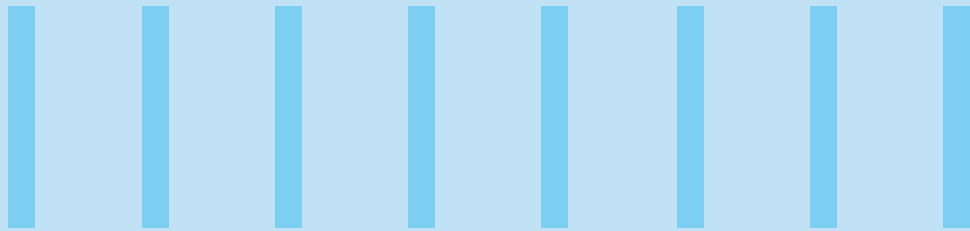




NAVIGATE THE NEXT IN AUTOMOTIVE:

FOCUSING ON PRODUCT DIGITIZATION AND SOURCING THE NON-CORE



“The automotive industry is being disrupted” – is now a cliché.

The fact is that the automotive industry is undergoing fundamental changes in business models, which is further accelerated due to COVID-19 pandemic. Here is our viewpoint on the tectonic shifts that can help automotive OEMs and their digital transformation partners ‘Navigate the Next’ in Automotive.

The sector is no longer about the one-time sale of a car-as-a-product, with transfer of ownership from the manufacturer to the buyer. Instead, it is now an ‘Ecosystem’ with the vehicle buyer at the center and an amalgamation of the product, its associated digital services, the data generated during their operations and financial transactions around the core (Figure 1).

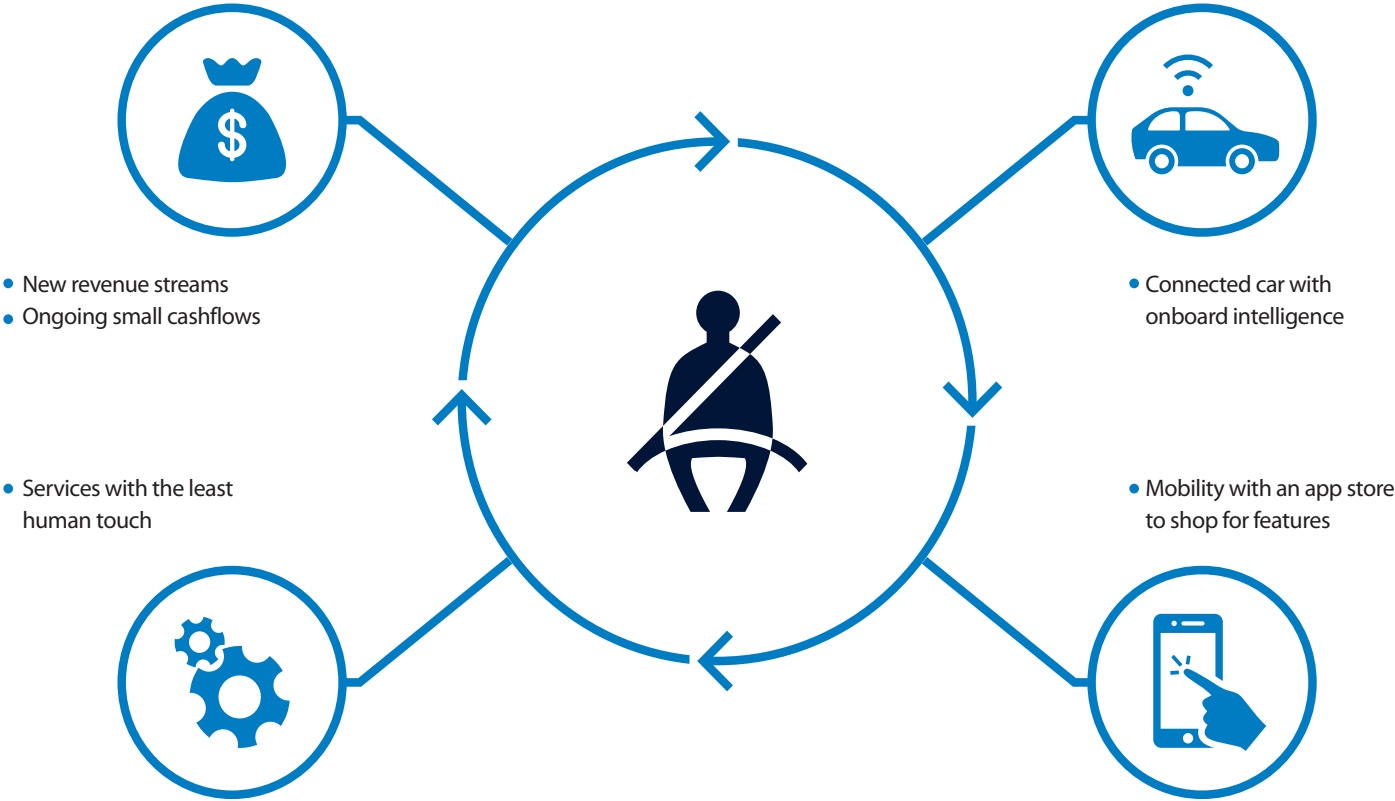


Figure 1. Automotive sector as a bundle of products, services, finance, and digitization

Within the product itself, the major sweeping transformation pertains to the shift from Internal Combustion Engines (ICEs) to connected, autonomous, shared and electric vehicles, with simpler product structures

but higher price points. Digital technologies are an integral part of this transformation and crucial to deliver premium mobility at affordable price points.

'Digital Transformation of the Ecosystem' and the transition to the electrified connected and autonomous driving should be the core focus areas for automotive OEMs, while the non-core operations should be sourced and standardized.

Figure 2 summarizes the specific changes in the automotive industry and the role of partners for digital transformation.

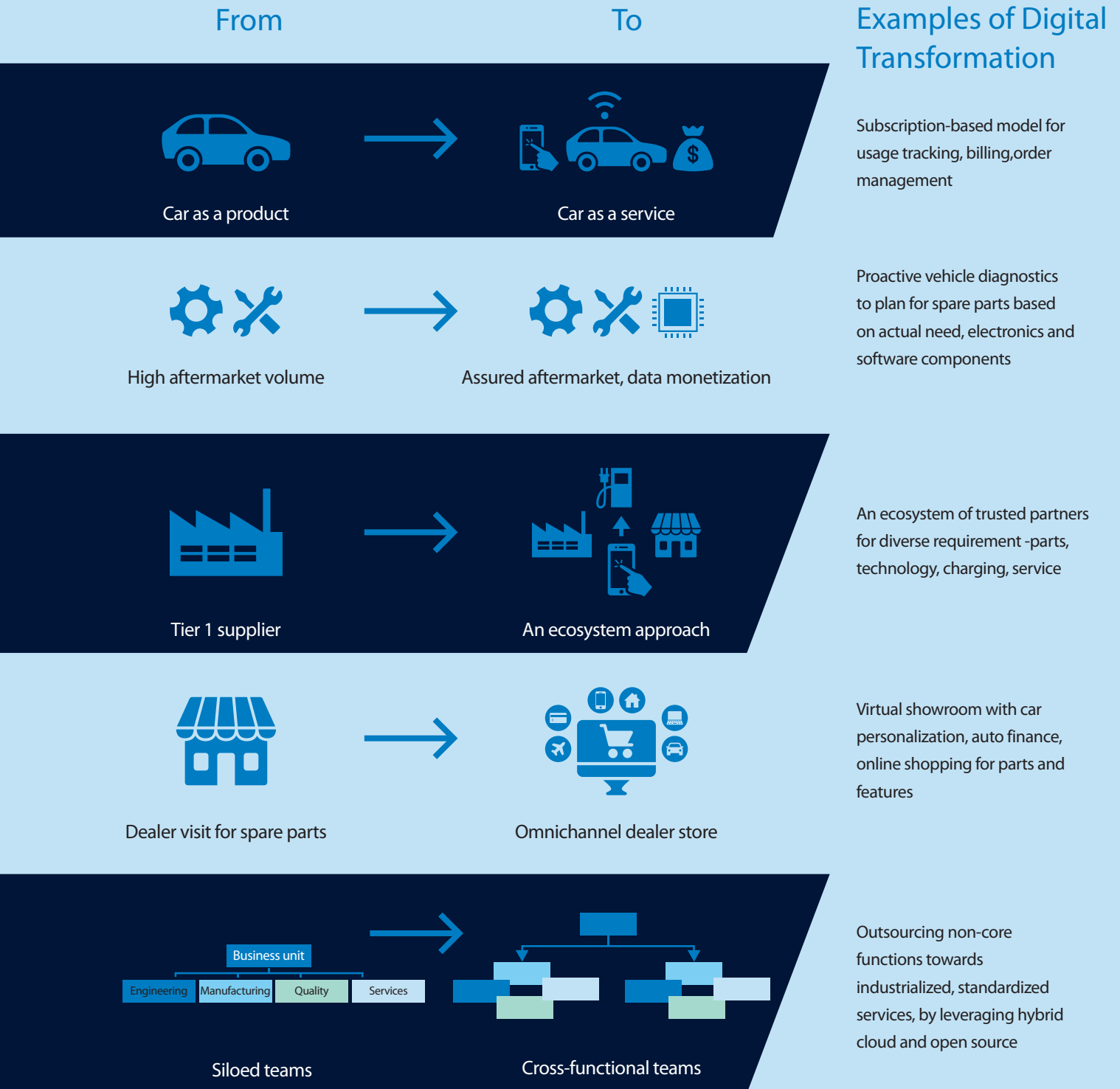


Figure 2. The gradual shift from product-based to a service-based system

Digital transformation partners like Infosys are right in the middle of this shift, and are empowering OEMs and suppliers to navigate these tectonic shifts and accelerate their initiatives. Let's go through each of these in action:

1

Car-as-a-Service

As consumer preferences shift to digital lifestyles and utilizing everything as a service, the automotive industry is adapting to this trend. The vehicle is becoming a smart phone. The customer does not buy a car but 'subscribes' to it, under specific conditions defined in the contract. Every major, global OEM has rolled out such subscription

services, although their revenue share is relatively low yet, as a single digit percentage of sales.

The impact of this shift on automotive IT systems is that the order management, billing, and financial systems must rapidly adopt to 'subscription' models, mimicking the telecom industry where customers pay for

mobility plans. Infosys has implemented one such business model for a leading European OEM, to enhance the customization capability for their bundles of products and services. Specific features, such as hourly subscriptions or flat time-bound models – can be enabled or disabled or customized at a country or a dealer level.





2

Assured aftermarket revenue and data monetization

The aftermarket segment – comprising the sale of spare parts and services – is an important revenue stream for the traditional automotive industry. However, revenue streams are not guaranteed. On the other hand, in subscription-based business model, there is assured business in the aftermarket segment, enabled by the contract. The cost and profit margins for spare parts and services are baked into the subscription fee.

EVs have far lesser moving parts and consequently, entail lesser dealer visits. However, software upgrades are new revenue streams. OEMs should make necessary investments to tap this ‘digital’ revenue stream and subscription business models.

IT service providers are investing in digital platforms that enable aftermarket revenues and data monetization. For example, Flypp™, Infosys’ automotive app store for digital customer engagement, helps OEMs to manage access and digital rights, curate applications, orchestrate in-app services like videos and advertisements, and offer billing services. In addition, Skava, the Infosys e-commerce platform, helps automakers build a B2B2C business model to connect with end customers through dealers and complement their efforts.

3

Win-Win ecosystem approach

To be fast enough in today’s market, OEMs have to leverage a plethora of partners onto an ‘ecosystem’ approach, to rapidly gain new capabilities like communication technologies, charging stations, batteries, software partners, etc. An ecosystem approach is contrary to a product approach. It promotes thinking from the customer’s perspective.

For the IT systems of OEMs and suppliers alike, this shift translates into the creation of open, product-based architectures driven by APIs, which can quickly integrate with offerings by partners.

The COVID-19 pandemic is a potential tipping point for remote customer engagement. Companies and brands that move the needle the fastest can gain a competitive advantage and record an improvement in market share and profit margins, leveraging the consumer data to create targeted offerings, according to BCG.



4

Omnichannel customer engagement

Traditionally, customers interacted with dealers during their physical visit to the shop, at all stages from car evaluation to purchase and service. In the new way, almost every customer interaction is made virtual, except for mandatory situations like vehicle pickup or drop-off services. OEMs should now engage with customers across multiple avenues, like chatbots, video calls or virtual tours, seamlessly shifting from one to another in an omnichannel manner. Software upgrades are also carried out over-the-air. Augmented Reality and Virtual Reality provide immersive experiences in a three-dimensional space.

The COVID-19 pandemic is a potential tipping point for remote customer engagement. Companies and brands that move the needle the fastest can gain a competitive advantage and record an improvement in market share and profit margins, leveraging the consumer data to create targeted offerings, according to BCG [1]. Further, according to BCG's projection, online transactions would account for 6-8% of new car sales in Europe by 2025, faster than the United States. This can be attributed to the fact that a relatively larger part of the European market follows the built-to-order model for new cars. Dealer franchise laws are relatively weaker than the United States, thus offering more flexibility for auto OEMs.

To bolster online car sales, Infosys implemented a virtual design assistant for a German automotive major's OEM dealers and sales teams across South East Asia.

It increased the customer base and contract sign-off, by digitizing the end-to-end sales processes for vehicle dealers. It also offers a fully integrated quote and contract management process, thus reducing the time taken by retail sales processes. The micro-services-based mobile app encapsulates the car selling process, with an easy-to-navigate user experience.



5

Virtual upskilling

With rapidly changing products and business models, it is imperative that not only OEM employees but also dealerships are adequately equipped to be successful and survive the change. In OEMs, there is an urgent need to upskill the digital skills of employees, given the increasing adoption of digital technologies such as Cloud, DevOps, Cybersecurity etc. in automobiles. At dealerships, front offices need to be geared up to sell a very different product like the EV, with enhanced focus on providing adequate information to customers on driving range, charging outlets, new software-enabled

features, etc.. Further, they must leverage new-gen concepts like digital marketing to reach out to potential customers and engage with them throughout the sales funnel. From a service perspective, the technical service crews need to be rapidly upskilled to handle EVs - which differ vastly from their ICE counterparts.

However, automakers must ensure minimal disruption to their existing business processes and customer experience

strategies during the upskilling initiatives, much like how a user can seamlessly upgrade to a newer version of the software while the car is still in use. Digital partners of automotive companies are investing in solutions that accelerate talent transformation. For example, Infosys invested in a Digital Upskilling Platform called Wingspan. Wingspan is an AI-driven, autonomous, virtual platform that nurtures continuous learning for Employees of OEM as well as Dealers.



Modularity of parts at an OEM-level or even at an industry-level supports mass customization. The critical shortage of semiconductor chips will not go away for some time.

6

Hyper-personalization of vehicles

One of the risks of EVs is that of commoditization, or in other words, the lack of differentiation. Hyper-personalization is one way to differentiate product offerings, by coming up with product configurations matching each individual customer profile, based on their history and preferences.

Some OEMs have developed modular vehicle architectures to promote interchangeability of parts. Modularity of parts at an OEM-level or even at an industry-level supports mass customization. The critical shortage of semiconductor chips will not go away for some time. Such standardization of parts is an opportunity to consolidate the demand for parts and manage them as consortiums.

The competition between automotive OEMs is no longer on safe, comfortable, fuel-efficient vehicles. The rules are rewritten in today's competitive landscape and the winners will be the most digitally advanced, green, innovative, and flexible organizations. Digital technologies offer a lever for each of these requirements. Digitization will offer a competitive advantage in the automotive industry for organizations that are rapid in scaling up necessary skill sets, either internally or as part of their partner ecosystem.



7

Source non-core

Consequently, and finally, to enable digital transformation of its core ecosystem and invest in electrified connected driving, OEMs should consider sourcing their non-core functions towards industrialized, standardized services. The mission of core business transformation requires all attention. When the focus and energy are channelized into shaping new businesses, it is also the right time to rethink existing IT infrastructure components and services.

The external partners for such services should be challenged with KPIs that help deliver faster, more standardized services at competitive costs. Innovation needs to be built into such services just as well as aggressive CO2 reduction targets. In a high paced global landscape, these elements need to give OEM leaders freed-up headroom.

Examples of technological changes to navigate are: Hybrid Cloud stacks with free and open source software (FOSS), a clear edge datacenter strategy, push towards zero trust networking and software defined elements from network to datacenter components. The digital workforce, consisting of more and more software engineers at the OEM, needs a modern, anytime and anywhere workplace and a reliable toolset.

In summary, the automotive industry is at the cusp of a revolution. Although several changes and challenges lie in the road ahead, sizable opportunities also await automakers if they take the right decisions now.



As a part of a strategic partnership with a leading German automobile manufacturer, Infosys has launched Infosys Automotive and Mobility GmbH & Co. KG, a digital and innovation technology center in Stuttgart, Germany. The new business center brings together automotive and technology experts who will help drive IT infrastructure transformation for leading automakers in Germany. Learn more from the [press release](#).



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