



Less traffic jams in the city: ZF makes local public transport smart and emissions-free

- **ZF offers electric drive solutions for all vehicle classes, from e-bikes to articulated buses**
- **Smart and networked local public transport is the key to stress-free mobility**
- **Advanced sensors and powerful central computers for automated driving functions**

Friedrichshafen/Stockholm. Congestion, lack of parking spaces, and driving bans for diesel cars; fearing gridlock and aiming to meet climate targets, many cities are expanding their public transport services. A network of different means of transport that is as seamlessly integrated as possible should offer people all the benefits of mobility. ZF supports this switch to emissions-free, safe, and smart public transport with a diverse range of electric drives for all vehicle segments, plus sensors and control boxes for autonomous transport systems. The technology group will present its comprehensive portfolio at the UITP Global Public Transport Summit in Stockholm.

To offer a more sustainable and attractive alternative to individual mobility, an increasing number of local public transport networks are providing broad and interconnected services that include traditional means of transport such as buses and trains alongside ride-sharing options or e-bike rental stations.

Electric solutions for the entire vehicle spectrum

For example, the technology group offers electric drive solutions for vehicles of all sizes – from the compact and powerful Sachs RS pedelec motor to two versatile e-drives for buses. Firstly, the **CeTrax** electric central drive with its "plug-and-drive" approach makes it possible for bus manufacturers to electrify existing vehicle models without major changes to the chassis, axles, structural engineering, or differential gear. Secondly, the **AxTrax AVE** electroportal axle, which has already



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proven itself more than a thousand of times in series production worldwide, is an attractive solution not only for OEMs but also when retrofitting existing fleets with electric drives. Under the name e-troFit, ZF Aftermarket offers retrofitting as a complete service in collaboration with engineering company in-Tech.

ZF supplies both CeTrax and AxTrax AVE as a coordinated **overall system** combined with an inverter and drive control, therefore guaranteeing its customers maximum performance, efficiency, and service life.

Digital systems make fleet management more efficient

Reliability and efficiency are decisive factors for transport associations. ZF relies on its broad expertise in smart digital solutions to avoid unplanned downtime and enable efficient fleet management. The group offers a comprehensive tool for both all-electric and mixed bus fleets in the form of the **Openmatics** open connectivity platform. Openmatics captures all relevant parameters and diagnostic data from the electric driveline, allowing bus operators to get the most from the charging infrastructure and plan vehicle maintenance on an anticipatory basis. ZF has also developed a new, cloud-based predictive maintenance program for the EcoLife transmission system, which is the preferred choice in city buses: **ZF-DriveLife** reliably and comprehensively monitors and analyzes the status of the transmission. This allows operators and OEMs to maximize transmission life through predictive maintenance, while also minimizing operating costs and downtime. A similar approach is used in tour buses with TraXon predictive maintenance. With this new feature, ZF has prepared its successful TraXon transmission system for the digital future of the commercial vehicle industry.

Automated transport for enhanced quality of life

In the future, self-driving transport systems for ride-sharing services will make another major contribution to smart urban mobility. ZF has developed a comprehensive range of camera, radar, and lidar sensors to allow these robotic taxis to navigate through city traffic reliably and



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safely. The company offers the most powerful central computer currently available in the automotive industry in the form of the **ZF ProAI RoboThink** AI-enabled control box. In the **e.GO Moove GmbH** joint venture and together with Dutch mobility service provider **2getthere**, in which the group acquired a majority shareholding last spring, ZF is working on various autonomous transport systems for future urban mobility. ZF will present its complete range of public transport solutions at the UITP Global Public Transport Summit in Stockholm from June 9 to 12, 2019.

Press Photos can be downloaded here:

<https://www.zf.com/uitp2019>

Caption:

Smart solutions for attractive local transport: ZF offers systems for all fields of networked and emissions-free urban mobility.

Images: ZF

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ZF Friedrichshafen AG

ZF is a global technology company that supplies mobility-focused systems for passenger cars, commercial vehicles, and industrial technology. With its comprehensive technology portfolio, the company offers integrated solutions for established vehicle manufacturers, mobility providers, and startups in the fields of transportation and mobility. Digital networking and automation are focal points of ZF system development. ZF allows vehicles to see, think, and act.

The company employs a global workforce of 149,000 people at around 230 sites across 40 countries. In 2018, ZF achieved sales of €36.9 billion. The company invests more than six percent of its turnover in research and development each year.

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