



"For Daimler, data analysis and data management must be a core competency"



The speeds decreed by Daimler CIO Jan Brecht are faster than ever. Software is expected to be set up, pushed through and delivered twice as quickly – at a minimum. The workload for the company's digitalization initiative will again be considerable in 2019. Daimler's Customer and Car Platform is expected to grow, and data analysis and management are expected to become one of the premium car group's core competencies. Brecht recently spoke to automotiveIT about speed, data, open-source software and other corporate IT priorities.

Mr. Brecht, you want to make Daimler IT twice as fast as it is right now. In your eyes, does speed come before quality?

In today's delivery models, speed and quality are not developed in opposition to one another. The same is true for speed and cost. Working within a scrum framework, you can be significantly faster with agile methods without becoming more expensive. The quality doesn't suffer if three preconditions are met: The teams have to be well-qualified, they have to work cross functionally, and they have to work on specified tasks. That's why I am firmly convinced that we can move twice as fast – maybe even faster...



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What is possible – without going off the track on the curves?

In today's programming environments where you work as a cloud native - that is, conceptualize, develop and operate all the applications in a cloud-computing architecture - speed can certainly increase by a factor of five, six, perhaps even seven over traditional processes. But it's clear that the approach doesn't work everywhere, and it is not crucial to immediately increase the speed by a factor of X right from the start. But I think there is a payoff for contemplating whether and how you can get double the speed perhaps every four years.

What key operating figures do you use to measure the progress of your processes and your delivery successes?

We've defined about 10 key performance figures that we measure automatically. I'd like to cite two of them: first of all, the number of software releases that we carry out per day or in a week. Secondly, the call-ups of our programming interfaces – their use within the developer ecosystem also increases speed.

You have competitors who want to be 100 percent agile. Others say this makes no sense. Where does Daimler stand on this issue?

We are not 100 percent agile. I personally don't believe this should be the definitive target figure. Agile methods make their impact in the company far beyond IT and there is an urgent need to include the operating departments. We have already been able to make some progress in this area, but there is still more potential. Our experience is that large agile projects have a lasting positive effect that radiates through the organization.

What operating issues were your major focus in 2018?

In the course of PDM2020 (Daimler's product data management project), we moved ahead with product documentation and redefined our system architecture. This allowed us to integrate backend systems across the entire value chain and link various databases – the foundation for digital twinning. The third generation of the Sprinter (a Mercedes van) was another focal point. It came out with 20 digital services for which our team was responsible. In the truck segment, all our brands can now use a uniform backend.

Digital twins on the product side? Or in the manufacturing area, too?

Both. We want to follow vehicles over their entire lifecycle with a digital reproduction. Using the data, we can then produce what I called a unique plaster cast, which can be used to derive the



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configuration of the factory, for example. If we no longer have to program installations and machines manually, and instead can take the settings directly from the product data, the result will be a huge edge in the speed of the product introduction process. We are already using this approach in certain niches today. In the future, it should be used anywhere we can boost our efficiency.

What is your focus on this year?

On our Customer and Car Platform, among other things. We are in the process of consolidating the data and the applications at a central location. I am still convinced that digitalization must go hand-in-hand with the consistent orientation of our business model toward the customer. They are two sides of the same coin. As an automaker, data analysis and data management must be a core competency for us as well. Only companies that have the appropriate points of contact and customer-specific information are in a position to make service offers based on the driver's situation and propose targeted purchases,

Open source seems to be a trend. In what segments is Daimler turning to free source code? Everywhere, in our vehicles and in our backend systems. The infrastructure in our computing centers is increasingly defined by software. Linux is standard. The potential continues to be huge. In the past, companies ostensibly tried to save on licensing costs by using open source programs. That is no longer the crucial argument for us today. We see that the innovation cycles in the open source segment are significantly faster than those for proprietary products. The best programmers in the market are drawn to open source. These are all strong arguments. They are bolstering us as we continue to pursue our strategy.

Are you ready to give something back to the open source community?

Of course. Give and take is the main guarantor of success with this approach – not just what happens inside the company.

Daimler's API ecosystem has recently grown to nearly 600 programming interfaces...

That's right. But what makes me even prouder than the number of programming interfaces are the calls on the Mercedes-Benz developer platform. In December, it was about a billion in just one month worldwide – this shows the contribution that open interfaces are capable of making, especially with regard to #TwiceAsFast. In major IT projects today, half of the time goes into building interfaces, and that presumably means half of the costs. To put it another way, APIs help us shorten the duration of projects and use our budgets more effectively.



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Are there also disadvantages?

You should give careful thought in advance to how often the particular interface is used. Making it programmable is complicated and expensive. It only makes sense to spend the money if scaling is expected later. But this determination in particular is not always easy to make. Unfortunately.

In many manufacturing companies, artificial intelligence is encountering a new generation of IoT sensors, generating the next wave of automation in manufacturing. What tasks are emerging for Daimler IT?

There are many aspects to this. To us, a paperless factory is not just appealing from the standpoint of increasing efficiency. You can only control product variance if sensor data is transmitted in real time. Or consider the issue of preventive maintenance for installations and machines using AI. If we could use it to boost plant utilization by one or two percentage points, that would be extremely attractive economically. The potential of digitalization is considerable just in the manufacturing field.

You are already updating applications and vehicles "over the air." What are the prospects for the further development of OTA?

We assume that the lifecycles of hardware and software will decouple from each other even more than they have. Our cars are on the road five, six, seven years or longer without needing major hardware interventions. But updates for the software will take place at increasingly short intervals – even on a daily basis when necessary. The trend to buy digital services later when needed makes for a business model that can be expanded.

Is the issue of security creating headaches for you in this regard?

Not on the system side. With our transmission protocols, we can ensure that every update reaches vehicles completely and securely. But insufficiently built-out mobile wireless networks are a disadvantage. The transmissions take longer and are more susceptible to errors than we would like. But the vehicles' operating security is guaranteed at all times. The activation of the release or service only occurs if the transmission is 100 percent completed. So I don't have any security concerns. Nonetheless, I would prefer to have a better communication infrastructure, especially in Germany.

What tools can you use to alleviate the time pressures to some degree in the "idea to product" process in the operating departments?



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In the development area, for example, we want to continue to reduce the number of costly prototypes through the use of simulations. Validations of the geometries and crash behaviors are no longer the main concerns. The focus is increasingly on the functionality of the vehicle software, which is becoming more and more complex. The more integrated the simulation chain, the more successful we will be at shortening product development times. Model-based systems engineering even allows us to simulate mechanical dependencies within the vehicle.

What role does the possibility of using mobile and devices play for Daimler employees? Our goal is to empower all employees to maximize their productivity. Whether they work in an office environment or in manufacturing. In the industrial segment, we took a major step in this direction in 2018. Using a secure software container in an app, all employees have access to key company systems on their own smartphones. As a first step, we are offering information – ranging from the menu schedule in the cafeteria to working hours, all the way to requests for vacation time.

Each quarter you make a so-called “CIO call” and try to stay in touch with IT staff around the world. How effective is a dialogue format where thousands of participants dial in at the same time? To me, this mainly involves conveying information – on strategic and operational issues that Daimler IT is currently working on. I could, of course, assemble the bare facts in an email and send it out. But I want to consciously use these calls to set the tone, personally explain my point of view to many thousands of employees and comment on developments. It is very important to provide the opportunity for dialogue. In the last 15 minutes, the participants can ask questions about what I’ve said, in writing, using a chat tool. In this process, focuses often emerge that we can specifically delve into a second time. The “CIO call” gives me the chance to learn directly and without a filter what is bothering our teams throughout the world. And since, 70 to 80 percent of IT employees are dialing in quarter after quarter, we know the format works.

As you see it, what distinguishes the digital mindset of Daimler IT? What attributes describe it best? First of all, in a digital transformation, I understand the comprehensive nature of the business model at the customer’s end. This really doesn’t have anything to do with information technology at first. We also have to learn to think in terms of state-of-the-art delivery systems, which we discussed early in our conversation – the key phrase here is “twice as fast.” To reach this goal, we want to be up-to-date in five categories: open software, API architecture, cloud and DevOPS, identity and access management, and staff qualifications. They all shape the digital mindset that you asked



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about.

In conclusion: Since 2018, you have posted regularly on LinkedIn as the CIO of Daimler AG. What are your goals here? Do you actually write these articles yourself?

I am pursuing two lines of attack with these articles: First of all, I want to get feedback from a large business community on my personal viewpoint on strategic IT issues. These kinds of external reference points are helpful in setting our course. Second, I consciously use the platform to position Daimler IT as an attractive employer. I spend a lot of time on selecting the right content, but I admit I'm happy to draw on my team's support for the longer articles.

Interview by Ralf Bretting and Hilmar Dunker

Photos: Claus Dick