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Redefining Fleet Efficiency: ZF presents New Digital Fleet Orchestration Platform SCALAR

- **Offering fleets real-time, AI-based automated decision-making and optimization, SCALAR delivers advanced operational efficiency**
- **Establishing intelligent end-to-end systems, SCALAR can seamlessly 'orchestrate' freight logistics and passenger transportation**
- **Setting a new industry benchmark, SCALAR brings together advanced digital connectivity and future technologies, including autonomous driving, for mixed fleets.**

Friedrichshafen, Germany. ZF's Commercial Vehicle Solutions (CVS) division has presented SCALAR, its advanced new digital Fleet Orchestration Platform, ahead of IAA Transportation 2022. Offering a diverse suite of features designed to optimize commercial fleet operations, SCALAR supports a wide range of customer requirements including fully automatic and live planning, routing, scheduling and dispatching solutions. This will help operators, including shippers, carriers, cities, and other stakeholders, embark on the next levels of Mobility (MaaS) and Transportation (TaaS) as a Service. A key building-block of SCALAR is its industry-leading fleet orchestration technology which was acquired from Bestmile in November 2021.

"Leveraging the powerful capabilities of our SCALAR digital Fleet Orchestration Platform will enable ZF to virtually redefine Fleet Management," said Hjalmar Van Raemdonck, Head of Digital System Solutions with ZF's Commercial Vehicle Solutions division. "Helping commercial fleets achieve new levels of efficiency, SCALAR establishes intelligent end-to-end systems which 'orchestrate' the whole process of freight logistics as well as passenger transport."



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“To achieve this, ZF is bringing advanced connectivity on a whole new level through SCALAR to enhance fleet services and operations. Orchestration undoubtedly has the potential to be the next big thing in fleet management, capable of bringing the technologies of the future, such as autonomous driving, together today,” added Van Raemdonck.

SCALAR further extends ZF’s leadership in commercial vehicle connectivity. Building on over 35 years of ZF’s advanced Fleet Management Solutions (FMS) expertise through its cutting-edge Transics-branded telematics portfolio and fleet digitalization experience, ZF has now also added world-class autonomous vehicle orchestration capabilities. Leveraging unique vehicle data and taking real-time, AI-based automated decision-making and fleet optimization to the next level, SCALAR’s open, modular platform can support a wide range of customer requirements for both homogeneous and mixed fleets.

The integration of Bestmile’s Orchestration solution represents both a technology enabler as well as a significant commercial milestone for SCALAR in preparing the ground and delivering orchestration services. Underpinning ZF’s strategy to realize Mobility-as-a-Service (MaaS), ZF is already successfully commercializing the Mobility Service Orchestration Solution, enabling public and private mobility providers to plan, launch and operate highly efficient fixed-route and demand-responsive transportation services for passengers.

With over 25 percent of freight journeys estimated to be empty runs, Orchestration has the potential to help improve fleet efficiency by sending the right driver to the right vehicle at the right time. This includes helping select the most fuel-efficient and less environmentally impactful route, supporting fleet sustainability and reducing the Total Cost of Ownership (TCO).

Leveraging its position as the largest global vehicle technology provider for commercial vehicles, ZF can access rich and unique proprietary vehicle data from its comprehensive portfolio of IoT/connectivity devices. Having additionally acquired Bestmile's world-class



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optimization technology for autonomous vehicles and passenger cars, ZF has further enriched its extensive Fleet Management System expertise with capabilities of forecasting, self-learning and live automated decision-making for fleets. ZF has now built an open, modular and dynamic platform to bring all these capabilities together. Fully automating fleet processes, ZF's SCALAR ensures fleets can automatically send the right mission to the right vehicle at the right time – all in real-time.

Orchestration generates greater value than combining individual isolated digital solutions through active integration, automation and self-learning. Planning, routing, dispatching and business intelligence are actively integrated and optimized with AI to deliver significant benefits. This includes eliminating management by exception and human error margins as well as ensuring live adaption and re-optimization to fully automate fleet operations.

SCALAR also provides a wide range of technology benefits to support operational efficiency, sustainability and vehicle uptimes. During its recent Global Technology Days, ZF showcased two key proof-of-concepts to demonstrate SCALAR's future capabilities. This includes supporting driver safety as a result of advanced processing of data from a vehicle's ADAS systems. Additionally, by processing data from cargo monitoring sensors, such as CargoCam, SCALAR has the future potential to provide better protection and management of trailer payloads.

"ZF's unrivalled ability to leverage rich commercial vehicle data, combined with a world-class orchestration system and SCALAR's open, dynamic, modular platform, offers enormous potential," concludes Van Raemdonck. "SCALAR is uniquely positioned to support the transition of cargo and people mobility towards an increasingly mixed and autonomous world for tomorrow's fleets."



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Captions:

Picture 1-3: ZF presents its new SCALAR Fleet Orchestration Platform (web view shown in picture 2), which it believes is set to powerfully redefine fleet management across the commercial freight and passenger transport sectors.

Picture 4: Orchestration can make a significant contribution to improving fleet efficiency: rides are optimally planned and combined, with routes dynamically adjusted and optimized as needed.

Images: ZF

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About ZF

ZF is a global technology company supplying systems for passenger cars, commercial vehicles and industrial technology, enabling the next generation of mobility. ZF allows vehicles to see, think and act. In the four technology domains of Vehicle Motion Control, Integrated Safety, Automated Driving, and Electric Mobility, ZF offers comprehensive product and software solutions for established vehicle manufacturers and newly emerging transport and mobility service providers. ZF electrifies a wide range of vehicle types. With its products, the company contributes to reducing emissions, protecting the climate and enhancing safe mobility. With some 157,500 employees worldwide, ZF reported sales of €38.3 billion in fiscal 2021. The company operates 188 production locations in 31 countries. For further press information and photos, please visit: www.zf.com

About CVS Division

ZF's Commercial Vehicle Solutions (CVS) division is helping shape the future of commercial transportation ecosystems. Our mission is to be the preferred global technology partner to the commercial vehicle industry. Powerfully combining ZF's



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commercial vehicle systems expertise, extensive technology portfolio and global operations, the division serves the full commercial vehicle industry value chain. As the automotive industry progresses towards an increasingly autonomous, connected, and electrified (ACE) future, ZF's CVS division innovates, integrates and supplies components and advanced control systems that help make commercial vehicles and fleets operate more safely and sustainably. CVS unites ZF's former Commercial Vehicle Technology and Commercial Vehicle Control Systems divisions, the latter being formed following ZF's acquisition of WABCO in Spring 2020.