Current and Future Challenges in the Independent Automotive Repair Industry – A Case Study

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Abstract

Title: Current and Future Challenges in the Independent Automotive Repair Industry – A Case Study

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The mega trends that will strongly influence the society over the next decades have also arrived in the automotive industry. New technologies and mobility concepts such as autonomous driving, shared driving concepts and the electrification of cars are affecting companies in the downstream stages of OEMs. This dissertation examines possible outcomes of these macroeconomic events and shines light on the structural problems the independent repair industry is facing. The market is dominated by fierce price competition and increasingly small potential for differentiation. The challenge of creating and maintaining a competitive advantage in today's independent repair industry is illustrated based on a company that poses as an example. Paradoxically, the solution to many of the problems faced by independent garages lies in a partnership with other major players in the automotive industry.

The format of this paper follows a pedagogical approach, as its aim is to encourage students to look more closely at the discipline of strategic management through a case study. The application of several strategic frameworks and tools allows for insights into the company's external and internal situation. Students are confronted with a real-life scenario and are supposed to identify necessary measures to seize and defend incoming opportunities and threats. The case is complemented with a teaching note that includes a proposal for the implementation in the lecture and a sample solution. The case addresses students and anyone interested in learning about the dynamics of Germany's independent repair shop industry.

Keywords: Strategic Management, Automotive Industry, Independent Repair Industry, E-mobility, Shared Driving, Autonomous Driving, Dynamic Capabilities, Change Management

Resumo

Título: Atuais e futuros desafios na indústria automotiva independente - Um estudo de caso

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As megatendências que irão influenciar fortemente a sociedade nas próximas décadas também chegaram à indústria do automóvel. Novas tecnologias e conceitos de mobilidade, como condução autónoma, conceitos de condução partilhada e eletrificação dos veículos, estão a afetar as empresas nas fases a jusante dos OEMs. Esta dissertação examina os possíveis resultados destes eventos macroeconómicos e ilumina os problemas estruturais que a indústria de reparação independente enfrenta. O mercado é dominado por uma forte concorrência de preços e por um potencial de diferenciação cada vez menor. O desafio de criar e manter uma vantagem competitiva na indústria de reparação independente é ilustrado com base no exemplo de uma empresa apresentada. Paradoxalmente, a solução para muitos dos problemas enfrentados pelas oficinas independentes está na parceria com outros grandes intervenientes da indústria automóvel.

O formato deste trabalho segue uma abordagem pedagógica, pois tem como objetivo estimular os alunos a aprofundar-se na disciplina de gestão estratégica através de um estudo de caso. A aplicação de várias frameworks e ferramentas estratégicas permite insights sobre a situação externa e interna da empresa. Os alunos são confrontados com um cenário da vida real e devem identificar as medidas necessárias para aproveitar e defender as oportunidades e ameaças que surgem. O caso é complementado com uma nota didática que inclui uma proposta de implementação em aula e um exemplo de solução. O caso é dirigido a estudantes e qualquer pessoa interessada em aprender sobre a dinâmica da indústria de oficinas independentes na Alemanha.

Palavras-chave: Gestão Estratégica, Indústria Automóvel, Indústria de reparação independente, e-mobilidade, condução partilhada, condução autónoma, capacidades dinâmicas, gestão da mudança.

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List of Abbreviations

ASA	**Bundesverband der Hersteller und Importeure von Automobil-Service Ausrüstungen**
ATU	**Auto-Teile-Unger**
BEV	**Battery Electric Vehicle**
BSC Group	**Bosch Service Car Group**
DC	**Dynamic Capabilities**
EGEA	**European Garage Equipment Association**
KÜS	**Kraftfahrzeug Überwachungsorganisation freiberuflicher Kfz-Sachverständiger**
M&R	**Maintenance and Repair**
MVBER	**Motor Vehicle Block Exemption Regulation**
OBD	**On-Board-Diagnose Socket**
OEM	**Original Equipment Manufacturer**
PWC	**PricewaterhouseCoopers**
SGW	**Security Gateways**
SM	**Strategic Management**
V.	**Vergel Corp.**
ZDK	**Zentralverband Deutsches Kraftfahrzeuggewerbe**

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1. Theoretical Review

1.1. Strategy

The idea of strategy has occupied mankind since time immemorial. Wherever there are power struggles and decisions to be made, implicit strategy is needed to achieve further development. Creating and following a strategy is shifting the focus from the short term and the trivial to the long term and essential - to not only address symptoms but to treat the causes of problems (Freedman, 2015).

The theory dealing with strategy in the context of the business world, however, tends to be assigned to the 1960s. Since then, numerous authors from practice and academia have influenced the discipline of strategic management (SM). This resulted in many different theories and frameworks - some contradictory, some complementary – ultimately leading to school of SM growing into a complex topic area. Many authors have ventured the attempt to bring order to this pluralism by summarising the fragmented scientific works under different criteria. (Volberda, 2004; Sarbah & Otu-Nyarko, 2014; Müller-Stewens & Lechner, 2016)

Among them, Müller-Stewens (2016), who clearly advocates that each view and theory that has contributed to the development of SM must be analysed and seen in its contemporary context. In his work, he brings together the various dominant thought patterns of SM with the respective temporal economic context. He emphasises that the development of content and thus the emergence of theories and tools over time can be explained by the challenges that management had been confronted with. But what is the economic, social and political environment like today and what influence does this exert on companies?

While in the 1990s the acronym VUCA described the characteristics of the modern world as marked by volatility, uncertainty, complexity and ambiguity (Jeroen Kraaijenbrink, 2022; Waltraud Glaeser, 2022) – today, competitive advantages are constantly eliminated by the action of other market participants, which leads to stronger competition and thus also increases the speed with which market participants have to react to action (Volberda, 2004). And apparently to such an extent that some business leaders today are questioning the value of strategy (strategy&, 2019). That is why adaptive strategy is needed. The ability of a company to react to the dynamics described above and adapt its strategy accordingly is necessary for survival in today's constantly changing business environment. Organisations must be able to create long-term objectives, make strategic choices, and still respond swiftly to environmental

changes. If not - they may find themselves sooner or later in a crisis. (Gupta *et al.*, 2001; Hitt *et al.*, 2019)

There are several strategic management frameworks and tools that are important for the assessment of a company's internal and external situation and its strategy generation. Strategy development requires the understanding of the macro- and microenvironment. The PEST analysis and Five Forces framework can be combined to assess an organisation's external situation (Kohlert, 2016; Steuernagel, 2017).

1.2. PEST Analysis

The ETPS-framework, later known and established as the acronym PEST, was developed by the Colombia University professor Francis Aguilar. He identified four elements that determine the economic environment of an organisation. To predict change and adapt, it's important to take future developments into account rather than making a static assessment of the current state of circumstances. A general notion of the potential subcategories that affect each superordinate field can be obtained from the following table (Aguilar, 1967).

Political	Economical	Social	Technological
- Legislation (Property rights, competition supervision) - Trade unions, Lobby groups, - State subventions - Foreign trade policy - Political stability	- Economic situation - Employment - Interest Rates - Resource availability - Inflation - Taxation	- Values - Social norms - Lifestyle - Consumer Preferences - Demographic trends - Education levels - Ethnic and religion	- Inventions - Research - Product cycles - New processes and products - Automation - Location of technology clusters

Table 1: PEST dimensions (Aguilar, 1967)

It is important to underline that the PEST instrument and its variations are more frequently utilised as consulting tools than in science (Frue, 2017).

1.3. Porter's Five Forces

The Five-Forces framework was designed by Porter in 1979 and is used to evaluate the competitive environment of a company in its respective industry. According to his model, market success depends, among other things, on the strategic behaviour of a company, which

is simultaneously a response to the dynamics of the market structure. The attractiveness of an industry's market structure is to be assessed by determining the powers of five stakeholder groups – potentially weakening or strengthening a company's ability to obtain and defend a competitive advantage. (Porter, 1998).

1. **Competitive Rivalry:** Direct competitors may reduce prices to attract customers. Strong competitive rivalry is characterised by

- High number of competitors producing almost indistinguishable products/services
- Low market growth
- Capability to increase outputs only in high volumes
- High number of competitors selling differentiated products and services
- High market exit barriers such as liquidation cost, emotional or social cost etc.

2. **Supplier's bargaining Power:** Supplier pose a threat an industry's profitability, if they obtain enough power to dictate and increase prices or reduce the quality of their products and services. Their power is strong with:

- Low concentration of participants in supplier market
- High switching costs
- High degree of differentiation of supplied product or service
- Low number of substitutes for supplied product or service
- Low importance of the customer to the supplier
- High importance of the supplier to the customer
- Realistic probability of forward integration by the supplier

3. **Buyer's bargaining Power:** Customers are highly interested in reducing prices and/or increasing quality of products and services. If they can easily switch to suppliers with better conditions, they hold power to negotiate better deals:

- Low concentration of buyers (high market shares or high order volume)
- Low switching cost
- Low and standardised differentiation and quality of products
- Prosperity of buyer industry (recess)
- Realistic probability of backward integration by buyer
- Complete information accessible to the buyer

4. **Threats of Substitution:** Substitutes determine the price an industry can demand from its customers to prevent them from switching to alternatives. Substitutes are products or services that may not be similar but fulfil the same function. Their threat is high when there is

- High substitute performance
- Low cost of change

5. **Threat of new entry:** Entry barriers limit the numbers of new competitors entering the market, potentially increasing the risk of price wars, and decreasing profits. The six most important barriers are:

- Product differentiation
- Capital requirements
- Economies of scale
- Cost disadvantages independent of scale (location, state subvention, economies of learning, patents etc.)
- Switching costs
- Access to distribution channels

However, a company's standing cannot be evaluated without taking a firm's resources into account. Therefore, Porters Five Forces should serve as a starting point from which further analysis must be conducted to gain a holistic understanding of an industry and the strength and weaknesses of a company. This suggests complementing this analysis with an inside-out perspective such as a framework derived from the resource-based-view i.e. VRIO or dynamic capabilities (DCs) (Goyal, 2020).

1.4. Teece's Dynamic Capabilities Framework

The notion of DC is significantly shaped by the work of J.Teece and Pisano. Their work characterises a successful business as one that reacts timely, fast and flexible to market changes by creating new product innovations and obtaining a management that effectively coordinates and distributes internal and external competencies/resources. Equivalent to the basic idea of the resource-based approach, this concept emphasises the ability to identify, select and link discretions to act, based on resources, in order to mobilise them and thus use them meaningfully. (Teece, 2007; Hutterer, 2013).

Companies need to know how to allocate their resources to make use of opportunities and neutralise threats born by changes in their competitive environment. The continuous

improvement and protection of existing and newly created assets, competencies, and knowledge under the consideration of current and future dynamics influencing market events is therefore crucial to securing a competitive advantage.

According to Barreto (2010), a company possesses Dynamic capabilities if it can successfully fulfil the following three tasks:

1) Sense opportunities and threats
2) Make timely and market-oriented decisions
3) Adapt its resource base accordingly

1.5. Kotter's 8 Steps to Change

The analysis of internal and external factors and derivation of new implications is not enough however, to adapt the company to imminent change. The company must prepare to ensure that the implementation of new measures, values, procedures etc. will be successful.

Figure 1 shows how organisational change exacerbates anxiety and uncertainty on individuals throughout the change-process and how effective change management can facilitate this transition for them (Cameron & Green, 2020).

Kotter's eight-stage method aids in the effective transformation of both organisations and individuals. Under his paradigm, overcoming resistance and controlling the possibility that old organisational culture may re-emerge depend heavily on communication and patience (Wickham & Wilcock, 2020).

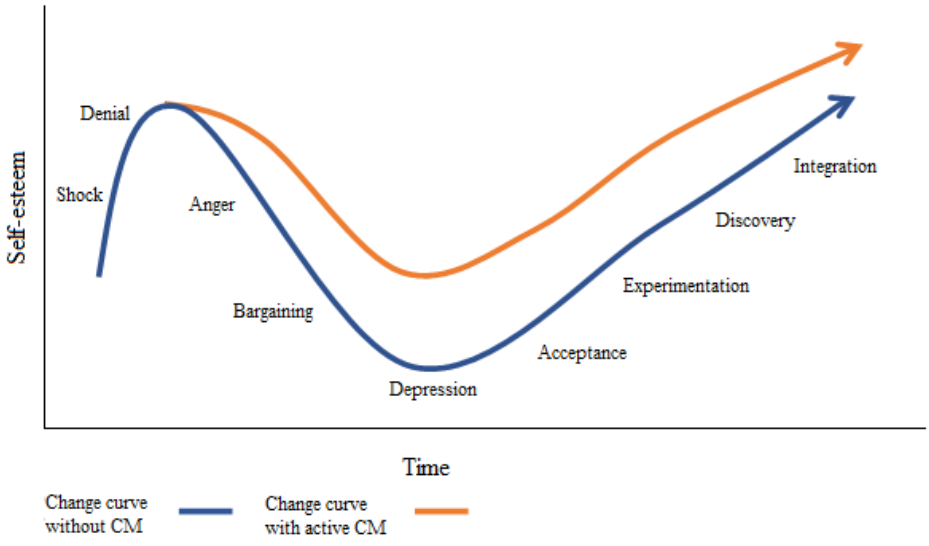

Figure 1: The process of organisational change and adjustment (own illustration based on Kübler-Ross (1969))

Step 1: Establish a sense of urgency

This step is the absolute prerequisite to change: Employees need to feel the urgency for transformation – recognise that there is a problem and a solution in sight that requires their participation. Simply, announcing a plan of action will not result in change - motivation, support and cooperation of management and employees are essential. (Kotter, 1995).

2. Form a powerful guiding-coalition

Change requires leadership. Leaders anticipate, guide, and shepherd an organisation through change while also supporting people in adjusting to that transition (Beerel, 2009). The creation of a strong guiding coalition shows support for every individual involved and increases awareness of the urgency for change. (Kotter, 1995).

3. Create a vision

Management and the guiding coalition need to create a clear vision that helps stakeholders understand why change is occurring and where it is heading. This is especially important to reach individuals in lower hierarchies (Wickham & Wilcock, 2020). According to Kotter (5) the vision should be simple and comprehensive, as it may otherwise lead to resistance.

4. Communicate the vision

Only when the vision is clearly articulated and communicated effectively, it can create acceptance and understanding among the workforce. A company should use all its communication tools frequently and intensively to spread the vision throughout the organisation. Furthermore, employees concerns and fears need to be addressed in order to build their confidence in the vision (Kotter, 1995).

5. Remove obstacles

The change process moves into implementation mode in phase 5. Structures, procedures, and traditions that uphold the status quo must change for a new vision to flourish. A blocking process may not be a significant obstacle to progress, but individuals may stop the change from moving forward. Addressing potential resistors is necessary, likewise it is also crucial to reward and empower enablers. (Kotter, 1995).

6. Create short-term wins

Many transformations lose momentum with progressing time. Therefore, short-term goals must be actively identified and rewarded. This will keep people motivated and reduce resistance. Quick victories must be evident across the organisation and convince employees that their work is bringing the company closer to its mission. (Wickham & Wilcock, 2020).

7. Build on change

Short-term success, meanwhile, ought not to be misconstrued for ultimate success. Instead, it is best to examine recent victories for potential improvement opportunities and success factors. Gained credibility can be used to tackle more significant challenges and to defend the change against re-emerging resistance (Kotter, 1995).

8. Institutionalise changes

Lastly, the new standards and values must be well ingrained in the company culture for the transformation becoming permanent. To reduce the possibility of change fading away, the vision must be evident in daily operations. (Kotter, 1995; Wickham & Wilcock, 2020).

1.6. Institutional Review

The paper at hand will examine the current situation of a German automotive company. Germany as a production hub is of particular importance to the global automotive industry, as it has been the birthplace of several notable automobile brands throughout the years, including BMW, Mercedes, and VW. Even today, vehicles with the stamp "made in Germany" are among the most well-known worldwide (Rosengarten & Stürmer, 2004). Conversely, the automotive industry also has a particularly high status in Germany, as it creates employment potential like hardly any other industry. It is not only manufacturers and suppliers that contribute to a high employment rate, but also service companies that are directly connected to the car, such as car dealers, garages and petrol stations. Around 3.3 million employees can be associated with this somewhat broader definition of the automotive industry (Kempermann *et al.*, 2021).

A general overview of the major players in the automobile business is shown in *Figure 2*. It becomes evident that the activities of companies in one value creation stage may impact the upstream or downstream businesses (Scholz, 2015).

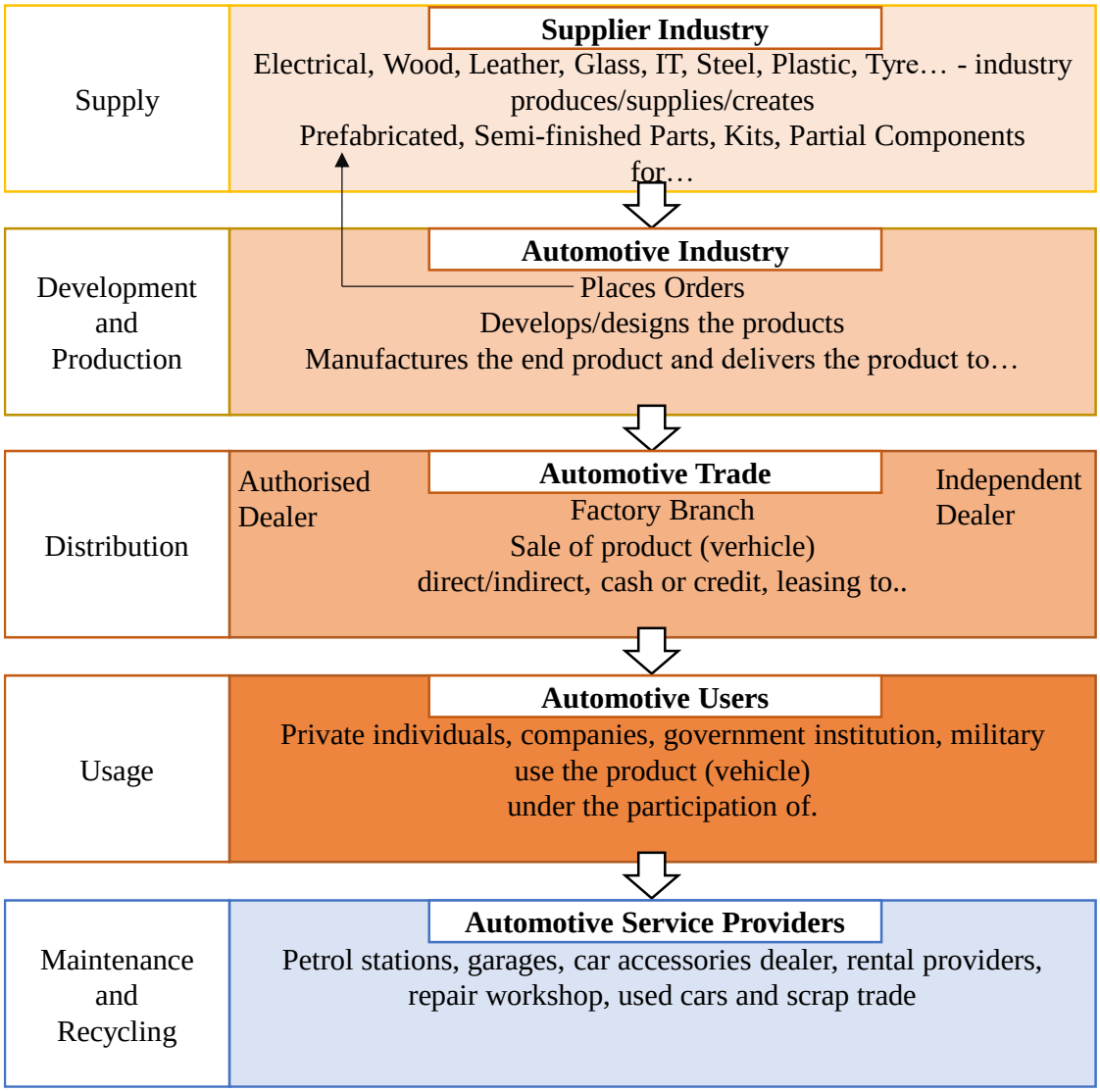

Figure 2: Overview Automotive Industry (Own illustration based on Scholz, 2015)

This paper will focus on the last level in the automotive value creation, specifically on the independent repair and maintenance service providers. As the recent years have brought disruption to the traditional mobility concepts as known before, through new trends and technologies, it may be worthwhile to consider potential future indication for independent workshops, arising from this new complexity.

2. The Case

2.1. Introduction to the Company

In the early 1920, Vergel Corporation (V.) was established by a young German entrepreneur. He recognised the new sales potential that resulted from the fact that more and more people could afford to buy a car and founded a little vulcanisation business to replace the treads on car tires. With passing time, he opened a larger plant in Belgium, until the second world war destroyed his hard work and dedication. However, that didn't stop Vergel from pursuing his dream – after the war he tried again with a production facility for re-treaded tires with great success. The company flourished and attracted the attention of its biggest resource vendor – a takeover by the supplier follows (CRD1, CRD2).

Today the company employs over 2000 people with more than 400 locations in Germany and has expanded its business from tire services to maintenance and repairs. Approximately 50% of the branches are in the hands of franchisees (CRD2, I4). All locations throughout Germany are supplied with machines, equipment and sometimes vehicles by V. (CRD3, I1).

In general, V. offers its customers three different services: Firstly, the sale of tires and related services such as changing and storage and secondly, the repair and maintenance of cars. Here, V. covers the complete range of services from standard maintenance work such as the replacement of windscreens to interventions in the vehicle's electrical system, such as repairs to the engine management or driving assistance systems. Thirdly, maintenance and repairs on trucks (I1, CRD4).

The company is facing several challenges – some nature to external developments, some to internal complexities.

2.2. Customers

Today there are over 42 Mio. Cars in Germany (Deutsches Kraftfahrzeuggewerbe, 2023) - the company directs its services to two customer groups: private and commercial customers.

The private client segment is currently somewhat weaker than in previous years. While a few years ago, post-covid, industry experts suggested to pay special attention to customers changing needs such as the importance of their convenience and comfort (Adams *et al.*, 2015), today, their decision are rather price-driven (I1). The current economic recession is making its mark on customers, as many have to cope with increased heating costs and the inflation-driven price increase of essential goods (Statistisches Bundesamt, 2022; Borger *et*

al., 2023). In addition, fuel prices have risen due to the Russia-Ukraine war and spare-part-dependent car owners are indirectly affected by this. (Wirtschaftswoche, 2023). The trade barriers that are currently in place as sanction for Russia affect supply chains by leading to a scarcity of goods and therefore to delays in repair work. The oil price increase also leads to higher costs in upstream production stages, such as spare parts producers, which are passed on to the end customer (Behringer *et al.*, 2022). Consequently, many people are holding off on the next inspection and prefer to let the car grind a while longer. For this reason - and because of the general tendency to perceive car services as a an exchangeable good - customers pay a lot of attention to the price. As V. does not identify itself as a cheapskate, the company is now feeling the consequences of the current situation (I1).

Among the commercial customers, fleet customers make a particularly strong contribution to turnover (I2, I3). These are mostly fleet managers and leasing companies. With a single contract, V. directly binds several hundred cars to its workshops (I1). Because buyers and fleet managers value service quality over price, price is not subject to the enormous as in the private customer business i.e., a smooth processes for the car users and a partner they can rely on. In this context, an indirect shift from private to commercial customers via car subscription and leasing companies is also implied (I2). In addition to service quality, commercial customers often have certain requirements regarding the service network and coverage of M&R providers. This forces more and more independent providers to join a workshop system like the BSC Group or Auto fit. Even big providers who would be able to service several hundred cars, do not manage to attract large fleets as customers due to their lacking branch network. Here, V. clearly benefits from its network density and has experienced strong growth in this customer segment in recent years (I2, I3).

As they connect market participants throughout the value chain by channelling business, intermediaries like routing portals or insurances are becoming more prevalent in the aftersales market (Exhibit 1). They have the authority to direct customers to particular repair shops and are said to account for about 15% of business in the future (Waas *et al.*, 2021). For example, if a customer's car gets damaged in an accident, it is usually the insurance that decides which repair shop the customer must visit (Adams *et al.*, 2015). Currently, most customers however, seek communication via telephone or in-person. V. is on track of the digital transformation and has established its own online presence in which customers can make appointments, request price information for all services and order spare parts (I3). Just recently they planned to conduct a recurring customer survey to analyse their customers preferences regarding

communication and general needs (I4).

So far, many people have only associated the brand with tires and related services (I1). This is also particularly reflected in the area of fleet customers, where the sales ratio is 20 to 80 in favour of tire services to normal M&R (I3).

2.3. Labour Shortage

A problem that the whole industry is facing, is the high fluctuation of employees. It almost seems as if a replacement must be already found for someone who has just been trained. Employee retention has decreased, and workers seem much more willing to leave one company for another (I1). In the course of demographic change and the declining potential labour force, finding qualified labour and developing new talent are significant industrial problems. Approximately one third of the prospective mechatronics technicians goes to work for the industry after their training, one third goes into further training and only one third remains with the same employer. The main reason for the strong exodus is the poorer working conditions in the workshops compared to the industry, in terms of pay, working hours, social benefits. The vehicle mechatronics technicians who are highly in demand do usually not stay with their employer, as they want to continue to develop (Dispan, 2021).

The shift from mechanic to electrician is on the rise, accelerated by novelty technology such as autonomous driving (Dispan, 2021). Today's technicians must be able to calibrate various driving assistance systems, read out errors with various diagnostic devices, and so on and so forth - a test lamp and a screwdriver are no longer enough to repair a car of today's generation. At the same time the fear that the profession of the mechanic as known may be reduced to a sole spare part replacer grows (I1). In this case, mechanics only act as simple fitters, while more complex tasks such as diagnostic work would be carried out remotely by specialists (“On air”). According to rumours, rival workshops have already divided car mechanics into those who do simple work and those who do complex work (Dispan, 2021).

While the volume of repair tasks may decrease, the amount of consultancy work in the industry will grow, resulting in an increased need for further training in customer service - this concerns mechanics as well as sales staff at the Point of Sale. Here lays a special focus for V., as service quality plays an important role in their selling proposition (I1). Service advisors are often under a lot of pressure, however, the high pressure is often not reflected in their salary (Dispan, 2021). As V. is not only missing skilled mechanics, but also lacking service consultants. Investment into training to ensure that the workforce is delivering the promised quality to its customers is

needed.

In addition, necessary investments for building maintenance and to modernise the interior of their branches are long over-due. In fact, the backlog of investments has led to the business falling behind on customer and employee expectations. As a result, a recent employer satisfaction survey showed, that V.'s employees do not feel comfortable in their workplaces due to the old-fashioned interior design (I1). However, due to a shortage of funding and the need to execute the measures across more than 400 branches, implementation is challenging. V. is aware that urgent improvements are required to stay competitive and raise employee and customer satisfaction and is planning to remodel its branches, despite its funding situation (I4).

2.4. Current Market Developments

Today, the automotive repair market in Germany is a mature and largely saturated, for several years now, the scope of M&R work on cars with combustion engines has been greatly reduced (Dispan, 2021). The whole industry is affected by decreased orders, sales have remained at roughly the same level for 15 years. (Deutsches Kraftfahrzeuggewerbe, 2023). This is due to the ever-improving quality of cars, but also, for example, to driver assistance systems. The implemented systems today reduce the probability of having an accident by 30% and the severity by 10%. (Diez *et al.*, 2014; Zayer *et al.*, 2020).

In 2022, there were around 36 thousand workshops in Germany, of which 22 thousand were independent operators and 14 thousand under contract with a car manufacturer (brand-affiliated). While the total number of workshops has decreased by 25% since 2000, the number of branded workshops has decreased more drastically by 40% (Exhibit 2). In contrast the number of independent workshops has tended to increase. This is mostly due to brand authorised workshops leaving manufacturers' networks to join the independent market. Furthermore, a consolidation of service providers in the independent market is to be expected. This consolidation trend seems to impact the whole after sales market, as spare part retailers and wholesalers are also affected by increasing consolidation (Waas *et al.*, 2021; Dispan, 2021).

V. is in direct competition with other independent garages, those offering a similar range of services, such as other large retail chains, small independent garages and those affiliated to larger associations, as well as larger chains offering a smaller range of services but shining through their speed: fast-fit-chains. In addition, the range of independent players compete with the brand-affiliated garages. These include either direct branches or authorised partner workshops (I1).

The competitive environment of independent provider is currently being dominated by certain players through aggressive pricing models. One competitor in particular, Auto-Teile-Unger (ATU), that has been in the headlines for several years for threatening insolvency, is forcing prices down (Autohaus, 2013; Handelsblatt, 2016; Marx, 2020). Given the current economic situation of consumers, this seems to be a welcoming offer. Unfortunately, the high price pressure is causing margins to erode (I1). In addition, the increasing number of intermediary platforms allows customers to directly compare prices of providers, with calculations updated several times a day. (Adams *et al.*, 2015). Nevertheless, V. tries to maintain high prices instead of surrendering to the price pressure. This is not necessarily an entirely voluntary decision, but since there is a larger group behind the company that is responsible for the supply of spare parts, there is additional upward pressure. In principle, however, V. also benefits from the parent company, which is known for the exceptional quality of its tire and spare parts (I1). Even if the award-winning tires of the parent company are freely available on the market, V as an affiliate company, benefits from supply security, lower prices due to internal transfer prices and for those who know that the affiliate and the parent company are related, reputation (I1,I4).

Competition is also intensified by the intermediaries already mentioned, such as appointment brokers and insurance companies. Insurances, for example, use their own garage networks and digital tools to interpose themselves between the garage and the customer. Consumers can report a claim via their app with just a few clicks and then choose whether they want a direct payout of a fixed amount or to be referred to a partner garage to repair the vehicle at the same calculated price. In this way, insurers try to impose prices on the market that are uneconomical for partner workshops (Dispan, 2021).

On the other side of independent workshops, there are those owned by or associated with an OEM. In their native industry, the car manufacturing one, incumbent OEMs used to obtain a strong position in markets: entry barriers were high, there was no real alternative to the ownership of a car, and they held significant negotiation power facing suppliers. However, with the increased outsourcing of production, their negotiating power diminished (Genzlinger *et al.*, 2020). Today, the increasing homogenisation of products is intensifying competition between manufacturers and forcing them to create a differentiating value for their customer among other things, through after sales services (Proff *et al.*, 2012; Diez *et al.*, 2014). Long gone are the days, in which it was enough for them to solely focus on their engineering capabilities. These developments lead to the fact that, today, extended services are the largest source of income for OEMs and contributing 50% of total profit (Genzlinger *et al.*, 2020; Grüntges *et al.*, 2021).

Apart from the urge to explore new business models for additional revenue streams, this could represent an increased incentive for OEMs to further expand their stable market position in tried and tested services such as repair and maintenance. So, if in some cases marketing measures and promises of quality to not suffice to make customers switch to authorised workshops, OEMs may just have found some other methods to artificially enforce market (entry) barriers (Diez *et al.*, 2014) such as long-term maintenance contracts and security gateways:

2.5. Data Sovereignty in the Vehicle

The days in which consumers were able to perform routine maintenance and repairs on their car by themselves are over. Electronics have essentially taken over in the interim and data volume is constantly rising, particularly in light of the growing adoption of driver assistance systems and the shift toward automated and connected driving. When cars were first equipped with electronic systems in the 1980s, initially only the manufacturers could access the data systems of their product. This changed, when the EU decided that cars have to be equipped with a standardised E-OBD plug, that enables nominated readout devices to access necessary data for repair and maintenance (*Council Directive 70/220/EEC* 1998; John, 2019).

Years later, in 2015, two hackers were able to gain access to a Fiat's crucial features via the infotainment system, including door locking, fuel injection, and brakes while the car was driving. As a result, the EU decided in 2018 that access to technical information and diagnostic data must be protected by security certificates or special authentication processes. Since then an increasing number of manufacturers have implemented so-called "security gateways" (SGWs) which obstruct the vehicles' access to diagnostic information to safeguard the car's electronics and protect data leakage (Schoch, 2021). The implementation of SGW differs between OEMs, making the access increasingly difficult for independent garages (Wimmer, 2021).

A distinction can be made between two types (Lutz, 2022):

1) Service data (incl. historical data): Access to this data is often protected by SGWs and only available to independent garages by using 3rd party diagnostic tools from i.e., Bosch GmbH or Hella Gutmann Solutions or by purchasing data or access directly by the corresponding OEM. However, all these solutions do not come without significant costs.
2) Engineering data: According to EU legislation, the manufacturer can have certain systems that are critical for the overall system excluded from the diagnosis (I1). This is

data i.e., from vehicle sensors and IT systems. Certain information is only shared exclusively with authorised workshops, which thereby gain an advantage. However, in the future these kinds of data may play an important role especially in the field of predictive maintenance. Customers nowadays expect their service providers to be able to anticipate what needs to be repaired or maintained before the damage has occurred. Data on usage behaviour makes this possible. While the access to this data remains under the right of release of the manufacturer and the vehicle owner, other providers also collect similar data i.e., Google, Apple or Tesla. If predictive maintenance solutions will be developed by OEMS or whether their breakthrough will come through normal apps that also collect mobility data with the customer's consent is not clear yet (Murphy & Delhaes, 2021).

Independent garages are currently suffering under the restricted access to data. The motor vehicle monitoring organisation of freelance motor vehicle experts (KÜS) assumed already in 2019 that this development will exacerbate (John, 2019). And indeed, with current developments in autonomous driving, the complexity of systems could make it considerably more difficult to access the car's data system (I1). Today, V. can repair everything that concerns Level 2 cars, but when Levels 3 and 4+ (Exhibit 4) are introduced, the question will be how strict the calibration requirements will become and whether the manufacturer will still allow independent workshops to access and adjust them (Schesswendter, 2021).

One development that the management fears is that it will no longer be the car owner who decides where the car is taken for maintenance and repair services - but rather an administrator responsible for programming the vehicle. The board knows that it is simply a question of who will be quick enough to make a contract with the manufacturers (I1).

The future development will also depend on the lobbying that the manufacturers will do with the legislators. They could argue that systems are safety-relevant to ensure safe autonomous driving and argue that intervention by third parties, such as repair by an independent workshop, no longer guarantees this safety (I1).

Additionally, the Motor Vehicle Block Exemption Regulation (MVBER) that has been put in place in 2010 to prohibit OEMs from pressuring customers to their garages by threatening to void the warranty or preventing suppliers from supplying spare parts to the open market, will expire in 2023. Until now it remains unknown whether the law will be updated or extended or if the usage of mobility data will be on the agenda (Waas *et al.*, 2021). However, the board is

closely observing the developments and is in contact with experts that stay in close contact with the OEMs. As its parent company also functions as a Tier 1 supplier for several OEMs, V. always obtains up-to-date information about new technical requirements (I1).

2.6. The Solution: A Shared Data Platform?

In the opinion of the ASA association, the current access restriction via SGW is not conform with valid legislation. The association is therefore working intensively on this issue with its European partner EGEA and other associations with the demand of a standardised solution for the authentication of the automotive repair shop via OBD access (Schoch, 2021) - data sovereignty should lie with the vehicle owner, as a data monopoly by manufacturers could deprive data to all those involved with the vehicle (John, 2019; Schoch, 2021; Lutz, 2022)

Among others, the Federation of German Consumer Organisations also advocates for a mobility data guardian. The organisation to be established should be designed as a mixture of data trustee and authorisation body and is intended to ensure that consumers can make their own decisions about the use of their data. Currently, there are still no explicit regulations on the behalf of mobility data; in practice, the vehicle manufacturers have almost full access to it (SP-X, 2022).

And this also seems to be a suitable solution for drivers in Germany. A nationwide, representative survey by DEKRA showed that around 88 % of them want to determine what happens to their vehicle's data. 72% of those polled also said they did not want their driving habits to be known by others, including their mechanic and insurance provider. On the other hand, the majority of drivers (63%) would welcome if the manufacturer or repair shop notifies them of required repairs by accessing vehicle data (Vögele-Ebering, 2023). Meaning that offering customers benefits may alter their view on sharing data (Völkers, 2019).

However, until now, only the OEM receives vehicle-related data and benefits from that by i.e. directing customers with connected cars to the nearest brand workshop (Wimmer, 2021). According to experts, the selling of software as supplemental equipment will become the main source of revenue in the connectivity sector, and the sale of data will also play a key role in generating income (Völkers, 2019). How such a platform could emerge, who would be involved, and how OEMs and customers can be motivated to share data in the absence of legal mandates is yet to be addressed. Without a fair solution, independent providers risk being left behind by the competition.

2.7. In Search of the Competitive Edge

The big question that also remains to the board is what ought to be considered a competitive advantage in the repair industry.

This also raises the question of what kind of good automotive services are. The service is usually the same, there are few unique selling points. Therefore, it is rather difficult for players to distinguish themselves through the sheer service they provide. Especially for customers without technical background knowledge, it is difficult to assess whether the pure M&R service is of exceptional quality. V. knows that they provide a very good service, but so does the competition. Hence, what provides differentiation is either the price, a personal customer relationship or the quality that a provider creates through service-add-ons and thus shines through his service excellence (I1,I3).

That is why the board has decided to review its strategy and rework the value proposition. However, there is often disagreement on topics like creating the value proposition based on a predefined persona, how a futuristic customer-centric proposition might look if based on newer strategic management methods, etc... Here, conservative voices meet progressive ones (I2,I3,I4). However, they managed to jointly decide that the new value proposition should focus on service excellence, through which the company should establishes itself in the market. In the long run, the implementation of this USP should lead to a differentiation from the competition (I1,I2). The old value proposition seemed complicated and the board wanted a simpler message, like a compass that helps every employee to make decisions, providing their customer the best quality at any time. The management team, which consists of more than 10 members, launched several projects on the basis of this new value proposition, aiming for its realisation companywide (I1,I4).

In the past, all business units were managed in isolation from one another. By refreshing the value proposition, the divisions are supposed to interconnect. On the other hand, it is difficult to achieve a common and consistent understanding and interpretation of the value proposition due to the stakeholder's different expectations and value systems. There is a demand for more homogeneous teams - so that projects can be examined from different viewpoints and a common language can be learned (I4).

Another challenge poses the establishment of the value proposition amongst the employees on site. For employees in customer contact and direct value creation, this firstly means internalising the value proposition and secondly also possessing the skills to enable service

excellence. It is important that employees understand that from now on, solutions rather than products are to be sold - to this end, the approach to the customer must be adapted (I2).

Another consideration currently in evaluation is whether, the focus on fleet customers should be increased. What will make more sense in the future, winning a customer with as little effort as possible that has many vehicles in his inventory? Or to concentrate on private end consumers because the sheer quantity of potential customers is higher (I3).

2.8. Declining Turnover due to E-mobility

Only recently, the major carmaker VW announced that around two-thirds of its investments will flow into e-mobility and digital technologies in the future. (Spiegel, 2023). The announcement comes shortly after, in February 2023, the EU-parliament met to decide the fate of cars with combustion engines. They stipulated that from 2035 only new cars that do not emit greenhouse gases should be sold (Mayr, 2023).

What indications will this have for V.?

Due to the different technical configuration of battery electric vehicles (BEVs), there are major differences in maintenance and repair as some services will not be no longer required (Exhibit 5). The consequence will be lost turnover. On the other hand, the tire consumption of BEVs is far greater than of normal combustion engine cars due to their increased weight. The experts at V. assume that a significant part of the lost sales can be compensated by services due to higher wear on other parts (I1). There are different opinions on these competing developments. While the German Association of the Motor Trade (ZDK) is more upbeat and projects only a negligible decline in the aftersales market for 2025 due to e-cars, pessimists anticipate double-digit decreases (Holzer, 2019).

Since electromobility is still in its infancy, the question of when a conversion should optimally take place is still unaddressed for many companies. For the new repair requirements, companies need high-voltage measuring devices and other equipment, and the employees need the appropriate training to access the electronics of the motor and work with them. For certain repairs, at least two employees in each company are trained to work on electric cars that are not under high voltage - specialist level 2. These employees can already carry out more complex work on electric cars, such as updating software or carrying out diagnoses. Additionally, already a few individuals have been trained for specialist level 3 (I1,I3). One direct competitor, too, has already trained at least one employee to level 2 in 95% of their sites. For many, this is enough

to be able to carry out extensive work and inspections on BEVs (Holzer, 2019). In General, according to a survey of 500 independent workshops, 60% of them are equipped to repair e-cars and some have established a charging infrastructure on site to create additional revenue. However, also the latter is controversial amongst workshop concept association - while some support their members by offering charging boxes in corporate design to call attention to their E competence, others merely point to the subsidies that the state distributes for charging stations. (Winkler, 2022).

So far, V. is holding back on further training due to a lack of customers. The share of electric cars registered is still very low and therefore also the probability that a customer will come to V. with such a vehicle (I1). Experts from PWC's estimate that although there will be more new registrations of BEVs than of normal combustion engines from 2026 onwards, the number of BEVs in the overall stock will only amount to 10.5 million (Günther, 2023). It is therefore important to find the right time to begin training to avoid skilled workers forgetting their knowledge due to a lack of orders but also to avoid missing the connection to the competition (I1). V. estimates that the initial major driver will be the fleet sector. Due to the increasing importance for companies to operate sustainably - more and more fleet managers are tasked with converting the fleet to e-cars (I2).

In addition, many customers do not seem to be aware that V can already fix problems with the power electronics of e-cars. Another reason for the lack of customers could also be due to the novelty of e cars and the associated warranty and guarantee claims that pull customers OEM authorised workshops (I1).

However, this does not necessarily apply to foreign manufacturers who are currently working on building up their own service networks and are specifically looking for partners with whom they can cooperate and whom they can train (I2). Competitors such as A.T.U, BSC and Euromaster have already entered cooperations with Aiways, E-Go, Microlina and Elaris in 2019. The two e-car manufacturers argue that having their own service network is expensive and does not create a unique selling proposition. In addition, a partnership also enables a quick market penetration (Baeuchle, 2021; Winkler, 2022).

Tenders for similar partnerships are already taking place. A final decision on how V will position itself with regard to these - is not yet decided. At the moment, the e-cars have no impact on sales and margins - neither in a positive nor in a negative sense (I2).

2.9. New Mobility Concepts

Furthermore, shifting consumer demands lead the way to new mobility concepts, altering the car's once unique value to consumers and shine light on the advantages of sole usage compared to ownership. The hassle of paying for parking, M&R cost or even the whole inconvenience of having to enter long-term contracts i.e. financing, insurance and so on (Genzlinger *et al.*, 2020), may not represent the ephemerality of the upcoming generations.

Besides these nuisances of owning a vehicle, the car is also increasingly losing its significance as a status symbol and, as a result, the emotional attachment to the automobile is declining (Proff *et al.*, 2012). This point ties in with the phenomenon already described above: OEMs are increasingly becoming service providers. Self-driving cars and carsharing making the ownership of a car obsolete and leading to OEMs tapping into ventures with knowledge intensive business services providers. The venture "DriveNow" is to be named here, a cooperation of BMW, Daimler that offers free floating car sharing or "MOIA" by Volkswagen, a ride pooling provider – both initiatives of car manufacturers, making the ownership of a car redundant (Hage *et al.*, 2019).

What are the consequences for independent garages? If people no longer own cars – it seems evident, that a large proportion of workshop customer will be lost. Just in a recent interview the CEO of BSC recognised the increasing interest of young people in new mobility concepts and stated to consider first cooperations with intermediaries and car-sharing providers (Winkler, 2023).

Today, consumers are increasingly interested in carefree car packages also known as car subscriptions. This is the first step in which the shift from ownership to usership is already becoming apparent. Again, the revenue potential for independent garages may be lost, as these subscriptions cover all services - from insurance to maintenance and repairs to tax payments (Stroncek *et al.*, 2021). According to a Deloitte study car subscriptions are expected to account for around 15% market share in Europe by 2035 (Pflefle *et al.*, 2023).

For this reason, one can assume, that the inventory of leasing and car-sharing services will increase within the next years. They currently they favour OEM affiliated workshop networks due to their technological know-how and seamless service integration, but total cost of ownership variables may shift their focus to the less expensive independent garages (Waas *et al.*, 2021).

A crisis seems to be looming for the independent workshops and the question for V. is - Will one be part of this crisis or perhaps even survive as a winner because one has recognised and seized opportunities in time?

3. Teaching Note

3.1. Synopsis

This case was developed in 2023 and aims to provide insights into the developments that independent workshops are currently experiencing and the future challenges that await them by the means of an example business. The company at hand is trying to position itself well to cope with e-cars, autonomous driving, and new mobility concepts and at the same time it is facing internal problems. The board sometimes has conflicting opinions, and it seems unclear to its members where the company's competitive advantage lies. Even if the company is not yet in a strategic crisis, it must take certain measures to avoid getting into one in the future.

Students are required to analyse the competitive environment, current strategy and underlying DCs in a first step to assess how the current virtue as well as shortcomings of the company in combination with external opportunities and threats will impact future operations. They will gain valuable knowledge on how important pro-active strategy management is, even when there is no crisis yet in sight. Secondly, they must think creatively and empathise with the board's situation to give practical recommendations on how the organisation can work in a unified way towards their specific goal of being a high service quality provider.

3.2. Case Questions

1. Briefly analyse the macroenvironment of the industry, given the trends and developments in the case. Secondly assess the market attractiveness.

2. What dynamic capabilities are needed to face the upcoming crisis? Name three examples by considering potential threats and opportunities. Which ones does V. already possess and which ones still must be developed? (Hint: Make use of your results from 1; There may be no information on V's situation in relation to several examples)

3. How could the company initiate change, guided by a holistic vision, to survive current as well as future internal and external challenges?

3.3. Teaching Audience and Objective

The case is aimed at advanced undergraduate or postgraduate students pursuing a business administration or economics degree. To be able to work on the case, students must have a basic understanding of organisational structures and change management and be familiar with the external analysis of the market and competitors as well as the internal evaluation of capabilities.

As the scope of the questions is large, students should form groups between 4-5 people and submit answers in a written form or alternatively/additionally present their results in a 10–15-minutes media supported presentation. Optionally, to avoid repetition – one group can be selected to present followed by an open class discussion in which other groups are invited to share alternative perspectives and solutions. For instance, the participants could be asked to take different positions on the introduction of a shared data platform and then, representing an OEM, independent workshop, consumer etc. discuss the advantages and disadvantages and jointly agree on an initial design of the platform.

Students will find all important information in the case to solve the questions but are encouraged to think out of the box and derive best practices from other industries. The case should be handed out at least one week before class discussions occur.

The students are supposed to apply already acquired knowledge of SM to a real-world example and derive implications. To do this, it is important to look at the tools and frameworks of SM and see in which context they can be helpful in their analysis. For this reason, some of the case questions leave open which tools are to be applied. The text is intentionally written in such a manner that not all information on a topic can be found in one section, students must be attentive while reading in order to combine information and perform a holistic analysis. Depending on the student's experience with case studies – teachers may openly share which frameworks are to be used.

The case shows dynamics of the industry whose developments cannot yet be foreseen conclusively, therefore the temporal context in which the case is taught, should be included. The temporal context can be of particular interest as it highlights the discrepancies between the expectations of the board and the industry experts. A comparison of the case with the current situation can show how some companies have dealt more or less successfully with the challenges ahead. This provides great material for discussion and additional question material.

4. Case Analysis

Question 1

In the first question, students are asked to analyse the macroeconomic trends and developments that affect the whole industry, by applying the PEST analysis.

Political

Trade unions, lobby groups and property rights: OEMs and associations on the side of independent providers are already pressing legislators to push for their interest. OEMs want to retain their data sovereignty and the associations demand a free, fair and standardised solution to access data. The future outcome lays in the hands of the legislators - directives have been issued by the EU for both parties' aspects (Protection of diagnostic data and MVBER).

Foreign trade policy: There are currently trade barriers in place due to the Russian-Ukrainian war. A further deterioration of the situation could result in an increase in the price of after-sales goods and a decrease of their availability.

Economical:

Economic situation and inflation rate: The current situation is characterised by negative sentiment as Germany is threatened by a recession. Companies are particularly feeling the impact of the economic situation indirectly through price pressure from customers, which is in turn triggered by the current difficult financial situation of many households.

Employment: The industry is characterised by a high turnover rate. As the case stated, many companies only manage to keep about 1/3 of their trained junior staff. At the same time there is a labour shortage as further discussed below.

Industry specific: There is an increasing servitisation of the automotive industry. The pure M&R services are increasingly regarded as a commodity, which gives providers more incentive to differentiate through prices or service quality.

Furthermore, the automotive industry seems to be moving towards consolidation. Not only spare part wholesalers are becoming increasingly horizontally integrated, but also other large independent garage chains. The continuation of this trend may have a major impact on market dynamics. If only 2-3 larger companies prevail, far-reaching positive as well as negative economic consequences for incumbents and customers can be expected.

Social

Social norms and Values & Lifestyle: The fact that the car is losing its status and sustainability is gaining importance can be assigned to this end. This can lead to a major shift in consumers attitude towards alternative mobility concepts. The less people own a car, the fewer potential customers the industry has. Conversely, this could lead to larger fleets and a shift in the industry's customer structure.

Convenience is a big factor in the lifestyle of many consumers. Before Corona and the looming recession, experts were advising to pay more attention to convenience and comfort. Now the focus is on price, this could change again when markets stabilise.

Demographic trends and educational levels: In addition to the high fluctuation rate, there is a shortage of skilled workers in the sector. In view of the demographic development in Germany, firstly there are fewer workers while at the same time the demands on qualifications are increasing.

Technological

Inventions: In the future repair industry, data related technologies will play an important role and decide over business. If OEMs will share their data willingly is to be determined. The development of a shared data platform would also have a great influence on the industry’s future. New data driven business models could be created, that positively or negatively influence market participants.

Disruptive technologies: such as automotive driving, spark new questions: which repairs can still be carried out by normal car mechanics in the future? It is certain that new qualifications will be required for employees in the entire industry. This also applies to the electrification of e-cars, which will additionally lead to an unforeseeable loss of turnover.

Product cycles: Product cycles are becoming steadily longer due increased quality and due to technical software, such as driver assistance systems that prevent damages. The fact that the market is saturated and orders are declining could be an indication for that. Increasing technological development, may intensify this trend and decrease order volumes in the long term.

New processes and products: Matchmaking platforms are gaining relevance. Their existence is likely to become even more important in the future repair industry and is in line with the

increasing affinity of the population to digital media. New business models could also emerge from this and introduce new customers.

For the second part, the student is supposed to take a closer look at the microenvironment – more precisely the direct competitive environment. The two keywords "microenvironment" and "market attractiveness" indicate that Porters Five Forces must be applied.

Competitors: High

- There is little to no differentiation between the service portfolio of the larger independent repair shops.
- The competitor that has made the headlines several times in recent years due to insolvencies, is also the one that mainly depresses prices on the market, indicating high price pressure.
- The strong consolidation of the industry is also evidence of increased competition. Expansion through acquisitions seems more attractive than organic growth, which indicates predatory competition in the industry.
- The brand-affiliated workshops do not force the price down but try to differentiate themselves strongly through quality and service integration. This is a hindering factor for independent workshops that want to excel in service. Branded workshops have easier access to more repair-related information, know-how and spare parts. The SGW give them another strong competitive advantage in diagnostics and general data-related work.
- Additionally, the repair service market is saturated – sales have not increased significantly in the past 15 years. At the same time order volumes and the work done per vehicle are decreasing while the number of independent workshops has increased since 2003 (Exhibit 2). This indicates fierce rivalry. Competitiveness may even worsen in the next years due to a decline in order volumes brought on by driver assistance technologies, changes in customer preferences, and other factors.

Supplier: Medium/High

<u>Spare-part-supplier:</u>

- Spare-part-supplier are not covered holistically in the case, students are required to abstract additional information from the exhibits.
- The increasing consolidation of the industry suggests that there are fewer suppliers in

the market with rising power. In addition, a growing number of them are venturing into downstream tiers and are integrating forward (Exhibit 3).

- On the other hand, the fact that cars mostly use standardised parts argues against high supplier power. Moreover, larger workshops like V. owned by a large corporation at an upstream level, hold a certain bargaining power due to the sheer volume of parts that they buy and distribute amongst their subsidiaries. Conversely, suppliers also face the risk that the parent companies will integrate horizontally and expand their product portfolio.
- Finally, it is a fact that some repairs depend on the arrival of certain parts and independent garages profit from reliable suppliers.

Labour market:

- Employees are internal resources, making this point controversial. However, the labour market supplies manpower. Skilled workers are scarce and have strong bargaining power as many of them simply switch jobs in view of the poor conditions.

Customer: High

- Currently price is an important factor in the purchase decision. Customers can delay M&R work until the car no longer works or no longer meets the legal maintenance standards.
- Moreover, as repair work are often perceived as a commodity, it is often not a big problem for private consumers to change garages. Given the high density of garages and the mostly uniform requirements for maintenance and repair work, switching costs are low.
- It is also becoming easier for customers to compare prices via intermediaries, creating information transparency.
- At the same time, they are abundant (42 Mio. Cars) and a backward integration from car driver to car technician seems unlikely.
- With the increasing development of alternative mobility concepts, a large part of the private customer business will indirectly shift to the commercial sector.
- Commercial clients are usually bound to their service providers by long-term contracts and likely to incur switching costs.
- Conversely, their high inventory allows them to negotiate prices and extra services. However, price and information transparency are only mediocre. The customisation of

contracts may complicate comparisons.

- Customers also indirectly include intermediaries. Insurance companies hold negotiating power because they choose where cars are repaired. Since they pay for repairs, they naturally want to keep costs low and quality high, exerting price pressure on providers.
- Additionally, routing platforms will channel up to 15% of order volume in the future, which gives them growing bargaining power. Essentially, whether orders are placed online or not, will be defining the market of tomorrow.

Threats new entrants: Low/medium

- Information about the threat from new entrants cannot be directly transcribed from the case. Students must use their powers of reason.
- Theoretically, anyone can open a workshop that has the necessary qualifications. In view of the poor working conditions, this may be a tempting offer for some employees. In fact, the number of independent workshops has been increasing since 2003 (Exhibit 2).
- However, this increase results from some brand-affiliated workshops giving up their ties to an OEM and operating as independent workshop.
- Whether this can be categorised as market entry is debatable. Although it intensifies competition among independent providers.
- Moreover, the introduction of SGW imposed by the OEMS has brought new barriers to market entry. These barriers are already preventing independent garages from keeping up with branded garages.
- Furthermore, market entry for completely new participants is capital-intensive. Despite labour shortage, qualified employees must be found, expensive equipment must be bought, while repair orders have become fewer, suggesting decreasing industry attractiveness.
- In addition, many repair companies have built economies of scale due to their size, e.g., low prices when buying large quantities from suppliers, or they already have a very strong and broad service network that is not easy to replicate. ATU, for example, runs more than 600 locations and V. more than 400.
- The danger of new entry is therefore more likely to come from well-capitalised investors such as larger corporations active in upstream stages - and indeed, forward integration by spare part suppliers and other market participants is increasingly being observed (Exhibit 7.)

Substitutes: Low

- The service of this industry is mainly repair and maintenance work. This could theoretically only be replaced by other service providers who are also able to carry out a repair.
- For this purpose, customers could train themselves through YouTube and other media to specialise in self-repair and then go to a DIY workshop. The likelihood of this occurring on a significant scale should be doubted.

Question 2

The first task is to work out what DCs ideally look like in practice, using trends elaborated in task 1. This requires innovative and creative thinking. Secondly, students must assess whether V. possess DCs and if so, why – excluding the examples in which no information is given about V. reaction. There are several that can be identified, due to the length requirements, only five examples are provided in the following based on Barreto:

1) Sense opportunities and threats

2) Make timely and market-oriented decisions

3) Adapt its resource base accordingly

Electromobility:

1) The potential loss of revenue due to a decrease in repair requirements pose a potential threat. One opportunity arises from the fact that new foreign OEMs specialising in e-mobility are looking for partnerships to build service network.

2) Although e-cars will only account for a quarter of the total share by 2026, there is an urgent need for action due to the government decree on abolishing combustion engines. To be precise, contracts with new foreign manufacturers should have already been concluded. The impact of the potential loss of revenue is not yet foreseeable - but companies should already start looking for alternative sources of revenue or specialise in e-car tire services, as the consumption of tires will grow.

3) Service providers with a large network and a high level of competence in the repair of e-cars will have an advantage in the tenders of foreign OEMs. The providers who will shine here will be those who have employees who are also trained in electrician level 3 - and are thus able to

carry out all work on an e-car. A strong sales force will also facilitate closing contracts with new OEMS. In addition, technical equipment such as voltage measuring systems must be purchased.

Creativity and strong observation skills are needed to create opportunities for new revenue streams through product innovations. These capabilities enable the identification and exploitation of market developments, customer needs and innovations from other industries. An important point here is also the creation of co-specialised assets i.e., partnerships with new OEMs.

Otherwise, it may also be possible to attract the attention of a particularly large number of customers through good marketing, e.g., by setting up charging stations in corporate design and increasing customers' associations with the brand's competences in e-car repair.

V.) The first competitors have already concluded contracts with manufacturers. V. has missed the mark in this respect. However, V. seems to be ahead in terms of qualifications, as the company has already trained some technicians to level 3 and every branch is equipped with the necessary infrastructure for repairing e-cars. Additionally, many customers are not aware that V. is able to carry out e-repairs. V has recognised this but has not yet derived a strategic implication from it. Its broad service network and qualifications could help V. to become a pioneer in this domain – offering repairs for all brands. Investment for marketing is needed, however.

Internal communication flows top-down. This hinders the exchange of information within the company, a key factor for tapping new revenue potential. Although V. is in the process of changing this, the internal structures with more than 10 board members complicate joint decision-making. Thus, the conservative voices get in the way of the younger ones possibly with fresh ideas full of potential. In addition, the business units have tended to act in isolation from each other, which hindered the vertical flow of information, also relevant to the formation of DCs.

Another advantage V. has in the emerging trend of e-cars, is its specialisation in tyre-related services in view of the higher tyre consumption of e-cars.

<u>Changing customer structure</u>

1) Commercial customers are becoming increasingly important. This is partly because new

business models are emerging from alternative mobility concepts that will drive up the number of commercial customers with large fleets. Companies must therefore prepare themselves to make large customers an attractive offer.

2) As fleet customers, shared car services as well as leasing and car subscription companies are no longer a rarity, all major providers should already have made corresponding decisions and developed offers for commercial customers. A large part of the fleets are currently still customers of brand workshops - this means that providers must make targeted efforts to make customers switch.

3) Providers must increase service quality and expand their network to become attractive to larger providers. Either by expanding themselves through acquisitions, franchising, opening their own subsidiaries - or by joining a larger association.

V.) With over 400 branches, V. is well equipped. The board has recognised the trend and is even considering shifting its focus from end consumers to commercial customers. In addition, fleet managers often prefer providers with high quality standards. This is where V seems to offer a great service, as the commercial customer segment has seen a lot of growth recently.

Shared Data Platform

1) The creation of a shared data platform presents a huge opportunity for any independent provider. A business might stand out, become a trailblazer, and directly affect the data flow to its benefit by initiating such a platform.

2) The call for such a platform is already being made publicly by numerous organisations and industry experts, so now is the ideal time to take the necessary steps.

3) The platform requires close cooperation between the main players. Companies that gather mobility data will be required, as well as those who can build a secure platform infrastructure. Partnerships are key here, as are assertiveness, creativity and the know-how on how to design such a platform in a fair and innovative way.

V.) Unfortunately, there is no information in the case about V's stand on a shared data platform. V. would need to mobilise a large amount of PR power, make compelling suggestions for the platform's implementation, and make investments in partnerships to advance from thought leader to pioneer. The board is aware, that certain parties are lobbying the decision-makers and must take actions now.

Autonomous driving

1) Increasing complexity makes it more difficult for independents to work on cars. The possibility that OEMs will decide in the future which vehicles can be repaired by whom could pose a threat. As with e-mobility, proactive action can help to secure supplier contracts. In this instance, it is crucial to be among the first. Lobbying, on the other hand, can prevent such an occurrence by influencing competition regulations from the outset.

2) As the MBV is about to expire, now is an opportune time to join forces with other political groups to advocate for equal rights for all workshops. Or to carefully seek out partners that can help negotiate data access with an OEM (for a specific contract) in the future.

3) Again, companies need to create tools to monitor developments and identify, train, or recruit skilled negotiators within their company. The latter are needed either to influence policy (lobbying) or to form contracts with OEMs.

V.) V. has recognised this threat and knows that sooner or later it will be a matter of concluding contracts with the respective OEMs. The company is actively monitoring the development and is in tight contact with people who are very close to the OEMs' crucial business units. According to the text, nothing is known about any lobbying activities.

Predictive Maintenance

1) Predictive maintenance will have high relevance for the future consumer. However, the question how this new data driven technology will be implemented is unaddressed. It may seem obvious that a solution will be contributed by OEMS, however there are tech savvy businesses that also collect mobility data. A potential cooperation with the latter poses an attractive opportunity for independent garages. Together, they could develop an application that enables predictive maintenance, while the client acquires data sovereignty.

2) Incumbents should actively approach tech companies or possibly create new business models themselves. For instance, they could create an app with several other convenient functions and high standards of data security. Great levels of information transparency could persuade sceptic customers.

3) Technical know-how is a prerequisite to app development. At the same time, the company must deal with the legal framework, acquire customers through marketing measures and rely on partnerships to create such a co-specialised asset.

V.) There is no further information on this topic in the Case

Question 3)

The company is striving to establish itself in the market with its new value proposition. It can only do so if the entire organisation adopts the proposition. This requires a transformation on all levels. Kotter's 8 steps can be utilised to implement this change. The keywords "change" and "vision" should refer to this tool.

Establish a sense of urgency

Even though V. has already decided that a change needs to occur and a new USP needs to be introduced, it remains to be addressed how urgency can be successfully established at the different levels of the hierarchy. V.'s staff must be convinced that change is necessary and will improve working conditions. While initiatives such as requiring employees to deal with dissatisfied customers or sharing potential threats, such as lost sales, may be appropriate for managers, they can frighten employees at a lower tier of the hierarchy.

Staff turnover indicates dissatisfaction. V should emphasise its determination to resolve its employee's concerns. The employees must be informed that they no longer have to switch employers until they find a good job, but that they can help shape the company and benefit from better working conditions. If given training and promotion opportunities, some may be intrinsically motivated to adapt, while others may be extrinsically motivated by commission-linked pay. Employees who bear more responsibility for the company must be made aware of the looming crisis. To survive long-term competition and the industry's future challenges, one must establish oneself in the market. They can be reminded of their leadership duty to secure jobs and motivated by the prospect of earning a stellar reputation if V. prevails the crisis.

Form a powerful guiding-coalition

Transformation needs leaders. As V.'s organisational form follows steep hierarchical structures, the guiding coalition should include members from every hierarchical level. The right mix of members from different hierarchical levels will also help the company to ensure that information does not only flow top-down but also bottom-up. This can help to reduce obstacles later on. In a first step, V. can benefit from the regular staff surveys and try to identify potential members.

Winning managers as members is important to confer credibility and to underline the potential

of the transformation. As decision-makers, they can drive the transformation into their domain. Consideration should also be given to persuading one of the more conservative directors to join the leading coalition, as they may persuade other conservatives into accepting change.

In addition, the leading coalition must also have allies in the parent company to advocate for changes in key shareholder decisions and influential peers in key regions to maximise geographical reach.

Create a vision

To implement change, V. needs a vision that the company can work towards. The overarching goal is to fulfil the new value proposition of always providing excellent service, but the current employee situation and trends should be incorporated into the vision, too. The vision should be so compelling that employees feel they belong and are part of something big. It should address change, communicate a common ground and help stakeholder understand the background to transformation. I.e., "Together we are preparing for the future - internally we are creating an attractive environment and externally we are providing excellent service".

In this assignment, students can let their creativity run free in creating a vision or work out specifically what points need to be considered in its development.

Communicate the vision

To be effective, the vision must be promoted throughout the organisation. Email and intranet-accessible employees should be exposed to the transformation often and thoroughly. Whether to actively invite them to change or to update them on progress of current milestones.

Employees who are more involved in local service delivery should be regularly invited to meetings to address any concerns. V. should emphasise that its employees are its most valuable resource and that their happiness is the top priority. They won't become a simple spare part exchanger under V.’s leadership.

Heterogeneous groups should be formed to meet and exchange thoughts. V. can organise brainstorming workshops and team-building exercises to achieve this. This can also be particularly helpful when it comes to positioning the company in a more customer-oriented way or developing new business models to offset revenue losses. All staff should be trained to provide excellent service and the value proposition should be broken down to a common understanding.

Remove obstacles

A new vision cannot be successful if structures and processes remain in place that support the status quo. V. should identify which individuals could provide strong and influential resistance. Conservative directors in the guiding coalition can be utilised to entice resistors with similar values i.e. to ease disagreements among board members, as some of them are opposed to newer ideas. Emphasising change's benefits should overcome widespread resistance. Engaged workers are more likely to believe they have a say and support change.

Other resistance is represented by the increasing complexity of the technologies in cars. It is important that V. has the necessary know-how to remain an attractive provider. For this, regular training must be offered to the staff and the board must keep a close eye on market developments.

Furthermore, capital is needed. To achieve higher employee and customer satisfaction, the interior remodelling of the subsidies should take place. Due to the investment backlog, V. may ask parent company-based members of the guiding coalition to aid with budget coordination.

Create short term wins

To keep morale up during the transformation, the organisation should set short-term goals. By achieving and celebrating short term wins, the organisation will be able to acquire trust and keep employees motivated. Potential ideas for short term wins are:

- When a certain number of automotive technicians have been trained as level 3 electricians.
- When a new partnership has been established i.e. with a foreign e-car provider for taking over their service network.
- When the first 50 branches have been renovated.

Build on change

After achieving short-term success, V. should focus on consolidating the changes and making further enhancements to secure long-term success. This may entail, for example, establishing employee retention initiatives or improving managerial decision-making processes. Due to the fact that the transformation process affects numerous areas, there should be a designated person in charge of each area who tracks progress and creates a thorough assessment of what has worked well and what needs to be optimised. If smaller projects have been successfully tackled

in the past, V. can now take on larger projects such as initiating a shared data platform.

Institutionalise change

For the improvements to last in the long term, V. should ensure that they are ingrained in the corporate culture. The implementation of new processes and systems ensure that the changes are put into practice. Sustainability can be achieved by regularly assessing and discussing how change improves organisational performance and ensuring that future leaders support change. A lower-hierarchical organisation or an innovation lab that tracks trends and finds new revenue sources may result. Regarding the service excellence – V. must guarantee employee mentality, systems, and processes enable service-oriented decision to achieve service excellence. To maintain service quality, hiring a chief experience officer is a further option.

5. Conclusion and Limitations

The aim of the dissertation was to provide a real-world example of the strategic management of a large company operating in the automotive repair industry. The case study at hand illustrates the potential impact of upcoming developments in technology, consumer preferences and legislation on the independent repair industry. The example illustrates that internal structures and voices must be aligned in order to seize opportunities. For the respective sector, market activities and innovations in upstream industries have an increasing impact on operations and strategic decisions that need to be made. Additionally fierce competition and similar service and product portfolios complicating the development and maintenance of a competitive advantage. Decision-makers must carefully assess how they will set up their businesses for the upcoming challenges. Especially for independent workshops, partnerships are becoming increasingly important. Understanding how this aligns with the industry's drive for independence will be a question that managers must address in the future. The purpose of the case study is also to highlight the value of proactive management even if there are only slight indications of a looming crisis.

However, this work can only offer a preliminary evaluation of the factors that are present and observable at this moment. Consequences will follow and it remains to be seen how the various players in the market will assert their interests. The modest number of interview partners also poses a limitation to this study as the little scientific literature on the subject available. Although the information gap was attempted to be closed by further research on the industry, it can be assumed that there are still further internal challenges that are not represented by the case. This

is partly due to the fact that companies may be reluctant to disclose plans for growth because they involve sensitive information. Additionally, as most of the respondents work in the management of the company under investigation, it cannot be ruled out that the statements are partially biased. Recognising mistakes in strategic management requires the ability to reflect and sometimes to detach oneself from one's own subjectivity. To keep the identity of the company secret, some information such as the company related documents and interviews could not be disclosed but is available upon request. This led to some shortcomings in the company's internal analysis in particular.

Further research is needed to analyse the impact of trends and developments and whether they evolve into the direction as indicated in the case. With a higher number of participants, preferably also from other organisation, more qualitative data could be collected to compare the strategic adaptation of companies in the industry. However, this would require large-scale longitudinal studies.

Appendices

Exhibit 1: Aftermarket separated into authorized and independent channels (Waas *et al.*, 2021)

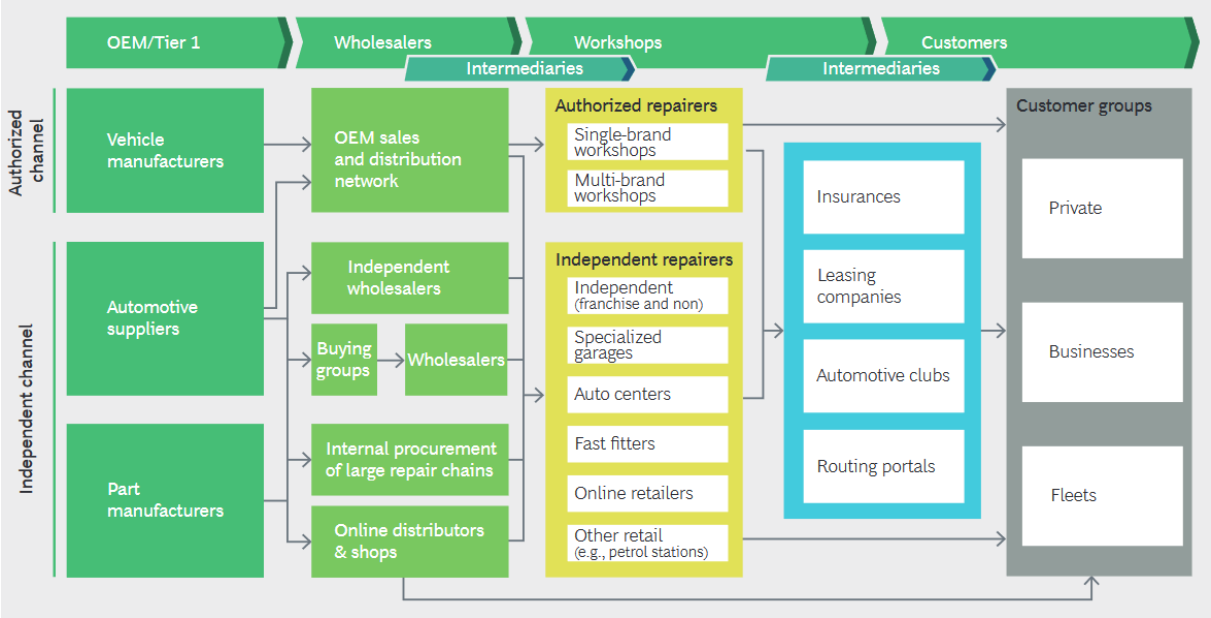

Exhibit 2: Development of the number of motor repair businesses (own illustration based on Deutsches Kraftfahrzeuggewerbe, 2023)

Number of repair shops in Germany			
		thereof	
Year	Total	brand dependent shops	brand independent shops
2022	36.420	14.290	22.130
2021	36.570	14.460	22.110
2020	36.580	14.600	21.980
2019	36.600	15.030	21.570
2018	36.750	15.200	21.550
2017	37.470	16.280	21.190
2016	37.740	16.800	20.940
2015	38.400	17.450	20.950
2014	38.500	17.500	21.000
2013	38.500	17.500	21.000
2012	37.800	17.500	20.300
2011	38.000	17.600	20.400
2010	38.050	18.100	19.950
2009	38.300	18.250	20.050
2008	39.100	18.900	20.200
2007	39.750	19.700	20.050
2006	40.200	19.800	20.400
2005	40.800	20.600	20.200
2004	41.700	20.120	21.580
2003	42.500	20.480	22.020
2002	44.200	21.760	22.440
2001	45.800	22.570	23.230
2000	47.000	23.650	23.350
1999	48.000		
1998	48.700		
1997	48.750		
1996	57.373		
1995	57.070		
1994	56.659		
1993	55.102		
1992	54.633		
1991	52.730		
1990	44.502		
1989	44.155		
1988	43.380		
1987	42.535		
1986	41.895		
1985	40.899		
1984	39.049		
1983	38.558		
1982	36.479		
1981	35.480		
1980	34.461		

Exhibit 3: OEMs are integrating along the value chain (Waas *et al.*, 2021)

[1]Respectively 2018 if not yet reported or estimated if not available [2]Recent available 3-year avg., one year margin if not otherwise available [3]Global EBIT margin, margin realized in Europe could differ [4]EBITDA margin from company website [5]Focus on commercial vehicles

Exhibit 4: Self-driving technology phases and relevance for autonomous services (Pflefle *et al.*, 2023)

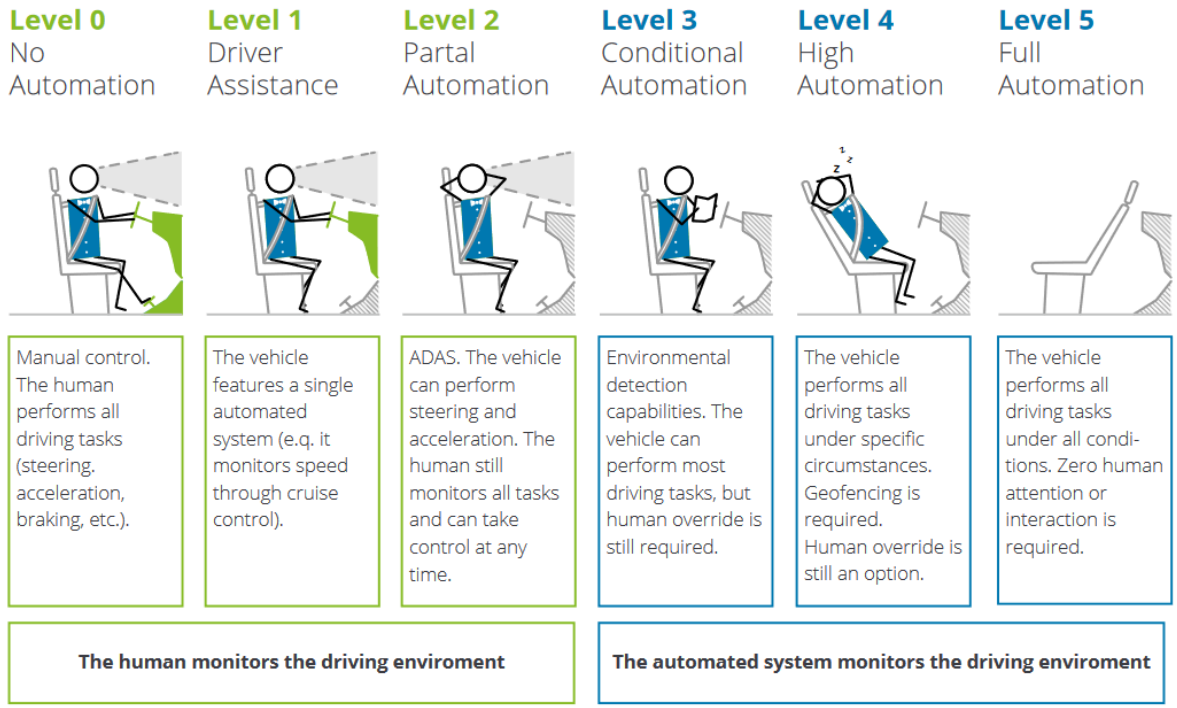

Exhibit 5 Repair and Maintenance scope of different drive concepts (own illustration based on Diez *et al.*, 2014)

		ICE	BEV
Maintenance	Oil- incl. oil filter change	✔	-
	Coolant replacement	✔	-
	Spark plug change	✔	-
	Air filter change	✔	-
	Air filter change	✔	-
	Timing belt change	✔	-
	Fuel filter replacement	✔	✔
	Brake fluid change	-	✔
	Power electronics check	-	✔*
	Dryer cartridge exchange	-	✔*
Repair	Brake pads and discs	✔	red.
	Exhaust system	red.	-
	Clutch	✔*	-

* Depending on manufacturer and model
ICE = Internal Combustion Engine
BEV = Battery Electric Vehicle

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Note: Company related documents (CRD) and Interviews are available upon request in German.