Social Challenge 4 of H2020 program of EU: "Smart, Green and Integrated Transport"

- Why go Electric?: (1) Climate change, air quality (2) Jobs, (3) Foreign oil dependency, and (4) Energy costs
- Traditional Grid become Smart Grid: Overlapping of Electrical, Telecommunications and Intelligence infrastructures
- Uncontrolled charging of EVs will overload the grid
- An aggregator is defined as the actor who controls the process of charging an EV
- It involves: Demand forecast methods, state estimation techniques and real-time monitoring

Technical Challenge: "Continuous Data Stream Real Time Processing Applications"

A system for dynamic, on-demand processing of distributed data streams processing

Approach: "Bridging the gap between formal methods and real problems"

1. Methodology for the development of Continuous Data Stream Processing Applications
2. Executable specification language across all software architecture levels
3. Analysis, design and development of a proof of concept

Parallel Infrastructure

Service Oriented Architecture

Different needs, same expectations
- Preserving QoS applications on shared Distributed infrastructures
- Expressing scalable solutions on heterogeneous infrastructures
- Processing huge volume of data online
- Parallel processing of data
- Scaling data storage, network and computing resources