2016•2017
FACULTY OF BUSINESS ECONOMICS
*Master of Management*

# Master's thesis

## Customers' and employees' willingness to join an engagement platform: An empirical study of Nike's Training Club

Supervisor :
prof. dr. Sara LEROI-WERELDS

Silke Mercken

*Thesis presented in fulfillment of the requirements for the degree of Master of Management*

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# PREFACE

With the realization of this master thesis I finally arrive at the endpoint of my study at the University of Hasselt. Writing this thesis, named “Customers’ and employees’ willingness to join an engagement platform: An empirical study of Nike’s Training Club”, is the final contribution to achieve my degree as a master of management.

I am happy that I had the opportunity to work on an interesting topic which reflects not only my interest in international management, but also my passion for sports.

The accomplishment of this master thesis was only possible with the help of some people. Therefore, I would like to grasp the opportunity to thank them in this preface. First of all, I could count on a great cooperation of Nike’s logistics center in Laakdal, and especially its HR manager Heidi Gillemont. They offered me the opportunity to conduct interviews, they provided me with useful information, and they were very helpful in distributing the questionnaires among the employees.

Next, special thanks goes to my promotor dr. Sara Leroi-Werelds. I could always rely on her experience and professional supervision. She was very helpful and always available for advice.

I would also like to mention my partner Anthony De Coninck. The combination of this study with my job was not always easy. However, his support made it possible for me to persevere and succeed.

Furthermore, I want to thank my friends and sister who helped me to find a sufficient amount of respondents to fill in the questionnaires.

And at least, my thanks goes to all respondents for their time to participate in this research.

I hope you’ll enjoy reading this master thesis.

Silke Mercken

Hasselt, june 2017

# SUMMARY

Nowadays competition is more fierce than ever before. Therefore, it is of highest importance for a firm to create unique customer value. In order to do so, firms are seeking new ways to build relationships with their customers. The challenge is to find a way to create value for both the customer and the firm.

From this perspective, value co-creation is an upcoming phenomenon. In order for co-creation to exist, interaction between the firm and the customer is a necessary condition. This interaction can be facilitated by the firm by the provision of an engagement platform. Such an engagement platform allows all stakeholders to interact and share their experiences, which in turn can lead to new sources of value for all parties involved.

However, it is important to recognize that it is not mandatory for customers (or other stakeholders) to engage in such a platform. In other words, they are free to choose whether or not they want to join the engagement platform.

Therefore, this master's thesis focusses on the factors that influence customers' and employees' willingness to join an engagement platform. More specifically, we examine Nike's engagement platform, named the "**Nike+ Training Club**", and determine **the factors that influence the willingness to use this training app, both for customers and employees**.

To do so, we first conducted a literature review to get more insights into the theoretical background of this topic. Next, we proceeded with an empirical study.

The **literature review** starts by pointing out the importance of value creation. It explains how the focus of value creation has shifted dramatically since the last decade. Whereas firms come from a product-centric approach in which they are internally oriented and do not focus on customer needs, they now are trying to reach customer centricity. This means that they do not focus on selling, but on creating value for the customer, while in the process creating value for themselves.

In 2004 the service-dominant logic was introduced by Vargo and Lusch. From then on, customers were no longer seen as passive recipients of value, but as active co-creators of value. In order to co-create value it is necessary that there are interactions between the firm and the customer. These interactions create experiences and these experiences, in turn, generate value for the customer and the firm.

In 2010 Ramaswamy and Gouillart stressed the importance of involving all stakeholders in the co-creation process. Thus, not only the customers, but others stakeholders (like employees) should participate in the value co-creation process as well. Firms can facilitate these interactions with all stakeholders involved by providing engagement platforms.

Engagement platforms are defined by Breidbach et al (2014, p.594) as "physical or virtual touch points designed to provide structural support for the exchange and integration of resources, and thereby co-creation of value between actors in an ecosystem". Both the firm and the customers, and actually all stakeholders involved, can benefit from the usage of an engagement platform. That is because new sources of value are created, which leads to a "win more – win more" situation.

The **empirical part** of this master thesis investigates the Nike+ Training app. In order to get a better understanding of the potential factors that influence the willingness to engage with the Nike+ Training Club app, some exploratory interviews were conducted. These interviews provided us insights that were used to construct a conceptual model and related hypotheses, based on Meuter et al's (2005) model on trial of self-service technologies.

To test the conceptual model two types of surveys were constructed, one for Nike employees and one for Nike customers. After describing our samples, we decided to continue our analysis only with the customers who are not (yet) using the N+TC app since only this sample size was sufficiently large.

An overview of the average scores on each of the constructs made us understand which values of the N+TC app are positively perceived by the respondents. To test the relationships between these different constructs, we continued with the analysis of the conceptual model, using a Partial Least Squares approach for Structural Equation Modeling (PLS-SEM). Thereby, we used a two-step procedure that first evaluated the measurement model and then the structural model. This stepwise approach was necessary since we first needed to know that the measures adequately represent the constructs of interest before we could use them in the structural model.

After analyzing the data, the findings indicated that not all of our initial hypotheses could be confirmed. A discussion of the results is provided in the last chapter, followed by recommendations to Nike and a description of the limitations of this study.

# TABLE OF CONTENTS

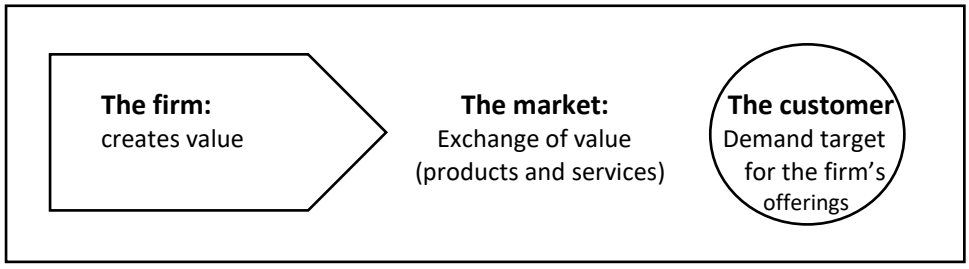
# LIST OF FIGURES

# LIST OF TABLES

# CHAPTER 1: Problem statement

Nowadays customers are overwhelmed with a great variety of products and services they can choose from. Firms, on the other hand, are facing the difficulty to differentiate themselves from competitors more than ever before. Globalization, deregulation, outsourcing, and the convergence of industries and technologies encourage commoditization harder than ever. Therefore, firms have to look for innovative ways to create value for their customers. Value creation has always been an important topic within marketing strategy, but since the last decade the focus of value creation has shifted (Prahalad & Ramaswamy 2004a).

In the "traditional view" firms can act autonomously with no interference from or interaction with customers. Customers are seen as "outside the firm" while value creation occurs solely inside the firm (through its activities). The market is viewed as a locus of value exchange and extraction where companies trade their goods and services with customers, as is shown in figure 1. The interactions between the company and its customers are not yet seen as a source of value creation. The focus of this traditional concept is therefore firm-centric (Prahalad & Ramaswamy 2004).




**The market is separate from the value creation process**

*Figure 1: The traditional concept of a market (Prahalad & Ramaswamy 2004a)*

But nowadays customers are becoming more informed, they want to be more connected, involved and active in the value creation process. Therefore firms should escape the firm-centric view and seek to co-create value together with their customers (Prahalad & Ramaswamy 2004a). Ramaswamy (2011) defines co-creation as a mutual process in which companies and customers create mutual value together. High-quality interactions are needed to enable a customer to co-create unique experiences with the company. Dialogue, access, risk-benefits, and transparency (DART) are seen as the base for interaction between the customer and the firm. In this emerging concept of a market with the focus on customer-company interaction, the roles of the company and the customer converge (Prahalad &

Ramaswamy 2002, Prahalad & Ramaswamy 2004a, Prahalad & Ramaswamy 2004b). In figure 2 is illustrated how the market as a whole becomes inseparable from the value creation process.

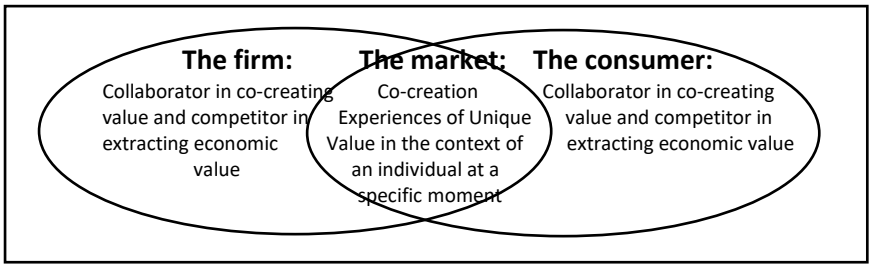



*Figure 2: The emerging concept of the market (Prahalad & Ramaswamy 2004a)*

Firms that embrace this concept of co-creation will experience great opportunities for value creation. Therefore, it is necessary for a firm to facilitate co-creation experiences for individuals who are willing to interact with the firm (Prahalad & Ramaswamy 2004a). An effective way for a firm to facilitate interactions with and among its customers, is the creation of a co-creation platform. In Figure 3 Ramashwamy (2008) illustrates how firms can evolve from a firm-centric view on value creation to the creation of experience-based value through interactions by designing engagement platforms.

Engagement platforms have been described as focal touch points that facilitate the co-creation of value with and among the different actors involved in a service system, by permitting the integration of their resources (Breidbach et al 2014, Ramaswamy 2009).

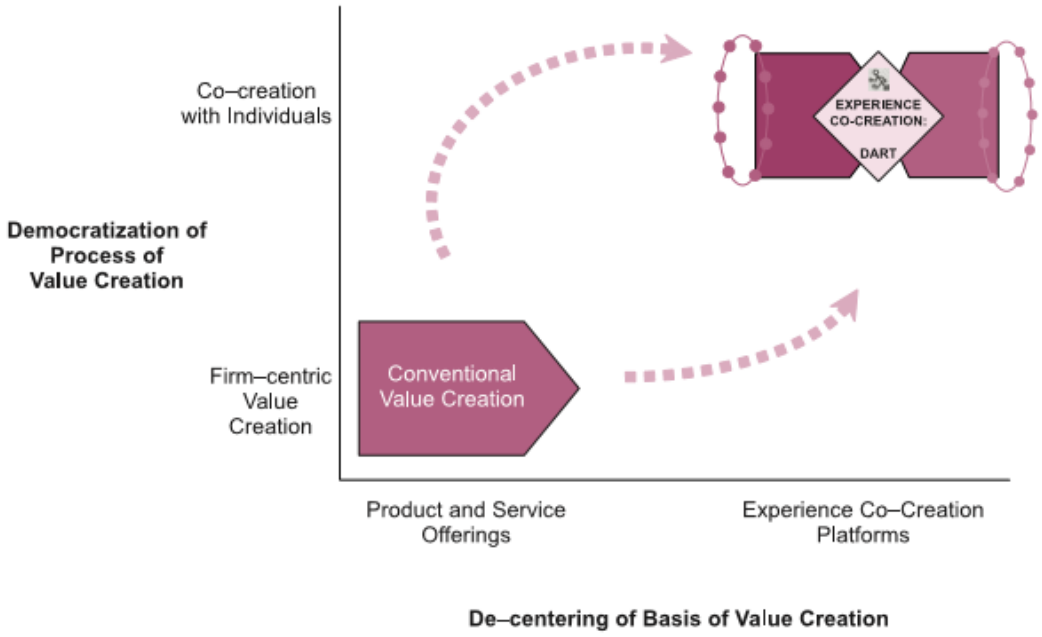



*Figure 3: Transformation of strategy: new sources of competitive advantage*

Through the use of engagement platforms, and thus the co-creation of value, customers are no longer just passive recipients of value. Customers are now involved in the value creation process. They can actively contribute to the creation of value and their influence can generate new outcomes that are beneficial to both the company and the customer (Ramaswamy 2008).

These insights about how value is created can lead to new competitive advantages and profitable growth opportunities for firms who are open to inventing new competencies and business practices (Prahalad & Ramaswamy 2004a).

One of these firms is Nike that shifted its focus from running shoes to the running experience. In 2006 Nike set up its Nike+ platform through which it wanted to interact with customers and stimulate customers to share their experiences. Thereby, Nike is able to strengthen its capacity to use global network resources. Via customers who are sharing their experiences, Nike is learning what their customers want and how they want to engage. This way Nike is able to continuously identify new innovation opportunities which can lead to future value creation (Ramaswamy 2008).

Engagement platforms are not only beneficial to the firm. They are an innovative way to build relationships between the firm, its employees, and its (potential) customers in a mutually beneficial way. Not the products or services are the starting point for the firm, but the stakeholders' experiences. Consumers will therefore be able to personally and actively engage firms in defining, creating and offering value. This way, firms can learn directly from their customers which will lead to new and better

ideas of value creation. Thus, within an engagement platform new sources of mutual value are created. This is what Ramaswamy (2010a) calls the win more – win more principle. Firms are able to decrease their costs, while increasing the value for the customers. So, all parties involved are experiencing additional value.

In order to achieve a win more – win more situation, it is foremost important for a firm to convince individuals to engage in such a platform. Engagement platforms go beyond the traditional services offered by the firm which makes it not mandatory for the customer to engage in such a platform. It is the customer who decides whether or not to accept the invitation of the firm to join the engagement platform (Ramaswamy & Gouillart 2010a).

Despite the importance of this topic, empirical research investigating the antecedents of people's willingness to join an engagement platform is lacking.

As a result, the aim of this master's thesis is to investigate **"Customers' and employees' willingness to join an engagement platform, via an empirical study of Nike's Training Club"**.

# CHAPER 2: Literature review

## 1. Value creation

Nowadays firms encounter fierce competition. By trying to differentiate themselves from their competitors, firms are seeking for new ways to create value for their customers. Value creation has always been an important topic within marketing strategy, but since the last decade we notice a shift the focus of value creation (Prahalad & Ramaswamy 2004a).

In the past, firms were locked into a firm-centric paradigm of value and its creation. Customers were not involved in the value creation process at all. But nowadays customers, and especially the interactions with these customers are becoming the focus of interest for value creation. In the next sections we will provide more insights into the shift towards this customer centricity and we will explain how firms can successfully engage people to generate better products and services (Ramaswamy & Gouillart 2010a).

### 1.1 Customer centricity

Historically, firms were only internally oriented and focused solely on their products. Trying to capture greater market share by achieving economies of scale and scope led to a product-centric paradigm. Already in 1960 Levit proposed that firms should not focus on selling products but rather on fulfilling customer needs (Shah et al. 2006). In 2000 Grönroos stated: “The focus is not on products, but on the customers' value-creating processes, where value emerges for customers, and is perceived by them...the focus of marketing is value creation rather than value distribution” (Grönroos 2000, p.24-25).

This product-centric approach was gradually being replaced by a customer centric approach, putting emphasis on customers and their wants and needs. By putting customers central, a firm is able to increase customer loyalty. Loyal customers can provide a sustainable strategic advantage that is not easily countered by competition, leading the firm eventually to higher financial rewards (Shah et al. 2006).

The true essence of customer centricity is not selling products but creating value for the customer, and in the process, creating value for the firm (Shah et al 2006). Firms can reach customer centricity by looking at value creation through a service lens. This means that firms help customers to get their job done by providing them goods and services that are the input to the customer’s own value creation

process (Bettencourt et al. 2014). In 2004 Vargo and Lusch introduced a new marketing paradigm, named *service-dominant logic*. The service dominant logic provides an overarching foundation for understanding value creation from a customer-centric perspective (Bettencourt et al. 2014).

## 1.2 Service-dominant logic

The service-dominant logic is a counter-reaction to the traditional goods-dominant logic. This goods-dominant logic was purely based on the exchange of goods, focusing solely on tangible resources, embedded value, and transactions. But new insights have emerged over the past few decades. The importance of intangible resources (like skills and knowledge), the co-creation of value, and need to build strong relationships with customers was recognized, leading to a new dominant logic for marketing. The orientation shifted from the producer to the customer and service provision became more important than the exchange of goods (Vargo & Lusch 2004).

The service-dominant logic elucidates how marketing can contribute to the strategic advantage of a firm. This strategic advantage comes from understanding and applying a service lens. To implement a service lens, a change in perspective on how value is created, is needed (Bettencourt et al. 2014). In 2008 Vargo and Lusch defined service as "the application of specialized competences (operant resources - knowledge and skills), through deeds, processes, and performances for the benefit of another entity or the entity itself" (Vargo & Lusch 2008, p.26).

The foundational proposition of the service-dominant logic is that organizations, markets, and society are fundamentally concerned with the exchange of service. Which means that service is exchanged for service (Lusch & Vargo 2012). We can discern two service types: products and services. The distinction is based on the kind of interaction between the customer and the firm. Indirect interactions imply that the customer uses or consumes resources that are outputs of the firm's processes, such as a product provided by a firm (Grönroos & Voima 2013). This product creates a self-service process for the customer by indirectly providing applied knowledge and skills - service - to the customer (Bettencourt et al. 2014). In other words, the usage of goods by a customers is a closed system for the provider (Grönroos 2011). Services, on the other hand, are interactive processes that create an open system where an organization can interact directly with customers. Think of a financial advisor applying his knowledge and skills to help a customer investing in stocks. Thus, products involve an indirect interaction between the firm and the customer, whereas services involve a direct interaction between the firm and the customer (Grönroos 2011, Grönroos & Voima 2013).

According to service-dominant logic, products are thus not embedded with value. They rather can be seen as enablers of value because they possess capabilities that give them value potential (Bettencourt et al. 2014). Value only emerges or is created by the customer during usage. From this point of view, Grönroos and Gummerus (2014) described service as the use of resources in a way that supports customers' everyday practices – physical, mental, virtual, possessive - and thereby facilitate their value creation. The Nike Training Club application, for example, has no value until it is used to exercise. Thus, the customer plays an important role in value creation, as he or she is always involved in the value creation process. Customers are therefore not passive recipients of value, but rather active participators in the value creation process (Vargo and Lusch 2004). Customers use the resources (that have potential value) provided by the firm and integrate them with other resources and skills they possess. The value potential of the resources provided by the firm is thus only realized when the offering is integrated and used with other resources (Grönroos and Gummerus 2014). Whereas the goods-dominant logic explains value as value-in-exchange (e.g. a good in exchange for money), the service-dominant logic is tied to the value-in-use meaning of value (Vargo & Lusch 2008). Value-in-use can be described as the value created by the customer during usage by integrating new resources with existing resources and applying previously held knowledge and skills (Grönroos and Gummerus 2014).

Along with the shift from a goods-dominant logic to a service-dominant logic, a change in perspective on resources occurred. Whereas in the goods-dominant logic operand resources (tangible goods like natural resources, equipment, ingredients,…) were still primary, people started to realize in the late 20$^{th}$ century that skills and knowledge can also be seen as important types of resources. These skills and knowledge, or competences, are called operant resources. Operant resources are often invisible our intangible, but can be a great source of strategic advance for a company (Vargo and Lusch 2004).

### 1.3 Service logic

Grönroos founded service logic as a reaction to the service-dominant logic. He and his colleagues critically questioned the role of the service provider when value, defined as value-in-use, is created by the customer. They argue that a firm cannot be a value creator, since this role is ascribed to the customer. Therefore they declare that the service provider should be seen as the provider of potential value-in-use to the customer. The service provider serves as a facilitator of value-in-use (Grönroos and Gummerus 2014).

This value generation process is visualized more clearly in figure 4, where we take a look at the service logic model of value creation, and its various phases, actors and goals.

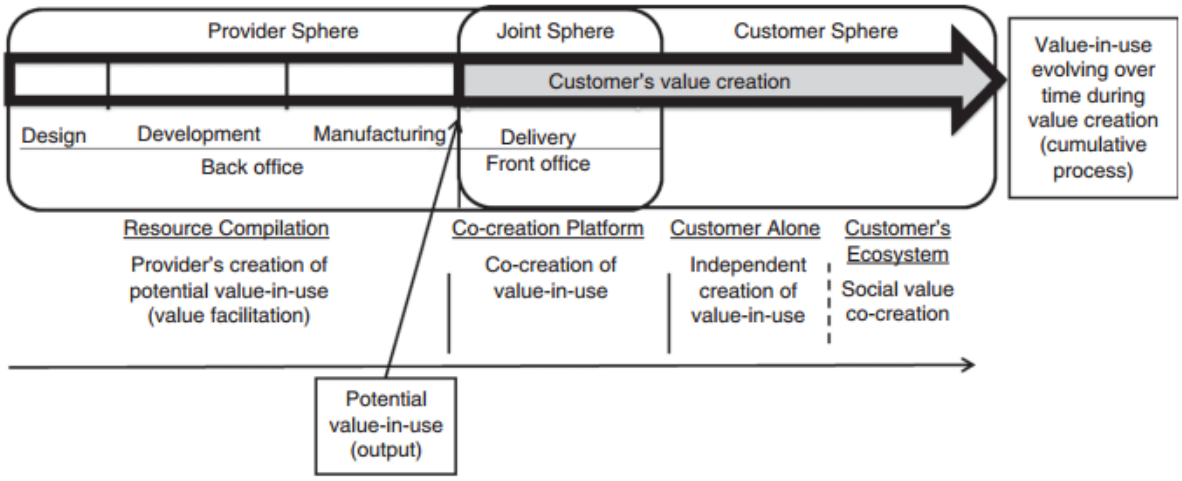



*Figure 4: Value generation process: value creation and value co-creation according to the service logic (Grönroos and Gummerus 2014)*

As shown by the figure, the value creation process consists of three spheres:

- **The provider sphere**, which is closed to the customer (the back office). In this sphere the firm is a provider of potential value-in-use. The firm's role is to facilitate the customer's value creating process by providing resources that have the potential to support the customer's creation of value-in-use.
- **The joint sphere**, where the service provider and customer interact directly. These direct interactions create a platform for value co-creation.
- **The customer sphere**, which is closed to the service provider. Here the customer independently creates value, as value-in-use. This value-in-use emerges out of integrating new resources with existing resources and applying previously held knowledge and skills. Customers can also socially co-create value with other actors if direct interactions with the customer's ecosystem occur.

It is important to note that the value generation process is not necessarily as linear as the figure implies (Grönroos and Gummerus 2014).

Since it is the customer who creates value when using the resources provided by the firm and integrating them with other resources and skills he possesses, value is always specific to the context. All customers have unique access to market, public, and private resources and they possess unique knowledge and skills. Furthermore, each customer draws on their own unique combination of experiences, culture, and mind to shape their value priorities and assigned meaning to the received

service. Therefore we can say that value-in-use is experiential and depends on the social and physical context in which usage takes place (Bettencourt et al. 2014).

## 2. Co-creation

Co-creation goes well beyond the traditional goods and services view. Based on the value-in-use principle we can say that value is a function of human experiences. These experiences come from interactions (Ramaswamy 2011) and these interactions should enable an individual customer to co-create unique experiences with the company (Prahalad & Ramaswamy 2004a). Therefore the interaction between the firm and the customer is becoming the locus of value creation. We will take a closer look at the building blocks of these interactions between the firm and customers, that facilitate co-creation experiences, as described by Prahalad and Ramaswamy (2004a) (see figure 5).

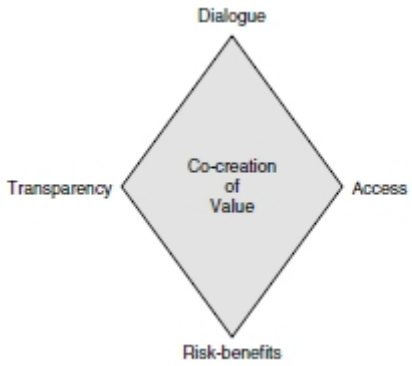



*Figure 5: Building blocks of interactions for co-creation of value (Prahalad & Ramaswamy 2004a)*

Dialogue, access, risk-benefits, and transparency (DART) are emerging as the basis for interaction between the customer and the firm.

**Dialogue:** Dialogue implies interactivity, engagement, and a propensity to act on both sides. It is much more than just listening to the customers. Dialogue implies equal partners, sharing communication to become joint problem solvers. Dialogue is important to create and maintain a loyal community.

**Access:** Traditionally, ownership is viewed as the transfer of value from the company to the customer. But since value can be experienced, customers nowadays have no need to own it. Access without ownership is what is desired most. Customers also want to get value out of the experiences of others and shared data without owning it effectively.

**Risk-benefits:** Customers are becoming more and more involved in co-creating experiences with companies. Because of this increasing involvement the question arises whether customers are also willing to take more responsibility for managing risk exposures. Therefore firms should reveal all information about the risks associated with the products and services they provide. The more informed the customer, the more likely he or she will make an intelligent choice and appropriate tradeoffs. An open dialogue and tremendous access to information are thus strict conditions to shift more responsibilities to the customers.

**Transparency:** Companies have traditionally profited from the information-asymmetry between them end their customers. But for customers to become co-creators of value, transparency is necessary. By making information concerning their used technologies and vital business processes visible to customers, the control of the value creation process is relinquished before the point of exchange. This is what makes co-creation possible.

These building blocks of the DART-model are necessary conditions for companies to be able to engage customers as collaborators in co-creating value. In this emerging concept of a market with the focus on customer-company interaction, the roles of the company and the customer converge (Prahalad & Ramaswamy 2002, Prahalad & Ramaswamy 2004a, Prahalad & Ramaswamy 2004b). The market as a whole becomes inseparable from the value creation process and converts into a forum for conversation and interactions between customers, customer communities, and firms (Prahalad & Ramaswamy 2004a).

Ramaswamy & Gouillart (2010a, p.96) described the core principle underlying the implementation of co-creation as “engaging people to create valuable experiences together while enhancing network economics”. As shown in figure 6, this co-creation principle has four components: an experience mind-set, a context of interactions, engagement platforms and network relationships. The principle states that it all starts with the insights originating from the actual engagement experiences of people (customers, suppliers, employees, etc.). In order to be co-creative, a company should use these insights to continuously (re)design what is of value. This way unique value can be created together with them. Engagement platforms are designed to “industrialize” the scale and scope of interactions, which drives the costs down and in the meantime reduces risks. This requires a broad network of resources that goes beyond the traditional boundaries of the company to expand stakeholder relationships (Ramaswamy & Gouillart 2010a).

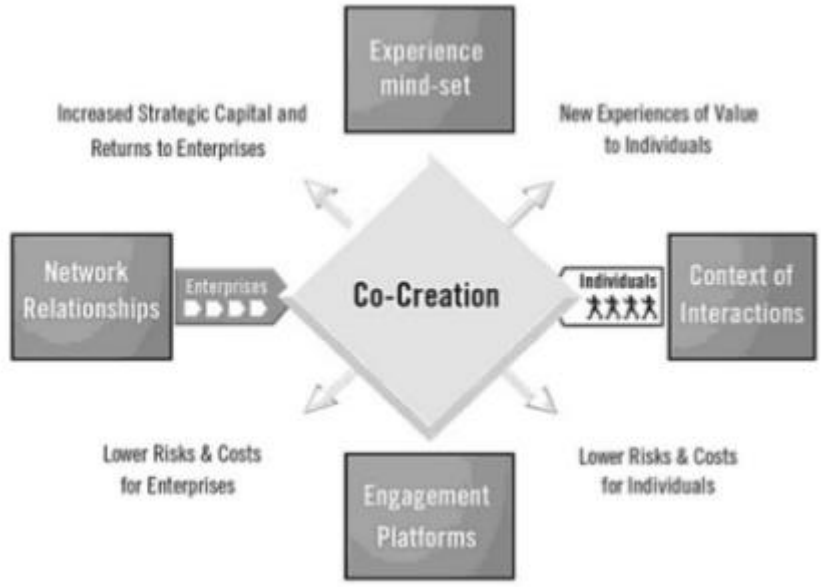



*Figure 6: The core principle of co-creation (Ramaswamy & Gouillart 2010a)*

Ramaswamy and Gouillart (2010b) stress the importance of involving all stakeholders in the co-creation process. Not only interactions between the customer and the firm are important but other stakeholders, like employees and suppliers, should participate as well in order to create maximum value creation. Stakeholders' may directly or indirectly influence customers' experiences. And therefore it is important for a company to build more trusting relationships with them. Furthermore stakeholders can directly contribute to the value creation process. Their insights may change the way companies think about operations and strategy. A company should provide platforms that allow stakeholders to interact and share their experiences. Stakeholder co-creation can lead to higher personal engagement by the stakeholders, which in turn can result in greater creativity, productivity, and lower costs for the firm (Ramaswamy and Gouillart 2010b).

An ecosystem of stakeholders is important for co-creation. It provides a continuous feedback loop of ideas which become part of the firm's decision-making process. Firms should try to facilitate the creation of experience-based value through interactions by designing engagement platforms for these ecosystems. Actually, co-creation is creating value based on experiences through engagement platforms that expand ecosystems (Ramaswamy 2011).

## 3. Engagement platforms

As mentioned before, value co-creation is ascribed as a jointly created phenomenon through the integration of resources, with a lot of emphasis on the requisite interactions between the firm and the customer.

There has been a primarily focus on the firm conditions needed for successful value co-creation, namely building strong relationships, high quality interactions and dialogue with their customers. But value co-creation does not only take place between a firm and its customers. Instead, a whole network of stakeholders is involved. The engagement of these stakeholders towards the firm or its offerings is of high importance as well (Jaakkola and Alexander 2014).

Firms can arouse these interactions with their stakeholders through "engagement platforms". The concept of engagement platforms is a relatively new concept, gaining more and more academic interest. Breidbach et al. (2014, p.594) define engagement platforms as "physical or virtual touch points designed to provide structural support for the exchange and integration of resources, and thereby co-creation of value between actors in an ecosystem".

Ramaswamy and Ozcan (2014) illustrate the concept of engagement platforms as shown in figure 7.

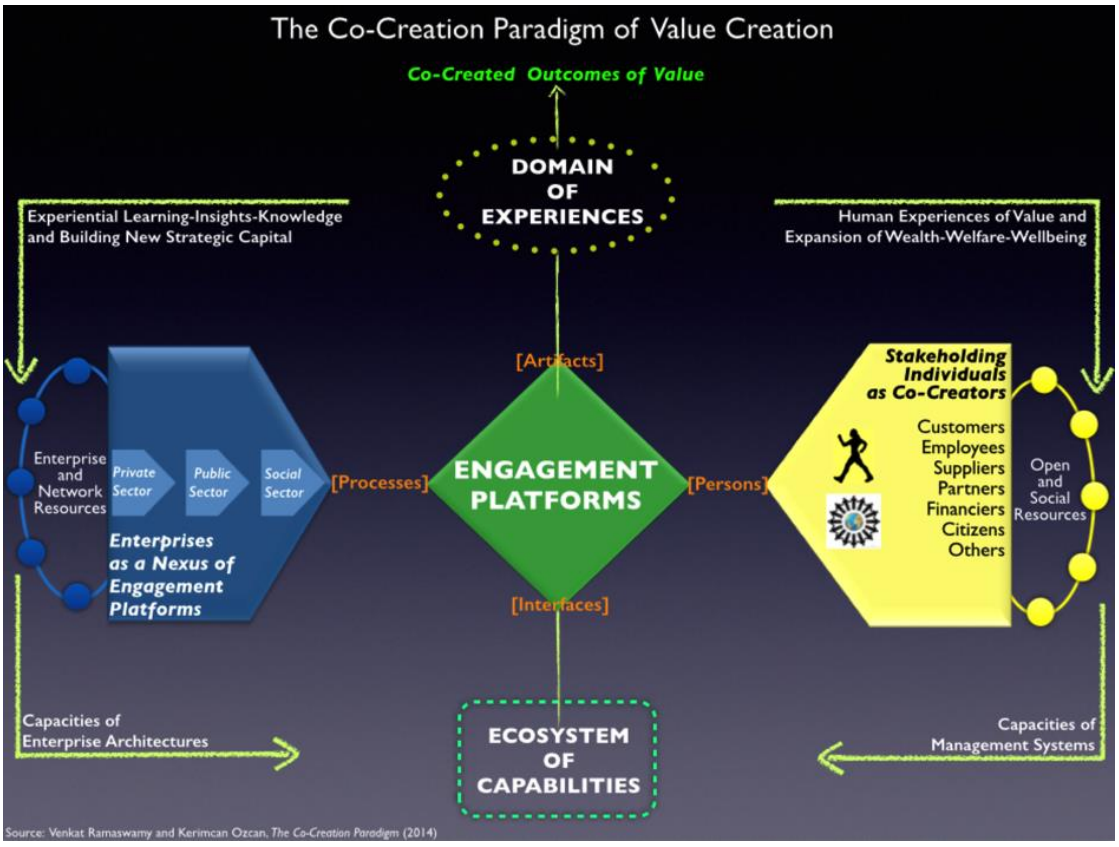



*Figure 7: The co-creation paradigm of value creation (Ramaswamy & Ozcan 2014)*

“It is the purposeful innovation and engagement design of assemblages of persons, processes, interfaces, and artifacts that make for an effective co-creation engagement platform” (Ramaswamy & Ozcan 2014, p.28).

Engagement platforms are designed to engage all stakeholding individuals as active co-creators of value. Engagement platforms can thus be seen as the cornerstone of co-creation since the engagement experiences of all these stakeholders can be used as the new basis of value creation (Ramaswamy 2009, Ramaswamy & Guillart 2010a). Obviously, an expanded, reconfigurable network of resources that goes beyond the traditional boudaries of the organization is required (Ramaswamy & Gouillart 2010a). External relationships with customers, suppliers, partners, and other external stakeholders, are very important. But co-creation can also occur inside the enterprise with employees as stakeholders, and even within and across the private, public, and social sectors.

The experiences of the stakeholders are the means through which value is actualized and embodied. Therefore, high importance should go to the configuration of these co-creation experiences. Gained knowledge, insights and experiential learning need to be used to (re)design the engagement platform (Ramaswamy & Ozcan 2014).

Figure 7 (Ramaswamy & Ozcan 2014) also illustrates that firms should build ecosystems of capabilities in all the communities in which its stakeholders exist and in which the firm’s operations are extant. Thereby, the process of joint value creation will expand the firm’s competence base (resources and skills).

Not only will the focal firm gain benefits from this co-creation process. New sources of value for all parties participating in the engagement platform will be created, which will lead to win more-win more situations. By creating value with others, this win more-win more nature of co-creation will simultaneously generate financial advantages and reduce risks (Ramaswamy & Gouillart 2010a).

Engagement platforms help firms to progressively learn about and from their customers and other stakeholders (Sawhney et al 2005). A continuous input of customer preferences generates the possibility to contrive new and innovative ideas. Engagement platforms can be used to experiment with these new ideas and opportunities. As a result, the firm will be able to build stronger relationships with its customers (Ramaswamy & Gouillart 2010a). These customers will then become more motivated and involved with the firm (Ramaswamy & Ozcan 2014). This will lead to more trust and loyalty towards the firm and its brand. Marketing costs can be reduced, efficiency can be improved, and business risk can be limited (Ramaswamy & Gouillart 2010a). Especially internet-based virtual platforms allow the firm to engage a very large amount of customers with limited risks involved.

Customer interactions can also take place in real-time and with a much higher frequency, which leads to increased opportunities for customer learning (Sawhney et al 2005).

Customers will experience advantages as well. The product can be seen as the means and not the ends of the customer experience. The product is actually the starting point for value co-creation and gives the opportunity to enable new types of valuable experiences for the individuals involved (Ramaswamy & Gouillart 2010a). In value co-creation every individual is treated as someone with a say and their judgement is recognized (Ramaswamy & Ozcan 2014). Furthermore the risks and the costs for the customer can be reduced as well (Ramaswamy & Gouillart 2010a).

Engagement platforms are thus created to manage the interactions between the firm and its stakeholders, while focusing on the user experience. These platforms can support and improve product-service offerings, or they can be integral to the offering itself. The online platform "MyStarbucksIdea" of Starbucks, where customers can post their constructive ideas for new flavors, is an example of the former, while Nike+ is an example of the latter.

To further declare the concept of engagement platforms, we will continue by conceptualizing "engagement", "customer engagement", and "employee engagement". Then we will take a closer look at Nike+, and more specifically to the Nike+ Training Club application, as an example of an engagement platform.

## 3.1 Conceptualizing engagement

Over the years the engagement concept has been studied across several fields, including organizational behavior, sociology, and marketing (Brodie et al 2011, Breidbach et al 2014, Kumar & Pansari 2016). In the academic marketing literature, and especially in the context of business relationships and branding, the term engagement has been increasingly used since 2005 (Brodie et al 2013).

However, despite this increasing number of contributions marketing scholars have paid little attention to the theoretical development of it (Brodie et al 2013).

Interpretations of the engagement concept were often linked to the terms "connection", "attachment", "emotional involvement", and/or "participation". Appelbaum (2001) was the first one to use the term engagement in the business practice. Since then, several scholars suggested a range of definitions for various engagement forms, which illuminate the concept form different perspectives. Most literature looks at engagement from a unidimensional perspective, focusing on either the emotional, or cognitive, or behavioral aspect. However, several academics recognize the

multidimensionality of the concept, in which at least two of the three dimensions are present (Brodie et al 2011).

Kumar and Pansari (2016) define engagement as the attitude, behavior, and level of connectedness of someone towards something or someone else. The more positive the attitude and behavior, and the higher the level of connectedness, the higher the level of engagement.

Looking at the engagement concept from a co-creation perspective, Jaakkola and Alexander (2014) state that engagement behavior is concerned with voluntary resource contributions provided by the customer or stakeholder (like time, money, or actions) that directly or indirectly affect the firm and its customers or stakeholders.

One's level of engagement can vary over time. Typically, relatively low levels of engagement can be seen at the beginning of the engagement process. But over time these levels of engagement tend to increase under particular, conducive contextual conditions, like favorable interactions (Brodie et al 2011).

As an individual's level of engagement towards a firm increases over time, firm performance will improve. Therefore, engagement needs to be an important part of the firm's overall strategy. Companies should ensure that both their customers and employees are well engaged (Kumar & Pansari 2016). That is why the concepts of customer engagement and employee engagement will be explained into detail.

### 3.2 Conceptualizing customer engagement

It is only in the last decade that the terms "customer engagement" and "consumer engagement" emerged in the academic and service literature (Brodie et al 2011).

The concept of customer engagement has its theoretical roots in the service-dominant logic and the expanded domain of relationship marketing. Brodie et al (2011) identified over 50 academic articles using the terms "engage" or "engagement" in relation to the S-D logic. Most of the time these terms were used in discussions about co-creation, interactions, marketing-based forms of service exchange, or customer and/or brand experience. This supports the idea that the conceptual roots of customer engagement lies in the S-D logic.

Despite the relatively profuse usage of the terms engage and engagement, there are only a few attempts in the marketing literature to conceptualize consumer engagement and there is a lack of consensus regarding its definition, dimensionality, and operationalization (Brodie et al 2011).

The most comprehensive definitions of customer engagement reflect an actor's cognitive, emotional and behavioral investments in focal interactive experiences (Brodie et al 2011). Patterson et al (2006, p.3) for example, defined customer engagement as "the level of a customer's physical, cognitive and emotional presence in their relationship with a service organization". Vivek, Beatty, and Morgan (2012, p.122) on the other hand, focus on specific actions and/or interactions and view customer engagement from a predominantly behavioral perspective. They define customer engagement as "the intensity of an individual's participation and connection with the organization's offerings and activities initiated by either the customer or the organization". In her 2011 article Hollebeek speaks of "customer brand engagement", which depends on the customer's motivational, brand-related and context-dependent state of mind. While Mollen and Wilson (2010) elucidate "brand engagement" within an online context, they also scrutinize how the engagement concept differs from "involvement". Customer engagement is suggested to extend beyond involvement since it encompasses an interactive relationship with a specific engagement object (e.g., a brand), and it requires a perceived experiential value, as well as instrumental value obtained from specific brand interactions. Furthermore, customer engagement has been identified as a psychological process (Bowden 2009), it is been examined in advertising research (Calder et al 2009), it is referred to as "brand community engagement" (Algesheimer et al 2005), and even many other perspectives on customer engagement exist (Brodie et al 2011, Brodie et al 2013).

As is made clear by now, there is no demarcated definition of customer engagement. All of the authors above defined customer engagement in a rather specific situation. In general, however, it is obvious that interactive customer experience and co-created value are the underlying conceptual foundations of customer engagement (Brodie et al 2011).

Based on these foundations, Brodie et al (2011, p.260) undertook an effort to develop a general definition of customer engagement: "Customer engagement is a psychological state that occurs by virtue of interactive, co-creative customer experiences with a focal agent/object (e.g., a brand) in focal service relationships. It occurs under a specific set of context dependent conditions generating differing customer engagement levels; and exists as a dynamic, iterative process within service relationships that co-create value. Customer engagement plays a central role in a nomological network governing service relationships in which other relational concepts (e.g., involvement, loyalty) are antecedents and/or consequences in iterative customer engagement processes. It is a multidimensional concept subject to a context- and/or stakeholder-specific expression of relevant cognitive, emotional and/or behavioral dimensions".

In addition to this broad definition, Jaakkola and Alexander (2014) stress the fact that customer engagement is about voluntary resource contributions towards the firm. Customers are in fact free to choose whether or not they want to engage in behaviors beyond those of a buyer or a user. Many studies discuss the reasons why customers express this voluntary engagement behavior. In an online context, previous research has shown that customers are willing to engage in non-transactional behaviors because they expect benefits, like economic benefits, social benefits, enhanced reputation and knowledge (Nambisan & Baron 2009).

In the last decade, customer-firm interactions shifted more and more from physical to virtual realms, leading to decreasing face-to-face interactions (Breidbach et al. 2014). With the rise of the Internet, an expansion in online social platforms occurred (Brodie et al. 2013). This shift resulted in the creation of new and unique customer experiences and behaviors (Breidbach et al. 2014). Customers are becoming increasingly active participants in these new forms of virtual customer-firm interactions. This may lead to the development of higher customer engagement towards specific firms or brands (Brodie et al 2013).

Firms should invest in facilitating customer engagement since it is seen as a strategic imperative for establishing and sustaining competitive advantage. To become profitable, customers are the key resource to a firm. Therefore, one of the primary objectives of a firm should be to make sure that the customer is heard, served and treated in the best possible manner (Kumar & Pansari 2016). Higher customer engagement will lead to higher sales and higher profitability. Customer engagement can also be seen as a predictor of future business performance (Brodie et al 2013).

### 3.3 Conceptualizing employee engagement

Besides engaged customers, firms should also strive to achieve employee engagement.

As is the case with customer engagement, there are different perspectives on employee engagement. This has led to different definitions, sometimes overlapping but often contradicting each other (Kumar & Pansari 2015). Initially, employee engagement was seen as personal engagement towards the organization and the assigned tasks (Kahn 1990). Maslach et al (2001) focused on employee burnouts, stating that everyone who is not experiencing a burnout must be engaged. In another approach, Harter et al (2002, p.269) defined employee engagement as “an individual’s involvement and satisfaction as well as enthusiasm for work”. Still others provided a multidimensional definition that comprises the cognitive, emotional, and behavioral components associated with an employee’s performance (Pritchard 1992).

From these contradicting definitions it is not even clear whether employee engagement is a state (an attitude) or a behavioral manifestation, and whether it is an individual or group phenomenon.

However, after an extensive literature review Kumar and Pansari (2014, p.55) argue that "most researchers agree that employee engagement is desirable, has an organizational purpose, has both psychological and behavioral facets, and involves energy, enthusiasm, and focused effort". Based on these insights they constructed the following definition of employee engagement: "a multidimensional construct that comprises all of the different facets of the attitudes and behaviors of employees towards the organization" (Kumar & Pansari 2014, p.55). They also proposed five dimensions of employee engagement, namely employee satisfaction, identification, commitment, loyalty, and performance (Kumar & Pansari 2014).

Employees can be seen as important operant resources of a firm. They can be seen as sources of innovation, co-creators of value, and organizational knowledge. Following the resource based view, we can say that employees can cause competitive advantage if they are neither perfectly imitable nor substitutable without great effort. Satisfied employees are more committed towards the organization, and committed employees are more loyal, stay longer and perform better (Kumar & Pansari 2014). Furthermore, through employee-customer interactions, employees can also affect customer engagement. They can contribute to the customer's perceptions about the firm, in either a positive or a negative way. A positive interaction between a customer and an employee might positively influence the way the customer talks about the firm. Therefore, we can say that employee engagement positively affects customer engagement toward a firm or a brand (Kumar & Pansari 2016).

Since employee and customer engagement have a direct influence on firm performance, it is obvious that firms should focus on designing strategies that ensure both the customers and the employees are engaged (Kumar & Pansari 2016). This brings us back to engagement platforms that are designed to co-create value for all parties involved, including the customers and the employees. Next, we will look at the Nike+ Training Club application, as an example of an engagement platform.

# 4. Nike+ Training Club

## 4.1 Nike+

With the rise of the internet customers all over the world are becoming more and more informed and connected. This has changed the way in which services are provided dramatically. Firms are constantly looking for innovative customer-focused service strategies (Ramaswamy & Gouillart 2010a).

Initially, Nike was a traditional product-centric organization. It was in 2006 when they started to see that a product is not the end point of the customer experience, but it is the starting point. That is when they shifted their product-centric approach to creating value through experiences. Specifically, Nike shifted from selling running shoes to co-creating a running experience.

It all started on the 23th of May 2006, when the CEOs of Nike and Apple, Mike Parker and Steve Jobs, announced a partnership between their two brands. This partnership resulted in the creation of the Nike+iPod. “Nike+iPod is a partnership between two iconic, global brands with a shared passion for creating meaningful consumer product experiences through design and innovation” Parker said (Apple press release 2006).

The Nike+iPod Sports Kit was an activity tracker device that measured and stored information while running. This means a runner was able to get knowledge via its iPod about the distance, pace, and amount of calories burned while running. It was launched to engage more deeply with runners and the running community at large. “This is the first result, and Nike+iPod will change the way people run” Nike CEO Mark Parker said, “Nike+iPod creates a better running experience. We see many more such Nike+ innovations in the future.” (Apple press release 2006).

In 2008 the first upgraded product, the Sportband Kit, appeared. It allowed users to store their running information without the iPod Nano. During a run, the Sportband displayed all information and afterwards the run information could be uploaded automatically to the Nike+ website (Nike 2008).

During the following years updated versions and new products appeared. In 2010 Nike released the Nike+ Run app, which was originally called Nike+ GPS. This application combined the accuracy of a GPS with the possibilities of the Sportband. It allowed runners to visually map every run while tracking pace, distance, time and calories-burned. And it motivated runners with instant feedback from famous athletes like Lance Armstrong during and after each run. The app also made it possible to connect runners all over the world, by providing the largest online running community in the world with more than 3 million members at that time (Nike 2010). On the 22$^{nd}$ of august 2016, runners in over 250 countries were connected via the Nike+ Run Club (Nike 2016b).

To keep expanding the Nike+ platform, Nike launched the innovative Nike+ Fuelband in 2012. A built-in three-axis accelerometer measures the user’s motion and translates this into NikeFuel. Each day a goal for activity, and thus the level of NikeFuel you want to achieve, can be set. This product does not only target runners but a broad range of athletes and people who want to be active can now join the Nike+ platform (Nike 2012).

The Nike+ Training Club (N+TC) app was already launched in 2011 and initially only targeted women. The app can be used as a personal trainer and is designed to provide full-body workouts. The N+TC app needed several updates before its popularity started to increase. In 2013 the Nike+ Training Club community reached nearly 11 million members. Eventually the N+TC app also started to integrate workouts for men. By doing so, the scope of potential members of the Nike+ platform was broadened again. This new N+TC app also features Nike+ Running integration and NikeFuel enablement to help athletes better measure their workouts (Nike 2013).

As is made clear by now, Nike+ has become a community of people who are connected with each other because of their common interest in sports. In august 2013 this Nike+ community counted more than 18 million members. Only a few months later Nike proudly announced that it reached the milestone of 28 million users (Nike 2014). Since then, no exact numbers were made available but the huge popularity of this online platform is obvious.

Nowadays Nike is still expanding its imperium by continuously setting up new partnerships. For example, in 2015 Nike partnered up with Spotify to make it possible for Nike+ members to stream Spotify's song catalog directly from the Nike+ Running app. "Since our launch as the original running app in 2006, music has always been core to the Nike+ Running experience" said Adam Roth, Nike VP, Global Running Brand Marketing. "Our partnership with Spotify takes that experience to a new level, leveraging personalized music as motivational fuel every run, for every runner" (Nike 2015).

## 4.2 N+TC app

The Nike+ Training Club app is designed as a personal training app with more than 100 workouts which are made available via audio and visual guidance from Nike trainers or famous athletes like Serena Williams.

The first step to use the app is to create a Nike+ account. By providing personal information like your gender, height, and weight, Nike is able to collect useful data from its customers. Combined with the information that becomes available from selecting and performing workouts (type of workouts, number of workouts, etc.) Nike can adjust its offerings to specific customer profiles.

Once you created an account you can choose a workout based on you own preferences. Whether you want to improve your strength, endurance or flexibility and whether you want your workout to last 10 minutes or 45 minutes, it is all possible. You can also choose among a single workout or a customized training schedule of several weeks adapted to your personal goals and starting level.

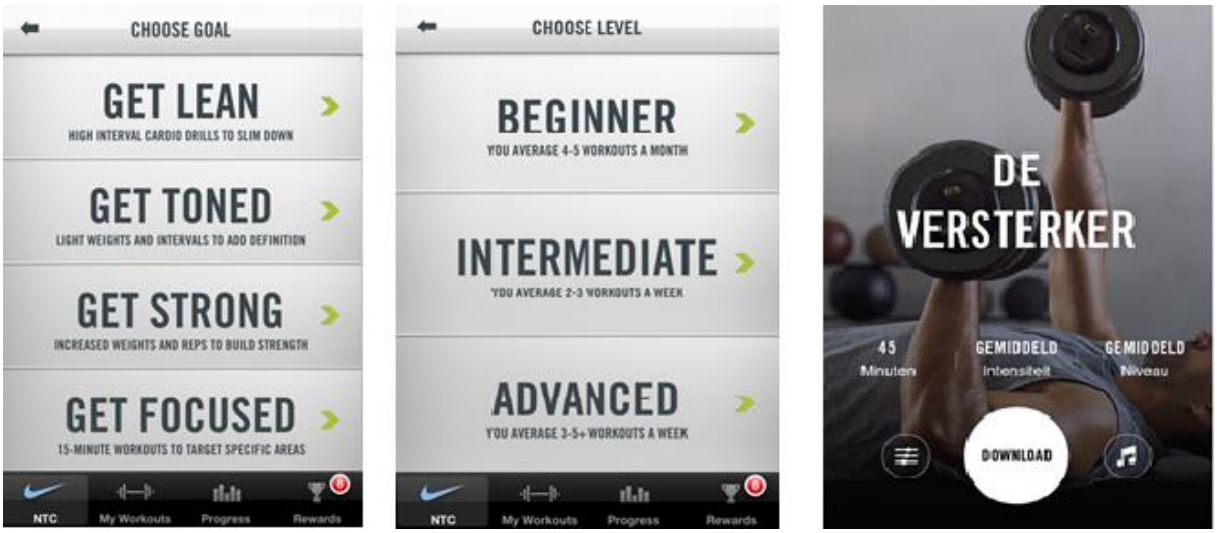



*Figure 8: Screenshots Nike+ Training Club app*

After selecting your workout, a video with visual and audio guidance is made available. A personal trainer demonstrates and explains the exercises. Depending on the type of workout you selected, a time bar or a specific number of repetitions indicates how long or how many times you have to repeat the exercise. Regular encouragements are provided by the coach.

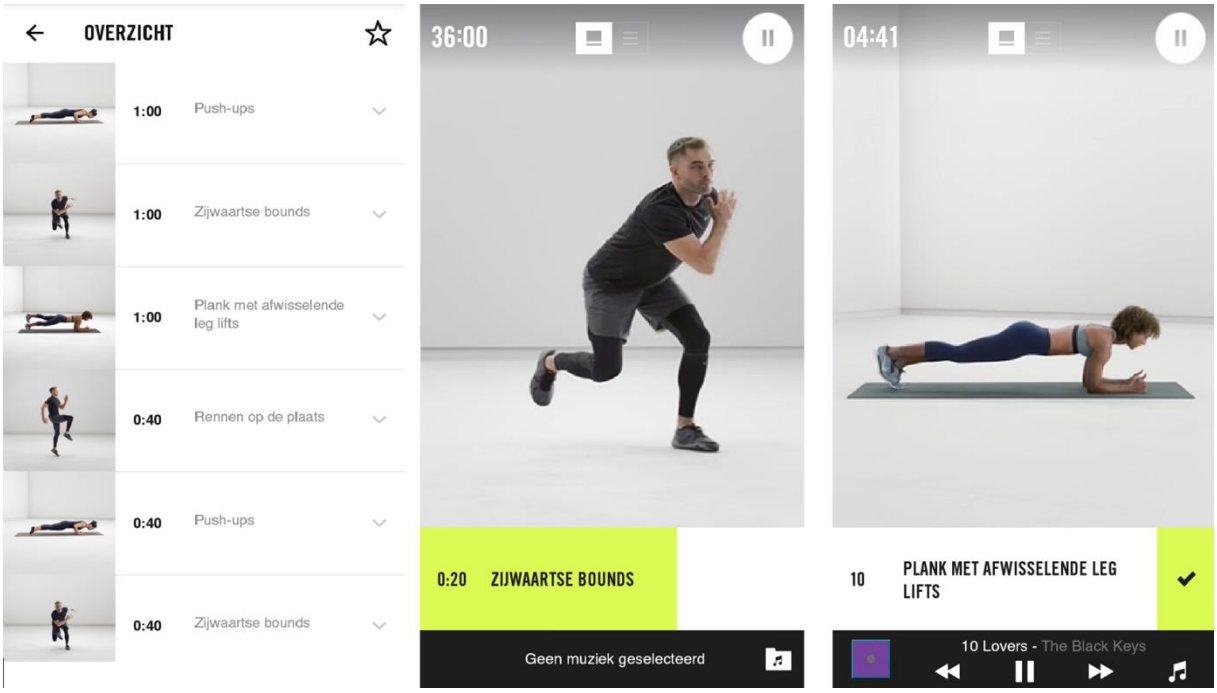



*Figure 9: Screenshots Nike+ Training Club app*

After completing a workout you can share this workout with friends. The N+TC app provides the

possibility to customize photos with stickers. Your friends can like or comment your posts which, in turn, can have a motivating influence for future workouts.

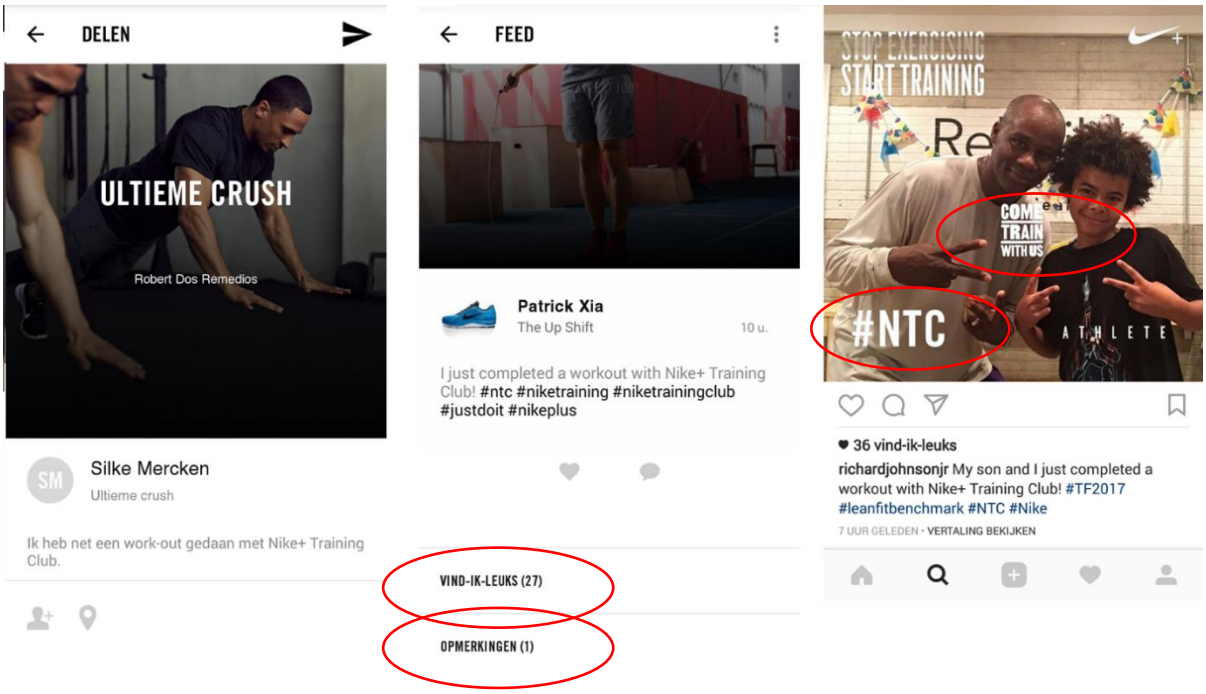



*Figure 10: Screenshot Nike+ Training Club app & social media posts (shared via #N+TC)*

Customers who use the Nike+ Run Club app, can get their runs integrated into the Nike+ Training Club app. Also other activities, like swimming, a yoga session, or a basketball training can be entered manually. This way, the app provides you a total overview of your completed sport activities (Nike 2016a).

The Nike+ Training Club app is a great example of a co-creative engagement platform:

Within the Nike+ platform, value-creation is a function of the user's own experience. This experience is partly created by the user him/herself (how he/she decides to workout) and partly by Nike+, which provides the engagement platform. "The Nike+ co-creation platform reaches out to the user on his or her own terms and invites him/her to connect not only with Nike but also with a vast community of sportsmen and women" (Ramaswamy & Gouillart 2010a, p.10).

The ultimate goal of Nike+ is to create new and innovative results that lead to win more-win more situations. According to Ramaswamy and Gouillart (2010a) Nike+ is a great example of a co-creative engagement platform that allows Nike to:

- Learn directly from the behavior of its customers;
- Generate new ideas rapidly;

- Experiment with new offerings quickly;
- Get direct input from customers on their workout preferences;
- Build deeper relationships and trust with the community;
- Generate “stickier” brand collateral;
- Reduce risks and costs

Since we speak of mutual value creation, there are benefits generated for the customer as well. By using the Nike+ Training Club Application, we saw that users are able to set up a personalized training programme based on their own goals. The workouts are always and everywhere available. During the workout they get motivated by famous athletes or personal trainers. After sharing their workout on social media or the Nike+ Club they can get more encouragements from other users as well. Other activities (like running, cycling,…) can get integrated in the N+TC application. This way the application can present you a total overview of all your completed sport activities.

All these new types of experiences did not exist before Nike+ provided them. Furthermore, the Nike+ platform also reduces risks and costs for the users of the platform. By using the NTC application you can save the cost of an actual personal trainer. Furthermore, these online personal trainers will reduce the risk of training by giving you access to audio and video guided instructions, explaining you how to perform an exercise.

By setting up this Nike+ engagement platform, Nike is able to attract new adherents to its brand and to boost its sales. Nike+ leads to increased motivation and involvement among its users. We can say that Nike+ is a successful example of an engagement platform used as a relationship-building marketing instrument. However, it is important to keep in mind that engaging in such a platform is not mandatory for the customer. Therefore, it is important to examine the factors influencing customers’ willingness to join such a platform.

Since it is not compulsory for customers to join this platform, it can be of great importance for Nike to gain insight into the antecedents of people’s willingness to engage. Therefore we set up an empirical research, which is described in the next chapter.

# CHAPTER 3: Empirical research

In the literature review we took a closer look at the concept of value co-creation, the importance of interactions between the firm and its stakeholders, and we described the rise of innovative engagement platforms.

Individuals are in fact free to choose whether or not they want to join an engagement platform. Therefore, this empirical research will take a closer look at the antecedents of customers' and employees' willingness to join an engagement platform.

In the next part, we will look at one of Nike's engagement platforms; the **Nike Training Club**. We tried to explore the antecedent predictors and mediating variables that influence an individual's intention to use this training application.

Therefore, we created online questionnaires that were answered by Nike employees and (potential) customers. Hence, we were able to identify possible differences among both groups.

## 1. Exploratory interviews

In order to get a better understanding of the potential factors that influence the decision whether or not someone is willing to engage with the Nike+ Training Club app, 15 exploratory interviews were conducted. Nike employees, stationed at the Laakdal logistics campus in Belgium, were asked several questions about their beliefs and perceptions concerning the N+TC app.

Based on their answers we were able to deduce several indicators of their attitude towards the Nike+ Training Club. Most answers reflected the employees' beliefs about the value of the app, the characteristics of the app, personal characteristics and job-related factors.

We believe that the same indicators account for Nike's customers' attitude towards the Nike+ Training Club app, with an exception for the job-related influential factors.

Based on the insights gained from the exploratory interviews we were able to construct a conceptual model.

## 2. Conceptual model and hypotheses

Our conceptual model starts from the abovementioned exploratory interviews and Meuter et al.'s work on customers' willingness to try a self-service technology (Meuter et al 2005). We adapted this model to the specific research context based on the insights provided by the exploratory interviews.

Our conceptual model, visualized in figure 11, consists of antecedent predictors, mediating variables and the desired outcome, namely the intension of future usage (i.e., willingness to engage).

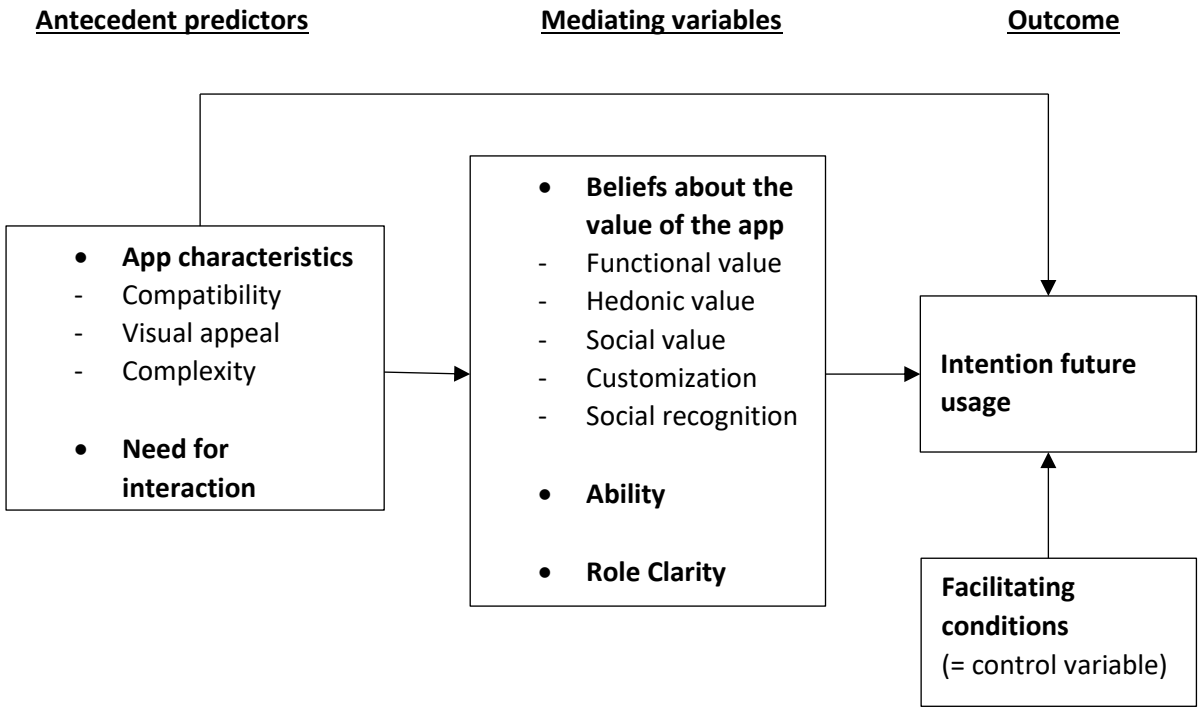



*Figure 11: Conceptual model*

The mediating variables can be seen as variables that indicate an individual's readiness to join the new platform. This readiness is a condition or state in which an individual is prepared and likely to use an innovation for the first time (Meuter et al 2005). The mediating variables are conceptualized by role clarity, the individual's ability, and his or her beliefs concerning the value of the app.

Role clarity is about the customer's understanding of his role in the service process, while ability is about the customer being able to perform a task by having the necessary skills and confidence (Meuter et al. 2005). The customer's beliefs concerning the value of the app, include functional value, hedonic value, social value, customization, and social recognition. Functional value is experienced when

something is perceived as being helpful, functional, practical and useful to the customer, while hedonic value refers to satisfying hedonic gratifications (e.g. fun and enjoyment) (De Vries & Carlson 2014). Social value is achieved when someone is able to interact and communicate with like-minded people. Social recognition on the other hand, occurs when someone experiences social feedback (e.g. social recognition) from others on his behavior. The last mediating variable is customization, which refers to the possibility to interact and communicate in order to receive better suited services (De Vries & Carlson 2014).

Furthermore we explore four antecedent predictors. Three of them are related to characteristics of the focal N+TC app, namely compatibility, visual appeal, and complexity. The fourth predictor concerns an individual's need for interaction.

We will take a closer look at each of these predicting variables and formulate hypotheses which will be tested in the next section:

**Compatibility**

Users of the Nike+ Training Club app primarily value the app because of the opportunity it offers to fulfill specific service needs. It is important that the app is compatible with their needs, values, past experiences, and routines (Kleijnen et al 2007). Because of the consistency with his or her values and lifestyle, compatibility will increase the individual's motivation to use the N+TC app (Meuter et al 2005). Therefore, we expect that greater perceived compatibility is associated with a more positive belief about the values of the app, a higher ability to use the app, an increased role clarity and increased intention of future usage. Hence,

***H1: Compatibility positively influences beliefs about the functional value of the N+TC app.***

***H2: Compatibility positively influences beliefs about the hedonic value of the N+TC app.***

***H3: Compatibility positively influences beliefs about the social value of the N+TC app.***

***H4: Compatibility positively influences beliefs about the customization value of the N+TC app.***

***H5: Compatibility positively influences beliefs about the social recognition value of the N+TC app.***

***H6: Compatibility positively influences the ability to use the N+TC app.***

***H7: Compatibility positively influences the role clarity of the N+TC app.***

***H8: Compatibility positively influences the intention of future usage of the N+TC app.***

**Visual appeal**

During the interviews, when we asked the individuals about their general findings about the N+TC app, the first answers received referred to the visual appeal about the app. Therefore we can assume that this is an antecedent that should be included into the conceptual framework. Visual appeal involves the extent to which the app is displayed in an attractive way (Wetzels et al 2005). We assume that the better the visual appeal of the N+TC app, the more positive the beliefs about the values of the app, the higher the ability to use the app, the higher the role clarity and intention of future usage will be. Hence,

***H9: Visual appeal positively influences beliefs about the functional value of the N+TC app.***

***H10: Visual appeal positively influences beliefs about the hedonic value of the N+TC app.***

***H11: Visual appeal positively influences beliefs about the social value of the N+TC app.***

***H12: Visual appeal positively influences beliefs about the customization value of the N+TC app.***

***H13: Visual appeal positively influences beliefs about the social recognition value of the N+TC app.***

***H14: Visual appeal positively influences the ability to use the N+TC app.***

***H15: Visual appeal positively influences the role clarity of the N+TC app.***

***H16: Visual appeal positively influences the intention of future usage of the N+TC app.***

**Complexity**

A complicated, confusing technology will hinder the customer and will make it more difficult for a customer to operate and understand the service. Furthermore it may also make the benefits of the service less apparent to the user. This will, in turn, lead to a lower motivation for future usage of the technology (Meuter et al 2005). We assume that if the Nike+ Training Club app is perceived as complicated or confusing, a customer will have less favorable beliefs about the values of the app and its role clarity. There will also be a lower perceived ability and intention to use it. Hence,

***H17: Complexity negatively influences beliefs about the functional value of the N+TC app.***

***H18: Complexity negatively influences beliefs about the hedonic value of the N+TC app.***

***H19: Complexity negatively influences beliefs about the social value of the N+TC app.***

***H20: Complexity negatively influences beliefs about the customization value of the N+TC app.***

***H21: Complexity negatively influences beliefs about the social recognition value of the N+TC app.***

***H22: Complexity negatively influences the ability to use the N+TC app.***

***H23: Complexity negatively influences the role clarity of the N+TC app.***

***H24: Complexity negatively influences the intention of future usage of the N+TC app.***

**Need for interaction**

Since the Nike+ Training Club app is usable on a mobile phone, users are able to perform the workouts anywhere and whenever they feel like working out. This means they're not depending on others and they have the possibility to use the app on an individual base. Some people, however, might have a need for personal interaction while exercising.

Meuter et al (2005) argue that a high need for personal interaction may lead to decreased interest in learning how a self-service technology works. This, in turn, may lead to reduced motivation to try it. As such, in the context of the N+TC app we anticipate that a high level of need for personal interaction decreases positive beliefs about the values of the app and its role clarity. We believe that there will also be a lower perceived ability and intention to use the N+TC app. Hence,

***H25: Need for interaction negatively influences beliefs about the functional value of the N+TC app.***

***H26: Need for interaction negatively influences beliefs about the hedonic value of the N+TC app.***

***H27: Need for interaction negatively influences beliefs about the social value of the N+TC app.***

***H28: Need for interaction negatively influences beliefs about the customization value of the N+TC app.***

***H29: Need for interaction negatively influences beliefs about the social recognition value of the N+TC app.***

***H30: Need for interaction negatively influences the ability to use the N+TC app.***

***H31: Need for interaction negatively influences the role clarity of the N+TC app.***

***H32: Need for interaction negatively influences the intention of future usage of the N+TC app.***

**Functional value**

Functional value can be described as "being able to have access to helpful, functional, practical and useful content" (De Vries & Carlson 2014, p.504). Hamari and Koivisto (2015) refer to the existing literature related to "perceived usefulness", which refers to the perceived extent that a particular system enhances the performance of a task, and "ease of use", which refers to efficiency and an obstacle-free use of the system.

When the N+TC app is perceived as being helpful, functional, practical and useful, this will positively influence the customer's intention to use this app. Therefore, we posit the following hypothesis as:

***H33: Functional value of the N+TC app positively influences the intention of future usage of the N+TC app.***

**Hedonic value**

Based on the exploratory interviews, we expect that people seek for hedonic value when using the N+TC app. We can describe this hedonic value as satisfying hedonic gratifications such as fun and enjoyment (De Vries & Carlson 2014). Madupu and Cooley (2010) proved that hedonic value is an important driver of online brand community participation. In the context of the N+TC app we expect that when people experience the N+TC app as fun, entertaining and exciting, this will positively influence their attitude towards the future usage of this app. Hence,

***H34: Hedonic value of the N+TC app positively influences the intention of future usage of the N+TC app.***

**Social value**

Existing literature argues that customers who co-create in virtual environments expect social benefits, like opportunities to connect and interact with like-minded people, and opportunities to build relational ties among participants (Nambisan & Baron 2009, Füller 2010, Jahn & Kunz 2012).

Social value can therefore be described as the ability to interact and communicate with other customers and perceive other customers as similar to themselves (De Vries & Carlson 2014).

Nike+ provides opportunities for social interactions facilitated via its Nike+ Training Club platform. Users can derive social value from the interactions with other like-minded users of the app. As such, it is argued that social value positively influences the intention to use the N+TC app. Hence,

***H35: Social value of the N+TC app positively influences the intention of future usage of the N+TC app.***

**Customization**

In the literature review we described the importance of value co-creation between the firm and its stakeholders. By involving the customer in the value co-creation process, the firm is able to learn from its customers' experiences. This way, the firm can customize its offerings even better to its customers. In this context, we can describe customization as "a customer being able to interact, communicate and in certain cases cooperate to achieve experiences, services and offerings that serve the customer better" (De Vries & Carlson 2014, p.506).

When a user of the N+TC app is able to interact with the app in such a way that the workouts provided by the app are better suited for him, this will positively contribute to this person's attitude towards the app. Hence,

***H36: Customization of the N+TC app positively influences the intention of future usage of the N+TC app.***

**Social recognition**

Deci & Ryan (2000) state that, in general, human beings inherently have a need for relatedness and acceptance from others. The social interactions which are made available via the N+TC platform may potentially satisfy these social needs. After completing a workout, this workout can be shared with Nike+ friends or on social media. Therefore, the user of the N+TC app has the potential to receive recognition from others after revealing his or her workout overview.

Thus, social interactions via the engagement platform of the Nike+ Training Club may create a sense of social recognition, which refers to the social feedback users receive on their behaviors (Hamari &

Koivisto 2015). We propose that social recognition directly affects the attitude towards the N+TC app. Hence,

***H37: Social recognition of the N+TC app positively influences the intention of future usage of the N+TC app.***

**Ability**

As explained earlier, the N+TC app provides video clips in which a trainer demonstrates and verbally explains all exercises. For the usage of the app it is of great importance that the user is able to perform these exercises by himself. Ability relates to having the necessary skills and confidence required to perform a task. It refers to what a person "can do" rather than what he or she "wants to do" or "knows how to do" (Meuter et al 2005).

Self-efficacy research by Ellen et al (1991) has shown that not only the specific skills to perform a task are important, but that a person's belief of self-efficacy is just as important. Therefore, self-efficacy can be seen as predictor of behavior. People will not engage in a certain behavior when they believe they are incapable of performing the task (Seltzer 1983). Thus, we expect a positive relationship between someone's ability to use the N+TC app and his or her attitude towards the usage of this app. Hence,

***H38: Ability positively influences the intention of future usage of the N+TC app.***

**Role clarity**

Usage of the N+TC app requires active participation of the user. Therefore it is of high importance that the customer knows and understands what to do. Traditionally, services are provided to the customer by an employee. But for an engagement platform active coproduction of the customer is required in order to create value. Role clarity can be described as a customer's understanding of his or her role in this service process (Meuter et al. 2005).

Clarity about your role as a customer is an important factor in the acceptance and trial of a self-service technology (Meuter et al. 2005). Therefore, we expect to find a direct positive relationship between role clarity and attitude towards the usage of the N+TC app. Hence,

***H39: Role clarity positively influences the intention of future usage of the N+TC app.***

## 3. Measurement scales

To measure the constructs described above we use existing measurement scales which we adapt to the specific context of our research:

| | |
|---|---|
| Compatibility | Kleijnen et al 2007 |
| Visual appeal | Wetzels et al 2009 |
| Complexity | Meuter et al 2005 |
| Need for interaction | |
| Ability | |
| Role clarity | |
| Functional value | De Vries & Carlson 2014<br>Hamari & Koivisto 2015 |
| Hedonic value | De Vries & Carlson 2014 |
| Customization | |
| Intention of future usage | |
| Social value | Verleye 2015 |
| Social recognition | Hamari & Koivisto 2015 |
| Facilitating conditions | Ventakesh et al 2002 |

*Table 1: Overview of used measurement scales*

## 4. Data collection

To test the conceptual model data were collected by using surveys. Two types of surveys were constructed: one for the employees (appendix 1) and one for the customers (appendix 2).

For both surveys the subjects were self-selected. After the survey was put online, an email announcement was sent to all employees of the Nike campus at Laakdal. Employees were free to choose whether or not they wanted to contribute to the research by filling in the online questionnaire. The survey for (potential) customers of the N+TC app was put online as well. Friends and family were asked to participate in the research. Furthermore, the questionnaire was distributed among the students of Hasselt University.

By designing the surveys in Qualtrics, we were able to create a simple and clear questionnaire. The surveys were developed based on the literature (De Vries & Carlson 2014, Dabholkar et al 2002, Hamari & Koivisto 2015, Kleijnen et al 2007, Meuter et al 2005, Schepers et al 2012, Verleye 2015, Wetzels et al 2009) and adapted to suit the specific context of this research (see Table 1: Overview of used measurement scales). The surveys consisted of approximately thirty questions, depending on whether the respondent already used the N+TC app or not, and whether they were employed by Nike or not. The questions were first drafted in English and then translated into Dutch.

At the beginning of the survey, an introducing video of the Nike+ Training Club app was shown. Respondents were asked whether they use this training app or not. Based on their answer they were redirected to a different series of questions. The questions for non-users, who can be considered as potential users of the app, where slightly different from those of the active users of the app in order to check for their potential interest in joining the N+TC platform.

The respondents were asked to answer these questions on the basis of a seven-point Likert scale, ranging from “disagree strongly” (1) to “agree strongly” (7). The questions concerning attitude and intention of future usage are measured using a semantic differential scale. This scale enables the respondents to express their preference between two opposites. Also with this scale a 7- point approach was chosen as this would enhance the consistency of the questionnaire. For the question concerning the usage intensity, the answer had to be expressed in percentage.

All answers were confidential, but at the end some demographics were asked in order to get a clearer picture of our respondents.

### 4.1 Nike employees

When we take a look at the Nike employees, there were 52 employees who completed the questionnaire. Out of these 52 employees, 24 (45,3%) indicated that they make use of the N+TC app. From those who do not use the N+TC app, 6 employees stated that they use another training app. It is not clear however, whether these other training apps are Nike+ apps or training apps of other brands.

The average age of the Nike employees who contributed to our research is 33 years, with the youngest respondent being 20 years old, and the oldest person being 53 years old. This average lies well above the average of the Nike customers (25 years), which is due to the fact that all Nike employees are workers while most of the Nike customers of this research are students.

This higher average age is reflected in the fact the no less than 75% of the Nike respondents lives together with his or her partner, while only 13.5% still lives at his parents' house.

To get a complete view of our group of correspondents, we also asked them about their sportiness. Therefore they had to indicate how many times a week they are performing a sporting activity for at least 30 minutes.

As we can see in figure 12 we can conclude that we had a rather sportive group of correspondents. None of the respondents is inactive, 34.5% of the respondents is active for at least 30 minutes once or twice a week, 40.5% is performing a physical activity 3 of 4 times a week, and even 25% of the respondents is working out 6 or 7 days a week.

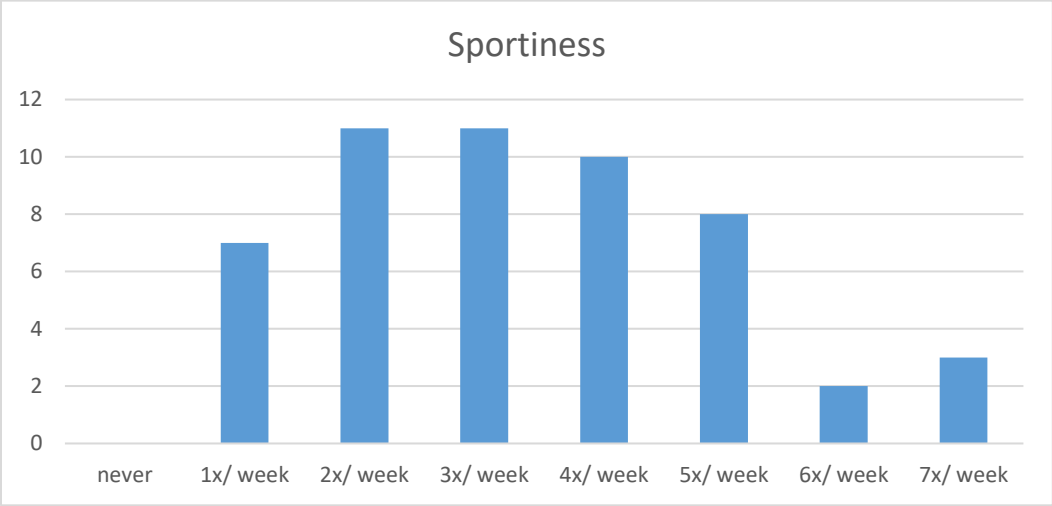



*Figure 12: Sportiness of respondents (Nike employees)*

The ration between men and women for the Nike employees is distributed equally. This means 26 of the respondents is male, while 26 of them are female.

On the other hand, when we look at the kind of work they perform at Nike Laakdal we see a clear difference between the employees stationed at the operations department, and those who work at the support department.

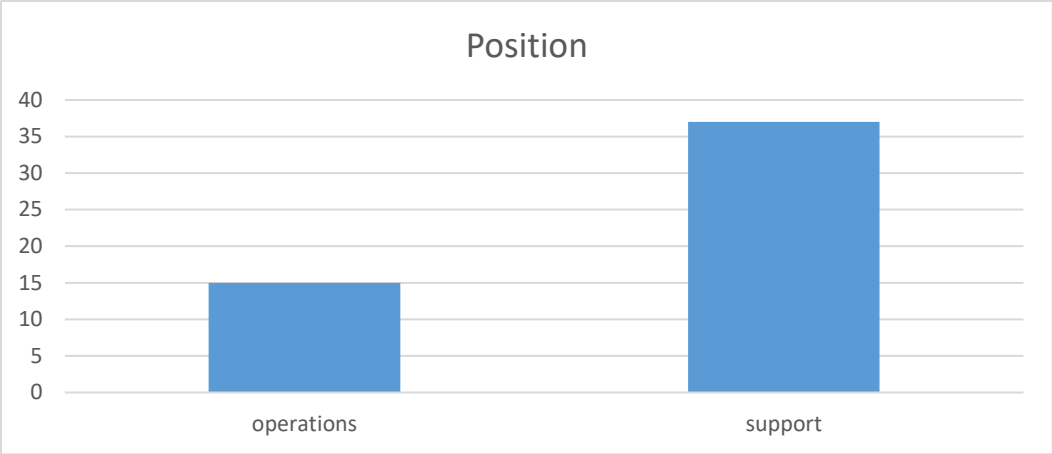



*Figure 13: Position of Nike employees*

Presumably, this difference is due to the fact that employees in the support department have a personal computer available, while most employees of the operations department don't. To take part in this research, respondents had to fill in a questionnaire that was only available online, so access to a personal computer was mandatory.

Furthermore we can also see a difference between the types of shifts of the employees. Those who perform the day-shift represent the biggest part of the respondents (63.5%), followed by those who are doing the B-shift (19%). Employees of the A-shift, night-shift and service-shift are barely represented in the research.

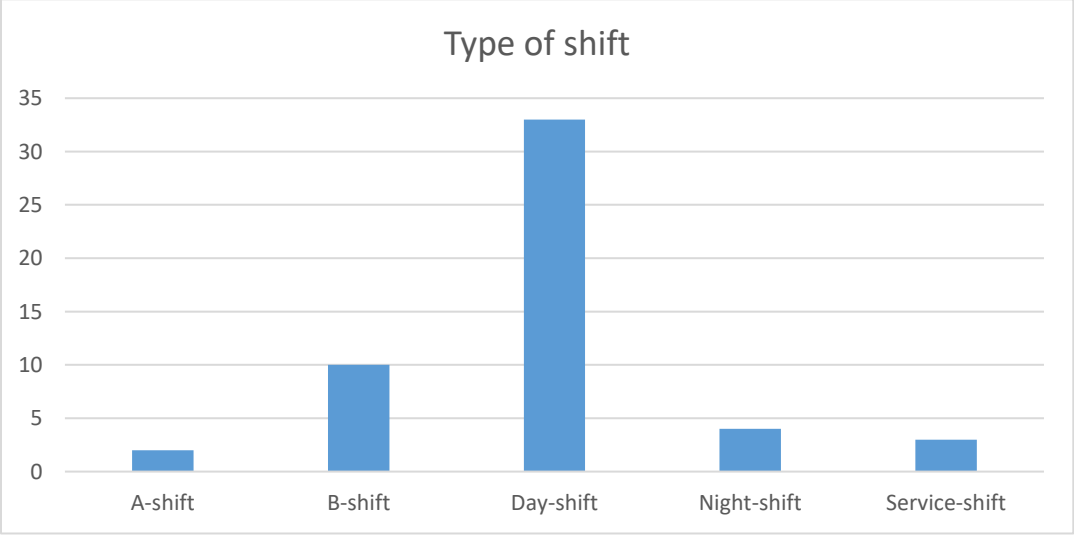



*Figure 14: Type of shifts of the Nike employees*

Unfortunately, the small sample size of Nike employees (52 respondents) is insufficient to test the

hypotheses using the Partial Least Squares (PLS)-method. Therefore, we will continue with Nike customers.

## 4.2 Nike customers

The survey for (potential) Nike customers (appendix 2) was published online for two weeks. In total 286 respondents completed the survey. It is important to notice that this group is not an accurate reflection of the population.

Out of these 286 responses, 34 (11.9%) of the respondents reported that they make use of the N+TC app. Approximately one out of three (32,6%) workouts of the people who use the app, are workouts performed with the Nike+ Training Club. On average 13.8% of the sportactivities not completed with the N+TC app are uploaded into the app afterwards.

More than 35% of the non-users indicate that they use another online training app. However, 62% of them indicate that it would not be a problem to change from their current training app to the N+TC app, and 68% of them reported that the cost in time, effort, and grief to switch from their current training app to the N+ TC app is not high. These individuals could absolutely be seen as potential users of the N+TC app.

Our group of respondents consisted of 111 (38.8%) men and 175 women (61.2%). The average age of the respondents was 25 years old. Probably this is due to the fact that a lot of students of the University of Hasselt participated in the research. This is also reflected in the question where we asked the respondents about their profession. As many as 159 of the respondents were students. Further there were 7 laborers, 58 employees, 26 self-employed, 28 civil servants, 2 unemployed, and 6 persons indicted that they belong to the group of “others”. All of the respondents of this group of “others” were PhD students.25

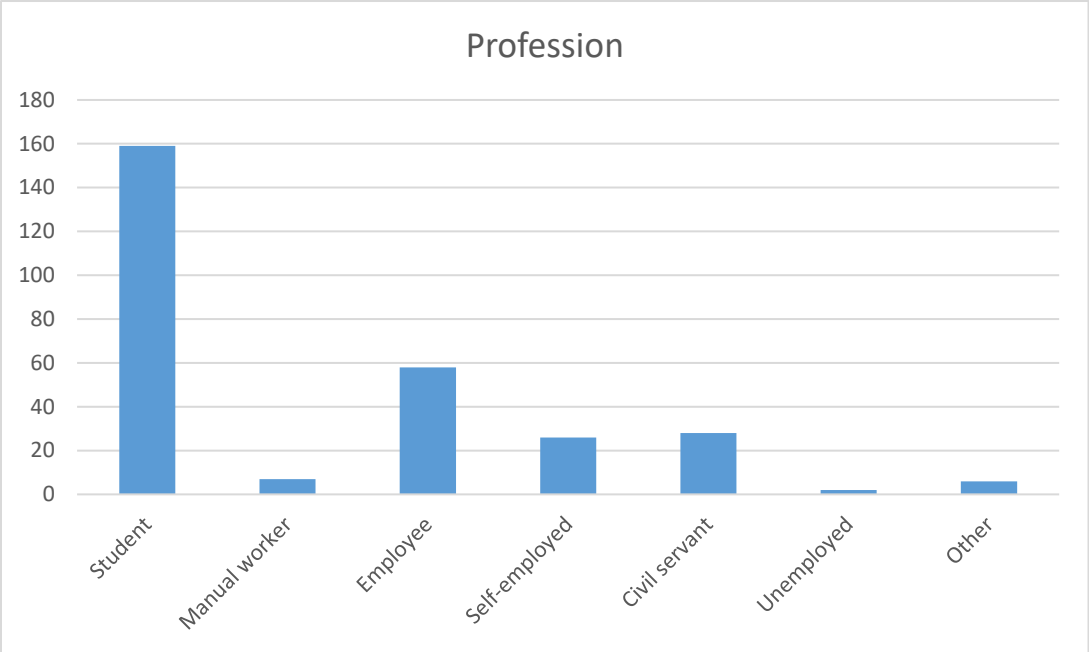



*Figure 15: Profession of respondents (Nike customers)*

The high number of students is also reflected in the answers about the respondents' marital status. As many as 55,3% of the respondents is living at its parents, while 14,3% is single, and 30,3% is living together with its partner.

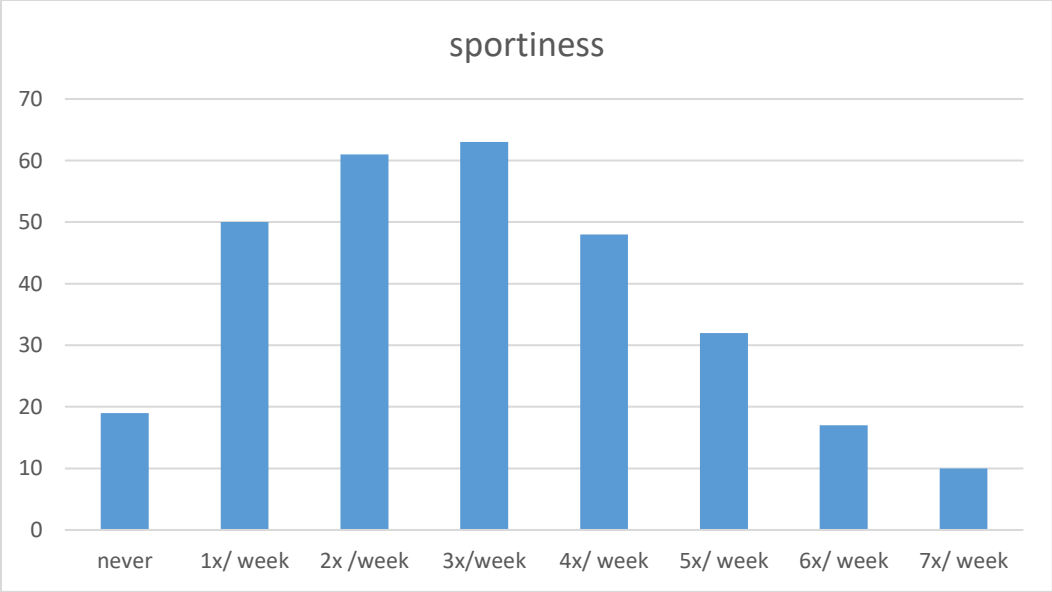



*Figure 16: Sportiness of respondents (Nike customers)*

As we can see in figure 16, the Nike customers of our research are a rather sportive group of correspondents. Only 6,33% indicated that they never perform sportactivities. Those who sport just

ones or twice a week represent 37% of the respondents, and at least 56,67% of the correspondents can be called sportive since they workout at least 3 times a week.

It may be possible that the topic of the questionnaires was more attractive to people with an interest in sports, which may explain the high scores on sportiness of the respondents.

### 4.2.1 Average scores of N+TC users

Next, we take a look at the average scores of the different constructs we included in our conceptual model. Remember that a 7- point approach was chosen for our scale. We can see following average scores for the users of the N+TC app:

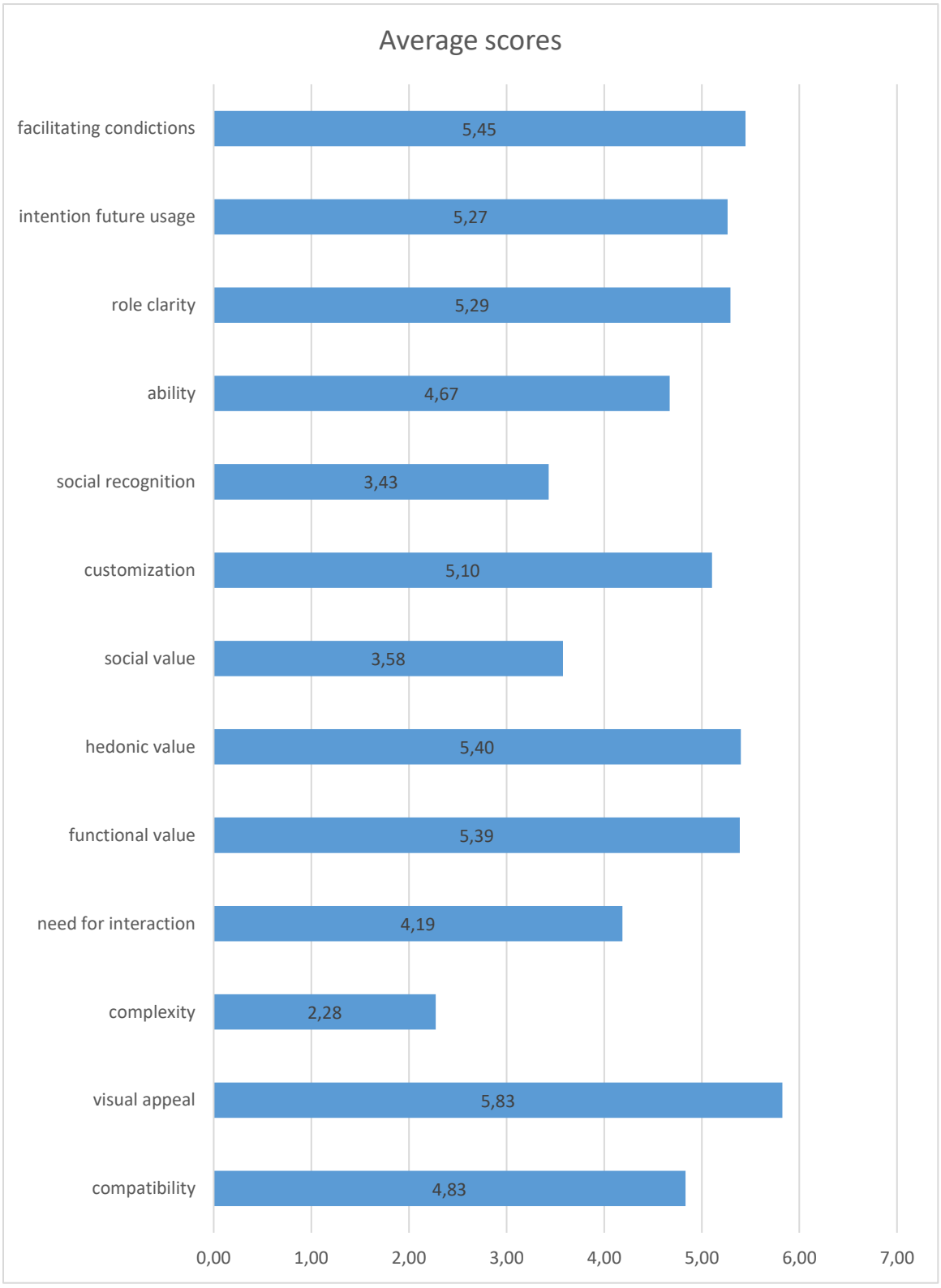



*Figure 17: Average scores Nike customers (users of the N+TC app)*

The highest average score is assigned to the construct visual appeal (5,83). This implies that users of the N+TC app appreciate the visual presentation of the app and strongly agree that the app looks attractive.

High average scores are also noticeable for the constructs hedonic value and functional value, and the control variable facilitating conditions. Thus, users of the N+TC app recognize that they have the necessary resources and knowledge to use the app, and appreciate the excitement and usefulness of it.

The lowest average score, on the other hand, can be found for the construct complexity, which implies that respondents believe that there is a low complexity involved in the usage of the N+TC app.

Social value and social recognition as well have a notable lower average score in comparison with the other constructs. Users of the N+TC app appreciate the possibility to interact with others just at a moderate level.

As in the case of the Nike employees, we were not able to collect a sufficient sample size of Nike customers that use the N+TC app. Therefore, we could not proceed with the data analysis of these groups of respondents. Hence, we will solely focus on the Nike customers who do not make use of the N+TC app. Since these respondents can be seen as potential users of the N+TC app, this group is of greatest interest for Nike.

### 4.2.2 Average scores of non-users of the N+TC app

Nike customers who do not make use of the N+TC app, provided following average scores:

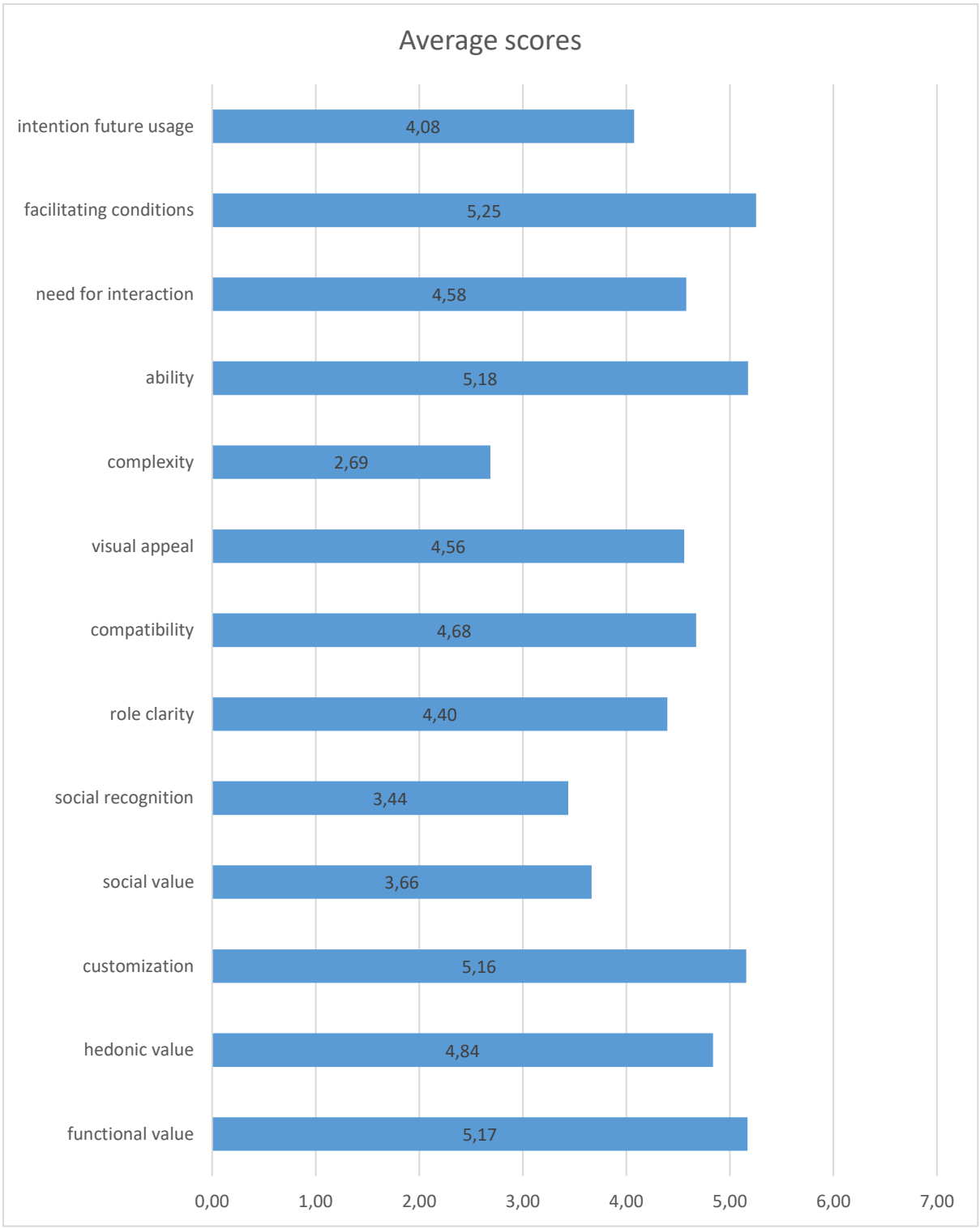



*Figure 18: Average scores Nike customers (non-users of the N+TC app)*

Compared with the users of the N+TC app, we see similar average scores for the non-users.

As we can see in figure 18, facilitating conditions, the control variable, has a very high score (5,25). This means that non-users of the N+TC app think they have the right knowledge and resources to use the app, which is of course an important and necessary requisite to start using the app.

High average scores can also be found for the constructs ability, functional value and customization. Therefore, we can presume that they think that they have the right skills and self-confidence to perform the exercises provided by the N+TC app. As we mentioned before, we examine a rather sportive group of respondents, which is a possible explanation for this high score on ability. The high score on functional value indicates that the respondents believe that the N+TC app is helpful, useful, practical, and has the ability to help them to achieve their targets. Customization refers to the supposed ability of the N+TC app to provide customized workouts for its users.

Complexity again has the lowest average score, but we have to keep in mind that this means a low perceived complexity of the usage of the N+TC app.

Since the sample size of 252 respondents who are non-users of the N+TC app is large enough, we can proceed with a PLS-SEM analysis based on the data of these respondents.

# 5. Results

To test whether the aforementioned hypotheses are supported, a PLS-SEM approach is used. Since our conceptual model is built on a chain of relations, we need structural equation models to test these relationships. With this technique dependent relationships can be tested simultaneously (Hair et al 2011). Structural equation modelling (SEM) using Partial Least Squares (PLS) is a variance based method and is preferred since it is applicable when sample sizes are rather small (Hair et al, 2014).

PLS-SEM tries to interrelate the different constructs of the conceptual model in a causal predictive way. Most of these constructs are latent variables that cannot be observed directly and therefore need to be predicted by the use of underlying indicators (items). However, it is important to make a clear distinction between two different kinds of constructs: reflective and formative constructs (Diamantopoulos & Siguaw, 2006; Freeze & Raschke, 2007). PLS can handle both formative and reflective constructs (Hair et al 2011). Since our conceptual model contains both types of constructs, PLS-SEM again seems the preferred option for analysis.

Since PLS-SEM does not presume that the data are normally distributed, it applies resampling methods like bootstrapping. Bootstrapping involves repeated random sampling with replacement from the original sample to create a bootstrap sample. In line with Preacher and Hayes (2008), we will deduce 5000 bootstrap samples, each having the same number of cases as the original sample. Based on this bootstrapping procedure, statistical significance will be tested by using percentile confidence intervals.

We conducted our analyses with statistical software SmartPLS 3.0. Thereby, we used a two-step procedure that first evaluated the measurement model and then the structural model. This stepwise approach was necessary since we first need to be confident that the measures adequately represent the constructs of interest before we can use them in the structural model (Hair et al. 2011)

## 5.1 Measurement model

The measurement model relates the observed variables (items) to the construct. To evaluate the measurement model it is important to distinguish between reflective and formative constructs.

In the case of reflective constructs, each of the indicators (items) is an observable, particular consequence of its construct. Thus, the items are caused by the construct and are expected to be mutually interchangeable and have high correlations. Reflective indicators are expected to explain the observed variance (Jarvis et al 2003).

With formative constructs, the indicators influence the construct. This means that if the indicators change, so is the construct. High correlation between the items is not required (Jarvis et al 2003).

The big difference between reflective and formative constructs is that the items of reflective constructs are kind of similar, while the items of formative constructs can be completely different.

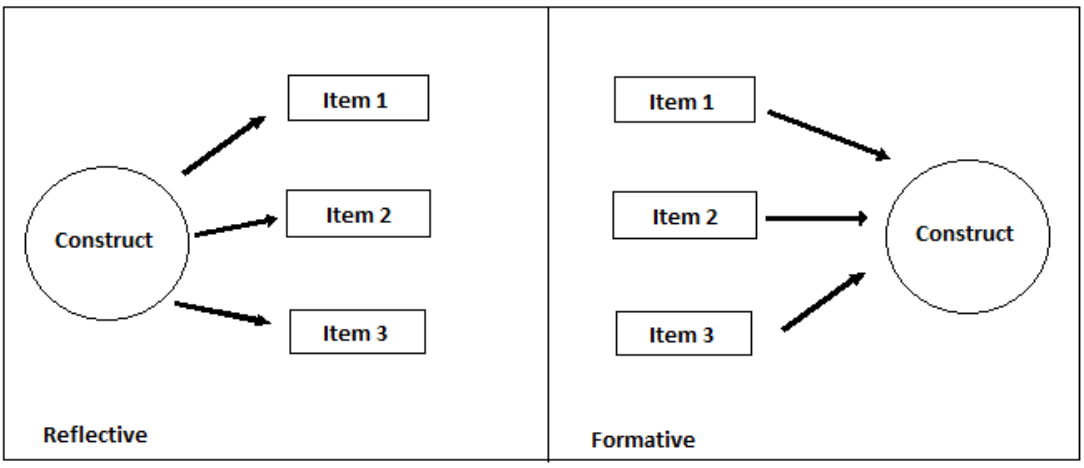



*Figure 19: Causal structures*

The following table gives an overview of the constructs and their indicators, which are either reflective or formative.

| **Constructs + items** | **Measurement model** |
|---|---|
| **Compatibility** | Reflective |
| The usage is in line with my needs<br>The usage is compatible with the way I normally perform things<br>The usage is in line with my preferences | |
| **Visual appeal** | Reflective |
| Presentation of the options is attractive<br>Visually appealing<br>Looks good | |
| **Complexity** | Reflective |
| Cumbersome to use<br>Difficult to use<br>Easy to use | |
| **Need for interaction** | Formative |
| Working out with others is more enjoyable<br>Personal attention of a trainer is important<br>Preferring a personal trainer over usage of an app | |
| **Functional value** | Reflective |
| Helpful<br>Useful<br>Helps to achieve my targets<br>Helps to sport better | |
| **Hedonic value** | Reflective |
| Fun<br>Exciting<br>Pleasant<br>Entertaining | |
| **Social value** | Reflective |
| Interaction with others is pleasant<br>Able to connect with others<br>Able to share completed workouts with others | |
| **Customization** | Reflective |
| Interacts with me to serve me better<br>Works together with me to produce workouts that better suit me<br>Works together with me to produce workouts that meet my needs<br>Provides services in conjunction with me<br>Allows my involvement in providing services to me to get the experience that I want<br>Helps me with the execution of the workouts | |
| **Social recognition** | Reflective |
| Feeling good when my achievements are noticed<br>Like it when others comment and like my workouts<br>Like it when others can follow my training results<br>Knowing that others noticed my workouts | |

| | |
|---|---|
| **Ability** | Reflective |
| Fully capable of performing the workouts<br>Confident in my ability to perform the workouts correctly<br>The usage is well within the scope of my abilities<br>Not feeling qualified for the task<br>Past experiences increase my confidence for successful usage<br>Elements that are more difficult than I am capable of are involved | |
| **Role Clarity** | Reflective |
| Knowing how to use it effectively<br>Not sure how to use it properly<br>Knowing what is expected of me when I use it<br>The steps in the process of usage are clear | |
| **Facilitating conditions** | Formative |
| Having the necessary resources<br>Having the necessary knowledge<br>Compatibility with mobile phone<br>Getting help from others when having difficulties | |
| **Intention future usage** (single-item constructs) | Reflective |

*Table 2: overview reflective and formative constructs*

We use different criteria to analyze the different types of constructs (see Table 3)

| **Reflective** | **Formative** |
|---|---|
| Unidimensionality test (in SPSS) | |
| Reliability test<br>- Composite reliability<br>- Cronbach's alpha | |
| Validity<br>- Item validity (Item loadings)<br>- Within-method convergent validity<br>- Discriminant validity | Validity<br>- Item validity (Item weights)<br><br>- Discriminant validity (CI) |

*Table 3: Different criteria to analyze the different types of constructs*

### 5.1.1. Reflective constructs

*Unidimensionality test*

For the reflective constructs we first need to test their unidimensionality. Unidimensionality refers to the existence of a single trait or dimension underlying a set of items. In a unidimensionality test all the items of a certain construct are crunched in a factor analysis. That way we want to make sure that all items can be reduced to one single factor, which is the construct corresponding to the items (Anderson et al 1987). To assess the unidimensionality of a reflective construct we use the procedure suggested by Sahmer, Hanafi, and Qannari (2006). In that case, a set of variables is unidimensional if it meets two

requirements: (1) the first eigenvalue of the correlation matrix of items exceeds one, and (2) the second eigenvalue is smaller than one.

Thus, this implies testing the following hypotheses:

(1) Ho : λ1 = 1 Ha : λ1 > 1

(2) Ho : λ2 = 1 Ha : λ2 < 1

According to Karlis et al. (2003), the first hypothesis (Ha : λ1 > 1) can be accepted if Ha : $\lambda 1 > 1 + 2\sqrt{\frac{p-1}{n-1}}$ where p equals the number of indicators and n indicates the sample size.

We will conduct a factor analysis in SPSS to test this unidimensionality. This technique is only usable for reflective items since the covariance between the different variables is caused by the variance in the underlying factor. This means that a change in the underlying construct will cause a change in the indicators (Jarvis, et al., 2003).

| **Reflective constructs** | **First eigenvalue** | **$1 + 2\sqrt{\frac{p-1}{n-1}}$** | **Second eigenvalue** | **Are both requirements met?** |
|---|---|---|---|---|
| Compatibility | 2.593 | 1.179 | 0.271 | YES |
| Visual appeal | 2.671 | 1.179 | 0.220 | YES |
| Complexity | 2.371 | 1.179 | 0.510 | YES |
| Functional value | 3.265 | 1.252 | 0.766 | YES |
| Hedonic value | 2.835 | 1.219 | 0.569 | YES |
| Social value | 3.740 | 1.252 | 0.538 | YES |
| Customization | 3.816 | 1.282 | 0.690 | YES |
| Social Recognition | 3.425 | 1.219 | 0.289 | YES |
| Ability | 3.380 | 1.282 | 0.945 | YES |
| Role clarity | 3.172 | 1.252 | 0.722 | YES |

*Table 4: Eigenvalues of reflective constructs for non-users of the N+TC app*

Based on table 4, we can conclude that the requirements for unidimensionality are fulfilled for all constructs.

*Reliability test*

Next, the reliability of the reflective constructs needs to be tested. More specific, we will test whether there is internal consistency reliability, which refers to the degree to which the items intended to measure the same latent construct have similar scores. Traditionally, Cronbach's alpha is the criterion used to measure this internal consistency reliability of the reflective constructs. Thereby the accepted threshold is .70 or above.

Next to Cronbach's alpha, Fornell and Larcker (1981) provide another index of construct reliability based on the ratio of the variance accounted for by the latent construct to the total variance in the indicators. This composite reliability also accepts values of .70 or higher.

| Reflective constructs | Cronbach's alpha | Composite reliability | Are the requirements met? |
|---|---|---|---|
| **Compatibility** | 0.921 | 0.950 | YES |
| **Visual appeal** | 0.938 | 0.960 | YES |
| **Complexity** | 0.864 | 0.916 | YES |
| **Functional value** | 0.867 | 0.901 | YES |
| **Hedonic value** | 0.862 | 0.906 | YES |
| **Customization** | 0.883 | 0.912 | YES |
| **Social value** | 0.915 | 0.917 | YES |
| **Social Recognition** | 0.944 | 0.947 | YES |
| **Role clarity** | 0.853 | 0.895 | YES |
| **Ability** | 0.842 | 0.882 | YES |

*Table 5:Cronbach's alpha and Composite reliability of the reflective constructs*

As we can see in table 5, all reflective constructs meet the requirements of the reliability test.

*Validity*

Item validity

Item validity tests whether an item is measuring what it should measure. For reflective constructs, the validity of the individual items can be assessed by determining whether the relationship between each item and its latent construct is large and significant. MacKenzie et al. (2011) indicated that a value greater than .50 would suggest an adequate level of item validity, although a value greater than .70 is preferable.

To measure the significance of the item loadings we use bootstrap confidence intervals. When a confidence interval contains the value 0, this indicates a non-significant loading.

| Reflective constructs | Outer loadings | Confidence interval |
|---|---|---|
| **Compatibility** | | |
| Comp_1 | 0,949 | [0,944 ; 0,955] |
| Comp_2 | 0,899 | [0,893 ; 0,904] |
| Comp_3 | 0,940 | [0,935 ; 0,946] |
| **Visual appeal** | | |
| Visual_1 | 0,930 | [0,924 ; 0,935] |
| Visual_2 | 0,950 | [0,944 ; 0,955] |
| Visual_3 | 0,951 | [0,945 ; 0,956] |
| **Complexity** | | |
| Compl_1 | 0,935 | [0,930 ; 0,941] |
| Compl_2 | 0,950 | [0,944 ; 0,955] |
| Compl_3 | 0,770 | [0,764 ; 0,775] |
| **Functional value** | | |
| Funct_1 | 0,867 | [0,861 ; 0,872] |
| Funct_2 | 0,826 | [0,820 ; 0,831] |
| Funct_3 | 0,783 | [0,778 ; 0,789] |
| Funct_4 | 0,778 | [0,772 ; 0,783] |
| Funct_5 | 0,762 | [0,757 ; 0,768] |
| **Hedonic value** | | |
| Hedon_1 | 0,880 | [0,875 ; 0,886] |
| Hedon_2 | 0,722 | [0,716 ; 0,727] |
| Hedon_3 | 0,900 | [0,894 ; 0,905] |
| Hedon_4 | 0,851 | [0,845 ; 0,856] |
| **Customization** | | |
| Custo_1 | 0,839 | [0,834 ; 0,844] |
| Custo_2 | 0,864 | [0,858 ; 0,869] |
| Custo_3 | 0,772 | [0,767 ; 0,778] |
| Custo_4 | 0,823 | [0,817 ; 0,828] |
| Custo_5 | 0,822 | [0,816 ; 0,827] |
| Custo_6 | *0,639* | [0,634 ; 0,645] |
| **Social value** | | |
| SocVal_1 | 0,751 | [0,745 ; 0,756] |
| SocVal_2 | 0,831 | [0,825 ; 0,836] |
| SocVal_3 | 0,815 | [0,809 ; 0,820] |
| SocVal_4 | 0,856 | [0,851 ; 0,862] |
| SocVal_5 | 0,895 | [0,889 ; 0,900] |
| **Social Recognition** | | |
| SocRec_1 | 0,914 | [0,908 ; 0,919] |
| SocRec_2 | 0,905 | [0,900 ; 0,911] |
| SocRec_3 | 0,944 | [0,939 ; 0,950] |

| | | |
|---|---|---|
| SocRec_4 | 0,853 | [0,847 ; 0,858] |
| **Role Clarity** | | |
| RoleCl_1 | 0,846 | [0,841 ; 0,852] |
| RoleCl_2 | 0,791 | [0,786 ; 0,797] |
| RoleCl_3 | 0,816 | [0,811 ; 0,822] |
| RoleCl_4 | 0,871 | [0,866 ; 0,876] |
| RoleCl_5 | *0,626* | [0,621 ; 0,631] |
| **Ability** | | |
| Abil_1 | 0,840 | [0,834 ; 0,845] |
| Abil_2 | 0,822 | [0,816 ; 0,827] |
| Abil_3 | 0,801 | [0,795 ; 0,806] |
| Abil_4 | *0,696* | [0,691 ; 0,702] |
| Abil_5 | *0,673* | [0,667 ; 0,678] |
| Abil_6 | *0,626* | [0,620 ; 0,631] |

*Table 6: Outer loadings and confidence intervals of the reflective constructs*

We notice that we have five items (marked in italic) that have an outer loading value lower than .70. Since these values are just below .70 and still above the minimum of .50, we decided that we met the requirements of item validity for all the reflective constructs.

Table 6 also makes clear that all loadings are significant.

Within-method convergent validity

Within-method convergent validity refers to the extent to which the different items of the same construct are in agreement. We use the average variance extracted (AVE), as defined by Fornell and Larcker (1981) to examine this convergent validity. The AVE-value should be higher than .50, which means that the variance within the items is explained for at least 50% by the underlying reflective construct rather than by measurement error.

| Reflective constructs | AVE |
|---|---|
| **Compatibility** | 0.864 |
| **Visual appeal** | 0.890 |
| **Complexity** | 0.970 |
| **Functional value** | 0.647 |
| **Hedonic value** | 0.707 |
| **Customization** | 0.634 |
| **Social value** | 0.690 |
| **Social Recognition** | 0.818 |
| **Role clarity** | 0.632 |
| **Ability** | 0.559 |

*Table 7: AVE reflective constructs*

Table 7 shows that all the AVE's are above .50, so the condition for convergent validity is met for all the reflective constructs.

Discriminant validity

According to Fornell and Larcker (1981), a necessary condition for discriminant validity is that the shared variance between the latent variable (construct) and its indicators is larger than the variance shared with other constructs. This Fornell-Larcker criterion states that the AVE should be compared with the squared correlations with other constructs, in simpler terms: AVE > [Cor(construct-otherconstruct)]$^2$.

This test is based on the principle that each construct should be more highly related to its own indicators than to other constructs (Chin 2010).

| | Abilitity | Compat | Compl | Customiz | Fac cond | Funct val | Hedon val | Need for int | Role clarit | Social rec | Social val | Vis app |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ability | **0,559** | | | | | | | | | | | |
| Compat | 0,165 | **0,864** | | | | | | | | | | |
| Compl | 0,291 | 0,041 | **0,790** | | | | | | | | | |
| Customiz | 0,086 | 0,239 | 0,026 | **0,634** | | | | | | | | |
| Fac cond | 0,119 | 0,070 | 0,110 | 0,088 | 0,000 | | | | | | | |
| Funct Val | 0,055 | 0,351 | 0,018 | 0,439 | 0,058 | **0,647** | | | | | | |
| Hedon val | 0,075 | 0,274 | 0,001 | 0,261 | 0,041 | 0,322 | **0,707** | | | | | |
| Need for | 0,016 | 0,011 | 0,027 | 0,011 | 0,005 | 0,019 | 0,010 | 0,000 | | | | |
| Role clarit | 0,193 | 0,107 | 0,140 | 0,075 | 0,260 | 0,041 | 0,057 | 0,008 | **0,632** | | | |
| Social rec | 0,000 | 0,080 | 0,004 | 0,005 | 0,002 | 0,017 | 0,043 | 0,001 | 0,028 | **0,818** | | |
| Social val | 0,002 | 0,039 | 0,006 | 0,012 | 0,013 | 0,026 | 0,037 | 0,006 | 0,029 | 0,556 | **0,690** | |
| Vis app | 0,107 | 0,084 | 0,115 | 0,096 | 0,040 | 0,048 | 0,127 | 0,000 | 0,043 | 0,004 | 0,001 | **0,890** |

*Table 8: Discriminant validity reflective constructs*

In table 8, AVE is displayed on the diagonal and the squared correlations are mentioned in the different columns. We can conclude that each construct is unique since AVE is greater than the squared latent correlations of all the reflective constructs.

### 5.1.2 Formative constructs

As mentioned before formative constructs require different criteria for analyzing the measurement model than reflective constructs. It is sufficient when we evaluate the two formative constructs (i.e., need for interaction and facilitating conditions) of our research model by the means of their item validity and discriminant validity.

*Validity*

Item validity

To test the item validity of formative constructs we only look at the significance of the item weights (MacKenzie et al 2011). The significance can be determined using the bootstrapping procedure. In order to be significant, 0 should be exclude out of the confidence intervals of the formative constructs.

| Formative constructs | Confidence interval |
|---|---|
| **Need for interaction** | |
| Needforint_1 | [0,714 ; 0,733] |
| Needforint_2 | [-1,165 ; -1,146] |
| Needforint_3 | [0,752 ; 0,771] |
| **Facilitating conditions** | |
| FacilCond_1 | [-0,817 ; -0,799] |
| FacilCond_2 | [1,118 ; 1,136] |
| FacilCond_3 | [0,225 ; 0,244] |
| FacilCond_4 | [0,237 ; 0,256] |

*Table 9: Confidence intervals formative constructs*

The table above shows that none of the confidence intervals contains the value 0. This means all the items of the formative constructs meet the requirements for item validity.

However, we notice that the second item of the construct "need for interaction" and the first item of the construct "facilitating conditions" have a negative confidence interval. A possible explanation is that the corresponding questions in the survey, respectively *"Personal attention of a trainer when working out is important to me"*, and *"I have the resources necessary to use the NTC app"* are not well understood.

Discriminant validity

The discriminant validity of the formative constructs can be evaluated by testing whether the constructs are less than perfectly correlated. This implies that we will assess whether an absolute value of 1 falls within two standard errors of the latent variable correlations. When this is the case, there is no discriminant validity (MacKenzie et al. 2005).

The confidence interval can be determined using the formula: CI= latent variable correlation +/- 2*standard error (s), with $s = \sqrt{\frac{1-r^2}{n-2}}$ (r= latent variable correlation coefficient; n = sample size)

The table with an overview of the standard errors can be found in appendix 3, while table 10 shows the confidence intervals.

| | Ability | Compatibility | Complexity | Customiz | **Facil cond** | FunctValue | Hedonval | Need for | Role clarity | Social recogn | Social value | Vis ap |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ability | | | | | | | | | | | | |
| Compat | [0,291; 0,521] | | | | | | | | | | | |
| Complex | [-0,646 ; -0,433] | [-0,327 ; -0,080] | | | | | | | | | | |
| Customiz | [0,173; 0,415] | [0,379; 0,599] | [-0,287 ; -0,038] | | | | | | | | | |
| Facil cond | [0,227; 0,464] | [0,144; 0,387] | [-0,450 ; -0,212] | [0,176; 0,417] | | | | | | | | |
| Funct Val | [0,113; 0,358] | [0,491; 0,694] | [-0,261 ; -0,011] | [0,568; 0,757] | [0,119; 0,364] | | | | | | | |
| Hedonval | [0,152; 0,395] | [0,416; 0,631] | [-0,165 ;0,087] | [0,402; 0,619] | [0,079; 0,326] | [0,464; 0,672] | | | | | | |
| **Need for int** | [0,002; 0,253] | [-0,232 ; 0,019] | [-0,288 ; -0,039] | [-0,231 ; 0,020] | **[-0,057 ; 0,195]** | [-0,261; -0,011] | [-0,224; 0,027] | | | | | |
| Role clarity | [0,326; 0,553] | [0,207; 0,446] | [-0,491 ; -0,257] | [0,153; 0,396] | [0,401; 0,618] | [0,080; 0,327] | [0,115; 0,361] | [-0,034 ;0,217] | | | | |
| Social recogn | [-0,109 ;0,144] | [0,161; 0,404] | [-0,065 ;0,187] | [-0,055; 0,197] | [-0,076; 0,176] | [0,005; 0,255] | [0,085; 0,332] | [-0,151; 0,102] | [0,042; 0,290] | | | |
| Social value | [-0,166 ;0,086] | [0,074; 0,322] | [-0,051 ;0,201] | [-0,017 ;0,234] | [-0,012; 0,239] | [0,037; 0,286] | [0,068; 0,315] | [-0,206; 0,046] | [0,044; 0,293] | [0,662; 0,830] | | |
| Visual appeal | [0,207; 0,446] | [0,170; 0,411] | [-0,457 ; -0,220] | [0,191; 0,431] | [0,077; 0,324v | [0,095; 0,341] | [0,239; 0,475] | [-0,138; 0,114] | [0,084; 0,331] | [-0,060; 0,192] | [-0,092; 0,160] | |

*Table 10: Discriminant validity formative constructs*

Since the value|1| does not lie within the confidence interval of the formative constructs, we can conclude that there is discriminant validity and both formative constructs are unique.

We can conclude that both the reflective and formative constructs are of good quality. After having evaluated the adequateness of the measurement model, we will now take a look at the structural model of our research.

## 5.2 Structural model

The primary criteria for evaluating the structural model are the $R^2$ values, and the magnitude and significance of the path coefficients (Hair et al. 2011).

### *$R^2$ values*

Since PLS is a prediction-oriented approach, its goal is to explain the endogenous latent constructs variance. $R^2$ (the coefficient of determination) stands for the variance in the endogenous constructs accounted for by the regression model. Our model contains eight such constructs, and their $R^2$ value is listed in table11. The higher the $R^2$ value, the better the model predicts these latent variables. According to Chin (1998), $R^2$ values of .67, .33, and .19 can, as a rule of thumb, be considered as strong, moderate, or weak, respectively.

| **Variable** | **$R^2$** |
|---|---|
| Ability | 0,38 |
| Customization | 0,30 |
| Functional value | 0,37 |
| Hedonic value | 0,33 |
| Intention | 0,37 |
| Role clarity | 0,21 |
| Social recognition | 0,08 |
| Social value | 0,05 |

*Table 11: $R^2$ values*

As we can see in table 11 we have moderate $R^2$ values for ability, customization, functional value, hedonic value and intention of future usage, and a weak to moderate $R^2$ value for role clarity (0.21). For social recognition and social value respectively, table 11 shows very weak $R^2$ values of only .08 and .05. This means that the constructs in our model only explain 8% and 5% of the variance within these variables.

### *Path coefficients*

In this last step we will test our hypotheses by evaluating which constructs have significant influence on the endogenous constructs. Therefore, we will evaluate the significance and sign of the path

coefficients. A significant positive path coefficient indicates that there is a positive relationship between the constructs, while a significant negative path coefficient indicates a negative relationship. The significance of these path coefficients is once again assessed by a bootstrapping procedure and calculating a 95% confidence interval for the 5000 cases. A hypothesis is not supported when the path coefficient is not significant or when the sign of the path coefficient is contrary to the hypothesized direction of the relationship.

| **Hypothesis** | **Relation** | **Path coefficient (β)** | **Confidence interval** | **H supported** |
|---|---|---|---|---|
| H1 | Compatibility → Functional value | 0,57 | [0,429 ; 0,679] | YES |
| H2 | Compatibility → Hedonic value | 0,48 | [0,304 ; 0,628] | YES |
| H3 | Compatibility → Social value | 0,21 | [0,028 ; 0,369] | YES |
| H4 | Compatibility → Customization | 0,39 | [0,253 ; 0,534] | YES |
| H5 | Compatibility -→ Social recognition | 0,28 | [0,125 ; 0,412] | YES |
| H6 | Compatibility → Ability | 0,26 | [0,121 ; 0,38] | YES |
| H7 | Compatibility → Role clarity | 0,26 | [0,096 ; 0.428] | YES |
| H8 | Compatibility → Intention | 0,35 | [0,216 ; 0,489] | YES |
| H9 | Visual appeal → Functional value | 0,04 | [-0,107 ; 0,168] | NO |
| H10 | Visual appeal → Hedonic value | 0,26 | [0,094 ; 0,421] | YES |
| H11 | Visual appeal → Social value | 0,05 | [-0,08 ; 0,197] | NO |
| H12 | Visual appeal → Customization | 0,18 | [0,01 ; 0,33] | YES |
| H13 | Visual appeal → Social recognition | 0,01 | [-0,116 ; 0,158] | NO |
| H14 | Visual appeal → Ability | 0,08 | [-0,037 ; 0,187] | NO |
| H15 | Visual appeal → Role clarity | 0,02 | [-0,11 ; 0,141] | NO |
| H16 | Visual appeal → Intention | 0,01 | [-0,119 ; 0,125] | NO |
| H17 | Complexity → Functional value | -0,01 | [-0,117 ; 0,094] | NO |
| H18 | Complexity → Hedonic value | 0,14 | [0,012 ; 0,28] | NO |

| | | | | |
|---|---|---|---|---|
| H19 | Complexity → Social value | 0,08 | [-0,081 ; 0,229] | NO |
| H20 | Complexity → Customization | -0,03 | [-0,144 ; 0,065] | NO |
| H21 | Complexity → Social recognition | 0,13 | [-0,022 ; 0,256] | NO |
| H22 | Complexity →Ability | -0,47 | [-0,581 ; -0,357] | YES |
| H23 | Complexity → Role clarity | -0,34 | [-0,49 ; -0,186] | YES |
| H24 | Complexity → Intention | 0,01 | [-0,136 ; 0,151] | NO |
| H25 | Need for interaction → Functional value | -0,12 | [-0,255 ; 0,14] | NO |
| H26 | Need for interaction → Hedonic value | -0,01 | [-0,157 ; 0,082] | NO |
| H27 | Need for interaction → Social value | -0,09 | [-0,343 ; 0,08] | NO |
| H28 | Need for interaction → Customization | -0,19 | [-0,336 ; 0,192] | NO |
| H29 | Need for interaction → Social recognition | -0,08 | [-0,304 ; 0,063] | NO |
| H30 | Need for interaction → Ability | -0,04 | [-0,171 ; 0,13] | NO |
| H31 | Need for interaction → Role clarity | 0,07 | [-0,049 ; 0,246] | NO |
| H32 | Need for interaction → Intention | -0,07 | [-0,212 ; 0,086] | NO |
| H33 | Functional value → Intention | 0,34 | [0,187 ; 0,495] | YES |
| H34 | Hedonic value → Intention | 0,01 | [-0,138 ; 0,152] | NO |
| H35 | Social value → Intention | -0,09 | [-0,267 ; 0,062] | NO |
| H36 | Customization → Intention | -0,05 | [-0,211 ; 0,097] | NO |
| H37 | Social recognition → Intention | 0,00 | [-0,162 ; 0,162] | NO |
| H38 | Ability → Intention | 0,05 | [-0,113 ; 0,196] | NO |
| H39 | Role clarity → Intention | -0,07 | [-0,191 ; 0,055] | NO |

*Table 12: Path coefficients*

We will explain the interpretation of the β-coefficients by the example of the first hypothesis (compatibility → functional value). The β-coefficient in this example is 0,57, which means that when

the compatibility would increase by 1, the perceived functional value of the app would increase by 0,57.

Indirect influences are possible as well. For example, when the compatibility would increase by 1, the intention of future usage will increase, through an increase in percieved functional value (of 0,57), by 0,19 (=0,57 x 0,34).

Figure 20 clearly illustrates the key findings of this master's thesis. It visualizes all the hypotheses of this research. The red arrows are the hypotheses that do not hold, while the green paths confirm the hypotheses stated before.

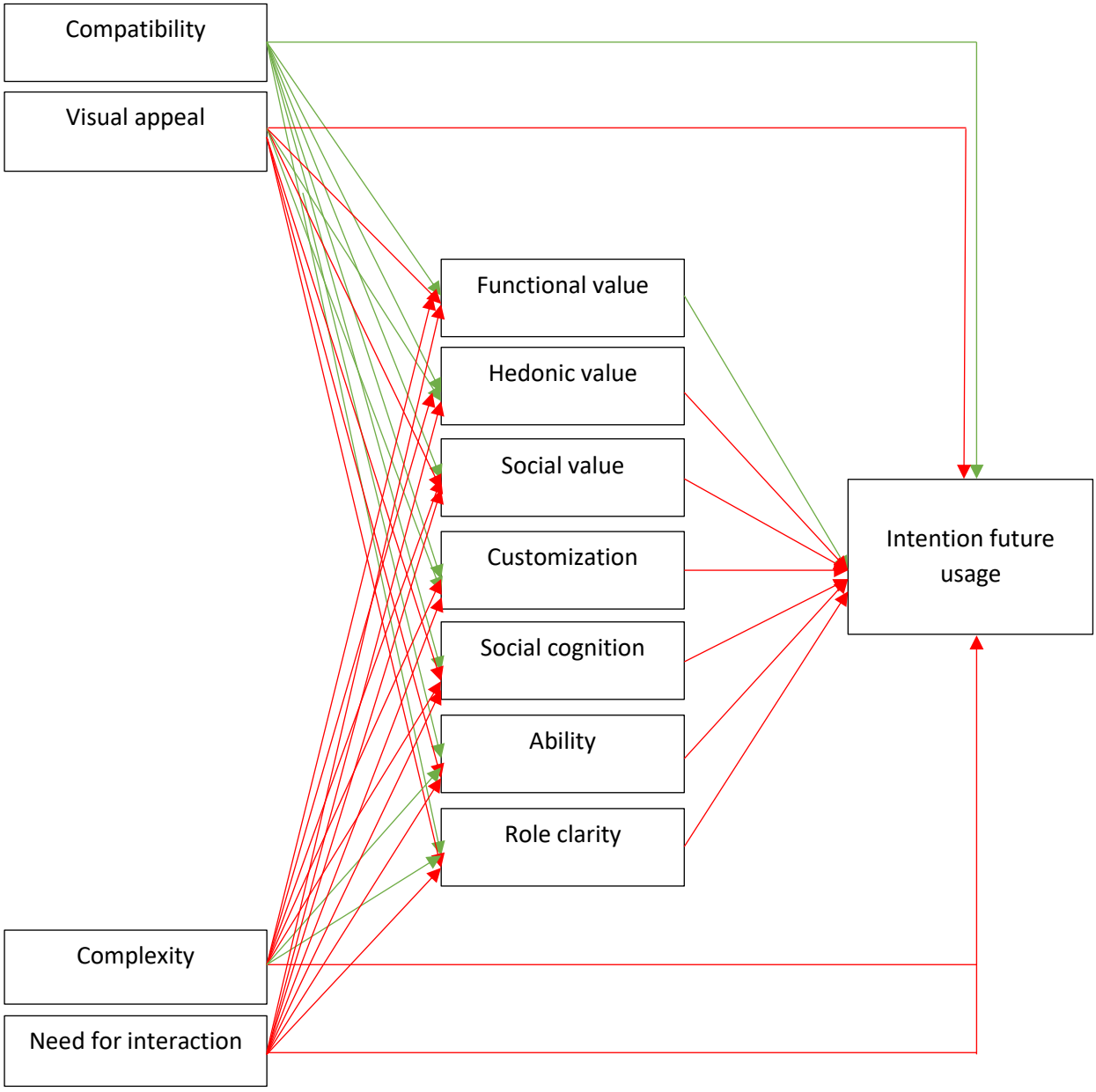



*Figure 20: Illustration of the hypotheses*

# CHAPTER 4: Conclusions

The aim of this master's thesis is to determine the predictive factors that influence an individual's willingness to join the Nike+ Training club engagement platform.

We adapted Meuter et al's (2005) model of customer trial of self-service technologies to the specific context of Nike's training application (the N+TC app). Exploratory interviews were used to determine the constructs included in our conceptual model (figure 11).

By using PLS-SEM analysis we were able to test all the hypotheses of our conceptual model for non-users of the N+TC app. The most remarkable results will now be discussed. Afterwards we will make some recommendations towards the company Nike.

## 4.1. Discussion of results

Compatibility obviously is the most dominant predictive variable with a direct significant influence on the intention of future usage and a significant influence on all of the mediating variables. Hypotheses H1, H2, H3, H4, H5, H6, and H7 are thus supported by the data. Potential users of the N+TC app primarily value the app because of the opportunity it offers to fulfill their specific service needs. Because of the consistency with his or her values and lifestyle, compatibility will positively increase the individual's beliefs about the value of the app, the ability, role clarity, and the motivation to use it in the future (Meuter et al 2005). The fact that we are dealing with a rather young and sportive sample of non-users might have an influence on these results.

Visual appeal has a positive and significant influence on a non-user's belief about the customization value of the N+TC app. We thus find support for Hypothesis 12. The app clearly visualizes the different workout possibilities, like the difficulty level, the type of workout, the duration,… This might increase the customer's feeling that they have a wide range of options to choose among, which increases their perceived level of customization. Furthermore, there is a significant positive relationship between the way the N+TC app is visualized and the customer's belief about the hedonic value of the app, which supports Hypothesis 10.

The visual attractiveness of the N+TC app, however, has no significant influence on the other mediating variables, and there is no direct positive effect on the customer's intention of future usage of the app. This means no support could be found for Hypotheses 9, 11, 13, 14, 15, and 16.

The level of perceived complexity of the N+TC app has no significant effect on the customer's beliefs about the value of the app. However, it has a high and significant negative effect on someone's

perceived ability and role clarity concerning the usage of the app, so support is only found for Hypotheses 22 and 23. This negative relationship seems obvious since Meuter et al (2005) already showed that a complicated, confusing technology will hinder role clarity and ability because it will be more difficult for customers to operate and understand the technology.

Remarkable is the positive significant relationship between complexity and hedonic value. This is in contradiction with our 18th hypothesis since we expected a negative influential effect. A possible explanation might be that customers don't want the app to be too simple. The more complex, the more possibilities and the higher the excitement might be. . Future research is needed to verify this explanation.

There is no direct significant effect of the perceived level of complexity on the intention of future usage of the N+TC app. Thus Hypothesis 24 is not supported.

Furthermore, we expected negative relationships between the customer's need for interaction and the other constructs of our conceptual model. Since a customer is not depending on others for the usage of the N+TC app, he or she has the possibility to use the app on an individual base. We expected however, that some people have a need for personal interaction while working out. These customers might have a lower interest in the usage of the N+TC app and have less favorable beliefs about the values of the app, their ability to use the app, and the role clarity. Our research however, did not provide significance for these negative relationships, so Hypotheses 25, 26, 27, 28, 29, 30, 31, and 32 are not supported.

When we look at the mediating variables, we see that only the functional value of the app has a significant positive relationship with the intention of future usage. Support for Hypothesis 33 could thus be found. In figure 18 we saw that non-users assign a high average score of 5,17 on functional value. This perception of the N+TC app as being highly helpful, functional, practical and useful positively influences the customer's intention to use this app.

The other mediating variables have a very weak and non-significant influence on the intention of future usage of the app, which means Hypotheses 34, 35, 36, 37, 38, and 39 are not supported. Despite the relatively high average scores of non-users on the customization (5,16) and hedonic (4,84) value of the app, these positive beliefs do not have a significant effect on the potential customer's intention to start using the app.

When looking at the average scores, figure 18 already demonstrated that non-users appreciate the possibility to interact with others just at a moderate level. Our PLS-SEM analysis now adds the fact that

social value and social recognition have no significant positive influence on these customers' intention to use the N+TC app.

## 4.2 Recommendations to Nike

Based on our research we will now try to formulate some recommendations to Nike with respect to its Training Club application.

In general we see that users give higher average scores to the different values of the app than non-users. This means that it is of major importance for Nike to focus on the conviction of potential users to start using the app.

Non-users already assign high scores to the functional value of the N+TC app, and the fact that they can customize the app. Furthermore, they have a high perceived ability to use the app. On the other hand, based on the average scores, we can say that Nike still has to convince them about the social value the app has to offer, and the social recognition the usage of the app can generate.

When we look at the average scores of the users of the N+TC app, we see that the lowest scores appear for social value and social recognition as well. Since Nike+ is all about sharing experiences and having interactions with other like-minded people, future improvements on the social value of the N+TC app are recommended.

Furthermore, the average scores show us that visual appeal scores very high, but it has no significant influence on the intention of future usage. Based on this result we could ask the question whether it is important for Nike to put this much effort and costs into the visual attractiveness of the app.

Since compatibility does have a positive effect on a customer's intention of future usage, a higher focus could be contributed to this value. We see that compatibility has an average score of less than five out of seven for both the users and non-users of the app. Thus, future improvements of the compatibility of the app are still possible and recommended because of its positive impact on the usage intention.

## 4.3 Limitations and recommendations for future research

As with any research there are limitations associated with this study. Based on these limitations we will try to deliver recommendations for future research.

First, we have to keep in mind that we had only a sufficient sample size for non-users of the N+TC app. As a result we could not test for the antecedents of the willingness to join the N+TC platform of users

of the N+TC app. However, we are convinced that it would be interesting to compare these insights of users with the results of our research (non-users). Future research could therefore focus on this group of customers.

Another interesting focal point for future research could be the comparison between customers and employees of Nike. We were able to conduct surveys at Nike's logistics center in Laakdal, but since the employees were free to choose whether or not they wanted to participate in the research, we had a sample size that was too small to continue the analysis.

Second, the results of our research cannot be generalized to the total population. As mentioned before the survey was send to family, friends and other students of the University of Hasselt. As a result the average age of the respondents was relatively young (25 years old). We might expect that older people would assess the training app in another way.

In the introduction of the survey we made clear that the questions would concern the assessment of an online training application. It is possible however, that sportive respondents were more attracted to this survey than respondents with no interests in sports. That is possibly the reason why the average respondent scored relatively high on sportiness. Individuals with no interests in sports might have a different assessment of the N+TC app.

Third, the different constructs were measured based on several items. However these items are conducted from previous research, we have to keep in mind that we adapted them to the specific context of our research. Therefore it might be possible that other items had to be included, or we might have interpreted them wrongly. The translation of the questions from English to Dutch is also something we have to keep in mind.

Furthermore, the central research question is about the antecedents that influence an individual's willingness to join the N+TC engagement platform. In this research we were only able to determine two factors, compatibility and functional value, that have a positive significant influence on this willingness to use the app. Additionally we found a significant effect of some of the antecedent predictors on the mediating variables. Future research is needed to get more insights on these antecedents that might have a direct or indirect influence on the willingness of customers and employees to use the N+TC app.

Further research could also explore how the usage of the N+TC app influences customer loyalty, and which impact this might have on the revenues and profitability of Nike.

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## Appendix 1: Survey Nike employees

**Introduction**

(Introduction video of N+TC app is showed)

**1. Do you make use of this N+TC app?**

O Yes O No

→ If "no" is selected:

**2. Do you make use of another training app?**

O Yes O No

**3. Please indicate to which degree you agree with each of the following statements**

| | Strongly disagree | disagree | More or less disagree | undecided | More or less agree | agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| Changing from my current training app to N+TC would be a bother. | | | | | | | |
| For me, the cost in time, effort, and grief to switch from my current training app to N+TC is high. | | | | | | | |
| It's just not worth the hassle for me to switch training apps. | | | | | | | |
| | | | | | | | |
| The N+TC app could be helpful when it comes to working out. | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| The N+TC app could be useful when it comes to working out. | | | | | | | |
| The N+TC app could help me to achieve my targets. | | | | | | | |
| The N+TC app could help me to sport better. | | | | | | | |
| The N+TC app could motivate me to sport. | | | | | | | |
| | | | | | | | |
| I think the N+TC app is fun to use. | | | | | | | |
| I think the N+TC app is exciting to use. | | | | | | | |
| I think the N+TC app is pleasant to use. | | | | | | | |
| I think the N+TC app is entertaining to use. | | | | | | | |
| | | | | | | | |
| I think the N+TC app allows me to customize the workouts to my preferences. | | | | | | | |
| I think the N+TC app works together with me to produce workouts that better suit me. | | | | | | | |
| I think the N+TC app interacts with me to design workouts that meet my needs. | | | | | | | |
| I think the N+TC app allows me to make modifications that are valuable to me. | | | | | | | |
| I think the N+TC app allows me to make modifications to create the workout I prefer. | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| I think the N+TC app helps me to execute the exercises correctly. | | | | | | | |
| | | | | | | | |
| I think interacting with others via the N+TC app is pleasant. | | | | | | | |
| I would appreciate the connection with others via the N+TC app. | | | | | | | |
| I would appreciate the sharing of my completed workouts with others. | | | | | | | |
| I think the usage of the N+TC app allows me to make a good impression on others. | | | | | | | |
| I would like to connect with others that have similar interests via the N+TC app. | | | | | | | |
| | | | | | | | |
| I think I would feel good when my achievements in N+TC are noticed. | | | | | | | |
| I think I would like it when others comment and like my workout. | | | | | | | |
| I think I would like it when others can follow my achievements. | | | | | | | |
| I think it would feel good to know that others have noticed my workouts. | | | | | | | |
| | | | | | | | |
| I think I have the resources necessary to use the N+TC app. | | | | | | | |
| I think I have the knowledge necessary to use the N+TC app. | | | | | | | |

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|---|---|---|---|---|---|---|---|
| I think it is possible to use the N+TC app on my mobile phone. | | | | | | | |
| I know how I can get help when I have difficulties using the N+TC app. | | | | | | | |
| | | | | | | | |
| I feel certain about how to effectively use the N+TC app. | | | | | | | |
| I am not sure how to use the N+TC app properly. | | | | | | | |
| I know what is expected of me if I use the N+TC app. | | | | | | | |
| The steps in the process of using the N+TC app are clear to me. | | | | | | | |
| I believe there are only vague directions regarding how to use the N+TC app. | | | | | | | |
| | | | | | | | |
| I think I am fully capable of using the N+TC app. | | | | | | | |
| I am confident in my ability to execute the exercises correctly via the N+TC app. | | | | | | | |
| I think that using the N+TC app is well within the scope of my abilities. | | | | | | | |
| I think I am not qualified for the task of exercising with the N+TC app. | | | | | | | |
| My past experiences increase my confidence that I will be able to successfully use the N+TC app. | | | | | | | |

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|---|---|---|---|---|---|---|---|
| In total, I think using the N+TC app sometimes involves things that are more difficult than I am capable. | | | | | | | |
| | | | | | | | |
| I think the N+TC app is in line with my needs. | | | | | | | |
| I think the N+TC app is compatible with the way I usually do things. | | | | | | | |
| I think the N+TC app is in line with my preferences. | | | | | | | |
| | | | | | | | |
| Working out with others makes it more enjoyable for me. | | | | | | | |
| Personal attention of a trainer when working out is important to me. | | | | | | | |
| I would prefer a personal trainer instead of using an online app. | | | | | | | |
| | | | | | | | |
| The way N+TC presents its options is attractive. | | | | | | | |
| The N+TC app is visually appealing. | | | | | | | |
| I like the way the N+TC app looks. | | | | | | | |
| | | | | | | | |
| I believe that the N+TC app is cumbersome to use. | | | | | | | |
| I think it is difficult to use the N+TC app | | | | | | | |
| I believe that the N+TC app is easy to use. | | | | | | | |
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|---|---|---|---|---|---|---|---|
| Generally speaking, I am very satisfied with this job. | | | | | | | |
| I am generally satisfied with the kind of work I do in this job. | | | | | | | |
| I frequently think of quitting this job. | | | | | | | |
| | | | | | | | |
| I belief that my values and Nike's values are very similar. | | | | | | | |
| I am proud to tell others that I am part of Nike. | | | | | | | |
| I really care about the fate of Nike. | | | | | | | |

**4. What is your overall impression of the N+TC app?**

O Bad O Good

O Unpleasant O Pleasant

O Unfavorable O Favorable

O Negative O Positive

**5. To what extent do you intend to start using the N+TC app in the future?**

Unlikely O O O O O O O Likely

→ If "YES" is selected:

**2. When exercising, how often do you use the NTC app? (%)**

**3. When exercising without the app, how often do you enter the workout in the NTC app afterwards? (%)**

**4. Please indicate to which degree you agree with each of the following statements:**

| | Strongly disagree | disagree | More or less disagree | undecided | More or less agree | agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| The N+TC app is helpful when it comes to working out. | | | | | | | |
| The N+TC app is useful when it comes to working out. | | | | | | | |
| The N+TC app helps me to achieve my targets. | | | | | | | |
| The N+TC app helps me to sport better. | | | | | | | |
| The N+TC app motivates me to sport. | | | | | | | |
| | | | | | | | |
| Using the N+TC app is fun. | | | | | | | |
| Using the N+TC app is exciting. | | | | | | | |
| Using the N+TC app is pleasant. | | | | | | | |
| Using the N+TC app is entertaining. | | | | | | | |
| | | | | | | | |
| The N+TC app allows me to customize the workouts to my preferences. | | | | | | | |
| The N+TC app works together with me to produce workouts that better suit me. | | | | | | | |
| The N+TC app interacts with me to design workouts that meet my needs. | | | | | | | |
| The N+TC app allows me to make modifications that are valuable to me. | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| The N+TC app allows me to make modifications to create the workout I prefer. | | | | | | | |
| The N+TC app helps me to execute the exercises correctly. | | | | | | | |
| | | | | | | | |
| The interaction with others via the N+TC app is pleasant. | | | | | | | |
| I appreciate the connection with others via the N+TC app. | | | | | | | |
| I appreciate the sharing of my completed workouts with others. | | | | | | | |
| The usage of the N+TC app allows me to make a good impression on others. | | | | | | | |
| I like to connect with others that have similar interests via the N+TC app. | | | | | | | |
| | | | | | | | |
| It feels good when my achievements in N+TC are noticed. | | | | | | | |
| I like it when others comment and like my workout. | | | | | | | |
| I like it when others can follow my achievements. | | | | | | | |
| It feels good to know that others have noticed my workouts. | | | | | | | |
| | | | | | | | |
| I am an integrated member of the Nike+ Training Club. | | | | | | | |

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|---|---|---|---|---|---|---|---|
| I am an engaged member of the Nike+ Training Club. | | | | | | | |
| I am an active member of the Nike+ Training Club. | | | | | | | |
| I am a participating member of the Nike+ Training Club. | | | | | | | |
| I have interactions with other members of the Nike+ Training Club. | | | | | | | |
| | | | | | | | |
| I have the resources necessary to use the N+TC app. | | | | | | | |
| I have the knowledge necessary to use the N+TC app. | | | | | | | |
| It is possible to use the N+TC app on my mobile phone. | | | | | | | |
| I can get help when I have difficulties using the N+TC app. | | | | | | | |
| | | | | | | | |
| I feel certain about how to effectively use the N+TC app. | | | | | | | |
| I am not sure how to use the N+TC app properly. | | | | | | | |
| I know what is expected of me if I use the N+TC app. | | | | | | | |
| The steps in the process of using the N+TC app are clear to me. | | | | | | | |
| I believe there are only vague directions regarding how to use the N+TC app. | | | | | | | |
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|---|---|---|---|---|---|---|---|
| I am fully capable of using the N+TC app. | | | | | | | |
| I am confident in my ability to execute the exercises correctly via the N+TC app. | | | | | | | |
| Using the N+TC app is well within the scope of my abilities. | | | | | | | |
| I do not feel I am qualified for the task of exercising with the N+TC app. | | | | | | | |
| My past experiences increase my confidence that I will be able to successfully use the N+TC app. | | | | | | | |
| In total, using the N+TC app sometimes involves things that are more difficult than I am capable. | | | | | | | |
| | | | | | | | |
| The N+TC app is in line with my needs. | | | | | | | |
| The N+TC app is compatible with the way I usually do things. | | | | | | | |
| The N+TC app is in line with my preferences. | | | | | | | |
| | | | | | | | |
| Working out with others makes it more enjoyable for me. | | | | | | | |
| Personal attention of a trainer when working out is important to me. | | | | | | | |
| I prefer a personal trainer instead of using an online app. | | | | | | | |
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|---|---|---|---|---|---|---|---|
| The way N+TC presents its options is attractive. | | | | | | | |
| The N+TC app is visually appealing. | | | | | | | |
| I like the way the N+TC app looks. | | | | | | | |
| | | | | | | | |
| I believe that the N+TC app is cumbersome to use. | | | | | | | |
| I think it is difficult to use the N+TC app | | | | | | | |
| I believe that the N+TC app is easy to use. | | | | | | | |
| | | | | | | | |
| Generally speaking, I am very satisfied with this job. | | | | | | | |
| I am generally satisfied with the kind of work I do in this job. | | | | | | | |
| I frequently think of quitting this job. | | | | | | | |
| | | | | | | | |
| I belief that my values and Nike's values are very similar. | | | | | | | |
| I am proud to tell others that I am part of Nike. | | | | | | | |
| I really care about the fate of Nike. | | | | | | | |

**5. What is your overall impression of the N+TC app?**

O Bad O Good

O Unpleasant O Pleasant

O Unfavorable O Favorable

O Negative O Positive

**6. To what extent do you intend to keep using the N+TC app in the future?**

Unlikely O O O O O O O Likely

**We are now at the end of the survey. We would like to know some information about you:**

**A. What is your gender?**

O Male O Female

**B. What is your age?**

**C. What is your civil status?**

O Living at parents

O Single

O Living together – not married

O Officially living together

O Married

**D. How many days a week do you workout for at least 30 minutes?**

Never O O O O O O O Every day

**E. What is your highest level of education?**

O Primary School

O Secondary School

O High School

O University

O Post-University

**F. In which sector are you employed at Nike?**

O Operations

O Support

**G. Which shift do you work?**

O A-shift

O B-shift

O Night-shift

O Day-shift

O Service-shift

## Appendix 2: Survey Nike customers

**Introduction**

(Introduction video of N+TC app is showed)

**1. Do you make use of this N+TC app?**

O Yes O No

→ If "no" is selected:

**2. Do you make use of another training app?**

O Yes O No

**3. Please indicate to which degree you agree with each of the following statements**

| | Strongly disagree | disagree | More or less disagree | undecided | More or less agree | agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| Changing from my current training app to N+TC would be a bother. | | | | | | | |
| For me, the cost in time, effort, and grief to switch from my current training app to N+TC is high. | | | | | | | |
| It's just not worth the hassle for me to switch training apps. | | | | | | | |
| | | | | | | | |
| The N+TC app could be helpful when it comes to working out. | | | | | | | |
| The N+TC app could be useful when it comes to working out. | | | | | | | |
| The N+TC app could help me to achieve my targets. | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| The N+TC app could help me to sport better. | | | | | | | |
| The N+TC app could motivate me to sport. | | | | | | | |
| | | | | | | | |
| I think the N+TC app is fun to use. | | | | | | | |
| I think the N+TC app is exciting to use. | | | | | | | |
| I think the N+TC app is pleasant to use. | | | | | | | |
| I think the N+TC app is entertaining to use. | | | | | | | |
| | | | | | | | |
| I think the N+TC app allows me to customize the workouts to my preferences. | | | | | | | |
| I think the N+TC app works together with me to produce workouts that better suit me. | | | | | | | |
| I think the N+TC app interacts with me to design workouts that meet my needs. | | | | | | | |
| I think the N+TC app allows me to make modifications that are valuable to me. | | | | | | | |
| I think the N+TC app allows me to make modifications to create the workout I prefer. | | | | | | | |
| I think the N+TC app helps me to execute the exercises correctly. | | | | | | | |
| | | | | | | | |
| I think interacting with others via the N+TC app is pleasant. | | | | | | | |

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|---|---|---|---|---|---|---|---|
| I would appreciate the connection with others via the NTC app. | | | | | | | |
| I would appreciate the sharing of my completed workouts with others. | | | | | | | |
| I think the usage of the N+TC app allows me to make a good impression on others. | | | | | | | |
| I would like to connect with others that have similar interests via the N+TC app. | | | | | | | |
| | | | | | | | |
| I think I would feel good when my achievements in NTC are noticed. | | | | | | | |
| I think I would like it when others comment and like my workout. | | | | | | | |
| I think I would like it when others can follow my achievements. | | | | | | | |
| I think I would like it to know that others have noticed my workouts. | | | | | | | |
| | | | | | | | |
| I think I have the resources necessary to use the N+TC app. | | | | | | | |
| I think I have the knowledge necessary to use the N+TC app. | | | | | | | |
| I think it is possible to use the N+TC app on my mobile phone. | | | | | | | |
| I know how I can get help when I have difficulties using the N+TC app. | | | | | | | |
| | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| I feel certain about how to effectively use the N+TC app. | | | | | | | |
| I am not sure how to use the N+TC app properly. | | | | | | | |
| I know what is expected of me if I use the N+TC app. | | | | | | | |
| The steps in the process of using the N+TC app are clear to me. | | | | | | | |
| I believe there are only vague directions regarding how to use the N+TC app. | | | | | | | |
| | | | | | | | |
| I think I am fully capable of using the N+TC app. | | | | | | | |
| I am confident in my ability to execute the exercises correctly via the N+TC app. | | | | | | | |
| I think that using the N+TC app is well within the scope of my abilities. | | | | | | | |
| I think I am not qualified for the task of exercising with the N+TC app. | | | | | | | |
| My past experiences increase my confidence that I will be able to successfully use the N+TC app. | | | | | | | |
| In total, I think using the N+TC app sometimes involves things that are more difficult than I am capable. | | | | | | | |
| | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| I think the N+TC app is in line with my needs. | | | | | | | |
| I think the N+TC app is compatible with the way I usually do things. | | | | | | | |
| I think the N+TC app is in line with my preferences. | | | | | | | |
| | | | | | | | |
| Working out with others makes it more enjoyable for me. | | | | | | | |
| Personal attention of a trainer when working out is important to me. | | | | | | | |
| I would prefer a personal trainer instead of using an online app. | | | | | | | |
| | | | | | | | |
| The way N+TC presents its options is attractive. | | | | | | | |
| The N+TC app is visually appealing. | | | | | | | |
| I like the way the N+TC app looks. | | | | | | | |
| | | | | | | | |
| I believe that the N+TC app is cumbersome to use. | | | | | | | |
| I think it is difficult to use the N+TC app | | | | | | | |
| I believe that the N+TC app is easy to use. | | | | | | | |
| | | | | | | | |
| I belief that my values and Nike's values are very similar. | | | | | | | |
| I am proud to tell others that I am part of Nike. | | | | | | | |
| I really care about the fate of Nike. | | | | | | | |

**4. What is your overall impression of the N+TC app?**

O Bad O Good

O Unpleasant O Pleasant

O Unfavorable O Favorable

O Negative O Positive

**5. To what extent do you intend to start using the N+TC app in the future?**

Unlikely O O O O O O O Likely

→ If "YES" is selected:

**2. When exercising, how often do you use the NTC app? (%)**

**3. When exercising without the app, how often do you enter the workout in the NTC app afterwards? (%)**

**4. Please indicate to which degree you agree with each of the following statements:**

| | Strongly disagree | disagree | More or less disagree | undecided | More or less agree | agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| The N+TC app is helpful when it comes to working out. | | | | | | | |
| The N+TC app is useful when it comes to working out. | | | | | | | |
| The N+TC app helps me to achieve my targets. | | | | | | | |
| The N+TC app helps me to sport better. | | | | | | | |
| The N+TC app motivates me to sport. | | | | | | | |
| | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Using the N+TC app is fun. | | | | | | | |
| Using the N+TC app is exciting. | | | | | | | |
| Using the N+TC app is pleasant. | | | | | | | |
| Using the N+TC app is entertaining. | | | | | | | |
| | | | | | | | |
| The N+TC app allows me to customize the workouts to my preferences. | | | | | | | |
| The N+TC app works together with me to produce workouts that better suit me. | | | | | | | |
| The N+TC app interacts with me to design workouts that meet my needs. | | | | | | | |
| The N+TC app allows me to make modifications that are valuable to me. | | | | | | | |
| The N+TC app allows me to make modifications to create the workout I prefer. | | | | | | | |
| The N+TC app helps me to execute the exercises correctly. | | | | | | | |
| | | | | | | | |
| The interaction with others via the N+TC app is pleasant. | | | | | | | |
| I appreciate the connection with others via the N+TC app. | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| I appreciate the sharing of my completed workouts with others. | | | | | | | |
| The usage of the N+TC app allows me to make a good impression on others. | | | | | | | |
| I like to connect with others that have similar interests via the N+TC app. | | | | | | | |
| | | | | | | | |
| It feels good when my achievements in N+TC are noticed. | | | | | | | |
| I like it when others comment and like my workout. | | | | | | | |
| I like it when others can follow my achievements. | | | | | | | |
| It feels good to know that others have noticed my workouts. | | | | | | | |
| | | | | | | | |
| I am an integrated member of the Nike+ Training Club. | | | | | | | |
| I am an engaged member of the Nike+ Training Club. | | | | | | | |
| I am an active member of the Nike+ Training Club. | | | | | | | |
| I am a participating member of the Nike+ Training Club. | | | | | | | |
| I have interactions with other members of the Nike+ Training Club. | | | | | | | |
| | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| I have the resources necessary to use the N+TC app. | | | | | | | |
| I have the knowledge necessary to use the N+TC app. | | | | | | | |
| It is possible to use the N+TC app on my mobile phone. | | | | | | | |
| I can get help when I have difficulties using the N+TC app. | | | | | | | |
| | | | | | | | |
| I feel certain about how to effectively use the N+TC app. | | | | | | | |
| I am not sure how to use the N+TC app properly. | | | | | | | |
| I know what is expected of me if I use the N+TC app. | | | | | | | |
| The steps in the process of using the N+TC app are clear to me. | | | | | | | |
| I believe there are only vague directions regarding how to use the N+TC app. | | | | | | | |
| | | | | | | | |
| I am fully capable of using the N+TC app. | | | | | | | |
| I am confident in my ability to execute the exercises correctly via the N+TC app. | | | | | | | |
| Using the N+TC app is well within the scope of my abilities. | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| I do not feel I am qualified for the task of exercising with the N+TC app. | | | | | | | |
| My past experiences increase my confidence that I will be able to successfully use the N+TC app. | | | | | | | |
| In total, using the N+TC app sometimes involves things that are more difficult than I am capable. | | | | | | | |
| | | | | | | | |
| The N+TC app is in line with my needs. | | | | | | | |
| The N+TC app is compatible with the way I usually do things. | | | | | | | |
| The N+TC app is in line with my preferences. | | | | | | | |
| | | | | | | | |
| Working out with others makes it more enjoyable for me. | | | | | | | |
| Personal attention of a trainer when working out is important to me. | | | | | | | |
| I prefer a personal trainer instead of using an online app. | | | | | | | |
| | | | | | | | |
| The way N+TC presents its options is attractive. | | | | | | | |
| The N+TC app is visually appealing. | | | | | | | |
| I like the way the N+TC app looks. | | | | | | | |
| | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| I believe that the N+TC app is cumbersome to use. | | | | | | | |
| I think it is difficult to use the N+TC app. | | | | | | | |
| I believe that the N+TC app is easy to use. | | | | | | | |
| | | | | | | | |
| I belief that my values and Nike's values are very similar. | | | | | | | |
| I am proud to tell others that I am part of Nike. | | | | | | | |
| I really care about the fate of Nike. | | | | | | | |

**5. What is your overall impression of the N+TC app?**

O Bad O Good

O Unpleasant O Pleasant

O Unfavorable O Favorable

O Negative O Positive

**6. To what extent do you intend to keep using the N+TC app in the future?**

Unlikely O O O O O O O Likely

**We are now at the end of the survey. We would like to know some information about you:**

**A. What is your gender?**

O Male O Female

**B. What is your age?**

**C. What is your civil status?**

O Living at parents

O Single

O Living together – not married

O Officially living together

O Married

**D. How many days a week do you workout for at least 30 minutes?**

Never O O O O O O O Every day

**E. What is your highest level of education?**

O Primary School

O Secondary School

O High School

O University

O Post-University

**F. What is your profession?**

O Student

O Manual worker

O Employee

O Self-employed

O Civil servant

O Unemployed

O Other

## Appendix 3: Standard errors formative constructs

| | Abil | Atti | Compatib | Complex | Customiz | Facil cond | Funct Val | Hedon val | Need for | Role clar | Soc recog | Soc val | Vis app |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ability | | | | | | | | | | | | | |
| Attitude | 0,062 | | | | | | | | | | | | |
| Compatib | 0,058 | 0,059 | | | | | | | | | | | |
| Complex | 0,053 | 0,062 | 0,062 | | | | | | | | | | |
| Customiz | 0,060 | 0,059 | 0,055 | 0,062 | | | | | | | | | |
| Facil cond | 0,059 | 0,060 | 0,061 | 0,060 | 0,060 | | | | | | | | |
| Funct Val | 0,061 | 0,059 | 0,051 | 0,063 | 0,047 | 0,061 | | | | | | | |
| Hedon val | 0,061 | 0,057 | 0,054 | 0,063 | 0,054 | 0,062 | 0,052 | | | | | | |
| Need for int | 0,063 | 0,063 | 0,063 | 0,062 | 0,063 | 0,063 | 0,063 | 0,063 | | | | | |
| Role clarity | 0,057 | 0,060 | 0,060 | 0,059 | 0,061 | 0,054 | 0,062 | 0,061 | 0,063 | | | | |
| Soc recogn | 0,063 | 0,063 | 0,061 | 0,063 | 0,063 | 0,063 | 0,063 | 0,062 | 0,063 | 0,062 | | | |
| Soci value | 0,063 | 0,063 | 0,062 | 0,063 | 0,063 | 0,063 | 0,062 | 0,062 | 0,063 | 0,062 | 0,042 | | |
| Vis appeal | 0,060 | 0,061 | 0,060 | 0,059 | 0,060 | 0,062 | 0,062 | 0,059 | 0,063 | 0,062 | 0,063 | 0,063 | |

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Richting: **Master of Management-International Marketing Strategy**
Jaar: **2017**

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**Mercken, Silke**

Datum: **31/05/2017**