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Data opportunities abound in complex new-mobility environment

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MUNICH –Car data provide fertile ground for new automotive business opportunities, but industry experts say several issues need to be addressed to realize the new revenue that automotive companies hope will compensate them for an expected longer term decline in new car sales.

Participants at a "Monetizing Car Data" conference hosted here by the German business daily Handelsblatt said the world of 21st century personal mobility is characterized by growing complexity, new players, new business models and rapidly changing consumer requirements.

What's required to be successful is stepped up collaboration between all parties as they realize data-driven opportunities and capitalize on new technologies. "You need competent partners to provide comprehensive solutions; you cannot do it all by yourself," said Walter Wottreng, senior director sales for the connected mobility solutions division of supplier Robert Bosch.

Following is an overview of some of the issues covered at the conference.

Opportunities. There was widespread agreement that connected cars and the data they generate will open the door to new services and new revenue streams. "We see a change in the automotive value chain and an extension of it," said Ulrich Lichtenthaler, professor of management and entrepreneurship at the International School of Management in Cologne.

Added Tom Raftery, global vice president and "futurist" at business sofware group SAP: "When you collect data, there are other potential uses for that data." He cited the example of Ford Motor, which is one of many carmakers developing new business models based on data. "Ford is hoping that data will be a completely new source of revenue," he said. Raftery also said usage-based insurance is a highly promising business area.

Graham Smethurst, a software and electronics engineer who works on networked and automated driving issues at the VDA, Germany's auto industry association, put the data revolution in a broader automotive context: "Hardware will erode in terms of importance as the digital experience around the vehicle increases."

Obstacles. Despite a general sense of optimism about the revenue potential of data, industry executives also cited several potential obstacles on the road to profit. SAP's Raftery said getting

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sufficient numbers of data scientists on board is a challenge for the auto industry. "Having people who have a data-first mentality is crucial going forward," he said.

Data privacy and data security were cited as areas where work needed to be done. "For the next phase of automation, we will need even better security," the VDA's Smethurst said.

Karoline Bader, who co-founded Parkpocket, a company that developed a smart-data-based off-street parking service that was sold to supplier Continental in 2017, said vehicle security is a constant issue as the auto industry develops data-based new services. "Automakers have to make sure cars are not hacked, which is a challenge as cars get more connected." Bader now works on business development and strategy at Continental's Intelligent Transportation Systems (ITS) division.

Thorsten Stuke, managing director of consultancy m2m-tailors, said the complexity of the automotive ecosystem justifies a differentiated approach to vehicle security. "You don't need to have the highest level of security for all data," he said. Key is to have a detailed understanding of the value of particular data sets. "If you have that, you know how much you will want to invest in security."

Smethurst, the VDA executive, said neutral servers, which would connect automakers' proprietary backend servers to the greater automotive and internet-of-things world, would be a step in the right direction as connected cars integrate with a network of third-party service providers. But industry insiders said car companies are reluctant to build such servers into their connectivity infrastructure. Neutral servers are marketed by companies such as Otonomo and Caruso.

Smethurst also cited a VDA initiative to deploy a standardized interface for remote access to vehicle data. Such a novel remote access option would make the current generation of dongles that connect to cars' OBD maintenance ports obsolete. "That will allow us to close what is today a significant security loophole," he said.

Another potential obstacle to monetizing car data is a culture-based resistance to radical change, which high-tech industry executives at the conference said continues to be a factor as the auto industry develops new business models. It's a problem new companies such as China's Byton don't have. Gerald Krainer, director of digitalization at the electric-vehicle startup, told the conference that, starting with a blank sheet of paper, the company decided three years ago to build "a completely

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new device" with an infrastructure that is more future-proof than what traditional automakers can provide with existing car architectures.

Krainer said the open platform that will underpin the Byton production vehicles set to come to market late this year will offer various data monetization options. They include the possibility of marketing AI-driven contextual recommendations; charging commissions on e-commerce; providing in-car gaming; location-based services; usage-based insurance; and in-car content purchases. No decisions have been made yet on any of these options.

Startups. New technologies around vehicle data are often developed by startups, but many of these companies tend to be acquired by bigger companies that are set to dominate this new automotive business. Bader, whose startup is now part of Continental, said that, being part of a bigger group was the only way to achieve the global scale required to develop the concept. Other executives at the conference agreed that it will be difficult for smaller players to thrive in the automotive data business.

Data ownership. Two industry insiders agreed that Europe's new data privacy legislation, the so-called GDPR, is helping to create clarity on issues surrounding the ownership of vehicle data. George de Boer, who leads connected car initiatives at Dutch location data specialist TomTom, said it is clear who has to give consent to data use. But he added that there are different levels of data that each require a different kind of consent. Some approvals need to be given by the end user, while others involve the "legitimate interest" of fleet managers or leasing companies owning a vehicle.

Matthias Schubert, executive vice president mobility at German testing group TUEV Rheinland, agreed. One layer, he said, would involve information on traffic flows and other such sensor-based vehicle information that helps prevent accidents. The other layer would help product development, while a third layer would involve proprietary data around the end consumer. "Where you draw the lines will be the discussion in coming years," Schubert said.

The TUEV executive said more transparency on the rules governing data ownership would build more trust. That's important to gain public acceptance of data-based services. "In a connected world this will be a differentiating factor," Schubert said.

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State of play. Several conference speakers said efforts to monetize car data are still in their infancy, though TomTom's de Boer noted that his company has been making money with systems that gather GPS-based location data from participating cars since 2006. Robert Bosch also has a community-based parking product in production in the new Mercedes A-Class, said Wottreng. He said revenue from the service is shared between Bosch, the automaker and providers of data required for the product to operate. "You share the cake and it's a win-win for all contributing partners."

Wottreng said a second data-based product is a service that senses the road condition and can, on that basis, automatically adjust the speed of a vehicle. The Bosch executive said such vehicle-data-driven services hold great promise as mobility evolves. "For automated driving, we see this functionality as very important and predict it will become mandatory in the future."

What remains to be seen is whether consumers will pay for services provided to them on the basis of car data.

Andrew Till, vice president marketing & technology at Harman Connected Services, cited four challenges that need to be addressed to make such services attractive to consumers.

He said providers of the services need to build "a relationship of trust and confidence" with consumers, which is essential. Personalization of the service offering will also be crucial, he added.

And he said automakers need to move their data analytics teams away from the IT department and closer to the marketing executives who deal directly with end-consumers. "Moving control of analytics to the outward-looking part of the organization is extremely important," Till said.

Timo Moeller, head of the Center for Future Mobility at consultants McKinsey, said that, though various obstacles remain, he is optimistic that the auto industry will succeed in adding data-based revenue to its overall business model. What's needed, he said, is a strong focus on the customer in early planning stages, a change to corporate organizational structures that impede progress, a more effective approach to partnerships and a clear approach to data sharing.

"Automotive companies have started and now it is about scaling up and becoming faster," he said. "It's a new game, but I'm very optimistic that the industry in total will work it out."

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-By Arjen Bongard