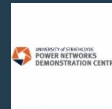
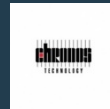


Energyn

Project summary

- Innovative Smart Grid sensor platform for electricity utilities
- High speed, time synchronised measurements of voltage and current waveforms
- Integrated, rugged GNSS/LoRa timing solution
- Artificial Intelligence (AI) Machine learning applications
 - Micro-PMU (Phasor Measurement Unit)
 - Non-Intrusive Load Monitoring (NILM) of electric vehicles
- Server-based application software to provide control and data analytics for the sensor network

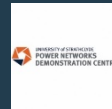
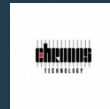


Project schedule

- Liaison with UK Distribution Network Operators (DNO)
- Detailed specification and design
- Development and implementation of hardware & software
- Hardware & software integration
- Demonstration and testing at the Power Networks Demonstration Centre (PNDC)

Project Achievements

- Micro-PMU implemented and tested
- NILM detected electric vehicle charging
 - Detection accuracy 98.9%
- LoRaSync implemented to extend GNSS to underground chambers
- Radio 4 resilient timing for GNSS holdover



Main NAVISP Benefits

- Development of solution to pre-commercial prototype
- Commercially exploitable IPR
- Project management well defined and straight forward
- ESA team professional and flexible to work with

Way forward for the product:

- Electricity network trials with electric vehicles
- Business model: technology licensing
- Exploitation activities: marketing, website, exhibitions, conferences, press releases & literature

