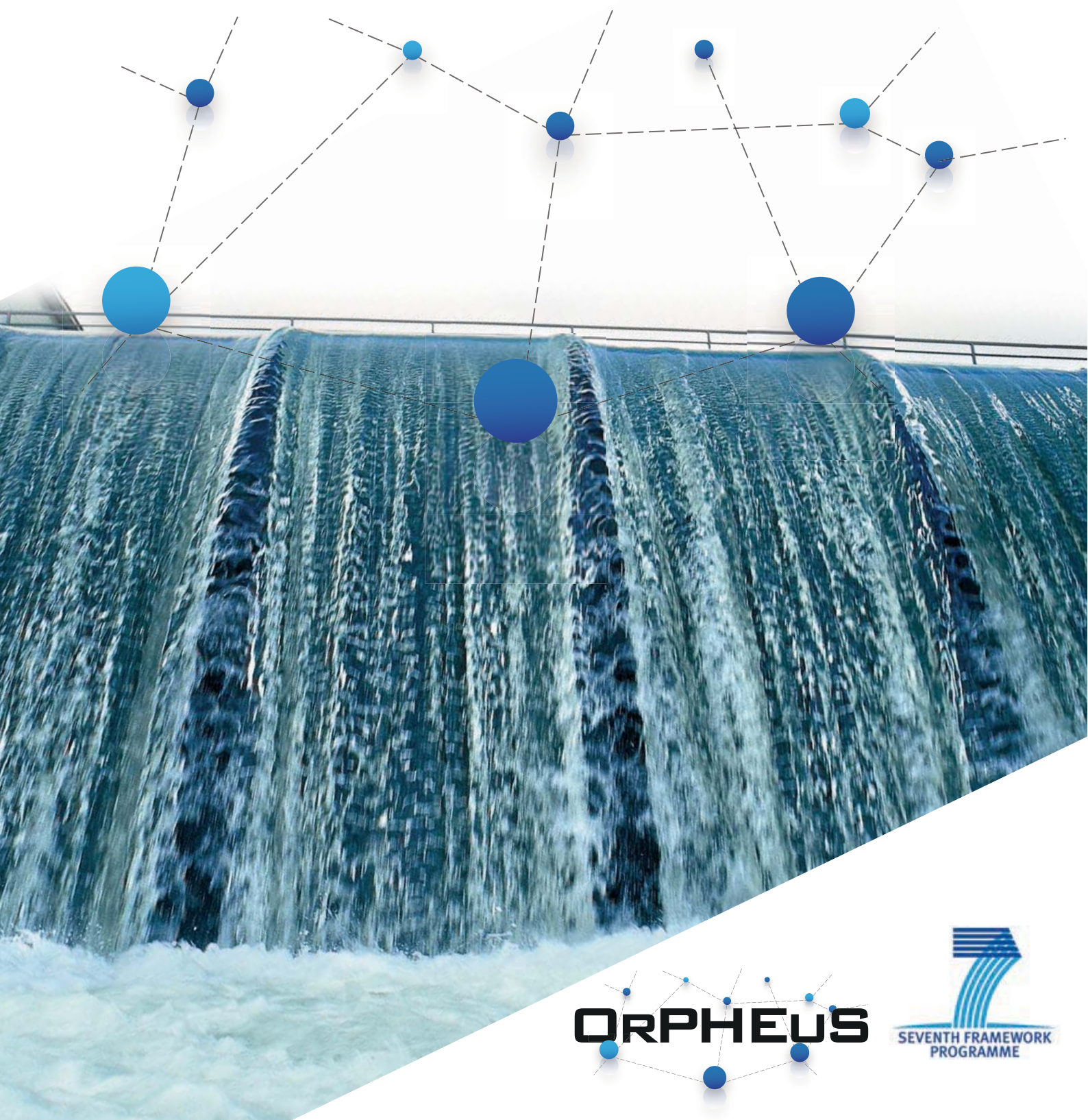


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OPTIMIZING HYBRID ENERGY GRIDS FOR SMART CITIES



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AIMS

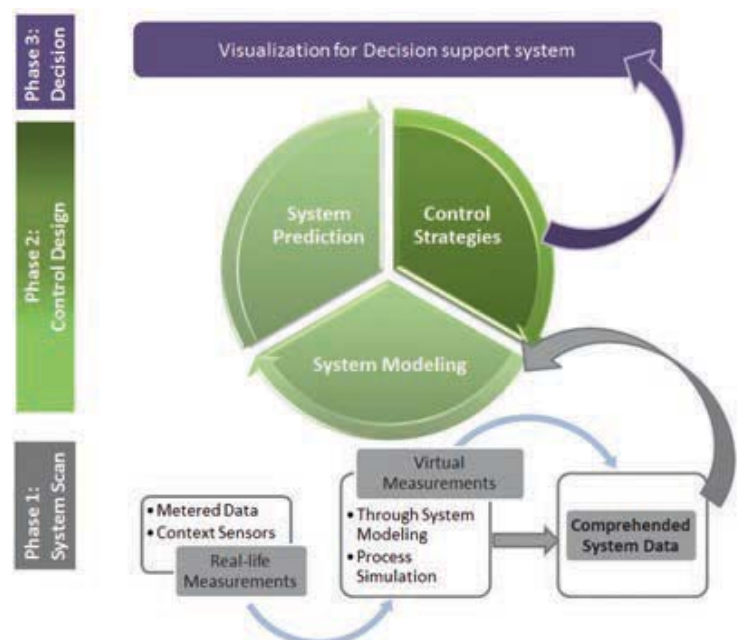
The project has three aims:

- Development of Cooperative Control Strategies for Smart Cities' Hybrid Energy Network Control System Solutions
- Improvement of the interactions between multiple energy grids by enabling simultaneous optimization for individual response requirements, energy efficiencies and energy savings as well as coupled operational, economic and social impacts
- Starting from existing system setups in two cities, enhanced operational scenarios are demonstrated for today's market setup, as well as for future market visions

CONCEPT

The project has three logical phases:

- System Scan Phase 1 which will mainly study the monitoring and control concepts of existing energy networks and define monitoring and control concepts
- Control Design Phase 2 will validate the defined monitoring and control concepts under an extensive set of system configurations, technical constraints and conditions and various business models
- Decision Phase 3 will allow to draw the conclusions of a control strategies matrix recommended for the investigated scenario evaluations. Visualisation concepts developed in Phase 1 and evaluated in Phase 2 will be used to represent the conclusions for decision taking. Demonstration-site specific aspects will be generalized, and the replication potential for the Eu Energy Grids will be outlined



TWO DEMO SITES



Skellefteå area in Sweden

District area network (purple),
CHP and pellets/oil burner
plants in (red)

Test Area in Ulm, Germany

Overlaid of the roof solar
potential analysis and the
position of the PV systems





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