

HELMI – The Hereon Layer For Managing Incoming Data

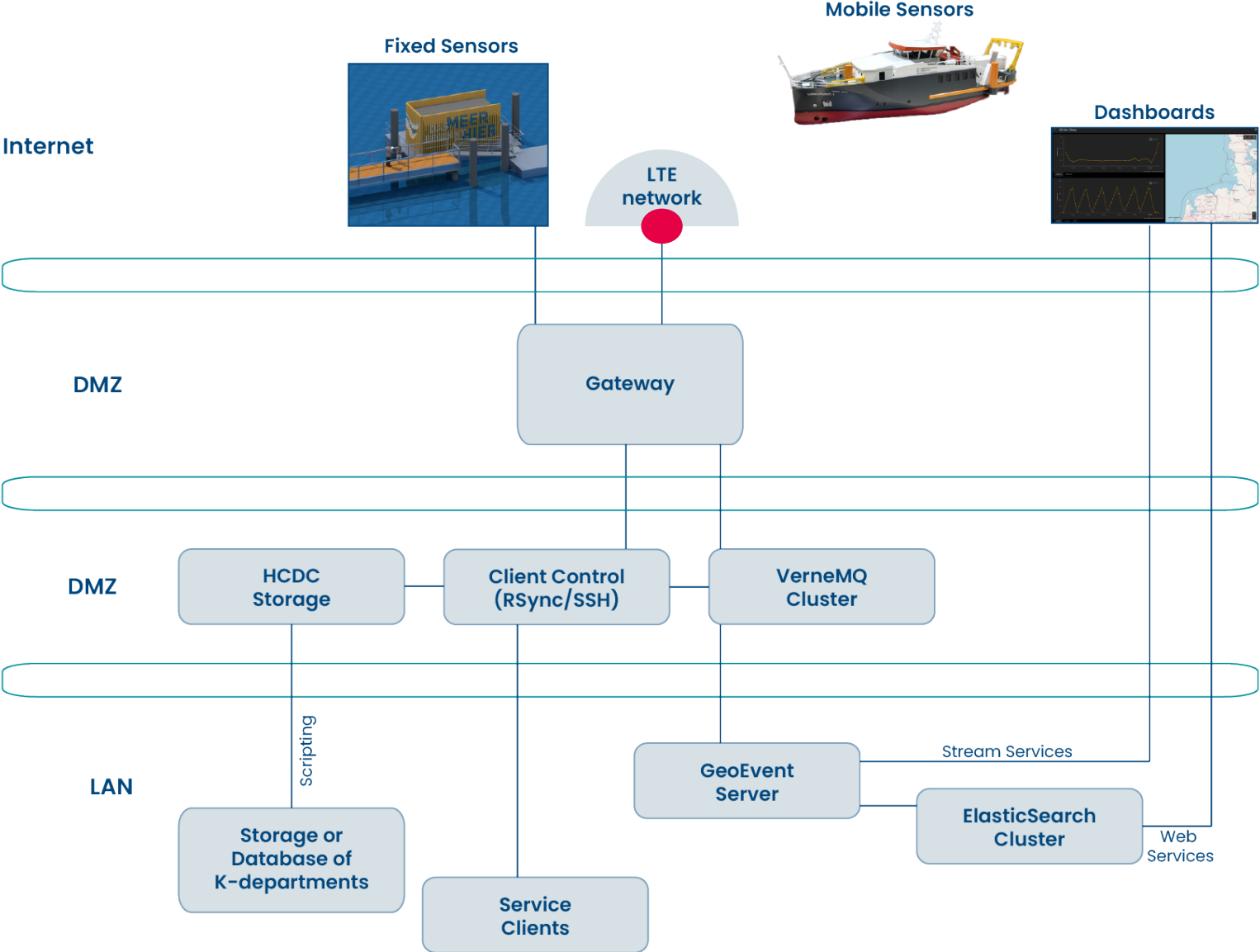
Helmholtz Coastal Data Center (HCDC)

Max Böcke & Linda Baldewein

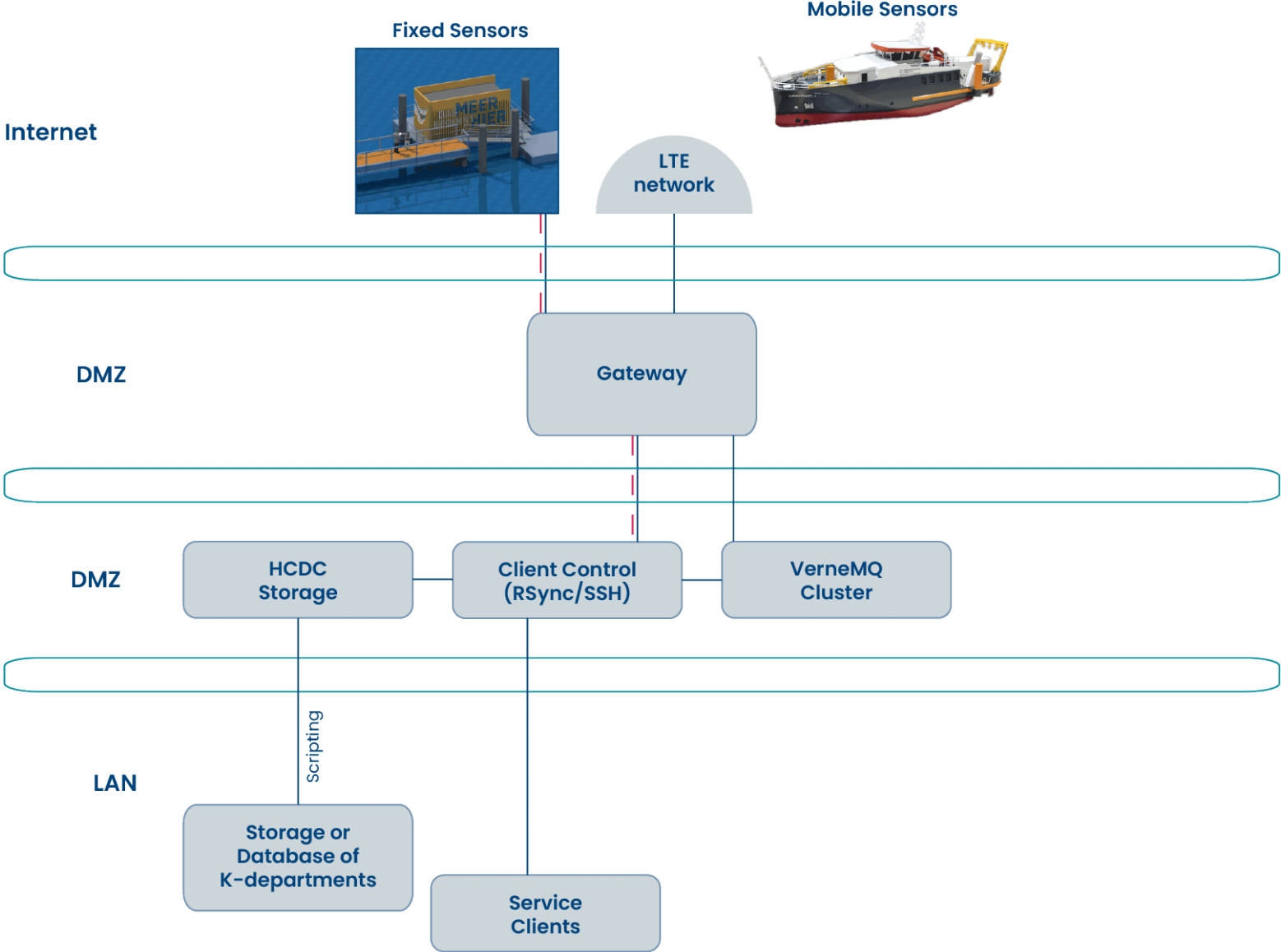
On behalf of Joost Hemmen,
Christian Jacobsen, Tim Leefmann,
Oliver Listing & Jörn Plewka

Institute of Carbon Cycles
Geesthacht, September 29th, 2022

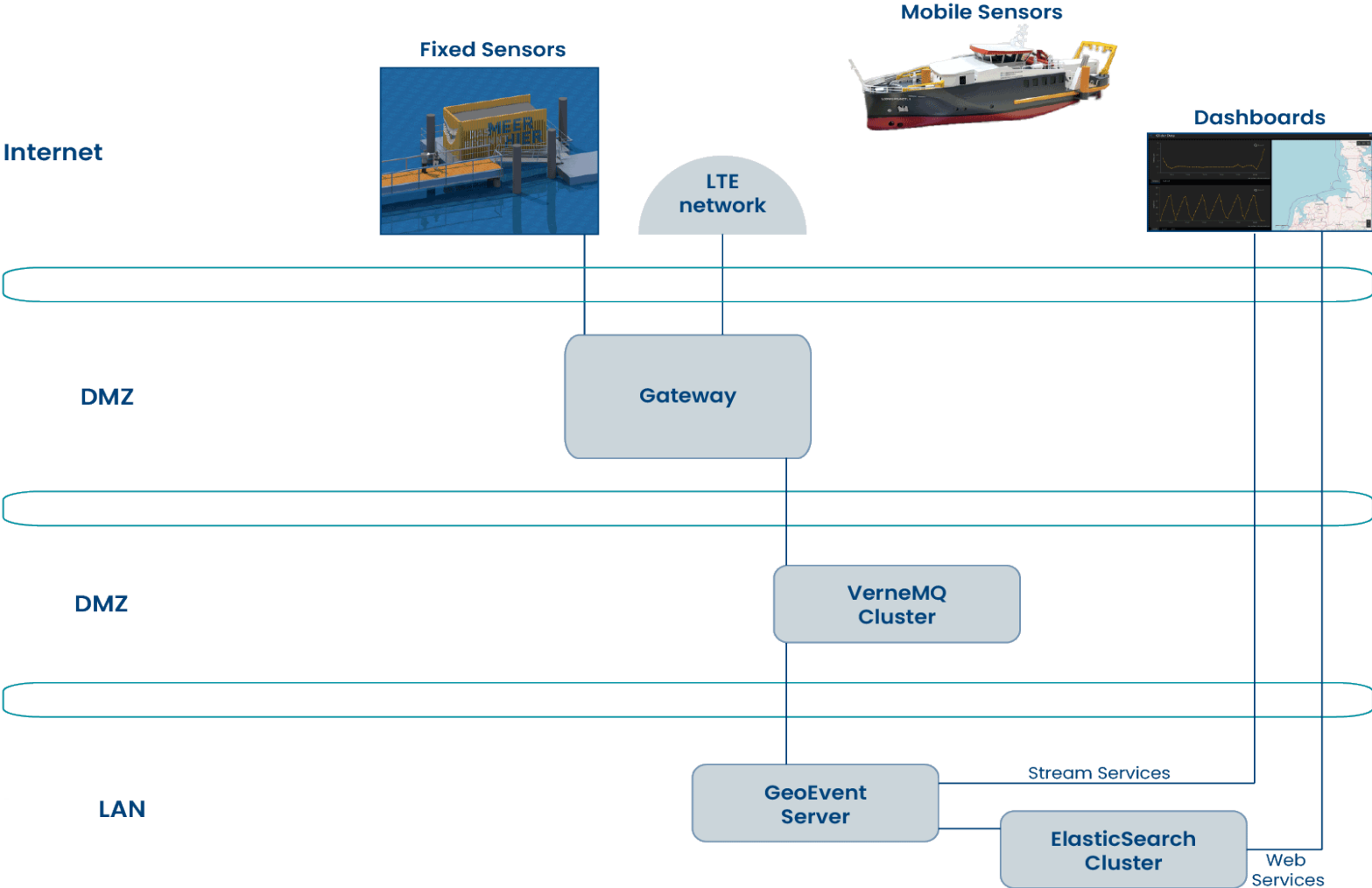
HELMI Sensor Data Transmission - Overview



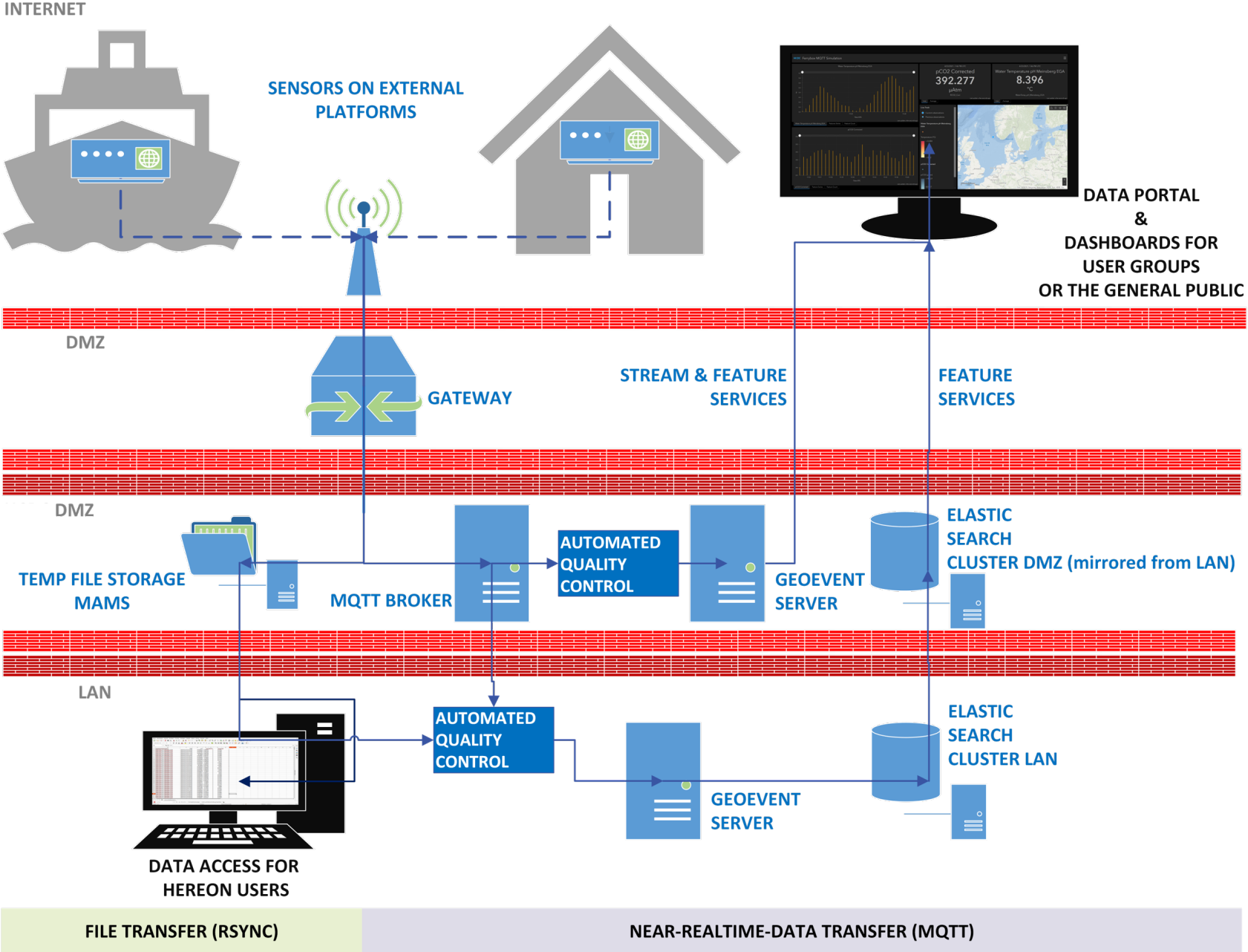
HELMI File Transfer



HELMI MQTT Transfer



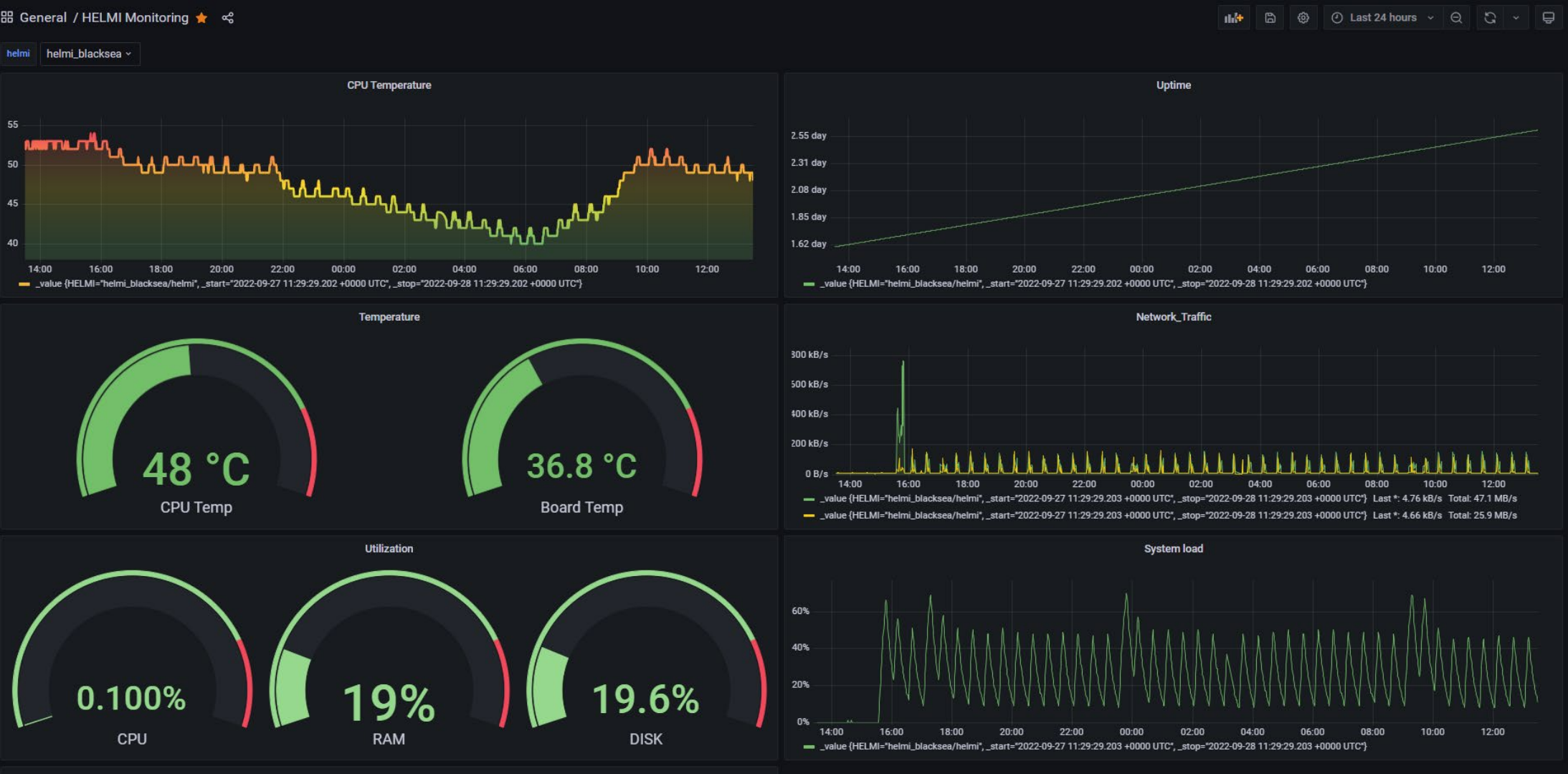
HELMI Sensor Data Flow – Applications, Services and Dashboards



HELMI Technology

Component	Solution	
VPN Tunnel	 WIREGUARD FAST, MODERN, SECURE VPN TUNNEL	Wireguard VPN Tunnel
NRT Transfer		VerneMQ Cluster
File Transfer		rsync Protocol
Hardware		phyGATE Tauri-L

HELMI Monitoring

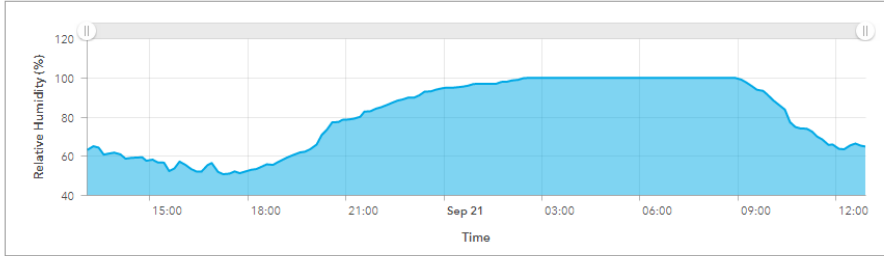


HELMI Dashboards

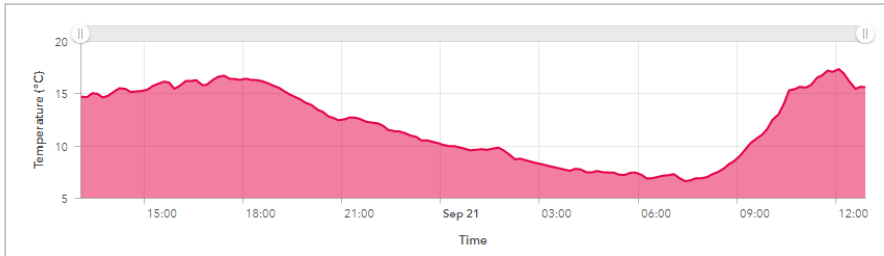
hub.hereon.de/portal/apps/dashboards/3b053237c8e54561b309d4b148b30dc5

Ludwig Prandtl Dashboard

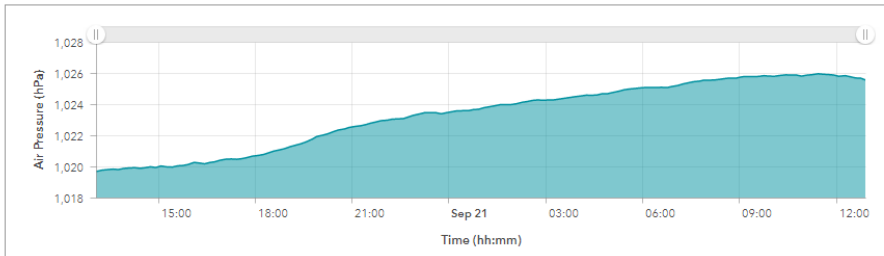
Relative Humidity
64.9 %
9/21/2022, 12:54 PM



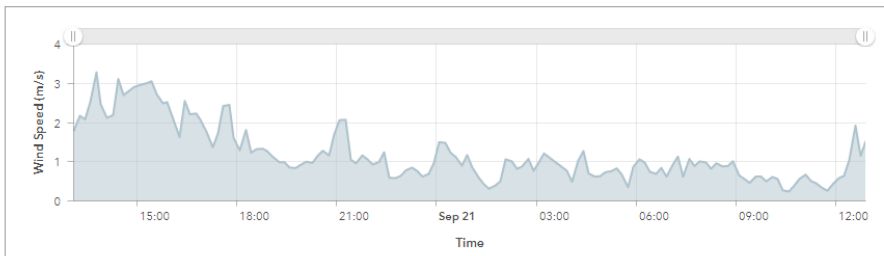
Air Temperature
15.6 °C
9/21/2022, 12:54 PM



Air Pressure
1k mbar
9/21/2022, 12:54 PM



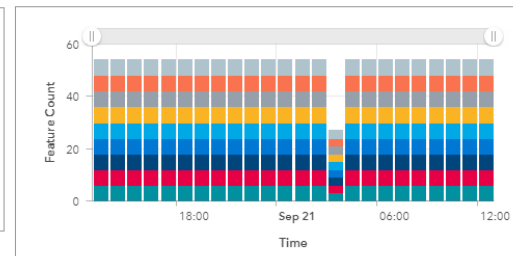
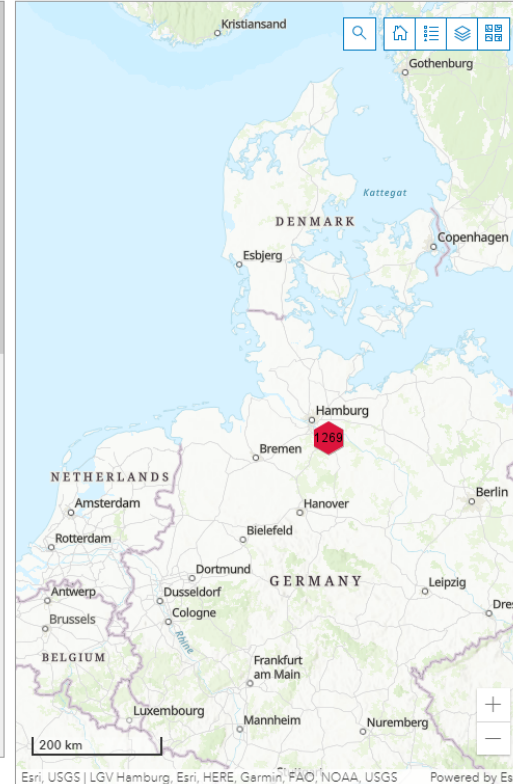
Wind Speed
2 m/s
9/21/2022, 12:54 PM



- AirPressure
■ 1,025.57 mbar
9/21/2022, 12:54 PM
- AirPressure
■ 1,025.70 mbar
9/21/2022, 12:45 PM
- AirPressure
■ 1,025.71 mbar
9/21/2022, 12:35 PM
- AirPressure
■ 1,025.79 mbar
9/21/2022, 12:25 PM
- AirPressure
■ 1,025.86 mbar
9/21/2022, 12:15 PM
- AirPressure
■ 1,025.82 mbar
9/21/2022, 12:05 PM
- AirPressure
■ 1,025.90 mbar
9/21/2022, 11:54 AM
- AirPressure
■ 1,025.93 mbar
9/21/2022, 11:45 AM
- AirPressure
■ 1,025.95 mbar
9/21/2022, 11:35 AM
- AirPressure
■ 1,025.98 mbar
9/21/2022, 11:25 AM
- AirPressure
■ 1,025.92 mbar
9/21/2022, 11:15 AM
- AirPressure
■ 1,025.89 mbar
9/21/2022, 11:05 AM

24 hrs Feature Count
1.3k

Count AIS Navstat



Thank you!

