



# Project presentation: INTEGRAL

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# Objective



To achieve an integrated ICT-platform based distributed control of decentralized energy resources (DER)

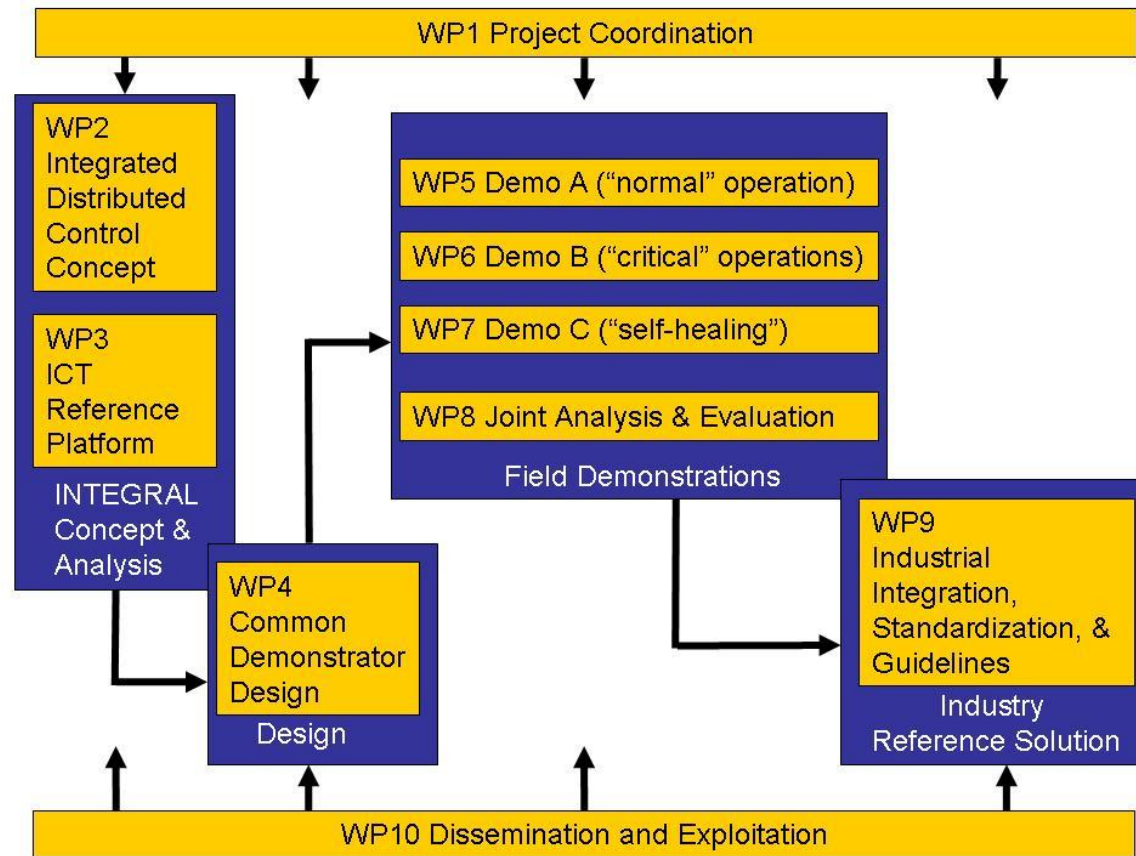
The project aims to build and demonstrate an industry-quality reference solution for DER aggregation-level control and coordination, based on commonly available ICT components, standards and platforms.

# Project steps



1. Define integrated distributed control for coordination and control of many DER devices
2. Show how this can be realized by common industrial, cost-effective and standardized, state-of-the-art ICT platform solutions
3. Demonstrate its practical validity via 3 field demonstrations:
  - Normal operating conditions (showing imbalance reduction potential)
  - Critical operating conditions (showing grid stability)
  - Emergency operating conditions (showing self-healing capabilities)
4. Wrap-up the lessons learned from the demonstrations and provide resulting practical how-to-build guidelines

# Project overview



Project period: 1 Nov. 2007 – 31 Oct. 2010

# Partners

- Universities and R&D institutions:
  - Blekinge Institute of Technology (SE)
  - Energy Research Centre of the Netherlands (NL)
  - Institut National Polytechnique de Grenoble (F)
  - National Technical University of Athens (GR)
- Private companies:
  - Enersearch AB (AB)
  - Gasunie Engineering and Technology (NL)
  - ICTAutomatisering (NL)
  - Wattpic



National Technical  
University of Athens

