**MEDIAINFORMATION**

## Connected container terminals: Telekom builds 5G campus networks for EUROGATE

- Telekom to equip port terminals in Hamburg, Bremerhaven and Wilhelmshaven with local 5G networks by spring 2024
- Funding by the Federal Ministry of Digital Affairs and Transport in accordance with the "Digital Test Fields in Ports" guideline
- Maximum 5G performance for digital logistics applications
- Full control over critical data traffic thanks to new network architecture

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5G for the digitization of port logistics: Europe's leading shipping-independent container terminal operator EUROGATE has commissioned Deutsche Telekom to implement three 5G campus networks. At the ports in Hamburg, Bremerhaven and Wilhelmshaven, the 5G business customer solution "Campus network L" will improve mobile coverage at the container terminals. This will enable the container terminal operator to deploy digital logistics applications even more securely and flexibly in the future - with exclusive bandwidth, high availability and full 5G performance. To this end, EUROGATE will use its own 5G industrial frequencies in the 3.7 to 3.8 gigahertz (GHz) range for critical data traffic in addition to Telekom's public mobile network - for example, for the further digitization of handling processes or the closer networking of handling equipment with control and process control systems. The project has now been launched at a kick-off event at the Port of Hamburg.

**Digitization of port logistics thanks to "Port-As-A-Service" funding project**

The "Port-As-A-Service" project is funded by the German Federal Ministry of Digital Affairs and Transport (BMDV) as part of the "Digital Test Fields in Ports" funding directive. Here, the establishment of digital test fields in ports is supported in order to create real test spaces for innovations in the field of Logistics 4.0. The realization of the 5G campus networks together with other digital infrastructure measures at EUROGATE with a project volume of EUR 3.7 million is being funded with EUR 2.9 million under the funding guideline and is being supported by TÜV Rheinland as the project sponsor of the funding guideline. The aim of "Port-As-A-Service" is to exploit the opportunities of digitalization for German seaports and to optimize investments in infrastructures. For EUROGATE, the opportunities here include:

- the networking of control and process control systems,
- the automation of container handling through the use of automated and/or autonomous port handling equipment,
- the support of container arrival and delivery by autonomous trucks,
- and connecting industrial port handling (IIOT) equipment to the cloud and using the data as part of a digital twin of a container terminal.

„An efficient and reliable technical infrastructure is the basis for making container handling at our terminals even more efficient and securing our competitiveness in the long term," says **Michael Blach**, Chairman of the EUROGATE Group Management Board. "Deutsche Telekom's 5G Campus networks will provide us with the best conditions for further automating our processes and testing innovative logistics solutions based on 5G".

**Light poles become 5G antenna carriers.**

Telekom's campus networks will cover a total area of 5.6 million square meters at the three container terminals with the latest mobile communications standard. This corresponds to the size of around 785 soccer fields. On the one hand, existing mobile communications systems will be expanded on site. Secondly, Telekom is installing three additional 5G radio sites at each of the terminal sites in Bremerhaven (2.9 million square meters) and Hamburg (1.4 million square

meters) and two in Wilhelmshaven (1.3 million square meters). The special feature here is that no new masts are being erected, but existing light poles are being used as supports for the powerful 5G antennas. The deployment of the three 5G campus networks will be completed by spring 2024.

"The 5G coverage of EUROGATE's container terminals is one of our largest campus network projects to date. It will enable EUROGATE to leverage the full potential of 5G to further optimize logistics processes and drive the digital transformation of port terminals," said **Hagen Rickmann**, Managing Director in the Business Customers division of Telekom Deutschland GmbH. "In addition to high-performance 5G connectivity and exclusive bandwidth, the network architecture of the three campus networks will offer a particularly high level of control over critical data traffic on the terminal site in the future."

**Own 5G frequencies for EUROGATE.**
Telekom will equip each of the port terminals with a dual-slice campus network. One of Telekom's public 5G networks will serve employees, external service providers, suppliers and customers, for example. The additional purely private 5G network is operated in the local 5G industrial spectrum in the 3.7 to 3.8 GHz range. Unlike Telekom's public 3.6 GHz spectrum, this is 5G spectrum made available specifically for industry by the Federal Network Agency. It provides exclusive committed network resources for EUROGATE's internal data traffic. Data runs over this part of the network separately and completely unaffected by public 5G data traffic. This means that EUROGATE basically has two 5G frequency bands and a total of around 190 MHz of bandwidth at its disposal.
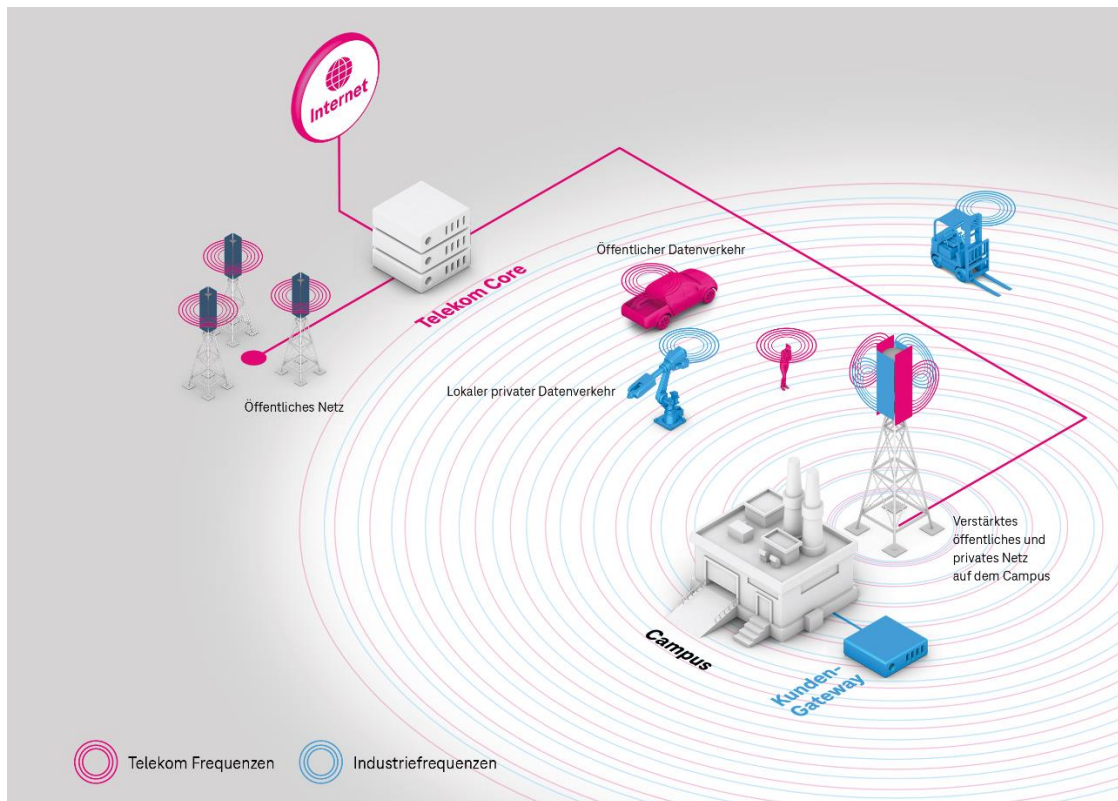
Telekom's 5G business customer solution "Campus-Netz L" is used at the terminals.
Graphic: Deutsche Telekom

**New technical solution: High security and short paths for data.**

In the project, Telekom will deploy a new network architecture for the first time as part of the 5G business customer solution "Campus-Netz L". This means that EUROGATE will benefit from lower infrastructure costs and greater technical flexibility at the same time through the use of a virtualized and dedicated campus core network. This network architecture enables a so-called CUPS solution (Control and User Plane Separation). It combines a central 5G core network within the Telekom network with a local user gateway for the customer. This means that the 5G campus network is managed centrally by Telekom, but the customer's own data remains exclusively on-site on its own campus. This provides EUROGATE with maximum security without the need to additionally invest in its own complete core network. The local user gateway also ensures low latencies: This is because the data takes the direct route from the end device via the private network to the customer's IT.

**High availability and exclusive 5G data traffic**

The 5G Campus solution enables EUROGATE to use exclusive SIM cards with unlimited data flat rates for networked devices. These guarantee maximum private 5G network performance with speeds of up to 1.5 GBit/s download per end device. The customer-specific SIM cards can be administered by EUROGATE via a self-service portal - for example for the allocation of authorizations or for prioritizing selected data within the private 5G network. Furthermore, EUROGATE benefits from service level agreements at the highest level including fixed contact persons and a 24/7 hotline of Telekom. All local network components, including the user gateway, are also redundant. This ensures the continuous availability and reliability of the network.

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**About EUROGATE:**
EUROGATE is Europe's leading shipping company-independent container terminal group. Together with the Italian terminal operator CONTSHIP Italia, the company operates 12 container terminals from the North Sea to the Mediterranean.

The range of services is rounded off by intermodal and box-related services. EUROGATE was founded in 1999. In 2022, the group handled around 11.9 million TEU across Europe. For more information, visit www.eurogate.eu .