



The Chassis of the Future is Code: ZF Becomes a Provider of Software Solutions

- **Collaboration with Microsoft to transform ZF into a provider of software-driven mobility solutions**
- **Advanced processes for faster development and validation of connected vehicle functions at a global scale**
- **“cubiX” by ZF: Example of software-driven connected chassis functions**

Friedrichshafen. ZF is setting the course for faster and enhanced software development: Together with Microsoft, ZF intends to bring its software engineering processes, methods and solutions to the speed and quality IT companies lead with. Transforming into a software-driven mobility services provider, ZF can scale its global resources more efficiently and better respond to the evolving customer needs. Working with Microsoft, ZF is leveraging Azure cloud services and developer tools as well as Microsoft’s experience in agile software development. Looking forward, ZF will provide the automotive industry with software solutions.

“In the future, software will have one of the largest impacts on automotive system development and will be one of the key differentiating factors when it comes to realizing higher levels of automated driving functions. We want to help drive this trend forward. The collaboration with Microsoft will enable us to accelerate software integration and delivery significantly. This is important for our customers who appreciate agile collaboration and need short delivery cadences for software updates. Moreover, software will need to be developed when hardware is not yet available,” explained Dr Dirk Walliser, responsible for corporate research and development at ZF. ZF will then combine its enormous know-how as a system developer for the automotive industry with the added advantage of significantly higher speeds for software development.



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“Digital capabilities will be key for automotive companies to grow and differentiate from their competition. DevOps empowers development and operations teams to optimize cross-team collaboration across automation, testing, monitoring and continuous delivery using agile methods. Microsoft is providing DevOps capabilities and sharing our experiences with ZF to help them become a software-driven mobility services provider”, said Sanjay Ravi, General Manager, Automotive Industry at Microsoft.

“cubiX”: Chassis of the Future from Code

At CES 2020, ZF will showcase its vision of software development with “cubiX”: It is a software component that gathers sensor information from the entire vehicle and prepares it for an optimized control of active systems in the chassis, steering, brakes and propulsion. Following a vendor-agnostic approach, “cubiX” will support components from ZF as well as third-party components. “cubiX creates networked chassis functions thanks to software: By connecting multiple vehicle systems such as electric power steering, active rear axle steering, the sMOTION active damping system, driveline control and integrated brake control, ‘cubiX’ can optimize the behavior of the car from one central source. This enables a new level of vehicle control and thus can increase safety – for example in unfavorable road conditions or in emergency situations,” said Dr Dirk Walliser. ZF plans to start projects with first customers in 2020 and will offer “cubiX” from 2023 either as part of an overall system or as an individual software component.

ZF at CES 2020

In addition, ZF will present its comprehensive systems for automated and autonomous driving at CES. They comprise sensors, computing power, software and actuators.

For passenger cars, Level 2+ systems pave the way for a safer and more comfortable means of private transportation. New mobility solutions like robo-taxis are designed to safely operate with ZF’s Level 4/5 systems. Additionally, ZF’s innovative integrated safety systems will be on display, like the Safe Human Interaction Cockpit. Innovative software



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utilizing artificial intelligence to provide new features and further-developed mobility offerings will also be highlighted.

Join ZF in Las Vegas

Press Conference: Monday, January 6, 2020, 8 AM (PST): Mandalay Bay, Lagoon E & F. Alternatively, you can watch the livestream at

www.zf.com/CESlive

ZF Booth: LVCC, North Hall, booth 3931

Caption:

"cubiX" by ZF: The chassis of the future made of code. A software component gathers sensor information from the entire vehicle and prepares it for an optimised control of active systems in the chassis, steering, brakes and propulsion. In this way, "cubiX" can centrally optimize driving behavior.

Image: ZF

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ZF Friedrichshafen AG

ZF is a global technology company and supplies systems for passenger cars, commercial vehicles and industrial technology, enabling the next generation of mobility. With its comprehensive technology portfolio, the company offers integrated solutions for established vehicle manufacturers, mobility providers and start-up companies in the fields of transportation and mobility. ZF continually enhances its systems in the areas of digital connectivity and automation in order to allow vehicles to see, think and act.



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In 2018, ZF achieved sales of €36.9 billion. The company has a global workforce of 149,000 with approximately 230 locations in 40 countries. ZF invests over six percent of its sales in research and development annually.

For further press information and photos please visit: www.zf.com