can help improve the customer experience and internal operations.

2.3 Digital Maturity and Execution Challenges

The rapid technology advancement was a large part of the reason that Bonnet and Westerman had to reframe their initial framework of digital transformation. It is, therefore, worth exploring the different type of technologies that have impacted digital transformation and what role they play in the success for its future. Technologies will seemingly play a more important role than ever. COVID-19 has proven that digital transformation is a given for any organization to survive but the competitive advantage can lie in what advanced technologies companies are willing to adopt.

Internet of Things

In 1999, Kevin Ashton, during his time at Procter & Gamble coined the term Internet of

Things (IoT) who wanted to attract senior management to the new exciting technology called RFID. McKinsey & Co define IoT as "sensors and actuators embedded in physical objects are linked through wired and wireless networks, often using the same Internet protocol that connects the internet."

In the context of digital transformation, data is the glue that holds IoT and digital transformation together. IoT technology collects data from physical products and gathers the data from the product for the company to analyze. The IoT platform that links the data from physical products and customer with a company is what drives digital transformation through this technology. This is emphasized by IDG's 2018 digital business research survey where 60% of executives believe connected technology and IoT will play an important role in their company's digital strategy.

Artificial Intelligence (AI)

When John McCarthy, in 1956, first uttered the words artificial intelligence, he probably could not have imagined where that journey would take us. McKinsey & Co define artificial intelligence as "the ability of a machine to perform cognitive functions we associate with human minds, such as perceiving, reasoning, learning and problem solving."

The use of AI in digital transformation can help organizations in various processes identify information to help design, execution and delivery. In the design stage, AI can enhance research, development and suggest forecasts of next steps. In the execution phase of a product or service, AI can continuously learn and feedback better ways to respond. Delivering the product, AI can heighten the customer experience by monitoring, recommending and forecasting actions to improve the customer based on their patterns in behavior which helps reinforce the use of this technology for successful digital transformation. The 2018 Fujitsu Future Insights Global Digital Transformation report surveyed that 68% of global business leaders believe the future of humans and AI working together.

Virtual and Augmented Reality

Virtual reality as touted by NASA is "the use of computer technology to create the effect of an interactive three-dimensional world in which the objects have a sense of spatial presence."

Virtual reality is already playing a part in company's digital transformation, for instance, Best Western Hotels and Resorts created a 360-degree VR experience where customers can see a three-dimension view of each hotel in North America's pool, lobby and bedrooms. This allowed the customer to pre-qualify their experience and build trust with Best Western through advancement in technology.

Augmented reality is a system that enhances the real world by superimposing computer-generated information on top of it (Shen, Shirmohammadi, 2008). Wellner, Mackay and Gold in their publication of "Special issue on computer augmented environments: back to the real world," state the goal of AR is to augment the real world with synthetic information such as visualizations and audio.

For instance, US soldiers are able to improve their situational awareness with the use of AR (South, 2020). This is a way that digital transformation is improving the employee experience in the US army by training them to a high level and receiving buy in as this new training will ultimately help them in the line of duty. This demonstrates that allowing your employees to see the vision and go on the journey with you of digital transformation, it will help enhance your business goals.

5G

The 5th generation mobile network, 5G enables virtual connectivity between people, machines, objects and devices. This connectivity is of higher performance and improved efficiency to empower users and connect industries globally. Ericcson predicts that there will be 1.9 billion 5G subscriptions by 2024, reaching 45% of the global population.

The 5G latency is far less than a 4G network which means that it can go a step further in the way digital transformation takes place across industries. The improvement on digital transformation due to 5G network can be explained by a Cellular Telecommunications Industry Association (CTIA) example: on a 4G network, if you send a message to a car to stop, the car gets the message and applies the brakes in about 5 feet. In a 5G network, it will apply the brakes in about an inch. Therefore, this has great digital implications on remote real time applications with use of robotics, machines or devices to improve performance and efficiency.

What is Digital Maturity?

In 2013, MIT Center for Digital business and Capgemini Consulting published 'The Digital Advantage' which highlighted that companies with digital maturity outperformed their peers. The publication researched 469 senior executives and 391 large companies to examine the link between digital maturity and financial performance.

So, what is digital maturity? MIT and Capgemini state, it is a combination of two separate but related dimensions, firstly, digital intensity and secondly, transformation management intensity. If a firm is able to optimize themselves in both these dimensions then they would reach digital maturity but with the rapid advancement in technologies, it means that both digital and transformation intensity needs to be constantly monitored and updated in order to sustain digital maturity.

Digital Intensity is the scale of technology enable initiatives a company has dedicated to customer engagement. internal operations and business models. Transformation management intensity is creating the leadership capabilities that are necessary to drive digital transformation in an organization. These have the same elements as listed previously by Bonnet and Westerman: vision, engagement and governance.
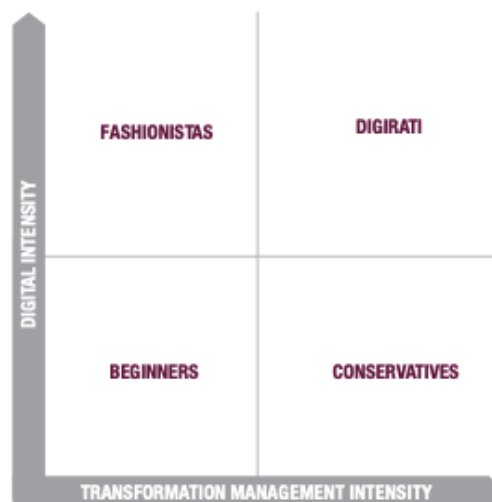
The research of the two dimensions that characterized digital maturity can be categorized into four different types (see diagram 3).
Diagram 3:

Figure 2. Four Types of Digital Maturity

Digital Beginners - The companies in this quadrant have low digital capabilities, even though they are exposed to advanced technologies, they are not proactive in using them. Usually, beginners are in this quadrant because they are unaware of the digital opportunities or their investments are not aligned with effective management.

Fashoinistas - The firms here are willing to use the latest technologies to show to their peers they are keeping up with the times. These companies do many digital initiatives and see very little value come from them. The companies that find themselves in this quadrant are motivated to bring digital transformation, but they lack the enterprise-level governance and the depth of knowledge of how to maximize benefits from digital transformation.

Conservatives - The firms in this quadrant are as the name suggests careful and prudent when they come to looking at the overall digital transformation strategy. Conservatives are unwilling to adopt new digital applications due to their skepticism and this can be detrimental. They count every penny and analyze thoroughly where investments are made and sometimes it's too late as their competitors would have gain a competitive advantage by being first to digital trends.

Digirati - The digirati quadrant is the optimal quadrant for firms as this is where firms maximize the benefits of digital transformation. The investment intersects with a transformative vision that helps build a digital culture within organizations. They seek to advance their competitive advantage by wisely investing and through diligent governance and engagement. helps them surpass their competitors by optimizing their digital transformation.

Why is being Digirati so important to achieving business goals?

Business goals such as increasing revenue, increasing profitability and attracting top talent can be seen as a result of companies who have digirati status. A survey from Gartner in 2017, said that 56% of CEOs say digital improvement have led to increased revenue. Research from Capgemini Consulting and MIT Sloan School of Management states that in terms of profitability, digitally mature companies are 23% more profitable than their less mature

peers. Furthermore, in talent sourcing, a Deloitte study measured that 71% of digitally maturing companies say they are able to attract new talent based on their use of digital. These outcomes demonstrate the impact that being digitally mature in your relevant industry has halo effects towards business goals that allow companies to continue to innovate and understand how to best serve their customers.

The achievement of digirati should not be seen as a mountain peak that companies should climb to. Rather, it should be addressed as an eternal climb to be higher than you were before with the rapid advancement in technology opening opportunities to stay as a digirati company and this needs to be adapted with strategic leadership that can create a vision that is in tune with the digital capabilities available. It is foreseeable to see that even a company who may now be labelled as digirati can end up falling into any of the other three types of digital maturity seen in diagram 3 if they are not prudent and careful to change.

Major challenges that companies' face implementing Digital Transformation

Research done by Capgemini in 2018 suggests the obstacles that organizations are tackling is the talent and culture dimension of digital transformation. Capgemini says it stems from a lack of leadership in the organization, who are not creating collaborative environments or investing in upskilling their current workforce.

Capgemini research institute surveyed more than 1,300 executives in over 750 global organizations, and they discovered that firms were failing to overcome challenges in people and talent as well as culture:

People and Talent

a) *Organizations do not make employees partners in the transformation program*
When the organizations do not start with the buy-in of employees, it presents a difficult obstacle to overcome. The lack of belief from firms to believe that employees can contribute to digital initiatives is alarming with Capgemini research stating that only 36% saying it is possible for everyone in the company to take part in the conversation. This mindset can ignore valuable input and feedback from employees who will ultimately be the winners or losers of digital transformation.

b) *Organizations do not leverage analytics to understand their skill need*

Capgemini research mentions only one in four organizations are using data and analytics to understand employee preferences or identifying the skills needed both today and into the future. This implies that digital transformation is not being used cross-functionally and it may mean that it is only occurring in silos of organizations. Using data and analytics should be not only be used to improve customer experience but also with employees to understand the gaps that need to be filled in firms.

c) *Organizations are not upskilling employees*

A consequence of successful digital transformation is that the current workforce needs to be reskilled or upskilled. Capgemini research shows only 38% of organizations have a formal program for digitally reskilling employees. This presents a huge barrier for digital transformation to take place because the latest advancements in technology cannot be effective if employees don't know how to use them. This is why it is crucial for companies to actively work towards narrowing the digital talent gap in order to prepare for this challenge.

Culture

a) *Organizations are not paying enough attention to the crucial ingredient*

Capgemini research demonstrates 60% of organizations see culture as the number one hurdle to digital transformation. Most organizations fail to promote digital culture as they don't focus on the seven-attribute listed by Capgemini: agility, collaboration, customer centricity, data driven decision making, digital first mindset, innovation and open culture. Tabrizi et al suggests bringing Silicon Valley startup culture inside as the process of digital transformation is uncertain, therefore, changes need to be made provisionally and then adjusted, with decisions made quickly and groups from the whole company need to get involved. When it comes to digital transformation, the importance of developing a flat hierarchy in the digital transformation process can help set the right culture in an organization to make a transition and maintenance of the digital age successful.

2.4 The Digital Matrix Rules

The Digital Matrix is a book by Venkat Venkatraman who provides a framework on how to learn to navigate the world of digital ecosystems. The book demonstrates the three phases of transformation that every firm will encounter on its journey through digital transformation. It also goes through the three winning moves that will ensure a company's success along the way.

Diagram 4:

The Rules Matrix	Experimentation at the Edge	Collision at the Core	Reinvention at the Root
Orchestrate & Participate	**Rule #1** – Evaluate your roles in experimentation ecosystem	**Rule #4** -Engage ecosystems as transformational triggers	**Rule #7** – Design your new digital ecosystems
Co-Creation of Capabilities	**Rule #2** – Explore capability co-creation options	**Rule #5** – Navigate your preferential partnerships	**Rule #8** – Co-create new business capabilities with preferred partners
Amplify Human Talent with Powerful Machines	**Rule #3** – Examine the intersection of human talent and machine power	**Rule #6** – Augment smart humans with powerful machines	**Rule #9** – Differentiate with computer capital and human capital working together

Source: The Digital Matrix Book (p.234) (Venkatraman, 2016)

Three phases of Digital Transformation (pp.54-121):

1. **Experimentation at the Edge**

   The first phase according to Venkatraman to digital transformation where ideas go from sketches on the board to prototypes, pilots and products. This phase is looking at the landscape of firms that conduct experimentation, even those who are outside a company's immediate industry boundaries. Experimentations are so important and deserve a deeper level of interpretation because richer investigations and analysis with the right mix of technology and management competencies allow the ability to

compute probabilities of plausible innovations.

2. Collision at the Core

When experiments mature from labs and go into the mainstream, they have evolved from prototypes to business options. The collision at the core phase sees genuine tension between established ways perfected in the industrial age and new digital ways experimented recently. This is where digital rules challenge traditional industry practices and pre-established rules of engagement. Collision at the core happens because digital technologies make in impact in two ways. Firstly, digital services and products challenge traditional practices. For instance, traditional analogue watches vs smartwatches. As more products become digital, this collision intensifies and competitive interaction between traditional industries and the tech giants (Facebook, Apple, Amazon, Microsoft and Google) and tech entrepreneurs heightens. Secondly, newer organizational models are based on principles of computer science with software models, opposed to mechanical engineering rules that gave credence to scientific management principles. The result for digital is continuous experimentation, with powerful machines and smart humans working together.

3. Reinvention at the Root

If a company survives the collision at the core phase, then Venkatraman argues that they will live to influence the new rules. In this phase, the new focus becomes who takes responsibility for interactions with the end consumer, who designs the interface to interact with the user, who gathers and analyses the data and develops insights. Reinvention at the root is about finding solutions to the pain points and fundamental problems facing consumers. This phase is about strengthening the intuition and judgement that have been valid modes to arrive at decisions in the past with tangible support from data and analysis. Developing insights and applying them faster and better than competitors is the key to success in this phase.

Three Winning Moves (pp.124-187):

1. Orchestrate & Participate

In any ecosystem you have two strategic options where you could be the orchestrator or the participator. The orchestrators are the leaders, and the participants are the followers, and both are needed for the ecosystem to thrive. The orchestrator's role is

to pull companies together with different business models and strengths to connect them. This is where the tech giants have a substantial advantage as they are more often than not the orchestrators of these ecosystems. Orchestrators make links between all type of providers such as services and platforms to create an ecosystem with network effects. Participants on the other hand, is about being aware of your strengths as a company and allowing others to link to you to create greater value that would not have been possible alone. For instance, the platform model seeks to link companies with consumers through interconnecting different products and services, and it seeks to increase the scale of adoption by consumers which is preferential to them as they enjoy the diversity available on platforms. A participant can play a vital role as they can deliver one or more of the important pieces that make the ecosystem distinctive. Being either an orchestrator or a participant does not mean one is better than the other, it is more important that the company reflects on themselves to understand which one best matches their skills and capabilities and act accordingly.

2. **Co-Creation of Capabilities**

The idea of business instantly garners the idea of competition. Whether that's competing for market share, employees or to earn more revenue than your rivals. There are, however, times where you have to cooperate. When you are part of the digital transformation process, you have to compete and cooperate at the same time. This is especially important when it comes to working within ecosystems where you not only work with allies but with competitors too so that you can learn and collaborate to co-create new offerings and develop new capabilities. For example, the Google and Apple interconnection provides useful pointers about the fundamentals of co-creating value in digital ecosystems. Both these companies want to satisfy consumer demands, so they have interoperability across hardware, software applications and major Google apps on Apple's app store and vice versa, demonstrating the idea of cooperating in their digital ecosystems. Digital transformation can change the context you see the relationships you had in two ways. Firstly, the structure of your relationships with other companies changes over time as new digital technologies emerge and mature. Secondly, the position of your relationship changes as you make new choices, new investments and set new priorities and the relative importance of your relationships changes as companies

continue to evolve.

3. **Amplify Human Talent with Powerful Machines**

   The amplification of human talent with powerful machines depends on two principles: complementarity and singularity. Complementarity defines the areas in which machines are superior to humans and then creates governance rules and working conditions to bring out the best combined output and enhanced productivity. Singularity anticipates that intelligent computers will be capable of recursive self-improvement or autonomously building ever smarter and more powerful machines. The first principle is about today and the second is about tomorrow. The idea powerful machines are associated with the likeness of the human mind where it has cognitive traits such as consciousness, sentience and self-awareness. The idea is that these powerful machines collaborate with humans, makes them great allies to automate, augment and amplify an organization's work. Example of powerful machines are machine learning, drones, robot, neural networks, big data, analytics, cognitive systems and algorithms. When looking at amplifying human talent with powerful machines, the change in technology in the future is certain and being future ready to adopt new technologies will be strongly considered by most companies, especially if it provides them with a competitive advantage. Therefore, the ability to sustain digital transformation in the future may be more decided by a company's legacy human resource practices, more so than by a company's technology architecture.

Venkatraman's Nine Rules (pp.215-227):

Rule #1 – *Evaluate your roles in experimentation ecosystem*
Experimentation is a crucial part of a digital transformation and understanding that changing from a firm that is stubborn and only allows a small minority to make decisions. In an experimentation ecosystem, it means to involve complementors who will assist the digital transformation process. If a company, chooses not to participate in any emerging digital ecosystem demonstrates that you will be following rules set by others rather than having an input yourself.

Rule #2 – *Explore capability co-creation options*

The evolution of the digital world shows complex dynamic interconnections that need to be made. In this rule, you need to select one or two ecosystems other than the industry you're in. There should be no pressure to co-create at the early stage, but more for observations of the digital landscape. This experimentation will help test partnership arrangements that will best transform your business by strengthening your existing capabilities and building new ones that will help you solve problems for customers and reinvent yourself for the digital world.

Rule #3 – *Examine the intersection of human talent and machine power*
This rule requires the company to start tracking advanced technologies that are redefining efficiency and innovation. Here, looking at what the tech giants such as Google, Apple or Amazon are doing, to understand how they are the frontier of technology and how a company can use their examples to structure their work and use powerful machines to bring out the best of your company's human talent.

Rule #4 - *Engage ecosystems as transformational triggers*
The trigger to accelerate and move forward powerfully is participating in orchestrating in ecosystems. This is where a company should look externally and consider building new capabilities with new partners. Unless you are one of the digital tech giants, a company cannot incorporate all digital transformation capabilities on their own so the importance having ecosystems allows the company to decide on the core capabilities that they must develop and rely on the external partners to support you in other areas.

Rule #5 – *Navigate your preferential partnerships*
Companies must navigate their roles of orchestrator and participant by selecting relationships that give the requisite capabilities. It can be easy to be cemented in relationships that have either served you well in the past or have been with you for a long period of time. This can mean companies become stuck in the way they do things and allow others to gain a competitive advantage. Therefore, it is crucial to rebalance and reprioritize the different relationships as conditions change in the digital landscape.

Rule #6 – *Augment smart humans with powerful machines*
This rule will become more and more applicable as time goes on. Technology use is now ubiquitous within organisations but there are advanced technologies that are developing which need to be closely looked at. When companies look at technologies such as artificial

intelligence, machine learning and augmented reality etc, it is important that a roadmap to adopt them and adapt employee's way of working with them will need closely looked at in order to optimize the performance of a human and machine. As time goes on, the future of recruitment for the types of skills employees need to have will be shaped by a company's digital transformation. With this rule, companies should consider fundamentally restructuring workflows and teams to integrate them which would allow more sharing and use machines and humans where each is best suited.

Rule #7 – *Design your new digital ecosystems*

Platforms and solutions are pushed by different companies and pulled by different consumers. This rule requires a company to understand which ecosystem they are able to receive most value from. A company needs scour the landscape and highlight the relevant ecosystems and where and when a company can participate in complementary ecosystem. This is a continuous process where a company should not stop scanning for opportunities as well as threats so they can continue to adapt to new technologies, new customer desires and help form future innovative ideas.

Rule #8 – *Co-create new business capabilities with preferred partners*

It was evident in Venkatraman's research that all the digital business models that he had analyzed, the leaders had created capabilities with others. Acting alone is a lonely and dark road that does not get you anywhere fast, so co-creating with others provides more resources to develop capabilities and also helps mitigate risk. This rule needs a company to be adaptable and ready to evolve when new opportunities arise and also a willingness to divest out of previous co-creation relationships when they no longer bring value.

Rule #9 – *Differentiate with computer capital and human capital working together*

The role of computer science is at the core of digital transformation and this leads to the final rule to find the best and most capable talent to work with machines. The hiring of this talent is not for specific jobs but rather with a wider lens of the business to create innovative solutions that will help economies and societies. If this is executed correctly, then the digital transformation will allow the company to be a sought-after workplace. This rule requires a company to have human capital and computer capital co-existing and co-creating so therefore there is an emphasis on where a company invests and who it attracts so digital transformation can be sustained moving forward.

3. NIKE CASE STUDY

3.1 METHODOLOGY

3.1.1 Case Study Approach

This research examines Nike as a case study to demonstrate the approach of their digital transformation and how they can sustain it in the post pandemic world. Both, Bonnet and Westerman's and Venkatraman's digital transformation frameworks will be used to analyze Nike and its digital transformation strategy. The analysis will seek to identify gaps and strengths in Nike's approach to digital transformation and evaluate what key elements are needed to sustain digital transformation given the rapidly accelerating technological environment. The Nike case study has been derived from a variety of sources. This includes sources directly from Nike such as website information, press releases, employee interviews and investor information. Other sources that have been used for this case study include academic literature, business articles, management literature and retail and technology reports.

The following steps have been undertaken:
1. A qualitative case study of Nike to understand its current digital innovation strategy and resulting technologies developed to date
2. An examination of Nike's leadership capabilities of how they have contributed to Nike's digital transformation
3. An analysis of Nike's digital capabilities using the identified digital transformation frameworks
4. A recommendation for how best to implement these best practices given their current context.

3.1.2 Brief Company History

In 1962 Phil Knight, a Stanford graduate, was traveling through Japan when he was discovered shoes made by Onitsuka Tiger Co. He went onto persuade the owners to export their shoes to the United States of America. After succeeding in this, Phil knight founded

Blue Ribbon Sports company to distribute the shoes to the U.S.. In 1963, Knight reached out to his old track and field coach Bill Bowerman, who was always on the lookout and studying better designs for running shoes. After Knight told him about his success Bill Bowerman decided to invest $500 into the venture. Bowerman would later become Nike's co-founder and the one who invented Nike's signature Waffle soles and Cortez shoes(Nike.com, 2015).

Blue Ribbon sports was eventually abandoned when Knight's relationship with Onitsuka started to disintegrate and trust was lost between the two partners. After this, Knight decides to manufacture shoes himself instead of being a distributor, but he needed a logo and a name for the new company. The Swoosh logo was created by a college designer who was compensated $35 for her services. Employee Jeff Johnson suggested the name Nike after the goddess of victory and this stuck (Levinson, 2016). Nike now has grown into one of the most iconic brands in the world with over a 1000 retail stores and over 70,000 employees worldwide.

The mission of Nike today is to bring inspiration and innovation to every athlete in the world. Nike believes if you have a body, you are an athlete, which implies that anyone can be their target consumer (Nike.com, 2021). Nike has four pillars: 1) innovation, 2) team, 3) social and community impact, 4) sustainable business innovation. Nike aim to create revolutionary sports innovations through making products more sustainable, through creating diverse global teams and through positively impacting local communities, (Nike.com).

3.1.3   Business Model

Nike since its origin has been selling athletic footwear, apparel, equipment and accessories, with most of Nike's sales being generated by selling footwear to wholesale customers in North America. In terms of geographies, Nike's website reveals that it operates across four divisions: North America, EMEA (Europe, Middle East and Africa), Greater China, APLA (Asia Pacific and Latin America). Nike' like many retailers were effected by COVID-19 which meant the wholesale sales declined, however, with Nike's push to accelerate direct to consumer, this saw sales grow in Q3 FY2021 ended February 28, 2021.

Diagram 5:

(In millions, except per share data)	THREE MONTHS ENDED 2/28/2021	THREE MONTHS ENDED 2/29/2020	% Change	NINE MONTHS ENDED 2/28/2021	NINE MONTHS ENDED 2/29/2020	% Change
Revenues	$ 10,357	$ 10,104	3%	$ 32,194	$ 31,090	4%
Cost of sales	5,638	5,631	0%	17,887	17,202	4%
Gross profit	4,719	4,473	5%	14,307	13,888	3%
Gross margin	45.6 %	44.3 %		44.4 %	44.7 %	
Demand creation expense	711	870	-18%	2,117	2,769	-24%
Operating overhead expense	2,330	2,413	-3%	7,166	7,166	0%
Total selling and administrative expense	3,041	3,283	-7%	9,283	9,935	-7%
% of revenues	29.4 %	32.5 %		28.8 %	32.0 %	
Interest expense (income), net	64	12	—	199	39	—
Other (income) expense, net	(22)	297	—	18	223	—
Income before income taxes	1,636	881	86%	4,807	3,691	30%
Income tax expense	187	34	450%	589	362	63%
Effective tax rate	11.4 %	3.9 %		12.3 %	9.8 %	
NET INCOME	$ 1,449	$ 847	71%	$ 4,218	$ 3,329	27%

Source: Nike Inc, Reports fiscal 2021 Third Quarter Results

As the financial statements reveal, Nike's highest cost comes from heavy investment in athletic technology, but the majority of Nike's products are consumed as clothing. In terms of revenue, Nike sees its customers divided by men, women and young children. Once divided in those categories, then it is subdivided into six categories: Running, Basketball, Jordan Brand, Soccer and Sportswear (lifestyle products). The Jordan and Sportswear are the highest performer in terms of revenue (Nike.com, 2021).

3.2 ANALYSIS

3.2.1 Digital Transformation Background

In January 2020 John Donahoe was appointed Nike CEO, only the fourth CEO in its history. He took the reins from Mark Parker who had been leading Nike into digital transformation and coined the shift as the 'Triple-Double Strategy' where parker planned to double their 1) innovation; 2) speed to market; and 3) direct connection points. The focus on digital transformation was aggressively pursued by Donahoe who stated, "I am focused on how we will leverage consumer data and insights in our digital ecosystem to understand and serve consumers better, and ultimately, increase our competitive advantage", (Grill-Goodman, 2020). Donahoe, who was former CEO at eBay, knew the role technology can play in

growing his business and it can be assumed his technology background will continue to guide Nike's leadership and business strategy.

At the forefront of Donahoe's ambitions in digital transformation was the Consumer Direct Acceleration (CDA) strategy, where Nike focused on direct-to-consumer channels (also known as Nike Direct) to understand their customers better. This marked the company's supply chain innovation, which cuts out intermediaries, notably Amazon so they could retrieve data directly from the consumer instead of relying on third parties. Nike and Donahoe believed that by having direct control of consumers data, they would be able to use it across the organization to improve inventory management and enhance the customer experience which could lead to higher customer loyalty and repeat sales. The ultimate objective of the digital transformation strategy at Nike was intended to serve the consumer better, (Nike.com, 2017).

Using CDA, Nike accelerated their digital transformation, and their innovations can be divided into three key areas:

1) Digital Applications

   Nike has used their digital applications to engage with their customers more than ever. It all starts with the main Nike app where consumers sign up to be a member to access exclusive deals and to really drive the direct-to-consumer sales, the in-app shopping is the big feature that has allowed Nike to build analytics to understand and improve the customer experience. One of their biggest hits and acceleration into digital transformation is the SNKRS app, where it provides insider access to the latest launches of sneakers. This app has segmented a market for the sneaker fanatic to drive engagement and sales.

2) Nike Innovation Stores

   The Nike innovation stores has accelerated their digital transformation because it is transforming the traditional brick and mortar retail store into an interactive digital space. Nike is blending data science with premium personal service in order to personalize the consumer experience as much as possible. These stores have opened up throughout the world and it is helping Nike get closer to the end consumer and gain data to improve the consumer's experience.

3) Nike Acquisitions

The Nike acquisitions are aligned with their digital transformation acceleration because the list of companies that have been acquired are all focused on data and analytics. These acquisitions are providing Nike with a focus and catalyst to transform their traditional way of working and accelerating into a digital way of working which tackles their main objective to better understand and improve the customer experience. Nike has realised the importance speed and not falling behind the competitions to acquire these data and analytics companies to meet their objectives.

3.2.2   Nike's Leadership Capabilities

In January 2020, John Donahoe took over the CEO position from Mark Parker. Mark Parker led the drive to the digital direct to consumer landscape. This was illustrated by the company's digital transformation plan, under Parker, the "triple double strategy". Donahoe, former eBay CEO brought with him his technology experience and has already shown intention to further Nike's digital presence as he speaks during COVID-19, "the accelerated consumer shift toward digital is here to stay." Donahoe's technology background and advocacy for digital is a big positive in leading Nike to sustaining digital transformation in the digital world.

During, COVID-19 Nike's leadership embraced and aligned their vision, engagement and governance towards a digital strategy. Based on their activities, described below, it can be assumed that Nike plans to continue to prioritize its digital future:

a) Vision

Senior leadership changes occurred in July 2020 to unlock future growth through the Consumer Direct Acceleration (CDA). The vision is Nike's digitally empowered phase to create a more premium, consistent and better consumer experience across Nike's ecosystem. The vision is using end-to-end technology to accelerate digital transformation in order to unlock growth and profitability. Donahoe states, "Simply put, we will more aggressively leverage technology to make Nike better," (Grill-Goodman, 2020).

This vision was made clear to the organization and its employees when Nike stated they would be removing many of their retail partnerships so they could focus on getting direct-to-the-consumer to gain valuable customer insights. In addition, Nike shifted categorization to a new consumer construct of Men's, Women's and Kids sections, instead of the former way of generalizing lifestyle and sport. Each category would have their performance sport and sport lifestyle specializations which provides deeper consumer insights driven by data to better serve these new consumer categories. Donahoe talking about the new consumer construct states, "this approach allows us to better focus on the individual consumer and unlock new opportunities to more nimbly serve their exact needs," (borndigital.com, 2020).

b) Engagement

Nike engaged employees with the vision by re-structuring the company and promoting employees to show intention to move fast to a more digital and direct-to-consumer strategy. The Nike employees are aware of the severe focus that is being put on digital transformation and this was no more evident when COVID-19 hit, and 35,000 retail store employees were suddenly stuck at home. However, digital platforms helped Nike employees stay connected with consumers. Nike built an application on top of Twilo's communications, Twilo is an American cloud communications platform. This empowered Nike employees as consumers who would have questions on the Nike App store about a product, it would be sent via text to retail store employee at home to answer. Donahoe speaking on the feedback for retail employees adapting to digital was, "our staff loved the fact even though stores closed, they could help our digital customers by providing insights,"(borndigital.com, 2020). However, the re-structuring of Nike saw Nike eliminate 700 jobs, including more than 100 vice presidents. This in the short-term could create anxiety amongst employees with job losses and why it would be more important to provide a top-down approach that demonstrates transparency and allow Nike employees to contribute and engage in the company's future.

c) Governance

Bonnet and Westerman mention that a successful company deploys a top-down approach for digital transformation. This is certainly what Nike did given that the board of directors were strong technology advocates and continued to push for digital transformation. The ambition setting for Nike was clear with 33% of Nike's revenue to be from ecommerce by 2023. This was accelerated by COVID-19 and is now on track for ecommerce to represent 50% of total revenue in the near future. Nike has a strong emphasis on its KPIs whether that come to data

analytics where they use platforms like Splunk to track real-time customer data or financial figures such as sales and profit to demonstrate that the digital transformation is moving in the right direction.

3.2.3 Nike's Digital Capabilities

BUSINESS MODEL		
Digital enhancements		
Information-based service extensions		
Multisided platform businesses		
CUSTOMER EXPERIENCE	**OPERATIONS**	**EMPLOYEE EXPERIENCE**
Experience design	Core process automation	Augmentation
Customer intelligence	Connected and dynamic operations	Future-readying
Emotional engagement	Data-driven decision-making	Flexforcing
DIGITAL PLATFORM		
Core		
Externally facing		
Data		

Source: The New Elements of Digital Transformation by MIT Sloan Management Review
Digital capabilities can be categorized into these elements (Bonnet and Westerman, 2020)

Business Model:

a) *Digital Enhancements*

LinkedIn co-founder wrote back in 2013 that "software will not replace all offline retail but, will be used to transform certain offline retail experiences.' Nike would likely agree with Hoffman's assessment and the implementation of this concept can be observed at 'Nike Live' concept stores.

The concept store is built on data and driven by digital through the use of digital enhancements whereby consumers can optimize their experience through the Nike app. The generated data gets sent to consumer preferences and feeds back to 'Nike Live' store creating a reinforcing feedback loop with real time data. The 'Nike Live' store also reduces friction experienced by the consumer; by using the Nike app someone can make a purchase and pick it up in store via a smart locker or collect It at the curb, (Businesswire.com, 2018).

b) Information-based service extensions

Nike has not only used the 'Nike Live' stores to enhance their business model digitally but, have also used it as a service extension whereby they are informed through data to understand the customer's needs. For instance, VP and GM of Nike direct Stores Cathy Sparks told the Los Angeles Times: "About 25% of our apparel is going to change every two weeks…if a color yellow is trending with customers, then we're going to bring in yellow." (Bird, 2018).

Nike also acquired a data analytics company named, Zodiac which allows Nike to analyze data points from customers using Nike apps as well as other connected devices such as wearables to understand the customer behavior and purchasing decisions better. It is clear that Nike understand the importance of their customer information in order to create value and expand their product-based business model by combing the use of technology.

c) *Multisided platform businesses*

Nike seem to be fencing themselves around their own platform in order to sell its products. Nike's mission is to focus more on direct-to-consumer innovation, therefore they want the consumer to buy on the Nike platform rather than anywhere else. In 2019, Nike stopped selling its apparel and footwear directly on the Amazon website. Nike stated, "As part of Nike's focus on elevating consumer experiences through more direct, personal relationships, we have made the decision to complete our current pilot with Amazon Retail." (Thomas, Cosgrove, 2019).

The risk here for Nike is that it is limiting its scope and betting big on itself to attract customers to their platform directly. Being left out of the biggest online marketplace in the world means less opportunity for people who may not go directly to Nike to purchase their products. Nike's investment into their platform demonstrates how strong they believe in their brand equity.

Nike's Customer Experience:

In June 2020, Nike announced its new digitally empowered phase of Consumer Direct Acceleration (CDA) to unlock long-term growth and profitability, the CDA is a further effort for Nike to accelerate their direct-to-consumer position (Nike.com, 2020). Nike wants the customer experience to be seamless and feel consistent across its ecosystem. Nike is

committed to delivering personalized customer experiences whether it be through digital or in-store:

a) *Experience Design*

Nike demonstrates delivering compelling customer experience through their Nike Live retail concept stores. Nike uses empathic creativity to within these Nike Live stores as it is a member-only store which allows them to identify customer personas when people sign up for customer membership and the products that are stocked are localized to the taste of the city whether it be in Los Angeles or Tokyo. Cathy Sparks Global VP of Nike Direct Stores said, "the approach of Nike Live really is putting Nike in your Neighbourhood." Being member focused and hyper localized demonstrate the empathic side to experience design. Underlying all of that is Nike's technological prowess. The Nike app use the customer data to understand purchasing pattern and engagement to produce the localized feel in these stores. The data is so useful to Nike that it allows them to rotate 25% of their inventory in Nike Live stores in order to produce the best customer experience possible and show different items on a regular basis, (Danziger, 2018).

b) *Customer Intelligence*

The Nike strategy now and moving forward is using data science to optimize the customer experience. Nike collect data from their portfolio of apps so they can collate the insights they need to assist with decision-making. For decades, Nike was a retail-first model, but, the focus and shift to using data to understand consumer behavior puts them in a strong position to remain a leader in their industry. *"There's a lot of talk about how much we need data, but, actually we need the right data, and we use some serious analytics behind it to turn it into value creation."* Hannah Jones, vice-president of sustainable business and innovation in 2014 (Post, 2014). Nike's acquisition of data analytics platform, Zodiac, in March 2018 and predictive analytics company, Celect, in August 2019 shows how intentional Nike's actions are towards the use of data to customize and improve the customer experience.

c) *Emotional engagement*

The power of Nike's branding has made it one of the most recognizable brands in the world. It is their branding which provides the emotional engagement with the consumer which Nike have captured in their advertising. One example is with the USA Women's Soccer team's win of the 2019 World Cup which focused on empowering women and girls to succeed.

Historically, Nike has been a trusted brand because they have connected with their customer through marketing, and this still holds a crucial element today when looking at the complete picture of customer experience.

Nike's Operations:

The operating of Nike has been and still is a process that involves design, manufacturing and sales. The design at Nike is taken very seriously with innovation and departments focused on creating new products and service technologies. Nike has been criticized heavily for its involvement or lack of in labor practices in the manufacturing that they outsource in more than 700 factories which helps them create cost efficiencies which lead to high gross margins in the sales of their products.

a) Core process automation

Nike has understood the shift to digital on the consumer side but, Nike has also got to grips with incorporating digital in their operational process, especially manufacturing. In 2017, they joined forces with leading robotics and automation companies to re-design how they produce footwear (Macdonald, 2017). Also in 2017, Nike said they have would have distributed 1,200 new automated machines in their manufacturing facilities. Although Nike is definitely making steps in the right direction, Nike's reliance of operational process in countries that are far from the United States has shown flaws in the globalized nature of their operations. For instance, Wall Street Journal in Q1 2021 that Nike reported below analysts' expectations due to sales being hindered by a global container shortage and congestion at West Coast ports that delayed flow of inventory by more than three weeks. Therefore, it seems that COVID-19 has highlighted gaps and emphasis that investment into core process automation will be required if they want to reach the levels of leader in this field, Amazon.

b) Connected and dynamic operations

Nike is improving its operations but, there is still a long way to go in creating a dynamic and connected operations. It seems a major obstacle here is the outsourcing that is so prevalent for Nike's manufacturing, so they lack control of how manufacturers are behaving. In 2017, Nike COO Erik Sprunk said, "we're digitizing our end-to-end supply chain and creating a model with shorter lead times to deliver what consumers want, when they want it where they want it." This was a bold statement and in 2021, Nike has shown improvements but, still rely heavily on the independent manufacturers in over 40 countries. It seems Nike is still

favouring the low cost of wages in these countries for production rather than prioritising connected and dynamic operations.

c) Data-driven decision-making

Data science is now a big part of Nike so it is no surprise that they are using it within their operations. Nike's emphasis on direct-to-consumer is to retrieve cleaner and more reliable data so they can forecast demand and predict more accurately.

Diagram 5: Nike is cutting intermediaries to get closer to customers (access to data)
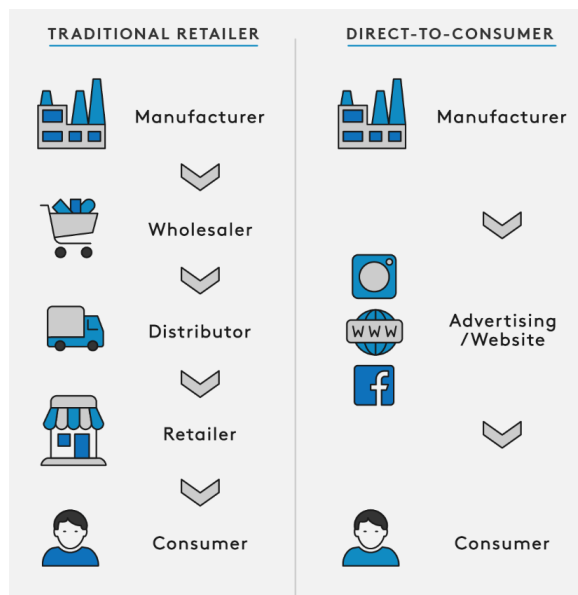
Source: Nike -just do it with Data science and Demand sensing (Biswas, 2020)

Nike have demonstrated data driven decision as they reduce their reliance on third party retailers and go direct to consumer. For instance, Nike improved technology within its flagship stores which helps them gain consumer insights that they are not able to achieve from other retailers. The importance of data driven decision making is clear from the actions of Nike as they acquired data analytics companies Celect and Zodiac. The other clear indication of Nike being a data driven decision making company is that it is strengthening its digital position with the acquisition of Datalogue.

Nike's Employee Experience:

Chris Granata is a digital product manager at Nike, who is based in the Beaverton global headquarters said it is a "great place to work and everyone makes you feel welcome." The

general consensus is that Nike is a great place to work with at the time of writing this 9,906 reviews rating Nike 4.1 out of 5 on the job board indeed.com. Nike follows a matrix structure where the authority passes vertically as well as horizontally and also follows a divisional structure amongst its employees to facilitate customer in different areas.

a) Augmentation

Nike's shoe-making process has been historically labor intensive and augmentation allows Nike to use technological advances to boost employee productivity. In 2015, Nike partnered with a company named Flex to introduced greater automation into its shoe-making process. Through this augmentation Nike is now able to offer lower defect rate which translates into further cost savings. Nike is using technology to lower the burden on its employees by saving time. For instance, Nike teamed up with NOVA (technology platform from DreamWorks) to produce 3D images that eliminate the need for numerous physical prototypes. It is clear Nike is helping the employee experience through the use of digital technologies, but, they should continue to analyze and observe what can be done faster and where else can employees time be better served if a technology can reduce cost and time.

b) Future-readying

Nike does a great job in giving a sense of purpose to it employees which is important for having longevity in the business. The issue Nike face is that it was a pre-internet company so its agility to move quickly is unlike tech giants who were born out of the internet era. It means that Nike are likely to have employees in junior positions that have more technological knowledge than those who have been at the company for decades. Therefore, Nike needs to actively focus on the training of the existing workforce and be careful not to be too focused on recruiting data scientists and engineers to cover for problems that may need to be looked at internally first. (show graph from communicating with data).

c) Flexforcing

Nike is well positioned and inadvertently can be argued that it is employing flex forcing techniques as it is a highly matrixed organization. The advantage to the matrix structure is that it maximizes the employees to do more than one job which in turn increase their income but, can also be a motivation to do even better. Therefore, it is crucial that Nike understand the importance of employee experience when sustaining their digital transformation because

they may need to upskill workers as digital threat and opportunities present themselves.

Nike's Digital Platform:

The COVID-19 pandemic has caused businesses to shift from in-office experience to completely online. Nike is no different, however, they were also ahead of the curve when it came to monitoring their digital transformation. Before 2017, Nike on almost all of their platforms were using commercial, off-the-shelf products purchased from various vendors (Nutt, 2018). Nike decided to take these capabilities in-house so it would allow them to increase speed-to-market and flexibility. Talking about traditional infrastructure metrics, software engineer at Nike, Adam Nutt said that their digital platform needed to be suitable so they could answer questions like, "Are we continuing to sell product, or has there been an interruption?" and "Are our services contributing to a god experience for the consumer?" (Nutt, 2018).

a) Core

The Nike engineering team use Splunk, which is a data platform that allows them to monitor and observe data in real-time, no matter the data source or application. Nike's core digital platform has helped them on the digital transformation journey with Nike implementing custom metrics across many hundreds of microservices, including those using serverless architecture. This is great because it allows for monitoring of the most important key performance indicators (KPIs) such as customer and business data across various platforms. This has enabled Nike to work across their entire data landscape, not just in silos in the data center or cloud-native environments.

b) Externally facing

Nike's continued efforts to drive direct-to-consumer has played a large part in helping the core platform work in tandem with their various applications and websites. The ability of Nike to track real-time metrics provides a valuable tool to conduct experimentational tests in order to see what consumers want more or less of. This software architecture that Nike has implemented plays a pivotal role in sustain their digital transformation because by using their websites and applications to better understand the customer interactions, it means they can continually iterate and serve the customer better in the future.

c) Data Platform

Nike understands that data is crucial in providing the modern consumer the products and content that is customized to their personal needs. Nike's emphasis on having a closer relationship with the consumer means that the role of data is vital in achieving the tailored engagement with the brand. There are two acquisitions to show Nike sees data platform at the frontier of their digital transformation. Firstly, the acquisition of Celect, a cloud-based analytics platform provides proprietary insights that allow retailers to optimize inventory across an omnichannel environment through hyper-local demand predictions. The acqustion demonstrated intent of being a data driven organization as Eric Sprunk, Nike Chief Operating Officer in 2018, says regarding the Celect acquisition "As demand for our product grows, we must be insight-driven, data-optimized, and hyper-focused on consumer behavior." (Nike.com, 2019). Secondly, the acquisition of Datalogue in February 2021, which has machine-learning technology that automates data preparation and integration. The data platform integration is all part of the CDA strategy which helps them sustain their digital transformation as Nike CEO, Johan Donahoe, mentions "The acquisition of Datalogue builds on our digital momentum by enhancing our ability to transform raw data into actionable insights in real time and across the enterprise." It was an impressive acquisition as Nike were able to integrate data from all the sources such as app ecosystem, supply-chain and enterprise data in a seamless and standardized platform.

3.2.4   Digital Rules Matrix

Professor Venkat Venkatraman's rules matrix (diagram 4) is a score-based system which will allow assessment of Nike on their digital transformation journey. There are nine rules in the matrix and each rule gets a score in two categories: importance and proficiency.

The importance score is based on the assessment of that rule in accordance where Nike's prioritization to sustain their digital transformation. It is a view to see where Nike is presently located in terms of importance across the nine rules. The importance scores can be anywhere between 0 (not important) to 10 (top priority).

The proficiency score assesses how proficient Nike is in each rule and how they are positioned now in accordance with looking into the future. The score is also anywhere between 0 (not proficient) and 10 (highly proficient).

Once each rule has been scored by importance and proficiency then it is time to calculate the importance-proficiency gap. This is the score of importance minus the proficiency across each of the nine rules.

[Importance – Proficiency = Gap Score]

Calculating Nike's Importance-Proficiency Gap

The list below demonstrates gap scores arranged from highest to lowest[1]:

Priority List (Highest to Lowest)	Importance Score	Proficiency Score	Gap
Rule #6 – Augment smart humans with powerful machines	10	5	5
Rule #3 – Examine the intersection of human talent and machine power	9	4	5
Rule #9 – Differentiate with computer capital and human capital working together	8	5	3
Rule #1 – Evaluate your roles in experimentation ecosystem	8	6	2
Rule #5 – Navigate your preferential partnerships	3	2	1
Rule #7 – Design your new digital ecosystems	8	8	0
Rule #4 -Engage ecosystems as transformational triggers	6	6	0
Rule #8 – Co-create new business capabilities with preferred partners	5	7	-2
Rule #2 – Explore capability co-creation options	3	6	-3

[1] When the gap score is the same, then the highest importance score takes priority for the higher order on the list.

For further information behind the number of the scores, please see APPENDIX 6.4 and 6.5.

4. RECCOMENDATIONS

The sustaining of digital transformation consequently leads to increased competitiveness, better efficiency, quicker innovation and the elevation of the consumer experience to increase customer lifetime value.

The key advantages of digital transformation come from customer data insights. The intimate nature of the information that digital transformation can provide enables companies to market, sell and service their customer better than ever before. The closer a company is to their customer the higher the customer retention and repeat sales.

Having reviewed the Westerman and Bonnet framework and Venkatraman's digital business rulebook as it pertains to Nike, the following recommendations are identified as next steps that Nike may take. The recommendations summarized in the table below would help Nike sustain their digital transformation in the digital world keeping in mind Nike's main objective.

1. Focus Investment	2. Engage the organization at scale	3. Sustain the Transformation
a) Advanced Technologies b) Strategic Acquisitions c) Increase 'Nike Live' Stores across the world	a) Encourage experimentation culture b) Upskilling existing workers	a) Omni-Channel Approach b) Integrating Technology Marketing

4.1 FOCUS INVESTMENT

4.1.2 Advanced Technologies

Robotics – Nike is becoming great on their digital interactions with consumers through their website and family of applications. However, they are still lacking in areas of the supply chain to create efficiencies that would see safe, easier and quicker processes. Nike has integrated robots from Geek+ into its Japan warehouse. These robots carry Nike products and packages directly to the warehouse worker, which reduces costs, increases efficiency and reduces daily workload for the employees. This is something that should be implemented in North America, given that Nike's largest revenue occurs in North America, for them to sustain digital transformation. Amazon has set the gold standard in warehousing and distribution with more than 200,000 mobile robots working inside its warehouse network to help fulfil speedy deliveries for their prime customers. More and more customers across all e-commerce will demand to expect the same from companies like Nike so therefore using robots in this capacity will help Nike better serve their direct-to-consumer business.

In the United States (Nike's biggest market), the company operates five primary distribution centers in Memphis, Tennessee. COVID-19 demonstrated the fragility of the distribution centers. On April, 2020, Nike temporarily closed one of its Memphis distribution facilities after warehouse employee tested positive for COVID-19. The introduction of robotics not only mitigates closures, but also helps the facility run more efficiently.

3D Printing – The use of 3D printing at Nike would not only sustain their digital transformation but, could propel their objective to serve and understand the customer better. Currently, 3D printing is not economically feasible to scale but, as time goes on like many technologies, 3D printing will become cheaper so it will be more cost effective to produce products like footwear in the future. Nike partnered with Hewlett-Packard released the first printed upper named the 'Nike flyprint'. The 3D printer could eventually be a gamechanger in the footwear industry and Nike could lead the charge.

3D printing capabilities will only get better and cheaper so if standard footwear can be accurately printed in a matter of hours, this could lead to a gigantic re-structuring of the

manufacturing process at Nike. Nike would no longer need to offshore their manufacturing and could be able to structure a supply-chain where they vertically integrate manufacturing through investing in 3D-printing. When the technology gets to the speed of a few hours of printing footwear, then this could lead to just in time printing, whereby, Nike would not need to overstock or forecast future inventory as the products are made when ordered. The use of 3D printing will allow Nike to learn new techniques and patent new discoveries before competitors to ensure their innovations are protected.

3D printing could lead to Nike having improved relationships with their consumer because it allows the consumer to tailor Nike products to their needs. This will help with consumer retention and allow consumers to connect deeply with the Nike brand. The 3D printing future would free up brick and mortar retail inventory square footage and allow utilization of floor space to engage and market to the consumer.

4.1.2 Further Acquisitions

Nike understood that for it to further its digital transformation, it had to integrate data analytics and platforms within the organization. Hence, the acquisitions of Celect and Datalogue. It will be important to stay on top of understanding data to serve the consumer better so building from the foundations of these acquired companies to constantly improve the way they work with data will be vital.

Nike, however, still has issues when it comes to their supply chain and COVID-19 has demonstrated that the globalized world that we live in is fragile and may not always be reliable in serving the consumer. Therefore, Nike needs to understand the importance of manufacturing on the shores of where you sell most of your products. Firstly, vertical integration of the manufacturing process would help Nike to sustain digital transformation as the technology such as 3D printing is advancing in a way that provides Nike the opportunity to avoid increasing offshore costs and establish many of its manufacturing operations in the United States. Nike should be on the lookout for 3D printing startups that have the technology and potential to scale so they can acquire them. The same can be said for robotic companies that have synergies in terms of helping to boost the efficiencies of Nike warehouses. Acquisitions in these ever-advancing technologies will help Nike sustain digital transformation in the digital world.

4.1.3　Increase Nike Live stores across the world

The success of the Nike Live stores in Los Angeles and Tokyo leads me to recommend that the company double down on 'Nike Live' stores across the world. Consumers across different regions and cities have different tastes and needs, and Nike are in a position where they can serve their customers better by tailoring products to localized needs.

This recommendation is actually supported by Nike itself who plan to open 150 to 200 Nike Live stores across North America, Middle East and Africa. The digitally enabled stores provide valuable data and engagement, which is unmatched in comparison to a regular Nike retail or wholesale store. Donahoe supported this by saying, "we've been testing this format with Nike Live and have a great understanding of how to best deliver this experience and so we will proceed ahead this year with more test-and-learn examples of it and scale it through the next couple of years." (Wilson, 2020). The store's understanding of a city or neighbourhood's culture is a unique experience of the major retail brands that would not have been possible with the digital engagement. To sustain the digital transformation and create more engagement and growth it would be in Nike's best interest to invest in opening more Nike Live stores worldwide.

4.2 ENGAGE THE ORGANIZATION AT SCALE

4.2.1　Experimentation Culture

Looking back at Bowerman discovering the Nike Waffle shoe, it demonstrates the origins of Nike's culture. Nike does seem to have silos of experimentation but, for them to be able to sustain digital transformation, experimentation needs to part of daily activities. The emphasis Nike has on focusing on data is laudable, but in order to truly gain value from data, Nike should allow employees curiosity to be nurtured where the use of data does not necessarily need to come from the data analytics team rather, can be led from anywhere in the organization.

Nike should take a note out of Booking.com's book where any employee can launch experiment without management's permission, (Thomke, 2020). The experimentation culture

at Booking.com was thanks to an experimentation platform and this type of platform could benefit Nike in engaging and empowering employees across the organization. For instance, Nike would benefit from A/B testing employee ideas across their applications in order to optimize which suggestions are successful. An experimentation platform at Nike would demonstrate organization-wide Nike's emphasis on digital transformation as well as get Nike back to the founding stage where experimentation propelled the company's growth. This would of course require training employees' company wide, and this is where upskilling workers becomes crucial to sustaining digital transformation.

4.2.2   Upskilling the Existing Workforce

The workforce is changing, McKinsey & Company stated that digital working hours would increase by 55% by 2030. There is a greater need for employees with technological skills and if Nike's current employees do not have sufficient training to keep up with Nike's digital objectives, then it will slow the progress of digital transformation. For instance, Nike can look at companies like Amazon who have invested $700 million in training programs to upskill over 100,000 of their workforce by 2025. Amazon's focus on digital upskilling is impressive with the company stating that it helps employees become software engineers in 9 months (Amazon Staff, 2021).

Upskilling at Nike is so important because they started before the internet era which means they may have employees that have been with the company spanning over decades and may not have the necessary tools to perform at the best standard in their position. The investment in upskilling programs shows a two-sided benefit, one side for the employees and the other for the company. The upskilling or re-skilling will sustain the digital transformation at Nike because it will help with employee engagement and retention, increase collaboration between departments and speed up the adoption of new digital objectives.

4.3 SUSTAIN THE TRANSFORMATION

4.3.1   Omni-Channel approach

An omni-channel approach in the retail industry is where a seamless customer experience occurs to build a unified and pro-active cross-channel of services that drive loyalty and repeat sales (Deloitte, 2017). The adoption of seeing digital as the new normal cannot be pushed in silos at Nike, it needs to be apparent across the whole organization. Nike's objective to better serve the customer is encouraged by the CDA strategy and this means that Nike should understand the entire customer journey.

However, Nike need to know that they need to apply technologies in the right areas to build customer engagement. For instance, the Nike training club app shows personal trainers performing workouts but, does not provide the consumer with in -app purchasing options for its featured retail products. A more omni-channel approach would allow Nike to engage with the consumer more to sell their products. This approach would provide convenience and accessibility for customers to interact and buy Nike products seamlessly.

4.3.2 Integrating Technology Marketing

The Nike marketing team is focused on the brand when they market their products, and this is no surprise as it has been so successful over many decades. The brand marketing at Nike does a fantastic job in using emotional branding to evoke feelings in consumers to inspire customer loyalty around the world (Estes, 2019). As Nike transforms digitally, closer attention needs to be paid to technology marketing and how they market their family of applications. The apparel and footwear are still purchased through emotive feelings' due to Nike's marketing. However, technology marketing is less emotive and more practical, and consumers will be interested because of the brand but, they will be even more intrigued by the technology that is being provided.

For example, speaking to John Andrews, VP of Product at Nike, currently, the marketing team is situated and operated separately from the digital product team at Nike. Nike should allow product managers to collaborate with product marketing closely because this ensures that: the product is well positioned in the market, users receive value and sales is enabled to sell better, faster and more effectively. For instance, Nike digital product managers would have a better opportunity to understand and communicate goals and pain points of users to build a product that the consumers love, and product marketers will understand the value of

the product in a way that resonates with the pains and goals of the target audience. Driving focus towards technology marketing by merging the product management and product marketing teams, will help sustain the digital transformation.

5. CONCLUSION

The case of Nike shows the undeniable impact that digital transformation can have to unlock growth and knowledge potential within an organization. The importance of leadership has been one of the driving forces that will lead to the future success of Nike and with John Donahoe at the helm, they have a leader that understands the importance of technology and digital transformation in the post-COVID era. There is no one size fits all approach when it comes to sustaining digital transformation, but Nike has digital transformation at the frontier of their strategy and are constantly identifying new ways to redefine the way they operate. This puts them in a good position to sustain digital transformation in the post-COVID world.

COVID-19 has accelerated digital transformation in the world and Nike was no different. Nike's previous 'Triple-Double' strategy and now its CDA strategy put them in a good position coming out into the post-COVID-19 era. The learnings taken from the thesis is that the process of digital transformation is never ending and must continue to be engaged at the core of a company's strategy such as Nike in order to succeed to their ultimate objective of serving the customer better. COVID-19 has shown humans the value that technology brings to them and Nike must take advantage of the power of digital transformation and must guide the company through this inflexion point to sustain digital transformation in the post-COVID era.

6. APPENDIX

6.1 Nike Digital Applications

Application Name	Description
Nike App	This app allows you to become a Nike member. The member access allows you to select product drops, events, and experience that happen only in the Nike app. Members get the option to pick up orders, check out through the app, or make returns in select stores. In-App shopping with free standard shipping, 60-day wear tests, and receipt less returns when you purchase through the app. *Nike By You* allows you to customize Nike silhouettes with unique colorways and materials. Daily recommendations where customers discover new gear, apparel and footwear. New releases where the latest drops are found. Offer and Promos such as exclusive birthday offers and other promotions. Gives you the ability to chat one-on-one with an expert for style tips or fit advice and be part of the Nike community wherever you are.
Nike SNKRS	Explore, buy and unlock the best of Nike and Jordan brand sneakers. SNKRS provides insider access to the latest launches, hottest events and exclusive releases that Nike and Jordan have to offer.

	Learn about the inspiration, benefits and heritage of featured sneakers with exclusive content, straight from the source. Set notifications about upcoming releases and share news photos and videos with friends. Buy sneakers in seconds, directly within the app. Store your billing and sizing information to expedite the process. Submit your entry into a randomized selection system to purchase key releases.
Nike Run Club	Nike Run Club has tools including GPS run tracking, audio guided runs, weekly, monthly and custom distance challenges, customized coaching plans for your goals and nonstop motivation from your friends. Use Apple Music or Spotify to access music library to play music during runs.
Nike Training Club	Nike Training Club (NTC) is designed for you to reach your fitness goals. NTC offers 185+ free workouts including yoga classes, HIIT workouts, bodyweight-only workouts and cardio only workouts. Trainer led programs include a prescribed series of workouts and science-based wellness guidance to improve your performance and help you build healthy habits. Each program is led by a Nike Master Trainer. Range of choice from equipment-free programs designed for training at home and full-equipment programs that are designed for gym spaces. Nutrition and wellness guidance like recipe ideas, tips on sleep, mindset and recovery.

	Use Apple Music or Spotify to access music library to play music during workouts.
Nike Adapt	The Adapt App gives you exclusive access to the latest and greatest features of your Nike Adapt footwear.
	Tighten or loosen Nike adapt footwear from your phone. The Adapt app allows you to make fine-tuned adjustments for each shoe.
	Customize the electronic lights by choosing from 24 iconic single and dual colors or turn the lights off.
	Check you charge to know exactly how much power you have left and get notified when you need to charge your shoes.
Nike Athlete Studio	Nike Athlete Studio is an exclusive platform that enables Athletes and Influencers to capture and share their stories with Nike – amplifying their voices, reach and personal brands.
	When a social media brief calls for it, the handoff from the app to an Athlete's social channel is frictionless.

Source: Apple App Store

6.2 Nike Innovation Stores

Innovation Store	Description
Nike Live	The first Nike Live concept store was opening on Melrose Avenue, Los Angeles. Since then, further Nike Live Stores have been opened at Long Beach, California and Shibuya, Tokyo.
	The store is based on blending data science and premium personal service that deliver to local members exact needs. The stores offer city specific styles which is determined by the Nike digital commerce data to serve local Nike members exactly what they want when they want it.

	The Nike Live store is so specific to needs to the local community that they replenish new footwear and apparel on a bi-weekly basis (a Nike first) and sometimes even exclusively.
House of Innovation	Based in Nike New York City, the Nike flagship store is six floors covering more than 68,000 square feet on the corner of Fifth Avenue and 52nd street. Nike NYC introduces the Nike Speed Shop, an entire floor hat uses local data to stock its shelves, and re-stock them based on what the community wants. You can browse the Sneaker Bar with the aid of a store athlete or a digital read-out of locals-only data. Nike members can reserve items via phone and have them held in an in-store locker or ready for pickup. The capabilities of the Nike App allow members to request items to be brought to them for a quick fitting and also a Shop the Look feature where you scan the code on an in-store mannequin's apparel or footwear to see if available sizes are available.
Nike Rise	The first Nike Rise store was opened in Guangzhou, China in July 2020. The consumer at the center and using Nike's member-first approach, Nike Rise curate a 1-to-1, personalized journey that connects consumers to sport, their communities and one another. The store has led way to a new feature on the Nike app called Nike Experiences. This will connect city members where a Nike Rise store is situated to weekly sport-minded activations designed to get them moving.

	There is a new Nike By You personalization bar that will deliver a 365- experience for members to personalize items with design element's inspired by a particular city's sport culture.
	Nike Fit in-store experience will be introduced to consumers where Nike shoppers can get their feet scanned by a store athlete to find the best fit for any footwear.

Source: Nike.com

6.3 Nike Digital Acquisitions

Acquired Company	Description
Datalogue	A data integration platform startup based in New York. Datalogue has built cutting-edge and proprietary machine-learning technology that automates data preparation and integration.
Celect	A retail predictive analytics and demand sensing company based in Boston. Celect holds a cutting-edge intellectual property portfolio across data science and software engineering. Celect's cloud-based analytics platform provides proprietary insights that allow retailers to optimize inventory across an omnichannel environment through hyper-local demand predictions.
Zodiac	A leading consumer data analytics firm based in New York City and Philadelphia. Zodiac provides the ability to enhance consumer data and analytics to help serve consumers globally.
Invertex	A leading computer firm based in Tel Aviv, Israel. Invertex gas a feetID system which has an in-store unit that 3-D scans a precise measure of a shopper's feet and sends it directly to their mobile phone within seconds.
Virgin Mega	A digital studio company based in New York. A 12-person startup that was a waiting line app which focused on fan communities and shopping experiences.
TraceMe/Tally	The Seattle based startup provides a platform the lets sports teams, broadcasters and venues engage with fans around events.

Source: Nike.com

6.4 Digital Matrix – Nike Importance Ratings Assumptions

The assessment score for importance demonstrates how Nike views the priority of that rule in their current and future digital transformation process. Each rule has been given a subjective rating based on evidence from Nike activities.

***Rule #1** – Evaluate your roles in experimentation ecosystem*

Score: 8

The importance of the experimentation ecosystem at Nike dates back to co-founder Bill Bowerman experimenting with shoes. Bowerman was constantly experimenting with shoes that track and field runners needed. In the early 70s, he went and poured urethane rubber into his wife's waffle iron which eventually led to the aptly named Nike "waffle" shoe (Peterson, 2015). Experimenting to create one of Nike's most iconic shoes was important then and even more so now to understand how to better serve the customer. For Nike to sustain their digital transformation, it is vital that this experimentation culture that is at the heart of the company is maintained and elevated so they can orchestrate the customer experience at the optimal level

***Rule #2** – Explore capability co-creation options*

Score: 3

Nike has in the past attempted to co-create but, this takes away from the focus on the direct-to-consumer relationship. The low score reflects Nike's decision to prioritize data capture.

***Rule #3** – Examine the intersection of human talent and machine power*

Score: 9

One of the most important rules to Nike is achieving the point where human talent meets machine power. McKinsey & Company in 2015, said the "most common hurdle to meeting digital priorities is insufficient talent or leadership." This is crucial in sustaining the digital transformation process because advancing technologies are gaining a lot of momentum and will only get better moving forward so it is important that Nike have the human talent to co-exist and champion innovations and efficiencies are able to occur from machine power. This will lead to Nike improving their customer experience, supply chains and the agility to adapt to digital change.

Rule #4 *-Engage ecosystems as transformational triggers*

Score: 6

Nike is not a digital tech giant, so it is not positioned to incorporate all digital transformation capabilities on their own. Therefore, understanding when to consider external help with digital transformation and when to build internally will help optimize Nike's digital strategy. Ideally, Nike would love to do everything internally, however, the resources would take away from the core business and eliciting help in areas that need improvement will be important to sustain their digital transformation.

Rule #5 *– Navigate your preferential partnerships*

Score: 3

Nike is moving away from what they call "undifferentiated" retail partners in 2021. This demonstrates that Nike is focused on the customer finding them directly through web or Nike stores. Therefore, preferential partnerships, especially in the retail space, are of less importance, rather, personalisation of the consumer experience is at the forefront of Nike's digital transformation.

Rule #6 *– Augment smart humans with powerful machines*

Score: 10

The most important rule of them all is that the future of the company will be shaped by this rule. Nike has a heavy focus on data analytics and using technologies to improve their supply chain operation, all with the intention to better serve the customer. In order to sustain this digital transformation Nike will need to ensure their employees have the skillset to connect with the powerful machines of the future. This supported by McKinsey research demonstrates the importance of technological skills for employees in the future:

Percentage Change of USA and Europe's Total Annual Hours Spent from 2016 to 2030 – by workforce skill

Workforce skills

- Technological Skills: 55%
- Social and emotional skills: 24%
- Higher cognitive skills: 8%
- Physical and manual skills: -14%
- Basic cognitive skills: -16%

% change in hours spent from 2016 to 2030
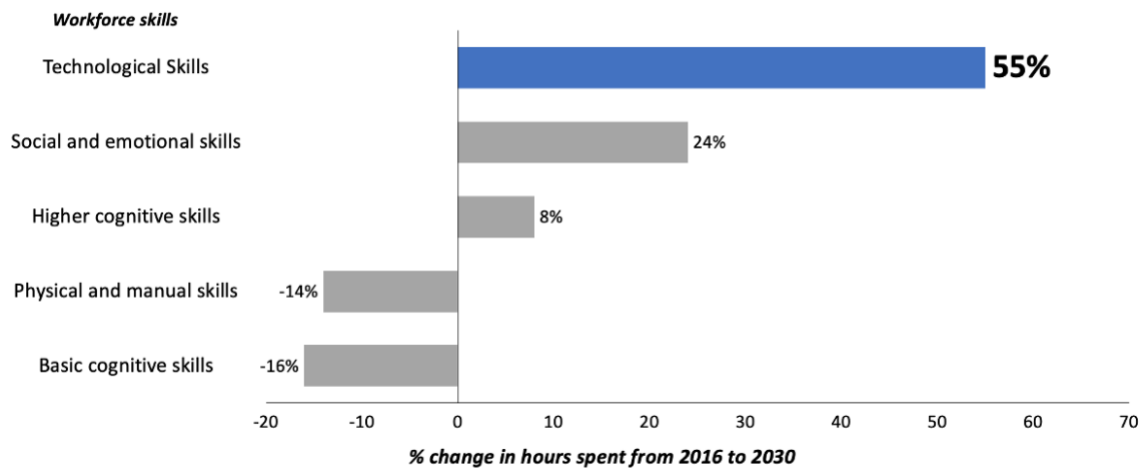
Source: McKinsey Global Institute: https://www.mckinsey.com/featured-insights/future-of-work/ai-automation-and-the-future-of-work-ten-things-to-solve-for

Rule #7 – Design your new digital ecosystems

Score: 8

Another important rule for Nike is to understand the digital ecosystems that provide the most value to them. This is aligned with their focus on removing barriers to the customer; putting barriers to the digital ecosystems to the forefront of the strategy means Nike needs to observe the landscape they are operating in very closely. Nike are unable to rely on others to gain insights about their own consumer and as the data increases, the personalization of service to the specific customer will no longer become a differentiator but, rather a standard. Nike needs to have agility in order to sustain digital transformation otherwise they could end up falling behind.

Rule #8 – Co-create new business capabilities with preferred partners

Score: 6

This rule scores somewhere in the middle of the spectrum for importance to Nike because they have a strong direction on their CDA strategy but, acting alone the whole way without partners may be a cause for concern. Therefore, in the short-term the importance is low as Nike builds out their digital ecosystems from within. In the long-term, Nike may need to consider co-creating new business capabilities as they have done with their applications with the ecosystem of the Apple and Android app store. Moving forward, there may be digital tech giants or other digital capabilities that are created by others where Nike would need to partner in order to sustain their digital transformation.

Rule #9 *– Differentiate with computer capital and human capital working together*

Score: 8

This rule is of great importance to Nike in their bid to sustain digital transformation; when the co-existing of computer and human capital happens, innovative solutions will help further Nike's progress in the digital world. Nike was a company that started before the internet era, so through no fault of their own, they do not have the capabilities to co-exist with the computer capital that is required to sustain digital transformation. Therefore, this rule is important because it helps them push forward in their digitization and as a consequence help them achieve their objective to better serving the consumer.

6.5 Digital Matrix – Nike Proficiency Ratings Assumptions

The proficiency score for each rule is based on where Nike is today with that current rule. There are a few more guidelines that Venkatraman suggests following on the proficiency score:

0 to 4 – Weaker than industry incumbents

5 to 8 – Parity with others (including tech startups and tech giants)

9 to 10 – Leader of the pack (including tech startups and tech giants)

Rule #1 *– Evaluate your roles in experimentation ecosystem*

Score: 5

Nike in the area of experimentation is above the industry standard. The downfall Nike faces is that it is inherently not a technological company, so it makes it difficult to outperform the tech giants who have been built on digital experimentation. For instance, Amazon founder Jeff Bezos says, "our success at Amazon is a function of how many experiments we do per year, per month, per week, per day." Although, experiments are evident at Nike, there is still a significant gap between Nike and the digital tech giants' level of experimentation.

Rule #2 *– Explore capability co-creation options*

Score: 6

Nike has done a good job exploring their options in co-creating, this is particularly prevalent with the various Nike digital applications they have in the Apple and Google Play stores. They have used these ecosystems effectively to build their digital user base. As of 2019, they

have 170 million users across their array of apps (Hensel, 2019). It is still way behind the tech giant's userbase on applications with Facebook having 2.74 billion and YouTube with 2.29 billion (Tankovska, 2021). In this instance, Nike are not in the realm of proficiency of the tech giants, and this is why their score is at a 6 and they still have a long way to go in the technology and would need to explore further co-creation options to get to a higher score.

Rule #3 *– Examine the intersection of human talent and machine power*

Score: 4

CEO of Nike, John Donahoe, said that "digital is the new normal" and Nike has been actively trying to reach the intersection of human talent and machine power by acquiring companies such as Celect, Datalogue and Zodiac. The acquisitions have brought with them human talent which Nike was not accustomed to previously, such as data scientist becoming a more and more required capability at Nike. The score is still low, however, as there are still gaps in the machine power that is out there and where Nike is in the process. For instance, if we look at Amazon and their supply chain process, it is superior to Nike's as they have found the intersection of human talent and machine power in order to achieve same day delivery and maintain that during the pandemic. In comparison Nike's delivery time was 3-5 days and during COVID-19 it became even longer with some customers waiting 2-3 weeks. Therefore, the proficiency for this rule has plenty room for improvement.

Rule #4 *-Engage ecosystems as transformational triggers*

Score: 6

Nike has familiarity in engaging with ecosystems that transform the way the company operate as you have to look at how they outsource their manufacturing of their apparel. Nike to a certain extent has made attempts of doing this with digital. Looking past the digital application, in 2016 Nike was able to partner with Hewlett-Packard to help 3D printing of Nike apparel prototypes, this led to Nike reducing their time on tweaking prototypes from months to hours. Nike has the capacity to go even further to engage in ecosystems that can help them across their business, but the downside of the direct-to-consumer strategy means that some partnerships may be overlooked if Nike is unable to control the relationship and data received from the consumer.

Rule #5 *– Navigate your preferential partnerships*

Score: 7

This score for Nike's proficiency on the digital rulebook is mainly down to their removal of existing partnerships to focus on the direct-to-consumer business. Nike have understood how to navigate preferential partnerships well because they understand where the value is. The value lies with the customer and retailers. As demonstrated by the divestiture from Amazon, Nike has excelled in this area and are aware when it is time to re-assess relationships when conditions change in the digital landscape.

Rule #6 *– Augment smart humans with powerful machines*
Score: 5

In recent years, Nike has had an emphasis on expanding its computer science and data employee types. Nike is ahead of their competitors when it comes to this, however, in the bigger picture of tech giants and entrepreneurs, they are not close. The advantage tech giants have over Nike is that understanding technology is part of the roadmap of entering a company like a Google or Apple. Nike is far from this level and in comparison, to these tech giants lack proficiency in this part of their digital transformation.

Rule #7 *– Design your new digital ecosystems*
Score: 8

Nike's highest score for proficiency is in this rule because they have created a family of apps that have significantly boosted their engagement and revenues. For instance, a strategic and successful move was the launch of the SNKRS app which targeted a specific segment of customers, who are known as 'sneakerheads', for limited stock shoe releases. The SNKRs app in 2019, brought in $750 million in revenue which was 20% of Nike's digital business revenue (Bain, 2019). Looking into the future, observing the digital landscape and where and when to target digital ecosystems will be crucial for Nike to sustain their digital transformation.

Rule #8 *– Co-create new business capabilities with preferred partners*
Score: 7

So far Nike has done a good job in co-creating business capabilities with preferred partners. There are examples where Nike has done this well, firstly, Nike has had a collaborative history with Apple. In 2016, Nike and Apple announced a special version of the Apple Watch. This was significant as Nike abandoned its own hardware divisions so they could

focus on connecting with a tech giant that has dominance in the digital hardware space. It was wise to co-create with Apple to be part of an interconnected digital ecosystem. Secondly, in 2015, Nike partnered with DreamWorks and its technology company NOVA to help with the product creation process through a 3D digital design system.

Rule #9 *– Differentiate with computer capital and human capital working together*

Score: 5

In Nike's industry they have computer and human capital that are matched with, if not better than their industry incumbents. When it comes to the wider lens of tech giants and tech entrepreneurs, then Nike are not at the level of these players. This is not surprising as these companies very foundation is digital, and they were built out of the internet era. The tech giants re-invest in newer digital ways to improve themselves and are often pioneers of digital innovation. This also leads to human capital being funnelled to these tech giants as they offer the most competitive salaries and have a reputation as champions for computer and human capital working together.

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