

## devolo launches the "GridMaximizer – Phase 2" project for the energy revolution in collaboration with TH Köln

Aachen, Germany, 3 March 2026 – devolo solutions GmbH and TH Köln (Cologne University of Applied Sciences) are working to create better infrastructure for the energy revolution. The purpose of the collaborative "GridMaximizer – Phase 2" project is to enable decentralised and grid-conductive control of consumers and energy producers.

The topics of this press release:

- devolo and TH Köln: a strong team
- The challenges of the future
- GridMaximizer – Phase 2
- devolo as a partner for the energy revolution

### devolo and TH Köln: a strong team

The energy revolution is steadily gaining traction, but it is also steadily bringing new challenges. On the one hand, electric vehicles, heat pumps and solar systems are paving the way for a greener and more resilient future for us, but on the other, they are putting the current infrastructure to the test. This is all the more reason for devolo to be delighted to collaborate with TH Köln actively to create new communication networks that are fit for the energy revolution. As part of the "GridMaximizer – Phase 2" project, TH Köln and devolo solutions GmbH are collaborating to create new system architecture for the decentralised control of electrical consumers. The initial goal is to create a prototype implementation. This collaborative project is funded by the state of North Rhine-Westphalia and the European Union as part of the ERDF/JTF program NRW 2021-2027.

### The challenges of the future

The project is based on the GridMaximizer concept for intelligent, autonomous grid optimization in the low-voltage range, developed and patented by TH Köln. This will be validated under real conditions and will solve a key problem of the energy revolution: the energy distribution system, which currently is centrally controlled, is to be replaced by a locally networked, resilient and technology-neutral system.

The current infrastructure for the power grid is not designed for the complexity associated with decentralised energy generation. The energy revolution also includes, for example, electric vehicles that not only charge but also make their electricity storage available to the energy grids (vehicle-to-grid) to feed electricity into the grid in the event of short-term bottlenecks. In order for such grid-conductive measures to work, the power grid must be controlled quickly and precisely at specific points. This means that much more data needs to be exchanged, both across the entire network and at the local level. Robust communication networks are needed to guarantee maximum network stability.

The problem: Two technologies are used in the low-voltage grid in Germany that are not optimally designed for such future requirements. Classic ripple control technology offers only a low data rate, no back channel and option to address consumers individually. However, broadband communication based on mobile communications used in intelligent measuring systems is cost-intensive, difficult to scale and offers little fail-safety.

## **GridMaximizer – Phase 2**

The "GridMaximizer – Phase 2" project relies on open, standardised communication protocols (rfc7252, rfc8613) based on state-of-the-art IPv6 networks to reliably support even narrowband networks such as 6LoWPAN with high latencies.

This opens up the possibility of using established and readily available transmission technologies such as Wi-Fi mesh (802.11s), G3-PLC, or broadband Powerline (ITU G.hn G.9960) for the decentralized, local-network communication infrastructure. Such infrastructure could enable charging stations and PV inverters, for example, to exchange data in real time without the high communication requirements limiting the choice of technology. This would enable cost-effective implementation of shared local infrastructure that can be integrated into larger networks in a grid-conducive and scalable manner and adapted to specific requirements.

devolo solutions GmbH, with years of expertise in the areas of Powerline and network technologies, firmware development and communication security and smart grids, bears the main responsibility for technical implementation as part of the project. The range of tasks includes the development and implementation of the application, communication protocols and validation of various physical transmission technologies. TH Köln is responsible for project management and scientific coordination, including the development and validation of optimisation algorithms, network status estimation, system architecture and the methodical test and evaluation method.

## **devolo as a partner for the energy revolution**

devolo solutions GmbH has years of experience in the development and integration of PLC solutions (Powerline Communication) in the Smart Grid and Smart Metering areas. With the devolo MultiNode LAN, the company has also developed a special Powerline adapter optimised for networking in distribution networks. devolo is looking forward to contributing and further expanding its expertise as part of this project. The project will run until 31 December 2026.

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This text and current product images can also be found at [www.devolo.com](http://www.devolo.com) in the media section of the devolo website.

## About devolo

devolo develops intelligent home networking solutions that send high-speed Internet into every corner of your house or flat. The main product for household customers is devolo Magic, a technology that makes it possible to establish smart networks over existing electrical wiring. The product portfolio is rounded off with innovative mesh Wi-Fi systems and solutions for fibre-optic connections.

In the professional sector, devolo is a reliable partner of international telecommunications providers, global industrial corporations, leading medium-sized companies and the fast-growing energy industry. Anywhere secure, high-performance data communication is needed, partners rely on devolo.

With over 50 million products sold, devolo belongs to the world's market leaders. More than 1,000 international top-product test reviews and distinctions underscore our leadership in innovation. devolo was founded in 2002 in Aachen, Germany, and is represented in more than 10 countries.