

AUTOMOTIVE eCOMMERCE

HOW TO SELL CARS AND SERVICES ONLINE

EXECUTIVE SUMMARY

- The automotive industry is being disrupted by several global trends. One of them is the appearance of eCommerce channels, dominated and shaped by third party players from outside the industry
- Customers are willing to buy online to a certain extent – if several conditions are met
- Today, new market players are entering the market, while new technologies and increasing customer requirements significantly and sustainably change the global automotive landscape
- Designing a new experience starts with a deep understanding of customers' wants and needs as well as the consideration of their changing lifestyles and consumption of mobility services
- Seamless and meaningful integration of online and offline touchpoints is a key aspect for the entire customer and dealer journey, always in tandem with the changing role of dealerships in times of eCommerce
- To build a user-friendly and sustainable experience the right eCommerce platform approach needs to be chosen, supported by the appropriate cloud service model for the necessary agility

CONTENTS

eCommerce makes customer journeys more complex	3
It's all about designing a new experience	6
Agile IT and new technologies enable the new experience	8
Conclusion	12



Start

Low Rate
Safety Pay
Unlimited Mileage
Theft Protection
Free Amendments



ECOMMERCE MAKES CUSTOMER JOURNEYS MORE COMPLEX

For a long time, car dealerships acted as the central place for buying cars, parts and services. Recently, however, the point of sale diversified, shifting more parts of the customer journey into the digital sphere. Initial solutions for end-to-end online sales processes already exist in some markets, where Volvo sets an example, who sold the first 1927 models of the XC90 online.¹ With that trend accelerating over the last years all carmakers must find an appropriate response to thrive within the new market conditions.

Customers want to buy cars online

Buying a car has never been easy. “Who is actually buying a car online? It is an experience that’s all about the feeling, smelling and touching”. This sentence somehow describes the opinion of some OEM officials. Since it’s a major investment for most people, it usually takes up a lot of thought and countless hours of research, comparisons and discussions. In case of purchasing a new vehicle, the possibility of

configuring it to one’s taste can be overwhelmingly complex, making the decision even harder. So far, consumers only had to pick and choose rather technical aspects of a car, that could be laid out in a matrix of options. Nowadays, people more and more choose which products they let into their lives based on emotional factors and lifestyle fit.

However, as early anecdotal evidence such as Volvo and our research show, buying online becomes more and more common. Especially for young digital-native customers, for whom a car is less a status symbol than for older generations, it would be surprising if eCommerce trends of other industries would steer clear of the automotive industry.

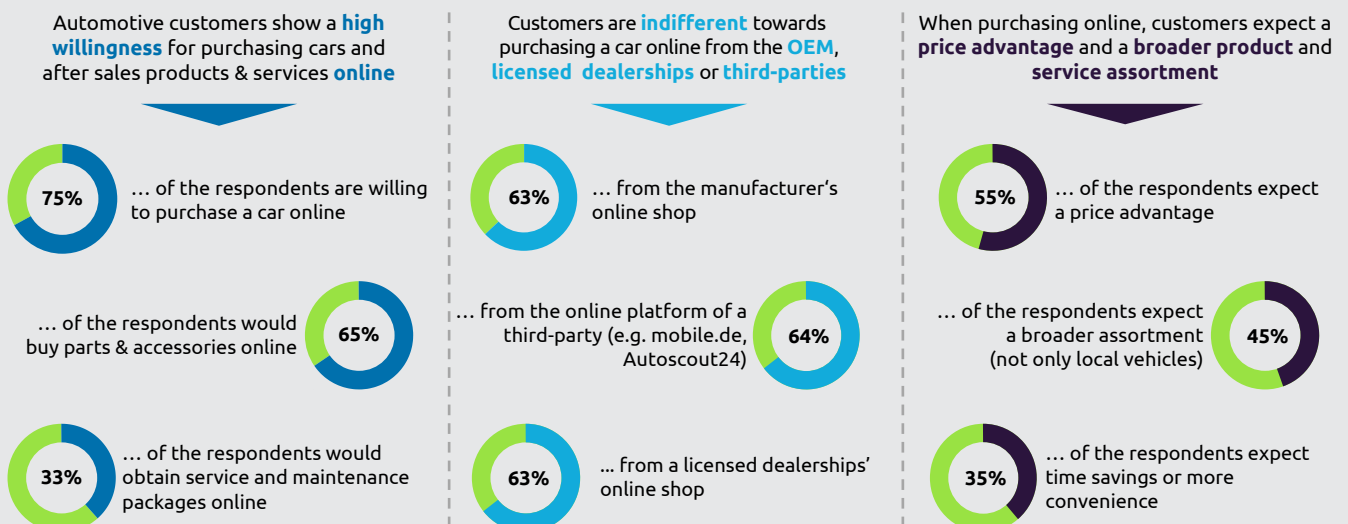
Looking at the numbers, our Cars Online Trend Study reveals that 3 out of 4 customers would buy a car online already in 2016. Customers thereby expect an online price advantage and time savings, as they are used to from

other industries. Figure 1 sums up some of the most important findings of our research. Particularly important for automotive companies will be the seamless channel integration: for products as complex as cars, customers simply expect to be able to change between the physical and digital sphere continuously.

Digital disruption affects traditional automotive sales models

Automotive companies are ever more challenged by companies from other industries – companies which dominate customers’ online habits and expectations. Especially pure online players and customer centric companies such as the GAFAs (Google, Amazon, Facebook, Apple) and BATs (Baidu, Alibaba und Tencent) of this world shape customer expectations globally, as Capgemini’s Cars Online Trend Study 2018 demonstrated. Customers simply expect the same treatment from their carmaker (and dealer) as they receive from consumer goods

Figure 1: Customers are already willing to purchase vehicles and after sales products online, but have specific expectations towards online sales



¹<https://www.media.volvocars.com/global/en-gb/media/pressreleases/149590/all-new-volvo-xc90-1927-limited-first-edition-cars-available-only-via-digital-commerce>

and retail companies. Therefore, these players' move into the automotive industry will be even more challenging for traditional carmakers. In 2017 Amazon announced their plans to sell cars and corresponding products on their platform.² This event should ring the alarm bell in automotive CEO's offices, as this would be the first industry not to be completely disrupted by Amazon.

Digital innovation offers opportunities for automotive eCommerce

New technologies can also be of great use for the eCommerce approaches of car makers. For instance, 360° car photos and virtual/augmented reality allow opportunities for the visual quality of their offers, while e.g. video chat or face recognition enables digital processes like user authentication. OEMs will need to find a way to include

these technologies in their operations to make online sales happen.

Since product lifecycles and therefore innovation times are generally much shorter in technology companies, automotive OEMs increasingly will need to collaborate with these companies to integrate new tools and processes in their online sales customer journey. This puts them in a somewhat ambivalent position, as they need to collaborate and compete with these players at the same time. For example, OEMs and their dealers could use Amazon's platform to market (after sales) products to maximize reach while building up their own branded shop ecosystem and be in direct competition with Amazon. We call this phenomenon 'coopetition'. OEMs will have to manage this situation carefully and especially safeguard against

transferring sensitive resources such as customers or transaction data to their competitors.

"To keep track with changes, carmakers shouldn't refuse to collaborate with innovative companies that push forward in their own business model. However, they should be cautious on what information to share with their competitors. Crucial data should always be in possession of OEMs."

Christian Küster

Automotive Account Executive,
Capgemini Invent Central Europe

Figure 2: Different new technologies and players are shaping automotive eCommerce



²<https://www.ft.com/content/34737954-51e6-11e7-a1f2-db19572361bb>



IT'S ALL ABOUT DESIGNING A NEW EXPERIENCE

The following section outlines how OEMs can use the chances of digital innovation and react to new coopetitioners to sell cars, parts and services online.

Considering the shift cars are undergoing from the main means of transportation and status symbol to just one option in a mix of various mobility offers, OEMs must come up with something new to convince customers. In today's world, a car has to reflect and neatly fit into a person's individual lifestyle. The experience needs to transform from being a product that customers want to own to a platform fulfilling a number of services. This change imposes the challenge to readjust the way to connect with the consumer, as it fundamentally changes the dynamics of the purchase decision. However, if done right it opens a vast amount of new opportunities at the same time. Once a consumer decides to invest into a certain ecosystem, it opens doors which enable automotive companies to get very close to their customers and integrate closely with their desires and needs – apart from just getting from A to B.

Using customer's lifestyle to sell online

At the beginning of every solid design-process comes a discovery phase. As shown in figure 3, the discovery

phase take a major part of time and effort, before the design team can start with several iterations. Besides getting a clear understanding on the overall business goals and technological capabilities this first phase is all about gaining a deep understanding of and empathy for the user. Through the means of ethnographic research methodologies like contextual inquiries, qualitative in-depth interviews and observations, OEMs are able to uncover customers' problems, desires and needs and translate these into insights. This approach ensures that organizations don't fall into inside-outside thinking, meaning that organizational processes and structures dictate the way products and services are shaped. Considering the important role that lifestyles and mindsets play in guiding the way people make purchase decisions, it is even more important to get as close as possible into the minds and hearts of customers.

It helps to focus on how the car fits in people's new lifestyles, as consumers now have more and more options, OEMs need to redefine the key functional, emotional and social aspects

that the car plays in customers' lives. Using a variety of online and offline channels, customers start forming an opinion on the values they associate with a car and put themselves in the pictures progressively. Through the insights generated during a qualitative research phase it is possible to easily personalize and tailor: car customization has always been an important feature of the way these functional means of transportations become objects of personality and desire. This is even more true since the diffusion of mass customization and just-in-time. Taking pages from the book of the fashion industry, with their product personalization (e.g. Nike ID), customer experience design can help customers easily customize, personalize and tailor the car they are looking for to buy. The difference is that besides the typical customization through detailed features – there's a trend towards customization by lifestyle and life events.

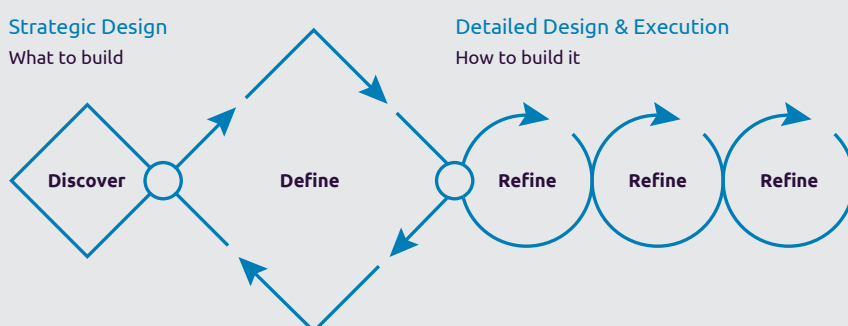
Online and offline integration is key

As eCommerce becomes an ingrained component in consumers' lives in areas as grocery, fashion, utilities and white goods, people have started to use a mix of online and offline channels to go through the decision making of buying a car. Dealers and retail points have shifted their role: they are now experience centers. Selling is not going to be their primary activity anymore,

“From the user's perspective, there is no online or offline - all that counts is the added value.”

Christian Jung
Head of Idean Studio Berlin

Figure 3: Project phases



Capgemini Invent 2019

not as much as allowing people to touch, feel and play with their potential new purchase.

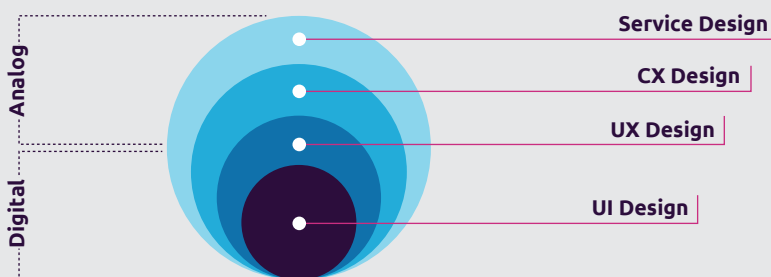
Following this evidence, digital channels are increasing their importance in disintermediated buying: once tried, individuals and families are becoming more familiar with the idea of an evening in front of a computer - or even more frequently a mobile device – where they can customize their car and order it without the mediation of a dealer.

Experience design helps brands reshape the pre-purchase discovery journey: by considering the purchase journey something that happens across multiple touchpoints, design teams can assist brands create a holistic approach to helping consumers through the different steps of the decision-making process.

an overview of the current way the overall experience comes into place. In addition, they can figure out what parts need to be redesigned in order to enhance the outcome from a customer perspective: it helps orchestrate marketing, digital and retail initiatives in a way that is seamlessly connected and based on what consumers do. It divides the experience into frontstage and backstage activities, where the first is all about what the customer sees and experiences and the latter accounts for the necessary processes that need to adapt inside the organization to be able to deliver value to the customer. Constantly assuming these two views in relation to each other makes sure that the whole system is changed instead of single actions that are well intended but are disconnected from each other and will therefore likely result in disrupted experiences

The online purchase is a step of high importance, and is often associated with a lot of doubts, uncertainties and second-thoughts. The lack of a person – a dealer or customer representative to support throughout the journey – may increase the possibility that the whole process feels uncomfortable for the user. Careful design of the eCommerce process brings the right information to customers as they start having these uncertainties. It also helps customers to get in touch online with people who can support them in their micro-moments of doubts: online concierges (a mix of automated and human support) as well as direct connection with online customer support – integrated at the right time within the journey – make a difference in reassuring people and giving them the confidence to continue without someone else driving their purchasing experience.

Figure 4: Shapes of design



Capgemini Invent 2019

As the last layer, service design helps to orchestrate and marry individual touchpoints into one seamless, coherent experience while at the same time accounting for business goals and the necessary internal processes and structures (see figure 4). Through the creation of customer journey maps and service design blueprints, OEMs gain

for the customer. In contrast, a well-designed customer journey and the corresponding frontends will enhance the brand with the potential to create signature moments of engagement, which will remain with the consumers as happy memories.

“eCommerce is not only a new sales channel for automotive companies. Moreover, it gives them the opportunity to marry the customers to the brand digitally.”

David Lindskog

Heah of Digital Strategy & Customer Experience, Capgemini Invent Nordics

However, more is not always better. Adding a technology should always be the means to an end to solve an existing problem, satisfy a customer pain point or deliver real joy. Mindlessly using it just to “see what sticks” can create the opposite result.

AGILE IT AND NEW TECHNOLOGIES ENABLE THE NEW EXPERIENCE

To provide a seamless purchasing journey and to meet new customer expectations and preferences, responsive and flexible IT is required. At the same time, it needs to be ensured that ongoing processes can be continued stably and reliably. However, OEMs usually depend on legacy systems with complex, heterogenic structures that have been growing over years or even decades. The systems, that partially date back to the 70s, either do not allow new requirements or cannot keep up with the modern requirements of a digital world. They are based on rigid development cycles and do not have the necessary interfaces to connect the needed systems. Therefore, an agile, digital project structure is significantly impeded. The slow, market-wide or even international rollout of new retail systems can also become a stumbling block for eCommerce.

Finding the right platform approach is the first step

For a user-friendly and sustainable eCommerce experience, however, the

integration of business functionalities like e.g. analytics, customer support or content management into the eCommerce platform is a must-do (see figure 5).

A seamless customer journey and smooth processes therefore require both, dealer and OEM systems integration, which can be a great challenge for OEMs due to the described environment.

To find the appropriate platform approach, requirements need to be collected, modules defined and intersections between these modules identified:

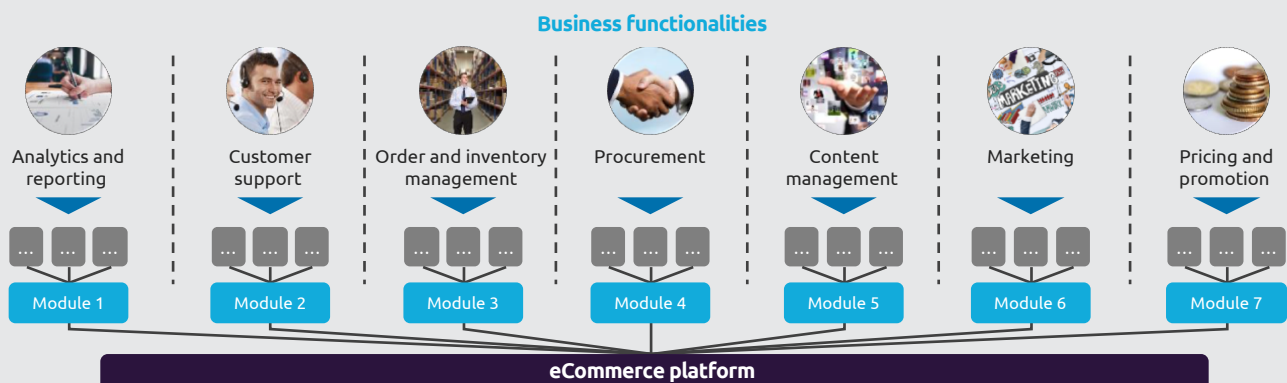
- 1. Requirements:** Functional and non-functional requirements must be collected and prioritized
- 2. Platform modules:** Modules needed to meet the requirements must be identified
- 3. Integration map:** Interfaces between the modules must be indicated by means of an integration map

The best way to go through these steps is to conduct scoping and IT target picture workshops with stakeholders from the business and IT side to break up silos, considering the new customer expectations. Once the scope of the platform is known, the process of setting up the eCommerce platform can be defined. Basically, **three different solution types** are feasible. All three types can be supported by **cloud technology** to profit from enhanced automation, fast availability of resources and scalability of capacities to cope with the aforementioned issues.

Standard software

Standard software provides eCommerce functionalities and standard processes out of the box, is ready to use and provides best practices. The key advantage of standard software is that it can be applied quickly and does not require extensive programming know-how. However, changing or adding functionalities or processes is limited to the standards provided

Figure 5: Integration of business functionalities into the eCommerce platform



by the software. Therefore, the usage of standard software limits the possibilities to build a strong USP against competitors.

Framework software

Framework software provides generic eCommerce functionalities and acts as a building block with the ability to adapt functionality and processes flexibly. This is a major advantage but also requires more programming skills than the application of standard software, since the software is not ready to use. In the automotive context, framework software is recommendable for setting up a web shop for after sales products, services and accessories, as it reduces time-to-market with the option to flexibly adapt desired functionalities. For these reasons, Ford and Renault, among others, chose framework software to build their accessory web shops, as illustrated in figure 7.

Self-development

A self-developed solution provides the highest degree of flexibility and scalability for functionality without any limitations. It allows tailoring the solution to the exact needs of the business, but also requires extensive programming skills and implies a high one-time effort. As the online sale of cars in most cases is linked to a complex structure of systems, self-developed software solutions are recommended to consider the specific system landscape and business needs of the OEM. Therefore, companies like Hyundai as well as Autoscout24 rely on in-house developed solutions for their car sales. Figure 7 shows selected examples of different approaches used by automotive companies.

No Agility without cloud technology

As mentioned before, all three approaches can be supported by cloud technology to take advantage of the fast availability of resources, to get access to innovations as well as flexible pricing models.

The combination of eCommerce platform approaches with the different cloud service models results in different advantages and disadvantages. Figure 6 illustrates the possible combinations.

With **Infrastructure as a Service (IaaS)** components such as virtual machines are automatically made available via a self-service portal in any quantity. Instead of waiting days and weeks to create and configure a virtual machine, a developer can select a pre-configured virtual machine on a management console with one click and use it minutes later.











A **Platform as a Service (PaaS)** layer automates the provision of a development and operating environment. The management of databases, security, integration, development tools, associated test and release processes and the management of the

operating environment are consistently automated. The high degree of automation is the ideal basis to leverage a DevOps approach and continuous delivery of new functionality.

Software as a Service (SaaS) delivers ready-made applications that can be used directly by customers as a web application. Operation, development and maintenance of the software are carried out by the SaaS provider.

IaaS and PaaS can be operated both as a private cloud on dedicated machines and as a public cloud on shared machines. A private cloud environment can be operated in its own data centers or hosted by a provider, whereas a public cloud environment is always operated by an IT provider. SaaS, however, operates only as a public cloud³. The cloud's elasticity of capacity typically reaches a limit for the private cloud due to the limited resources in data centers. Large public cloud providers like AWS, however, continuously invest in their data centers and have millions of physical servers in globally distributed data centers. Therefore, they can react much more flexibly to high load peaks and scale capacities automatically.

Figure 6: Possible combinations of platform solution types and cloud service models

	Software as a Service 	Platform as a Service 	Infrastructure as a Service 
Self-development 			
Framework Software 			
Standard Software 			

Capgemini Invent 2019

³Applies to multi-tenant only - single-tenant private cloud possible but not relevant since advantages of public cloud are eliminated

Standard and framework software through SaaS or IaaS

If ready-to-use software or framework software from a provider is installed on-premise, there needs to be technical in-house knowledge to install and update the software regularly. The company's own IT staff are fully responsible for the availability of the shop. Also, the initial investment and the recurring costs are rather high.

To cope with these issues, standard software can be provided without installation by a cloud service provider (SaaS). This leads to a very fast deployment as the software can directly be used as a web application. Operation, development and maintenance of the software are carried out by the SaaS provider, guaranteeing high stability and quality. Also, total cost of ownership (TCO) can be reduced due to fewer IT expenses. However, compared to on-premises installation, full control over the system and its upgrade cycles and new features is given up.

If OEMs want to keep responsibility for all aspects of software management internal but still take advantage of the high availability the cloud offers, they can also install the ready-to-use software on an automated IT-infrastructure (IaaS). This will still

reduce their costs as no investment in data centers is needed and provide the highest data center security and degree of availability. However, considerable in-house IT skills and staff will be needed. Also, there is less control over the physical location of the server. The same applies for framework software when it is installed on automated IT-infrastructure.

Self-developed software through PaaS

PaaS is the cloud service model of choice for implementing a self-developed software solution as not only the IT infrastructure automated but so is the development process, making the development much faster. The integration with existing applications of any kind is rather easy in this case. As with all cloud service models no investment in data centers is needed and further cost reductions can be realized through standardization and automation. With PaaS the maintainability and scalability of the eCommerce software can be improved through the direct access of the auto scaling and load-balancing features of the cloud platform. The degree of availability as well as the data center security are very high. However, a loss of control over platform and data is possible depending on the cloud provider.

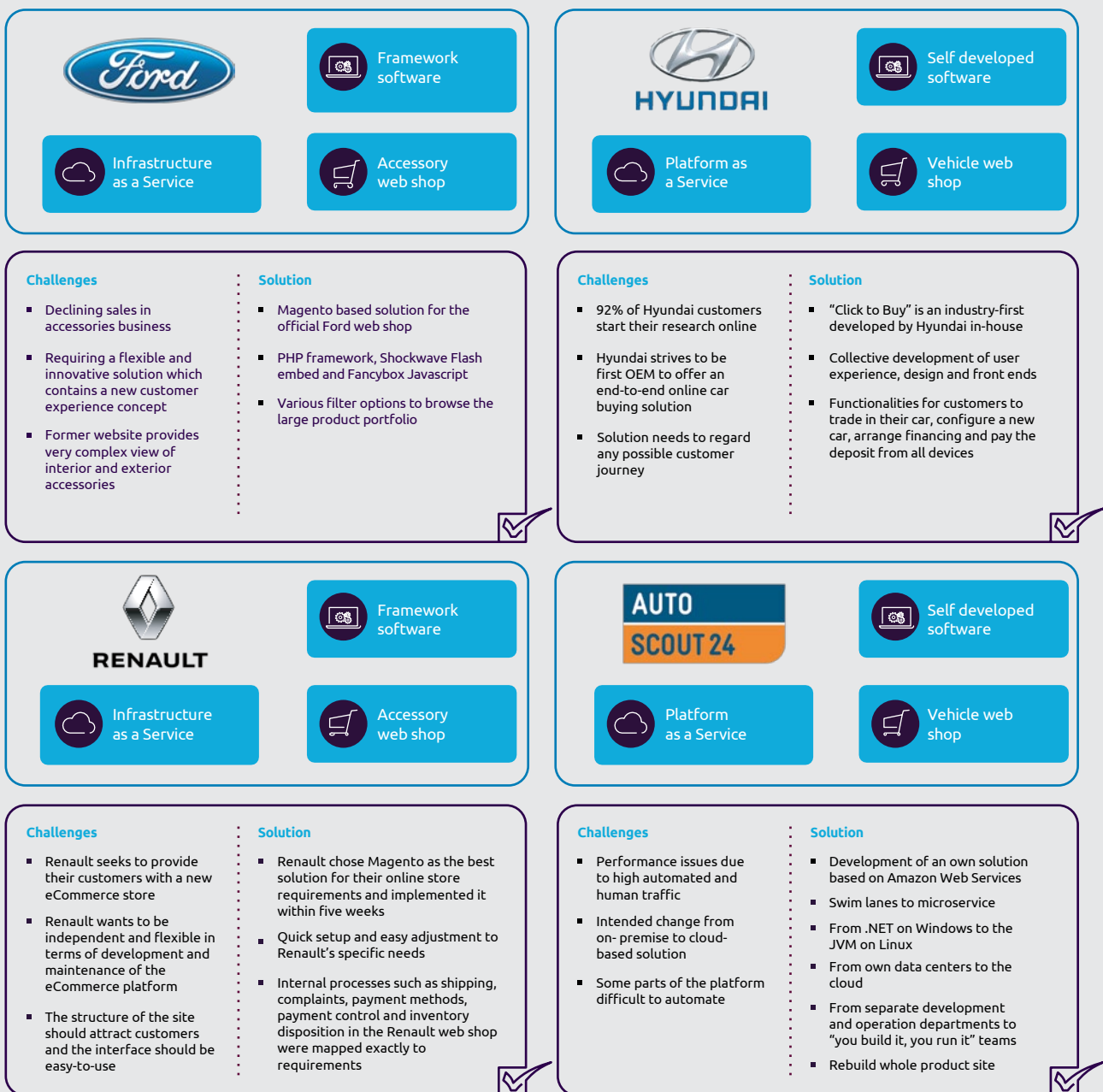
No benefits without challenges

To fully enjoy the cloud benefits, however, some challenges have to be overcome in advance.

First of all the new cloud architecture design needs to be applied and integrated. Depending on the complexity of the application landscape the transformation can be rather challenging and depends on a sophisticated transformation roadmap. A new task that comes with the introduction of cloud technology is the management of the chosen deployment model. Besides these fundamentals the financial impact on TCO and the effects on IT accounting need to be elaborated. Even though data center security is very high, when applying a cloud approach, cloud security aspects – especially identity and access management – need to be taken into account. The new cloud strategy also requires changes to the IT target operating model. Changes to the existing organization, roles, processes, and governance need to be conducted to successfully use cloud technologies. In order to effectively leverage cloud benefits and become truly agile, organizational changes regarding skills, leadership and culture need to be considered as well. To address these challenges in a structured way, Capgemini Invent has developed the Cloud Strategy Framework.⁴

⁴For more information on the Capgemini Cloud Strategy Framework please visit <https://www.capgemini.com/de-de/service/invent/future-of-technology/cloud-strategy/>

Figure 7: Selected examples for eCommerce approaches from different automotive companies



CONCLUSION

In today's automotive landscape it is clear that the possibility to sell cars and services online issues a rather big challenge to most OEMs. After decades of successfully selling via the classical stationary sales model car makers now find themselves in a more complex environment with rapidly changing customer requirements on the one hand and lacking experiences with the new sales channel and touchpoints on the other hand. Therefore, OEMs quickly need to develop their own eCommerce solutions and carefully integrate customers and dealers into the development process. Based on our experience, we see a need for OEMs to thoroughly tackle these challenges and especially consider strategic design and backend topics hand in hand.

First, before a web shop is designed, OEMs should analyze how the eCommerce solution fits the brand strategy, incorporating all business lines. An after sales and services web shop will impose different requirements than a new or used car sales platform. However, OEMs are willing to provide one single ecosystem to their customers for the entire product portfolio. A direct sales model requires different forms of dealer integration and remuneration compared to a model in which the dealerships are the contractual partner, just to mention a few relevant strategic barriers.

Second, after the alignment of the overall eCommerce strategy, OEMs need to define how to design the entire customer experience of such a web shop, including options to change between the online and offline world.

With respect to the new role of dealers as an experience center rather than the ultimate point of sale, the entire customer journey needs to be redesigned (including all entry points as well as online and offline touchpoints) to satisfy customers.

Third, these requirements won't be achievable without an agile and scalable IT landscape, which needs to be set up according to the desired business targets. OEMs need to determine an appropriate platform approach for their eCommerce activities. Different cloud deployment models can enable the agility and scalability required for successful eCommerce enterprises.

Such an intention can only become a reality by starting a dedicated project setup with agile project management and using an MVP approach. A digital transformation project enables OEMs to react to changing customer and dealer requirements and incorporate feedback quickly. As always, the ability of an organization to change and adopt cultural patterns should not be neglected for the success of the eCommerce endeavor.

In our view, automotive OEMs have no reason to back off from automotive eCommerce. Instead, they should rather look boldly into the future and find a way to combine their strengths with new possibilities to serve customer demands and become true eCommerce champions.

Check list for OEMs – what needs to be done

Strategy

- Evaluate possible partnerships with pure online players and innovative technology companies
- Consolidate eCommerce targets and requirements of each business line

Design

- Conduct user research as focus interviews and user testings
- Consider all touchpoints, not just those that are online
- Include your dealership in the overall journey

Backend

- Determine the suitable platform approach by gathering requirements, identifying required platform modules and developing an integration map
- Identify the suitable solution type considering the business model and intended value proposition
- Decide on a promising combination of solution type and supporting cloud technology

Overall

- Apply agile project management tools and processes
- Establish the IT capabilities required to develop, implement and operate the determined solution type
- Experiment and re-iterate product increments using MVP approaches
- Take care of change management within your organization and dealership

CONTACT



Christian Küster

Automotive Account Executive – Central Europe
Phone: + 49 1517 06010 232
christian.kuester@capgemini.com



Anna Baum

Phone: +49 151 4025 2882
anna.baum@capgemini.com



Tae-Ho Shin

Phone: +49 1514 0252 060
tae-ho.shin@capgemini.com



Manuel Müller-Ost

Phone: +49 1511 1374 712
manuel.mueller-ost@capgemini.com



Annika Wittig

Phone: +49 1511 137 868
annika.wittig@capgemini.com



Conrad Scheibe

Phone: +49 1514 0250 458
conrad.scheibe@capgemini.com

About Capgemini Invent

As the digital innovation, consulting and transformation brand of the Capgemini Group, Capgemini Invent helps CXOs envision and build what's next for their organizations. Located in more than 30 offices and 22 creative studios around the world, its 6,000+ strong team combines strategy, technology, data science and creative design with deep industry expertise and insights, to develop new digital solutions and business models of the future.

Capgemini Invent is an integral part of Capgemini, a global leader in consulting, technology services and digital transformation. The Group is at the forefront of innovation to address the entire breadth of clients' opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year heritage and deep industry-specific expertise, Capgemini enables organizations to realize their business ambitions through an array of services from strategy to operations. Capgemini is driven by the conviction that the business value of technology comes from and through people. It is a multicultural company of over 200,000 team members in more than 40 countries. The Group reported 2018 global revenues of EUR 13.2 billion.

Visit us at

www.capgemini.com/invent

People matter, results count.