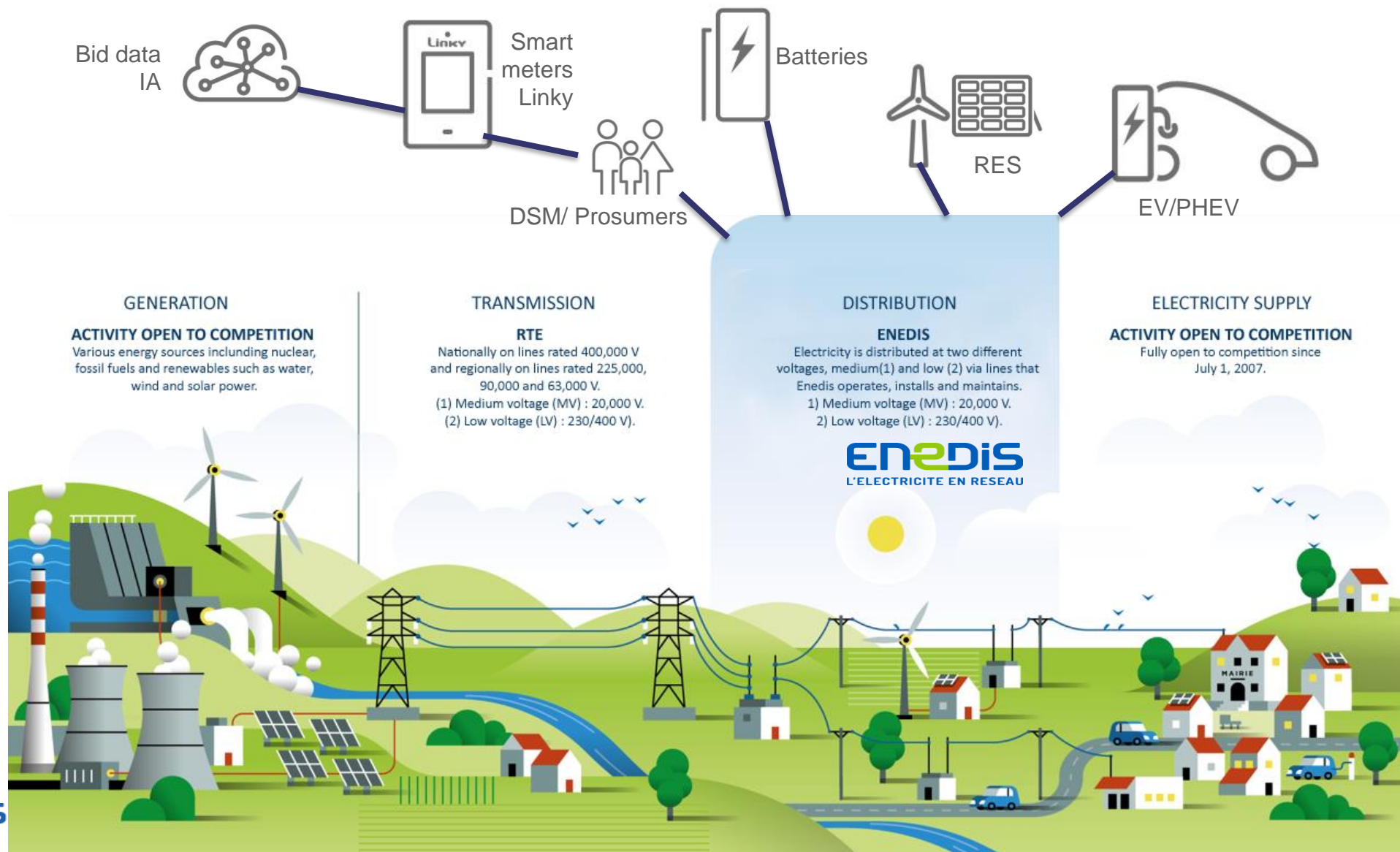


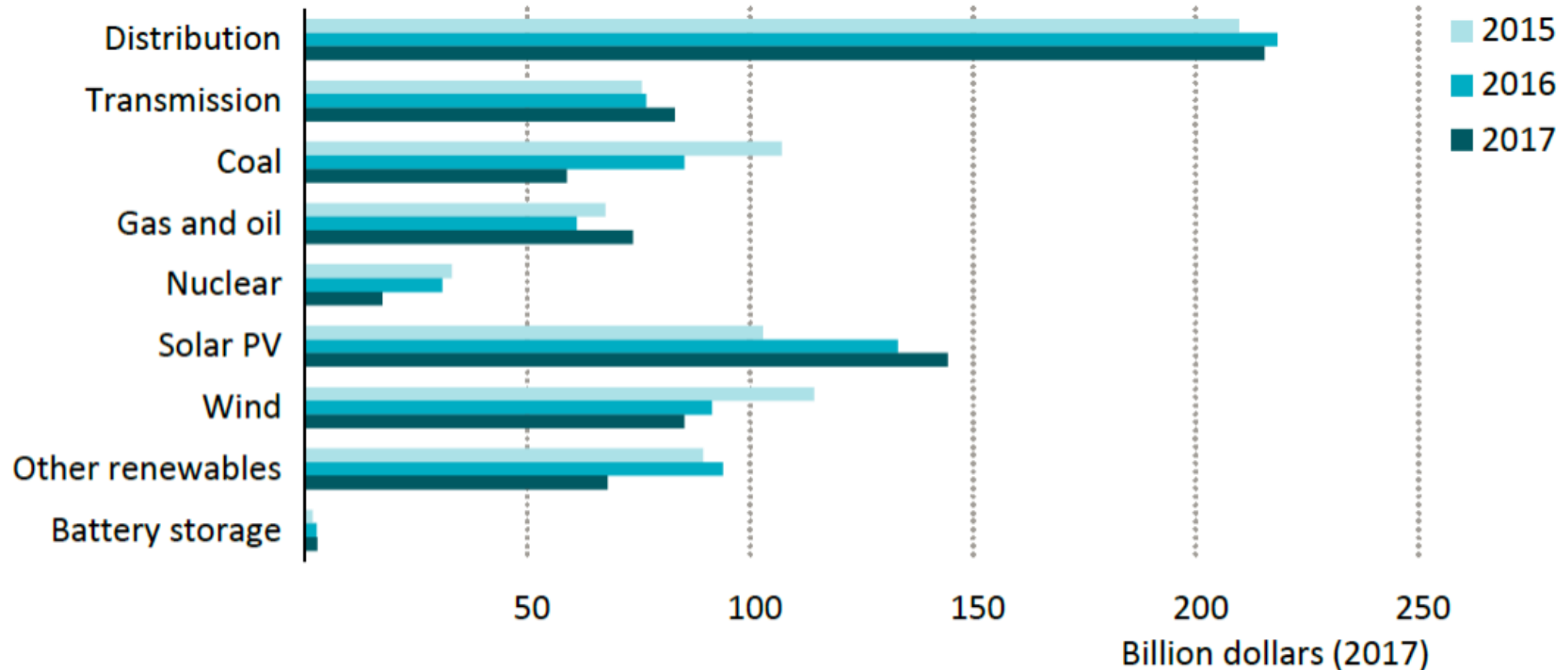
Efficient investments by mastering energy transition uncertainties: a prospective approach



ENEDIS at the heart of the power value chain & its innovations



Distribution topping current electricity sector investments in the world

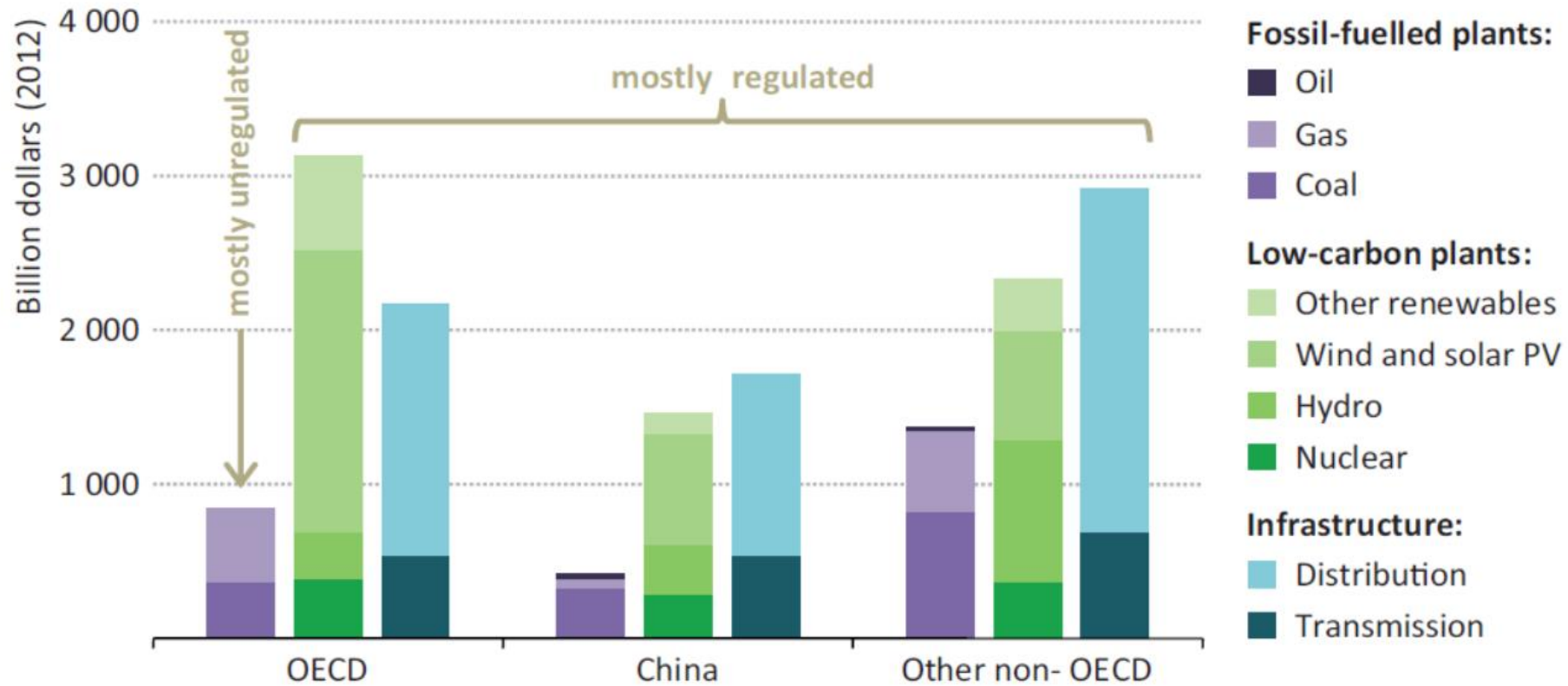


Overall investment in the power sector

Source: WEO 2018

A trend that is likely to keep on over the coming years

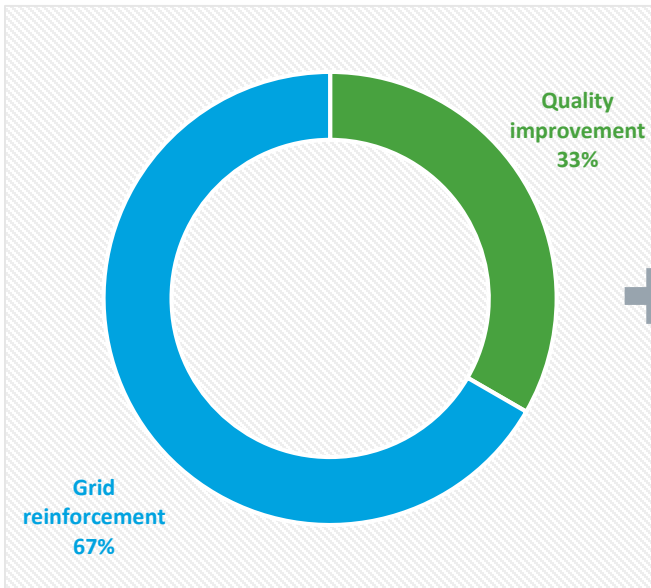
Worldwide cumulative electricity infrastructure investments forecasted from 2014 until 2035: G\$16,400



Source: WEO 2014

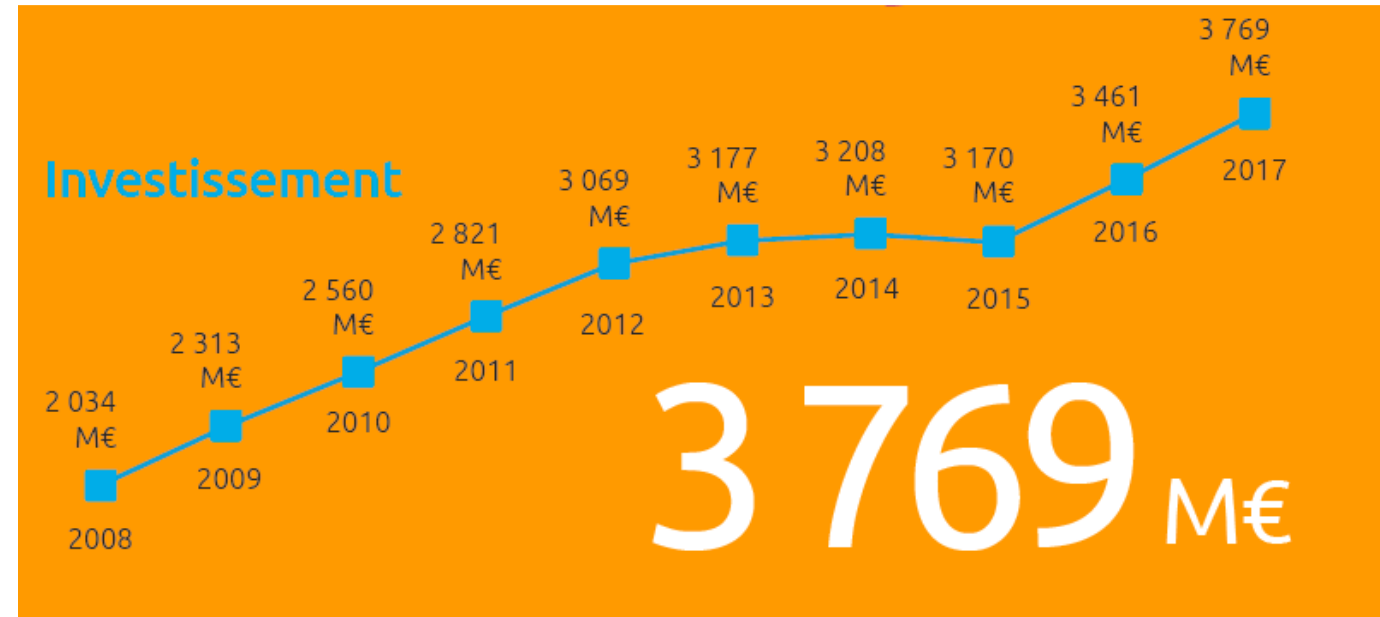
Enedis investments target quality improvement, grid reinforcement and smart metering

Nature of investments



LINKY
5 G€
cumulated from
2015 to 2021

Annual investment evolution



Investing is part of a broader asset management vision

Managing energy assets implies several key actions



Different strategies & approaches have been identified in a recent international benchmark:

- Internal vs. Subcontracted actions
- Integrated vs. Specialized tools
- Global vs. Local analysis

→ **Need for local energy planning**

Forecasting electricity volume evolution at the distribution grid perimeter

- Demand,
 - At local scales,



- For each sector,



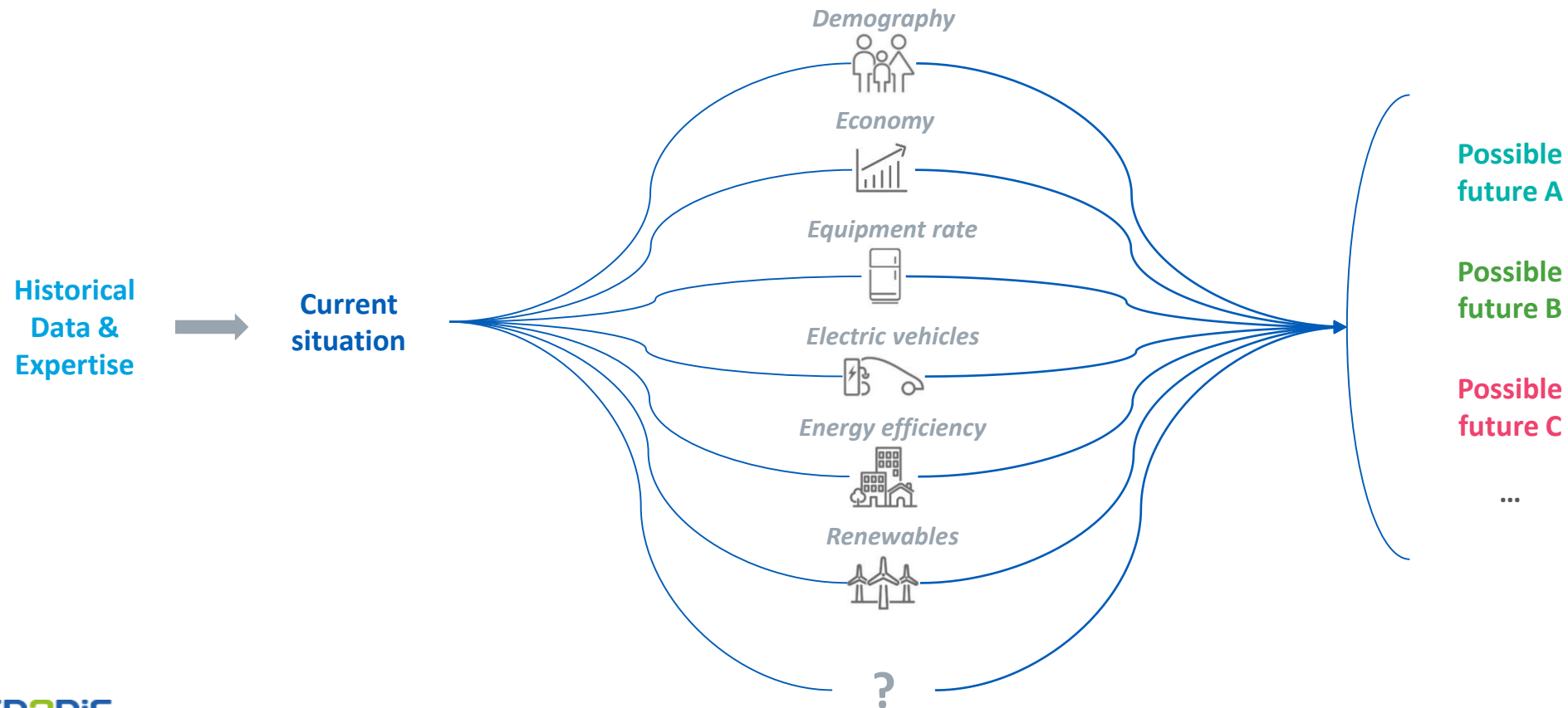
- Decentralized production,
 - At regional scale,
 - For energies connected to the distribution grid,



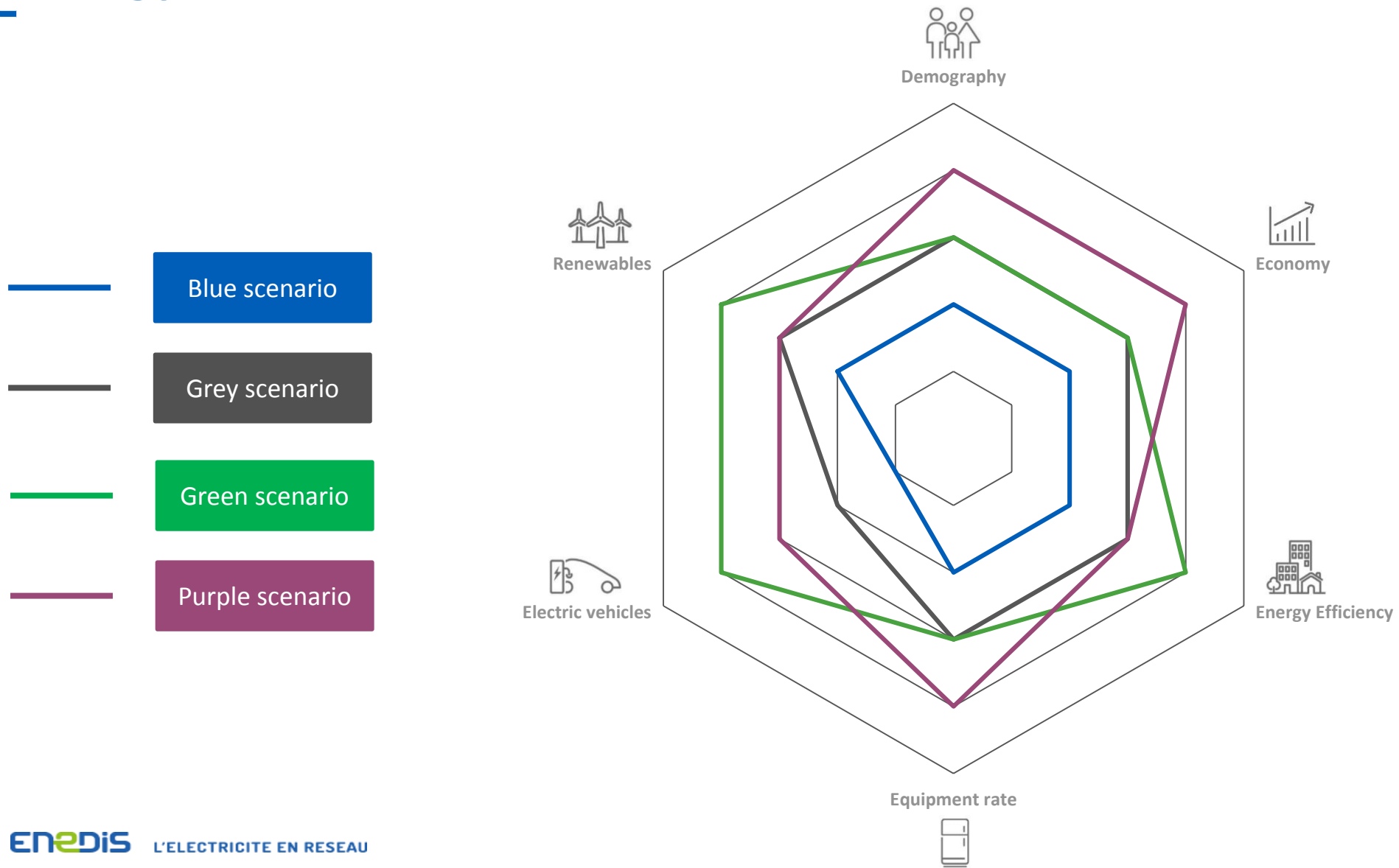
- For every year from 2015 to 2035.

The energy transition brings new and possibly disrupting factors

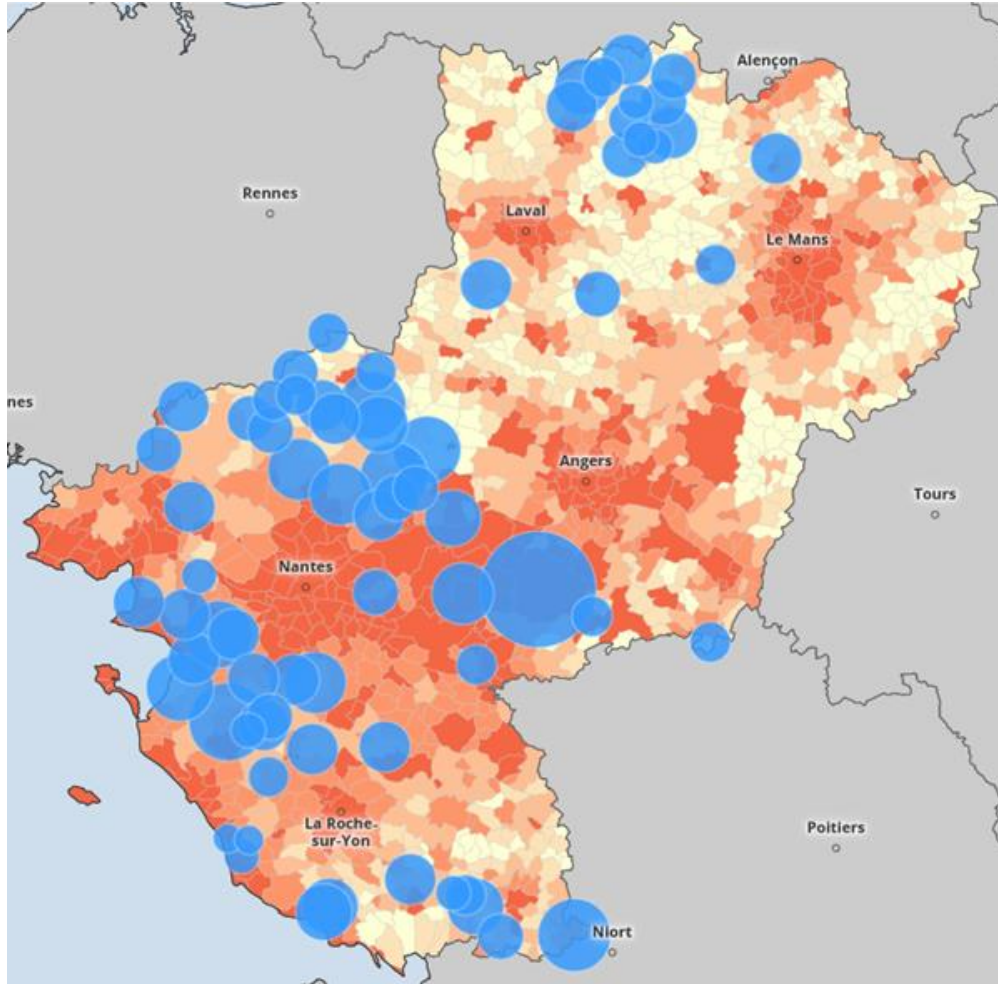
Forecasting power distribution activities, and investments, requires to take into account new technologies and social behaviours



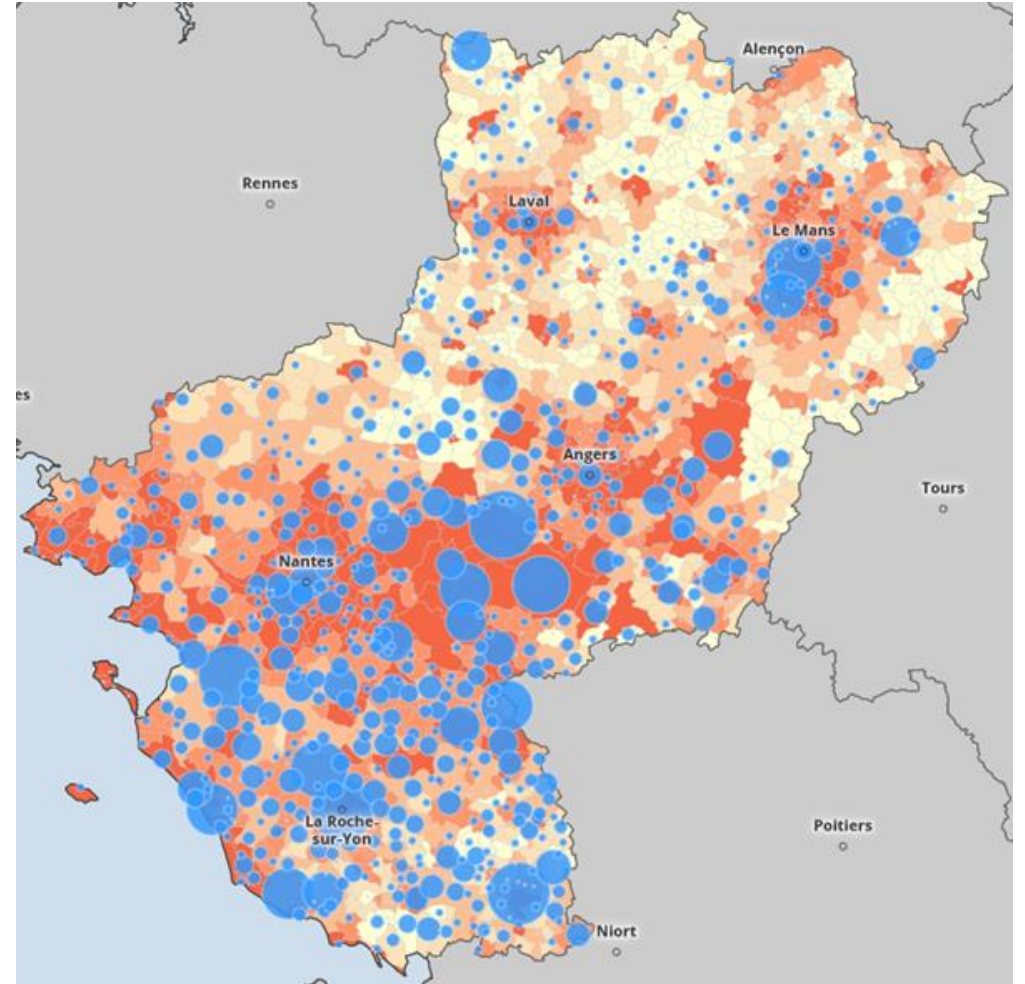
“Enedis 2035 Scenarios” enable efficient investments by mastering energy transition uncertainties



Taking into account local and social structures

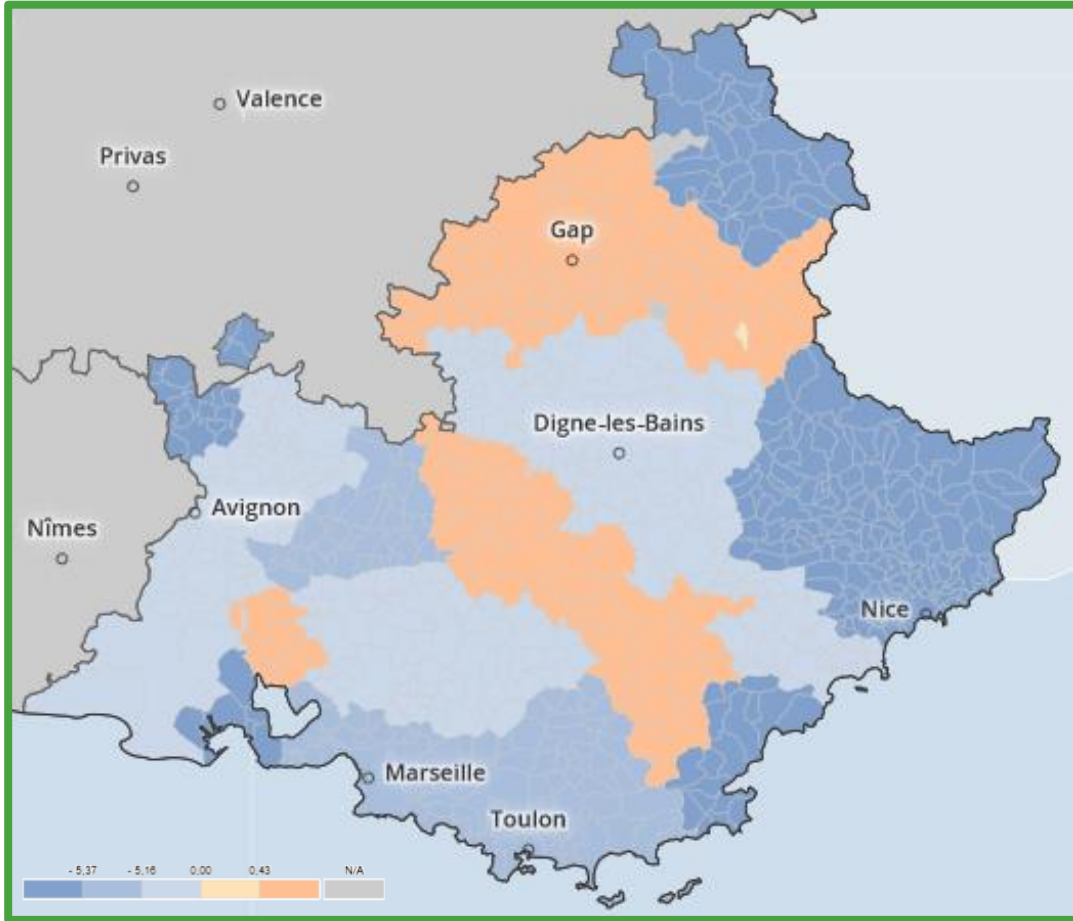


On-shore wind capacities connected to the distribution grid & population densities in 2017

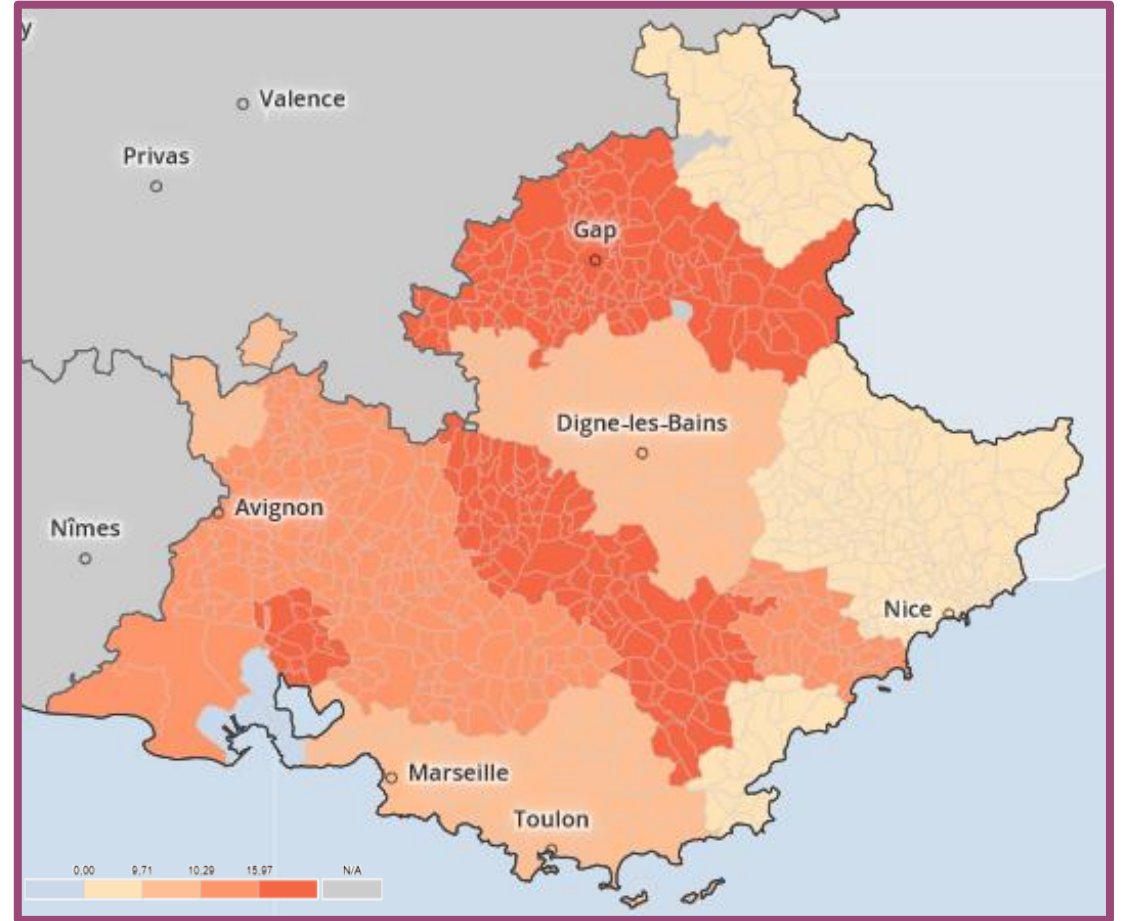


PV installed capacities connected to the distribution grid & population densities in 2017

Detecting relevant dynamics among territories and scenarios

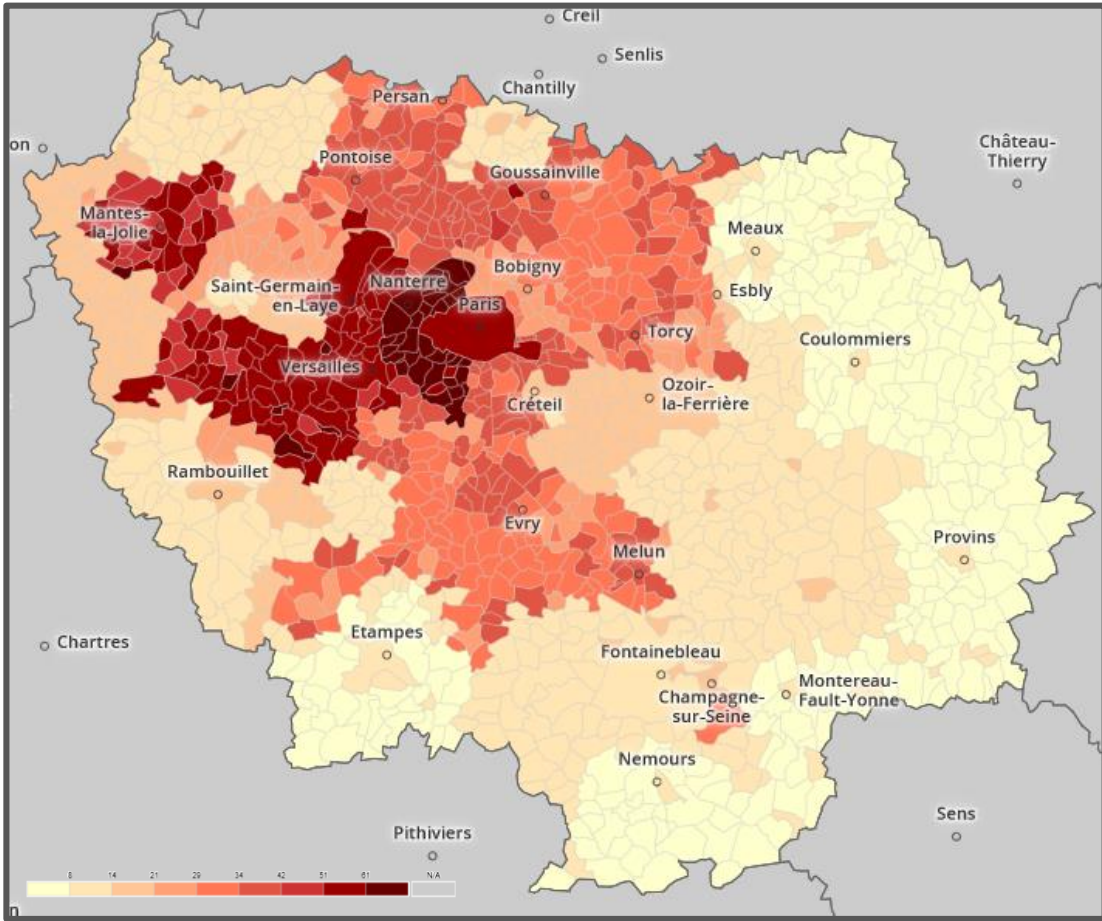


Service sector electricity demand growth rate between 2015 and 2035 (green scenario)

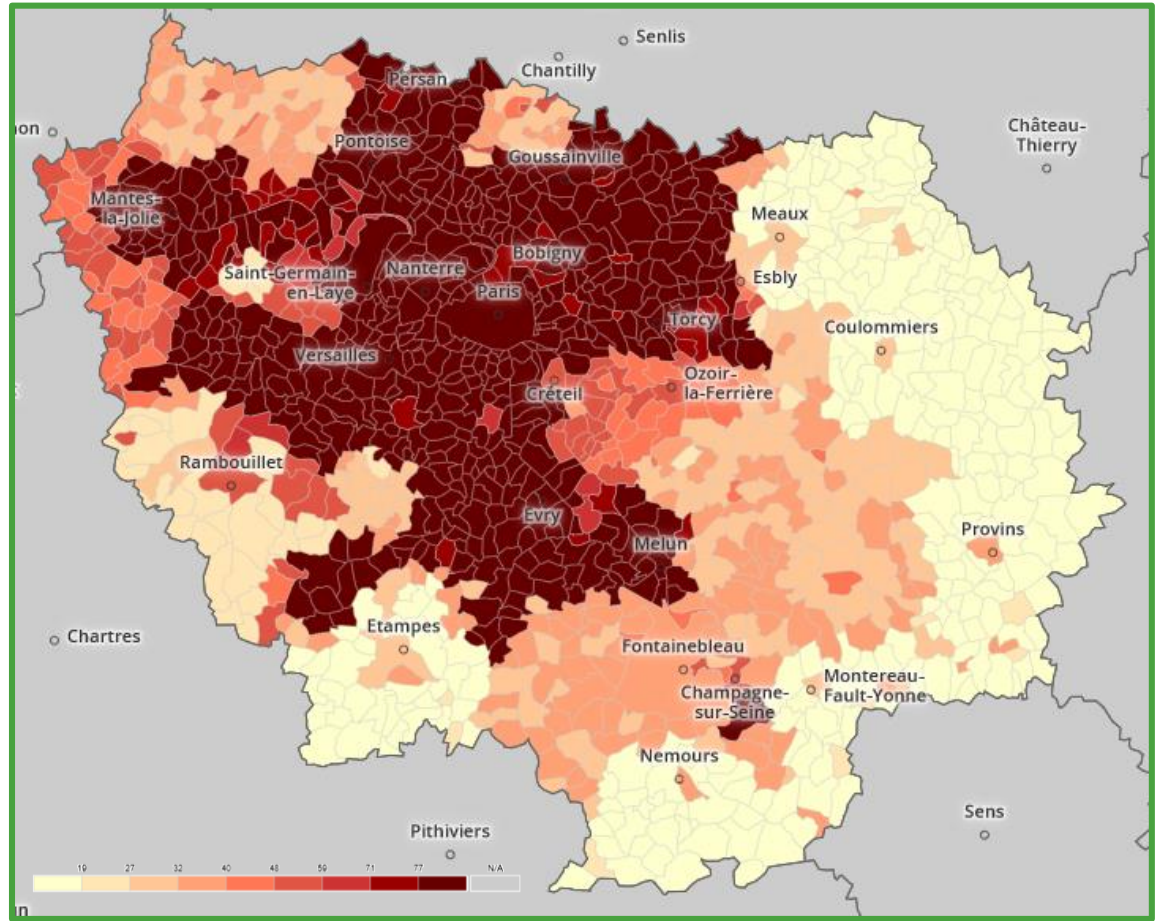


Service sector electricity demand growth rate between 2015 and 2035 (purple scenario)

Understanding the geography of possibly disrupting factors

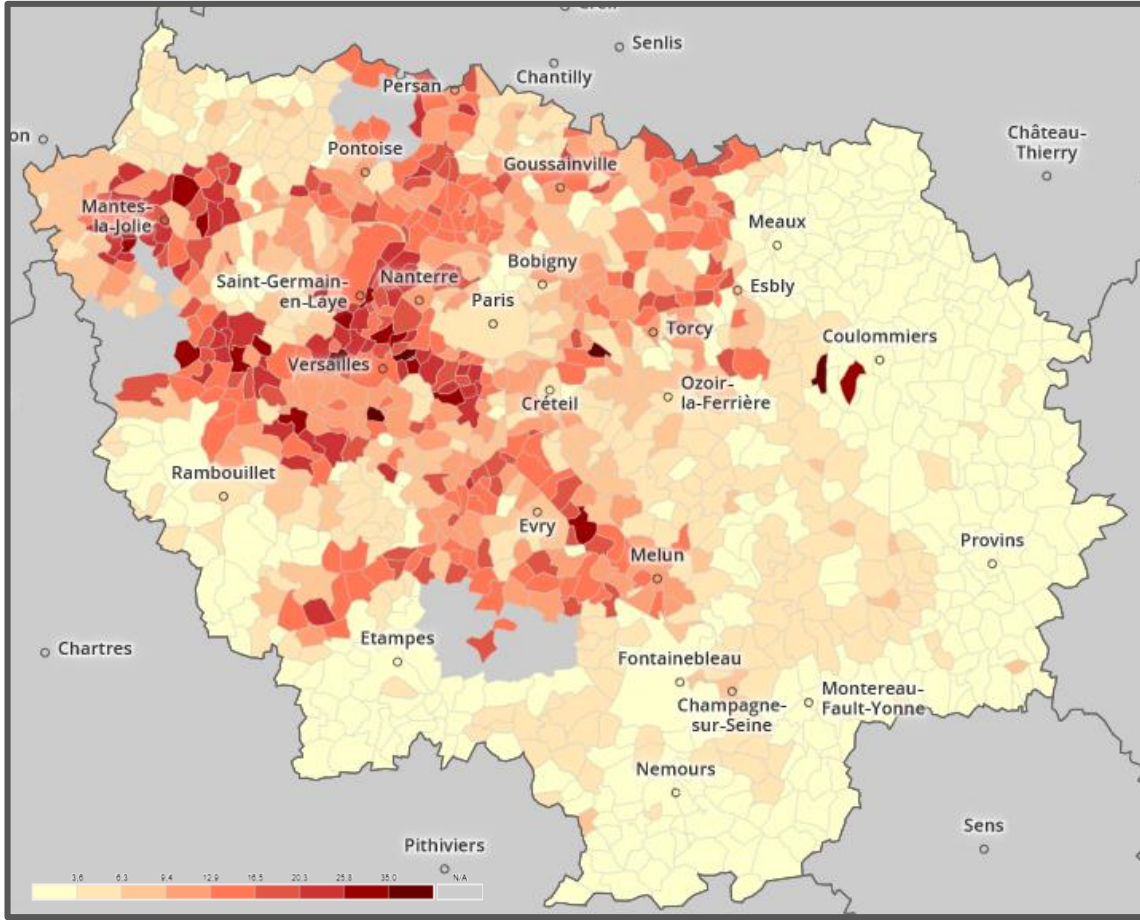


*Individual vehicle electrification rate in 2035
(grey scenario)*

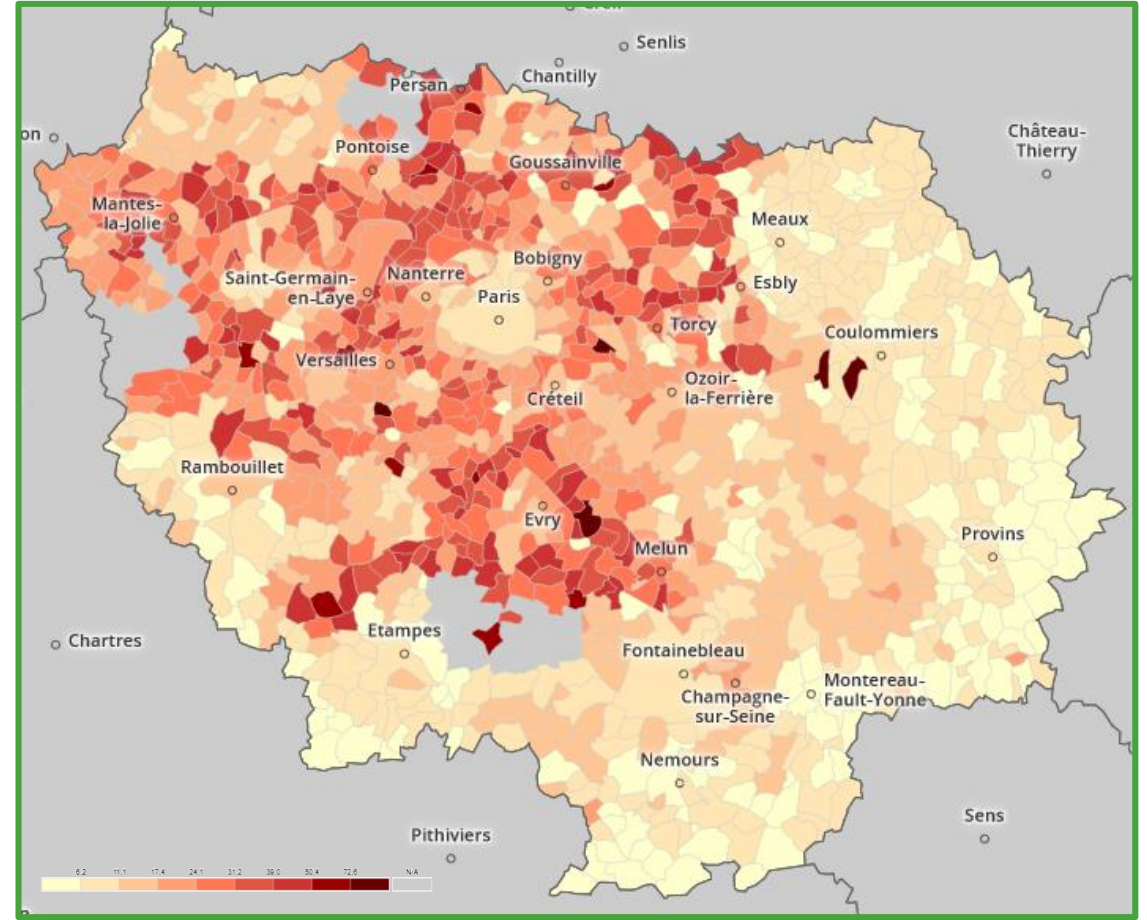


*Individual vehicle electrification rate in 2035
(green scenario)*

Assessing energy transition impacts on electricity demand



*Electricity demand growth rate
due to EV between 2015 and 2035
(grey scenario)*



*Electricity demand growth rate
due to EV between 2015 and 2035
(green scenario)*



Efficient investments by mastering energy transition uncertainties: a prospective approach

- **Anticipate new & disrupting factors**
- **Consider local & global parameters**
- **Involve all energy system stakeholders (local authorities, policy makers, energy operators, NGO, etc.)**



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