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THE RACE TO CASE: PREPARING FOR SUCCESS WITH CONNECTED, AUTONOMOUS, SHARED, AND ELECTRIFIED VEHICLES

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ABERDEEN

Connected, autonomous, shared, and electrified (CASE) vehicles are coming, and to thrive in this new world, organizations need to prepare now. This Knowledge Brief shares the steps necessary to succeed in the brave new world of CASE-powered vehicles and investigates the receptivity of Fortune 1000 buyers and corporate fleet managers to this trend.

Technology Trends Transform Automotive

The automotive ecosystem faces disruption unseen since the industrial revolution. At no time in history — since handcrafted coach building gave way to the innovation of mass production — have automotive companies faced the disruptive forces that new technology is introducing to the industry, including artificial intelligence, real-time computing, enterprise mobility, and ubiquitous connectivity.

The logical outcome of this disruption is **CASE**: vehicles that are increasingly connected, autonomous, shared, or electrified. The confluence of these four major trends will significantly affect the way consumers perceive and experience mobility in the next 10 to 20 years (and beyond).

Accompanying the rise of CASE is automotive executives' universal belief that the automotive business model will change or broaden, and most believe their industry will be challenged by new competitors due to digitization and in-vehicle connectivity. As CASE dominates car design, automakers and their partners see the connected car providing huge opportunity in the growth of new business models, digital services, and digital aftermarket products.

Car design will undergo mobility, connectivity service, and other product enhancements that will endear current and future customers. This has already begun to play out; for example, many U.S. households already own a particularly popular smart speaker and digital assistant product. As this vendor prepares to launch their digital aftermarket product for the connected car, consumers are already signing up *months in advance* to be the first person on their block to consult with their favorite smart, digital assistant on their morning drive to work.

Six Steps to Get Fit for CASE

What are the core competencies that organizations must master to succeed in the brave new automotive world? Observed and foreseeable CASE trends strongly suggest six steps organizations should take to succeed.

1. Master the management of huge amounts of connected car data. There's a flood of data coming from the connected car, with the average driven connected car churning out four terabytes of data per day. Each car on the road will generate roughly as much data as about 3,000 people generate in a day (based on average daily video, chat, and other internet use). And just a million autonomous cars will generate three billion people's worth of data.

Further, a connected car is a mobile sensor platform that can deliver a myriad of insights, limited only by the number of installed sensors. For example, a connected car can collect driver data based on actual behavior. It can collect and map air quality in various parts of a city. It can even map cellular phone signal strength by neighborhood or zip code. These connected car data streams can be monetized to fuel new business models for mobile services.

2. Master agility in the world of partnerships, mergers, and acquisitions. In the new world of autonomous cars, no one does anything alone; there are too many technologies and they are changing too fast (see sidebar).

As autonomous vehicles climb the technology continuum from Level 1 to Level 5, successful firms need to partner fast, acquire fast, or divest fast, based on shifting automotive trends.

3. Extend the (digital) supply chain. Increasingly, cars will be used — and shared — on demand. Shared mobility is much easier, more flexible, and more individual for users. Urban areas are destined to see the widespread proliferation of shared vehicles in both corporate and personal settings.

Because of shared business models, the automotive value chain no longer stops at the factory doors, but extends across all types of use over the entire lifetime of the vehicle through its eventual recycling.

In this environment, real-time, end-to-end digital visibility into supply chain management is increasingly a requirement. In addition, automotive

Levels 1 Through 5: Constant Change in Autonomous Driving Requires Agility in Partnerships and M&A

Level 1 and 2 is really about adding sensors, actuators, and specific software (for example, a camera and radar) to perform specific functions. Here, the sensors assist the driver, but the driver retains full responsibility. Penetration of these Level 1 / 2 features — such as automatic emergency braking, adaptive cruise control, and lane change assist — will grow rapidly in the next 2-3 years.

Level 3 systems are not yet on the road, outside of dedicated testing projects, but by 2020 they will be introduced. Here, the car takes over responsibility for monitoring the environment, but the human driver retains ultimate responsibility.

Level 4 / 5 systems are further away — this means a gradual shift to full system responsibility in all situations on the road.

players often integrate vertically — at least one car manufacturer reports making investments in a promising, strategic, autonomous semiconductor chip supplier, viewing this investment as an arrow in their quiver that will enhance future responsiveness to changes in autonomous car technology.

4. Master finances and capital deployment to refocus on innovation. For automakers, battery electric vehicles (BEVs) are a business-model game changer. Currently, automakers control much of the value of the car by designing and producing the major structures and systems, powertrain, branding, and distribution. The shift to BEVs means up to 50% of the value of the car could migrate from mechanical to electrical systems and electronics. While we can't yet imagine the level of innovation and new competition that will occur as this happens, we have to be ready for it. Company finances and capital deployment must thus be bore-sighted to link to the business-critical need for competitive innovation.

5. Focus on the customer experience. Now more than ever, manufacturers and suppliers should put users at the heart of their business model. Customer centricity is key when the way customers consume your product is changing. In short, shared vehicle consumption is not equal to owned vehicle consumption; for example, usage intensity and service life of vehicles is expected to change dramatically because of electrification and sharing.

Customers of the automotive industry are no longer just direct buyers of vehicles, but all users of the products — in both private and shared usage models. Software-based, direct interaction with every use — supported by brand experience — will lead to higher revenues over the lifecycle of the customer relationship.

6. Master workforce agility. Automotive players now find themselves competing with Silicon Valley to attract and retain talent. In short, Ford and GM are now competing with Apple and Google. This requires a major change in core competency. With technologies coming and going in as little as 18 months, organizations need to carefully consider whether they want to hire talent or use contingent labor. If the decision is to hire, competitive dynamics require the employer to be especially attentive to the different expectations of Millennials, Generation X, and Baby Boomers.

Buying Intent for CASE

Using “Connected Car” as a proxy for the emerging CASE sector, Aberdeen finds that both Fortune 1000 buyers and corporate fleet managers are extremely interested in CASE technology and open to new business models, digital services, and digital aftermarket products resulting from connected car data.

Aberdeen Marketspace tracks forward indicators of Fortune 1000 buying intent by capturing what is happening across millions of companies, tens of millions of active researchers, and over a hundred million technology buying decisions. We found:

- The “Connected Car” topic in the “Fleet Management” sector scored the highest among the Fortune 1000 of all topics, as measured by research activity per week.
- In general, “Connected Car” was a top-four sector research topic overall, with 7.53% of the Fortune 1000 actively researching this topic. Sustained at a high level for an extended period of time, this research activity is a forward indicator of demand. Depending on average sales cycles, it provides a demand forecast, by industry, three to nine months out.

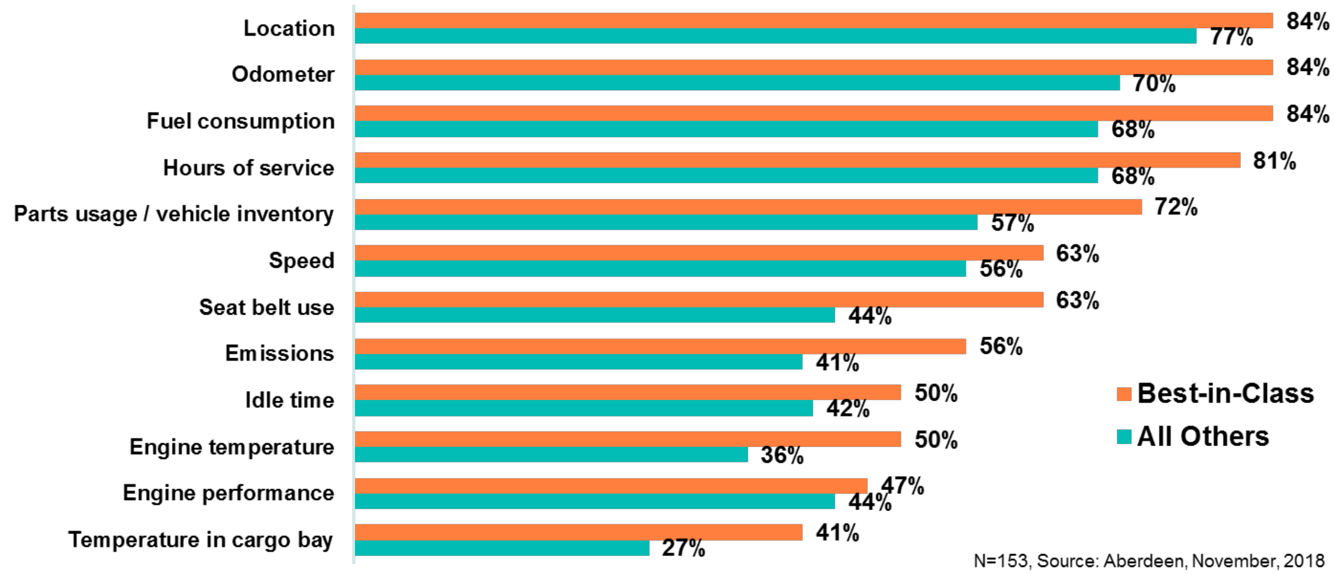
Aberdeen also samples corporate fleet-manager buying intent through surveys and interviews to determine why changes are happening in awareness, consideration, perception, and market share.

Corporate fleet managers are highly amenable to insights based on CASE data. In fact, they already monitor their fleets via dashboards and alerts, and use this data for demand forecasting. Further, they integrate their connected-fleet car data into existing enterprise systems, with automated actions taken based on both IoT and historical data.

Almost 9 out of 10 Best-in-Class organizations use or are evaluating fleet-management systems. As these systems begin to further incorporate connectivity to CASE data, corporate fleet managers are likely to be the first to consume digital services and products based on CASE-derived insights.

Our final and most significant takeaway? Best-in-Class corporate fleet managers are already voracious trackers of connected-fleet car data. In the future, they are also likely be avid consumers of CASE-derived data, insights, and products (Figure 1).

Figure 1: Regardless of Connected Car Data Type, the Best-in-Class are More Likely to Track It



As the above data shows, you can name any connected-car data category, and the Best-in-Class not only track it, but they do so at **higher levels** than their non-Best-in-Class peers.

We thus confidently conclude that Fortune 1000 buyers and Best-in-Class corporate fleet managers are likely to respond positively to new CASE-based business models, digital services, and digital aftermarket products based on CASE-derived insights.

Summary and Recommendations

Foreseeable trends strongly suggest that connected, autonomous, shared, and electrified (CASE) vehicles will increase greatly, but to thrive in this new world, organizations need to prepare **now.**

To succeed in the brave new world of CASE-based vehicles, organizations should excel in six critical areas; they must:

- Master the management of huge amounts of connected-car data.
- Master agility in the world of partnerships and M&A.
- Extend the (digital) supply chain.
- Master finances and capital deployment to refocus on innovation.
- Focus on the customer experience.
- Master workforce agility.

While there is huge potential to analyze and monetize this data, mastering these new rules will be very challenging. To make sense of the flood of CASE data, Aberdeen recommends that organizations maximize their chances for success. The best way to accomplish this is by utilizing a trusted software partner skilled in these six areas, starting with the cloud-based management and processing of big data from the connected car.

A software partner skilled in the new world of automotive can also assist in targeting the most promising new business models spawned by CASE as well as providing analytical expertise in tracking CASE data, analyzing it, making predictions, and monetizing data and insights.

Fortunately, a ready market exists for CASE-based digital services and products, as Fortune 1000 buyers and corporate fleet managers have signaled their strong buying intent for CASE, starting with the connected car. With a high degree of certainty, Aberdeen finds they are likely to respond positively to new CASE-based digital services and products.

In summary, connected, autonomous, shared, and electrified vehicles offer a huge upside in new business models, new digital services, and digital aftermarket products. Partnering with a software technology provider that gets you fit for CASE is a sound strategy for success.

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17780