# Statnett welcome to CERN Entsoe WG5 –meeting 12th-13th September 2024

Statnett

**April 2023**

**30.01. January 2024**

**March 2024**

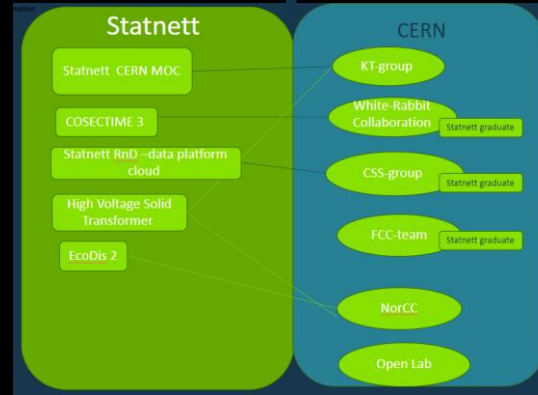Statnett R&D platform in cloud

Long distance time-synchronization use of White Rabbit
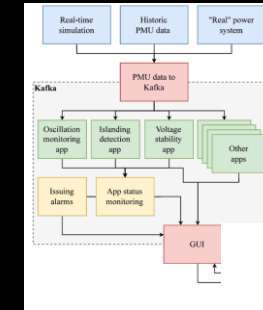


HV-SST

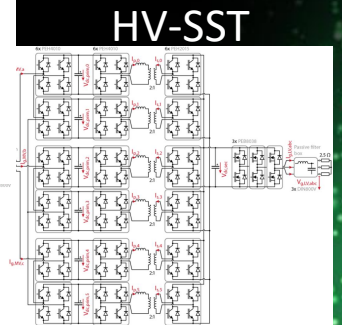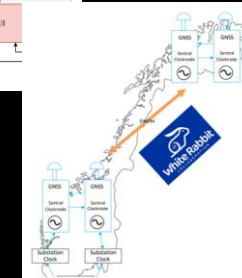First visit to CERN

Sign MOC Statnett-CERN

Bi-weekly meetings

- System Operation
- Surveillance and measurements
- Superconductivity
- AI and Machine learning
- Module based control systems
- Drone and robot technology

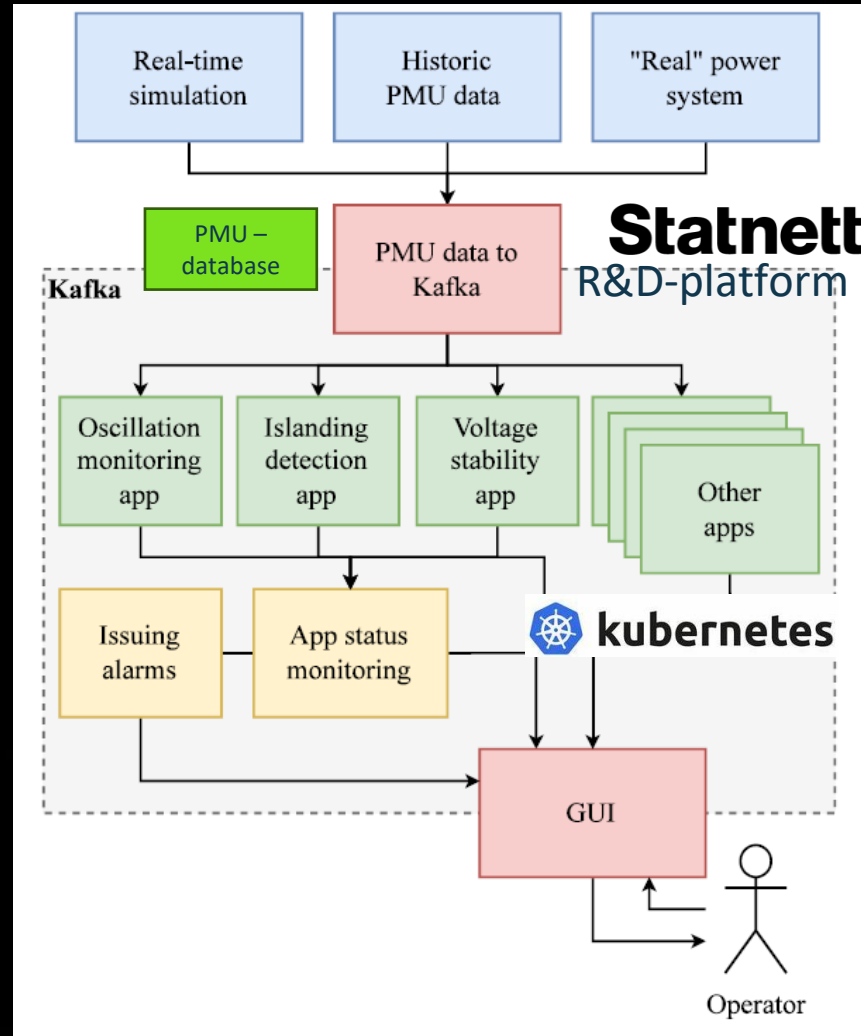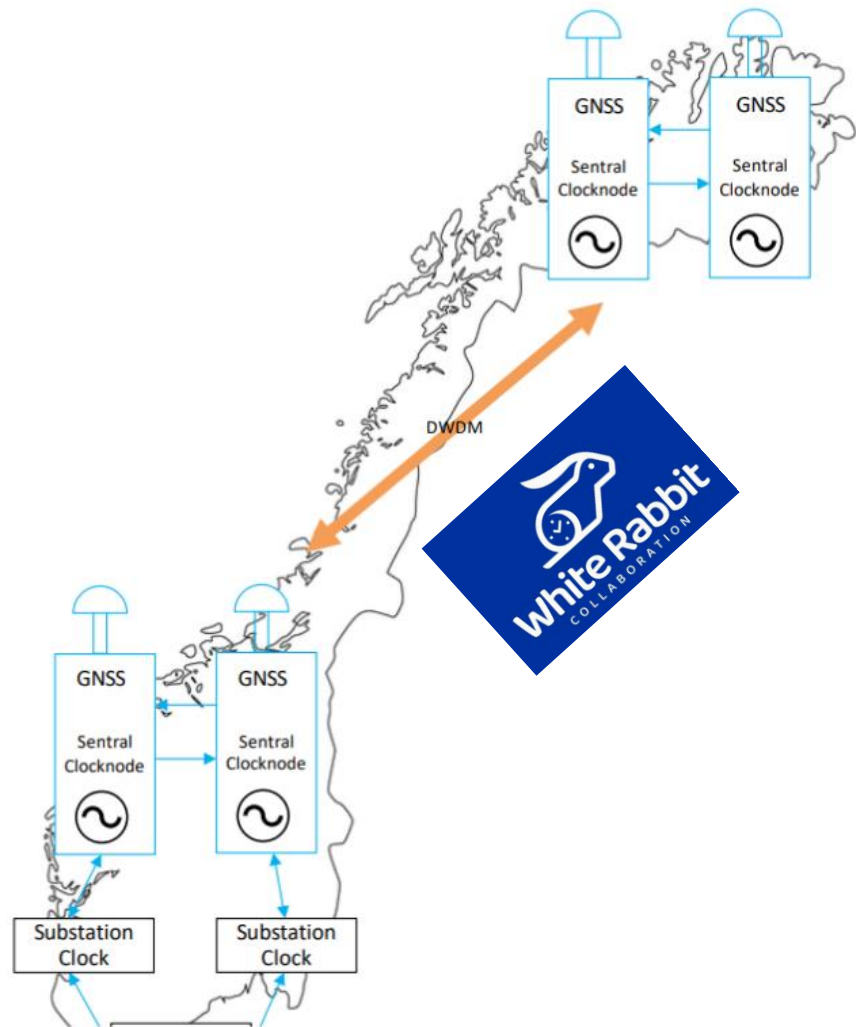**Statnett**

# Statnett R&D platform in cloud



NEWEPS prosjektet

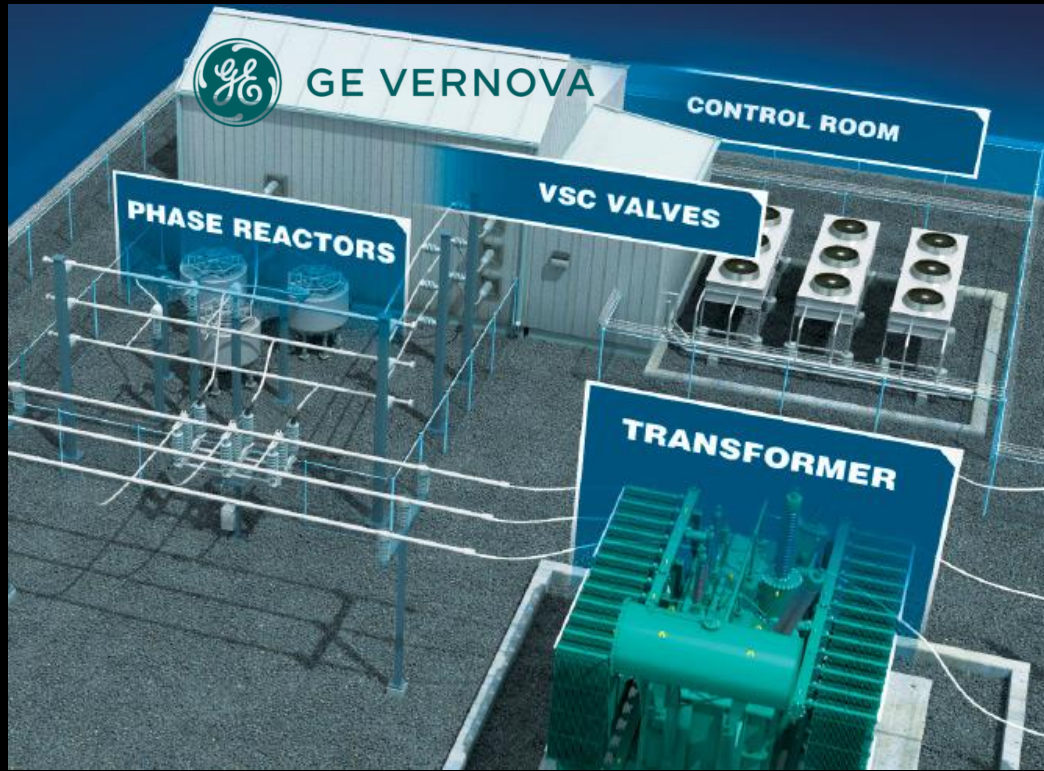# Long distance time-synchronization use of White Rabbit



BfK § 7-14 **j) Sikker tidsreferanse**
*Driftskontrollsystem som er **avhengig** av **eksakt** tidsreferanse, skal ha **sikre kilder** for tidsangivelse.*

- Statnett generates its own autonomous atomic timescales referenced to UTC

- No direct dependence of global navigation satellite systems

- Redundant clock systems and sync networks

- Deliver accurate timing (1µs) to transmission network substations via optical fibers for:
    - Protection relays (over IP)
    - Phase Measuring Unit

**Statnett**

# High Voltage Solid State Transformer (HV-SST)



Static Synchronous Compensator : Power Delivery
Projects : GE Grid Solutions (gevernova.com)