automotiveIT international

The B2B magazine for automotive IT strategists

"There are a few very fast movers in the auto industry as well"

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Last week, Volkswagen Group struck a deal with Amazon Web Services (AWS) to build a cloud-based digital production platform that will eventually connect the carmaker's plants, its suppliers and all other players in its supply chain. VW said it had chosen AWS because of its innovative cloud technologies in the production environment and its strong offering in logistics and supply chain. At the CES high-tech exhibition in Las Vegas in early January, automotiveIT International spoke with Dirk Didascalou, AWS vice president, Internet of Things, about disruption in the manufacturing industry, digital transformation and the opportunities companies have when they move operations into the cloud.

There's a lot of talk about disruption in the industry. How does that affect the auto industry?
I come from the mobile world and spent 20 years of my life there. We got disrupted. I worked for Nokia for seven years and we were king of the hill. And then we went to virtual non-existence. This can happen to every single car manufacturer as well.

What is the role of a service provider such as AWS in the current industry transformation?
We are part of the disruption, but we also give companies the tools to be part of the disruption. That way they aren't disrupted themselves.

Are small companies more hesitant to move to the cloud than bigger enterprises?
No, that is not true. Small companies that start from scratch and don't have resources all start cloud-native. They don't have any other choice. That's how AWS started: We were the platform for startups.

Is the auto industry a slow cloud adopter compared with other sectors?
We don't look at the market per industry, but we look at individual companies. The auto industry is big, so it has a tendency to be a little bit slower, but there also are a few very fast movers. Like in other industries, you have fast and slow movers.

When you walk into a company, how quickly do you see whether its executives are receptive to change?
It's all about mindset and culture. Almost all technologies are now available, so culture is either the biggest impediment or the biggest accelerator. You need to adopt a different way of doing things. Take accounting: The CFO asks what a project will cost and my answer is that it is 'pay-as-you-go.'

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And depending on your usage, you may spend less. Another example: Traditionally, product teams had product ownership and IT was a support function. With IoT, product people become IT people and IT people become product people. Silos have broken down completely and if you have the ability to handle that, you can accelerate developments at your company.

Who is your point of contact when you discuss AWS products with manufacturing companies? Do you talk to the CIO, the operational heads or other people?
All of them at different times. For our services, the direct counterpart in a company is, typically, a software developer. They are the ones using our services. But we get engagement from product management, engineering, the CDO or the CIO, too.

Where does the IT staff come into the picture, then?
I would argue that companies that are most successful are the ones where the CIO, the IT department, procurement, finance and the operational teams work hand in hand from the beginning. If some people come in at the end of a project, it's too late.

Managing huge amounts of data is becoming crucial to the success of today's businesses, but is this actually a mature science or is much more work required?
The foundation was laid decades ago, but the amount of compute power we have now and the things you can do with this require a different type of science. Take our Amazon SageMaker service, which allows you to do machine learning. Or AWS Greengrass, which lets you put a new model that you trained in the cloud on a local device. What's interesting is that you need a lot of computing power and data to train a model, but once you have done that, you need much less of it.

Please explain how important data analysis is within the suites of IoT services you offer.
Data is one of our biggest investment areas. It's one of the holy grails when you think about what you can do with almost infinite amounts of computing power. In the past, if you wanted to look at, for example, cars' sensing data, you would have to spend a lot of money to buy tons of storage. In the cloud, you can instantaneously use the data. And with today's computing power, you can do things that in the past were black magic. Now, it's just technology.

IoT is different for the auto industry because you deal with moving assets, right?
The biggest challenge is that you probably have to collect data wirelessly. When you have lots of data to transmit, you run into bandwidth constraints. The coming of 5G will allow different types of services and reduce latency, but it won't help you with bandwidth. The question then becomes: Do

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you have to send the entire data stream into the cloud? If you can process the data in the car, you only have to upload the relevant information into the cloud. That's where edge computing comes in.

Where do most of your computer scientists come from?
The biggest talent pool is probably in China, India and the US. We have every nationality in our team. Europe is a little behind. Industry needs people who write code and coding is one of the most important skills in engineering today. It's all about software and if you don't know how to code, you're like a journalist who doesn't know how to write. Europe could be better in this area.

-Interview by Arjen Bongard

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