



Campus Future Driveline: MAN researches together with universities on the drives of the future

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A cooperation between the Friedrich Alexander University of Erlangen-Nuremberg (FAU), the Nuremberg University of Applied Sciences Georg Simon Ohm (Ohm) and MAN Truck & Bus is conducting joint research into the mobility of the future. The Campus Future Driveline works both decentrally together and spatially united on the factory premises of the MAN site in Nuremberg. The joint laboratories on the MAN site were officially opened today in the presence of Prof. Dr. Siegfried Russwurm, President of the Federation of German Industries (BDI) and Marcus König, Lord Mayor of the City of Nuremberg.

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- **Joint use of specialised test benches and measuring equipment**
- **Pool of ideas for common goals and work packages**
- **Teaching and further education within the framework of lectures and teaching modules**
- **First projects in the fields of batteries and hydrogen fuel cells already started**

To jointly commit to the further development of fossil-free, future-proof drives and to create synergies between science and industry - that is the goal of the Future Driveline Campus, which officially opened today. The Friedrich-Alexander University of Erlangen-Nuremberg (FAU), the Technical University of Nuremberg Georg Simon Ohm (Ohm) and the commercial vehicle manufacturer MAN Truck & Bus are involved. As a triple alliance, they will share their existing infrastructure at previous locations and create new laboratories at the Campus Future Driveline on the MAN factory premises in Nuremberg. The first Ohm students will move into their workplaces here in summer 2022. The conversion of the laboratories was started at the beginning of 2022.

Today, five test benches have already been set up and put into operation. A total of eight test benches for batteries and fuel cells as well as a materials

MAN Truck & Bus is one of Europe's leading commercial vehicle manufacturers and transport solution providers, with an annual revenue of about 11 billion euros (2022). The company's product portfolio includes vans, trucks, buses/coaches and diesel and gas engines along with services related to passenger and cargo transport. MAN Truck & Bus is a company of TRATON GROUP and employs approx. 33,000 people worldwide.

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laboratory are to be built here. By leasing the space on the Nuremberg factory premises of MAN Truck & Bus to Ohm, the parties involved have succeeded in making particularly sustainable use of existing resources, because Ohm had already been looking for new space for its students for some time. The symbiotic use of the space vacated by MAN in buildings A3, A5 and A8 represents a win-win situation. Before the Campus Future Driveline moved in, the MAN premises were used for the development of natural gas and diesel engines.

"For MAN Truck & Bus, the campus here in Nuremberg is another milestone in the transformation of this tradition-rich site. This is where the most efficient diesel engines were and are already being created, and this is where the most economical battery packs, fuel cells and electric engines will be developed and produced for our customers in the future with scientific support," said Alexander Vlaskamp, Chairman of the Executive Board of MAN Truck & Bus, during the opening ceremony. Prof. Dr. Siegfried Russwurm, President of the Federation of German Industries (BDI) and Honorary Professor of Mechatronics at FAU, was on site in Nuremberg as a guest of honour. He said: "Technology openness paves the way to climate neutrality. This leads to innovations that convince customers worldwide and are demanded by them. Politicians need to promote innovation without ideological blinkers and focus much more on the transfer between science and business."

Furthermore, representatives of the two participating universities as well as Marcus König, Lord Mayor of the City of Nuremberg, attended the opening ceremony as guests of honour. A video message shown by the Bavarian State Minister for Science and the Arts, Markus Blume, also acknowledged the joint efforts and goals of the partners involved in the Campus.

Prof. Dr. Niels Oberbeck, President of the Georg Simon Ohm University of Applied Sciences, sees many advantages of the cooperation: "Through our application-oriented research, we can not only successfully shape this transformation, which is so important for our region, but also further develop our teaching: Our students gain insights into content and new technologies that would not be possible without the interaction of companies, university and university."

And Prof. Dr. Joachim Hornegger, President of FAU, explains: "Without new and above all sustainable forms of mobility, the transport revolution will not



succeed. Close cooperation between science and industry is essential for this. At FAU, scientists have played a decisive role in shaping research in the field of innovative transport technologies in recent years, just as students are dealing with the topic in various degree programmes. The Campus Future Driveline now brings three important partners in the region, MAN, FAU and THN, even closer together."

The first joint projects of the Campus Future Driveline have been started or put into practice. Prof. Dr. Michael Wensing from FAU wrote the technical lecture "Hydrogen" for the MAN Academy, an internal further education institution. A basic training course on the subject of "hydrogen and fuel cells" developed at the Ohm Professional School (Ohm's institute for further education) has also already gone live. In the field of fuel cells, the research project "Fuel-Cell System Heavy Duty" (FAU), the establishment of an energy laboratory in the NFLUID project (Ohm) and SMART.H2 (Ohm) have been started. The latter deals with the monitoring and regeneration of fuel cells. The BNG 2.0 project (THN), i.e. Battery Next Generation, is concerned with the further development of battery technology.

Nuremberg is and will remain MAN's production and development site - as many recent decisions show. Another project for the future is also about batteries: from 2025, battery packs for MAN trucks and buses will be manufactured in large-scale series production at the MAN site in Nuremberg. The investment (around 100 million euros) is being supported by the Bavarian Ministry of Economic Affairs with 30 million euros as part of the energy research and technology promotion programme.

The pre-development project of the H45 hydrogen combustion engine, which is based on the D38 diesel engine, also originated in Nuremberg. For testing and demonstration purposes, the H45 was integrated into a MAN TGX tractor unit. The topping-out ceremony for a new production hall was also celebrated here at the end of March 2023. (See news item: [Production hall for new group engine is ready](#))



Captions:

E_EOT_CampusFutureDriveline_01.jpg

Opening of Campus Future Driveline on 6.4.2023 in Nuremberg: (from left)

Ulrich Zimmer, Site Manager Nuremberg MAN Truck & Bus SE

Prof. Dr. Andreas P. Fröba, Dean of the Faculty of Engineering Friedrich-Alexander University, Erlangen-Nuremberg

Prof. Dr. Siegfried Russwurm, President of the Federation of German Industries (BDI)

Prof. Dr. Niels Oberbeck, President of the Nuremberg Institute of Technology - Georg Simon Ohm

Alexander Vlaskamp, CEO MAN Truck & Bus SE

Dr. Frederik Zohm, CTO MAN Truck & Bus SE

F_IOD_CampusFutureDriveline_02.jpg

The Friedrich-Alexander University of Erlangen-Nuremberg (FAU), the Nuremberg Institute of Technology Georg Simon Ohm (Ohm) and the commercial vehicle manufacturer are collaborating on research into the drive components of the future in test benches for batteries and fuel cells on the MAN Truck & Bus site in Nuremberg.

F_IOD_CampusFutureDriveline_03.jpg

In a test stand operated by the Nuremberg Institute of Technology Georg Simon Ohm (Ohm) at MAN Truck & Bus site in Nuremberg a doctoral student is researching battery elements.

F_IOD_CampusFutureDriveline_04.jpg

Research into electric drive components is carried out at MAN Truck & Bus in Nuremberg in close cooperation with the Friedrich Alexander University of Erlangen-Nuremberg (FAU) and the Nuremberg Institute of Technology Georg Simon Ohm (Ohm).

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F_IOD_CampusFutureDriveline_05.jpg

In a cooperative project at MAN Truck & Bus in Nuremberg, the commercial vehicle manufacturer is using a test bench for fuel cells of the future together with the Nuremberg Institute of Technology Georg Simon Ohm (Ohm).

F_IOD_CampusFutureDriveline_06.jpg

A doctoral student at the Nuremberg Institute of Technology Georg Simon Ohm (Ohm) is researching the fuel cell as a drive module in a laboratory shared by university institutions and MAN Truck & Bus.