

In collaboration with





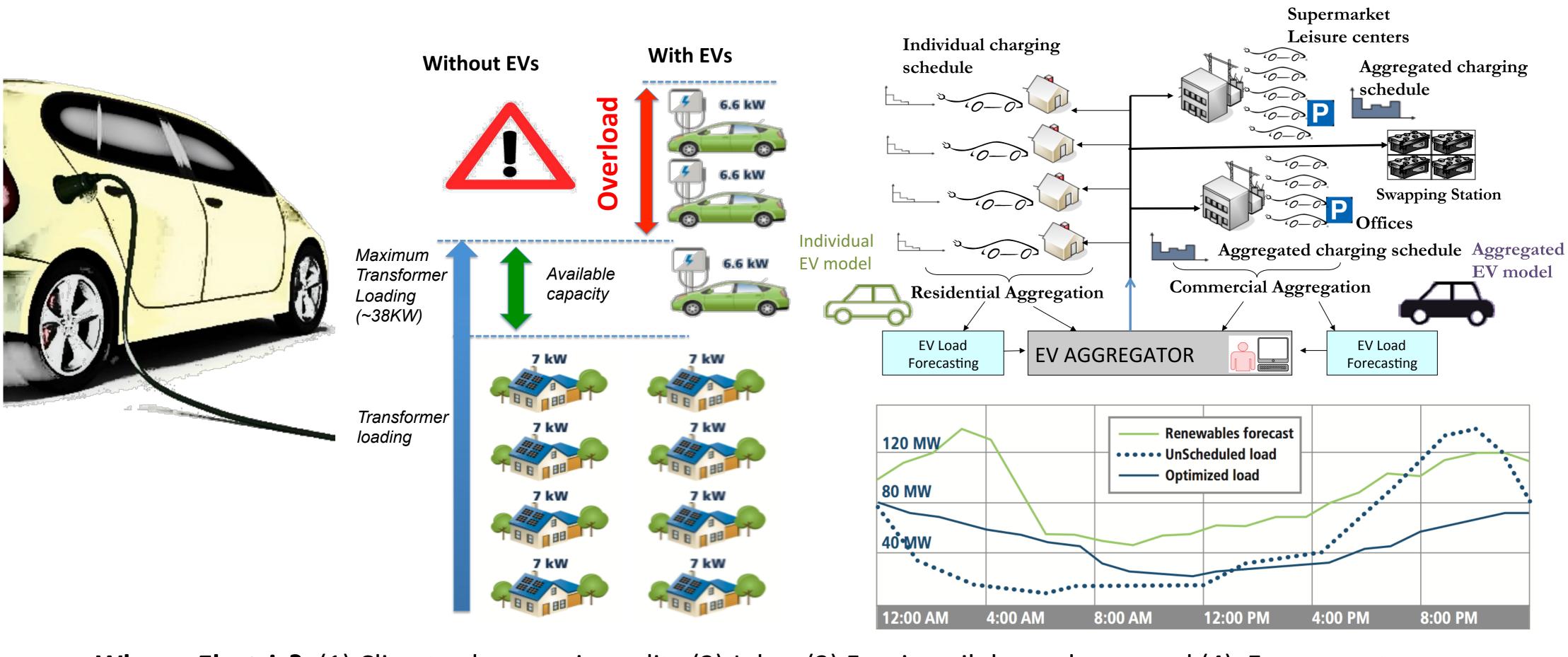
The COS²MO¹ vision

Construction of Data Streams Applications from Functional, Non-Functional and Resource Requirements for Electric Vehicle Aggregators

¹Computer Science for Complex System Modeling

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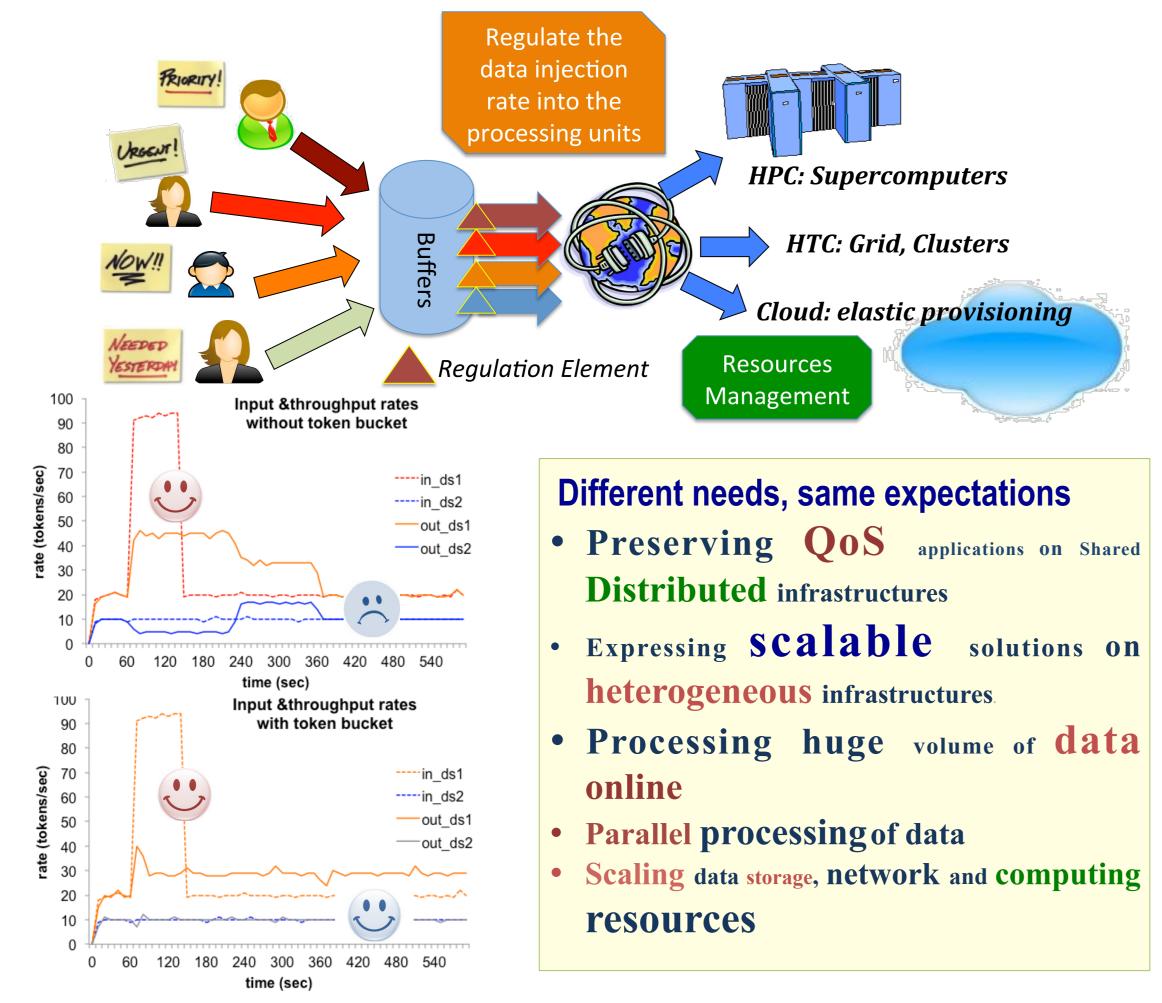
Social Challenge 4 of H2020 program of EU: "Smart, Green and Integrated Transport"



- 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 forecas**t 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

