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# **Press Release**

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# Smart parcels take the bus or tram - research project offers new prospects for rural areas

In the distant past, mail coaches brought parcels and passengers alike to their destination. Today, passenger transportation and freight transport are virtually always strictly separated. But does this actually make sense when it comes to rural areas? In the recently launched research project CargoSurfer, Kühne Logistics University (KLU) and seven partners are developing an IT solution that will allow parcels to be reliably delivered in rural contexts using public transportation.

The idea behind the CargoSurfer project: using untapped capacities in public transportation to instead transport goods, like parcels or fresh regional products. Doing so could simultaneously solve two structural problems plaguing rural areas: on the one hand, many seats in regional buses and trains are often empty, as a result of which regional routes are frequently discontinued. On the other, there is a substantial need for smoothly functioning supply chains, especially beyond city limits, e.g. for orders from online shops. Ideally, this approach could reduce traffic and emissions, save costs and boost efficiency in the transport sector. "But taking cargo along in public transportation can only work if everything is seamlessly monitored and parcels are reliably delivered," explains Dr. André Ludwig, Associate Professor of Computer Science in Logistics at Kühne Logistics University in Hamburg.

### Parcels that can think for themselves

"We use Artificial Intelligence technologies to make cargo 'smart,'" says Ludwig, describing the KLU's responsibilities in connection with the project. If any problems arise in transit, e.g. a traffic jam or delayed train, the parcels can automatically detect them and respond accordingly. "Our software accompanies the parcels, basically serving as a virtual courier. Thanks to AI, it knows whether it's made the planned connection. If not, all parties involved are informed in a timely manner and a new transport schedule is created."

As part of the research initiative mFUND, the Federal Ministry for Digital and Transport (BMDV) will provide total funding of 2.7 million euros for the project over three years. The project is being coordinated by LaLoG LandLogistik GmbH.

# Field test in Hessen

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Before the first parcels can begin their journey, a comprehensive analysis is called for. How likely is there to be a problem on a given day? Which factors can affect punctuality and reliability of service? And which alternatives are there when it comes to the form of transport?

Software development will likely take roughly a year before the system can be tested in the field and the first intelligent parcels are shipped throughout Hessen. This is based on an already market-tested application in the ondemand transport of Trapeze Group Deutschland GmbH, which is now being upgraded for the freight transport system. In this regard, cantus Verkehrsgesellschaft mbH and Regionalverkehr Main-Kinzig GmbH are important transport providers who've gotten on board as regional logistics partners. "As soon as the first parcels are shipped, we can continually refine the system using real-world data," Ludwig explains.

### **Further information:**

- Download Photo material Prof. André Ludwig and KLU

### About CargoSurfer

In addition to Gutes aus Waldhessen e.V. and SPESSARTregional e.V., the project members include the Behinderten-Werk Main-Kinzig e.V., cantus Verkehrsgesellschaft mbH, Regionalverkehr Main-Kinzig GmbH, Kühne Logistics University (KLU), Trapeze Group Deutschland GmbH and LaLoG LandLogistik GmbH, which is coordinating the project.

## About the BMDV's mFUND:

In the context of the innovation initiative mFUND, since 2016 the BMDV has supported data-based R&D projects for a digital and networked Mobility 4.0. This financial backing is complemented by active professional networking between various actors from the political, business, administrative and research communities, and by the provision of open data on the mCLOUD portal. For further information, please visit www.mFUND.de.

### About KLU

Kühne Logistics University - Wissenschaftliche Hochschule für Logistik und Unternehmensführung (KLU) - is a private university located in Hamburg's HafenCity. The independent, state-certified university's major research areas are Sustainability, Digital Transformation and Value Creation in the fields of Transport, Global Logistics, and Supply Chain Management.

KLU is one of very few private universities in Germany entitled to confer their own PhDs. The 2021 ranking of the Wirtschaftswoche identifies KLU as one of the strongest research universities in the field of Business Administration in Germany, Austria and Switzerland. Comparing the research output per professor among all participating universities, KLU ranked 4th in Germany and 8th in the DACH region. In the latest CHE university ranking, KLU obtained the highest marks for all major criteria.

With one BSc and three MSc degree programs, a structured doctoral program, and a part-time Executive MBA, KLU offers its 400 full-time students a high level of specialization and excellent learning conditions. KLU has an international team of 27 professors who teach in English. In open, tailor-made management seminar series, industry specialists and managers alike benefit from the application of academic findings to practical issues.

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