

Integrating Smart Grid and Smart Cities CIGRE ITALIA

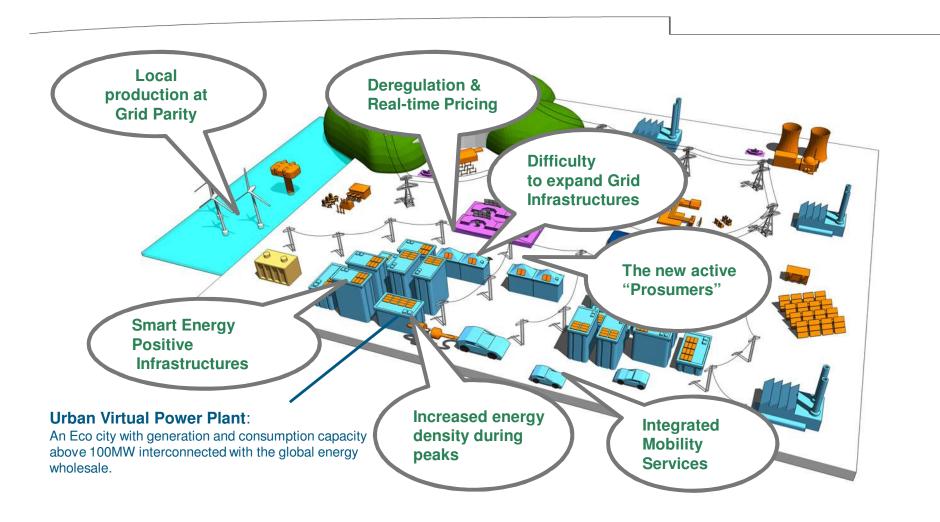
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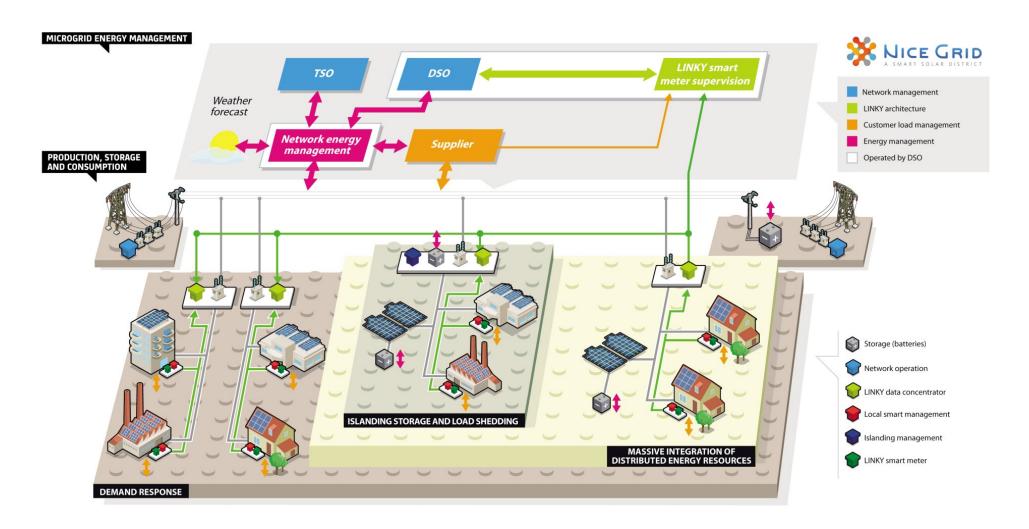
Urban energy infrastructures are facing new constraints



New coordination needs of Distributed Energy Resources (DER)

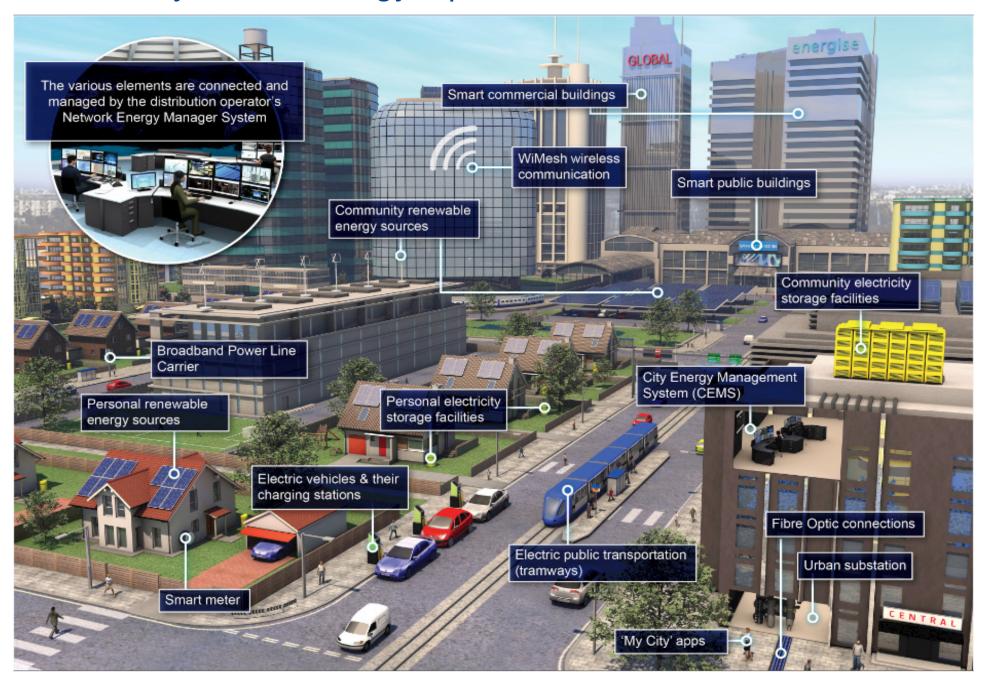


Emerging Community Energy Management MicroGrid Control & Retail Market Places





Smart City: Multi Energy Optimisation & Public Data Service

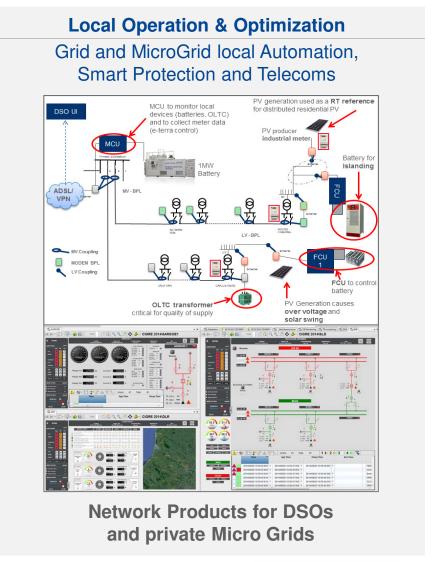


When governance is defined, Innovation can be delivered

DER Transactional Coordination between Local Stakeholders Open Data Heating **Energy** City/ Smart Network Service Territory Consumers Battery providers Storage / Water Networks Urban **Energy** Coordination Operational Infrastructure Network **Smart Campus Planning** Vehicules **Operators** H2/EV **MicroGrids Data Smart Distribution** & Constrains management Distribution Gas Network **H2** Local H2 Storage **Electrical Grid ALSTOM** Alstom Grid- 2014 -5

Implementation: system of systems

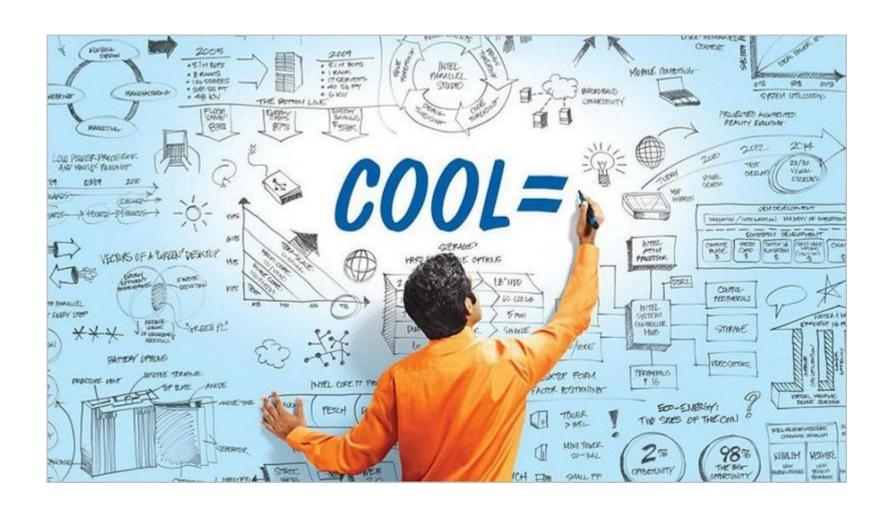
Wide Supervision & Coordination Distributed Resources Management, Market & Community Services IT Solutions for DSOs, Cities and MicroGrid Operators



&



Next Steps: Initiate Large Scale Living Labs







Welcome in the new interoperable Smart Grid world!

