DREAM project presentation
Interaction Meeting, Grenoble
Raphael Caire, Grenoble INP
16th of December 2015
Major challenge and outcome of DREAM

- Enhance **market based approach to Distribution level with DNO validation** ➔ validate concepts and recommend regulation evolutions
  - Validate the concept on different grid types and propose evolution for a market based approach of both **energy/ancillary services/emergency reserve** markets & coordination
  - DSO role: market enabler/facilitator (market platform + validation at different voltage levels)
  - DSO role: market participant (buying flexibilities to solve constraints in real time)

- Show that increased **distributed “intelligence”** combined with **limited structural modifications** is able to allow **larger amounts of DER** (including RES, novel loads and storages), decrease costs without compromising quality of service, taking into account the **interaction of ADA functions**.
Dream: Dream vision – focus on key components

- TSO
- DSO
- Market
- Aggregators
- Energy box/Smart Meter
- Flexibilities from both load and generation
- Transmission Network
- Distribution Network
- Primary Substation digital control
- Substation aggreg
- Data Concentrator - ARTU
- LV aggreg commercial/technical
- MV ARTU
- Primary Substation aggreg
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- Energy offers
- Capacity offers
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Heterarchic approach and energy/balancing markets [1]
Heterarchic approach and energy/balancing markets [2]