



## **Congestion management of MV/LV distribution grid**



## Congestion management

## Hierarchical control system:

- Primary (IED) for hard real-time control
- Secondary (SAU) for local optimization
- Tertiary (DMS) for global optimization



## **RTDS** demonstrations

Hardware and software-in-the-loop testing with commercial IEDs and a prototype Substation Automation Unit



- Hierarchical (integration)
- Distributed (local data management and analysis, vertical and horizontal integration)
- Standard-based (IEC 61850, CIM and DLMS/COSEM) information exchange







Solution Architect for Global Bioeconomy & Cleantech Opportunities

