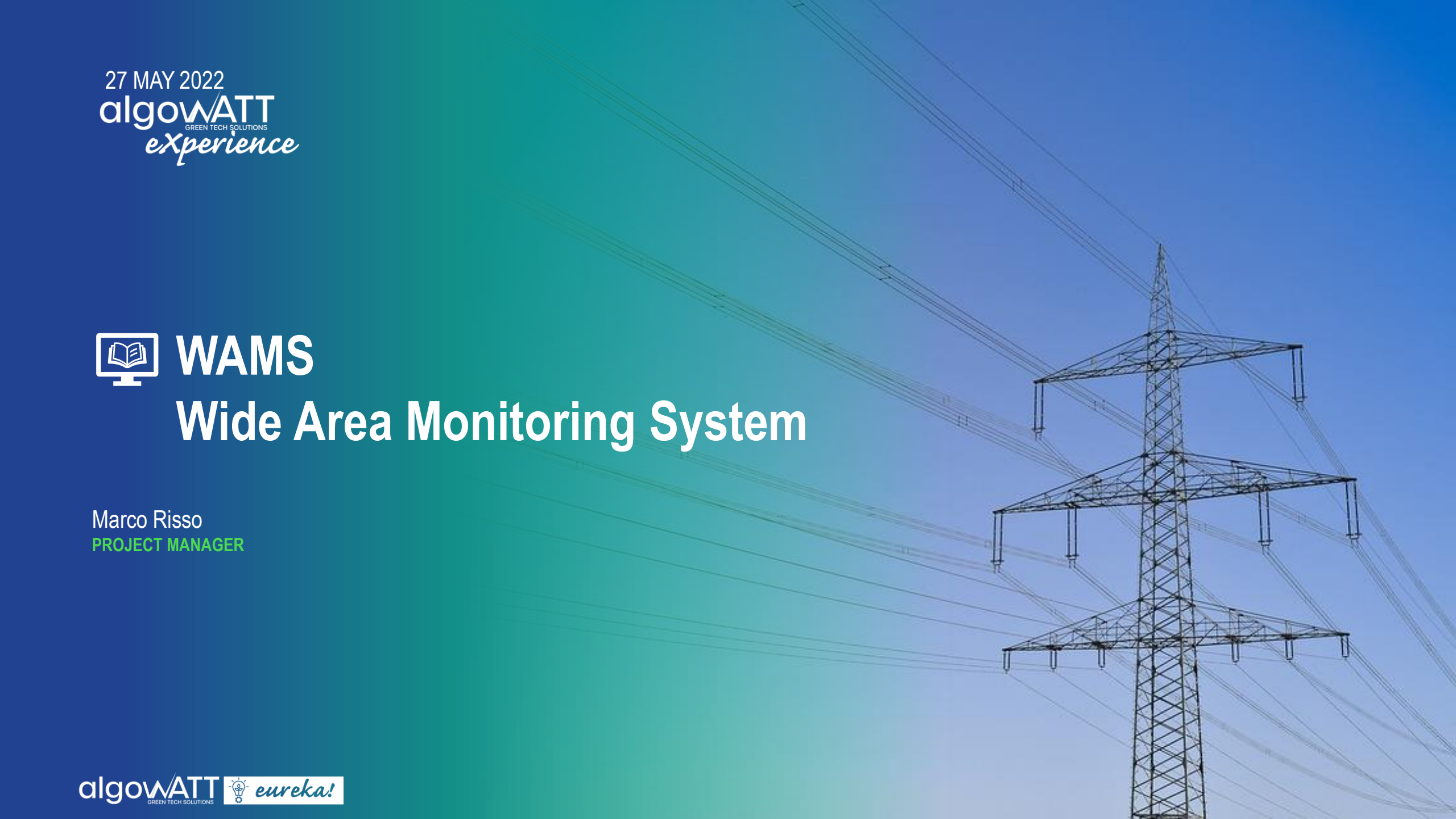
27 MAY 2022

algowATT GREEN TECH SOLUTIONS experience

# WAMS
# Wide Area Monitoring System



Marco Risso
PROJECT MANAGER

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# WAMS – WIDE AREA MONITORING SYSTEM (TERNA)



**WAMS (Wide Area Monitoring System)** it is a high performance realtime system which aims to increase the reliability of the electricity transmission with the consequent decrease in response times of countermeasures in the event of outages on the network. The system acquires and processes the data detected by the PMU (Phase Monitoring Unit) measuring instruments located in the power stations

**Equipment increase**

**Synchrophasor measures: an increasingly central role**

**Increasing number of offline WAMS users**

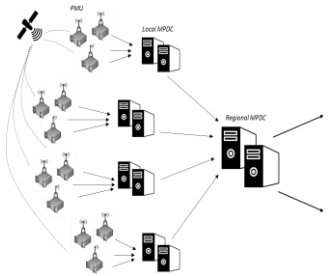
Revision and consolidation of a new architecture capable of responding to future needs (scalability)

- **Multiprotocol Phasor Data Concentrator (MPDC - protocols)**
- **Databus and streaming / buffering platforms (Kafka/DDS)**
- **Long-term historical DB with 20 ms resolution (influxDB)**

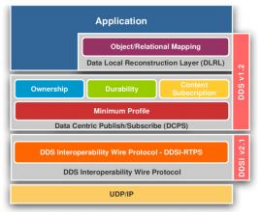
**MPDC based on multiservice architecture**

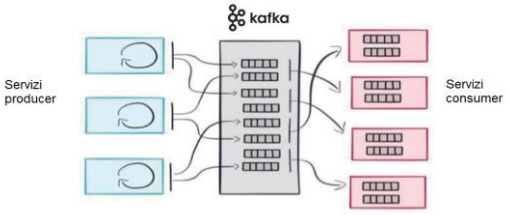
*industrial protocols:*

- *IEE C37.118-2011*
- *IEC 60870-5-104*
- *IEC 61850*



**Real Time Bus (DDS) – Big Data Streaming Data Bus (Kafka)**




*Microservizi*

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