

Master Thesis

**Strategic analysis for the integration of a digital innovation in the  
current offering portfolio of BMW Motorrad**

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## **ABSTRACT**

This master thesis was mandated by the Sales Development and Management department from BMW Motorrad with the aim of conducting a research study for the optimization in the currently deployed offering portfolio regarding the current motorcycle market stagnation, the difficulties in the acquisition of new customers from younger demographic segments and the role of digital business model innovation in the industry. To this end, the current offer model, the long-term strategy implemented at the moment of the realisation of the work, and the role of digitalization as a business model enabler were considered as the departure point in the development of an innovation proposal. In this regard, the thesis proposed a dual approach based on a theoretical research phase regarding the relevant terms in the field of business model innovation and digitalization, and an empirical research phase founded on a gap analysis study that was articulated around the Seizing the White Space theory by Mark W. Johnson. In so doing, the described internal capabilities and external factors, found during the development of the empirical stage, were evaluated throughout the comparative analysis of the outcome from the SWOT and Ansoff study techniques. Ultimately, the assessment of the breaches detected in the business space that could be covered by means of the reallocation of already implemented capabilities was performed. As a result, the project showed the saturation of the motorcycle traditional business model and the prospective expansion of the urban mobility scene. Finally, the conclusions support the introduction of a novel servitization offer model, making use of the current fleet, the brand identity and the integration of the presently in development digital capabilities, in the establishment of a mobility service solution as a product-service-software system that would enhance the present business model value proposition.

## ACRONYMS

ACES	=	Autonomous Connected Electrified Shared vehicles
AI	=	Artificial Intelligence
B2C	=	Business to Customer
BAM	=	Business Activity Model
BEV	=	Battery Electric Vehicles
BMI	=	Business Model Innovation
EV	=	Electric Vehicles
ICE	=	Internal Combustion Engine
ICT	=	Information & Communication Technologies
IoT	=	Internet of Things
IT	=	Information Technologies
KPI	=	Key Performance Indicator
OEM	=	Original Equipment Manufacturer
PSS	=	Product-Service System
R&D	=	Research & Development
ENISA	=	European Network and Information Security Agency
EC	=	European Commission
LTE	=	Long Term Evolution
H-D	=	Harley-Davidson, Inc.
ECU	=	Engine Control Unit

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# 1. INTRODUCTION

This chapter of the project includes the motivation of the thesis, the research goals, the assumptions and expected results. Similarly, an overview on the structure of the work is elaborated.

## 1.1 Motivation

This project was mandated by the Sales Development and Management department of BMW Motorrad and supported by the Institute of General Management and Organisation of the Graz University of Technology in October 2020.

The motivation of the project is based principally in two main aspects, first the stagnation of the motorcycle market and the difficulties experienced regarding the acquisition of new clients from younger demographic sectors. Second, the role of industrial digitalization in the execution of business model innovation (BMI), in particular regarding the motorcycle industry and BMW Motorrad as the subject of the study. In essence, the role of industrial digitalization is evaluated from the introduction of BMI strategies perspective with regard to the already implemented digital capabilities and the strategic goals of the company.

For that purpose, the development of the project is based on the strategic analysis study of the current offering portfolio and business line strategies of BMW Motorrad, with a special focus on the current competencies, in the search of a prospective offering model or BMI. The aim is to elaborate an innovation proposal to optimize the current sales performance and to draw an adaptation to the evolving customer preferences, demands, expectations and other macro-environmental factors affecting the prospective business operation.

BMW Motorrad is the motorcycle division of the German car manufacturer BMW A.G.. It is integrated as part of the company's development department (E) under the designation EX. The company began in the early 20<sup>th</sup> century as an aircraft engine manufacturer and after World War I. BMW Motorrad manufactured its first motorcycle, the R32, which incorporated a flat-twin boxer engine (Ian, 2004). This technology is still in use by BMW Motorrad. Nowadays the flat-twin boxer configuration is still the distinguishing mark in the manufacturer's designs, however a varied range of motorcycles with a variety of engine configuration designs have been incorporated to the offer catalogue.

Looking at the industry from a general perspective, according to the last report from the Verband der Automobilindustrie (VDA) the automotive industry represents approximately 20% of the turnover of the entire German manufacturing industry (VDA, 2017). Therefore, BMW Motorrad as a subsidiary company from the BMW Group AG, participates from an industrial conglomerate that has a great influence in the economy of the country, and therefore a considerable economic leverage. Nevertheless, according to the VDA figures regarding the production of German manufacturers in the last ten years, the vehicle production decreased from 490 to 390 thousands per month on average before the lockdown downturn effect from the COVID-19 pandemic. In particular, attending to the motorcycle market figures, on a global level, it can be considered a stagnation trend regarding the total sales in the last 7 years, even without considering the 2020 lockdown effects (Statista, 2021a). However, looking at the European figures, the trend during the same period has developed differently, with an overall increase of 12.8% in the last 7 years before the 2020 lockdown. Regarding the German market the trend follows the same pattern. Having a look at the world market figures development after the 2020 economic effects caused by the world pandemic, the forecast for the following 5 years shows a drop and subsequent stabilisation of around 28% on sales. On a European

level, the forecast is not more promising with an initial 41% decrease in 2021 followed by an additional 12% drop in the following 5 years (Statista, 2021b).

Furthermore, the increase in customization demands as a result of a developing society (Wedeniwski, 2015), and the development of cities and the urban environment, especially regarding emerging economies, is reshaping customer necessities and expectations (Schuster, 2013). In the same vein, studies such as the one conducted by the Center Automotive Research (CAR) at the University of Duisburg-Essen determined, on the basis of statistics on new car registrations for private individuals, that between 1995 and 2012 the average age of German car buyers increased steadily from 46.1 to 51.9 years (Kuhnimhof, 2017). Similarly, the observed decrease in younger demographic's interest in acquiring individual transportation means is shown by the 17% drop on license obtainment between 1983 and 2010 (Sivak & Schoettle, 2012). Having a closer look at the Motorcycle market, according to the Motorcycle Industry Council the share of drivers younger than 30 years has decreased from 40% in 1990 to less than 20% in 2015 (Stock, 2017). These trends and statistics are similarly experimented by BMW Motorrad, in particular attending to the young segment adoption. Regarding the internal data on adoption rate provided in the AU-Circle<sup>1</sup> Management Report from September 2019, the age distribution among BMW Motorrad customers is as follows: 61% of customers are between 63 and 54 years old, 32% are between 53 and 39 years old, and only 7% are between 38 and 24 years old. Hence, it can be inferred that there are no clients under 24 years old (Sales Development Department, 2019).

Regarding the role of digitalization as an innovation enabler especially considering the digital BMI, in the first part of the work, an analysis based on academic research is conducted in order to introduce the terms and with the aim of framing the elaboration of an strategic analysis for an optimization proposal based on the digital capabilities already implemented in BMW Motorrad's current operation, given the relevance that the topic is gaining in the industry and its disruptive character in the BMI field (Vaska et al. 2020). The approach introduced for this work is based on the Gartner Glossary (2018) definition for digitalization in the business field. According to this definition, the digitalization in the business field has to be based on the employment of digital technologies to reinterpret the business model's structures and contribute to innovative revenue and value creation channels.

In this respect, increasingly industries are entering the fourth industrial revolution through digital transformation, which is revolutionizing the manner in which businesses are understood (Porter et al., 2015). The new industrial age is making the sector become increasingly 'smart' with the use of Internet of Things (IoT) technologies, intensive data exchange and predictive analytics (Lenka et al., 2017). For this reason, the perceived opportunities are encouraging an increasing number of industrial companies to innovate in their business models, making use of digital innovations (Baines et al., 2017).

However, evidence shows that the traditional incumbent companies across the different industries are not prepared to profit from the opportunities that digitalization enables (Porter et al., 2015; Lenka et al., 2017). The main challenge for many organizations is to identify, set, and perform tailored digital innovations to enhance their processes and operations (Sjödín et al., 2018). Another challenge concerns the need for better interpreting how to design, customize, assess, market, and acquire intangible offerings. This is particularly remarkable in the case of digitally enabled servitization business models, in which the offer is neither the product nor the service but the delivering of a bundled offering model (Visnjic et al., 2018).

Therefore, the project develops on the servitization alternatives and BMI, given the digitalization enabling capacity, through the evolution towards a product-service-software system that enhances the value creation and capture by means of monitoring, controlling, optimizing and automating

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<sup>1</sup> AU-Circle: BMW Group Corporate Strategy conference. Conducted in September 2019 by the Sales Strategies and New Business Model department from BMW Motorrad.

operations. In essence, the concept of digital servitization reinterprets the traditional idea offerings, as unique individual entities. Meanwhile it emphasizes on the integration between products and the different actors along the value chain. (Frank, 2019)

## 1.2 Objectives and Research Questions

The aim of the project is to elaborate an strategic analysis for an optimization proposal of the current offering portfolio and business line strategies from BMW Motorrad, based on the comparative analysis of the internal capabilities, the deployed offer model, the strategic approach, and the external factors regarded from a macro-environmental perspective as well as from a competitive analysis of direct, potential and substitutional market actors.

To that end, the research question that the development of the project aims to answer is the following:

***How could BMW Motorrad's offering portfolio better address the new market challenges?***

Similarly, as signalled in the motivation of the project, the digitalization in the industrial domain and in particular regarding the business model innovation is considered. Hence, the research question is complemented as follows:

***Which changes in the business model could digitalization enable?***

In the aim of answering these questions, the project proposes the development of a strategic analysis founded in the gap analysis methodology and simultaneously framed by the theory by Mark W. Johnson: "Seizing the White Space: Business Model Innovation for Growth and Renewal" Johnson (2010). To this effect, the gap analysis is formulated through the comparative analysis between the SWOT and Ansoff study techniques, by means of the illustration of the findings observed from the internal and external evaluations. The gap assessment and subsequent proposal for innovation are based on the complementarity between the employed methods.

## 1.3 Approach and Research Design

As mentioned in the previous point, the method for the development of the project is based on a gap analysis approach articulated through the theory: "Seizing the White Space" by Johnson (2010). To this respect, the study is formulated from an internal-external comparative analysis where the description of the current offering portfolio structure, the long-term strategy for the forthcoming 10 years, the direct competition selected by the Sales Development and Management department, the potential and substitutional competition, the macro environmental factors affecting the business operation, and the status-quo development of company's activity are considered.

The research approach focuses on answering the research questions exposed in the objectives and research questions section. With that in mind, the internal-external analysis is performed to answer the question regarding the suitability from the current offering portfolio to the current market and its possible developments. To that end, a gap analysis is conducted in order to assess the differences between the current strategic direction evaluated by means of the SWOT analysis and the possible growth strategies elaborated after developing the Ansoff matrix. Simultaneously, throughout the development of the strategic analysis, the answer to the second question is integrated in the study as the consideration of the digital capabilities in place and their possible development in the elaboration of the final proposal to suit BMW Motorrad's offering portfolio and the market.

In doing so, for the external evaluation a PESTEL analysis is conducted in order to evaluate the environmental conditions from a macro-perspective. More concretely, the political, economic, social,



considered of interest for the development of the proposal are digitalization and servitization. These concepts are presented in section 2. of the work; the Theoretical Background.

The second part of the work, and the body of the study, is formed by the empirical part. As it can be seen in Fig. 1, this is similarly split into the internal (BMW Motorrad Status Quo) and the external (Environmental Analysis) analyses. The internal analysis is performed through the description of the current offering portfolio and the evaluation of the long-term strategy. The external is carried out through the deployment of the PESTEL and the benchmarking analyses. Once both the internal and external analyses are performed, the SWOT and Ansoff studies are carried out in order to conduct the final gap analysis. Finally, with the findings obtained from the theoretical part and the empirical gap evaluation the final proposal is elaborated.

The distribution of the empirical part is divided in section 3. and section 4. respectively. In section 3., the methodology description regarding the gap analysis articulated through the Seizing the White Space theory is presented. In this part, the forthcoming analysis steps and the definition and justification for every method and tool are presented. Following, in the 4<sup>th</sup> section, the results from the PESTEL, benchmarking analysis and the deployment of the SWOT and Ansoff studies are described. Ultimately, the discussion for the gap analysis assessment and the merged strategies for each of the four business spaces are elaborated in section 4.5. This is performed, as the previous step, for the formulation of the final proposal (section 4.6), as the final goal of the project, by means of the gap analysis evaluation based on the internal and external factors analysed.

## 2. THEORETICAL BACKGROUND

In this part of the work, the most important terms in relation to the field of research of strategic analysis and its connection to the business model and BMI theories are introduced. In the same way, attending to the second research question the terms digitalization and digital servitization are defined. Moreover, the theoretical introduction for the strategic analysis techniques employed in the development of the work is carried out. Finally, the theory “Seizing the White Space” from Johnson (2010) is introduced as the theoretical framework for the development of the gap analysis methodology.

### 2.1 Strategic Analysis

There are numerous views on strategy, from strategy design (Chandler, 1962), strategy planning (Ansoff, 1965), strategic positioning (Porter, 1980) and the resource-based view (Wernerfelt, 1984) where the firm strategy is analysed by means of the evaluation of its resources rather than for its products.

According to Rumelt (1998) the term "strategy" has been so extensively used for different purposes that it can be said that it has almost lost its meaning. Even so, having a look at the definition given by the author it can be determined that a good strategy is: “*a coherent set of analyses, concepts, policies, arguments, and actions that respond to a high-stakes challenge*” Rumelt (2012, p.6). Moreover, the particular policies, plans, and objectives of a business express its approach for coping with a complex competitive environment (Rumelt, 1998). At a firm’s level, it illustrates in general terms how the company will compete (Teece, 2018).

In the same way Rumelt (1998) presents the criteria according to which a strategy can be analysed in the long-term. Nevertheless, the author expresses that it is impossible to show that a particular business strategy is optimal or to guarantee that it will bring the desired results because its ability to stand against the critical flaws through experimentation cannot be proven, as in science for example. The criteria for the evaluation according to Rumelt (1998) are:

- Consistency: The strategy must not present mutually inconsistent goals and policies.
- Consonance: The strategy must represent an adaptive response to the external environment and to the critical changes occurring within it.
- Advantage: The strategy must provide for the creation and/or maintenance of a competitive advantage in the selected area of activity.
- Feasibility: The strategy must neither overburden available resources nor create unsolvable derivative problems.

Besides that, there is no consensus on a definition for strategy development and, as a result, a wide range of conceptual frameworks exists for the formulation and implementation of strategies (Feurer et al., 1995). According to Novikov (2018), strategy development can be divided into three main components: strategic analysis; choice of a strategy; and implementation of the selected strategy in the context of current problems at the enterprise. For the elaboration of the master thesis, the strategic development is focused on the strategic analysis component. In particular the strategic

analysis is performed considering the strategy planning view. That is to say, the process of defining a strategy, or strategic direction, and making decisions on allocating its resources (Mintzberg, 1987).

On this basis, Casadesus-Masanell et al. (2011) define strategic analysis as the evaluation process that leads to the selection of a determined business model, market segment, and a marketing approach among other alternatives, and frequently conducts to the disinvestment on former business model for new ones that help on building and sustaining a distinctive advantage. *“Strategy has been the primary building block of competitiveness over the past three decades, but in the future, the quest for sustainable advantage may well begin with the business model”* (Casadesus-Masanell et al., 2012, p.100). In the same vein, according to Teece (2018), it is more accurate to say that capabilities are the main building block of competitiveness because they sustain the business model design, which is essentially tied to strategy.

Moreover, strategic analyses are closely tied to the external circumstances and to the business model design. Casadesus-Masanell et al. (2010) state that strategies are usually described as contingent plans of action and are designed to reach a particular objective. In addition, the authors affirm that strategy refers to the subordinated plan as to how a business model operates. *“Strategy is a high-order choice that has profound implications on competitive outcomes. Choosing a particular business model means choosing a particular way to compete, a particular logic of the firm, a way to operate and to create value for the firm’s stakeholders”* (Casadesus et al., 2010, p. 203). Therefore, it can be observed that the strategy and strategic analysis are terms which definitions are tied to the business model design and its surrounding circumstances. Business models are rooted at the core of the essential question asked by business strategy designers and deal with the way a firm builds a sustainable competitive advantage, obtains a profit and grows. Similarly, Zott et al. (2008) argue that the business model may interact with the firm’s product market strategy.

Following the same line, Teece (2010) emphasizes on the idea that strategic analysis is inevitably tied to business model design, however the author also points out that a business model is more general than a business strategy. Thus, merging strategy analysis with business model analysis is required to preserve the competitive advantage from the business model design and for the implementation of innovative business models (Teece, 2010).

Elaborating on the connection between strategy, business model and contingencies, Casadesus-Masanell et al. (2010) distinguish that the major difference between a strategy and the business model arises when the firm’s plan of action calls for modifications to the business model as a result of a particular contingency taking place. In these occasions, strategy and business model no longer match regardless of whether the BMI is fundamental or limited (Casadesus-Masanell et al., 2010). The contingencies cited by the authors as the reasons for the dealignment between the strategy and the firm’s business model are: the recovery from recession periods or actions by other industry players (such as competitors, complementors, buyers or suppliers). In essence the authors’ view on strategy is that it goes beyond the selection of a particular business model. Nevertheless, it is the contingent plan of action that the business model should perform, relying upon the contingencies that the company may face.

In many cases, corporate strategy determines how the business model design should look like. However, the arrival of new general-purpose technologies such as the internet enables seizing opportunities towards fundamentally new business models that require from the corporate strategy to react. Once a business model is settled, it shapes the strategy inasmuch as it limits certain action actions and eases the development of others. Essentially, while defining the costs and the profitability, a business mode influences the executability of a strategy. (Teece, 2018)

In summary, the development of a strategy and its analysis need to be closely tied to the analysis of the current business model structure and the external circumstances that surround the firm’s business operation. In particular the project motivation of this work suggests an evaluation of the offering portfolio with respect to the current external challenges as the subject of the analysis. Hence, in the

following two sections the concepts for business model, for the understanding of the placement of the offering portfolio in the business model structure, and BMI, for the analysis of the strategic development, are introduced.

### 2.1.1 Business Model

As seen in the previous section the definition of the business model is essential for the understanding of the strategy in place and, in this work, for the elaboration of the proposal based on a strategic analysis from the offering portfolio.

Although the topic of business models is becoming more and more the focus of scientific debate, there is no clear consensus, no general concept, on a clear idea of a clear definition of a business model (Zott et al., 2011). Many studies use different definitions that fit into the context of their research (Björkdahl et al., 2013). As a result there are numerous definitions for business model and the business model structure (Al-Debi, 2008). Nevertheless, most scientific analyses on business models are based on the fact that a company is divided into individual value adding units, all of which are closely related to each other (Demil et al., 2010).

On a conceptual level, a good business model could be defined as the one that: *“yields value propositions that are compelling to customers, achieves advantageous cost and risk structures, and enables significant value capture”* (Teece, 2010, p. 174). Every company has a business model, even if this is often not communicated or is clearly recognizable from the outside (Chesbrough, 2007).

On a strategic level Rasmussen (2007) defines business model as concerned with how companies design their competitive strategy through the definition of the product or service that they are offering, how do they charge for it, the costs that are incurred, how do they differentiate themselves from others regarding the value proposition, and how do they integrate their value chain with the rest of the industry in a specific value network. The business model presents the structure of revenues, costs, and profits derived from the business delivering the value proposition and it is concerned with the organisational and financial ‘architecture’ of a business that includes implicit assumptions about customers, their necessities, and the behaviour of revenues, costs, and competition. (Teece, 2010). *“A business model articulates the logic and provides data and other evidence that demonstrates how a business creates and delivers value to customers, entices customers to pay for value, and converts those payments to profit”* (Teece, 2010, p. 172).

The business model concept has become increasingly relevant with the growth of internet-based business had triggered profound changes in the way companies create value (Amit & Zott, 2001). Previously, value creation was frequently based on the production of an asset and its sale to the potential clients. Since the 1990s at the latest and with the advent of the internet and e-commerce, the term business model has become more and more common in Scientific literature (Demil et al., 2010). The digital economy brought innovative approaches for value creation and interconnection between companies and among customers (Zott et al., 2011).

For this work the definition considered as for the business model is the one introduced by Richardson (2008) (Fig. 2). This definition, based on a wide range of literature, proposes an extended view of the elements forming a business model as: the value proposition, the value creation and delivery, and the value capture.

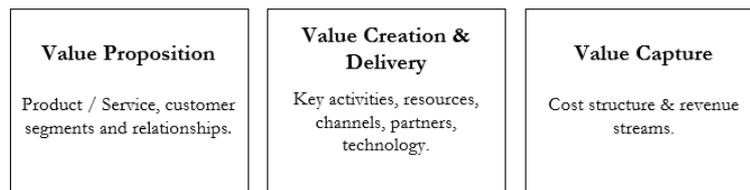


Figure 2. Exemplary structure of a business model based on Lindgardt et al. (2009).

Value proposition is often concerned with the product or service offering that generates the economic return, in a sustainable business (Boons and Lüdeke-Freund, 2013). Value creation and delivery is at the core of any business model construct; businesses frequently capture value from seizing new business opportunities, new markets, and revenue streams (Beltramello et al., 2013; Teece, 2010) it describes how activities and processes are implemented to achieve the value proposed (Parida et al., 2019). Value capture is concerned with the way in which the revenues acquired from the delivering of products, services or information to the potential consumers (Teece, 2010).

In order to understand the structure of a business model, it is worthwhile to have a closer look at its specific units. To better define the specific focus into the business model structure components, this work uses a practice-oriented model proposed by Lindgardt et al. (2009) (Fig. 3). This model is used given the division presented between the “*Value Proposition*” and “*Operating Model*” elements and in particular addressing directly the “*Product or Service Offering*” that frames the offering portfolio in which the work is focused. Furthermore, this model elaborates on the concept introduced by Richardson (2008), that is developed in the “*Seizing the White Space*” theory from Johnson (2010) and that is employed in the methodology of this work.

In this model, the 3 units already proposed are integrated on two upper-level elements: value proposition and operating model and these elements are at the same time divided into three sub-elements.

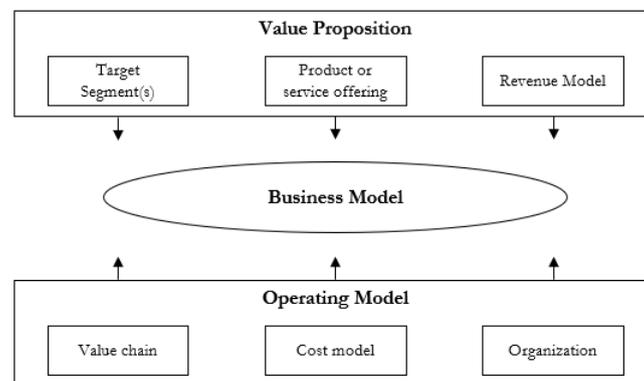


Figure 3. Conceptual business model framework. Adapted from Richardson (2008)

On the one side, for the Lindgardt et al. (2009) model, the value proposition is divided into 3 sub-elements: target segment(s), product or service offering and revenue model. The target segment determines the customer groups, the needs, and the problems the company wants to address. The product or service offering defines what must be delivered to the targeted groups in order to solve their demands. The revenue model defines how the company is compensated for the offering.

On the other side the operating model represents how the company profitably delivers the offering and it is divided into 3 sub-elements: value chain, cost model and organization. The value chain determines whether and how a company should be present in the value creation process, namely, whether an activity should be performed internally or externally. The cost model describes how a

company should organize its costs-structure in order to profit from the value creation activity. The organization determines how a company arranges its work-force towards gaining a competitive advantage in the long term.

This model can be used to describe each company's business model. While the 6 individual components could be seen as trivial at first, the complexity lies in the close interlinking of the fields and the many interdependencies between them. If one of the fields changes, all other fields must be automatically adjusted (Lindgardt et al., 2009).

In conclusion, according to Teece (2010), all companies, either explicitly or implicitly implement a specific business model. A business model determines the design or structure of the value creation, delivery and capture. The essence of a business model is that it interprets customer needs and their capacity to pay for them, defines the way in which the organization performs solutions by delivering value to the customers, defines how customers can be charged for the value proposed, and how it can transform their payments into profits by means of an appropriate design and operation of the different elements in the value chain (Teece, 2010). In essence, a business model implements the business model designers' hypothesis about what customers need, how do they need it, how much will they pay for it, and how the firm can be designed to best reach customer desires and obtain a profit from doing so.

### **2.1.2 Business Model Innovation**

After the business model has been defined, it is worthwhile to have a look at the term business model innovation. As elaborated in the beginning of the section, the strategic analysis leads to the evaluation of the business model in place and the contingencies surrounding the firm. Thus, in the strategic analysis from the offering portfolio, with the final objective of the elaboration of an innovation proposal, the term business model innovation is introduced.

While early disruption literature emphasised the role of technological innovation (Christensen et al., 1996), since 2006 (Christensen, 2006), studies have been focusing on the role of continuous BMI in fuelling disruptive dynamics. In this work, an innovation in the offering portfolio for the company is intended, thus attending to the previously introduced definition by Lindgardt et al. (2009), when attending to the business model structure, this innovation will be mainly focused on in the value proposition element from the business model structure.

Having a closer look at the term offering portfolio, in the course of this work, the offering is understood as the integration of both the products and the services that the company's business model is designed to deliver. Therefore, we need to attend to the business model definition and its components to better place the term. According to the model explained from Richardson (2008) a business model is composed of three main components (Fig.1): value proposition, value delivery and value capture. Attending this conceptualization, the offering portfolio hereinafter refers principally to the value proposition, that is to say, the offering that generates an economic performance to the organization.

Moreover, having a closer look to the business model definition, the model suggested by Lindgardt et al. (2009) is similarly introduced in the business model section of the work. Regarding this model (Fig.2), that elaborates directly on the model already discussed by Richardson (2008), the offering portfolio is placed between the sub-elements of the value proposition component. In particular, the offering model evaluated in this project is addressed as the sub-element "*Product or service offering*", that is to say, it defines what must be delivered to the targeted groups in order to solve their demands.

Hence, when facing an innovation on the offering portfolio for the organization, an innovation in the business model structure and therefore a change in the business model itself will be studied. This

involves, as seen, a holistic perspective when addressing the research question which includes, therefore, a general outlook on the business model and its characteristics.

Following this approach, the literature frames BMI in the context of changing the value proposition for the customer. According to Amit et al. (2012) the BMI is described as a change that goes beyond the product and service offering and involves a fundamental change in the way the business is done. This definition refers to BMI as a change in the configuration of either the entire business model or individual elements as the value proposition. It could be either a reaction to opportunities or challenges in the organisation's environment (Amit et al., 2012).

Having a look at Geissdoerfer et al. (2018) approach, four general configurations of BMI can be differentiated (Fig. 4). These configurations concern: start-ups, business model transformation, business model diversification, and business model acquisition.

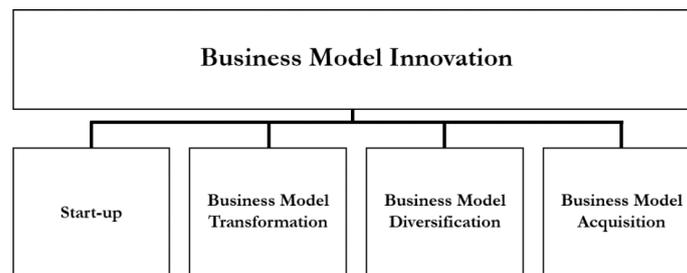


Figure 4. Types of business model innovation model from Geissdoerfer et al. (2018).

The Start-up configuration describes a BMI where there is not currently a business model and a new one is created. The business model reinterpretation affects a current existing business model that is transformed into a novel business model. The business model diversification describes a situation where the current business model remains invariable, and a new additional business model is created. Finally, the business model acquisition describes a situation where an innovative business model is detected, procured, and incorporated into the present structure.

Besides that, in order to distinguish between different strategies of BMI in relationship to their main drivers, Schaltegger et al. (2012) propose a classification of defensive, accommodative, and proactive strategies. Defensive strategies are defined as incremental business model innovations looking to protect the current business models putting the aim on the reduction of risks and expenses and often motivated by the need for completion of the current offering model. Accommodative strategies intend to improve and to integrate modifications of internal processes and they can additionally include some perspective on environmental and social objectives. Ultimately, proactive strategies consider the reinterpretation of the core business aspects of the company in the search of sustainable development. Despite BMIs delivering sustainability have a role in the innovation process, proactive innovation strategies appear most decisive (Bocken, 2014).

Regarding the role that BMI has in the innovation process, Teece (2010) states that while technological innovation is regarded in most developed societies as desirable reflection of the values of a technologically progressive society, presumably the establishment of new organizational forms, organizational methods, and in particular of new business models must be of equal if not of greater importance for a society.

Finally, business model innovation is regularly claimed to be a source of competitive advantage (Teece, 2010), a decisive factor for long-term success (Bucherer, 2012), and a means to improve company's performance (Lambert, 2013). Overall, an effective business model is the core enabler of any company's performance (Taran, 2015). Therefore, the ability for frequent and successful BMI can raise an organisation's resilience to transformation in its environment and represent a sustainable

competitive advantage (Mitchell et al., 2003). Moreover, it is argued that imitation of a business model is harder than of a product or process (Amit et al., 2012), which potentially explains why companies see themselves confronted with the necessity to extend their innovation scope beyond products or services toward business models (Futterer et al., 2020).

## 2.2 Strategic Analysis Development

For the implementation of the strategic analysis, the gap analysis between the possible growth strategies, as the outcome of the Ansoff matrix, and the status-quo regarding the current external circumstances, offering portfolio and the long-term strategy of BMW Motorrad is performed.

In this project, the gap analysis is based on the design and evaluation of the SWOT and Ansoff matrices. The aim is to identify the gaps for potential market development and the introduction of innovative business model strategies through a comparison analysis considering the current strategic positioning and the strategic growth prospects observed through the application of the aforementioned techniques.

For the implementation of both the SWOT and the Ansoff matrices, two different analytical tools to evaluate the organization's offer structure and its environment in terms of external conditions, direct, and substitute competition are employed (Fig. 1). These tools are the PESTEL analysis, for the study of the macro-economic firm's framework, and the benchmark analysis considering the competition previously defined by the organization. This last analysis intends to categorise the competitive environment, in terms of the offering portfolio, and to place the organization's offering model with respect to the specified competition.

In doing so, the portrayal of the company's value proposition and its environmental circumstances are summarized by the SWOT analysis, that is to say the external and internal findings obtained from the conducted research. For the elaboration of the SWOT analysis the PESTEL study for the macro-environmental conditions, together with a benchmarking evaluation of the offering portfolio from the companies selected by the direction of the department are performed. It is important to note that for the elaboration of the SWOT analysis the external perspective focuses primarily on the findings from the PESTEL analysis, furthermore the analysis is employed as a tool to summarize information regarding current internal and external conditions to show the current strategic direction.

Subsequently, the Ansoff matrix is elaborated based on the findings from the studies on the external circumstances (PESTEL and Benchmarking) and considering the current BMW offering portfolio in place and the long-term strategy at the moment of the elaboration of the work. Nonetheless, for the development of the Ansoff matrix the focus is directed to the study of the possible strategic growth directions and concentrating primarily on the findings related to the competition evaluation. In addition to that, other techniques such as the Porter's five forces were considered, nevertheless the lack of information regarding the bargaining power of buyers and suppliers at the department in which the work was performed at BMW Motorrad impeded it. On account of that, in the benchmark analysis, a complementary section is added to the analysis to evaluate the threat of substitutes and new entrants.

Lastly, the gap description between both outcomes (SWOT and Ansoff) is formulated as the possible strategies to follow in the pursuit of an innovation in the current offering portfolio that would suit the current capabilities regarding the SWOT analysis outcome and the growth strategies derived from Ansoff's analysis.

With that in mind, in the following section, a theoretical introduction of the analysis techniques that are elaborated in the methodological section are introduced. These definitions concern: the PESTEL and benchmark studies, and the SWOT and Ansoff analyses.

### **2.2.1 PESTEL Analysis**

In terms of environment analysis, there are many models that organization leaders can use to help them make decisions in different situations. Models such as PESTEL - political, economic, social, technological, environmental, and legal - analysis focuses on the external conditions that affect business operations (Cadle et al., 2014). The PESTEL model can serve to analyse and research on the business conditions that organizations are exposed to and their impact (Adamu, 2019). In the following, for the description of the PESTEL analysis, the definition of Cadle et al. (2014) definition is considered.

PESTEL analysis presents a framework for macro-environmental analysis employed in the external evaluation for strategic analysis and strategic management. It forms part of a strategic environmental analysis employed principally for market evaluation and research. It provides a general view of the different macro-economic circumstances affecting the development of an organization's activity. It provides the means for interpreting market trends, business positioning, business potential and strategic direction. (Cadle et al., 2014)

According to Cadle et al. (2014), the definition for the PESTEL analysis includes the following focus factors:

- Political factors relate to how governmental activity affects the market conditions. Specifically, political factors have areas including tax policy, labour law, environmental law, trade restrictions, tariffs, and political stability. Furthermore, governments have a high impact on the health, education, and infrastructure of a certain region.
- Economic factors include economic growth, exchange rates, inflation rate, and interest rates. These factors greatly affect how businesses operate and make decisions. These factors also include financing or the access to external funds.
- Social factors include the cultural aspects and health consciousness, demographic growth rate and distribution, general values, and emphasis on safety. Certain trends in social factors can for example affect the demand for a company's products and how a company operates. Furthermore, companies may change various management strategies to adapt to social trends caused from changes in perceptions or priorities.
- Technological factors include technological aspects like research and development (R&D) activity, technological incentives and the rate of technological change. It can be understood in the end as the easiness for new technological adaptations. These can mitigate entry barriers, minimum efficient production level and influence the outsourcing decisions. Furthermore, technological shifts would affect costs, quality, and lead to innovation.
- Environmental factors include ecological and environmental aspects such as climate, and climate change, which may especially affect industries such as tourism, farming, and transport. Furthermore, growing awareness of the potential impacts of climate change is affecting how companies operate and the products they offer, both creating new markets and diminishing or destroying existing ones. Hence, the environmental factors are highly related to the social factors.

- Legal factors include general legislation, consumer law, antitrust law, employment law, and health and safety law. These factors can affect how a company operates, its costs, and the demand for its products and are very closely related to the political factors.

Although the employment of PESTEL as an environmental-analytical tool is mainly criticized for not having originated in conceptual theory (Kourteli, 2000), it is a valuable tool in helping decision makers to detect manners in which their companies can position to ensure competitiveness in a changing business environment. It is additionally linked to academic research in the process of studying external market environments that cannot be easily influenced by the company, and in the practice, PESTEL is designed to show the linkage from variables to expected outcomes (Collins, 2010).

PESTEL analysis is especially relevant in circumstances in which managers cannot have an influence over the external conditions. The PESTEL analysis helps setting the strategic directions and gives an illustration of the internal available resources for their better allocation. Scholars and professionals generally point out that firms in which decision-makers do not correctly interpret the environmental circumstances in which their business operates are likely to fail. (Adamu, 2019)

### **2.2.2 Benchmarking**

As a second approach for the external analysis, a benchmarking study for the previously selected competition by the Sales Development and Management direction is conducted. The aim of study is therefore, analysing the external conditions from a competition perspective and more specifically putting the focus on their offering portfolio. The objective is to assess the market presence of these competitors in five selected offer model categories and to illustrate where the organization is placed among them. For the benchmarking study, a restriction in terms of geographical research is required, thus, the offering portfolio analysis from the competition will be limited to Germany as the biggest market in terms of sales and the base country from the company.

Benchmarking is the process of assessing the performance of a company in comparison with the best in the same or a different industry (Stevenson, 1996). Usually, dimensions such as quality, time and cost are evaluated or in this case the offering portfolio from the selected competition will be evaluated. Benchmarking is used to assess performance using specific KPIs and resulting in a measurement that is then evaluated against others, allowing companies to implement strategies to improve their business operations or to adapt them to the best practices in the field (Fifer, 1989). Benchmarking is frequently performed as a single study, however it must be treated as an uninterrupted process in which organizations search for the best practices to improve their performance, and in particular in project management it can also serve as support in the selection, planning and delivery of projects (Colette et al., 2018).

In accordance with Bogan (1994), there are three primary types of benchmarking that are in use and these are; process benchmarking, performance benchmarking, and strategic benchmarking. Furthermore, according to Bogan (1994) benchmarking can be performed internally (comparing performance within an organization) or external (comparing performance with companies in a particular competitive environment). According to the given definition, in this work an external strategic benchmarking study is performed considering its long-term strategic view and the involvement of the business model. In essence, strategic benchmarking puts the focus on how companies compete and it looks at which strategies are being used to make them successful (Bogan, 1994).

In the same vein for the development of the benchmarking study, the steps presented by Stevenson (1996) are employed for the master thesis. These are selected given the clarity in the denomination and description of the milestones and because of its appropriateness in terms of suitability to the

study given that it considers the substitute product as a part of the process. These steps in which the benchmarking analysis is divided according to Stevenson (1996) are:

1. Identify the problem areas
2. Identify other industries that have similar offering models.
3. Identify organizations that are leaders in the area.
4. Evaluate the selected companies to identify leading edge practices.
5. Implement new and improved business practices.

Finally, according to Zairi et al. (1994), benchmarking brings the necessary evaluation to ensure that the firm's standards of performance are competitive in the studied field and it can lead to the following outcomes:

- In the identification of a gap, first the predetermined standards are reviewed, and new practices based on best performers are integrated in the aim of closing the gap.
- In the identification of a parity or a positive gap in favour of the organization, benchmarking guarantees that the objectives remain focused on improvement and in the search of a superior performance.

### **2.2.3 SWOT Analysis**

SWOT Analysis has been employed in the latest fifty years principally in the field of strategic management. It is designed to throw light on an organization's current strategic status and intends to help in the development of future strategic action plans. A correct application of a SWOT analysis can provide a good departure point for strategy formulation. As seen, the clearer the understanding of strengths and weaknesses, the less likely opportunities will not be seized. (Derguisi, 2017)

SWOT analysis (or SWOT matrix) is a valuable technique for strategic planning and decision making, used to help an organization identify strengths, weaknesses, opportunities, and threats related to business competition or project planning. It is a study that combines both the internal and the external view and, in this work, it is used to represent the information collected by its research with a specific focus on the offering portfolio. If used effectively, it can help to build a firm's organizational structure and its competitive strategy (Derguisi, 2017). PESTEL analysis builds one basis for the SWOT analysis and can be used for the analysis of the business environmental factors (Armstrong, 2006).

It serves to identify an organization's strategic direction. In so doing it identifies potential strengths to either exploit opportunities or counteract threats, and weaknesses in order to face them (Ayub et al., 2013). It summarizes the central elements that have been drawn by studying the external and internal conditions of every organization. That is to say, it evaluates and compares the strengths and weaknesses through the analysis of the internal organizational factors with the general opportunities and threats that can be detected from the analysis of the external organizational environment (Vlados, 2019).

While the strengths and the weaknesses focus on the internal capabilities, the opportunities and threats have a particular focus on the external conditions. According to Kotler & Armstrong (2010) the strengths include internal capabilities, resources, and positive situational factors that favour the company in serving its customers and achieve its goals, while the weaknesses include internal constraints and negative situational factors that can affect the firm's performance. Furthermore, Kotler & Armstrong (2010) define opportunities as beneficial factors or trends coming from the external environment of a company that may favour the exploitation of such circumstance to the company's advantage, while threats are defined as certain harmful external factors or trends that can

present challenges to the normal operation. In other words, the aim is to fit the analysis of externalities and internalities, to balance the organization’s strengths and weaknesses in the light of environmental opportunities and threats (Derguisi, 2017).

According to Chermack and Kasshanna (2007), the SWOT Analysis can help organizational managements to better address opportunities to take competitive advantages and, simultaneously, a correct interpretation of the internal weaknesses can lead to the elimination of certain external threats. Moreover, they develop a Two-by-Two matrix (Fig. 5) in order to illustrate the convergences between external and internal factors and therefore the application of tailored strategies.



Figure 5. Two-by-Two Matrix. Chermack and Kasshanna (2007).

As observed in the Two-by-Two matrix, the authors propose a combined interpretation for the implementation of the respective strategies considering the interaction between both the internal and the external factors. With that in mind, for those company’s offering portfolio competencies that could be considered as strengths, either an S-O or an S-T strategy could be employed in order to either target a market opportunity or protect against an external threat. Similarly, for those offering portfolio competencies that could be considered as weaknesses, the organization should pursue either a W-O strategy whose aim is to overcome a perceived weakness by targeting an external opportunity, or in the event that these weakness coincide with certain external threats, the company must implement a W-T strategy to minimize the impact.

### 2.2.4 Ansoff Matrix

Finally, after PESTEL, benchmarking and SWOT analysis techniques have been introduced, the fourth strategic analysis tool employed for the evaluation phase of this project, the Ansoff matrix, is presented. In this work, the Ansoff matrix is employed in order to assess the possible strategic growth directions according to the internal and external findings. Similarly to the SWOT analysis, this tool is implemented in order to represent the previously collected data, however the Ansoff matrix focuses on the future growth perspective. This representation together with the SWOT analysis will help address the elaboration of a final proposal through the interpretation of the perceived gaps.

The Ansoff matrix is a strategic planning tool that connects a firm's marketing strategy with its general strategic direction. As a result, it helps in the assessment of the four possible alternative growth strategies presented as a Two-by-Two matrix (Fig. 6). (Loredana, 2017)

These strategies according to Ansoff (1957) consider mainly two factors; products and markets, that is, products to be produced and markets to sell these products. For the aim of the project, the product category is understood as a product-service-system, as introduced in the servitization section of the work, that gives a better overview on the offering portfolio possibilities and that considers the most recent digital servitization theories.

The Ansoff matrix is then represented as follows:

	<b>Current Product</b>	<b>New Product</b>
<b>Current Market</b>	<b>Market Penetration</b>	<b>Product Development</b>
<b>New Market</b>	<b>Market Development</b>	<b>Diversification</b>

Figure 6. Ansoff Matrix. (Ansoff, 1965).

According to Loredana (2017) a market penetration is a strategy aimed to increase the market share of a particular business model and it can be effective in a market that does not present saturation by implementing measures such as: development distribution networks, attracting new customers, or improving communication channels. It aims to increase the company's sales performance without leaving the original product-market approach (Loredana, 2017). Using this strategy, a firm tries to enhance its business performance by increasing its sales or by finding new segments of customers to whom it can approach with its current products (Ansoff, 1957).

Second, product development strategies consist in developing new or modifying existing products and/or services, however considering the current markets. In other words, organizations focus on developing new products for their main markets. Furthermore, a product development strategy builds on the present strategy and looks for developing products with new and different features which intend to improve the current performance. (Ansoff, 1957)

In the third place, market development is a strategy by which the company identifies new markets in order to improve the current results by targeting them with current offering portfolio products and/or services. However, this strategy requires the assessment of risks arising from: the peculiarities of new outlets, local competition, uncertainty in the new market segment and profitability (Loredana, 2017). Market development is a strategy in which a firm looks for the adaptation of its present offering model (generally with some changes in the product substance) to new strategies (Ansoff, 1957).

Lastly, pursuing a diversification strategy an organization tries to grow its market share by introducing new offerings in new markets. The diversification strategy involves the entrance to an unexplored market with a new or reinterpreted product and/or service. It is the riskiest from the four alternatives because both product and market development are required, especially when it involves the screening of a new offering model that is not based on the core competencies of the organisation. Diversification looks for a simultaneous departure from the current offering model and the current market field (Loredana, 2017). It stands apart from the other three. While the latter are usually followed with the same technical, financial, and merchandising resources which are used for the current product in place, diversification requires new sets of skills, new processes, and new resources (Ansoff 1957).

According to Loredana (2017) diversification strategies are characterised by being the ones that can help the company achieve a better performance in line with the offering model extension to new services and products, new markets, new technologies, etc. A diversification strategy looks for the expansion of the scope to novel activities in different areas from those in the present business. Similarly, implementing a strategy of differentiated marketing, a company can also decide to approach different market segments by employing separated offers for each of them targeting a certain segment (Loredana, 2017).

Finally, according to Ansoff (1965) each of the strategies analysed present a different path that a business can take in the search of future growth. Nevertheless, it can be also observed that in real circumstances a business would follow different paths simultaneously. Therefore, a parallel implementation of market penetration, market development, and product development is usually recommended, and in the search of a competitive business model may be essential for the survival (Ansoff, 1965).

### 2.2.5 Gap Analysis: Seizing the White Space

As introduced at the beginning of the section, in the development of the master thesis methodology, the gap analysis is employed as the evaluation technique in the strategic analysis. In doing so, an evaluation of the internal and external findings obtained from the previously introduced analysis techniques are employed in order to establish the suitability form the current offering portfolio strategic implementation to the firm's environment.

This gap analysis methodology is built according to the BMI theory from the book: "Seizing the White Space: Business Model Innovation for Growth and Renewal" (Johnson, 2010), in advance referred as: "Seizing the White Space". This theory introduces the problematic between BMIs and the lack of a definition or a real understanding on what lies behind the concept, and it illustrates how on multiple occasions the topic is not given the relevance within companies that it should have. Additionally, the theory is particularly well-suited to the strategic analysis presented because in the chapter "Achieving Sustained Growth" it describes the stagnation problematic that companies face once they are established in a market and repeatedly perform a determined business model. It explains that as a result firms might confront a growth gap between their expected growth trend and the growth path delivered by their current business model and its adjacencies. Thus, a parallelism between current BMW Motorrad market situation, regarding the market stagnation introduced already in the motivation and that will be developed in the forthcoming analysis, and the growth gap described in the book can be established.

For the elaboration of the theory, Mark W. Johnson defines a business model in a similar way to the definition introduced in the theoretical background by Richardson (2008). This interpretation proposes a consolidated view of the components of a business model: value proposition, value creation and delivery, and value capture.

Thus, similarly, "Seizing the White Space" interprets the business model structure as a four-box model grouped in three parties (Fig.7) – customer value proposition, profit formula, key resources, and key processes.

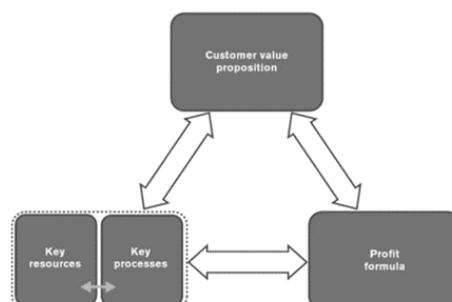


Figure 7. The four-box business model. (Johnson, 2010)

According to Johnson, (2010), the power of the model and its effectiveness lies in the complexity of the links between the different parts, the so-called interdependencies. When these four elements are properly integrated together and congruent to each other, they provide the essence of a company

competitive advantage. Similarly, the author explains that every successful company is fulfilling a real customer job-to-be-done with an effective, well-integrated business model. A successful business model should establish a balanced system in which the previously described elements can interact in a consistent and complementary way. Thus, a change on any of these elements will affect directly or indirectly the rest of them and, therefore, incongruencies between elements can also cause a downfall.

The value proposition and profit formula elements correspond directly to the value proposition and value capture elements previously defined, while the key resources and key processes correspond to the value creation and value delivery, as the description of how activities and processes are employed to deliver promised value. Through this business model conceptualization Johnson, (2010) makes the sources of a current business model success explicit, identifies which ones need to change if a company tries to capitalize an opportunity, and brings to the strategic managers a comprehensive approach to making a new-value creation a consistent, repeatable process.

In the same vein, Johnson (2010) argues that opportunities may arise then from outside of the company's core value proposition and many of those opportunities, even when they may appear to be pretty far from the scope, could be a great opportunity to exploit traditional existing capabilities through an entirely novel approach. These opportunities are the definition of what the author denominates as adjacencies.

On the other hand, some other opportunities demand from a firm to act in fundamentally different manners, which may alter the profit formula, the key resources and processes, and the responsibilities. Therefore, when aiming to deliver new value to the market and it is necessary to reconsider the fundamental business model structure, these opportunities lie in a company's white space (Fig.8).

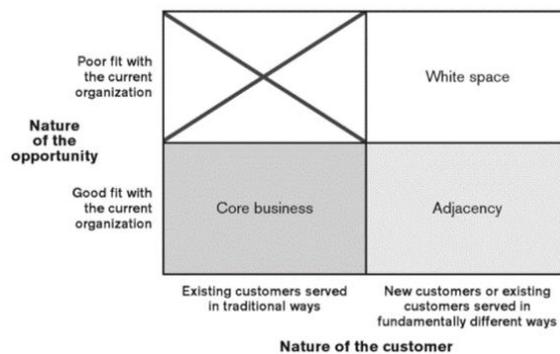


Figure 8. Nature of the opportunity vs. Nature of the customer (Johnson, 2010).

As noted in the illustration (Fig. 8), four possible business spaces are defined according to the nature of the opportunity and the nature of the targeted customer.

First of all, the core business of an organization, as defined, lies between opportunities that could be characterised as a good fit to current organization's business model, thus of its offering portfolio, and the genre of customers that are served in the traditional manner (those who were considered during the initially business model design as the targeted group). Consecutively, and in accordance with its definition, the business space named as adjacency addresses opportunities that are similarly to the core business' a good fit to the current offering model. However, in terms of the nature of the targeted customer, these are new or existing ones but served in fundamentally different modes. In the third place, lying between opportunities that are not a good fit to current organization's offering portfolio and that aim to serve existing customers in a traditional way, the business strategies considered as a poor fit to current organization's design are placed. These are the business model opportunities that should be evaluated carefully before venturing into, due to their poor fitting and their cannibalization potential. Finally, the white space is characterised by those opportunities that with current offering portfolio are poorly addressed and that intend to expand their current customer base. This could be

done by offering a current customer segment a new value proposition as an additional service, or by integrating a new set of customers into the organization's ecosystem. (Johnson, 2010)

As defined by Johnson (2010): The white space is the range of potential activities that are not addressed by the firm's current business model, that is to say, the opportunities outside the core and beyond its adjacencies that demand from a reinterpreted business model to be exploited. In addition, a white space must be essentially considered as a subjective valuation; one company's white space might be the core of another (Johnson, 2010).

The author adds that what this white space definition mainly contributes to, is to describe the activities that lie far outside from the firm's usual manner of operating and present unique challenges to the organization. Moreover, he states: "*Success here can bring the transformational growth that so many business leaders aim for. Yet it will always appear to be risky and the figures, especially in the beginning, will seem not to add up*" (Johnson, 2010, p. 8).

For the development of the strategic analysis and the final innovation proposal, in the integration of the Ansoff matrix into the Seizing the White Space framework theory the Nagji et al (2019) approach is considered. For this approach, the authors present the Innovation Ambition Matrix in which elaborating on the adjacency concept from Johnson (2010) and the Ansoff matrix, they integrate both the second and third categories (Product Development and Market Development) as a single alternative and denominate it adjacency. This solves similarly the problem for the integration of the Ansoff matrix and the Seizing the White Space matrices by avoiding integrating the business space in between opportunities that represent a poor fit to current organization and trying to address the current market. Hence, in the development of the strategic analysis both the Product Development and the Market Development Strategies are considered as adjacencies to the core business model.

### **2.3 Digitalization, Business Models & Business Model Innovation**

Attending the second research question from the work, the concept of digitalization is introduced as an essential part for the strategic evaluation for the implementation of BMI and its role as an enabler for these innovations. Therefore, in the following the term is introduced together with the analysis of its influence in the three business model elements according to Richardson (2008) definition.

Increasingly, industries are stepping into the fourth industrial revolution through taking advantage of digitalization which is revolutionizing the manner in which business is understood across the industrial value chains (Porter et al., 2015). A new age is being witnessed, the industry is becoming increasingly 'smart' with the implementation of IoT technologies, extensive data exchange and the application of predictive analytics (Porter et al., 2015; Lenka et al., 2017). There are numerous advantages: automation and optimization of processes improve the productivity and profitability by reducing costs, accelerating production, and significantly decreasing the quantity of errors in the value chain (Grubic et al., 2018; Hasselblatt et al., 2018).

According to the Gartner Glossary (2018), digitalization in the business field is the employment of digital technologies to transform business models and to supply new revenue and value opportunities; it is the process of moving towards a digitalised business. Furthermore, Parida et al. (2019) based on a literature review and building in previous definitions define it as the implementation of digital technologies to renovate a business model and to provide alternative revenue streams and value-added opportunities in industrial ecosystems. Thus, the definition does not only consider digitalization as just the application of digital technologies but also as a whole integrated ecosystem.

The development of digitalization is a challenging activity and demands from commitment to making an organization completely capable. Furthermore, this approach to digitalization initiatives together

with the wise implementation of an innovative business model can determinately lead to important benefits.(Parida et al., 2019) The new requirement for digital technologies and BMI is to facilitate continuous improvement in order to withstand competition and to produce long-term value to customers (Sjödín et al., 2017). Hence, profiting from digitalization is closely tied to BMI. This requires innovative offerings and new processes in the definition of new value proposition, value delivery, and value capture between suppliers, clients, and other value chain agents (Parida et al., 2019).

The detected opportunities are motivating a growing quantity of industrial companies to research on innovative business models, centred on digital technologies (Baines et al., 2017). According to Visnjic et al. (2018), these innovative business models create and capture value over the product life cycle delivered (e.g., pay-per-service, performance-based). With the aim of exploiting these benefits, organizations need to transform their business model, designing its structure regarding the integration of digital technologies. Indeed, the rise of digital technologies such as the IoT, Industry 4.0, artificial intelligence (AI), automation, remote monitoring, predictive maintenance, big data, cloud computing, digital platforms, data analytics, and smart connected products enable numerous business development opportunities (Porter et al., 2015; Grubic et al., 2018).

Nevertheless, increasing evidence shows that most incumbent companies in the different industries are poorly prepared to take advantage of the opportunities that digitalization brings with it (Porter et al., 2015; Lenka et al., 2017). A decisive challenge for many organizations is to identify, select, and implement customized digital innovations to benefit their operations (Sjödín et al., 2018). An additional challenge derived from the digital integration is related to the necessity for an appropriate interpretation of the design, customization, evaluation, sale, and procurement of intangible offering models. This is perceivable in digitally enabled advanced service offering models, in which the offer is neither a product nor a service but delivering a specific ensemble offering to the customer (Visnjic et al., 2018; Ziaee et al., 2017).

Furthermore, attending the second research question for the project, the concept of digitalization as a direct enabler has a determining role for the forthcoming business model analysis and proposal. Attending the Richardson (2008) model, it could be placed in the same way in the value proposition component as well as in the value creation and value delivery component, considering how activities and processes are employed to deliver the proposed value (Parida et al., 2019).

In addition to that, and similarly to the offering portfolio placement, this digital technology integration is regarded from Lindgardt et al. (2009) scope as a part of the operation model. More precisely, it is placed between the sub-elements defined as value chain and organization. The value chain definition considers the activities that involve whether and how a company should be present in the value creation process, namely, whether an activity should be performed internally or externally. As previously seen, this is one of the main requirements for digital business models, and it demands from the determination of the strategic partners and complementary actors that will be needed to deliver value (Kiel et al., 2017). From the organization point of view, it determines how a company arranges its work-force towards gaining a competitive advantage in the long term. The digital business model design requires the development and application of new capabilities. To this regard, in Racherger et al. (2018) review, the organizational capacity and the work-force competencies are identified as the major future challenges for digitalization.

In brief, with the aim of developing an optimization proposal for the offering portfolio and regarding digitalization as an enabler, the described components, elements and sub-elements from the business model conceptualization are analysed. Thus, a holistic vision on the business model structure is applied. Therefore, in the following, a description on how digitalization affects business models and the influence it has on the different components of its structure, following the previously introduced definition by Richardson (2008), is exposed.

### 2.3.1 Digitalization and Value Proposition

The value proposition component of a business model describes what is offered to the customer. This concerns the types of product and service offered by the company. According to the analysis realized by Parida et al. (2019), there are numerous manners in which digitalization can create value for the customer through innovative and more developed service offerings models.

Firstly, digitalization enables companies to either review or widen their offering portfolios by integrating IoT components or even by bundling different offerings to create opportunities (Cenamor, 2017; Hasselblatt, 2018). However, these innovative offerings are not always guaranteed; companies can commit the mistake of implementing digitalization uniquely in the attempt of sustaining their market position or their existing offering (Martín-Peña et al., 2018).

Secondly, it is vital for firms to focus on understanding customer needs concerning digital solutions. Firms take advantage from initially researching and evaluating the potential digital technology applications and the potential value benefits that they can integrate (Sjödin et al., 2018). Moreover, digital technologies are sometimes incorporated into the value chain without an understanding of the customer needs and without a value proposition that delivers a unique value to the client (Gebauer et al., 2005).

Thirdly, digitalization enables the creation of value through ecosystem orchestration or collaboration. In many cases, the execution of digital value creation will happen beyond the firm's frontiers and will be implemented across networks in the form of merged value creation (Ehret et al., 2017). In addition, companies may benefit from enhancing cooperation with innovative start-ups that are more likely to venture regarding digitalised value creation (Loebbecke et al., 2015). Furthermore, customers will have a main role in the process given that they will be introduced into the value-creation process (Laudien et al., 2016). An important criteria for value creation is that digital technology must not supplement but rather complement human capabilities regarding value creation. This may be especially relevant when studying advanced services in which human interaction with customers is determinant and an over-reliance on digital systems can affect personal interaction and have a negative impact on the value creation potential of new offerings and their perception (Sjödin 2018).

### 2.3.2 Digitalization and Value Delivery

The value delivery component of every business model describes how activities and processes are employed to deliver the promised value. The manner in which value is delivered to the targeted customers can be fundamentally reinterpreted in digitally enabled business models. These transformations will take place both within the company and in the external business ecosystem (Parida et al., 2019).

In the first place, a digital business model design requires the development and application of new capabilities for value delivery. Rachinger et al. (2018) identify organizational capacity and employee competence as the major future challenges for business model digitalization. Relevant actions to develop digital capabilities for value delivery in companies concern investing in smart and connected information technologies (ITs), developing analytical capabilities of customer usage data at front-end devices, automating data analysis, and supporting the service innovation (Cenamor et al., 2017). In order to perform digital transformation, a firm culture has to support transformation and actively search for new opportunities (Sjödin et al., 2018).

Second, to successfully achieve value from digitalization, firms need to be capable of developing scalable platforms that can integrate modularity to achieve both efficiency and effectiveness in what they create and deliver on a global level (Cenamor et al., 2017; Hasselblatt et al., 2018). Digital

capabilities enable continuous innovation of routines regarding information streams, integration of services, and centralization of process monitoring.

Third, new digital business models call for the revision of the industrial roles within ecosystems. This is because of the intensification, interdependence, and global distribution of networks (Parida et al., 2015; Ehret et al., 2017). The collection, storing and sharing of information requires firms to become more cooperative, easing a higher information transparency, connectivity, and ensembled data analysis (Hakanen et al., 2018). Thus, companies need to define their partners and complementary agents to which they will need to deliver value and how these relations should be designed (Kiel et al., 2017).

### **2.3.3 Digitalization and Value Capture**

Lastly, the third business model component according to Richardson (2008) definition is value capture. It defines the financial profitability, the revenue structure and in particular studies and the cost structures and the integration of alternative revenue streams. According to Parida et al. (2019) review, this is the aspect that has the most limited literature related research, and it is ultimately at the core of the digital business model structure.

First, digitalization can optimize internal processes that enable an improvement on cost efficiencies and lead to a positive effect on business performance (Sjödin et al., 2018). Other benefits related to the cost efficiencies can be achieved through the acceleration of delivery processes by developing product data flow and focusing on customer interaction improvement (Cenamor et al., 2017). These efficiency improvements are among the main drivers of digital business model development (Gauthier et al., 2018). In the same line, it is also important to frequently review co-creation initiatives, thus the extra costs occurring from joint digitalization efforts are balanced (Zancul et al., 2016).

Second, the digital-capability integration in the business operation can also enable the increase of the revenue streams. The increase in perceived value would enhance contribution margins (Laudien et al., 2016), but the majority of the benefits are expected to be coming from new revenue or pricing models based on subscriptions, pay-per-use, or similar methods in which the customer pays solely for the particular usage instead of for a product (Kiel et al., 2017). These new revenue models enabled thanks to digital technology are opening up more flexible and customized pricing models that are based on operational data. These situations also give customers the chance to select fixed prices, pay-per-use, or hybrid models, enabling value creation through increased customization (Zhou et al., 2015). This pricing model not only allows the achievement of a more specific and targeted pricing, but also constitutes an additional perceived value for the customer.

Ultimately, one of the main advantages of digitalization concerns the transparency in provider-customer interactions thanks to the provision of real-time data KPIs. Thus the opportunity to establish more outcome-based service contracts, in which pricing is more accurately determined based on the real service can be implemented. (Zhou et al., 2015)

### **2.3.4 Digitalization & Servitization**

Lastly, to finish with the introduction and definition from digitalization in the business field conducted for this work, the term servitization, in relation to the digitalization of capabilities and BMI, is introduced.

Servitization can be defined as the process of enhancing the value proposition of a company by adding services to the firm's offering portfolio (Vandermerwe, 1988). Authors such as Neely (2008)

argue that the development of servitization can be observed as the integration of new organizational innovative capabilities that, rather than solely offering traditional products, they can provide customers with a comprehensive product-service system (PSS) offering model (Visnjic & Van Looy, 2013).

As it has been shown, the industry is being challenged by the introduction of digital technologies that encourages the specialization in the value chain and also connectivity between actors. The industry 4.0 calls for improved operational efficiency and the development of new products, services, and business models (Kagermann et al., 2013). The mutual influence between traditional manufacturers and service providers, through processes of servitization is at the heart of innovative technologies, creating new sectors or in the aim of increasing the competitiveness of the existing ones (De Propris et al., 2016). Numerous companies have evolved from producing and marketing single products to offering their customers need-based integrated solutions (Davies et al., 2004). In the aim of successfully developing digitalization and integrated servitization, companies must change, among other things, their strategies, their operations, and their value chain (Bustinza et al., 2013). In essence, they must introduce changes into their business models that simultaneously enable the creation of new models, as digitalization and servitization enable digital business models (Martín-Peña et al., 2018).

In the same vein, information and communication technologies (ICT) have represented a major impact (Belvedere, 2013). They have enhanced efficiency and effectiveness in terms of both the development of new products, and the establishment of integrated PSS (Agnihotri et al., 2002). Furthermore, information and communication technologies ease the servitization further, not only by enabling the provision of product-service-software systems, but also by reducing expenses, improving internal efficiency, and developing the firm's offering portfolio orientation to services (Kowalkowski et al., 2013). Efficient and effective data and information processing is particularly relevant for the improvement of decision-making processes. The role played by digitalization, in this case mainly regarding the encoding of information into digital information capacity, in service innovation and in the development of a servitization strategy is of high relevance (Parida et al., 2015).

Therefore, digital servitization can be defined as the process towards smart product-service-software systems that facilitate value creation and value capture through monitoring, control, optimization, and automation of functions. To obtain value from digital servitization, companies must invest on three dimensions for their digital offerings: products, services, and software, which would principally need to work as one (Kohtamäki et al., 2019). Therefore, the concept of digital servitization reinterprets the conventional idea of products as standalone entities, conversely it enhances the connectivity between products and between the different agents along the value chain (Frank, 2019).

Digital transformation changes the customer's value proposition and the operation model, that is to say; how the organization creates value, and how it captures this value on a monetary basis (Iansiti et al., 2014). Digitalization and servitization must point towards the same direction. Digitalization, connectivity, and data analysis must come together in order to develop opportunities. Digital opportunities move usually faster than firms' abilities to adapt. Therefore, those firms which manage to develop digitally earlier than their competitors will be in a better position to implement servitization, and thus the transformation into digital business models (Martín-Peña et al., 2018).

### **3. METHODOLOGY**

In this section of the work, the method employed for the offering portfolio strategic analysis and the process for the elaboration of an innovation proposal are defined and justified. The methodology is based on the theory by Professor Mark W. Johnson elaborated in the book: “Seizing the White Space: Business Model Innovation for Growth and Renewal” (Johnson, 2010). This theory uses the gap analysis methodology to identify the breach between an organization’s current and optimal performance.

As a first step, the following section defines the current offering portfolio and the current long-term strategy as the Status-Quo from the BMW Motorrad. This is performed as a preliminary step, in order to provide a baseline for the subsequent study.

#### **3.1 Current Situation at BMW Motorrad**

The aim of this section is to set a baseline for the development of the study. As mentioned previously, in the methodology part, the gap analysis of the current offering portfolio with respect to the current market trends and competition environment is introduced. To that end, both the external and internal factors must be considered. Regarding the internal conditions, the current status of the company’s offering portfolio as well as the current long-term strategy are introduced.

First, the current offering portfolio is described and classified taking into account the different offer models that it contains. This classification is presented in accordance with the business model lines portrayal and the department’s internal description. Second, an introduction and evaluation of the current company’s long-term strategy called EXCITE (Appendix 1), is presented.

Both perspectives together give not only a point of departure for the elaboration of the study, but also a better understanding of the current offering portfolio structure as a fundamental part of the business model’s value proposition.

##### **3.1.1 Offering Portfolio Structure**

In the first place, as mentioned in the introduction, a description of the current offer model structure is presented. This description is based on the offering portfolio description statement from the 2019 management report: Sales Development Department (2019).

For that purpose, a classification of the offering portfolio in four higher-level groups, previously discussed and agreed with the department, is employed. This is simultaneously, and in a similar way to the benchmarking for the current offering portfolio, performed for Germany’s catalogue as of March 2021. This classification is hereafter employed for the understanding of the different offering models implemented by the organization.

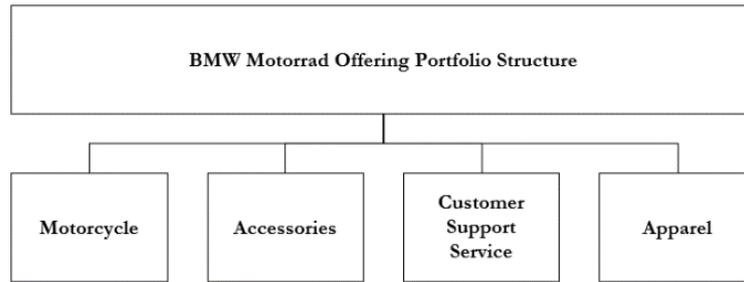


Figure 9. BWM Motorrad Offering Portfolio Structure.

The referred groups are: motorcycles, accessories, customer support services and apparel (Fig. 9). It is worthwhile to notice that, for the elaboration of this introduction, the different offer packages and the specific weight relevance of each of them in the offer model are not considered. The aim is to create a general picture from which products and services are part of the organization's offering portfolio. In the following a more detailed description of each of the models is presented.

### **Motorcycles**

First of all, the motorcycle represents the core and main offer model of the company. The motorcycle represents the core value from the value proposition. It is the main product and the business model cornerstone. From it, the rest of the offering models are conceived. That includes the customer support services, accessories and also the apparel from which functionality is designed in relationship to the vehicle performance demands and characteristics. In essence, the vehicle is the main and fundamental basis for the business model and all its elements.

For the characterization of this first offer model, the motorcycles are classified first according to the engine cubic capacity in three categories. Firstly from 0-500 cc, then from 501-950 cc and lastly the ones bigger than 950 cc. Similarly, related to the engine technology a fourth category is included for the electric drive motorcycles. Then, once every vehicle is ranked according to its engine technology and capacity, the second classification within each group is implemented according to the construction characteristics and style of the vehicle. Here six categories are distinguished; Adventure, Heritage, Roadster, Sport, Tour and Urban. Hence, considering the description and its technical characteristics every model is classified accordingly. The complete display of the offer model and the description of their characteristics will be performed in the benchmarking results section.

Therefore, it is possible to identify the motorcycle as the first and main offer model from the offering portfolio, and to classify each of the different variants depending on their technical characteristics and style. It is also possible to identify the rest of the products and services as dependent from the principal asset that is the vehicle itself.

### **Accessories**

Subsequently, the accessories can be classified as the second higher-level group from the company's offering portfolio. These are, similarly, a core product from the value proposition perspective, and are conceived as an addition to the vehicle offer model itself. In contrast with the first group, the accessories as an offer model could not be implemented independently from the vehicle, given that they are an offer model whose main characteristic is its complementarity to the motorcycle. They are an add-on to the motorcycle standard features.

These accessories are offered in two different ways, individually or as option packages. The second are predetermined accessories configurations, also known as option packages, that are offered in the first place as add-ons to the vehicle during its configuration. Additionally, specific characteristics, also

known as options, can be selected during the configuration of the vehicle in order to provide a more customized offer that can fulfil customer's demands in a more tailored manner.

This offer model is very prevalent in the industry and similarly employed by the competition, however a better description of the presence of the organization and the selected competition concerning this offer model approach is described in the benchmarking analysis.

### **Customer Support Services**

As the third offer model integrating the offering portfolio the additional support services, denominated as customer support services, are included. By service, every additional assistance or support, given to the customers after the sale has taken place, are considered. This is therefore, the third offer model and it builds on the value proposition. It is thus considered as an essential offer core value from the customer's point of view. Operatively, it could be classified as part of other business model elements, such as a value delivery element or in the operation model chain. For this project, this offer model is understood as an addition to the value proposition, and it is interpreted as an offer model itself within the offering portfolio with a determining role in the premium value construction.

More precisely, the company has a range of customer support service offers. They can come already integrated in the product offer model, embedded in a vehicle-accessories-service offer package, or independently as an individual offer model. These include the workshop service with original part supply, the service packages, the warranty, the road assistance and the collect & return service. Similarly to the previous offer models, this category is more precisely studied in the benchmarking section with the respective analysis of the competition's offer models.

### **Apparel**

Finally, as the fourth offer model considered for the study, the category denominated as apparel involves all the merchandise and wearable accessories produced and commercialized directly by the organization and that include its branding. This is, similarly to the rest of the offer models, considered from the value proposition point of view and it constitutes a category itself within the offering portfolio.

For the apparel offer model, three different categories are considered. First, the rider equipment involves the wearables that add technical characteristics to the riding activity. Second, the general clothing category involves the wearables that are not technically designed with a specific riding purpose. These are garments that have the company's branding and, therefore, they can be studied from a value proposition perspective, not directly from the main vehicle offer model but as addition to the brand's value. Finally, the small accessories in the same way as the general clothing are included. These products are considered given the fact that BMW Motorrad is not only a motorcycle brand but also a commercial brand itself, and therefore it captures value from the sale of other equipment that is not rider related.

As for the rest of the offer models, a more precise study on the apparel especially in the competition environment is studied in the benchmarking section of the project.

In essence, BMW Motorrad has a wide offering portfolio that in terms of its offer models can be classified in four higher-level groups, making use of which, all the offer possibilities are collected and consecutively considered for the development of the study.

As explained, these four big groups can generalize the offering portfolio so it could be characterized and compared to other direct, potential and substitute competitor's offering portfolios. This is performed in order to assess the competitive environment as well as to specify the offering portfolio

characteristics that are already implemented and have a role in the value proposition. Similarly, this characterization aims to help in drawing the general characteristics and the business spaces in which the company already competes and those in which it has not as notable presence.

### 3.1.2 Long-Term Strategy of BMW Motorrad

This part of the work addresses the strategic view of the company for the next ten years, the so-called long-term strategy in which the mission statement and the general guidance for the business model is embedded. The long-term strategy is therefore a necessary part to consider when addressing a business model evaluation and, in this case, when studying a determining part of the value proposition as it is the offer model.

In addition to the long-term strategy exposition, the criteria introduced in the Theoretical Background (section 2.1) for the strategy evaluation (“Consistency”, “Consonance”, “Advantage” and “Feasibility”) from Rumelt (1998) are considered. These criteria aim to evaluate the proper adjustment of a strategy to the business environment, targeted goals and the organization’s capabilities. In the event of failure to perform at least one of the key functions that are necessary for the survival of a business model is compromised (Rumelt 1998).

#### EXCITE 2030

The long-term strategy held at the moment of the realisation of this project by BMW Motorrad is “EXCITE”. This strategy was initiated in the year 2020 with the aim of targeting an increasingly volatile environment with rising uncertainties in terms of markets, global trade and urban development. Similarly, it intends to respond to the new arising customer demands through the implementation of a customer-centric perspective and making use of ICT such as big data analytics or the employment of AI tools. Additionally, it intends to tackle the lack of young demographics among the company’s customer base. This strategy can be defined as well by its mission statement:

*“We transform our business to shape our customer’s world of experiences”.*

Every part of the statement is deliberately throwing light on one of the strategic goals and aiming to transmit a specific idea of its purpose. First of all, it is formulated in plural, which shows a commitment to make it cross-functional and integrative. It talks about transformation and reshaping, conferring it a future perspective. Secondly it mentions the business directly as the main goal of the transformation, so it pays attention to the operative side from the business model - it is operation based. Finally, it talks about the customer orientation as the direct object of the statement, and it refers to its world of experiences. So, it can be observed that the target is customer centric but from an experience perspective. Here it can be observed that the experience perspective from the organization’s main value proposition is placed directly under the spotlight.

In essence, the strategy aims for a transformation without leaving the operative side from an already established and functioning business model, but putting the emphasis on a new perspective: the customers and their experience. Thus, it puts the focus on a new core value within the overall value proposition.

The EXCITE strategy is fragmented in the multiple and specific targets to address in order to carry it out, these are the fourteen specific areas in which the strategy is split that can be seen in the figure (Appendix 1). For the development of this project, the higher-level ones are described. These are the four principal strategic targets in which the 14 operative initiatives are integrated, and from a strategic interpretation point of view, sufficient for its evaluation. These four categories are: Brand & Marketing, Seamless Customer Interaction, Seamless Data Processing and Future Sales Model.

First of all, the target Brand & Marketing address the brand's identity and global vision. According to the goal statement, the objective is to become by 2030 the most desirable brand within the industry. This target approaches the aforementioned customer experience perspective and illustrates the intention to become a valuable brand in terms of brand perception. It expresses the premium character.

Second, the Seamless Customer Interaction refers to the convenient, hassle-free and personalized customer experience. Here, once again, the customer centric perspective can be observed by putting the focus on the relationship from a business to customer (B2C) interaction perspective. This exposes the customization aim as an additional value proposition developer, and in order to increase the customer's perceived value.

Third, the Seamless Data Processing puts the technological development perspective in the middle. Similarly to the second point, here the B2C interaction is the main goal. The enrichment of the business model in terms of its operative side but also from the value proposition side is intended from a technological perspective, this means, the processes have to go through a data-driven transformation. Likewise, the data collected and the capabilities developed must drive the company's operations.

Finally, the fourth category involves the Future Sales Models. This is the category that puts its focus the most on the future business model perspective and on the interpretation of what the future market demands could seem like. Regarding the target statement, it aims to integrate from an ICT perspective the sales operations in order to enhance customer's satisfaction and the sales results.

In essence, taking into consideration Rumelt (1998) strategic evaluation categories and according to the above described strategy, it can be seen that it complies with the four criteria. First, it is consistent from a goal perspective, there are no inconsistencies between the goals and targeted areas, and it is built in an integrative way in which the linkage between objectives is clearly stated. Similarly, it shows consonance to the external environment, to customers and to their perspective. It tries to address the newest demands and developments. Consecutively, it intends to enhance the current brand's competitive advantages by favouring its premium value. Finally, it is feasible in the sense that it takes the current capabilities and creates fourteen derivative initiatives, each of them targeting a specific business unit. Additionally it proposes the implementation of new capabilities in order to attend the arising demands and the novel targets.

As a consequence of the strategy statement, the goal is to become the most desired motorcycle brand. This is understood from a holistic perspective and puts the emphasis on a premium-product corporate image. Thus, every offer model and therefore the offering portfolio, must support a premium-product category. Any proposed change into the business model structure must comply with the premium value proposition standards. In order to better understand the strategic structuration and the initiatives integration within the model, in Annex 1 the strategy's schematic design is illustrated.

### **Data Driven Company & Sales Platform**

As part of the introduction to the current status of the organization, the evaluation, description and classification of the current offering portfolio was performed. Subsequently, the description of the current long-term strategy was displayed. This strategy, as described, is the current mission statement of the company for the next ten years, and it is divided in four main categories that simultaneously are also divided in the fourteen different initiatives.

From these initiatives, the most interesting for the development of the study and of major interest according to the department point of view are the Data Driven Company and the Sales Platform initiatives. Both initiatives have a clear focus on the digitalization of capabilities and operations. The Data Driven Company initiative is more operationally conceived while the Sales Platform integrates

both the development of digital capabilities as well as the customer centric point of view. Both initiatives deal with the development of skills and capabilities but also are framed on a strategic level. The development of such capabilities, together with their vision statement, speak for the digital BMI and, therefore, deals with the business model structure both on a value proposition and on an operating mode level.

On the one hand, the Data Driven Company initiative is integrated from the beginning as a framework for the Seamless Customer Interaction and the Seamless Data Processing. It has an overall perspective on the digitalization of internal processes and tools and the development of teams and roles. This concerns from the fostering of personnel competencies to the integration of new software and digital tools for big data collecting, processing and analysing, as well as the gradual implementation of AI tools. Regarding the EXCITE strategy, the initiative is seen as one of the fundamental business operation developers and therefore it has an essential role.

Considering the initiative description, the Data Driven Company aim is to build on the customer-centric approach and serve as a driver for the decision-making processes based on automated and easily understandable data reports adjusted to the specific needs. Similarly, it can be defined as attending to its four main targets. First, it aims to build know-how among the organization's structure and the workers and, thereto, drive the decision-making process. Second, it aims to configure data-expert teams through the development of the "Data EX Machina Werkstatt", organised as an independent cross-functional data analytics team. Third, it aims for processing and merging the available data resources and the obtention of new data sources so the processes can be automated and the Key Performance Indicators (KPIs) predicted on an artificial intelligence base. Finally, it aims to give visibility to the obtained, collected and processed data so it can be easily accessed and visualized. Thus, in essence Data Driven Company is a transversal initiative that intends to shape the operations within the decision-making processes, constitute new teams of professionals, improve the data collection systems, the data access and the seamless data visualization.

To this regard, it is worthwhile to give mention to the EX Machina initiative that is already working on the data collection and big data analytics, issuing reports such as the EX Machina Magazine from January 2021, analysing motorcycle usage per country, per brand and per segment based on data collection from sources such as FASTA, REVER, the BMW Motorrad Connected App and Quality Data Manager tool. The aim is to integrate the data study and analysis in order to evaluate the customer usage and improve the understanding of the markets or customer base.

On the other hand, the Sales Platform initiative is integrated in the Seamless Customer Interaction and principally as a part of the Future Sales Models. This is in essence, the constitution of a sales platform building on the digital and in the data collection capabilities, in order to enable a future offer model in which the sale is integrally performed online. It aims to offer a seamless and simplified shopping experience and to be the basis for cross- and upselling, that is to say, to bundle the different products and services offered by BMW Motorrad. It comprises the initiative for the reconfiguration of the operation model from the business model structure. The basic configuration of the platform looks to ease the searching and information collection processes for the customer, assist in the selection of a motorcycle and its option packages, calculate the payment and the financing options, and serve as a final check-point for the sale of the product and add-ons. In brief, the Sales Platform initiative looks for the digital tool integration and the approach to a more customer-centric and customized offer, thanks to the data obtained and the easiness of the selling process.

### 3.2 Method: Gap Analysis

As displayed in the theoretical part in the section 2.3 “Strategic Development”, the gap analysis is the methodology conducted in the evaluation phase of the project. This methodology is, in short, an analysis of the difference between where a business is currently and where it desires to be in terms of its performance (Debra et al., 2014). The discrepancy between how the business wishes to perform and how it is currently performing is known as the performance gap (Franklin, 2006).

In the elaboration of this work, the gap analysis evaluation is interpreted from a strategic point of view. Therefore, it looks directly into the organization’s business model characteristics and into the different elements that constitute it. Accordingly, the implementation of the previously mentioned analysis has a close look into the current offering portfolio as the main subject of the study. The final aim is to elaborate a proposal based on the comparison between the external conditions and the internal offering portfolio characteristics, through the interpretation of the gap analysis outcome.

According to Debra et al. (2014) a gap analysis is composed of a set of techniques to examine and study the gap between current firm’s performance and the expected future goals. Gap analysis is the evaluation of the actual performance against the potential or desired one; that is to say the current state and against the desired future state. Gap analysis provides a way of detecting non-optimal strategies, structures, capabilities, processes, operations, technologies, or competencies, and as a result it proposes solutions in the aim of helping organizations achieve their goals (Debra et al., 2014).

However, analysing the gap demands from detailed understanding of the repercussions resulting from implementing the proposed solutions (Debra et al., 2014). In particular, when addressing the problematic areas detected in the conducted analyses, the selected option will similarly need from the alignment with the business structure of the organisation (Debra et al., 2014). Hence the identification of the gap might always be considered from a business model perspective, taking into account the current organization’s capabilities and identifying the white spaces in accordance.

From the “Seizing the White Space” proposition, Johnson (2010) considers that taking the decision whether to continue targeting your customer or venturing into a reachable white space, where so many uncertainties arise, is a decision that no manager should need to face. Besides, to decide never to go into the white space is to make a company’s growth prospect always walk around any opportunities that might arrive. The opportunity to create new markets, transform them or change the game is a powerful manner to address competition and to disrupt an industry status quo.

As previously discussed, when companies are still at a development stage on their business model and value proposition, they have the necessary room for progression and expansion. They have room to seize business core adjacencies and incorporate them to their business operation. They remain able to capture value from different strategies and different business model approaches. Notwithstanding, once the business model is settled and the operations are integrated, the movement to novel propositions that outstand the current business model structure get more and more complex to be implemented. At that point process innovation reaches its upper bound and new product development slows (Johnson, 2010).

Furthermore, Johnson (2010) explains that, it is at this point when companies face an imminent shortfall between their desired growth perspective and the growth that the existing business and its adjacencies can deliver. These growth gaps can be equally affected by technological discontinuities, disruptive threats, changes in government policy or society’s expectations and intensification of the direct and indirect competition. These growth gaps are not new, but it can be argued that they are arriving faster and more frequently than ever before.

To overcome this growth deceleration, companies are demanding something more fundamental than simply new growth, they need renewal. They must try to evolve into companies that deliver new sorts of value, and that is through new value proposition approaches. Thus, they must try to leave the

comfort of their core business and their operational capabilities, to pursue opportunities in their white space. Seizing this white space requires new sets of skills, the reinterpretation of strengths and new ways to capture the value and turn it into profit. It calls for the ability to evolve into something that lies behind the core business model structures and thrives for new strategies (Johnson, 2018).

So fundamentally the gap growth could be tackled by the identification of the white space and those areas within it, that a company's business model could meet. To do so, the identification of the so-called gaps between their capabilities and their identified diversification strategies are the aim of the study, thus the desired outcome from the methodological implementation.

### **3.3 Gap Analysis General Implementation**

As previously seen, the process of analysing the gaps requires a detailed understanding of the associated implications derived from the application of the resulting changes. Thus, in addressing the detected gaps the designed solution would need similarly from the alignment with the original business model structure. In the following section, the Debra et al. (2014) gap analysis implementation approach is introduced.

As previously stated, the main objective of a gap analysis is to assess the deficiencies from current business, find out what originates from them, and propose ways to adjust the strategic target with the analysis's result (Debra et al., 2014). Some of the reasons that can move a company to implement a gap analysis include the following: benchmarking, portfolio analysis, profits, processes, performance indicators and usage gaps. According to the definition of the project motivations, in the following, the gap analysis of this study concerns examining the offering portfolio to look for new sales and service growth opportunities. Additionally, it can look for the better allocation of existing products or offer models in order to target the adjacencies defined by Johnson (2010) with the aim, as described by the authors, to overcome the growth gap.

More specifically, the portfolio gap analysis is embedded in two upper-level gap analysis. These are the market gap analysis and the strategic gap analysis.

On the one hand, the market gap analysis is a manner to identify sales opportunities where the demand is above the supply possibilities. Employing this technique can help in the identification of markets that have room for new entrants. Making use of market gap analyses, strategic decisions can be taken based rather on market facts. The main difference between gap analysis and traditional market research is that it is proactive rather than reactive and is principally employed by B2C companies. Furthermore, the market gap analysis might be developed on a geographic basis (there is no offering of a certain product in certain place), product basis (there is a certain time when there is no offering of a certain product as a main offering model), service basis (a demand of a complementary service for a product mainly served by external players) or look for a better way in which exploit existing resources (optimising market knowledge, resources and capabilities). (Debra et al., 2014)

On the other hand, the strategic gap analysis looks at a company's strategy and is closely tied to benchmarking, comparing the offering model to competitors, or performing a best practices evaluation. First, a market gap is performed to find out what other current competitor's offerings do not address. Then a strategic gap analysis is conducted to look at the current state and see what kind of skills they lack, if the geographic positioning is correct, what kind of market penetration approach is required, and what equipment will be necessary. (Debra et al., 2014)

In essence, the portfolio gap analysis in this work primarily intends to identify the business spaces denominated as white spaces with a strategic perspective. Therefore, it looks for the gaps within the company's market environment, aiming to find the optimal opportunities to seize. For instance, a

lack of a service supply that is directly related to the organization's value proposition and at the same time a good fit to the current offer model structure. Furthermore, when evaluating the strategic gaps, the analysis aims for the voids that lie within the own offering portfolio and that are present in the competition's offering. It has a closer look into the benchmarking analysis from the direct and potential players in the competitive environment and it tries to assess which offer models can be of an interest on a longer-term perspective. This is developed with a close look to other macro-environmental factors that directly affect the market and that can help in the detection of substitutes in terms of value proposition from a customer's point of view.

Companies can conduct a gap analysis at any point in time, however being accurate about the moment to perform it can maximize its efficiency. Hence, in the development of a gap analysis it is worthwhile to look at strategic planning because it is the process that defines a strategy that intends to guide a company to achieve its goals. A gap analysis can be determining for strategic planning. Assessing issues via a gap analysis, the strategy can be readjusted to better suit the market situation or to redesign the company's processes to align with strategic goals. In particular, when organizations are searching to find the problems in their performance, a gap analysis can be an appropriate tool for the identification of underperformance. (Debra et al., 2014)

The gap analysis can be applied at different levels depending on the aim of the evaluation. As a first approach to the study, a Business Activity Model<sup>2</sup> (BAM) illustrates a conceptual outlook of an intended future business model, it shows the necessary actions to fulfil certain stakeholder's requirements or to discern new opportunities. Each of the activities shown on the BAM may be examined in order to identify where deficiencies lie. At a more general level, according to Debra et al. (2014), gap analyses may start by addressing one of the following categories to examine:

- The 'as is' and 'to be' business model.
- The competencies held and those required for a particular role.
- The IT system requirements and its features offered by the existing capabilities.

As stated in the project's motivation and in the subsequent research question, the aim of the project is the identification of new offering model propositions that could fit with the organization's current capabilities. Therefore, the gaps will be defined in the "as is" and "to be" category. That is to say, to identify the possible "good fitting" future business model areas where it would be desirable to come through or to reinforce. In addition, both the second and the third points, referring to the competencies and the IT capabilities, are addressed as a result of the previous mentioned project's aim. First, in the study of the status quo of the current offering model, there is an analysis on the competencies of the current offering model. However, this is not carried out to an individual level. Furthermore, as a part of the research question, the role of digitalization as an enabler for a future offering model approach is considered. Hence, both the second and third point are, because of the "as is" and "to be" category, collaterally covered.

Moreover, it is important to note that often during the implementation process, organizations tend to acknowledge a gap while they have a particular solution in mind. This narrow process limits thinking and potential solutions. To keep every option path open, the discrepancy should be stated as a straightforward and clear formulation. Only once the performance gap is identified and clearly articulated, the next phases of the method deployment could be conducted.

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<sup>2</sup> Business Activity Modelling is a technique to create a holistic activity view of a particular business. It enables to gain a conceptual view of what is happening in an organization and the ability to compare this with what could be happening following specific changes (Philips, 2019).

### 3.3.1 Gap Analysis Execution Steps

For the development of the gap analysis, the execution process described by Franklin (2006) is employed given its strategic analysis approach framing and its complementarity with the integration of the strategic analysis tools considered for the study. In essence, the gap analysis is realised through six main steps described in the following section. Each main step is described from a general point of view as described by Franklin (2006), and in addition the analysis tools and study evaluation instruments selected for each of the implementation steps are presented.

Gap analyses are in general conducted by business analysts, project managers, process improvement specialists or by the management (Franklin, 2006). On a general level, the basic steps for performing a gap analysis according to Franklin (2006) are the following:

**1. Identify the area to be analysed and identify the goals to be accomplished.**

In this case, the described project aims: evaluating the good fit of the current offering portfolio to the customer's expectations and market demands, and the digitalization capabilities as a source of new offering model alternatives.

**2. Analyse the current state.**

In this step, both the description of the internal and external circumstances, based on which the strategic analysis tools will be elaborated, are presented. To that end, first the PESTEL study for the macro-environmental analysis is executed. Following, the benchmarking analysis regarding the competition selected from the Sales Development and Management department are studied and following Stevenson (1996) description of steps. Additionally, for the extension of the market research the substitute products from the Porter's five forces analysis is considered. These are products that by the use of a different technology try to solve the same need (Porter, 2008). In this case the competition selected for the possible substitute are the market agents providing mobility services given its potential substitutional character, especially regarding the urban domain. The complete Porter's five forces analysis is dismissed given the lack of information at a department's level in which the work is conducted regarding the bargaining power of "Buyers" and "Suppliers" and considering the entry barriers for "New Entrants". Thus, the focus of the external forces is put into "Industry Rivalry" and possible Substitutes.

Regarding the internal factors, in section 3.1. the current offering portfolio and the long-term strategic vision are introduced. Once the internal and external factors are studied, all the findings are presented by the assessment of the findings in accordance with the SWOT analysis as strengths, weaknesses, opportunities or threats. From it, in the subsequent steps, the general strategic directions of the firm's offering portfolio in relationship with the current external factors are assessed. Through the evaluation from both internal and external aspects, the nowadays offer proposition and the strategic vision of the organization's market positioning can be discretized for a better understanding of its characteristics.

**3. Analyse the optimal future state.**

This is described by the current strategy statement: "*Become the first and most desirable motorcycle brand*". In order to accomplish the strategic mission statement, once the current strategic directions are assessed by the execution of the SWOT analysis, the Ansoff matrix is carried out. This analysis, as shown in the theoretical background introduction (section 2.3.4) serves as a tool to study the strategic growth directions. Therefore, the parameters influencing a product and market level are analysed regarding the internal and external input gathered from the macro-environmental factors, competitive environment evaluation and the internal sources previously

described. In essence, the definition of these parameters according to the Ansoff matrix, leads in the subsequent step to the

**4. Compare the current state with the future state.**

In this part of the strategic analysis, both the results obtained from the evaluation of the internal and external findings by the previous deployment of the SWOT analysis and Ansoff matrix are discussed. In doing so, the strategic directions from the current strategic position derived from the SWOT analysis and the strategic growth paths derived from the Ansoff matrix are presented. Therefore, the outcome from both SWOT and Ansoff matrices is presented.

**5. Present the gap and describe the difference.**

Once both analyses are performed, and as a result their matrices are built, the complementarity of both evaluation techniques could be observed. This complementarity is described in the following section 3.3.2. In short, both analyses lay out external and internal characteristics of the studied subject and expose them in a similar graphical way. That makes it possible to acknowledge the gaps between the current offering model strategic direction and the prospective strategic growth areas.

Therefore, after the internal and external findings are analysed through the evaluation of the SWOT and Ansoff matrix outcomes, the complementary strategies developed in section 3.3.2. are applied. As explained, in the preceding discussion section from each of the analyses, the internal and external findings are evaluated from the perspectives proposed from each strategic analysis tool. For the SWOT discussion the findings are regarded from a strategic positioning point of view, whilst in the Ansoff discussion the prospective growth vision is described. Hence, the complementary strategies proposed in section 3.3.2 are elaborated as for the bridging of the gaps between the current strategic evaluation and the strategic growth perspective given by the Ansoff matrix.

**6. Summarize the recommendations and create a plan to bridge the gaps.**

In this last step, the decision on what needs to be changed and the determination of what steps need to be followed is taken. Finally, after the evaluation of the spotted gaps and the determination of areas of interest, as a result from the gap analysis study and as the main goal of the project, the proposal for an innovation in the current offering portfolio is elaborated in the project discussion section 4.6.

The final gap analysis proposal is therefore based on the complementarity strategies built between the SWOT and Ansoff analyses and framed, as seen in the theoretical background section 2.3.5 “Seizing the White Space”, from the Johnson (2010) perspective in the search for alternative business models that might lay outside the core operation of the company and beyond the defined adjacencies and look to face the stagnation defined as growth gap.

After performing a gap analysis, the deficiencies and shortcomings, if any, that need to be overcome can be understood and prioritized. Once gaps are detected, it becomes easier to quantify them and identify the work effort that will be necessary to cover them. A gap analysis intends to give decision makers a general overview of the business model or a certain function such as strategy, information technology or operations. In doing so management can assess whether an organization has the necessary resources to meet its objectives. The gap analysis brings clarity on where the company is and where it must go in terms of strategic planning. Additionally, when it is correctly baselined against current offering best practice, it can add real value to the business. (Franklin, 2006)

### 3.3.2 SWOT - Ansoff Complementarity

Finally, to finish with the methodology part of the work, the complementarity strategies described in the 4<sup>th</sup> step from the gap analysis execution steps are introduced. In so doing, the proposed strategies try to address the potential gaps derived from the evaluation of the obtained results and it is based on the employment of both outcomes obtained from the external-internal analysis and the elaboration of both SWOT and Ansoff matrices.

This work proposes a combined look into the strategic analysis. This evaluation is based on the assessment of the current strategy by the deployment of the SWOT analysis and the prospective view from the same internal and external factors given by their analysis through the Ansoff matrix (Fig. 10). In doing so, with the objective of covering the gaps between both outcomes, four complementary theories are proposed.

The complementary strategies are developed based on two main factors; first on the internal vs. external approach that both analyses implement, each of them considering the strategic direction and the strategic growth view respectively. Second, given the parallel assessment of internal factors as strengths or weaknesses from the SWOT analysis and as current or new products from the Ansoff matrix, as well as the assessment of external factors as opportunities or threats from the SWOT analysis and as current or new markets from the Ansoff matrix.

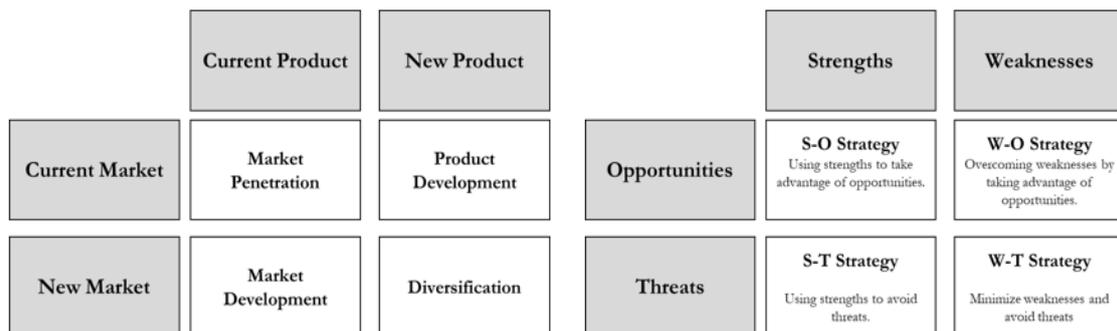


Figure 10. Ansoff and SWOT matrices parallelism.

This approach is based on the “Corporate Strategy” book (Ansoff, 1965) development in which according to Gürel et al. (2017) H. Ansoff takes the SWOT analysis and divides it into neatly delineated steps linking the setting of goals to the operating plans of the organization in the development of the Product-Market matrix (Ansoff matrix), that defines and compares four core strategic responses to a different set of internal and external conditions. Hence there is an elemental linkage between the development of the Ansoff matrix and the SWOT analysis.

As seen in the theoretical background, the Ansoff matrix addresses the existing product, in this case offering model, as a new or an already-in-place offer, that could be interpreted from the SWOT perspective as a strength or a weakness in terms of the offering portfolio competencies. It can be either considered a strength when the required competencies are already a core from the company’s value proposition, or as a weakness when this product is not deployed by the current offering portfolio. Similarly, a weakness can be detected when the capabilities to implement an offer model are not delivering the potential value given the lack of a business model or the ineffectiveness of its elements.

Similarly, the evaluation of the markets as new or current from the Ansoff side can be also considered from the competencies evaluation by SWOT analysis as a threat or an opportunity. Either as a threat when there is a gap in the current market or a new one that could substitute the current offer model,

or as an opportunity when there is an already seized market that demands a product that is already in place conceived as a different offer model, as it could be an adjacency. Additionally, an opportunity can arise from the chance to open up to a new market where one of the current offer models can be directly applied, or by seizing the novel market through the reallocation of capabilities.

Having these descriptions in mind, and considering the parallel assessment introduced regarding the dichotomy between the internal-external perspective, a complementary strategic outcome is proposed in order to bridge the gaps between the strategic direction in place and the strategic growth analysis outcome. Thus, the complementarity between the SWOT and the Ansoff matrices is solved as follows:



Figure 11. Combination of Ansoff matrix and SWOT strategies.

In the illustration (Fig. 11), as a result of the complementarity interpretation from both outcomes, the 4 possible strategic responses to pursue depending on the condition's setting are presented. The complementary strategies are based on the superposition of the strategic statements from both SWOT and Ansoff matrices' outcomes and do not intend to establish a parity between the interpretation of the conditions that predetermine them. The aim of the strategies proposed is to cover the same strategic spaces, emerging from the same internal-external parameters but considering the differentiated interpretation from each strategic analysis tool, and to throw light on the strategic path to follow in order to cover the gap between both outcomes.

The definitions of these merged strategies combine the SWOT strategic direction implementation and the Ansoff growth perspective, taking into account the nature of the market and of the product. Therefore, for every of the SWOT outcome strategies, Ansoff market strategy is associated with proposing the following definitions for the resulting strategic responses.

**Market Penetration – S-O Strategy:**

According to Ansoff (1957) when implementing a market penetration strategy, a company intends to develop its business performance by increasing sales regarding its present customer base or by acquiring new customers for its present offering. It looks to extend market share and it is recommended in non-saturated markets. Additionally, the S-O strategy is defined by the SWOT analysis as employing the competencies that are understood as a strength, in this case from the offer model, to take advantage of the opportunities that could arise.

This merged strategy intends to face the gaps perceived between the Strengths-Opportunities strategic direction formulations and the Market Penetration growth strategies. It pursues the opportunities arising in the current market that could be better addressed by the current offering. Thus, the current product, in this case the offering model, is understood as the strength in which the growth strategy has to be substantiated whilst the opportunity arises from the current market positioning.

Therefore, the definition for the complementary strategy is:

- *Employ the strengths of the current product and the opportunities from the current market positioning to improve the business performance.*

#### **Product Development – W-O Strategy:**

According to Ansoff (1957) while aiming for a product development strategy the organization retains the present strategy, so to say remains in the current market, but develops products that have new and different characteristics in order to improve the performance. This strategy consists in developing new products or modifying existing products or services, however always remaining in the same market. In addition to that, a W-O strategy intends to overcome weaknesses by taking advantage of the opportunities. Being these weaknesses the gaps that could be found in the same market given the lack of an offer model to address them.

This complementary strategy tries to cover the gaps observed between the Weaknesses-Opportunities strategic direction formulations and the Product Development growth strategies. It searches for the opportunities arising in the current market that could be better addressed by the development of new products. Thus, the novel product, in this case offer model, is understood as the weakness given its absence. Because of it, the growth strategy has to be substantiated on the development of a new offer model taking the current market presence as an opportunity.

- *Overcome the weaknesses from the absence of a new product by benefiting from the current market positioning as a development opportunity.*

#### **Market Development – S-T Strategy:**

For a market development strategy, Ansoff (1957) defines a strategy in which a company tries to adapt its current product line (generally with some changes in the product substance) to new strategic goals. Market development is a strategy by which the company identifies or creates new market segments in order to improve the current sales results by targeting new customer segments or markets, offering the current products and services. Additionally, the S-T strategy involves the use of the so-considered strengths as to avoid the foreseeable threats. In this case these threats are the emergence of new markets that can involve the substitution of the current offer by a new offering that replaces the current business model, but it can be addressed by the reallocation of the competencies or of the current offer.

This merged strategy addresses the gaps discerned between the Strengths-Threats strategic direction formulations and the Market Development growth strategies. It intends to face the threats coming from new market substitutes that could be addressed employing the current products. Thus, the current product, in this case the offer model, is understood as a strength in which the Market Development strategy has to be substantiated. Based on it, the growth strategy has to be focused on the offer development to face the new threatening market segments.

- *Employ current product as a strength for the development of solutions to avoid the threats from substitutive new markets.*

#### **Diversification – W-T Strategy:**

Finally, for the last strategy, according to Ansoff (1957) with a diversification strategy organizations attempt to develop their current market share by implementing new offerings in new markets. The diversification strategy involves the entrance to an unexplored market with a new or reinterpreted product or service. In addition, considering that the W-T approach involves the minimizing of

weaknesses by avoiding threats. With a diversification strategy the organization faces new markets with the introduction of new offerings the resultant joint strategy could be defined as:

This complementary strategy intends to cover the gaps detected between the Weaknesses-Threats strategic direction formulations and the Market Development growth strategies. It looks to face the threats arising from new market substitutes by the development of new products. Thus, the novel product, in this case the offer model, is understood as the weakness given its absence from an offering portfolio point of view. The implementation of a new offer model is therefore necessary for the application of the Diversification strategy. Based on it, the growth strategy has to be focused on facing the new market substitution threat.

- *Minimize new market substitution threats by overcoming the weakness from the absence of a new product.*

Once all the four possible outcomes are exposed, it is similarly worthwhile to show the connection from these concepts to the Johnson (2010) theory: “Seizing the White Space”. As explained so far, the gap analysis implementation is based on the study of the external and internal factors analysed by the PESTEL, benchmarking and current status description and summarizing and evaluating the results by using the SWOT and Ansoff techniques. By doing so, the gaps detected between the current offering portfolio strategic positioning and the strategic growth analysis are evaluated, so a proposal for an optimization, improvement or innovation can be deployed as the outcome of the work.

As introduced in the theoretical background chapter, the gap analysis methodology proposed is embedded in the Johnson (2010) theory. This is because of the necessary relationship between the strategic analysis and the business model structure. As described, in this work the strategic analysis is centred in the offering portfolio as an elemental part from the business model structure. Therefore, in the evaluation of the four merged strategies the business model development is considered.

Furthermore, Johnson (2010) addresses the growth gap issue that many incumbents face in their market growth perspective once they are established in a certain market space, as the main driver to develop the “White Space” theory proposition. This is equally, as described in the project motivation, one of the most relevant drivers in the development of the study and therefore the “Seizing the White Space” theory is particularly well suited to it.

Considering the above mentioned, a resemblance between the Combination matrix describing the strategic responses from Fig. 10 with the rearranged authors’ “Defining the White Space: strategies for business model development” matrix (Fig. 12) can be observed.

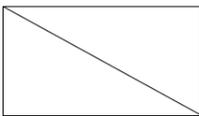
	<b>Good Fit Current Organization</b>	<b>Poor Fit Current Organization</b>
<b>Existing Customer Served in Traditionally Ways</b>	<b>CORE BUSINESS</b>	
<b>New or Existing Customer Served in New Ways</b>	<b>ADJACENCY</b>	<b>WHITE SPACE</b>

Figure 12. Rearranged matrix of Defining the White Space. (Johnson, 2010; adjusted by the author)

As it can be observed in Fig. 11, the two-by-two matrix has a number of similarities to the ones constructed in the aforementioned methods and equally to the results from applying the complementarity (Fig.11).

First, those business models that target the existing customer with the traditional offering and therefore are a good fit to the organization's business model structure are considered as Core Businesses. This business space corresponds directly to the developed strategy of Market Penetration – S-O strategy that, as explained, intends to develop its business performance by increasing the in sales or by acquiring new customers making use of the present products.

Second, the business model that derives from serving the existing customer in traditional ways but are not a good fit to the organization in terms of nature from the opportunity, are similar to those derived from the Product Development – W-O strategy, that aim for a product development strategy but remaining in the current market. According to Johnson (2010), these are business models lying between opportunities that are not a good fit to current organization's offering portfolio and aim to serve existing customers in a traditional way and therefore the implementation of strategies in this business space should be considered carefully.

In the third place, those business models that derive from serving new or existing customers in new ways and are a good fit to current organization offering portfolio competencies are the ones denominated adjacencies. More specifically, according to Mark W. Johnson, these are great opportunities to exploit traditional existing capabilities through entirely novel approaches. These are similar to Market Development – S-T strategies, by which a company identifies or creates new market segments in order to improve the current sales results by targeting new customer segments or markets offering the current products and services in similar or new ways.

As seen in the theoretical background section dedicated to the Seizing the White Space Theory (Section 2..3.5), in framing the four possible business spaces defined by Johnson (2010), the approach from Nagji (2019) is employed. This approach reduces the second and third categories explained to the one denominated as “Adjacencies” from the Seizing the White Space theory. In doing so, the merged strategies Product Development – W-O and Market Development – S-T are evaluated as a sole category under the adjacency definition. Therefore, in the discussion and evaluation of the final proposal both categories are studied as part of the merged strategic outcome and their strategic outcome will be interpreted from a Johnson (2010) perspective as adjacent business model alternatives, overcoming additionally the lack of fit from the second business model alternative.

Finally, the last defined space and the one that gives to the theory its name is the white space. This space is according to Johnson (2010) characterised by those opportunities that with current offering portfolio are poorly addressed and that look to expand current customer base; by offering current customers a new value proposition as an additional service, or by integrating a new set of customers into the organization's ecosystem. This business space corresponds directly to the Diversification – W-T strategy that describes strategies that lie outside the current offering model and aim to seize new markets while minimizing weaknesses and avoiding threats.

In essence, the application of the portfolio gap analysis, given the internal-external conducted analyses, results in:

- First, the identification of the strategic and market gaps.
- Second, the proposal, according to the business space in which the gaps are identified and taking into consideration the organization's capabilities, of an innovation strategy in order to better address market challenges.

## **4. RESULTS**

Once the theoretical background for the relevant terms and context has been introduced, and the method described and justified from a theoretical point of view, the next section of the project concerns the deployment of the results from the empirical research phase following the gap analysis step description. In this section, the findings according to the internal and external sources will be displayed in order to give light to the problematic and to elaborate the methodology previously introduced. For every step a subsection is introduced following the step description order.

### **4.1. Identification of the Area to Analyse and the Goals to Accomplish**

As previously introduced in the gap analysis step description, the first step concerns the motivation of the project. In essence it constitutes the analysis of the suitability from the current deployed offering portfolio from BMW Motorrad regarding the market and competition environment. It tries to address the stagnation of the market experienced in the last decade and to integrate the digital capabilities in the design of a better suited offering model. To that end a complementarity study, designed as a gap analysis, between the current strategic directions, derived from the analysis from the internal factors (described as the current offering model and long-term strategy, section 3.1) and the external circumstances study hereafter are illustrated through the performance of the SWOT analysis. Then these results are compared to the Ansoff matrix for the determination of the strategic growth analysis and the gaps between them are described. The final goal is the elaboration of an innovation or optimization proposal to satisfy the project's motivation.

### **4.2 Analysis of the Current State**

Consequently, and in accordance with the gap analysis implementation description, the second step concerns both the PESTEL analysis for the macro-economic environmental factors and the benchmarking results from the study are rolled out. Following, the elaboration for the SWOT analysis matrix with the facts obtained from the internal offering portfolio description and the information gained from each external analysis is conducted. The goal is to present an assessment through the SWOT analysis from the current strategic direction.

#### **4.2.1 Results of the PESTEL Analysis**

In the following section, the findings for the PESTEL analysis are displayed. These findings concern the political, economic, social, technological, environmental and legal factors that constitute the external conditions which directly affect the business model. Essentially, it is the study on the business climate that the organization faces and the impact it has on its surrounding environment.

More specifically, the analysis focuses on identifying external influencing elements which cannot be directly influenced by the affected organizations and that do not make it possible for them to implement internal solutions. Furthermore, when studying the external elements mutual dependencies can be observed between the different factors, this implies that the findings cannot be always classified clearly in a certain category. The main goal of the analysis is to summarize the market opportunities and threats.

As presented in the theoretical background section (section 2.2.1) , for the implementation of the following PESTEL analysis, the Cadle et al. (2014) approach is followed. Furthermore, for the

development of the study the Wedeniwski (2015) PESTEL analysis in the context of digitalization in the automotive industry is employed as a departure point for the evaluation of the influential factors in the industry from an external perspective. Following this article, the research is conducted elaborating on the aspects presented for the study, in which the BMW Group is included, and building on the presented points having a closer look to the specific conditions in the firm's particular macro-environment. To that end, the aspects introduced are developed through the employment of academic research, press coverage to add contemporariness to the study and references to the national and international policies stated throughout the descriptions. Each of the aspects employed for the study is shortly introduced and described before the relevant findings are displayed.

According to the Cambridge Dictionary (CED, 2021), the word automotive concerns: “*relating to road vehicles*”, therefore it can be considered that the influential factors displayed in the study results, performed for the German market, can be similarly considered for the motorcycle industry. Nevertheless, for the motorcycle industry numerous factors must be evaluated from an individual scope and not all the conclusions can be evaluated from a similar perspective.

### **Political Factors**

Political factors refer to the governmental activity that has a direct effect on the market conditions. Political factors include domains such as the stability and reliability of political systems, the role of governmental organisations in structuring the economy, political changes and political networks on a global level, and security in the digital domain (Cadle et al., 2014). Moreover, governments have a high impact on the societal aspects such as health, education, and infrastructure of a certain region (Wedeniwski, 2015). Considering the present study, the political stability, the governmental role in shaping the economy, the digital security and the environmental factors appear to be the most influential considering the business model and the market of operation. Nevertheless, the environmental and the economic factors are discussed separately in their respective sections.

First, according to Wedeniwski (2015) the automotive industry is influenced by politics to a regional, national and global level. For the companies in the industry, the most relevant element regarding the political environment is the stability and reliability of the systems in the operation countries. For example, countries such as Brazil, Russia, India and China in particular, are considered traditionally as politically unstable and this can have negative effects on the consumer behaviour, or in the production chains (Wedeniwski, 2015). This might certainly influence an organization that has presence on a global level, however the German market could be considered rather stable.

In the beginning of the 21st century, the automotive industry could be considered like a mature industry. Nevertheless in the last two decades, the industry has been experiencing significant turbulence due primarily to changes in markets, regulatory requirements, and technologies. Therefore, governmental regulations on energy consumption, emissions, and safety implemented raising demands on all Original Equipment Manufacturers (OEMs). These requirements are supported by a complex socio-political agenda that intends to reduce oil dependency and is concerned about climate change, air pollution, and other negative externalities of the automotive industry such as congestion. (Schulze, 2015)

In the same vein according to the PESTEL analysis realised in Wedeniwski (2015) article, another crucial factor when it comes to the political influence in the industry is the changes in the global trade network. The growth of European Union can be referred to as an example of the increase in global trade agreements and international organisations, which are growing similarly in their political influence (Wedeniwski, 2015). Moreover, the author declares that the reliance of the European automotive industry in international trade agreements like the CETA<sup>3</sup> is of high relevance, given that

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<sup>3</sup> Comprehensive Economic and Trade Agreement (CETA) is a trade agreement between the EU and Canada that cuts tariffs and eases the export of goods and services. It entered into force on the 21<sup>st</sup> of September 2017.

the development of trade through tariff reductions and the minimisation of various export restrictions, results in many advantages for the export of vehicles (Wedeniowski, 2015).

The third influential factor are the issues related to data privacy. Freedom and security in the digital domain must be considered. Currently, these issues are hardly contemplated, and the general public is scarcely prepared to pay extra for prescribed IT security in their vehicle. However, the question of whether a liberal state will force citizens to protect their lives in a better way remains controversial (Wedeniowski, 2015).

Regarding this last point, the European Union commission established the European Union Agency for Cybersecurity: European Network and Information Security Agency (ENISA). According to the institution's mission statement, it is dedicated to the achievement of the common level of cybersecurity across European Union (EU) countries. Additionally, according to its mission statement, it plays a determinate role in enhancing cooperation between cybersecurity stakeholders in the different member states as well as in the EU institutions and agencies, and it searches for the unification of efforts, by raising the value for the stakeholders, studying synergies and optimising the usage of limited cybersecurity resources. As of January 2017, the agency is responsible for the issues related to cybersecurity in the connected autonomous vehicle industry. The "ENISA Good Practices for Security Report" (ENISA, 2019) aim to identify the relevant assets of the emerging threats targeting the smart vehicle ecosystem of tomorrow as well as the potential security measures and good practices to mitigate them.

Thus, as exposed by the author, this could be a foreseeable major factor influencing the development of mobility solutions in the long term. This affects offer models that step out of the traditional business model and need from the sharing of vehicle data as a main capability for the development of their business operation. For instance this may be a great influential factor for potential competitors coming from the mobility service sector that could display offering model solutions that could be considered as substitutes, in terms of the value perceived by the customer, in contrast to current solutions based on vehicle ownership. However, the usefulness of possible IT protection measures is yet to be clarified, especially in the case of many new technologies which demand from time to understand whether its usefulness compensates their disadvantages. (Wedeniowski, 2015)

### **Economic Factors**

First of all, currency and its stability can be considered at the centre of the study of the economic factors. As the industry develops, produces, sells and serves its products in the international field, factors such as exchange rates, inflation rates, economic growth and economic cycles have determining influence on business practices, especially when considering companies that export a big part of their production (Wedeniowski, 2015). Further factors to consider are the influential role of the automotive industry in industrialized economies, the growth shift to emerging economies, the dependence on raw materials or the EU recovery funds.

From a local point of view, considering the German market, according to the VDA latest report from 2017, the automotive industry represents approximately 20% of the turnover of the entire manufacturing industry (VDA, 2017). Therefore, BMW Motorrad as a subsidiary company from the BMW Group AG, participates from an industrial conglomerate that has a great influence in the economy of the country, and therefore a considerable economic leverage.

On a global perspective, over the past decades, economic development has moved from traditionally stronger industrial nations such as the United States, Japan, Western Europe countries and Canada in favour of the so-denominated emerging economies, for instance to Brazil, Russia, India and China. In particular, for the case of the automotive industry, this is not only caused by the lower or decremental demographic development in the traditionally stronger markets, but also given the proportion of these markets that have already reached its saturation, for instance due to the limited number of parking spaces per household. Numerous statistics indicate the stagnation of the number

of vehicles per 1000 inhabitants, in particular regarding the commercial vehicles. Indeed, it is possible to agree on the fact that in countries such as Germany or Japan there is an average of one vehicle per two inhabitants. (Wedeniwski, 2015)

It is also worthwhile to consider the comparisons with countries in which the number of vehicles per inhabitant is much lower than it is in industrialised economies. In the case of Germany, according to the VDA, the production of the German manufacturers has been decreasing continuously from 490 thousand vehicles per month on average in 2011 to around 390 thousand in 2019 (VDA, 2020), not taking into account the lockdown effects from 2020.

Attending the figures in the motorcycle market, the same general trend can be observed. There is a saturation in the market regarding the sales numbers and the market has suffered a stagnation during the last years (Fig. 11).

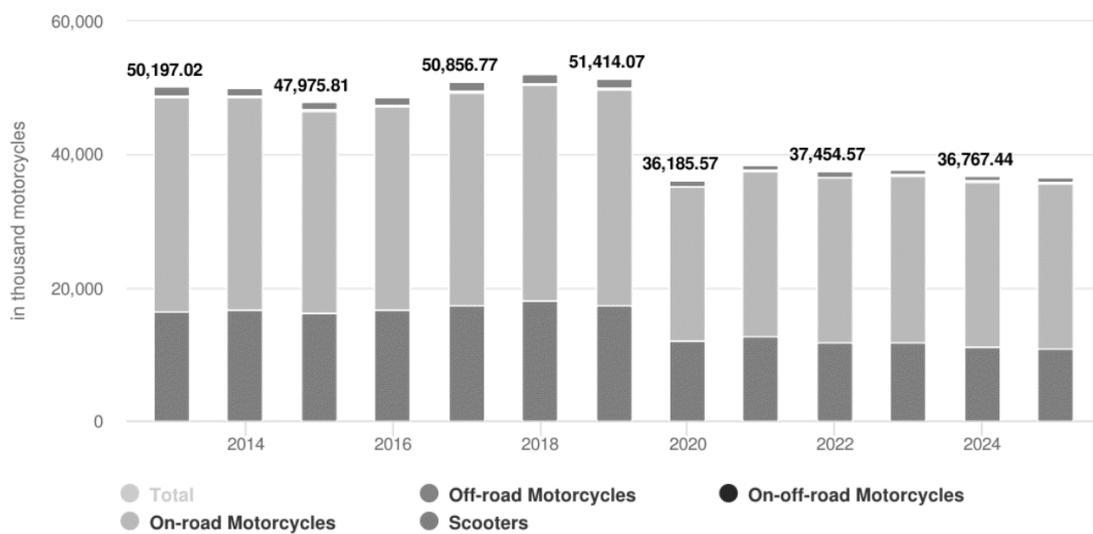


Figure 13. Unit Sales Worldwide in thousands of motorcycles (Statista, 2021a).

As we can observe in Fig. 13, the sales on a worldwide level in the motorcycle industry have been rather steady in the last 7 years. It is similarly possible to observe the drop in 2020 caused by the lockdown effects worldwide, as a result of the COVID-19 economic policies. This was equally considered in the initial part of the project as one of the motivation drivers for the performance of the study.

In addition to the observed effects from the sales performance results on an overall market perspective, another major influencer in the automotive industry is its dependence from the raw material markets. This includes the oil as the main fuel raw material along with other raw materials such as steel, iron, aluminium, copper, lead, textiles, plastics, vinyl, rubber, and an increasing need for rare earth elements for the integration of batteries and other components from electric vehicles (EVs). While the lightweight technology used by BMW Motorrad reduces vehicle’s weight, it does not affect the continually growing dependence on raw materials (Wedeniwski, 2015).

Finally, the last considered influential factor, from an economic perspective, is the European Recovery Fund put into place by the European Commission (EC) as of December 2020. The “Recovery Plan for Europe” aims to help repair the economic and social damage caused by the coronavirus pandemic. This plan is carried out by the EC, the European Parliament and EU leaders. It consists of a temporary instrument designed to stimulate the economic recovery that represents the largest stimulus package ever financed through the EU budget with a total of €1.8 trillion that

intends to help rebuild a post-COVID-19 Europe with a special focus on digitalization. It has forecasted funding for governmental institutions and private activity projects among others on the fields of: innovation, digital transition via the Digital Europe Program, agriculture, climate change, biodiversity and gender equality (EC, 2021).

Regarding the innovation and digitalization part, 143.4 billion € will be conceded to projects in the field of digital development through the Connecting European Facility agency and an additional 7.5 billion € from the Digital Europe Program to support the digital transformation of Europe's economy (Digital European Program, 2021).

Hence, in the field of BMI and more specifically considering digital business models, these funds could help in the development of digital capabilities for products in current markets or for the deployment of new offer models making use of digital competencies. These instruments can be seen as an enabler that eases the transitional phase. Similarly, the room for the entrance of new players will also be widened so the decision from incumbents to make use of these funds can be considered from a strategic point of view (Wedeniowski, 2015).

### **Social Factors**

From a general scope, social factors can differentiate between the social structural characteristics and the corresponding social trends. Social structural characteristics are considered for instance the demographic structure, the education, the moral concepts and the income distribution, whilst the corresponding social trends are principally influenced by demographic change. (Cadle et al., 2014)

According to Wedeniowski (2015), product brand is considered the feature perceived more strongly at a consumer's level, especially in the case of those markets in which vehicles are seen as status symbols. This is the reason why brand identity continues to have a decisive relevance for companies, in particular for those manufacturing premium vehicles and investing in features such as safety, comfort, performance or reliability (Wedeniowski, 2015). This is of particular interest for BMW Motorrad and one of the most relevant factors when it comes to its social perception.

Moreover, when it comes to social perception, it is relevant to analyse the brand's orientation in terms of demographics and society sector. Different sectors of society are addressed according to their lifestyle by steering the brand's orientation to customer segments that are not static (Wedeniowski, 2015). So the only thing that can be taken as certain is that the more diverse individual circumstances there are, the more demand for customization increases (Wedeniowski, 2015). To this regard, the adoption of more customer centric strategies, as exposed in the strategy description, and the employment of new capabilities based in digital technologies to support from the business operative side, are essential for the deployment of a more customer oriented and tailorize offering model.

According to Wedeniowski (2015), there are very different causes for the changing in society's values, and these causes are not just a result of growing wealth and modernization, but also of developing urbanization. Therefore, the development of urbanization, in particular in emerging economies in which the purchasing power is generally lower, requires from the implementation of small, lightweight and manoeuvrable city vehicles (Wedeniowski, 2015). Cities are not only being redesigned because of the increasing urbanization, but also given the ageing industrial societies where the population decrease demands from a more sustainable urban planning (Steierwald et al., 1994). The process of redesigning new urban areas involves, for instance, a more socially acceptable form of mobility by restricting cars from city centres as much as possible (Schuster, 2013). This can represent an advantage when considering new mobility offers that do not involve the employment of cars. Share concepts together with multi-modular offer models can help cover the business spaces left by the shift from a car-centric urban concept to new models in which a motorcycle manufacturer could seize the opportunity with a new business model development.

Furthermore, considering the values change and more specifically within the younger demographic sector, it can be observed that there is a change in the tendency for the preference of obtaining driving licenses. This is due to a change in priorities and to the change in the perceived value from driving. This can be shown in Table 1 as the driving license ownership rate among young people in the United States. Similarly, the study by the CAR at the University of Duisburg-Essen determined, on the basis of statistics on new car registrations for private individuals, that between 1995 and 2012, the average age of German car buyers rose continuously from 46.1 to 51.9 years (Kuhnimhof, 2017).

Year	17 Years (%)	18 Years (%)	19 Years (%)
1983	69	80	87
2008	50	65	75
2010	46	61	70

Table 1. Driver's licence ownership rates among young people in the United States (Sivak & Schoettle, 2012).

This data shows a clear tendency on the rate of adoption of new vehicles and of the interest of the obtention of car driving licences among the younger generations. Notwithstanding this can represent a customer segment of interest for companies that implement offer models that propose alternative transportation solutions. However, according to the data collected regarding the demographics among motorcycle riders, a study conducted for the United States market by the Motorcycle Industry Council shows that the share of drivers younger than 30 years has decreased from 40% in 1990 to less than 20% in 2015. Nevertheless the drivers above 50 years old have increased in the same time frame from representing the 10% to more than the 45%. So it can be seen that the generational gap between the age groups is increasing due to different factors as so far studied.

As the last aspect studied under the social perspective, the shifting of priorities from customers regarding mobility models in urban areas due to the effects of COVID-19 must be considered. According to a McKinsey & Company study performed for Germany customers, among other countries in December 2020, when it comes to choosing a mode of transportation, the risk of getting an infection has climbed up from the 7<sup>th</sup> position in terms of priority to the first one after COVID-19 pandemic. The former most relevant factor (time to destination) has been relegated to the second position, and the convenience to the third (Heineke, 2020a). Similarly the study showed that the use of mobility solutions defined as micro-mobility (under 25 km/h) is to increase by 5% and the offer including share mobility concepts will increase by 3% in the next year. Moreover, up to a third of the customers interviewed for the study between 18-34 years old would prefer to buy their next vehicle at a dealer rather than online. Regarding all this, it can be concluded that, on a general level, consumers are becoming more aware of digital channels and sustainability issues.

### Technological Factors

Technological developments affect the industry in an ample variety of ways. Technological developments and their role as enablers, due to the ease of implementation in numerous processes and operations, are also gaining more and more importance and influence in a wider range of industries. The factors considered the most influential from the technological point of view according to Wedeniwski (2015) are the role of electronics and software in product development and in operations management, the cybersecurity and the investment on autonomous-connected-electrified-shared vehicles (ACES) developments.

Technological developments in the area of electronics, communication, and internet technology are steadily infiltrating vehicle design and accelerating changes in areas such as drive trains with the implementation of EVs or fuel cells (Wedeniwski, 2015). As a result, new makers and suppliers, from traditionally unrelated sectors such as chemistry and electricity generation, are progressively entering

the stage. (Schulze, 2015). In particular, Europe and China are leading the EVs transformation, this can be observed in Gersdorf et al. (2020a) study, showing that the European market grew 44% between 2018 and 2019, while growth slowed in many other regions even before the lockdown disruption effect experimented from the second quarter of 2020.

Regarding the investment on electric models, the automotive industry will produce around 600 new battery electric vehicles (BEVs) and plug-in-hybrid EVs before the end of 2025, and during the same time frame OEMs will dedicate more than \$120 billion in capital expenditures to BEV models, what represent about 25 to 30 percent of their total expenditure capacity (Heineke et al., 2020b). This trend affects BMW Motorrad in two different ways. From one side it shows the general market trend regarding the automotive industry, which has similar drivers, environmental factors and market conditions as the motorcycle sector. From the other side, as a part of a big automotive conglomerate, the R&D expenditure and the strategic line from the group will foreseeably align to the trend, and so can the company benefit from.

In the same vein, the specific weight of electronics and software in the industry is becoming more and more important, which growth expectations continue to grow (Heineke et al., 2020a). To this effect, the components that will experiment the strongest demand include electronic control units (ECUs) and domain control units, accounting for an estimated \$156 billion in annual sales by 2030, and software, accounting for an estimated \$50 billion in annual sales for the same period (Heineke et al., 2020a). An example of the role that the electronics are taking in the automotive manufacturing domain, is the production shortcut that the unavailability from micro-chips has cost to the overall sector in the beginning of 2021. An unexpected rise in semiconductor components demand, driven by an increase in the production of game consoles, laptops and televisions as a side effect from the lockdown, has thrown light to the limited capacity that the automotive industry has in its negotiation power towards these manufacturers, causing the interruption of the production of approximately 500,000 units. This has reopened the debate on whether the industry must insource these capabilities (Miller et al., 2021).

As addressed on the political influential factors, for many OEMs as well as for political institutions, cybersecurity has become a one of the major concerns although only limited standards and guidelines exist for specific technical procedures, for securing hardware and software in vehicles, for standardization for hardware encryption or for secure communication among ECUs (Wedeniwski, 2015). The current Long Term Evolution (LTE) mobile technology, for instance, makes it possible to transfer about ten times as much data in practical applications as the third generation Universal Mobile Telecommunications System (UMTS) (Wedeniwski, 2015). In fact, as shown in the political factors part, in terms of regulations there have been as well advancements in the last years. The World Forum for Harmonization of Vehicle Regulations, as part of the UN Economic Commission for Europe, plans to introduce new regulations regarding cybersecurity and over-the-air software updates. This market is expected to have a compound annual growth rate of approximately 7% until 2030, when it will reach \$9.7 billion in value (Heineke et al., 2020a).

Finally, although many industry players focused on responding to the effect of the economic crisis generated for the lockdown in 2020, the investment in ACES continued. The funding for such innovations has always been challenging given the high level of expenditure required, and the pandemic has made this issue even more relevant given that traditional OEMs have undertaken cash-preserving measures and cost-reducing initiatives that do not favours technology investments. Manufacturers and suppliers attempt to dilute some funding issues by venturing together with other companies. Even before COVID-19, many companies were getting into partnerships, with the number of ACES ventures growing by a factor of forty with a main focus on electrification and shared mobility over the past decade. With the lockdown effects putting budgets under pressure for manufacturers and suppliers, these partnerships will become even more essential. (Heineke et al., 2020a)

## Environmental Factors

Environmental factors concern the increasing awareness of the relevance of the environment and health in modern societies, which is shown in values such as environmentally aware waste disposal from production to the recycling, and the emission reduction (Schenk, 2013). For the ecological analysis, the increasing awareness of environmental health, alternative drive concepts and mobility services are the factors considered for the study.

However, the reduction of emissions cannot be implemented only by developing the efficiency of classic internal combustion engines (ICEs). As seen in the technological section, alternative drive technologies are increasing their relevance. Nevertheless, they depend on various raw materials, and cause other environmental problems such as the ones resulting from EVs, being controversial from an environmental point of view because their value for the environment perspective is especially related to the way the electricity that they need to operate is generated. Furthermore, the high-performance permanent magnet in EV technology needs from lithium and several rare earth metals, while hydrogen-powered vehicles demand from platinum for the manufacturing of their fuel cells. Moreover, the obtention of rare earth metals is responsible for high environmental risks such as the release of radioactive substances and the residues caused from poisonous waste which damage humans and the environment in the form of particles polluting the groundwater. (Wedeniwski, 2015)

This sustainability general commitment can be observed from BMW in statements such as the one in the “Sustainable Value Report 2013”: “*We don’t measure success by financial indicators alone but rather in terms of the solid integration of the company into society. Taking social and environmental responsibility for all we do is an integral part of our corporate image*”. So it is clear that the environmental factors played a big role already in the last years. It is seen as a strategic goal for the company and more specifically as an additional contributor to the value proposition for the brand.

Another factor that can be considered from the manufacturer perspective is the vehicle use efficiency, that attracts increasing attention from customers and that has led some of them to reconsidering offer models uniquely based on vehicle-owning concepts. There are many studies and statistics on these topics, in particular regarding the use of parking places near residential areas and workplaces, and considering the average travel time duration (Wedeniwski, 2015). To this respect Bates et al. (2012) show that although these values cannot be analysed from a generalist perspective, most vehicle owners are conscious from their own usage habits, that on average a vehicle usage of one to two hours a day corresponds to a vehicle real usage of between 3 and 8 % of its overall lifecycle. In the light of these figures, we can say that vehicles spend more time “stationary” than they do in motion. So, from an environmental perspective, vehicles cause a relative high level of pollution while only being used minimally in comparison to their complete lifecycle (Wedeniwski, 2015).

Taking into consideration the political and legal factors that emerge around the ecological premises, it is possible to find numerous policies as well as regulations and laws that have as a framework the ecological issues. On a global level, the Paris agreement signed in 2016 involving 196 nations agreed on limiting the temperature increase below 2 °C to the pre-industrial levels and to pursue efforts to limited to 1.5 °C, therefore a climate an energy policy was agree on a decrease of the 20% on carbon dioxide (CO<sub>2</sub>) emission, directly affecting the transport industry (Paris Agreement, 2015). More specifically the EU estimates that 25% of the released greenhouse effect gases (this include carbon dioxide and methane among others) are emitted in the member nations by transportation means. To this regard, the EC implemented in November 2018 a climate neutral policy with the goal of a net zero greenhouse gas emissions in 2050. This policy is an essential part of the European Green Deal and in line with the Paris Agreement. (EC, 2018). In this way, the environmental factors, as explained at the beginning, cannot be interpreted without the legal and technological policies that embed them as in the PESTEL analysis. The interdependency among all the factors has a great level of correlation.

Finally, sustainable BMI is similarly considered a relevant topic when evaluating new BMI archetypes. These have already shown to bring numerous advantages to organizations, as seen in the theoretical introduction of the project, and will make the concept of non-sustainable BMI obsolete as sustainable business models will eventually supersede the notion of business models (Porter and Kramer, 2011). Thus for the elaboration of this study, it can be observed that the ecological matters transcend the environmental and external factors, in this case from the considered environmental valuation of the industry.

### **Legal Factors**

Throughout the study development, the legal factors were parallelly addressed in previous sections. Neither environmental nor technological or political factors can be understood without the interpretation of their associated regulations or legal deployment. In essence, the legal conditions are the manner in which the rest of the factors are put into practice and, therefore a fundamental part of them (Wedeniwski, 2015). Nevertheless, for the study of the legal environmental conditions the harmonisation of technical regulations, the standardization, the development for regulations considering autonomous vehicles, and the urban congestion charges are considered.

There are legal framework conditions on many levels, which tend to be perceived by industry as restrictive factors in the development of new solutions. In particular, the industry has to consider national and international legal frameworks and regulations, in particular in certain situations in which legal conditions are standardised at state-union level such as in the case of the European Union. Regional interest associations, similarly, are often active on the community and local levels in many automotive companies, and they can have important effects on a company's performance. In the last years, the development of particularly three legal provisions is in the focus: the taxes related to emissions standards for exhaust gases and CO<sub>2</sub>, the regulations regarding congestion charges and road tolls for the urban mobility, and the first attempts to regulate the development and urban integration of autonomous vehicles. (Wedeniwski, 2015)

Similarly, according to the Wedeniwski (2015), the automotive industry is not different from other global industries regarding its general legal factors such as legislation, tax directives, the awarding of patents, or competition regulations. Moreover, as in other global industries there is a novel influencing factor regarding the legal framework conditions that is still in its infancy, this factor is the increasing amount of information which can be gained from electronic systems, such as vehicle data, that as seen in the technological section pose many questions regarding data classification, data processing and users security (Wedeniwski, 2015).

Regarding the EV legislations, to encourage sales and stimulate the economy, some governments have created policies favouring low-emission vehicles and alternative forms of transportation (Wedeniwski, 2015). In Germany, for example, purchase subsidies for new EVs can amount to up to \$10,000 per vehicle, while in China the subsidies currently range from approximately \$2,350 to \$3,265 depending on the vehicle's range (Heineke et al., 2020a). The EV market is more likely to see a quick and strong development in China and Europe than in the United States, where the government is not providing EV subsidies, thus over the long term EV market share is also more likely to grow in China and Europe (Heineke et al., 2020a). In addition to the EV subsidies, some governments are implementing financial assistance to favour the use of these transportation alternatives. For example, the Italian government offers its citizens a €500 bonus for buying a bicycle.

Furthermore, many regulatory frameworks focus on environmental issues for the development of mobility guidelines. For example, European Union policy makers plan to implement more strict carbon-reduction targets to meet standards such as the ones agreed on the Paris Agreement on climate change, as it was exposed in the environmental factors section. Many administrations are also implementing new policies to encourage the sales of carbon-free means of transport, and others are issuing guidelines and regulations with similar goals. By 2020 in more than 150 cities around the

European continent the access to city centres will be restricted in order to reduce pollution and carbon emissions. Governments are constantly implementing regulations regarding mobility policies like new car lanes, pedestrian walkways, or EV-charging infrastructures. For instance, Milan announced its plan for transforming 35 km of streets to pedestrians and cycling lanes, or Paris announced that they will shift 50 km of lanes reserved for cars to bicycles and that plans to invest around \$325 million in updating its bicycle network. Outside the European continent, Seattle closed 30 km of streets to most vehicles by the end of May 2020, facilitating more space for pedestrians and bikers. Finally, Berlin repurposed some residential streets as “play streets” on Sundays and is also discussing the possibility of extending the program. (Heineke et al., 2020a)

To this regard, these regulations move further on the already established ban on ICE vehicles in most European countries. Looking at the next 25 years, several countries will implement regulations that will forbid the sale of vehicles with traditional drive technologies. Some examples from the so-called phase-out target years are: Norway and the Netherlands that are the countries committed to the strictest timelines having 2030 as their target year. Additionally, they plan on implementing regulations for long-distance transportation and public transportation means. In second place, Denmark, Iceland, Ireland, Slovenia and Sweden plan on bans for the upcoming ten years. Moreover, the United Kingdom is planning on shifting its target from 2040 to 2035 and joining this second group. Other European countries with similar policies are France, Spain and Germany that plan on applying the ban by 2040. Taking a look outside the European continent some states in the United States and in Canada plan on a phase-out target of 2035 and the Chinese province of Hainan in the year 2030.

Furthermore, taking a look into the regulation that will follow the 2020 pandemic, the post-COVID-19 crisis effects on the economies has forced governments all over the globe to take action to restore the market dynamics. Concerning the industry, these market dynamics were already strongly driven by CO2 emission limits. As shown, legislation and policies have encouraged OEMs to manufacture more fuel-efficient vehicles. With that in mind, the COVID-19 crisis has motivated some changes in both emission regulations and incentives, as many local and state governments have raised consumer incentives for EV purchases, as part of stimulus programs looking for the softening of the economic impacts derived from the pandemic lockdown effects (Heineke et al., 2020a). Furthermore, many European-based OEMs have committed to reaching the agreed target and have rolled out an unprecedented amount of battery-powered-EV and plug-in hybrid-EV alternatives (Gersdorf et al., 2020b).

Once the results from the PESTEL analysis have been described and exposed in the last section, in order to give clarity to the analysis and to ease the understanding of the characteristics observed as well as the mutual influences, the PESTEL results are exposed in Table (2).

POLITICAL	ECONOMIC	SOCIAL	TECHNOLOGICAL	ECOLOGICAL	LEGAL
<ul style="list-style-type: none"> <li>- National and international stability.</li> <li>- Institutions and government reliability.</li> <li>- Macroeconomic shaping capacity.</li> <li>- Trade agreements influence.</li> <li>- Digital security, ENISA.</li> <li>- Change on oil dependence.</li> <li>- Implementation of ecological policies.</li> </ul>	<ul style="list-style-type: none"> <li>- Germany 20% industry turnover.</li> <li>- Macroeconomic growth shift.</li> <li>- EU Recovery Funds.</li> <li>- Currency strength.</li> <li>- Demand from developing economies.</li> <li>- Vehicle market saturation ind. Economies.</li> <li>- Vehicle manufacture decrease.</li> <li>- Motorcycle sales stagnation.</li> <li>- Dependence on raw materials.</li> </ul>	<ul style="list-style-type: none"> <li>- Urbanization development economies.</li> <li>- Urbanization industrialized economies.</li> <li>- Driving licenses young demographics.</li> <li>- Motorcycle aging demographics.</li> <li>- Individualization demand.</li> <li>- Post COVID preferences.</li> <li>- Brand strength.</li> </ul>	<ul style="list-style-type: none"> <li>- COVID incentives in tech. development.</li> <li>- EV 25-30% industry expenditure capacity.</li> <li>- Increase investment in ACES.</li> <li>- Electronic industry increasing relevance.</li> <li>- Energy industry growing relevance.</li> <li>- Digital role in product design.</li> <li>- Cybersecurity protocols.</li> <li>- Data transfer regulations and standardization.</li> </ul>	<ul style="list-style-type: none"> <li>- Paris Agreement.</li> <li>- EU Climate Neutral 2050.</li> <li>- Vehicle use efficiency 3-8%.</li> <li>- Controversy new technology.</li> <li>- BMW Group commitment to sustainability.</li> <li>- Academic approach SBM and SBMI.</li> <li>- Electricity production.</li> <li>- Raw materials exploitation.</li> </ul>	<ul style="list-style-type: none"> <li>- International to regional spectrum.</li> <li>- Incentives to EV production.</li> <li>- Post-COVID incentives.</li> <li>- Increasing Urban Mobility regulations.</li> <li>- Cybersecurity standardization dev.</li> <li>- Current CO2 Emissions cut-off.</li> <li>- Congestion charges.</li> <li>- Forthcoming phase-out legislation.</li> <li>- Cybersecurity regulations and protocols.</li> </ul>

Table 2. PESTEL Table Mach 2021.

## 4.2.2 Results of the Benchmarking Analysis

As introduced in the method section, the benchmarking analysis focuses on the selected competition. This competition, previously determined by the Sales Development and Management head of the department, represents the direct competition, that is to say, the competitors that with similar offer models target the same customer segment in the same markets where the organization operates.

As explained in the theoretical background, the approach followed by Stevenson (1996) in the development of the benchmark is followed.

### 1. Identify problem areas.

Given that benchmarking can be applied to any business process or function, a range of research techniques may be required. In particular, as mentioned previously, the focus for this study is the offering portfolio analysis as a part of an external-strategic benchmarking approach.

Therefore, first the focus area for the study must be identified. To this regard, as equally explained in the introductory part, the motivation for the project establishes already the aim of the study, in this case, the offering portfolio from the selected competition in comparison to the ones deployed by the organization. More precisely the focus for this step of the study is the offering portfolio analysis as a part of a strategic benchmarking approach.

Having a closer look to BMW Motorrad business model, the offering portfolio is classified in four different offer models in agreement with the offering portfolio description. These categories involve the whole range of products and services deployed by the current business model and that are of interest for the organization. Following the offering portfolio description in the beginning of the section these categories are:

- a. Motorcycle.
- b. Accessories.
- c. Customer Support Services.
- d. Apparel.

### 2. Identify other industries that have similar offering models.

For the development of the study, it is paramount to consider not only the direct competition but also other players in the industry with substitutive offering models. These could include companies that with a different product approach deliver an offer that represents a similar value proposition to the customer, and therefore such products can act as substitutes. For the development of this study, the substitutes identified by the Sales Development and Management department from BMW Motorrad are the mobility services.

In particular, in order to consider mobility services as an individual offer solution and its potential substitutional character, the category “Mobility as a Service” is also included to cover those products or offering models already displayed by competition that can involve a foreseeable service model. Given that BMW Motorrad does not implement at the moment any product that offers a mobility service as a single offer model, this is understood as a potential substitute product.

Therefore, for the development of a wider scope analysis, the potential competition and possible substitutive offers are considered. In that sense, the industries that have different offer models on the paper, but that could access the market, are considered. These could include companies that with different product approaches deliver offer models that represent a similar value proposition to the customer, and therefore they can act as substitutes. Similarly, this analysis considers current direct

competition that with the reallocation of their current offering portfolio competencies could offer substitutive services.

Potential and substitutive products are selected from those industries that implement offer models that could be perceived in an uncertain environment with changing customer preferences as a similar value proposition. In particular, this could be observed in the competition offering mobility services, which could essentially replace BMW Motorrad main product's purpose.

As described in the social factors section, these changes take place not only directly on a social value perception level in terms of offer preferences, but also derive from the implementation of new legislative frameworks and political initiatives, leading to the entrance of new players that could appreciate white spaces in the organization's business space. These potential competitors, such as mobility solution providers, can try to cover with their current offer models or through the employment of the capabilities that they have developed in the operation of their original business activity, the spaces perceived in novel market configurations.

The identification of this mobility services, that could constitute a whole new offer model, and the potential competition that currently deploy such offer models, is elaborated in the final part of the benchmarking analysis with the identification of long-term rental agents, mobility service providers, start-ups implementing disruptive business offer models and other OEM's approaching the field. All in all the fifth category in the benchmark analysis is:

e. Mobility as a Service.

### **3. Identify organizations that are leaders in these areas.**

This step concerns looking for the most relevant competitors in the industry and in the selected geographical area. For this work, the competition was preselected from the Sales Development and Management direction based on the direct competition in terms of offering portfolio and market niche.

For the third step of the benchmarking analysis, the most relevant competitors in the industry and in the selected geographical area are considered. For this work, this competition was preselected from the Sales Development and Management department based on the direct competition in terms of offering portfolio and market niche. The following motorcycle competitors are selected:

- a. Harley-Davidson, Inc.
- b. Ducati Motor Holding S.p.A.
- c. Triumph Motor Company.
- d. Honda Motor Co.
- e. KTM AG.
- f. Yamaha Corporation.

For these manufactures, an offering portfolio market analysis, taking into account their current catalogues as for March 2021 is performed. According to Stevenson (1996) benchmarking performance, a previous definition for the limits of the field of research should be established. Hence, the competition offer catalogues are evaluated for the German market.

### **4. Evaluate the selected companies to identify leading edge practices.**

In this study the collection of the selected competition data is done through the study and comparison of the offering portfolio displayed in their commercial catalogues in March 2021. The goal is to classify their offering model in accordance with the categories included in point 1. and the identification of possible substitutional value in other offering models from external players.

Following the method description, as the fourth step for the benchmarking analysis, it is important to clarify the categories in which the portfolio is divided. This aims to help with the portfolio visualization and to make a more precise classification. For it, the same categories employed for the previous description of the BMW Motorrad offering portfolio are employed.

To this point of the project development, it is important to note that the aim of the benchmark offering portfolio evaluation is not to deep-dive into the different products composing each category, and the different variants of every product for each competitor catalogue. In fact, for the development of the evaluation and discussion of the project, the aim is to assess the business areas in which the selected competitors are present and to which extent they are. Hence, the goal is to analyse BMW Motorrad position in terms of offer models with respect to the competition offering portfolios as an essential part of their business model value proposition.

Every category is then separated into subcategories in order to sort every product offer to a further specification level. In the next category description, the BMW Motorrad offering portfolio is also described as part of the definition and the analysis.

#### **a. Motorcycle**

First, for the vehicle category, an initial division is made according to the cubic capacity from the engine. The motorcycles with ICE technology are divided in three categories, the first going from 0-500 cc involves the small segment motorcycles and scooters. The second category, the medium segment, contains the vehicles between 501-950 cc, this category accounts generally for the biggest part in terms of number of vehicles, especially for the Roadster, Heritage category and big scooter concepts. In the third place, the big segment, the vehicles with cubic capacities bigger than 950cc are contained. This category accounts for the majority of the Touring models. Additionally a fourth category is considered responding to the increasing availability of motorcycles with electric propulsion systems.

Staying in the vehicle classification, as it can be observed in the previous paragraph, there is a second classification for the vehicles attending to their characteristics in terms of design and styling. This classification is taken from the BMW Motorrad classification of its current portfolio of models. After the first split is performed, every motorcycle is classified as: Adventure, Heritage, Urban, Roadster, Tourer or Sport. For the electrical models, the classification possibilities are: Urban and Others. The categories can simultaneously be discretized to more levels, however for this study it is considered enough with the two-level classification. Following, a short definition of each category is displayed in order to illustrate the split:

- **Adventure:** These motorcycles are the ones whose style is clearly inspired by off-road models. That is to say, roads not conventionally paved. They are usually lighter and more flexible vehicles typically having long suspension travel, high ground clearance and are geared higher in order to provide more torque. In the last few years, there has been an increase in long-trip Adventure motorcycles and their sport versions that are also classified inside this group. Examples from these vehicles in BMW Motorrad offering portfolio are: G310GS, F850GS, F900XR, S1000XR, and the bestseller R1250GS and R1250GS Adventure.
- **Roadster:** The roadster motorcycles are vehicles designed for a paved road but in this case considering short and long trip ranges. They are essentially versatile and general-purpose street-motorcycles, and they are sometimes also referred to as naked-bikes, given their lack of fairing. They are primarily recognized by their upright riding position, partway between the rider posture of the cruisers and the forward leaning sport bikes. As for the BMW Motorrad offering portfolio we can find: G310R, F900R, R1250R, and the sport naked version S1000R.

- **Heritage:** The category heritage does not respond directly to specific constructive characteristics but refers to a design level. These models have become increasingly popular in the last decade and have a so-called “retro” appearance. These motorcycles are mainly roadster models developed in the image and likeness from the Softail line introduced by Harley-Davidson Inc. in the late 80’s. Examples from these vehicles in BMW Motorrad offering portfolio are: R nineT, R nineT Scrambler, R nineT Pure, R nineT Urban G/S and the new touring concept launched to the market in 2020 the R18 as a Touring-Heritage concept.
- **Urban:** These are motorcycles designed for being used on paved roads, and more specifically they are designed for the comfort and usability in urban space. They have smooth tires and engines from 125cc to 750cc for the sport versions. Additionally, they include often automatic clutches and continuously variable transmissions that ease the usage especially to new users. Examples from the BMW catalogue are: C400X, the C400GT and the former C650GT and C650 Sport.
- **Tourer:** To this group correspond the motorcycles equipped and specially designed for touring purposes, that is to say, to excel at covering long distances. Generally speaking they account for large engines, fairing and screens that provide wind protection, large fuel tanks and upright seating position. For this classification the so-called cruiser concepts, given the similarity in terms of characteristics and purpose, are considered. Taking BMW Motorrad offering portfolio we can find: R1250RT, K1600B, K1600GTL and the K1600GT.
- **Sport:** Sport bikes are those which design emphasizes the high velocity, braking, acceleration, handling and grip performance. Typically they are models designed and built in the pursuit of high-performance characteristics, putting aside other features such as fuel economy, comfort or urban usability. A common characteristic from the sport bikes is in general the integration of a comparatively high-performance engine inside a lightweight frame. Examples from the BMW Motorrad’s portfolio are: S1000RR, R1250RS and the 2020 introduced model based on the Superbike competition model M1000RR.
- **Electric.** For the electric category, the vehicles that are built based on non-conventional ICEs with electric drives instead, are considered. In this category simultaneously, a division between those models designed with similar characteristics as the Urban classification but with an electric drive are sorted as Urban-Electric vehicles. For the rest of the models, given that there is not a harmonisation of the market due to its infancy, the electric models not complying with the urban characteristics are classified as other electrics. From a BMW Motorrad offering portfolio the C Evolution is displayed at the moment of the realisation of the study as well as the CE 04 that will be launched at the end of 2022.

## b. Accessories

As described in the current offering portfolio description section in the methodological part (section 3.1.1 Offering Portfolio Structure) of the project, the accessories are a value-added offer model from the value proposition perspective, given its close relationship to the core product. They are designed as an addition to the vehicle offer model itself. Nevertheless, in contrast with the first group, the accessories themselves could not be implemented independently from the vehicle, due to its complementarity to the motorcycle. Accessories are add-ons to the motorcycle standard features.

The accessories also known as options differ normally between vehicle categories and involve specifications style related such as colours, piston head covers, ignition coil covers, wheels or front engine housing. Comfort related such as adjustable seats, hand protectors, knee pads, heated hand grips or keyless ride. Performance related such as dynamic engine control, gear shift assistant,

exhausts or dynamic suspension. Furthermore, additional accessories such as luggage carrier, adaptive headlight variants, anti-theft alarm system, navigators, panniers and many others are similarly considered. Likewise, the predetermined option packages are usually offered together with the motorcycle category and add features that match their style and purpose.

### **c. Customer Services**

As defined in the offering portfolio description, these are composed of additional customer support services. Service regarding a motorcycle manufacturer offering portfolio is defined as the additional support offered to the customers after the purchase of the vehicle. In particular, these services can be offered already as an addition in the product offer model, integrating a vehicle-accessories-service offer package, or as an individual offering model.

Considering the BMW Motorrad offering portfolio, the following customer service offer model alternatives are considered: workshop assistance service including manufacturer's original part supply, service packages such as vehicle inspection or oil supply, extended warranty as an additional feature or integrated in the product model offer, road assistance service (also sometimes incorporated as an option system), and the collect & return service for the pre- and post-sale service. Based on these categories, the competition is evaluated.

### **d. Apparel**

The apparel category involves all the merchandise and wearable accessories commercialized directly by the organization and that include its branding. To be more precise, three different categories are considered: rider equipment, general clothing and small accessories.

First, the rider equipment category involves those wearable accessories that add technical complementary characteristics to the riding of the motorcycle. Examples of rider equipment are helmets, suits, boots, jackets, gloves or functional clothing. As for BMW Motorrad the mentioned articles are commercialised with the logo and brand. Simultaneously, they are split into categories according to the motorcycle category in which it is inspired. The aim is to create a set of rider products that align with the motorcycle in terms of design and features, and that can be sold as a full-package offer model. The rider equipment could be therefore considered as an additional feature to the riding experience. Examples from BMW Motorrad offering portfolio in the rider equipment category are: helmets, riding jackets, riding trousers, gloves, boots and the one-piece riding suits.

Secondly, regarding the general clothing category it involves the wearables product offer that are not technically designed for a riding purpose, but they include the company's branding. From the BMW Motorrad offering portfolio it is possible to find the BMW Motorrad Style collection composed of jackets, shirts, hoodies or t-shirts all of them similarly classified by vehicle category group (Heritage, Adventure, Sport...etc).

Finally, the small accessories category is considered given that BMW Motorrad is not only a motorcycle brand but also a commercial brand itself, and therefore it captures value from the sale of other equipment that is not rider related. For this category, the range of products is considerably wide, and it includes logo belts, knives, goggles, bags, pins, wallets, or toys for children.

### **e. Mobility**

For the aim of the study and with the goal of setting a wider perspective, as it was previously explained, for the analysis of the offering portfolio from the concurrence, a fifth category is included. This category has the purpose to look at the foreseeable future offer models from a competitor base offer model perspective.

To that end, in addition to the final incorporation to the study of mobility service providers and alternative offer models in the market, this offer model possibility is also studied regarding the

competition offering portfolio analysis. For this part, all the products that are either already deployed or can potentially integrate service solutions in the mobility domain, are integrated. Thus, when evaluating the concurrence catalogues, all the offer models and products in the potential business area of mobility service provision are included. As for the BMW Motorrad offering portfolio to this category the C Evolution, the e-scooter version from the C400 ICE model, and the novel CE04 are considered.

## BENCHMARKING COMPETITORS ANALYSIS

Once the considered categories are defined, in the following table the results obtained for the benchmarking analysis are displayed and summarized.

			BMW	H-D	Ducati	Triumph	Honda	KTM	Yamaha
Motorcycle	0-500	Adventure	x				x	x	
		Heritage					x		
		Urban	x				x		x
		Roadster	x				x	x	x
		Sport					x	x	x
	501-950	Adventure	x		x	x	x	x	x
		Heritage	x	x	x	x			x
		Urban	x				x		x
		Roadster	x	x	x	x	x	x	x
		Sport			x		x		x
	> 950	Adventure	x		x	x	x	x	x
		Heritage	x		x	x	x		
		Urban							
		Roadster	x	x	x	x	x	x	
		Sport	x		x		x	x	
		Tour	x	x	I	x	x		x
	Electric	Urban	x						
		Others		x					
Accessories	Options / Option Packs.	x		x	x	x	x	x	
Customer Services	Original Parts	x	x	x	x	x	x	x	
	Service Inclusive	x	x	x			x	x	
	Collect & Return	x							
	Extended Warranty	x	x	x	x	x	x	x	
	Road Assistance	x		x			x	x	
Apparel	Rider Equipment	x	x	x	x	x	x	x	
	Clothing	x	x	x	x	x	x	x	
	Accesories	x	x	x	x	x	x	x	
Mobility	E-Bike		x	x			x		
	E-Scooter	x	x						

Table 3. Benchmark Analysis. Germany Motorcycle Market, March 2021.

The results shown in Table (3) are obtained from the market research on the selected competition as of March 2021. The information evaluated corresponds to the competitor's catalogues in the German market.

In order to develop the analysis of the results, in the following the offering portfolio for every competitor considered is displayed. In the case of BMW Motorrad the information concerning the offering portfolio is addressed in the current status section under the offering portfolio structure point. Additionally, information more precise regarding each offer level is deployed in the previous offering portfolio classification section.

## Harley-Davidson, Inc.

Harley-Davidson (H-D) can be considered for the competition analysis, in terms of value proposition and brand perception, a direct competitor to BMW Motorrad. H-D has a clear positioning in the premium segment, implementing high prices and with an offering portfolio that, when it comes to the motorcycle, is positioned in the big engine segment. Moreover, in the upper segment they are the world leader in terms of vehicle registrations.

As it can be seen in the table (Table 3), there are no motorcycle offerings under the cubic capacity of 500cc. The smallest model offered in the offering portfolio is the Street category, these motorcycles have a cubic capacity of 750 cc and therefore are classified in the medium segment. The street models (Street 750 and Rod) are roadster bikes with a heritage look. Similarly, in the same category the Iron 833 is also a medium-segment engine vehicle that can be classified as a Heritage-Roadster concept.

However, the main focus on the H-D offering portfolio is the big segment. With a clear heritage style, the American brand delivers a set of vehicles that range from Roadster motorcycles like the Forty-eight, the Iron 1200, the Super Low, the Fat Bob, the Breakout or the Fat Boy. Other cruiser models in the bigger segment are the Softail, the Softail Slim, the Low Rider or the Sport Glide. Furthermore, in the upper segment we can find the touring category, this is probably the most representative product from the brand and includes models such as the Road King, the Road Glide, the Street Glide, the Ultra limited, and the CVO. Finally, the last category regarding the big engine segment is the trike, these are three-wheel models that given their little representativeness among other competitors they are not considered for the study.

So in essence, when it comes to the vehicle, a general Heritage line and a clear focus on the long-ride bikes, especially looking at the big segment, can be observed. There are numerous models ranging between 1200 and 2700 cc and the biggest offer could be found in the cruiser and touring models. Notwithstanding, there is also an offering regarding the electric category, in particular with the introduction of the Livewire. This move makes H-D participate in the electric market by implementing a model that is not uniquely urbane oriented, but also conceived as a roadster model with a premium high-performance character, being able to reach up to 160 km between charges.

Regarding the accessories, H-D implements a slightly different offer model when it comes to parts. Instead of offering them as additional features or accessories for the configuration of the bike before the sale, the offer model is independent from the purchase of the bike and the parts are sold and delivered separately. There are a wide variety of original parts and they can be classified according to the model category, the brand collections vary from sound systems to bearings, seals or decorative elements.

For the third category, in terms of Customer Services, the offering portfolio covers the service inclusive offer model with original part supply, the extension of warranty, and the original parts. However, there is a lack of a road assistance service for Germany as well as a collect & return service.

In terms of apparel, given the premium character of the brand and the level of recognition among markets and segments, H-D implements a wide offer in terms of apparel and merchandise products. These products cover specific rider equipment designed to be an extra feature for the utilization of the bike, the general clothing for the general public, and in the same way the small accessories. To this regard, the apparel model offered from H-D can be seen as similar to the one from BMW Motorrad.

Finally, for the mobility offer evaluation, it is worthwhile to consider the first step into the market that the brand has already taken by the release in 2018 of the Livewire model. This model, as mentioned previously, in opposition to other electric motorcycle concepts implemented by the rest of the manufacturers, has not a main urban mobility perspective. It constitutes a single model in the Electric-Roadster category, implementing high performance characteristics and aiming for an

experience driven customer. Additionally, H-D commercialises e-bicycles designed and presented as an environmental-friendly urban mobility solution. This concept mixes innovation and environment caring features with the aim of attracting a younger and urbane customer niche but maintaining the premium scope.

### **Ducati Motor Holding S.p.A.**

Having a look into Ducati's results, in terms of offering portfolio presence, it can be seen that the offering portfolio is not far from the one offered by BMW Motorrad. The level of presence in the smaller segment is not as extended, but when it comes to the medium and big it is rather similar. However, Ducati puts the focus mainly on the performance in the super sport domain and from those products base-line implements a wide range of models that cover from Heritage to Adventure concepts. For the rest of the categories it can be observed that the level of presence is rather similar to BMW Motorrad. This can be understood given the similar premium segment that both brands pursue.

In the first place, having a closer look to the product catalogue in terms of the motorcycles, similarly to H-D, Ducati does not commercialise models in the smaller segment. Neither have any scooter concept available. Therefore, the first alternatives are offered in the medium class. In this segment models classified as Heritage, as the Scrambler segment with the Icon and the Night Shift are presented, or the Desert Sled as the Adventure representative. Nevertheless, the presence of Ducati in this medium segment is limited.

Regarding the big vehicle category, Ducati has the major and main part of its offering allocated to this segment. Here is where the V2 and V4 engine technology between 950cc and 1260 cc is deployed. These models range from Super Sport to Roadster concepts, having their main focus in the performance and the sport characteristics. Similarly, long-distance trip Adventure-Sport models, like the Multistrada, Multistrada Enduro and the Hypermotard 950, are deployed for the big segment. From the Sport side, it is possible to find the Super Sport 950 and the Panigale V2 and V4. Likewise, in the super Sport segment the Supperleggera V4 derived directly from the MotoGP competition concept can be found. Regarding the big Roadsters, it can be considered that the Street Fighter represents a bridge model between the Sport models and the pure roadsters, and the Monster, the Diavel and the XDiavel are completing this group.

So, in essence, when it comes to motorcycles, Ducati capitalizes mainly the bigger segment with a premium and high-performance offer model that inherits the performance features from the super sport models. Their main focus can be considered the big Sport models, with additional presence in the Adventure and the Roadster categories. In terms of electric models, at the time of the study, for the German market, Ducati did not have electric models in their offer catalogue.

In the second place, when it comes to the accessories and the accessories packages offered together with the purchase of the vehicle, Ducati has a similar model offer to BMW Motorrad. In opposition to H-D, the Italian brand implements a configurator tool for the purchase process that allows the installation of different add-ons and features that range from colour, wheels or performance parts to comfort accessories. In this regard, the extra-features can be as well configured in the form of packages that can be selected and adjusted according to the segment and type.

Regarding the customer services, Ducati, as a premium manufacturer, offers a similar offering portfolio as the one from BMW Motorrad. In this case, service inclusive packs with original part supply are offered as well as a catalogue of original parts from the manufacturer, warranty extension plans for 3 and 5 years, and a road assistance service. In contrast to BMW Motorrad it does not offer the collect & service.

In terms of apparel Ducati is, similarly to BMW Motorrad or H-D, considered a brand beyond the vehicle itself. This is not only due to the premium aim of the brand, but also due to their presence in

the competition domain. The catalogue offers rider equipment, characterised by sportive and high-performance features, like helmets, technical jackets, trousers, boots or gloves. Similarly, a whole set of casual wearing is commercialised with the team or the brand's anagram, as well as accessories that range from watches to mugs. In essence, it is observed that the brand name and colours are exploited, from a merchandising perspective, more aggressively than for the rest of the brands.

Finally, in terms of a foreseeable mobility solution service or product, as explained previously, the brand does not commercialize at the moment any electrical nor urban models. However, similarly to H-D they have an e-bicycle concept in the offering portfolio that, as for the previous competitor it is designed for an urban environment, however in line with the rest of the product offering, with a special focus on the sport character.

### **Triumph Motor Company**

Observing Triumph benchmarking results, it is possible to assess at first glance that the offering portfolio is not very different from the ones already presented for H-D and for Ducati. Considering that from the six manufacturers selected these are the ones that have a clearer focus on the premium segment, it is coherent from a business strategy optic.

In the first place, when it comes to the vehicles, similarly to H-D and Ducati, Triumph focuses rather on the medium and bigger segment having no offer under the 500 cc for the German market. However, when looking closer to the offering portfolio in terms of motorcycles and more specifically the medium and the bigger segment, the differences arise.

As seen so far, within the premium category, it can be determined that H-D focuses on the long-distance trip customer segment, with wider product range in the tour and cruise category, while Ducati focuses more on the Sport and on high-performance segments.

Nevertheless, as the other competitors, inside the medium and big segments, Triumph has different products for the various types of motorcycles. However, it can be assessed that the main primary approach for the manufacturer is the Roadster and naked category with heritage style. In the Roadster category it is possible to find the Trident 660 and the Street Triple in the medium segment, and the Speed Triple 1050 and the Speed Triple 1200 as the biggest Roadsters. Nevertheless, regarding the roadster models, the Heritage category is the main focus from the brand with models such as the Thruxton RS, the Speed Twin, the Scrambler 1200 or the Bonneville family, all of them forming part of the bigger category. Special mention should be made for the Rocket 3 and the Bonneville Speedmaster, presented as the spearhead of the brand. Additionally, the Triumph Factory Custom line offers the Bobber, Thruxton and Rocket models with a distinct retro look. Notwithstanding, the Bobber models could be considered a midpoint between the Roadster and the Touring family. Therefore, it can be considered that Triumph offers alternatives as well in the Touring line.

Interestingly, regarding the vehicle category spectrum of the manufacturer, as mentioned previously, as other manufacturers Triumph does also provide offers in various different segments like in the Adventure, that can be considered somehow distinct to roadster focus that the rest of the catalogue shows. In this category it is possible to find offers for the medium segment with the Tiger 900 Family and the bigger segment with the Tiger 1200 and the Tiger Sport.

In the same way as seen for Ducati and for BMW Motorrad, regarding the accessories, triumph offers the configuration possibility during the purchase process. In this regard, when configuring a certain motorcycle, different package possibilities are offered according to the model and the model category. This features packages, as for the other competitors, vary from performance parts to colour or comfort add-ons. In addition, these parts and accessories can be selected individually for each model in order to customize the product. In summary, it can be observed that the offer model is rather similar to the ones contained in BMW Motorrad and Ducati offering portfolios.

However, regarding the customer services, the model offer differs from the so far studied competition and also from the one by BMW Motorrad. To this point, it is possible to appreciate that the catalogue for additional after-sales services is not as wide. For Germany, Triumph uniquely offers the original part supply from their own manufacturing but not with a service inclusive package as previously observed. Additionally, the brand offers packages regarding the extension of warranty.

Furthermore, regarding the apparel catalogue, it is possible to observe that the British brand presents articles for the three categories, these are rider equipment, general clothing and small accessories. Nevertheless, it can be noticed that the variety of choice is not as wide as for the previous manufacturers. In terms of rider equipment the catalogue contains a small offer of jackets, technical trousers, helmets or gloves. Nonetheless regarding the general clothing the offer is as big as for the rest of the competition already studied, with technical jackets that could be placed between the rider and the general clothing category, t-shirts, shirts and trousers. When it comes to the small articles there is also a smaller offer than for Ducati, H-D or BMW Motorrad.

Finally regarding the mobility service, it can be noted that there is no offer in terms of electric vehicles or other scooter models that could be aligned to the urban public. Similarly, there is no direct offer for other alternatives such as e-bikes or offer models that could be interpreted as a mobility solution service approach.

### **HONDA Motor Co.**

In contrast with the previous study competition, Honda is the first competitor in the table (Table 3) that has not a primarily premium market approach. Looking at the benchmarking analysis results, it can be appreciated that the presence of Honda is generalised among the different product segments as well as on the other categories. Honda implements a wide offer variety in terms of vehicles with the aim of covering a wider spectrum in the market, from smaller models targeting a more price sensitive audience, to bigger models that implement premium characteristics and customer segment with a higher acquisitive power. It can be said that, regarding the studied competition, Honda deploys the wider product spectrum, also having an extended presence in other considered categories as the customer service, the apparel or prospective mobility service solution.

Regarding the vehicle portfolio, first of all in the smaller segment, Honda unfolds a variety of models covering the whole category range from Adventure to Heritage and Roadster and offering alternatives as well for the Urban and the Sport oriented public. In this regard, as Adventure models in the catalogue a wide variety of models are deployed, this include the CRF250 and CRF300 Rally and L versions, the CRF450, and the CB500 X as the big models from the small category. Moreover regarding the Roadster and Heritage models it is possible to find a small 125cc roadster; the CBR 125, the smaller version of the Neo Sports Café the CB300R and the CB500F. Similarly, as a roadster model but with a Heritage look, the CMX500 Rebel can be considered. In the Sport segment the CBR500R and in the Urban segment the line SH, Vision, PCX and Forza are the alternatives that can vary from 125cc to 500cc. It is worthwhile also to mention the presence of lightweight motorcycles for novel drivers such as the Monkey, MSX125 or the CB125, as well as the trial models the Montesa and the CRF line that ranges from 50cc models to 250cc and a CRF version of 450cc. All in all, it can be assessed that Honda has a clear approach to the small segment with an apparent seek of the younger customer segment.

In terms of the medium segment, in the same vein as the smaller, the offering portfolio varies widely from Adventure to Urban models, the lack of a Heritage version of their roadster models is the single distinction. As Adventure models, the NCX750X and the VRF800X are the most relevant models, in the Sport segment the CBR650R is the representative and in the roadster segment the CB650R and the NC750S are the main competitors. As mentioned, for the Heritage side the Honda Spectra jumps from the smaller directly to the bigger segment and in the Urban offer the Forza 750 is the main model. Regarding the last point, the catalogue contains a model that can be interestingly placed

between the Adventure and the Urban models with the X-ADV as a mixture between an urbane and sport-adventure lines.

Completing the vehicle portfolio, the bigger model offer from Honda catalogue covers the Adventure segment with the big version of the CRF; the CRF1100 Africa Twin and Africa Twin Adventure and the Crosstourer VRF1200X. Regarding the Sport segment, it can be considered the super sport models derived from the competition team; the CBR1000RR-R and the Fireblade version. Concerning the Roadster segment the CB1000R and the Black Edition are the alternatives, and regarding the Urban models no offer is deployed above the 750cc category. Finally, Honda addresses the Tour segment with the bigger segment models; the GL1800 Gold Wing and the Gold Wing Tour versions. In essence, it can be assessed that Honda covers the whole spectrum of motorcycle categories, with the widest range of vehicle alternatives in terms of style and cubic capacity, yet with a considerable focus on the small segment. In virtue of this wide range offering portfolio it is the major motorcycle manufacturer worldwide.

Regarding the rest of the offered models, in terms of accessories, Honda deploys a similar configuration sale strategy as other manufactures studied like Ducati, Triumph or the one by BMW Motorrad. Nonetheless, this add-on configuration model offer is not directly implemented in all the segments and all the models, especially for the small segment in the Adventure, the trials and the lightweight models. Neither the Sport nor the Roadster offer the configuration possibility. In the medium segment the configuration of accessories as an offer model is generally deployed, except for the Adventure model and for the big category all can be configured. In terms of the content of these accessories, similarly to the other competition the catalogue varies from comfort features to performance or style.

Regarding the customer services, Honda similarly to the competition, offers extra warranty packages as well as service packages, offered independently from the vehicle and a catalogue of original parts. Regarding the road assistance or the collect & return purchase service, no offer for the German market can be found.

In terms of apparel, a wide variety of products are offered. This varies from technical rider equipment to general all-day usage clothing. Interesting is to point that similarly to Ducati in this regard. Honda offers equipment related to their competition Sport team. That is to say, that once again the brand perception becomes wider than just the manufacturer signature but a brand itself, in this case related to the sport domain. Moreover a catalogue of accessories with the brand's name are offered, from wallets, to watches or bags.

Finally, regarding the mobility alternatives, there are no electric model offers implemented in the brand's catalogue. Neither bike options as the one from H-D or Ducati. However, as explained for the small and medium segment, there is a wide variety of scooter models with a holistic range of cubic capacity engines. These could, given their urban character design, be placed in a future offer model that regards a mobility service solution offer, being Honda the competition with the more extensive offer in the small segment.

## **KTM AG.**

The next competitor considered for the study is KTM, this is in a similar way to Honda not a primarily premium focus competitor. Regarding its offering portfolio it is possible to observe that, from the vehicle perspective, KTM is present in all the three segments and also deploys an electric alternative. In terms of customer service it has a similar offer to Honda or Triumph and in the apparel section, as well as the other competitors, they offer a variety of accessories in the three considered categories.

Regarding the motorcycle offer itself, in terms of categories, a clear predilection for the Adventure category is observed from the corporate image, as well as for the performance orientation in the domain. Having a look into the small segment it is possible to observe models mainly on the

Adventure-trial category such as the MX and the Enduro lines with the differentiation between the two- and four- stroke engine. In the two-stroke engine offer, the SX line from 50cc to 250cc are offered and in the Enduro line the EXC models varying from 150cc to 300cc are included. In the four-stroke segment it is possible to find the EXC-F models for the Enduro line and the SX-F in the MX. This model varies from 250 to 500cc. Moreover, remaining in the small segment, KTM offers Roadster models as well such as the Duke from 125cc and 350cc, and a Sport alternative inspired by the motorsport team; the RC 390 and the RC 125cc.

Considering the medium segment, KTM similarly has a wide variety of Adventure models, in this case these Adventure concepts are designed as a long-trip model alternative and therefore they integrate the travel line. So as a part of the Travel line the 450 Rally Replica, the 690 Enduro R and the Adventure line with 890 cc are offered. In the naked segment, as a part of the Roadster category, the 890 Duke R and the 450 SMR and 690 SMC as a hybrid between the Sport and the Adventure segment are included.

Lastly, to finish with the motorcycle offering portfolio, in the big segment models KTM portfolio has not a very varied offer as for the previous two segments. As a part of the Travel line the 1290 Superadventure models are offered as a big segment motorcycle in the Adventure category. Moreover, KTM implements a Touring model in its offer catalogue as a derivative from the Superadventure model in the Travel line, this model is the 1290 Super Duke that could be considered a model in between a long-trip adventure alternative with touring features and a Roadster motorcycle designed for long trips and with the aim of entering the big Touring segment.

Regarding the accessories model offer, KTM has a similar model offer to the one performed by Honda. In this regard, the configuration possibility with packages and extra features and performance part is only implemented for certain categories and for certain segments within these categories. In this way, it is possible to observe that the package configuration is available for the Adventure models bigger than 890cc, for the tourer model, for the roadster bigger than 890 cc and for the Sport bikes. Additionally, with the purchase of the vehicle the selection between colour alternatives is always available not depending on the vehicle size. Furthermore, a catalogue of both original and spare parts is available to choose along with the purchase in order to offer an increased customization possibility.

In terms of the third offer model, the customer services, KTM deploys similarly to the accessories, an offer model comparable to the one from Honda. In this case, as mentioned in the accessories paragraph, the availability of an original part catalogue is provided. These original parts catalogue seems to be more specific and specialised than the ones studied for the competence. Almost every construction and performance part is available especially when it comes to the smaller models, like wheels, brakes, exhausts or many others. Furthermore, extended warranty offers and road assistance systems as a part of an extra package offer model, as well as the collect & return service are presented. Additionally, for Germany the service packages for 1 year are offered together with the purchase as a package offer.

Looking to the fourth category, the apparel offer is, similarly to the other evaluated competitors, containing all of the three considered alternatives. There is offer regarding rider equipment, especially in the trial domain as rider suits, helmets, boots, gloves, technical jackets and trousers with different performance standards. Furthermore there is an extensive variety in terms of casual wearing like t-shirts, hoodies, caps, technical coat wear and as for Ducati and Honda there is merchandise from the motorsport teams. Considering the accessories, as for the other competitors, the range of products is considerably wide, also considering toys and children's wear.

Ultimately, regarding the mobility as a service or as a prospective foreseeable offer model based on the current offer catalogue, although KTM has already integrated on its offer catalogue an electric motorcycle model, this model is oriented as a trial offroad model that it is difficult to picture it as a feasible mobility alternative. However, this could be also considered as a first step into the EV market.

Moreover, the brand does not offer scooter alternatives. In summary, KTM deploys an extended catalogue that is however mostly aligned with the Adventure-trial and the Adventure categories. As seen, it presents offer models covering the majority of the categories considered, but it can be assessed that the focus is the Adventure-Sport segment with a special emphasis to the technical- and competition-oriented public.

### **YAMAHA Corporation**

As the last competitor for this study, the Yamaha offering portfolio is studied. Having a first glance at the corresponding results from the benchmarking analysis table, it can be determined that regarding the vehicle offer, in terms of segmentation, there is a clear approach to the small and medium category, being the second the main targeted segment. Similarly, there are alternatives in the offering portfolio regarding the big models as Touring and Adventure alternatives.

Looking closer into the vehicle offer, as mentioned, Yamaha deploys offers in the three considered segments. To begin with, for the small segment there are models belonging to the Roadster and Sport categories as well as a wide offer of Urban concepts and scooter models. As Roadsters, the MT-125 and the MT-03 are the main representative models and as the Sport concepts; the R125 and the R3. Similarly to KTM, regarding the small models, a wide variety of Adventure-trial models with a clear competition aim are deployed. These models are the TT, the WR and the YZ that vary from lightweight models of 50cc up to 450cc.

However, the main focus from the manufacturer in terms of offer variety can be found as well in the small segment, in particular looking at the Urban models. Although the model alternatives for the rest of the categories are not as extensive, for the scooter segment the variety is ample. Here three categories are distinguished: the 50cc with the Neo'4 and the Aerox 4 models, the Urban Mobility line with the NMAX125 and the Tricity trikes of 125 and 300cc, and finally the Sport Scooter line with the XMX from 125, 300 and 400cc and their corresponding Tech Max versions. Hence, with respect to the rest of the studied competition, Yamaha has the most extensive variety of Urban models. Its scooter portfolio is as big as the rest of the categories together.

Regarding the medium segment, the most extensive variety of products is provided. It is possible to find vehicles in all the categories. First of all, in the Adventure segment the Ténéré model line with 700cc engines are offered and in the naked Roadster line the MT07, the MT-09 and the MT-09 SP are presented. For the Heritage segment the XSR700 is the sole model and for the Sport segment the R6 Race is the manufacturer's alternative. Moreover, the TRACER line with the 700 and 900cc models are presented. Lastly, as the Urban category the TMAX and the TMAX Tech Max are complementing the medium segment offer.

Finishing with the vehicle offer model analysis, regarding the big segment, a variety of models in the Adventure and in the Tour categories can be found. First, as Adventure alternatives the Super Ténéré 1200 Z and ZE are deployed, and for the Touring category the FJR1300A and FJR1300AS as long-trip model alternatives are presented. Thus, in essence, Yamaha implements a considerable extensive offering portfolio regarding the medium segment with a main focus in the small and medium scooter market.

For the second offering model, the accessories, Yamaha displays a similar offering to the one from BMW Motorrad, Ducati or Triumph. Along with the purchase of the vehicle, the client is given the possibility to implement certain characteristics, so to say, to personalise and customize the motorcycle with different accessories, performance parts or styling elements. These addable features vary from colour, comfort features, travel accessories, electric components, security elements, functionality and performance parts, and competition elements. These features can be added individually and specifically determined regarding every model category, however, in contrast to the other competitors mentioned, not on an accessory package level.

Regarding the customer service category, as the third offer model, Yamaha implements a comprehensive offer model. In this case, the catalogue for original parts and service packages with the original part supply are offered as add-ons to the purchase. Similarly, Extended warranty alternatives and road assistance services are presented. In short, a complete offer model regarding the alternatives studied with the sole lack of a collect & return service that at any rate is not widely extended in the rest of the concurrence.

For the fourth category, the apparel, as the rest of the studied concurrence Yamaha implements articles for the three categories. To this regard, there is an extended offer in terms of rider equipment from full suits to jackets, technical trousers, gloves or protection accessories. In the general clothing category it is possible to find t-shirts, trousers, or jerseys along with the motorsport team merchandise equipment. Lastly, a variety of accessories mainly related to the motorsport team are deployed.

Finally, in terms of mobility services, as for the rest of the so far studied competition, there is no mobility as a service solution offer model already implemented in the offering portfolio. However, as mentioned in the analysis, Yamaha has the most comprehensive offer in terms of scooter models, which are especially designed for an urbane environment. Nevertheless there is not an electric alternative in the German market.

### **Other Competition**

Ultimately, to finish with the benchmarking evaluation's 4<sup>th</sup> step, once all the direct competition has been exhibited and their offering portfolios are described, the competitors that play a role in the mobility market, with service-oriented offer models, and with the capacity to constitute a potential substitute offer model directly or indirectly in terms of value proposition are presented. This is performed following the 2<sup>nd</sup> step substitute identification from Stevenson (1996): "*Identify other industries that have similar offering models*". As explained, these are identified by the Sales Development and Management department as the mobility solution providers agents.

Essentially, the goal is to better represent the competitive environment, as in the competition analysis in Porter's five forces analysis. In this case, considering the previously performed benchmarking evaluation regarding the selected competitors, this can be similarly understood as the "*Industry rivalry*" from Porter (2008). Moreover, it can be assessed that for the traditional categories considered (Motorcycle, Accessories, Customer Services and Apparel), with different levels of specialization and focus, the traditional motorcycle market is extensively covered in terms of offering models, specifications, categories and competition. Therefore, it is considered that the traditional motorcycle market represents a red ocean competitive environment<sup>4</sup> in which the "*Threat of New Entrants*", as defined in the Porter's five forces analysis (Porter, 2008), have an improbable occurrence.

In fact, attending to the macro-environmental conditions study and the industry development, it is interesting to address the mobility sector as a market that could constitute a future substitutive, named by Porter (2008) as the "*Threat of Substitutes*", at this point of the study in order to draw a more realistic picture of the current competition environment.

Therefore, in this section different offer models already in the market are evaluated as potential market challengers. To that regard, the market classification analysis developed by Münzel et al. (2018) is employed. This study carried for the German market considering 101 German sharing providers develops a classification for the sharing mobility concept in 4 different groups and studies the success and future perspectives for each of the models. Thus, considering that the German market is the focus of the benchmark study, its contemporaneity, and that it provides a clarifying

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<sup>4</sup> Red oceans are the industries in current operation where industry boundaries are well defined and companies constantly try to outperform their rivals to grab a greater share of their common market (Kim & Mauborgne, 2014).

structurization of the competition in the segment, it is considered as an appropriate framework for the understanding and classification of the competition.

The categories distinguisher are; cooperatives mainly established in small towns with few vehicles fleet size range, B2C on a roundtrip bases with a few hundred vehicles in larger cities, B2C on a one-way trip basis with over thousand vehicles in largest cities, and the peer-to-peer business models with multiple thousands and not restricted to the urban area size. The results of the study throw light on the fleet size and especially on the fleet size per capita rate as the most determining factor in terms of model offer growth. However, given the diversity of customer environments among the territory there is room for the co-existences of the different models in the short-term. More interestingly, the study observes a first mover advantage, not on a general but on a local level. That is to say, that in certain market niches (from large cities to towns) the competitor entering the first has the major growth perspective due to the network and spill-over effect. (Münzel et al. 2018)

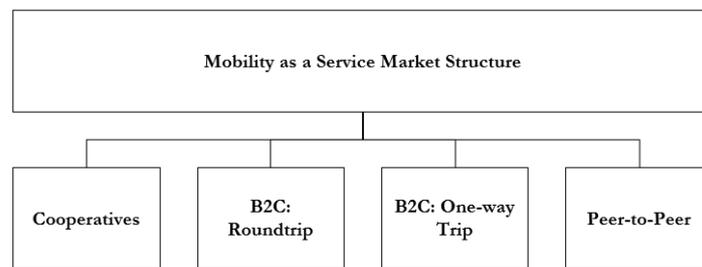


Figure 14. Mobility as a Service Market Structure (Münzel et al. 2018).

Regarding the competition, different examples can be studied for each of the four business model types. In the first place, the cooperatives, that are mainly established in smaller towns and have limited car fleet sizes, are not closely observed for the aim of the study given that, due to their market niche, diversity and different business scope, they are not considered a potential competitor. Similarly, the peer-to-peer business model is not considered for the analysis, provided that this model is based on a private individual sharing concept that cannot be imitated from a business or a company perspective. Therefore, the competitors considered for the evaluation are in the B2C domain.

Accordingly, when regarding the urban environment the B2C business models are the ones considered for this project. To this point, it is important to note the high diversity found in terms of the company's background, approach and business model development. In essence, the mobility solution as a service offered is mostly similar but some differences are appreciated. For this business model offer, as explained, two main alternatives are given; the round-trip model and the one-way model.

In the first place, deploying a B2C round-trip offer model it is possible to find mainly competitors coming from the traditional rental market. Some examples are SIXT AG or The HERTZ Corporation which offer models are based on a day rental tariff with a collect & return station and a fixed price rate per day under a mileage limitation. They also include differentiated categories in terms of motorcycle category and offers in terms of insurance policies. Similarly, the BMW Group through its fleet manager subsidiary company ALPHABET Fuhrparkmanagement, implements already similar offer models in the car market. Indeed, it is worthwhile to mention that for the motorcycle market, the alternative is already considered within the EXCITE strategy under the initiative Offer Steering. A first pilot, named the Long-Term Rental program, is being studied at the moment of the realisation of the project with the development of a pilot program in the Italian market. For this initiative, the operative part from the business model is being developed at the moment with the design of an IT central operation platform and the setting of cooperation between markets. Similarly, the synergies

with the mentioned ALPHABET subsidiary company are employed for the know-how capture and the utilisation of the fleet management capabilities.

Considering the second alternative, the B2C one-way model, regarding the urban environment, different players with different offer model backgrounds and market approaches can be observed. The alternatives vary from start-ups to companies coming from very different sectors, ventures from large corporations and even the incumbent manufacturers with the aim of entering the arising business space. Being aware of the mentioned first mover and fleet size advantage factors. In the following, examples from the market leaders are given in order to illustrate some of the above mentioned characteristics. Similarly, these could be considered relevant models playing a role in the international market, and can serve as a valuable picture to define the business space.

- **Gogoro:** It consists in a Taiwanese start-up that manufactures e-scooters with interchangeable battery systems and provides a battery swapping network for its operation. Additionally, the company provides a developed smartphone application with the aim of enabling business models based on shared mobility concepts. However, given the necessity for a developed battery network in order to start its operation the Asian company has not jumped to the international market.
- **eCooltra:** Start-up based and originally from Barcelona, the company offers the rent of e-scooters on a pay-per-usage basis. It is already present in other European markets as Italy, Portugal or Greece. Similarly, the rental operation procedure is completely carried out through the employment of a smartphone application.
- **Emmy Sharing:** Similarly to eCooltra, the start-up Emmy implements a business model that operates in big cities with a high population density based on e-scooters and operated on a smartphone application operation. It is mostly present in the German market in cities such as Berlin, Dusseldorf, Stuttgart or Munich. The platform surpassed 250,000 users in 2019.
- **Coup Mobility Gmhb:** On a similar business model approach based on e-scooter sharing, and as Emmy, with an already established network in the German market, Coup is the second biggest operator. The main difference with the previously mentioned Emmy is its origins. Coup is a subsidiary 100% owned by Bosch. This is an interesting example of an external industry stepping into the urban mobility market and becoming one of the biggest players at the moment of the study.
- **Acciona S.A.:** A similarly interesting movement to analyse, considering the entrance from external industries into the mobility domain, is the movement performed by Acciona, a multinational Spanish conglomerate dedicated principally to the development and management of infrastructure and energy production. In 2018 the multinational put in operation a sharing e-scooter pilot in Madrid using electric scooters from the start-up **Silence Urban Mobility**.
- **Uber Tech Inc.:** The company based in San Francisco, and present already in more than 900 metropolitan areas worldwide, performed a pilot program in Paris for a sharing motorcycle e-scooter concept. The company whose mobility offering model already includes other solutions such as e-bikes and ride-hailing services, in the year 2020 put in operation the pilot under the name Cityscoot, where the customer gets access by means of the Uber smartphone application to a network of electric scooters in the metropolitan area.
- **Tier:** As an example of a different business model but in essence, trying to reach the same market space, the Tier mobility e-roller business model is the fastest growing mobility service provider in the European market with presence already in Germany, Netherlands, France, Finland or Denmark. This concept differs essentially from a product point of view, but delivers a similar

mobility solution on a nearly similar business operation mode. Other examples of fast-growing e-roller sharing platforms are **Lime** or **Void**.

- **Volkswagen Group:** A very interesting movement in the business domain performed by an incumbent manufacturer trying to earn share in the mobility business space, is the one carried out by the Volkswagen Group in 2020, more precisely by means of its subsidiary manufacturer **SEAT S.A.**, by launching the SEAT MO. The MO is an e-scooter model that, similarly to the ones manufactured by smaller companies and start-ups, integrates interchangeable battery technology and it is clearly oriented to the urban mobility segment. Through the implementation of the model, the multinational is not only addressing the mobility market by the implementation of a shared-mobility service solution, but also it is taking an initial step into the field.
- **DriveNow:** As the last example of a B2C mobility service performed by incumbent manufactures, it is worthwhile to consider the early launch in 2011 of the joint venture platform between the BMW Group and SIXT A.G. with the later participation of Daimler A.G., of the merged mobility provider DriveNow. The initiative was disinvested in 2019. This market movement is interesting to analyse, although it has not reached the motorcycle segment, given that it represented a first movement from the incumbent automotive into the mobility segment. This was designed as a one-way car sharing business model and from 2015 incorporates electric alternatives. For the study purpose, it is of particular interest given that the initiative was partially performed by the BMW Group and the synergies and knowledge obtained from the operation experience could be exploited in a prospective motorcycle urban sharing alternative.

As exhibited, there are numerous examples of business models and companies entering into the mobility as a service solution market in the last years. These examples provided, are a limited exposition of players that in the last years have won relevance, principally in the European market but that also have presence in the Asian and American markets.

It is possible to observe that there is a wide variety of solutions and of companies in terms of their approach and background. Likewise, it is possible to consider from start-ups to the big manufacturers and from vehicle constructors to pure operators. This indicates the novelty and youthfulness of the market, that although it remains in a ramp-up phase state, in the last few years it is getting more stable.

However, as mentioned, the arrival of a dominant player and of a dominant business model has yet not been set. That explains the high variety in terms of offer models and operators. This aligns as well with Münzel et al. (2018) conclusions, in the sense that there is a coexistence of the models. Nevertheless it is worthwhile to point out that the conclusions of the study foresee the arrival of a dominant model along with the digitalization of the sector. Similarly, from the conclusions it must be regarded that the fleet rate is said to be of a decisive role on the dominant model determination.

Finally, once the fourth step from the benchmark analysis has been carried out, it is only left to perform the last step according to the Stevenson (1996) execution description:

##### **5. Implement new and improved business practices:**

This last step concerns the study of the leading-edge practices and the development of implementation plans which include identification of specific opportunities. As the outcome of the evaluation, the offering model data collected is employed to develop the SWOT analysis (section 4.2.3 and 4.4.1) and Ansoff matrix (section 4.3 and 4.4.2), and to illustrate the coverage of the current market segment and the potential to target other market spaces. Therefore, this involves the execution of the remaining steps from the gap analysis conducted hereafter.

Up to this point, the first and second steps from the gap analysis methodology presented in section 3.3.1 have been implemented. In particular, the benchmark is included in the second step from the gap analysis and simultaneously this last step from the benchmarking analysis concerns the development of the steps remaining from the gap analysis methodology. Hence, thereupon the current state analysis is finalised and the following steps from the gap-analysis conducted.

#### **4.2.3 Results from the SWOT Analysis**

The SWOT analysis is the consecutive step to the PESTEL and benchmarking results description. It constitutes the fifth step in the gap analysis execution sequence in which, afterwards the external and internal elements have been exhibited, the construction of the SWOT and Ansoff matrices intends to help in throwing light on the interpretation of the results obtained with the final objective of the performance of the comparative analysis. This will lead in the discussion section to the analysis of the gaps and the final innovation proposal.

For the following SWOT analysis, the current state evaluation, the long-term strategy description and the benchmarking corresponding to the BMW Motorrad offering portfolio are considered. For the external factors, the PESTEL analysis and the benchmarking study for the direct competition as well as for the potential and substitutive competition is employed.

As the last step, once the internal and external factors are classified as the four presented categories, in the discussion section the conceptualization and the evaluation of the interaction between the factors and the assessment of the strategic approach that could be followed will be discussed. By means of such analysis, and with the comparative use of the Ansoff matrix similarly, the discussion will lead to the final proposal as the intended project outcome.

#### **INTERNAL EVALUATION**

From the SWOT point of view, as explained, the factors can be generally conceptualized as internal or external. Representing the so-called internal factors, according to the analysed categories the strengths and weaknesses are evaluated. That is to say, that for the following point the characteristics of the offering portfolio that give an advantage over other competitors are classified as strengths, while the characteristics from the evaluation of the offering portfolio that place the business model at a relative disadvantage are defined as weaknesses. For this classification, the elements exposed in the current offering portfolio description in addition to the long-term strategy, and the benchmarking of the offering portfolio for BMW Motorrad are evaluated. Ultimately, (Table 4) displays a short summary for the factors analysed in each category.

##### **Strengths**

As strengths, the description for the factors considered as advantageous for the company are studied. Considering the offering portfolio as the main focus of the overall project, the competencies are evaluated considering its influence in the value proposition element from the business model.

From the study of the current offering portfolio, it is possible to classify the strengths from a general value proposition point of view and similarly considering the specific parts of the offering portfolio structure.

In terms of the motorcycle, it is possible to define the strength factors having a look into the defined categories. First, for the small segment, we observed that the BMW Motorrad's offer is deployed for the Adventure, Roadster and Urban segment this is done contrary to the other premium competitors such as H-D, Ducati and Triumph, that have no offer model implemented for this segment. Similarly,

in comparison to the rest of the competition with presence in the segment, the premium positioning in comparison to the same models from Honda but specially from KTM and Yamaha can be evaluated as the main strength. Additionally the product offering for this segment is less specific in terms of product design in comparison to Honda, KTM or Yamaha, which can be assessed as a strength factor given that it widens the targeted customer segment.

Second, considering the medium segment, the presence of the BMW Motorrad in all the five categories with a higher level of specifications is the main strength in comparison to the rest of the competition. Especially, when considering the urban segment against the rest of the premium competitors, where BMW Motorrad possess two different versions of the big scooter the C600 in contrast with no offer from H-D, Ducati and Triumph. Regarding Honda and KTM the Heritage category is not offered in the medium segment and KTM skips the Urban and Sport as well.

Lastly, for the third category, the big segment, BMW Motorrad deploys models for the Adventure, Heritage, Roadster, Sport and Tour categories. It is possible to observe that the main strength against H-D lies in this bigger variety in terms of big motorcycles while for the rest of the competitors, the Adventure category is dominated by BMW. Additionally, the introduction of the R18 intends to face the H-D main market, the Heritage cruiser and the tourer models, while the rest of the competition do not deploy a counteroffer. Yamaha and KTM in this regard do not offer a direct competition and the main value against Honda is considered in terms of perceived value, performance and product substance. Additionally, BMW Motorrad offers an electric alternative in opposition to all the competitors but to H-D, that however implements a non-urban oriented model. This could represent a strength factor when looking into urban mobility service alternatives.

In Essence, regarding the product portfolio the strengths of BMW Motorrad are the strong and wide motorcycle offer in comparison to the premium competition, offering models in more categories, the level of specifications and performance in comparison to the rest of the competitors, and the strength of the Adventure segment. Similarly, it deploys a wider Urban alternative in comparison to the premium competition, including electric alternatives, and a less customer specific offer in contrast to KTM and Yamaha that show a different value proposition approach.

Regarding the rest of the offer models, BMW Motorrad, equally to all the competition except H-D, implements the accessory offer in the form of extra features and accessories packages as explained. The only strength here observed is the difference to the H-D model, being this competitor the main one in the big Touring category. In terms of customer service offer model, BMW Motorrad is positioned as the rest of the premium competition in a similar way in terms of service packages, warranty extension policies, supplement of original parts or road assistance. The implementation of the collect & return offer model is not observed in the rest of the competition. In these terms it can be assessed that the strength of BMW Motorrad is the customer specific offer model, characterising and empowering the premium value proposition.

For the apparel category, very little differences can be observed between the direct competition studied. It is possible to observe that all the competition deploys a similar offer in terms of categories when it comes to the wearables and accessory items. The brand value and the alignment to the style categories of the motorcycle offering model represents the biggest difference and the major strength in terms of packaging offer. To this point, the brand concept is strengthened with the motorsport merchandise equipment that is only present for Ducati, Honda, KTM and Yamaha.

In the mobility field, the position of BMW Motorrad with respect to the premium competition is clearly advanced and can be considered as a strength. The delivery of urban concepts in the small and medium category and the electric models, show an advanced position in terms of product offer. Other competitors such as H-D and KTM deploy electric offers but the purpose of these models are not designed in the Urban product line.

As a last point for the evaluation of the strength factors derived from the offering portfolio from BMW Motorrad, the long-term strategy (EXCITE) approach should be considered. Initially, as assessed in the method section the strategy complies with the four criteria according to the Rumelt (1998) for the strategy evaluation, that means that the strategy is consistent, in consonance with the circumstances, advantage-oriented and feasible to the organization's capabilities. Additionally, it can be assessed that the customer orientation and the digital transformation, could constitute a strength on the design of the future offering portfolio, especially regarding the Sales Platform initiative, the Data Driven company and EX Machina initiatives. The three of them are oriented to the future business model and designed in a way that they describe the capabilities to create, and to enhance the future company positioning with a special focus on digitalization. Furthermore, it can be also considered on the strength side the fact that it is a contemporary strategy given that the mission statement is adjusted to the current trends and customer expectations regarding the customer-centric proposition and the targeting of uncertainties, volatilities and complexities that the current market and social domains represent.

### **Weaknesses**

In the same way as the strength analysis is performed, as part of the internal analysis, the weaknesses statement and evaluation is conducted. The first approach is to evaluate the benchmarking analysis and the offer comparison against the competition from the direct and potential competition in order to detect the weaknesses from the own offering portfolio. Similarly, the long-term strategy is considered.

In terms of the motorcycle offer, as for the strengths, the three main segments are evaluated in terms of offer models and the different categories inside each of them. Regarding the small segment, the strength from BMW Motorrad lies in the availability of different models in comparison to the rest of the premium constructors. Nevertheless, given that it can foster a misconception in terms of brand-positioning and value proposition, this could be similarly considered from a weakness point of view. With a clear absence in such segments, the rest of the premium competition set their focus to the big models, while BMW Motorrad had to differentiate the model offer from the rest of the competition in terms of added-value and premium standards. Compared with the non-premium competitors (Honda Motor Co., KTM A.G., Yamaha Corporation), the main weakness appears in terms of price-positioning. In brief, within the small segment BMW Motorrad can find its offering model dealing with a loss in its value proposition dimension in terms of brand perception from the one side, and against a more targeted customer orientation in terms of price positioning from the other side. It can be problematic to project a premium image in a principally not premium segment.

Regarding the medium segment, as described in the strengths section, one of the advantages is the deployment of Urban alternatives. However, compared to Honda or Yamaha the level of alternatives is very low and the presence diluted among the rest of the categories. Moreover, in contrast to Yamaha, Honda and Ducati there is no offer for a Sport concept in the segment. Generally speaking, for the medium segment, it can be said that although the level of specification and product substance is high, the lack of a specific scope to a certain product model can be of a weakness in comparison to Yamaha or Honda in the Urban and the Sport-Urban field or KTM in the Adventure line.

As the last category within the motorcycle offer models, in the big segment when competing against H-D, the lack of product line orientation to the Touring-Heritage class could be assessed as the bigger weakness. Regarding the rest of the premium competition the analysis is rather similar. While Ducati has a Sport orientation and Triumph a Heritage focus the offering portfolio from BMW Motorrad is not specifically targeting any of the categories and deploys model concepts that can be hard to categorise from a customer point of view, as the S1000XR, that are not clearly positioned between the Adventure and the Sport segment. The lack of a clear product line orientation could constitute the biggest weakness in terms of the motorcycle offer model and can be extended to the rest of the segments.

Having a look into the rest of the categories, from an accessories point of view, as explained in the strengths, BMW Motorrad deploys a holistic additional features and feature packages offer model that covers all the product line in a similar way to the rest of the competition. In the Customer service field, as well as in the apparel, the offer range is similar to the rest of the premium competitors. It addresses the necessary value proposition points in terms of service that a premium manufacturer aims to reach. Therefore, considering these three offer models, not major weaknesses in terms of offering propositions can be assessed. However, regarding KTM accessories and apparel model offer, the product line could be said to be more oriented into a competitive customer segment and, thus, the offer orientation is more specific. Similarly, in terms of accessories the H-D model offer is considered separately from the vehicle, giving a higher sense of originality to the manufactured product, and a more technical orientation in terms of accessories. This could represent a difference in the value proposition in terms of customer perception understood as a weakness.

As the last point for the offering portfolio analysis, in terms of the weakness factors, the mobility category is worthwhile to mention. In this category, as stated in the strength point, when looking at the selected direct competition alternatives, the positioning of BMW Motorrad is not behind in terms of product or capabilities for a hypothetical entrance to such a field. However, the field itself is not addressed at the moment and regarding the external competition and the potential substitutes from outside the industry, this is a business space in development.

As analysed in the section dedicated to the “other competitors”, nowadays there are numerous alternatives in terms of offering models when looking into the market, and more interestingly, a wide range of backgrounds. That is to say, there are different agents, with different capabilities and industrial knowledge, converging into the market space and looking to establish a dominant design. The major weakness for BMW Motorrad here is not related to a lack of capabilities, nor to the delay in the implementation, but to the lack of immediate scope in a business model area that, as shown by its degree of attention captured, might be of great interest. Furthermore, it could constitute a substitute offer model in terms of a mobility solution that is an essential part of the value proposition for any vehicle manufacturer.

Finally regarding the long-term strategy, as it was presented in the strengths side, the fact that it is rather a recent strategy, and that it has just been initiated in the last year, makes it reasonably adjusted to the current trends and market expectations. More specifically, regarding the Data Driven Company and the Sales platform initiatives, the customer-centric proposition and the digitalization of the entire operational side are contemplated. However, it is also worthwhile to mention that, while the initiatives are integrated on a major project level and are capability-focused on the way they are conceived, they are not directly intending to develop on the value proposition and this can be interpreted as a weakness of the strategy.

From the one side, the Data Driven Company initiative speaks for the seamless customer interaction, built of know-how and expert knowledge, merging of existing resources, and decision-making processes. That is to say, it is markedly operation based. Nevertheless, there is not a proactive approach in terms of the employment of the developed capacities to improve the customer perceived value regarding the offering portfolio and this can be understood as its main weakness. In brief, although the development of a seamless B2C interaction intends to improve the customer service, the data processing capabilities together with the digital competencies could constitute an essential feature in a servitization offer as a part of the value proposition of a novel digital business model.

From the other side, the Sales Platform initiative, as stated in the strategy description, builds on the seamless customer interaction and is a future oriented sales model. It plans on the usage of digital skills, data collection and data processing. However, the model proposed screens for the steering of a sales process that would be completely web-based. Attending to Heineke et al. (2020a) while 80% of customers employ online sources during the purchase-consideration period and these sources play an increasingly important role in shaping customer decisions, yet the ranked number one influential

factor when purchasing a new vehicle is the dealership visit, therefore the movement to a fully-integrated sales platform purchasing process could represent a weakness point in the absence of a dealer. In the same vein, 70% of customers consider the dealership a touchpoint for experiencing the vehicle before the purchase, and on average a customer performs between 2 and 3 dealership visits before deciding. In summary, while the initiative could develop skills and competencies on a platform usage, research shows that the customer is yet not prepared for performing a full platform-based purchase.

## **EXTERNAL EVALUATION**

Once the internal analysis is presented, the second part of the SWOT analysis is constituted by the external evaluation. For this part, the so-called opportunities and threats are regarded. As defined previously the opportunities are those external factors that are beneficial elements or trends in the external environment that the company could exploit to its advantage. Meanwhile, the threats are unfavourable external factors or trends that may represent challenges to the company's performance. For this evaluation, the elements exposed in the PESTEL analysis description for the BMW Motorrad environment are evaluated as well as the information derived from the benchmarking analysis, in particular having a look at the potential substitutes. The results can be found in (Table 4) where a short summary for every category is presented.

### **Opportunities**

For the opportunities evaluation, the different parameters from the PESTEL analysis are used. In that sense, the strategic advantages that could be found from the most relevant categories are exposed.

First, regarding the political elements, stability and reliability are the most and major influences when it comes to the macro-political level. To this regard, it can be observed that the BMW Motorrad main operation is conducted in industrialized economies and most concretely in the European market that could be considered a stable market. Moreover, the operation in these markets makes it possible to benefit from the multilateral trade agreements between the member economies. Being BMW Motorrad a manufacturer whose operations are similarly mainly carried in Germany, this confers an advantageous field of operation on a political level and therefore an opportunity for growth in a stable environment.

In the same vein, regarding the economic factors, that as seen in the PESTEL matrix have a high degree of correlation to the political factors, the currency strength of a Germany-based company represents a major advantage. Moreover, within the market, the high degree of relevance in terms of turnover of the sector gives the company a great deal of power that can be seized as an opportunity. In the same line as the trade advantages factor related to be centrally based on an EU economy, in terms of trade with other important industrialized economies, after the COVID-19 pandemic and its associated economic effects, the company has access to the European Recovery funds and most importantly to financing and consultancy in terms of digital development.

Regarding the social factors, the brand strength is considered the main influential factor and in this regard, BMW Motorrad as a premium brand additionally to the BMW Group accession benefits from a strong brand value perception. This gives support to the development of new projects and the access to new markets and customer segments, which fundamentally benefits the seizing of opportunities. In addition the customization demands are being addressed at the long-term level strategy with the development of new capabilities that will prospectively enable the implementation of customer centric offer models. Similarly, the demands for new urban models, especially in the major growing urban environments, could be covered with the already deployed urban concepts. Another major opportunity from a social point of view, is the one shown by the Heineke et al. (2020a)

study on customer preferences after the COVID-19 age in terms of the priority of choice, looking into a mobility solution, for the transportation alternatives that could minimize the infection risk.

In terms of the technological and environmental factors, that as seen in the PESTEL matrix are highly correlated, the investment on the development of EV vehicles is of a major interest and could represent an essential factor on the opportunity seizing in the forthcoming years. The role of electronics and software is taking the lead in the automotive industry, so in that field the implementation of models, even at a small level, in the product offering portfolio can be seen as an upcoming capability in the seizing of opportunities. In the same manner, the presence of electric alternatives in the offering portfolio could lead the environmental commitment of the brand and therefore capture the associated opportunities that might arise from policies such as the Paris agreement objectives or the EU regulations in terms of the climate neutral 2050 strategy.

Finally regarding the legal factors, as previously explained the degree of linkage to the other elements is the highest. In most of the cases they are the pragmatic implementation of the rest of policies, initiatives and regulations. From the factors studied in the legal section, the taxation, congestion charges, and road tolls in terms of Urban mobility could, as seen for the environmental factors, bring opportunities in the field of mobility services and solutions. To this regard the BMW Motorrad offering portfolio includes two electric alternatives with the aim of targeting the metropolitan customer segment in tackling the urban regulations challenges. This electrification and connectivity development can profit from the legal incentives that will be arising especially after the COVID-19 pandemic.

### **Threats**

For the threat evaluation, the same approach as for the opportunities external analysis is employed and the findings from the PESTEL analysis are taken into consideration. Thus, an analysis based on the assessment of which of the factors could constitute a disadvantage element or trend that could influence the company operation is conducted regarding each of the categories.

First of all, on a political level, as previously seen, the most influential factors are the stability and reliability of the institutions regulating the markets. From an opportunity point of view, this is considered from the perspective that BMW Motorrad is operationally centred in the German market and, therefore, it accounts for the stability and for the trading benefits at the EU market. However, as studied in the political factors section, the economical shaping capacity of these institutions can pose a threat to the profit development, given the limited influential power of an organization. To this regard, the fast-growing markets in the south east of Asia and in South America for instance represent a more complex political and influence network. Indeed, the outsourcing of the small segment model production to Brazil or India could threaten the stability of the production.

Regarding the economic influences, as previously stated, they have a high degree of linkage to the political factors in the way that they shape the trading environment and give stability to the market operations. As for the outsource of the production to developing economies as a political threat factor, the growth rate of these economies demand for an increasingly high number of vehicles whose specifications and requirements are not exactly the same. However, these economies represent the fastest growing path and probably a dependence factor in the future that must be approached. On the other side, the industrialized economies are showing a bigger rate of vehicle saturation and a stagnation in terms of vehicle sales per inhabitant and especially in the motorcycle market. Altogether could constitute the principal threat from an economical perspective, with the prospective growth shift to other markets and economies that are nowadays not addressed on a central basis. Furthermore, the growing perspective of the specific weight of the EV in the offering portfolio requires from the usage of new materials as metals that come from markets that are equally novel for the incumbent manufacturers.

On a social level, the brand perspective is considered to be the major influential factor. As exposed in the opportunities, this for BMW could be considered as one of the most important advantages. However, these could be also a volatile factor considering that the size of the brand gives a greater deal of exposition as well to the public eye. Additionally, and building on the economic threats, the increasing influence of developing economies as bigger players from a marketing point of view, comes along with certain new features in the vehicles demanded by customers that live in different environments and metropolitan areas. To this regard, an increasing demand for smaller lightweight and manoeuvrable vehicles is taking place, and this could pose a threat from a product offering perspective considering that is not in the core of the product spectrum from BMW Motorrad. Moreover, the probably biggest issue to address on a social level for the motorcycle market in general, is the decrease in interest from the younger demographic, as seen in the statistics related to the driving licenses decrease and, more importantly, in the motorcycle market regarding the change in the average customer age.

Having a look into the threats that could arise from the technological perspective, the biggest threat could be understood from the arising of new agents to the market that, due to the EV demands and regulations development, have increased their role in the sourcing market. These novel agents mainly refer to the electronics suppliers, software developers and the energy markets. This threat has been already discussed regarding the microchip sourcing shortage in 2021, shows the lack of influence and power that the manufacturers from the automotive industry have in this domain in comparison to other manufacturers in the electronics industry. Similarly, the increasing use of data and the development, due to the digitalization of the industry on a general level, poses technological problems in terms of standardization and cybersecurity. It calls for cooperation among agents and this could lead to the leakage of know-how along with the threat of its complexity.

Finally, considering the environmental and the legal factors together, given the degree of relationship according to the findings from the PESTEL analysis, the major threat factor could be interpreted as the promotion, due to ecological agreements and environmental factors, of alternative drive technologies. As studied, on a regulatory level, there are several countries and territories that are implementing phase-out policies and legal frameworks that intend to halt the sale, and thus halting the production of ICE vehicles. This is embedded in international agreements such as the Paris agreement and deployed to a local and regional level. In essence, this ecological-based legislation poses the biggest threat to the industry that is challenged to change the whole production model and more precisely their offering portfolios. Furthermore, the entrance of new influential agents in the product development and therefore in the product substance can raise problems, due to the controversies generated from an ecological point of view, related to the retrieval of the materials, or related to the way in which the new powering technologies are sourced. Similarly, on a legislation level, the cybersecurity challenges are gaining more influence due to the limited regulation and the threats that it can pose on a technological level.

<b>SWOT</b>	
<b>STRENGTHS</b>	<b>WEAKNESSES</b>
<ul style="list-style-type: none"> <li>- Premium manufacturer in the small segment.</li> <li>- Holistic offer in the medium segment.</li> <li>- Scooter alternative in the medium segment.</li> <li>- Strong big segment Adventure category.</li> <li>- Electric scooter already implemented.</li> <li>- Collect &amp; return service as a part of the purchase process.</li> <li>- Brand strength in the Apparel offer model.</li> <li>- Motorsport team as a part of the brand strength.</li> <li>- Consistent and up-to-date strategy. Recently designed and including urban concepts.</li> <li>- Strategic building on data analysis and AI tools.</li> <li>- EX Machina team for big data analysis and customer data evaluation.</li> <li>- Focus on data driven operations and processes through Data Driven Company.</li> <li>- Prospective online sales platforms as part of the Sales Platform initiative.</li> </ul>	<ul style="list-style-type: none"> <li>- Sole premium manufacturer in the small segment.</li> <li>- Price-positioning in the small segment against non-premium competition.</li> <li>- Hard positioning in the small segment. Between premium and price sensitivity.</li> <li>- Scarce Urban model offer in the medium segment compared to main Urban competition.</li> <li>- Lack of a clear specific brand line identity in comparison to the premium competition.</li> <li>- Regarding H-D, lack of product orientation in the Touring-Heritage class.</li> <li>- Original-product/technical orientation for the accessories offer model as H-D or KTM.</li> <li>- Lack of a specific offer model for the developing mobility service market space.</li> <li>- Digital capabilities orientation to current operations only.</li> <li>- Vague prospective digital value proposition as part of the offer model.</li> <li>- Necessary integration for a touch-point in the Sales Platform purchasing process.</li> </ul>
<b>OPPORTUNITIES</b>	<b>THREATS</b>
<ul style="list-style-type: none"> <li>- Europe market central operation and international trade benefits.</li> <li>- Stability of the German and, the European market.</li> <li>- Economic strength of the industrial sector in the German economy.</li> <li>- Access to European Recovery funds after COVID-19. Capabilities in terms of digital development.</li> <li>- Strong brand value perception as an innovation enabler.</li> <li>- Increasing customer demands for customization.</li> <li>- After COVID-19 shift on customer preferences to low-risk infection alternatives.</li> <li>- Demand for urban friendly vehicles and electric alternatives.</li> <li>- Operation in the EV field as a know-how developer factor.</li> <li>- Urban-electric vehicle increasing their specific role due to urban regulations.</li> <li>- Legal and regulatory fostering of mobility solutions based on EV.</li> </ul>	<ul style="list-style-type: none"> <li>- Political influence on economy shaping as potential instability factor.</li> <li>- Risks derived from the entrance to upfront-restrictive developing markets.</li> <li>- Different product substance demand in the developing markets.</li> <li>- Market saturation in industrialised economies regarding the vehicle/inhabitant rate.</li> <li>- Motorcycle general market stagnation in the last 7 years.</li> <li>- Increase of the relevance of electronics, software and energy industries.</li> <li>- High level of exposure in terms of brand perception and corporate identity.</li> <li>- Decrease on driving licenses attainment in the younger generations.</li> <li>- Increase on the customer's average age in the motorcycle market during the last 30 years.</li> <li>- Reduced negotiating power of the motorcycle industry compared to the electronics industry.</li> <li>- Difficulties in cybersecurity and standardisation of protocols in terms of data management.</li> <li>- Legislative and institutional foster of alternative drive technologies.</li> </ul>

Table 4. SWOT Analysis BMW Motorrad.

### **4.3 Analysis of the Optimal Future State.**

Once the analysis of the different elements from the internal and the external point of view has been examined for the SWOT analysis, the third step from the gap analysis concerns the employment of a second tool for the development of the final assessment. Thus, making use of its affinity in terms of structure to the previous analysis, the Ansoff matrix results are deployed. Similarly, to the SWOT matrix, this tool is implemented in order to represent the previously collected data and to ease the provision of an illustration on the findings. However the Ansoff matrix focuses mainly on a prospective interpretation of the findings and serves to derive the strategic growth paths as the definition of the possible paths to the optimal future state.

For this analysis, similarly to the SWOT development, the factors are considered from an internal and external point of view. First, for the internal category the current offering portfolio together with the long-term strategy analysis are considered. That is to say, for the internal analysis the so-considered current and new products are studied. For this analysis, both the benchmark analysis and the current status of the BMW Motorrad offering portfolio are employed. Second, regarding the external analysis, the market dimension from the Ansoff matrix is addressed. To this regard, in a similar way to the SWOT analysis, the findings from the PESTEL study are employed in order to assess the current and the new market prospective.

#### **INTERNAL EVALUATION**

As for the SWOT evaluation, in terms of internal factors, the benchmarking together with the own current portfolio structure and the long-term strategy are employed. The aim is to differentiate between current and new products regarding the offering portfolio. In doing so, the current product alternatives and offer models are analysed in comparison to the selected competition in order to illustrate the current product in place. Similarly, the new offer models from external actors are analysed from a strategic viewpoint. Ultimately, (Table 5) illustrates a short summary for the factors analysed in each category.

Therefore, although the sources employed for the elaboration are similar to the ones used for the SWOT analysis, the approach in this occasion is significantly different. Once the classification from the following factors is conducted, in the discussion section, the result outcome from the Ansoff strategic approach is performed.

##### **Current Product**

For the analysis of the product categories, first of all the benchmarking categorisation is employed. This is the offering portfolio classification as of Motorcycle, Accessories, Customer Services, Apparel and Mobility as the evaluation classes.

In the first place, considering the motorcycle category, the three-segment differentiation can be employed in the assessment of the current product classification. Regarding the small segment it can be observed that from the BMW Motorrad offering portfolio there are alternatives in the Adventure, Urban and Roadster segments. As seen in the benchmarking analysis this is a differentiation fact between BMW and the other premium manufacturers (Ducati, Triumph and H-D). However this offer can be considered rather punctual given that the offer deployed includes only one or two models for each of the categories mentioned.

Having a look into the medium segment, the BMW Motorrad current portfolio covers the majority of the fields. There are offering alternatives for all the considered categories but for the sport line. In this regard, in comparison to the other premium operators considered for the analysis, the offer is wider and regarding the rest of the competition is similar. However, as it is addressed in the New

Product section, the level of specification and overall alternatives in these categories is not as extensive.

As the last point considering the motorcycle offer model, for the big segment BMW Motorrad deploys offer in the Adventure category mainly as well as in the Roadster, Tour categories and the Sport and the Heritage on a lesser level. In comparison with the competition, regarding the premium concurrence, the presence in the segment is similar, however the presences by Ducati or the H-D are more specific into the Sport and Tour-Heritage categories respectively. Regarding the rest of the competitors, excepting Honda, the rest are not as present in the segment. For the Japanese brand in particular, as for the other segments, on an offer level the availability of alternatives is the widest. In brief, the motorcycle section of the offering portfolio can be considered rather as a current product from a general perspective, although not all the categories are fulfilled and to the same extent covered.

In terms of accessories, as seen for all the competition except H-D the accessories are offered at least for the big and medium segment level as a configuration offer during the purchasing process of the bike. For competitors such as Yamaha and KTM and the smaller models of Honda, the availability of configuration add-on accessories is limited or not offered. Thus, from a current vs. novel assessment, the accessories as an offer model can be considered a current offer model as well. However the slight differences among the competition and the spaces addressed by the differential approaches conducted by H-D and KTM are considered in the New Product section.

Subsequently, in terms of the customer service, as seen in the benchmarking analysis, the current offer model deployed by BMW Motorrad is comparatively the biggest regarding the variety of options and customer choice. From one side it is possible to observe that the original part supply and the extended warranty options are offered by all the considered competition, however there is differences in terms of service inclusive packages that Honda and Triumph do not include as additional offer models and for the road assistance services that are not offered in H-D, Triumph and Honda catalogues. Finally it is worthwhile to mention that comparatively BMW Motorrad is the sole manufacturer to offer the collect & return services.

In terms of apparel the offer displayed by BMW Motorrad portfolio and the rest of the evaluated competition does not differ significantly. As described in the benchmarking analysis, there are slight differences in terms of the line design and the focus of the product categories, however all of them reach out to the three categories considered (rider equipment, clothing and accessories) to a higher or lower extent. The most relevant difference here can be said to be the offering of products in relation to the motorsport teams that BMW Motorrad participates in.

Finally, the last offering model addressed in the benchmarking is mobility as a service. As seen, BMW Motorrad already possesses EV in an Urban design category. This could represent, as previously developed, a first approach into the market segment. However the presence of mobility solutions is not fully addressed by any of the considered competitors in a direct way as other agents are doing. This is regarded from a new product perspective in the so-called section.

In brief, it can be concluded that the markets in which BMW Motorrad has a model offer and an extended catalogue of offer variabilities, is mostly covered in a similar way from its competition. Regarding these direct competitors, it can be assessed that, in terms of offer variability, the organization together with Honda are the competitors with the wider range of alternatives. However, regarding the level of specification and specialisation, every other competitor has a main focus and product line that similarly defines their brand character.

It can be also concluded that, for the first four categories including the vehicle, accessories, customer service and apparel, the competition is highly spread, and all the direct competitors considered for the study try to seize the greater part of the product and service lines. It can be concluded that this traditional market is a red ocean competitive environment where the existing competition is already established and extended to a certain level, and in which the same competitors look for the capture

of the same customer base. That is to say, that the market does not spread beyond its barriers, also observed through the stagnation of the market. Nevertheless, the new product offer that can be observed in other arising actors offering portfolios, can foster the appearance of new offer models among incumbents. These novel agents are studied in the following point.

## **New Product**

In the same way the Current Product is analysed, for the evaluation of New Product categories, the benchmarking for the direct competition together with the new offering model from substitutes are considered. Therefore, the evaluation is conducted first regarding the model offers from the benchmarking, and then regarding the external actors. For this part of the analysis, it is important to consider the long-term strategy presented, given that it sets the focus on the future outlook, thus in the new products.

First, considering the vehicle offer model, in the small category, as stated in the previous section the Adventure, Urban and Roadster categories are addressed. That means similarly that the Heritage and Sport are not. To this regard, none of the premium competitors deploy offers, however Honda, KTM and Yamaha address the Sport category and Honda participates as well in the Heritage. This shows a more intense competition from these competitors in the smaller segment that could imply the search for a younger customer or the deployment of a wider offer for more price-sensitive clients. However, BMW Motorrad must decide whether to fully participate or not form the segment. Otherwise it undertakes the risk of taking a middle position where it can be diluted among the broader offer from the non-premium competitors, and the loss of brand identity compared to the premium competitors that decide not to participate from it.

Regarding the medium and the big segment, the evaluation is rather straight forward considering the current product analysis. As addressed in the current product section, this offer models are rather capitalized but all the competition to different levels of extension. Hence, these offer model categories do not pose a big variety in terms of new offer models or novelty to the segment. However, when looking more carefully into the medium segment, BMW Motorrad, as observed in the current product description, does not offer alternatives for the Sport segment while Ducati, Honda and Yamaha do. Regarding the big segment, the offer model does not include an Urban alternative, however this is a common blank in the rest of the offering portfolios. Furthermore, even though the Heritage category is addressed there is a sole model constituting the category in comparison to H-D that deploys the majority of its models on this category and is actually the competitor addressed by the launch of the mentioned model.

In terms of other offer models, as assessed in the current offer evaluation and in the current product category, the accessories are covered as a configuration by the majority of the competitors. Nevertheless, H-D and KTM deploy different alternatives to this regard. More specifically they offer their original part supply as a separate extra offer. This grants, from the one side, the idea of an original manufactured product for H-D building on the exclusivity concept and, from the other side, for KTM the approach intends to target a more technical-oriented client that understands the experience value proposition not only from the riding perspective but also on the maintenance and technique labour.

Regarding the customer service, all the categories addressed are covered by the BMW Motorrad offering portfolio and the differences or novelties could be addressed from the way in which these services are put together in the offer model. It can differ in the way it is packed together, the pricing category or the substance relationship. However, these categories go beyond the project scope. Similarly, in the apparel category, the categories studied are mainly addressed by the concurrence in a similar manner and therefore not big differences in terms of substance or offer models can be addressed. In a similar way to the customer service category, slight differences could arise in the way in which these products are offered in terms of packaging or special offers.

For this point, the most interesting analysis comes from the offer models in terms of mobility solutions and the mobility concepts offered as a service product model. As stated for this category in the current product evaluation, the topic can be laterally addressed by competencies already existing in BMW Motorrad offering portfolio, and the digital capabilities built on a strategic level could help on the composition of an offer model that directly addresses the field. Therefore, with the aim of regarding offer models in the domain, the reach is extended to actors that are not considered for the direct competition analysis but have nonetheless a determining role in the business space.

As assessed in the current product evaluation, the traditional market can be regarded as a so-called red ocean in terms of competition and in strategic terms. In the case of the mobility as a service or as a value proposition itself, according to the increasing degree of competitors entering the field and the abundance of offer model options and contexts regarding the original industries from which these competitors are coming from, the offer model business space can be assessed as a blue ocean market. This means that the market has been until recently mostly uncontested and from the incumbent side, it has been considered irrelevant. Similarly, at the moment is capturing demand and therefore a large number of new actors are trying to establish their dominant models and ultimately trying to seize the space.

Looking into the different offers deployed by these competitors, as it is performed in the benchmarking, it can be determined that the dominant business model is yet to arrive. However, some common features from the different models can be analysed and together with the academic research presented by Münzel et al. (2018), consider the general factors that form this new product perspective. The main common feature that can be highlighted is the platform-based operation mode, not only in terms of operation but also as of the value proposition of the service itself. The operations are performed on an online-platform that is designed to be mainly operated through a smartphone. Furthermore, the need for the establishment of an interconnected network between autonomous vehicles is necessary in terms of operation and cost efficiencies. Moreover the vehicle offered makes use principally of electric drive technology and a charging network is provided. This can be directly employed by the users when parking their vehicles to certain stations or carried by an extra operative service conducted by the company. Finally from a product point of view, a lightweight, urban oriented and manoeuvrable vehicle is required in order to provide a transportation-efficient service. The offer model is not focused on the product offer but on the service provided as the main value that the customer is willing to pay for. It can be also observed that to this level no premium products are offered and that the lack of synergies between platforms can harm the customer prioritization when choosing a mobility service solution. In essence, it can be said that the offer model is in general a product-service-system integration, hence the servitization as part of the digitalization of capabilities is exploited.

## **EXTERNAL EVALUATION**

Once the analysis for the internal factors for the Ansoff matrix is presented, subsequently the external evaluation is performed. For the external factors description, in parallel to the external analysis conducted for the SWOT analysis, the findings from the macro-environmental analysis and from the competition analysis are employed. The aim is to define the market conditions from a macro perspective with the objective of classifying them, as with the products, as new or current markets. For that purpose, the traditional markets in which the organization competes with the conventional direct competition are classified as current markets, while the new business areas in which it is observed a prospective sale space are classified as new markets. The results can be observed in table (5) in which a summary for every category is represented.

Once the classification from the following factors is conducted, in the discussion section, the result outcome from the Ansoff strategic approach is analysed.

## Current Market

As previously mentioned, for the current market analysis the external findings from the PESTEL and the competition evaluation are employed. As explained in the methodology, for this section the current market is defined through the analysis on the findings from the macro-environmental conditions as well as by the competition evaluation performed. To this end, the Porter's five forces analysis is considered, as explained in the methodology (section 3.3.1), by considering the industry rivalry, the threat of substitutes and discarding the threat of new entrants as previously explained. By doing so, the current market is described by the analysis of the mentioned factors with the aim of illustrating an accurate picture of the current market situation.

To start with, regarding the political factors, as described in the external analysis, multiple factors are determinant when referring to the environmental influence. Principally, the stability and the reliability from the institutions shaping the economies and the political security in terms of market intervention are the major influencers. To this regard, considering the company centralisation in the German market and as seen in the SWOT analysis, forming part of an EU country with access to the common market and trade agreements, the current market can be described as rather stable from a political point of view, at least when considering the central operations as well as the main relevance markets that are similarly in the EU.

Regarding the economic factors, that as a matter of fact are rather related to the political influences, the major influences are the currency stability and the market share that the automotive industry represents in the mentioned central market, the traditional market can similarly be assessed as stable in terms of geographical conditions, attending to the current fields of operation. However with the economic growth, as well as the vehicle market reshaping, new opportunities can arise from different geographic points or new customer segments that are considered in the New Market section.

Moreover, looking at the social influences, various change factors can be defined arising from uncertainties in market perception and complexities in terms of customer expectations that similarly are increasingly diverse. However, at this point, the current market is addressed in terms of social perception. To this regard, the brand strength from the BMW Group in general and from BMW Motorrad in particular is the major influence in terms of social perception and it determines the current idea of a premium brand. The traditional market for the organization is addressed with the current product catalogue that focuses on the medium and big segment and with a particular strength in the Adventure segment that shapes the brand identity as well as the Sport and Touring on a lower level. However, in the last years the enlargement of the catalogue to other categories and segments has positioned the brand in other domains such as the Heritage, the Roadster and the Urban segments.

In terms of the technological aspects, it can be assessed that the most influential factors take place. In this domain, the disruption as well as the public and private expenditure on changing the traditional drive technologies are reshaping the technological status-quo. However, in terms of the traditional market, and having a look at the current offering portfolio of the brand and direct competition, it can be determined that the traditional ICE technology is the dominant model in the market. Nevertheless, in terms of digital features and electronic components in the last decade the current product has incorporated digital features that are already a part of the current market offer. As observed from the PESTEL findings the current investment in ACES is at a high level and in increase, thus the current market offer is already digital and electronic composed although the high pace growth will determine the future market in terms of technological factors and influencers.

Having a look into the environmental and the legal factors, as mentioned before, these two factors are rather related according to the findings from the study. The current market circumstances can be said to be developing and being steered from an environmentally-legal perspective into a new model in terms of emissions, technologies or usage especially in the urban environment. These are, however,

change factors that are regarded in the new market section. Considering the current market, from an environmental point of view, already the international legal frameworks, in particular in certain markets and Europe, are restrictive regarding the regulation of environmental effects and factors. This affects the current markets and technologies and shapes the competitive environment. As evaluated in the SWOT analysis, this is not only limited to their own manufacturing production and activity but influences the suppliers as well in terms of product substance and also regarding the energy consumption and supply sources.

### **New Market**

After the evaluation for the current market is exposed, for the development of the study of the factors that are influencing the arising and development of novel markets and, therefore, to perform the classification into the new market category for the Ansoff matrix, in the same way that the current market is evaluated, the findings from the PESTEL analysis are employed. By doing so, the same categories are considered in order to assess the markets and business spaces that can be understood as enablers and macro-environmental factors.

To begin with, in terms of political influences, besides the stability and reliability needed in term of market central operation from the institutional side, when it comes to defining the foreseeable new market spaces influenced from a political level, the decrease in terms of oil dependence as well as the policies taken on an environmental basis could be determined as the major influencers in shaping a new market. The independence to the oil markets on a political tier, affects the introduction of new drive technologies as well as the international trade balance. This affects in the long-term the product substance, as well as the market accessibility regarding certain geographical locations. Additionally, the increasing relevance of digital technologies and data processing protocols and regulations directly affect the industry, as seen in the technological factors. Therewith the policies in the domain are increasing.

Having a look at the economic influential factors, as mentioned previously these are necessarily related, on multiple occasions, to political activity. However, this can be considered separately. In terms of market reallocation and the arising of new markets, the economic growth shift can be mentioned as the major influencer. The superior growth rates of certain economies are making them more attractive to the manufacturers, not only in the traditional manner of outsourcing production, but also as new markets in which to offer their products. In this regard, the decreasing production in the industrialized economies together with the stagnation in terms of the vehicle rate per inhabitant, and more specifically when looking at the motorcycle market, are encouraging the shift of the scope to markets in the south east of Asia or in South America.

From a social perspective, the major driver that could help in the reshaping of the current market is the demand for customization increase due to the changes in customer perspective and cultural factors. In this sense, it is of particular interest the shift observed in the demographics in terms of the average age of the motorcycle average rider and also regarding factors as the number of driving licenses decreases in the last 30 years in the younger generational groups. Similarly, the shift to other economic poles in terms of markets carries together different customer preferences related to different all day live conditions or cultural matters. Therefore, an increase in the demand of smaller, lightweight and more manoeuvrable vehicles has been experienced. Finally, in the age of COVID-19, the changes in terms of the customer priority factors when it comes to deciding among different mobility solutions have changed. According to the findings, the risk of getting infected is rated nowadays as the number one preference factor, beyond other as time to destination or price of the trip.

Regarding the technological factors, the most influential elements according to the findings are the so explained change in the drive technology and specially regarding the investment that the ACES technologies receive. This speaks for the foreseeable change to products that are more autonomous,

connected, electric and share concepts that reshape the future offer models. Similarly, regarding the technological field, the role of data security when conducting new offer models and delivering new products will shape the way in which these business models and the vehicles will be designed and operated. It must be also mentioned that in terms of technological influencers, the main role that new-coming industries such as the electronics manufacturers and the software developers will obtain, will similarly affect the prospective market.

Finally, attending to the environmental and legal factors, as mentioned previously, they are highly related to one another. The legal framework and regulations affecting the business environment are mainly focused on the environmental side. By means of agreements such as the Paris Agreement in 2015 and regulations such as the Climate Neutral Europe that the EC pursues for the year 2050, numerous countries are applying in the next thirty years legislation in terms of CO2 emissions, congestion charges or road tolls for urban mobility. Therefore, the legal-environmental factors are having a major influence in giving form to the current and prospective new markets, where new services such as mobility as a service or shared business models are increasingly seizing the business space.

<b>ANSOFF: DIMENSIONS ANALYSIS</b>	
<b>CURRENT PRODUCT</b>	<b>CURRENT MARKET</b>
<ul style="list-style-type: none"> <li>- Small segment motorcycle offer in the Adventure, Urban and Roadster categories.</li> <li>- Medium segment offer in the Adventure, Heritage, Roadster and Urban categories.</li> <li>- Big segment offer in the Adventure, Roadster, Heritage, Sport, Touring categories.</li> <li>- Accessories as configuration alternative integrated in the purchasing process.</li> <li>- Most extensive customer service offer compared to direct competition including collect &amp; return.</li> <li>- Apparel offer in the Rider Equipment, General Clothing and Accessories categories.</li> <li>- Apparel merchandise offer from the motorsport team.</li> <li>- Electric vehicle offer in the Urban line category.</li> <li>- Similar portfolio to competition regarding Motorcycle, Accessories, Customer Services &amp; Apparel.</li> <li>- Red ocean competitive market environment.</li> </ul>	<ul style="list-style-type: none"> <li>- International market centralised in Germany. EU common market and trade agreements.</li> <li>- Market focussing on industrialised economies. Increasing shift to developing markets.</li> <li>- Premium brand perception focused on the medium and big segments.</li> <li>- Traditional focus on the Adventure, Sport and Touring market.</li> <li>- Extended vision in the last years to the Roadster, Heritage and Urban markets.</li> <li>- Offering portfolio fundamented on ICE drive technology.</li> <li>- Incorporation digital features in the product substance.</li> <li>- Increasing regulations in terms of emissions and air quality parameters.</li> </ul>
<b>NEW PRODUCT</b>	<b>NEW MARKET</b>
<ul style="list-style-type: none"> <li>- Small segment Sport category. Already at Honda, KTM and Yamaha offering portfolio.</li> <li>- Medium segment Sport category. Already at Ducati, Honda and Yamaha offering portfolio.</li> <li>- Big segment Urban-scooter absence in the studied competition.</li> <li>- Touring-heritage market. Mainly capitalised by H-D.</li> <li>- Accessories sold as an independent offer by KTM and H-D.</li> <li>- Package offering including service, warranty and other add-ons.</li> <li>- Mobility offer models as service solutions. Value proposition fundamented on the service provision.</li> <li>- Platform-based business operation as a part of the offer value proposition.</li> <li>- Autonomous and interconnecting efficiencies as a part of the product substance.</li> <li>- Increase of electric drive technology specially regarding Urban models.</li> <li>- Development of charging networks for the e-share mobility models.</li> <li>- Servitization and Digital Servitization offer models. Product-Service-Software value proposition.</li> </ul>	<ul style="list-style-type: none"> <li>- Less oil dependence and related political influence.</li> <li>- Increasing policies regarding data processing and cybersecurity.</li> <li>- Growth shift to developing economies increasing product demand.</li> <li>- Role relevance of developing economies affecting product design and portfolio configuration.</li> <li>- Decreasing of production in industrialized economies and vehicle/inhabitant rate stagnation.</li> <li>- Increasing demand for customization and adaptability.</li> <li>- Change on users demographics. Increase on the average age of the motorcycle rider.</li> <li>- Change in terms of priorities when choosing mobility alternatives after COVID-19. Risk of infection.</li> <li>- Increasing investment into ACES vehicles and EV development.</li> <li>- Role of electronics, software and energy producers regarding negotiating power in the market.</li> <li>- Regulations such as the Paris Agreement and Climate Neutral Continent (EU).</li> <li>- Blue ocean competitive market environment in the mobility as a service market space.</li> </ul>

Table 5. Ansoff Dimensions Analysis Summarized (BMW Motorrad).

#### **4.4. Comparison of the Current State with the Future State.**

Following the methodological approach, the gap analysis is performed in the form of the final assessment using for that purpose the comparative analysis between the previously mentioned study tools, the SWOT and the Ansoff matrices. The final aim is to identify the gaps for potential market development based on the external characteristics of environment and competition, the prospective market view and most importantly taking into consideration the competencies from the current business model and its strategic outlook.

Hence, in this fifth step, the evaluation of the current offering portfolio for BMW Motorrad in comparison with the external environment is performed as the description of the strategic directions and strategic growth paths derived from the outcome from both SWOT and Ansoff analyses. In doing so the discussion from both analyses is presented as a preceding step to the application of the previously defined merged strategies (section 3.3.1).

##### **4.4.1 SWOT Analysis Evaluation**

As the last step for the SWOT analysis, the strategic evaluation in accordance with the findings from the internal and external sources is conducted. As defined by Chermack and Kasshanna (2007), the SWOT analysis provides a tool to the organization to detect opportunities and use them in its own advantage, and to understand weaknesses and threats that can be managed or eliminated.

With that in mind, for those company's capabilities that could be considered as strengths, either an S-O or an S-T strategy could be employed in order to either target a market opportunity or to protect against an external threat. Similarly, for those offering portfolio competencies that could be considered as weaknesses, the organization should pursue either a W-O strategy where the aim is to overcome a certain weakness by targeting an external opportunity that could dilute it, or in the event that these weaknesses converge with certain external threats, a W-T strategy to minimize the impact (Fig.6).

Attending the results obtained from the analysis and exhibited in (Table 4), various strategies can be interpreted from the merging of the internal and external factors. Hereinafter, the four different strategic spaces (S-O, S-T, W-O and W-T) are separately considered.

##### **1. Strength – Opportunity Strategy.**

According to Chermack and Kasshanna (2007), the strength-opportunity strategies are the ones in which making use of the identified strengths from the internal competencies revision, an external opportunity is targeted in order to obtain an advantage, in this case in terms of market positioning or offer substance.

Having a look at the results from the SWOT analysis, the most relevant strengths identified from a product portfolio point of view are the holistic offering portfolio in all classes with special relevance of the Adventure in the big segment, the urban alternatives in the middle and the premium presence in the smaller are the main strengths. Moreover, the offering of electric alternatives, and more specifically in the urban line, is of relevance. Regarding the rest of the offers, the extensive customer service coverage, the extended apparel offer with the motorsport team merchandise, and the brand perception are classified as strength factors. Furthermore, the recent long-term strategy implantation, the development of data collection, analysis and processing capabilities, the building of know-how in the digital domain, and the Data Driven Company, EX- Machina and Sales Platform approach, in the regard of prospective sales models, are similarly of advantage.

Regarding the opportunities evaluated, the centralisation in the German market as a relevant European market actor that gives the access to a strong common market, trade agreements, and the recent allocation of European recovery funds are opportunity factors. Similarly, the increment on customer demands for individualization, the shift of customer preferences after the COVID-19 pandemic in terms of transportation, the demand for urban adaptive mobility concepts, and the fostering of electric drive models through the legislative frameworks as well as from the ecologic regulations are classified as environmental opportunities.

Regarding both outcomes, various combinations could deliver alternative strategic models and offering portfolio solutions, making use of the strengths the opportunities are exploited in an advantageous manner. As the evaluation from the S-O strategy the following alternatives are recommended as optimization enablers:

- a. Make use of the premium small-segment positioning and the strong brand value perception in building novel alternatives presented as urban-friendly to cover the urban regulations development.
- b. Make use of the already deployed electric-urban scooter offer to target the mobility domain. Profit from the shift in customer preferences regarding the risk of infection after COVID-19, by offering individual transportation means.
- c. Make use of the strategic digital tools and competencies, built from the Data Driven Company and Sales Platform initiatives, for the development of customer specific and individual PSS solutions.
- d. Take advantage of the European Recovery funds to enhance the digital capabilities and to develop new data processing tools and systems embedded in current initiatives.

## **2. Weakness – Opportunity Strategy**

Once the internal strength factors are considered, both as opportunity enablers and as threat tacklers, the elements from the current offering portfolio structure and the benchmarking analysis that are classified as disadvantageous are analysed. In doing so, first, the combination of these elements together with the opportunities already introduced are studied in order to overcome the internal weaknesses by taking advantage of external opportunities.

To this end, the factors presented as weaknesses from the SWOT analysis are the presence as the sole premium manufacturer in the small segment, making it complicated to position the offer model as a premium alternative in a price-sensitive market space, together with the risk of losing premium value perception. Similarly, the scarce Urban model alternatives, especially regarding the other manufacturers that deliver more extensive and holistic models in the segment, as well as the lack of a clear manufacturer line identity, are classified as weakness factors. This can be also observed in the big segment regarding the level of specification of H-D offering portfolio as the main competitor, with a clear approach to the Touring-Heritage category. Moreover, regarding the competition coming from external industries, the lack of a service solution in the mobility field can be understood as a weakness point, considering the overlap of functionalities and the value proposition, regarding the customer preferences, particularly in the metropolitan area. Additionally, regarding the digital capabilities and its development, the sole orientation towards an operation enhancement and particularly in the decision making processes, despite being of great interest for the optimisation of resolutions, lacks an offer orientation perspective, and implies a vague direct customer value proposition future alternative. From the other side, the lack of a touch-point in the development of future platform-based purchasing processes is perceived as a weakness for the majority of the customer at this stage.

Hence, the following alternatives are presented as the recommendations for the W-O strategies.

- e. Make use of the brand perception as an innovator enabler to develop new offer model alternatives for the small classes that could enable positioning the premium brand character in the segment.
- f. Participate from the European recovery funds in the field of industrial digital development, to build capabilities that could shape a prospective offer model regarding product-system features as a part of a digital value proposition alternative.
- g. Profit from the shift on customer preferences, regarding the selection of mobility solutions in the urban environment, together with the beneficial regulatory framework, to develop a motorcycle-based mobility service offer model to target the substitutional character of the field.
- h. Regard the implementation of alternatives in the EV segment as a know-how developer in order to explore the electric market. For instance, in the medium segment scooter market where the urban regulations are favourable and the company's offer model limited.

### **3. Strength – Threat Strategy**

In the same way, the internal strength factors can be employed to face threats coming from external elements. To this end, the S-T strategies defined by Chermack and Kasshanna intend to use the internal capabilities and the characteristics from the offering portfolio in order to avoid the risks posed from external actors that can represent a threat, both directly at the moment or from a strategic point of view.

As described in the previous S-O strategy, the advantageous factors resulting from the analysis are similarly employed for the analysis and, in this case, the threat factors detected are the following. First, from a political perspective, the influence in the economical shaping and the potential instability as a result of it are regarded, especially when considering novel markets and new geographical interests. Similarly, the shift in terms of the economic growth and the increasing switch of market scope to the developing economies, implicates changes in customer preferences in terms of product and offer substance. In the same vein, the saturation of the industrialized markets in terms of vehicles per inhabitant rates, particularly regarding the motorcycle market saturation and the ageing in the average driver and license holder, are relevant menaces. Moreover, regarding the industry as a whole, the reduced negotiation power in the supply of new materials, electronic components and software tools, is of interest regarding the development of the sector. To this regard, the high level of exposure of the brand and the high dependence on external actors, threats similarly the production activity and the company's operation activity.

In respect thereof, regarding the strengths already described the following alternatives as of the S-T strategies are recommended as the analysis outcome.

- i. Employ the small-segment offering portfolio alternatives and the strong brand value perception in the development of new markets with different product substance demands.
- j. Make use of the scooter catalogue, especially regarding the electric alternatives, to target the market saturation in industrialized economies, demanding simultaneously for metropolitan mobility solutions, offering novel PSS alternatives.
- k. Exploit the small segment offer model and the premium brand value perception in targeting younger generations. Making use of the digital and platform capabilities for the development of price-sensitive PSS alternatives.

- l. Benefit from the already deployed electric offer model to face the challenges posed by the phase-out policies and environmental regulations, and for the development of EV know-how in order to tackle the forthcoming ICE restrictions.

#### **4. Weakness – Threat Strategy**

Finally, as the last strategic approach from the SWOT analysis, the W-T strategies are presented. In this case, these strategies are designed for the situations in which certain internal weaknesses could converge with the appearance of certain external threats that affect them directly. In this regard, the recommended strategy from Chermack and Kasshanna presented in the description of the method is to minimize the weakness while avoiding the threats.

At this point of the analysis from the obtained factor classification, the elements classified as strengths, weaknesses, opportunities and threats have been already introduced. Therefore, it is only left to present the outcome recommendations as the W-T strategies for this study.

- m. Evaluate the risk of pursuing the entrance to novel developing markets with restrictive upfront policies that could have a determining effect in the price, market positioning and value proposition for the small segment vehicle category.
- n. Address the lack of a clear definition regarding the product line and manufacturer identity, when targeting new markets that demand for differentiated and renovated offer model substance.
- o. Tackle the lack of a specific offer model that integrates a digital proposition as part of the offer model alternative, for instance product-service-software system models, in a market where electronic components, software and data processing are gaining relevance.
- p. Face the lack of a specific offer model for the developing mobility service market space to minimize the effects of the increasing average customer age and the lack of entrance regarding the new generation that affects the motorcycle market.

#### **4.4.2 Ansoff Matrix Evaluation**

As the last step from the Ansoff matrix, the strategic propositions as the outcome of the combination of the classified internal and external factors is performed. This technique provides a strategic planning tool to match an organisation's general strategy with its possible strategic growth directions. As presented for the results, it considers mainly two factors; products and markets, that is, products to be produced and markets to sell these products.

Hence, four model strategies can be interpreted from the categorisation of the factors. These strategies are; market penetration, product development, market development and diversification.

Attending the results obtained from the analysis and exhibited in (Table 5), various strategies can be interpreted from a combination of the internal and external influences. Hereinafter, in a similar way to the SWOT discussion analysis, the four different strategic spaces described above are independently considered.

##### **1. Market Penetration Strategy (Current Product, Current Market)**

As the first strategy from the Ansoff results analysis, the market penetration strategy is presented. For it, the combination of the internal and external elements classified as of current market and current product are employed.

Regarding the outcome from the Ansoff result analysis and the classification into the four categories elaborated, as mentioned, for this point, the elements classified as current product and current market

are employed. From the one side, after the internal analysis, based on the current offering portfolio, the long-term strategy and the findings driven from the benchmarking analysis are displayed, the following factors are considered for the definition of the current product. First, regarding the vehicle, the current product is implemented for the small, medium and big segments, and with a wide variety regarding the categories. It is possible to find Adventure and Roadster models in the three segments, Heritage in the medium and big, Urban in the small and medium, and finally Touring and Sport in the big. Regarding the rest of the offer models, the accessories line are offered as a configuration feature during the purchase process, the customer services are applied in all categories considered and the apparel offer model is extended to the rider equipment, general clothing and accessories with the additional motorsport team merchandise. Moreover there are electric models in the offering catalogue. That is to say, that the company's catalogue does not diverge greatly from the rest of the direct competition studied in terms of offer model possibilities. The differences appear regarding the product substance differences or the strategic approach from the different manufacturers. In brief, the current offering portfolio is placed in a red ocean competitive environment.

From the other side, the following external factors from the environmental analysis are assessed for the definition of the current market. First, an internationalised industry with the German market as the operation centre. This speaks for an operative base centralised in an industrialised economy in Europe, from which the company can take advantage of the common market, currency and the international trade agreements. Regarding the social perception, the identification as a premium brand in the sector together with a traditional focus on the Adventure, Sport and Touring product categories, and the later inclusion of models in the Roadster, Heritage and Urban categories are of relevance. In terms of technological factors, the market is at the time founded in the ICE technology with the incorporation during the last years of digital features and characteristics into the vehicles and the operations. Finally, regarding environmental and legislative factors, the increasing regulations on emissions and the fostering of electrification are the main influence factors.

Regarding both outcomes, various alternatives could be deployed as strategic approaches regarding the market penetration plans. In the following, the recommendations elaborated as the market penetration strategies are presented:

- I. Enhance the market share in the actual markets by continuing with the development of the model categories for the different segments, especially regarding the extension of the small segment.
- II. Build on the premium value perception and the brand identity development by integrating a holistic customer service offer and developing on servitization business model proposals.
- III. Increase the relevance of the EV catalogue making use of the beneficial regulations regarding emissions and restrictions on ICE sales.
- IV. Continue developing the digital features and capabilities in order to differentiate the brand in terms of product, service and the customer interaction by fostering a prospective product-service-software system approach.

## **2. Product Development Strategy (New Product, Current Market)**

Once the market penetration strategy is deployed the second strategy regarding factors classified as a new product from the benchmarking analysis together with the current offer structure evaluation and the elements defining the current market form the external analysis are presented.

In essence, product development strategies consist in developing new products or modifying existing products or services, regarding the current markets. That is to say, organizations focus on developing new products for their main markets. Making use of a product development strategy, the present

strategy is retained and products that have new and different characteristics that intend to improve the performance are pursued.

In this regard, in order to deploy the outcome from the Ansoff matrix regarding the mentioned strategy, the factors ranked as new products are the following. First, regarding the current motorcycle offer from the studied competition, it is observed that for the small and medium segment, competitors such as Honda and Yamaha are deploying Sport categories. This offer model is not deployed at the moment in BMW Motorrad's catalogue. Similarly, there is an absence of Urban alternatives for the big segment that considering the characteristics demanded for the mentioned category, the realisation could be seen as rather unfeasible. In the same vein, manufacturers as Yamaha are proposing Sport-Urban alternatives that could represent a first step into a novel urbane conceptualization. Regarding the rest of the offer models, the accessories and customer services are rather similar within the competition studied. Alternatives appear regarding offer packages containing products, services and others as a bundled proposal. Most interestingly, regarding the new market assessment, there are offer models coming from external actors and in particular with the arrival of substitutional services that the mobility business space can represent. Some common features of this offer models are the platform base operation, the autonomous interconnection efficiencies as part of an integrative network, the mainly electric drive alternative, the development of support charging networks as a lateral requirement and the digital servitization as the new offer model value design.

Regarding the current market characteristics, the description is presented in the previous point. Therefore the outcome from the Ansoff matrix recommended strategies to follow in the product development domain are:

- V. Extension of the current vehicle catalogue regarding the small and medium model offer in the actual markets. For instance, developing a small and medium Sport alternative as already deployed by the competition.
- VI. Implement transversal packaging offer model alternatives, including products and services from the different offer models, in order to build on the brand perception and the brand identity.
- VII. Address the digitalization of product substance and company operations in order to face the increasing relevance of digital features in the product substance demands.
- VIII. Approach the development of digital tools, networks and platform-based operations in order to address the increasing relevance of potentially substitutive mobility solutions.

### **3. Market Development Strategy (Current Product, New Market)**

For the market development strategies, the proposals that lie between the current product and the new markets characteristics are elaborated. To this regard, the introduction of the features considered from an external point of view, as descriptive form the new markets, and the ones employed in the internal description of the current product are employed.

Essentially, market development is a strategy in which a firm detects or builds new market segments with the aim of improving the present results by targeting new customer segments or markets offering the current products and services. According to Ansoff (1957), market development is a strategic growth path which attempts to adapt the present product line (generally with some modification in the product characteristics) to new missions.

To that end, the description of the characteristics of the current product have been already introduced, thus, the elements defining the new markets are hereby presented. First, regarding the political and economic influences, the change on materials and fuel dependencies, the policies regarding cybersecurity and the growth shift to developing economies will alter the future business

space. Similarly, the decrease in the production and in the vehicle/inhabitant rate in the traditional markets will play a determining role. From a customer perspective, the increase in the demand for individualized products, the change in the demographics priorities, and the entrance of the younger groups will shape the future catalogues. In the same vein the role of electronics, software and connectivity features will modify the product substance and foster the entrance of new offer models, such as mobility service solutions, for which the customer rank of preferences after the age of COVID-19 has shifted favouring the individual transportation means. Furthermore, the increasing investment in ACES development from the manufacturers side, together with the implementation of legal frameworks, such as the emission limitations and the phase-out policies, will steer the offering portfolio from the industry to an electric drive technology base offer model.

In brief, regarding the prospective development of the market, the current offer model in the traditional sectors will be reshaped in terms of digitalization of features and operations, and the integration of servitization business models as a result of such developments. In addition, the growth of external offer model solutions must be considered, in particular in the urban mobility field, where a growing competitive environment can be observed at the moment.

Taking the future market characteristics into account and the current offering portfolio characteristics already developed in the previous point, the recommended strategies as the outcome for the market development view are the following.

- IX. Address markets in developing economies considering their increasing relevance and their particularities involving product substance demand with the current small segment vehicle catalogue.
- X. Use the holistic service offer model together with the current product substance, as a premium offer provider, to approach the increasing demand of individualised offer models and therefore attract new market segments.
- XI. Make use of the current EV alternatives to face the foreseeable change of the industry model catalogues to an electric-based vehicle offer, building on the segment know-how.
- XII. Use current electric alternatives to develop mobility solutions that can help to tackle the entrance of external players to the business space. For instance entering the mobility market by deploying a digital servitization offer model as a PSS that could enhance the premium value proposition.

#### **4. Diversification Strategy (New Product, New Market)**

Finally, as the last strategic outcome from the Ansoff matrix, the strategies denominated as diversification are elaborated. To that end, the analysis on the factors classified as new products and the environmental factors determining the new market are studied. Attending the diversification strategy definition, the aim is to grow the sales share by introducing new offerings in new markets. The diversification strategy involves the entrance to an unexplored market with a new or reinterpreted product or service.

According to Ansoff (1957) definition, it is the riskiest of the four alternatives because both product and market development are required, especially when it involves the screening of a new offering model that is not based on the core competencies of the organisation. Diversification is the most transformational growth alternative; it looks for simultaneous transformation in the product line and the market structure. The diversification strategy stands apart from the other three, it is the one which expands the scope of the activities in different areas from those of the current business.

For the description of the alternatives, the outcome from the Ansoff result section regarding the new product and the new market are employed jointly in order to elaborate the recommended proposals as diversification strategies.

- XIII. Increase the vehicle offer in the small segment, for instance addressing new categories as the Sport or by developing the Urban offer, to address market shift growth to developing economies demanding new catalogue substance.
- XIV. Develop an electric based model catalogue in order to face the forthcoming limitations in terms of ICE technology and emissions and therefore enter the EV market.
- XV. Develop a holistic model offering integrating digital capabilities, network connectivity, and platform-based services in order to implement a digital servitization offer model to fulfil customization demand as well as enhance the seamless service and premium value and therefore attract new market segments.
- XVI. Develop a mobility service based on an EV urban fleet in order to address the potentially substitutional business space, and to undertake the change in customer priorities regarding vehicle ownership and the younger demographics accessibility.

#### **4.5 Presentation of the Gap and Strategies Description**

For the development of the proposal, as explained in the introduction, the outcome from the SWOT and Ansoff studies are employed by means of the complementarity approach of the described methods.

To that end, in the following section, the recommended strategies resulting from the evaluation of both analyses is presented in order to cover the gaps between the compared business spaces. These strategies defined previously in section 3.3.2 aim to bridge the detected gaps between the growth strategies and the current strategic direction.

In doing so, the four merged strategies are presented and a final statement for each of the alternatives is elaborated. This final elaboration is carried together with the Johnson (2010) “Seizing the White Space” theory that articulates the gap analysis study, and the theoretical concepts regarding BMI and digital servitization, that are introduced in the beginning of the work attending to the theoretical background of the project.

Accordingly, hereunder the gaps detected for the four categories are first described and accordingly the merged strategies for the four business domains presented:

##### **A. Market Penetration – S-O Strategy**

As for the first merged strategy, which definition is as follows: “*Employ the strengths of the current product and the opportunities from the current market positioning to improve the business performance*” the outcome from the current product and current market space from the Ansoff matrix and the Strength-Opportunity space from the SWOT analysis are evaluated in order to find the necessary complementarities for the proposal.

For this proposition the recommended strategies analysed are: a., b., c., d., I, II, III, IV.

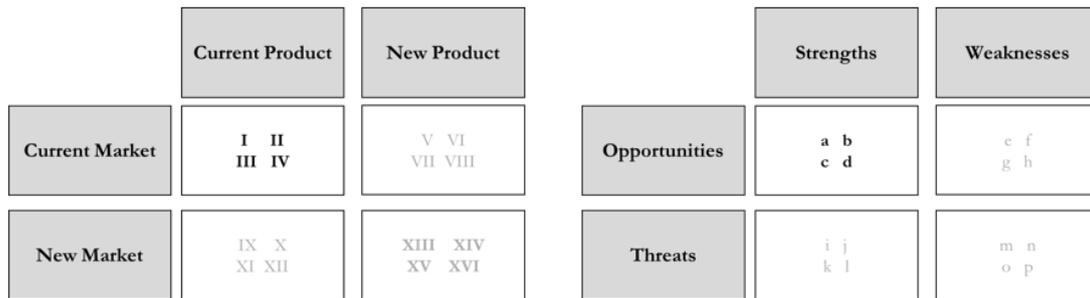


Figure 15. A. Market Penetration - S-O Strategy.

The proposed strategy regards the employment of the advantageous characteristics of the business in place and makes use of the observed chances together with the current offering model. All together compose the core business that is defined by Johnson (2010) as the business model that targets the existing customer served in traditional ways with offers that are a good fit to the current organization.

Attending the conclusions from the SWOT analysis evaluation and together with the Ansoff conclusions, the gap detected between the current strategic direction and the growth paths proposed by the strategic analysis can be assessed between the alternatives a. and III. These concern the reduced offering in the urban segment especially regarding the EV catalogue and the opportunities observed for growth in the segment.

Therefore, attending to the Market Penetration – S-O strategy, the proposal for the gap coverage regarding this business space can be described as follows:

*Benefit from the premium small-segment positioning and the strong brand value perception to penetrate the urban market based on an urban-friendly offering portfolio. Profit from the urbane regulations development regarding emissions and restrictions on ICE sales.*

This alternative intends to exploit the leverage of the company’s positioning in the segment and to profit from an already developed product to attract new customers in a market niche that is already known. In doing so, the potential in the urbane environment, as an effect of the observed increment on regulations, can be seized in markets where metropolitan areas are growing in terms of population. The current offering portfolio already deploys such alternatives, so the aim would be to steer the brand identity by means of an urban-friendly offer model.

In summary, this initiative intends to permeate in the urban segment with the current offering portfolio, by means of a repositioning of the offer model in the aim of an urban-friendly and premium oriented business model. By contrast, the market is already addressed by the current offering portfolio and the competition in the segment is rather intensive, in particular regarding its spread.

## **B. Product Development – W-O Strategy**

As for the second merged strategy, which definition is as follows: “Overcome the weakness from the absence of a new product by benefiting from the current market positioning as a development opportunity” the outcome from the new product and current market space from the Ansoff matrix and the Weakness-Opportunity space from the SWOT analysis are evaluated in order to find the necessary complementarities for the proposal.

For this proposition the recommended strategies analysed are: e., f., g., h., V, VI, VII, VIII.

	<b>Current Product</b>	<b>New Product</b>		<b>Strengths</b>	<b>Weaknesses</b>
<b>Current Market</b>	I II III IV	V VI VII VIII	<b>Opportunities</b>	a b c d	e f g h
<b>New Market</b>	IX X XI XII	XIII XIV XV XVI	<b>Threats</b>	i j k l	m n o p

Figure 16. B. Product Development – W-O Strategy.

This strategy involves then the development of new products or the modification of existing products and services whilst remaining in the same market. In addition to that, considering that a W-O strategy looks to get over certain weaknesses by taking advantage of the opportunities the weaknesses can be understood as the gaps found in the studied market. Regarding the Johnson (2010) market space definition, and taking the Nagji et al (2019) approach elaborated in the section 2.3.5., this business space is considered as an adjacency to the core business model strategies.

Attending the conclusions from the SWOT analysis evaluation and together with the Ansoff matrix conclusions, the gap detected between the current strategic direction and the growth paths proposed can be assessed between the alternatives e., h., V. and VI. These concern the reduced offering alternatives in the small and medium segment especially when regarding the prospective integration of EV drive technology and growth towards product-service offer models enabled by digitalization.

Therefore, attending to the Product Development – W-O strategy, the proposal for the gap coverage regarding this business space can be described as follows:

*Benefit from brand perception as an innovator enabler to develop new offer model alternatives in the current vehicle catalogue regarding small and medium segments in the actual markets. For instance, by the development of small and medium Sport or Urban-Sport alternatives integrating electric drive technology or by the integration of product-service offer models.*

This proposal intends to build on the premium value customer perception as an opportunity factor to develop an innovation in the offering portfolio. The aim is to overcome the lack of market penetration in certain segments, as a premium manufacturer, due to the difficulties in the product positioning. This recommendation sustains the development or the reconfiguration of the offering catalogue, in particular regarding the small and medium segments. Alternatives to develop, already observed in the market, are the small segment Sport category, the Sport-Urban in the medium segment, or the package offer models in which customer services, and other offer model categories as apparel, can be bundled together with the core product constituting a holistic offering approach.

Additionally, the described proposal could foster the entrance to the young market niche and the development of new markets demanding smaller motorcycles. In the medium segment it can develop the market niche related to the urbane public. The Urban-Sport alternatives are increasing in competition's catalogues and are already observed in Yamaha's extensive offering portfolio or in Honda's catalogue. Furthermore, by means of merging different elements from the distinct offering model categories, the specification in terms of offer model line and the premium value identity of the constructor as a brand can be highlighted.

From the disadvantages side, the development or the redesign of products could be perceived as cost and resource intensive, and therefore, constitute a risky BMI alternative. In the same vein, the

development of new alternatives for the current market could be appreciated as worthless, if the value proposition of the novel business line is not differential from what it has been historically deployed.

In summary, the proposed strategy lies on the premium value perception to enable a product catalogue innovation that aims to improve the current market adaptation. The alternatives presented in order to carry out this proposal are a reconfiguration in the offer model, through the integration of novel Sport and Urban-Sport models in the small and medium segment, and from the offering perspective, by means of bundling current offer alternatives. However, inconveniences resulting from the proposal are the cost and resource intensive product development approach and the difficulty to increase the value proposition in an already addressed market space.

### C. Market Development – S-T Strategy

As for the third merged strategy, which definition is as follows: “Employ current product as a strength for the development of solutions to avoid the threats from substitutive new markets.” the outcome from the current product and new market space from the Ansoff matrix and the Strength-Threat space from the SWOT analysis are evaluated in order to find the necessary complementarities for the proposal.

For this proposition the recommended strategies analysed are: i., j., k., l., IX, X, XI, XII.

	Current Product	New Product		Strengths	Weaknesses
Current Market	I II III IV	V VI VII VIII	Opportunities	a b c d	e f g h
New Market	IX X XI XII	XIII XIV XV XVI	Threats	i j k l	m n o p

Figure 17. C. Market Development – S-T Strategy.

Through the implementation of a market development strategy, the company tries to implement its present product line (in general with slight changes in the product substance). Additionally, the S-T strategy involves the use of the strength factors in order to avoid the foreseeable threats. All together compose the adjacency business space that is defined by Johnson (2010) as the business model that targets new or existing customers served in new ways with offerings considered as a good fit to the organization. More specifically, according to Mark W. Johnson, these are great opportunities to exploit traditional existing capabilities through entirely novel approaches. Following Nagji et al. (2019) approach these are thus also regarded as adjacencies.

Attending the conclusions from the SWOT analysis and together with the Ansoff results, the gap detected between the current strategic direction and the growth paths proposed by the strategic analysis can be assessed between the alternatives k., IX. and X. These concern the lack of attraction of the younger generation customer segments and the lack of orientation from the initiatives concerning digitalization to a BMI perspective especially regarding the changes in customer profile and its demands.

Therefore, attending to the Market Development – S-T strategy, the proposal for the gap coverage regarding this business space can be described as follows:

*Benefit from the already implemented small segment offer model and the premium brand value perception in targeting younger generations, by making use of the digital and platform based*

*capabilities, for the development of price-sensitive product-system alternatives regarding the variability in product substance and the increase in customization demands.*

This proposal intends to cover the gap detected among the adoption from younger generations in the motorcycle market and the increase in the customer's average age. The recommended strategy is based on the strong image value of BMW Motorrad as a manufacturer and the already implemented catalogue in the smaller segment. In addition, it develops other strengths detected in the internal evaluation such as the recently introduced long-term strategy and in particular the Data Driven company and Sales platform initiatives.

Making use of these digital initiatives, the proposal strives for refinement in the data analysis, in particular regarding the younger demographics, in order to understand and build a more precise and targeted offer model. To this regard, the proactive employment of these capabilities in enhancing the product substance and in the enrichment of the offer model, by integrating the digital tools, are intended. Furthermore, the Sales Platform initiative, conducted at the moment of the development of the project, can be used to offer the platform service that ease the customer interaction and the offer model solution adoption. In addition, for the development and integration of such tools the organization can access the presented European Recovery funds in the field of digitalization.

Regarding the disadvantages, the mentioned tools and initiatives are at an initial stage of development and integrated in other initiatives. The employment in the market development strategy, in particular regarding new tasks and approaches, could challenge the actual order of operation and consume necessary resources. Furthermore, as detected in the external factor analysis, regarding the platform-based purchasing processes, there is a general lack of commitment from the customer side regarding the execution of the purchase on a complete online basis, yet a dealer or a "touch-point" is demanded.

In brief, the recommended strategy intends to cover the generational gap regarding the industry product adoption by offering targeted offer models based on the development of the digital capabilities aforementioned, not only from a data analytic point of view but also as a part of the value proposition and the operating model. The innovation can be regarded as a digital business innovation model that pursues the customization together with the improvement on market scanning.

The product expected departs from an already implemented offer model modified by means of capabilities already in place or in development. The main disadvantage for the proposal lies in the reallocation of necessary resources to other operations. Furthermore, to overcome the lack of a so-called "touch-point" in the platform sale process, an easily-accessible dealer contact point would be additionally recommended when aiming for such a selling process. For instance, by gaining marketable presence in the main commercial locations in selected metropolitan areas.

#### **D. Diversification – W-T Strategy**

As for the fourth merged strategy, which definition is as follows: "*Minimize new market substitution threats by overcoming the weakness from the absence of a new product*" the outcome from the new product and new market space from the Ansoff matrix and the Weakness-Threat space from the SWOT analysis are evaluated in order to find the necessary complementarities for the proposal.

For this proposition the recommended strategies analysed are: m., n., o., p., XIII, XIV, XV, XVI.

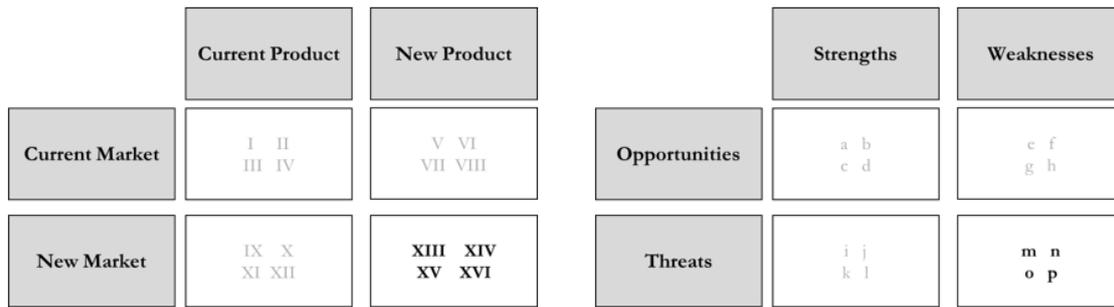


Figure 18. D. Diversification – W-T Strategy.

This space is according to Johnson (2010) characterised by those opportunities that with current offering portfolios are poorly addressed and that they look to expand their current customer base; by offering current customers a new value proposition as an additional service, or by integrating a new set of customers into the organization’s ecosystem. The white space is essentially a subjective valuation; one company’s white space might be the core of another.

Mark W. Johnson states that the white space describes the activities that lie far outside from usual business, could present unique challenges to the organization and adds: “*Success here can bring the transformational growth that so many business leaders aim. Yet it will always appear to be risky and the figures, especially in the beginning, will seem no to add up*” (Johnson, 2010, p.8).

Attending the conclusions from the SWOT analysis results and together with the Ansoff conclusions, the gap detected between the current strategic direction and the growth paths proposed by the strategic analysis can be assessed between the alternatives p., XV. and XVI. These concern the entrance of substitutes from the mobility service segments that can threaten the current status of the industry and the lack of integration of digital enabled PSS offer models.

Therefore, attending to the Market Development – S-T strategy, the proposal for the gap coverage regarding this business space can be described as follows:

*Develop a mobility service in order to address the potentially substitutional business space, and to undertake the change in customer priorities regarding vehicle ownership. By doing so, tackle the lack of a specific offer model integrating a digital value proposition as part of the offer model alternative, in a market where electronic components, software and data processing are gaining relevance.*

The proposal pursues a completely renovated and reinterpreted offer model. The main aim is to cover the growth of the mobility business space with the rise of new corporations and developing the adoption rate among customers. Similarly, it looks to face the customer preference change in terms of vehicle ownership, in particular regarding the big metropolises and new markets, and the attraction of new customer niches as it could be the younger generations. In addition, it represents a step in the direction in which the regulations and legislations in terms of urban mobility and sales development are steering the future market appearance.

When regarding the mobility alternative, besides the mentioned attraction from novel customer niches and the prospective market facing, several from the elements found in the study as strengths and opportunities can be addressed. These are the digital developments in terms of data analytics and platform capabilities that are necessarily required for the establishment of such services. The integration into the ecosystem of new customers and the development of a digital business model innovation that can be regarded as a sustainability alternative, and therefore, create an additional value perception and steer the company’s market strategy into a source of present and future competitive advantage.

From the other side, the diversification strategy implies by definition the biggest risk assumption when developing a completely new offering and in a novel business space. However, the foreseeable development of the market, the blue ocean competitive environment described, the great interest shown from other industries and corporations, the development in terms of urban regulations, the incentives for the development of digital solution and digital integration, the demands for individualization and the studied effect on the first-entrant effect in addition to fleet size from the Münzel et al. (2018) conclusions, make an incumbent actor as BMW Motorrad, with the strength of the brand identity and the fleet size capacity, an optimum candidate to enter, disrupt and dominate one of the arguably future market spaces.

In addition, motorcycle manufacturers can make use of the advantageous factors shown in (Heineke et al., 2020a) regarding the changes on customer preferences (COVID-19 safety environment, time to destination and privacy were shown as the three most determinant factors when choosing an urban mobility alternative) in the development of an offer model concerning an urban mobility service solution. To this regard, a shared concept integrates environmental sustainability advantages such as the vehicle usage rate and the resource consumption optimization. These ideas can encourage the sustainable brand perception development and the corporate commitment as stated in the Sustainable Value Report.

#### 4.6 Final Proposal

Until this point of the analysis, the evaluation of the external and internal factors regarding the findings from the current status evaluation, long-term strategy description, benchmarking and PESTEL studies, is performed. In so doing, the mentioned outcome is analysed and evaluated by means of the SWOT and Ansoff matrices in the previous section. Ultimately, the merged strategies as the outcome of the gap analysis study are deployed.

According to the gap analysis outcome, four strategies are articulated for each of the business spaces described and in accordance with Johnson (2010) proposition. Thus, the final outcome of the gap analysis study is the four strategies previously described for the core business, product development, adjacency and diversification business spaces.

In this section, as the final result of the study, in line with the obtained outcome, the final proposal for an innovation in the BMW Motorrad offering portfolio and business line strategies, with regard to the digital business innovation, and the digital servitization is enunciated.

Accordingly, the final proposal for the optimization of the offering portfolio with regard to the internal and external conditions of the company is:

*Development of a mobility service, based on an Urban-Electric fleet, in order to address the potential substitutional character of the business space and to undertake the change in customer priorities regarding vehicle ownership and product adoption among younger demographics.*

*In doing so, address the lack of a specific offer model integrating digital features as part of the offering's value proposition, through the development of a product-service-software system offering model and benefiting from the brand's premium character as an innovation enabler.*

As observed, the final proposal is mainly based on the diversification strategy and it incorporates characteristics from the Market Penetration – S-O and Market Development – S-T strategies. This is due to the definition by Johnson (2010) of the diversification business space, i.e. the white space, as the only manner to tackle the stagnation and to face the deceleration of market development. According to the author, companies must leave the comfort of their core business and their operational capabilities to pursue opportunities in their white space. Seizing this white space requires

new sets of skills, the reinterpretation of strengths and new ways to capture the value and turn it into profit. So fundamentally, the gap growth can be tackled by the identification of the white space and those areas within it, that a company's business model could meet by means of a BMI.

More concretely, the strategy speaks for the implementation of a mobility service to undertake the arising business space and in order to gain the know-how in the business domain. This is important given the growth perspective of the sector and principally given its substitutional character in a society that, as seen in the PESTEL analysis, is taking more concern about vehicle usage rates and that looks for efficiencies regarding displacement means and alternatives. Similarly, it proposes the integration of the necessary digital capabilities to better address the customer niches and develop the demanded increase on customization offer models. By means of ICT platform-based systems, connectivity between intelligent products, user interfaces and beyond firm boundaries, access to the user and usage data, and the implementation of tools for its analysis and operation, the offer model can evolve to a product-service-software systems offer model as described by the digital servitization.

Servitization offer models are designed for the ease of customer access and the delivery of a better tailored offer model, adapted to the single client necessity. Moreover, digitalization and servitization have to be steered in the same direction. Generally speaking, digital opportunities advance faster than most firms' ability to adapt to them and this can favour the appearance of gaps. However, firms that are able to manage to transform digitally sooner and more efficiently will be in a better marketing position in order to implement servitization as the next digital business models transformation. (Martin-Peña et al., 2018)

Regarding the internal capabilities and the suitability of implementation. As seen in the current state section, numerous initiatives are conducted in the line of digital integration, data processing and prospective sales models. To this regard, the so-described Data Driven Company initiative in terms of provision of digital resources, the Sales Platform as the basis support for an online customer interaction, and other deployed offer models such as Rent a Ride or the Long Term Rental initiative, could serve as support and departure point for the integration and development of this business line. Furthermore, as additional considerations in order to complement the proposal, the integration of trusted touch-points to the Sales Platform initiative, as well as the implementation of a subscription offer model, considering the increasing relevance of subscription models, could be considered in the pursuit of deployment of a premium product-service-software system proposition. For instance by the implementation of a membership client program or a BMW Motorrad client fleet service access.

Additional benefits from the strategy implementation are the usage of distinctive capabilities and current business knowledge for the reconfiguration of the offer model in a manner that could help in the integration, in particular, of the younger demographics. To this effect, these capabilities could be employed in the development of price-sensitive alternatives and in the aim of portraying a digital spirit as an additional distinctive factor to attract the most innovative public. In essence, the benefits must not only be considered from the extension of the current stagnating customer base, but also as a first-experience enabler for the integration of new customers into the corporation's ecosystem.

Ultimately, attending to the research regarding the shared-economy and the shared models in the field of mobility, it is possible to find numerous sources and studies forecasting the arising and the market growth of the mobility service model solution. Some of these findings are deployed already along the project. However, it is worthwhile to mention the Wedeniwski (2015), Heineke et al. (2020a), Heineke et al. (2020b), Münzel et al. (2018) or Lortie et al. (2018) as valuable reports and research articles supporting the approach. Similarly, the proposal builds on the "E-Scooter Sharing" report conclusions developed internally by the AU-21 department in December 2019 (Sales Development Department, 2019)

In brief, the proposed strategic direction integrates the external perspective in terms of market and customer development, considers the competitor environment, regards the already established

characteristics and competencies in the offering portfolio and from the company's long-term strategy, and in addition, it incorporates the theoretical research concerning BMI, its development trends and the digitalization as an innovation enabler. In essence, it intends to face the increasing lack of reach to the younger demographics and the stagnation of the current market, by integrating a novel business model idea compatible with the current offering portfolio operation and with the aim of improving the overall sales performance.

## 5. CONCLUSION

The aim of this project was to provide an optimization proposal for BMW Motorrad offering portfolio regarding the new challenges posed from the market development and studying the adequacy of the current deployed offer model to the market circumstances. In doing so, the digitalization process of the industry as an innovation enabler in the strategic analysis was regarded. More importantly, a study on the characteristics of the currently deployed offer model, the long-term strategic approach and the external factors from the macro-environmental conditions as well as the study of selected competitors were considered.

To this effect, in the first part of the study, a theoretical introduction was given for the relevant terms of the study such as business model definition and the description of its parts, BMI, the digitalization in the BMI process and its influence in the business model elements, and the definition of the offering portfolio for the project and its relationship to the business model structure considered.

Subsequently, the introduction of the “Seizing the White Space” theory by Mark W. Johnson was carried out in order to articulate the method chosen for the project; the gap analysis. For the development of the gap analysis, in the methodological section (section 3.2), the tools and studies employed were described and justified. Broadly speaking, the method is based on the comparative analysis between the SWOT and Ansoff matrices in order to evaluate current offering portfolio competencies against the market trends and prospective development. For the elaboration of these studies, the internal factors were analysed through the employment of the internal data on the current offer and strategy and the external analysis on the environmental condition by means of a PESTEL study and a benchmarking analysis. The method was conducted given the complementarities described in the SWOT and Ansoff introduction.

Consecutively, in the results section, the findings from the external and internal studies were described and consecutively the method previously described was performed. Lastly, in the discussion of the results (section 4.5), the outcome from the gap analysis was the elaboration of four strategic proposals, each of them regarding one of the four business spaces described by the method and the theory. Ultimately, the final proposal was elaborated in consideration of the final strategic proposal from the gap analysis in section 4.6

Based on the results and the discussion of the project, taking into consideration the gap analysis study elaborated between the internal capabilities and the external findings, the conclusion of the project supported the establishment of a mobility service as an additional service in the BMW Motorrad offering portfolio. This proposal was based on the external market developments, the environmental circumstances and the prospective view given by the strategic analysis regarding the current market space growth. Moreover, the proposal was founded on the offering portfolio capabilities already in place, such as the digital integration and the fleet capacity, and spoke for an innovation in the business model with regard to the servitization and the sustainability as additional value proposition enhancers.

### 5.1 Limitations

Although the aim of the project was reached and the final proposal elaboration was based on the findings and the proposed method presented, the development of the project as well as its conclusions were subject to limitations in relation to its method and findings. The method introduced followed the development of four other strategic analysis techniques that were subjected to limitations in their scope and procedure. In fact, there are limitations and criticisms regarding the PESTEL and benchmarking analysis due to the temporary validity of their results and the employment of data that was limited from the research capabilities. Additionally, the analyses

themselves showed uniquely a picture of a moment and a measure of a certain state under certain circumstances. Thus, these were processes that need to be repeated on a regular basis given the volatility of the studied markets and the environmental factors on a general level, in order to obtain a more accurate observation.

Furthermore, the Ansoff and SWOT matrices representation are also subject to criticism and limitations. Both methods are, first of all, limited as previously mentioned by the scope and reach of the research process. They were dependent from the findings obtained from other sources and from their extent. Moreover, they display and assess the studied factors in a structured manner, so they ease the analysis and the obtention of conclusions, nevertheless these are tools that do not provide direct solutions or implementation strategies, they are limited to the diagnosis aspect. They can provide general approaches and strategic initiatives to pursue, but they do not evaluate relevance in terms of results or appropriateness. Indeed, the method approach employed intended to balance these limitations by implementing a complementary approach.

## 5.2 Future Research

As explained, the project is developed with the aim of the integration of the theoretical and the empirical research. Therefore, for the final proposal of the project, the convergence between the theoretical research and the empirical findings was aimed. In doing so, this project gave a proposal line to pursue an improvement in sales results and with regard to the prospective market evolution.

Regarding the future research lines, given the elaboration process and the reached conclusions two main lines are suggested.

- In the first place, for the evaluation of the mobility service customer adaptation, a study based on client preferences in terms of implementation of a mobility service solution and regarding the evaluation of the digital tools integration in the business operation would be of interest. To this respect, the study of the arrival of a dominant model, as forecasted by Münzel et al. (2018), regarding the German market and in particular studying the prospective development of the motorcycle offering in the domain is of high interest.
- In the second place, for the evaluation of the feasibility of the proposal, the study of the definition of specific initiative continuing the project proposal and considering the operative implementation of the offer model suggested. In particular, with the aim of the integration of such service in BMW Motorrad offering portfolio making use of the available sources and the development of the current EXCITE initiatives would be of interest.

## 5.3 Contribution

Ultimately, it is worthwhile to give mention, as the closure part of the conclusion, to the contributions proposed by this work. Given the dual theoretical-empirical approach pursued, the contributions are similarly classified attending to this differentiation.

Regarding the theoretical aspect, the contribution does not look directly at the theoretical background research domain, yet it attended to the methodological development and the elaboration of the own method. As described in the elaboration and justification of the methodology, an alternative method based on the development of recognisable studies in the field such as the PESTEL, benchmarking, SWOT and Ansoff matrix was conducted. The novelty of this approach lies in the complementarity approach that intends to balance out the limitations from the SWOT and Ansoff matrices

representations in terms of focus and accuracy for the implementation of a tangible strategic outcome. To this end, the compatibility of the methods description and the elaboration of the proposed merged strategies towards the steering of the obtained outcome were conducted in the final part of the methodological section of the project.

Furthermore, regarding the empirical component of the study, the main contribution as the final result of the project was the proposal for the optimization in the current offering portfolio and business line strategies. This proposal, formulated in section 4.6, was based on the digitalization as a business model enabler and the additional theoretical concepts regarded for the elaboration of the project such as the servitization and the sustainable BMI.

## 7. BIBLIOGRAPHY

- Adamu N. F. (2019). "A PESTLE Analysis of International Retailing in the East African Community." *Global Business and Organizational Excellence* 38.4: 54-61. Web.
- Agnihotri S., Sivasubramaniam N., & Simmons D. (2002). Leveraging technology to improve field service. *International Journal of Service Industry Management*, 13(1), 47– 68.
- Al-Debi, M. M., El-Haddadeh, R., & Avison, D. (2008). Defining the business model in the new world of digital business. *AMCIS 2008 proceedings*, 300.
- Amit R. & Zott C. (2001) Value creation in E-business. *Strateg Manag J* 22:493–520.
- Amit R. & Zott C. (2012), "Creating value through business model innovation," *MIT Sloan Manage. Rev.*, vol. 53, no. 3, pp. 41–49.
- Ansoff H. I. (1957). Strategies for diversification. *Harvard business review*, 35(5), 113-124.
- Ansoff, H. (1965), *Corporate Strategy*, McGraw-Hill, New York, NY.
- Armstrong M. (2006). *A handbook of Human Resource Management Practice*, 10 Kogan Page, London.
- Ayub A., Razaq A., Aslam M. S., Iftekhhar H. (2013). A conceptual framework on evaluating SWOT analysis as the mediator in strategic marketing planning through marketing intelligence. *European Journal of Business and Social Sciences*, Vol. 2 No. 1, pp. 91-98.
- Baines T., Bigdeli A. Z., Bustinza O. F., Shi V. G., Baldwin J., Ridgway K. (2017). Servitization: Revisiting the state-of-the-art and research priorities. *Int. J. Oper. Prod. Manag.*, 37, 256–278.
- Bates J., Leibling D. (2012) *Spaced out – perspectives on parking policy*. Royal Automobile Club Foundation for Motoring, London.
- Beltramello A., Haie-Fayle L. & Pilat D. (2013), "Why New Business Models Matter for Green Growth", *OECD Green Growth Papers*, No. 2013/01, OECD Publishing, Paris, <https://doi.org/10.1787/5k97gk40v3ln-en>
- Belvedere V., Grando A., & Bielli P. (2013). A quantitative investigation of the role of information and communications technologies in the implementation of a product-service system. *International Journal of Production Research*, 51(2), 410–426.
- Björkdah J., & Holmén M. (2013). Business model innovation-the challenge ahead. *International Journal of Product Development*, 18(3/4), 213-225.
- Bocken N. M. P., Short S. W., Rana P., Evans S. (2014). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production*, vol 65, pp. 42-56.
- Bogan C. E., & English M. J. (1994). Benchmarking for best practices: Winning through innovative adaptation.
- Boons F., Lüdeke-Freund F. (2013). Business models for sustainable innovation: state-of- the-art and steps towards a research agenda. *J. Clean. Prod.*, 45, pp. 9-19.
- Bucherer E., Eisert U., & Gassmann O. (2012), "Towards systematic business model innovation: Lessons from product innovation management," *Creativity Innov. Manage.*, vol. 21, no. 2, pp. 183–198.
- Bustinza O. F., Parry G. & Vendrell-Herrero F. (2013). Supply and demand chain management: The effect of adding services to product offerings. *Supply Chain Management*, 18(6), 618– 629.
- Cadle J. (2014). *Business analysis*. D. Paul, & D. Yeates (Eds.). BCS, The Chartered Institute for IT.M. Franklin (2006). *Performance gap analysis: Tips, tools, and intelligence for trainers*. Market driven strategy (Vol. 603).: New York, NY: The Free Press.
- Casadesus-Masanell, R. and Ricart, J.E. (2010), "From strategy to business models and onto tactics", *Long Range Planning*, Vol. 43 Nos 2-3, pp. 195-215.
- Casadesus-Masanell, R., & Ricart, J. E. (2011). How to design a winning business model. *Harvard business review*, 89(1/2), 100-107.
- CEA. *Cambridge English Dictionary*. Cambridge University Press (2021). Available online: <https://dictionary.cambridge.org> (accessed on 8<sup>th</sup> February 2021).
- Cenamora, J., Sjödin D. R., Parida V. (2017). Adopting a platform approach in servitization: Leveraging the value of digitalization. *Int. J. Prod. Econ.*, 192, 54–65.

- Chandler, A. D. (1962). *Strategy and structure: Chapters in the history of the industrial empire*.
- Chermack T. J., & Kasshanna B. K. (2007). "The use and misuse of SWOT Analysis and implications for HRD professionals", *Human Resource Development*, 10 (4), pp. 383-399.
- Chesbrough, H. (2007). Business Model Innovation: it is not just about technology anymore. *Strategy & Leadership*, 35(6), 12-17.
- Christensen C. M. (2006). The ongoing process of building a theory of disruption. *J. Prod. Innov. Manage.*, 23 (1), pp. 39-55.
- Christensen C. M., Bower (1996) . Customer power, strategic investment, and the failure of leading firms. *Strateg. Manage. J.*, 17 (3), pp. 197-218
- Colette I. D., Giorgio L., Naomi B. J. (2018). A methodology based on benchmarking to learn across megaprojects. *International Journal of Managing Projects in Business*. 11 (1): 104–12.
- Collins R. (2010). *A graphical method for exploring the business environment*. Henley-on-Thames, England: Henley Business School.
- D.E.P. Digital European Program (2021). Europe Investing in Digital. Accessed: February 2021. <https://ec.europa.eu/digital-single-market/en/europe-investing-digital-digital-europe-programme>.
- Davies A. (2004). Moving base into high-value integrated solutions. A value stream approach. *Industrial and Corporate Change*, 13(5), 727– 756.
- De Propriis L., (2016). A fourth industrial revolution is powering the rise of smart manufacturing. In *World Economic Forum Agenda*.
- Debra P., James C., Donald Y. (2014). *Business analysis*, third edition. 3rd ed. Swindon, U.K: BCS Learning & Development Limited.
- Demil B., & Lecoq X. (2010). Business model evolution: in search of dynamic consistency. *Long Range Planning*, 43 (2-3), 227-246
- Derguisi S. A. (2017). SWOT analysis: a theoretical review. *The Journal of International Social Research*, 10 (51).
- E.C. European Commission (2018). 2050 Long-term Strategy. Accessed: February 2021. [https://ec.europa.eu/clima/policies/strategies/2050\\_en](https://ec.europa.eu/clima/policies/strategies/2050_en).
- E.C. European Commission (2021). Recovery Plan for Europe. Accessed: February 2021. [https://ec.europa.eu/info/strategy/recovery-plan-europe\\_en](https://ec.europa.eu/info/strategy/recovery-plan-europe_en).
- Ehret M., Wirtz J. (2017). Unlocking value from machines: Business models and the industrial internet of things. *J. Mark. Manag.*, 33, 111–130.
- ENISA (2019). ENISA Good Practices for Security of Smart Cars. European Agency for Cybersecurity. Accessed: February 2021. <https://www.enisa.europa.eu>.
- Feurer, R., & Chaharbaghi, K. (1995). Strategy development: past, present and future. *Management decision*.
- Fifer R. M. (1989). Cost benchmarking functions in the value chain. *Strategy & Leadership*, 17(3), 18-19.
- Frank A. G., Mendes G. H. S., Ayala N. F., Ghezzi A. (2019). Servitization and Industry 4.0 convergence in the digital transformation of product firms: A business model innovation perspective. *Technological Forecasting and Social Change*, 141, 341-351.
- Franklin, M. (2006). *Performance gap analysis: Tips, tools, and intelligence for trainers (Vol. 603)*. American Society for Training and Development.
- Futterer F., Heidenreich S. and Spieth P. (2020), "Is New Always Better? How Business Model Innovation Affects Consumers' Adoption Behavior.", *IEEE Transactions on Engineering Management*.
- Gartner, I. T. (2018). Glossary: Digitalization. Online: <http://www.gartner.com/it-glossary/digitalization> (accessed on 17<sup>th</sup> January 2020).
- Gauthier C., Bastianutti J., Haggège M. (2018). Managerial capabilities to address digital business models: The case of digital health. *Strateg. Chang.*, 27, 173–180.
- Gebauer H., Fleisch E., Friedli T. (2005) Overcoming the service paradox in manufacturing companies. *Eur. Manag. Journal* 23, 14–26.
- Geissdoerfer M., Vladimirova D., Evans S. (2018). Sustainable business model innovation: A review. *Journal of Cleaner Production*. Vol. 198, pp. 401-416.

- Gersdorf T., Schaufuss P., Hensley R., Hertzke P. (2020b). Electric mobility after the crisis: Why an auto slowdown will not hurt EV demand. McKinsey & Company. Retrieved from: <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights>.
- Gersdorf T., Schaufuss P., Schenk S., Hertzke P. (2020a, July 17). McKinsey Electric Vehicle Index: Europe cushions a global plunge in EV sales. McKinsey & Company. Retrieved from: <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights>.
- Grubic T., Jennions I. (2018). Remote monitoring technology and servitized strategies –factors characterising the organisational application. *Int. J. Prod. Res.*, 56, 2133–2149.
- Gürel, E., & Tat, M. (2017). SWOT analysis: a theoretical review. *Journal of International Social Research*, 10(51).
- Hakanen E., Rajala R. (2018). Material intelligence as a driver for value creation in IoT-enabled business ecosystems. *J. Bus. Ind. Mark.*, 33, 857–867.
- Hasselblatt M., Huikkola T., Kohtamäki M., Nickell D. (2018). Modeling manufacturer’s capabilities for the Internet of Things. *J. Bus. Ind. Mark.*, 33, 822–836.
- Heineke K., Kampshoff P., Möller T., Wu T. (2020a, December 20). From no Mobility to Future Mobility: Where COVID-19 has accelerated change. McKinsey & Company. Retrieved from: <https://www.mckinsey.com/industries/automotive-and-assembly>.
- Heineke K., Kloss B., Holland-Letz D., Kässer D., Müller T. (2020b, February 5). ACES 2019 survey: Can established auto manufacturers meet customer expectations for ACES?. McKinsey & Company. Retrieved from: <https://www.mckinsey.com/industries/automotive-and-assembly>.
- Ian F. (2004). *The BMW Story: Racing and Production Models from 1923 to the Present Day*. Haynes Publishing UK.
- Iansiti M., & Lakhani K. R. (2014). Digital ubiquity: How connections, sensors, and data are revolutionizing business. *Harvard Business Review*, 92(11), 90–99.
- Johnson M. W. & Lafley A. G. (2010). *Seizing the white space: Business model innovation for growth and renewal*. Harvard Business Press.
- Johnson M. W. (2018). *Reinvent your business model: How to seize the white space for transformative growth*. Harvard Business Press.
- Kagermann H., Whalster W. & Helbig J. (2013). Recommendations for implementing the strategic initiative Industry 4.0: Final report of the Industrie4.0 Working Group. *Forschungsunion: Berlin, Germany*.
- Kiel D., Arnold C., Voigt K. (2017). The influence of the industrial Internet of Things on business models of established manufacturing companies—A business level perspective. *Technovation*, 68, 4–19.
- Kim, W. C., & Mauborgne, R. (2014). Blue ocean leadership. *Harvard business review*, 92(5), 60-72.
- Kohtamäki M., Parida V., Oghazi P., Gebauer H., Baines T. (2109). Digital servitization business models in ecosystems: A theory of the firm. *Journal of Business Research*. Vol 104.
- Kotler P., & Armstrong G., (2010). *Principles of marketing*. Pearson education.
- Kourteli L. (2000). Scanning the business environment: Some conceptual issues. *Benchmarking: An International Journal*, 7(5), 406–413.
- Kowalkowski C., Witell L., & Gustafsson A. (2013). Any way goes: Identifying value constellations for service infusion in SMEs. *Industrial Marketing Management*, 42(1), 71–81.
- Kuhnimhof T. (2017). *Car ownership and usage trends in Germany—Response to the Commission on Travel Demand’s Call for Evidence: Understanding Travel Demand*.
- Lambert S. C. and Davidson R. A. (2013), “Applications of the business model in studies of enterprise success, innovation and classification: An analysis of empirical research from 1996 to 2010,” *Eur. Manage. J.*, vol. 31, no. 6, pp. 668–681.
- Laudien S. M., Daxböck B. (2016). The influence of the industrial internet of things on business model design: A qualitative-empirical analysis. *Int. J. Innov. Manag.*, 20(08), 1640014.
- Lenka S., Parida V., Wincent J. (2017). Digitalization capabilities as enablers of value co-creation in servitizing firms. *Psychol. Mark.*, 34, 92–100.
- Lindgardt Z., Reeves M., Stalk G., & Deilmer M. S. (2009). *Business model innovation. When the Game Gets Tough, Change the Game*, The Boston Consulting Group, Boston, MA, 118.
- Loebbecke C., Picot A. (2015). Reflections on societal and business model transformation arising from digitization and big data analytics: A research agenda. *J. Strateg. Inf. Syst.*, 24, 149–157.

- Loredana M. E. (2017). The use of Ansoff matrix in the field of business. *Annals-Economy Series*, 2, 141-149.
- Lortie P., Case R., Lefort A. (2018). The mobility revolution. A compendium of Oliver Wyman articles on the potential for disruption and opportunity. Oliver Wayman. Retrieved from: [https://www.oliverwyman.com/content/dam/oliverwyman/v2/publications/2018/november/2018\\_Oliver\\_Wyman\\_Mobility\\_Compendium.pdf](https://www.oliverwyman.com/content/dam/oliverwyman/v2/publications/2018/november/2018_Oliver_Wyman_Mobility_Compendium.pdf).
- Miller J., Inagaki K., Keohane D., Yang Y. (2021, January 26). Global chip shortage puts car supply chain under the microscope. *Financial Times*. Retrieved from: <https://www.ft.com/content/13094950-fb45-4686-9ef9-8199c674b90d>.
- Mintzberg, H. (1987). *Crafting strategy* (pp. 66-75). Boston, MA: Harvard Business School Press.
- Münzel K., Boon W., Frenken K. & Vaskelainen T. (2018). Carsharing business models in Germany: characteristics, success and future prospects. *Information Systems and e-Business Management*, 16(2), 271-291.
- Nagji, B., & Tuff, G. (2012). Managing your innovation portfolio. *Harvard Business Review*, 90(5), 66-74.
- Novikov, S. V. (2018). Strategic analysis of the development of high-technology manufacturing facilities. *Russian Engineering Research*, 38(3), 198-200.
- Parida V., Sjödin D. R., Lenka S., Wincent J. (2015). Developing global service innovation capabilities: How global manufacturers address the challenges of market heterogeneity. *Res. Technol. Manag.*, 58, 35–44.
- Parida V., Sjödin D. R., Wiebke J. (2019). "Reviewing Literature on Digitalization, Business Model Innovation, and Sustainable Industry: Past Achievements and Future Promises." *Sustainability* (Basel, Switzerland).
- Paris Agreement (2015). United Nations. United Nations Treaty Collection. Retrieved from: [https://unfccc.int/sites/default/files/english\\_paris\\_agreement.pdf](https://unfccc.int/sites/default/files/english_paris_agreement.pdf).
- Philips A. (2019). What Is Business Activity Modeling And How To Use It?. *Business Analytics*. Retrieved: <https://baanswers.com/ba-skills/what-is-business-activity-modeling-and-how-to-use-it>.
- Porter M. E., Heppelmann J. E., (2015). How smart, connected products are transforming companies. *Harv. Bus. Rev.*, 93, 96–114.
- Porter M. E., Kramer M. R. (2011). Creating shared value. *Harv. Bus. Rev.*, 89, pp. 62-77.
- Porter, M. E. (1980), *Competitive Advantage*, Free Press, New York, NY.
- Porter, M. E. (2008). The five competitive forces that shape strategy. *Harvard business review*, 86(1), 78.
- Rachinger M., Rauter R., Müller C., Vorraber W., Schirgi E., (2018). Digitalization and its influence on business model innovation *Journal of Manufacturing Technology Management*.
- Rasmussen. B. (2007). *Business Models and the Theory of the Firm*. Working Paper. Victoria University of Technology, Melbourne, Australia.
- Richardson J. (2008). The business model: an integrative framework for strategy execution *Strateg. Change*, 17 (5–6), pp. 133-144.
- Rumelt R.P. (1998). *Evaluating business strategy*. Mintzberg H, Quinn JB, Ghoshal S., *The Strategy Process*, Revised Edition, Prentice Hall Europe.
- Rumelt, R. P. (2012). Good strategy/bad strategy: The difference and why it matters. *Strategic Direction*.
- Sales Development Department (2019). *Sales Development and Management: Sales Strategies and New Business Models*. Management Report. Introduction Excite Strategy: BMW Motorrad Customer Demographics. AU-Circle 2019.
- Schaltegger S., Hansen E., Lüdeke-Freund F. (2012). Business cases for sustainability and the role of business model innovation. *Int. J. Innovat. Sustain. Dev.*, 6, pp. 95-119.
- Schenk M. (2013). *Altautomobilrecycling: technisch-ökonomische Zusammenhänge und wirtschaftspolitische Implikationen*. Springer-Verlag.
- Schulze A., MacDuffie J. P., Täube F. A. (2015). Introduction: knowledge generation and innovation diffusion in the global automotive industry—change and stability during turbulent times, *Industrial and Corporate Change*, Vol. 24, Pages 603–611.
- Schuster W. (2013). *Nachhaltige Städte-Lebensräume der Zukunft*. Kompendium für eine nachhaltige Entwicklung der Stadt Stuttgart. München.
- Sivak M., & Schoettle B. (2012). Update: Percentage of young persons with a driver's license continues to drop. *Traffic injury prevention*, 13(4), 341-341.

- Sjödin D. R., Parida V., Lindström J. (2017). Barriers and conditions of open operation: A customer perspective on value co-creation for integrated product-service solutions. *Int. J. Technol. Mark.*, 12, 90–111.
- Sjödin D. R., V. Parida, M. Leksell, A. Petrovic (2018). Smart Factory Implementation and Process Innovation: A Preliminary Maturity Model for Leveraging Digitalization in Manufacturing. *Res. Technol. Manag.*, 61, 22–31.
- Statista (2021 a). Motorcycles - Worldwide. (n.d.). Retrieved March 13, 2021, from <https://www.statista.com/outlook/mmo/motorcycles/worldwide?currency=eur>
- Statista (2021 b). Motorcycles - Europe. (n.d.). Retrieved March 13, 2021, from <https://www.statista.com/outlook/mmo/motorcycles/europe>
- Steierwald G., Künne H. D., & Vogt W. (1994). *Stadtverkehrsplanung. Grundlagen, Methoden, Ziele*, 51.
- Stevenson W. (1996), *Productions/Operations Management*, Irwin Publishing Company, 5<sup>th</sup> Edition.
- Stock K. (2017). Can Millennials Save the Motorcycle Industry? Bloomberg. Retrieved from: <https://www.bloomberg.com/news/articles/2017-07-05/can-millennials-save-the-motorcycle-industry>.
- Taran Y., Boer H., and Lindgren P. (2015), “A business model innovation typology,” *Decis. Sci.*, vol. 46, no. 2, pp. 301–331.
- Teece D. J. (2010) Business models, business strategy and innovation. *Long Range Plan* 43:172–194.
- Teece, D. J. (2018). Business models and dynamic capabilities. *Long range planning*, 51(1), 40-49.
- Vandermerwe, S., & Rada, J. (1988). Servitization of business: Adding value by adding services. *European Management Journal*, 16(4), 314– 324.
- Vaska, S., Massaro, M., Bagarotto, E. M., & Dal Mas, F. (2020). The digital transformation of business model innovation: A structured literature review. *Frontiers in Psychology*, 11, 539363.
- VDA (2017). “German Association of the Automotive Industry – Figures and data”. Retrieved: February 2021. <https://www.vda.de/en/services/facts-and-figures/facts-and-figures-overview>.
- VDA (2020). “German Association of the Automotive Industry – Figures and data”. Retrieved: February 2021. <https://www.vda.de/de.html>.
- Visnjic I., Neely A., Jovanovic M. (2018). The path to outcome delivery: Interplay of service market strategy and open business models. *Technovation*, 72, 46–59.
- Visnjic I., & Van Looy B. (2013). Servitization: Disentangling the impact of service business model innovation on manufacturing firm performance. *Journal of Operations Management*, 31(4), 169– 180.
- Vlados C. (2019), "On a correlative and evolutionary SWOT analysis", *Journal of Strategy and Management*, Vol. 12 No. 3, pp. 347-363.
- Wedeniwski S., (2015). Digitalisation of the Industry from the AUTOMobile to the autoMOBILE. In *The Mobility Revolution in the Automotive Industry* (pp. 239-281). Springer, Berlin, Heidelberg.
- Wernerfelt, B. (1984), “A resource based view of the firm”, *Strategic Management Journal*, Vol. 5 No. 2, pp. 171-180.
- Zairi M. (1994), "Benchmarking: The Best Tool for Measuring Competitiveness", *Benchmarking for Quality Management & Technology*, Vol. 1 No. 1, pp. 11-24.
- Zancul E. D. S, Takey S.M., Barquet A. P. B., Kuwabara L. H., Cauchick Miguel P. A., Rozenfeld H. (2016). Business process support for IoT based product-service systems (PSS). *Bus. Process Manag. J.*, 22, 305–323.
- Zhou L., Chong A. Y. L., Ngai E. W. T. (2015). Supply chain management in the era of the Internet of Things. *Int. J. Prod. Econ.*, 159, 1–3.
- Zott C., Amit R., Massa L. (2011) The business model: recent developments and future research. *J Manag* 37:1019–1042.
- Zott, C & Amit, R (2008). ‘The Fit Between Product Market Strategy and Business Model: Implications for Firm Performance’, *Strategic Management Journal*, Vol. 29, No. 1, pp. 1-26.

## 8. ANNEX

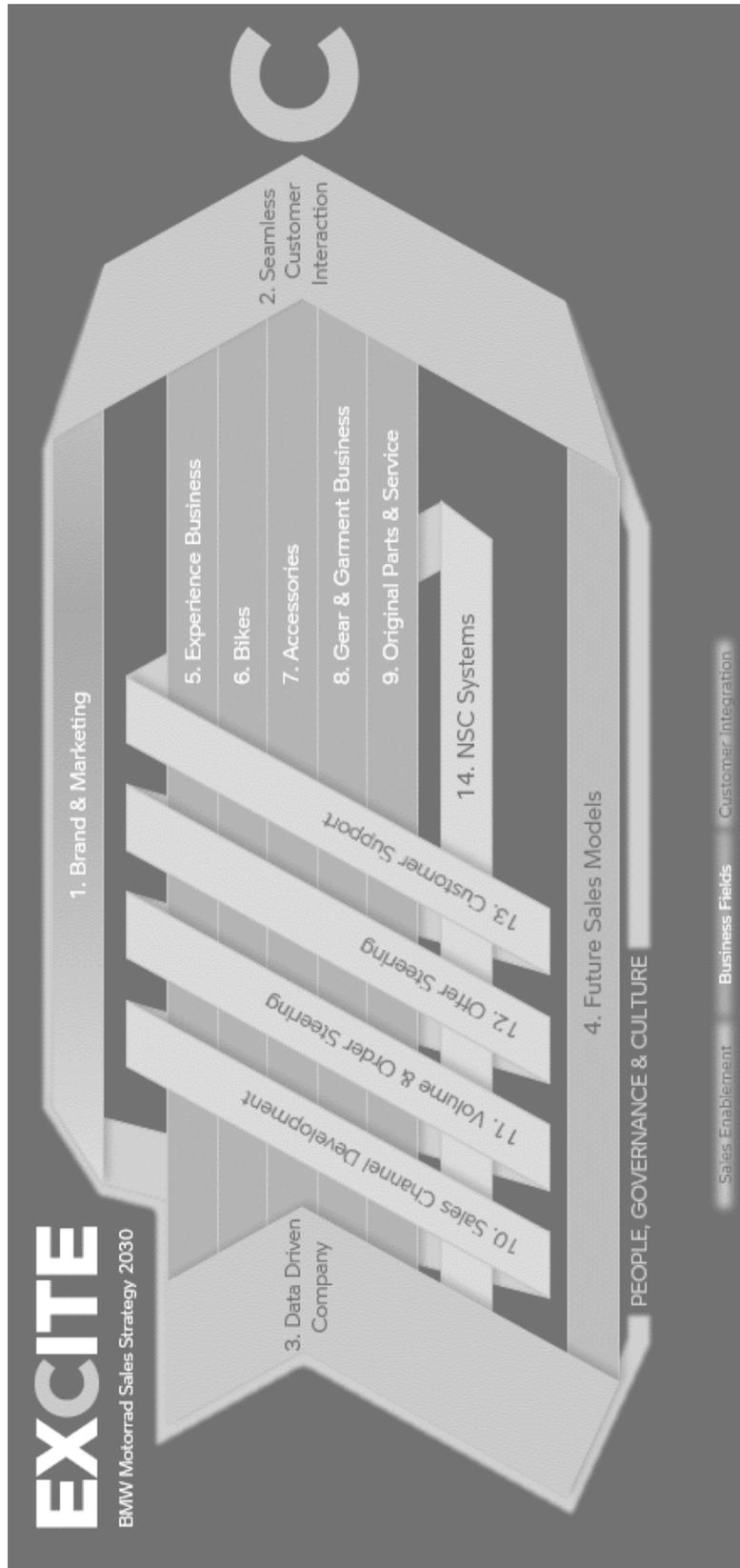


Figure 19. EXCITE Arrow