



ETIP SNET

EUROPEAN
TECHNOLOGY AND
INNOVATION
PLATFORM

SMART
NETWORKS FOR
ENERGY
TRANSITION

PLAN.
INNOVATE.
ENGAGE.

WG2: Storage Technologies and Sector Interfaces

Petten, 19th of September
Davide Grazioli (TU Delft)

1. WG2 scope
2. WG2 organisation
3. WG2 activities in 2018
 - i. ETIP SNET Roadmap
 - ii. ETIP SNET Implementation Plan
 - iii. Horizon Europe
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Name: Storage Technologies and Sector Interfaces

Specific objective: addressing the technological and market developments related to energy storage solutions and the interfaces between energy sectors as tools to ensure the required level of flexibility for the transmission and distribution of electricity.

All energy storage technologies and all possible interfaces are covered, among others:

- Power-to-power
- Power-to-gas
- Hydro and marine storage
- Compressed air energy storage
- Thermal mass of buildings
- Hot water storage...

The **entire value chain of all energy storage options** is also covered, starting from the development and demonstration of new materials, technologies and solutions, addressing their integration into the overall energy system, the evaluation of their impact on flexibility and the related costs/benefits.

Interfaces between the power sector and the sectors **heat, gas and transport** are also included.

Chair: Yves Schlumberger (EDF)

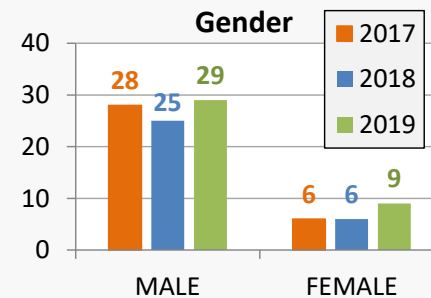
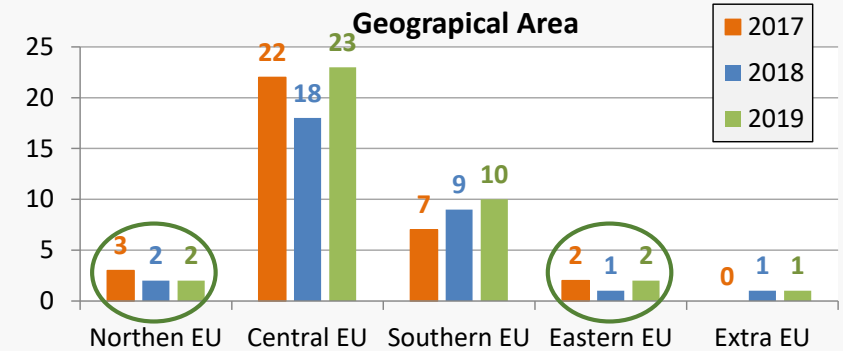
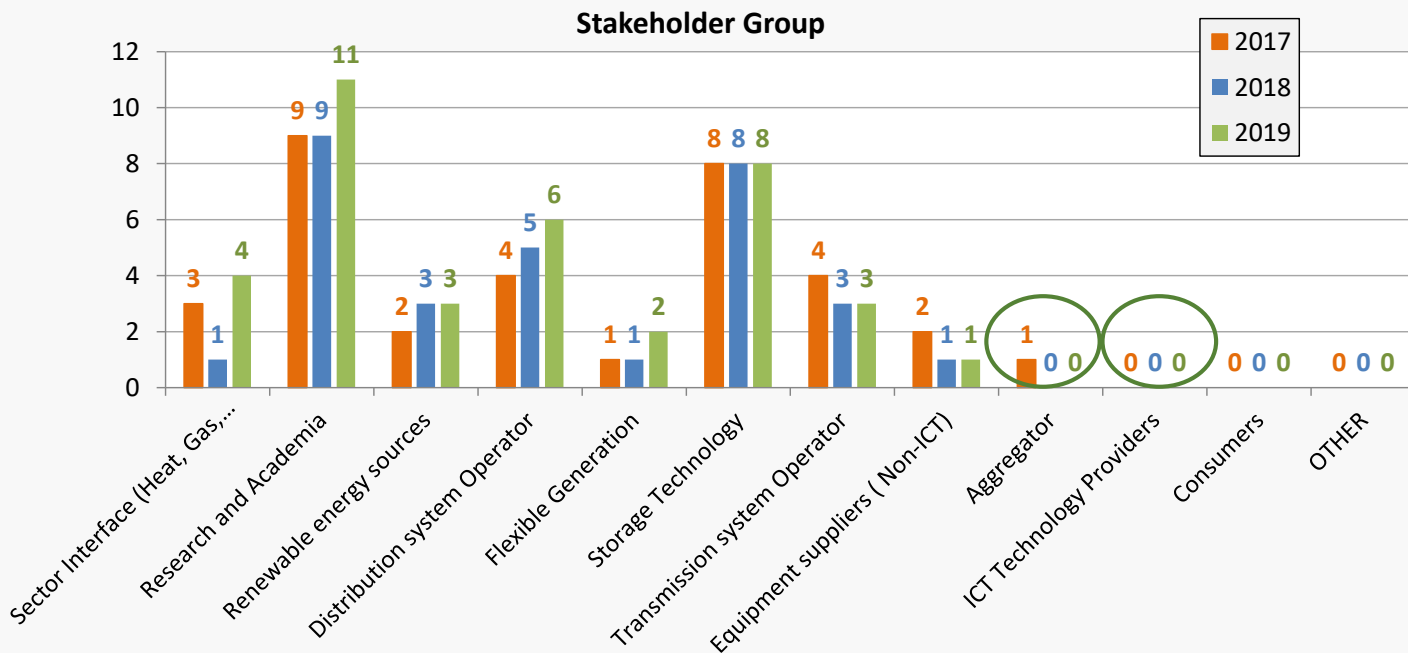
Co-chairs: Cristina Gómez Simón (ENTSO-E) and Carlos Arsuaga (Circe)

Special adviser: Omar Perego (RSE)

Organisational support: Thomas Otuszewski (EASE)

Annual expert renovation in 2019: 7 new experts joined → Current total number of WG2 experts: **38**

→ Profiles missing!! – Aggregator, ICT tech. provider...



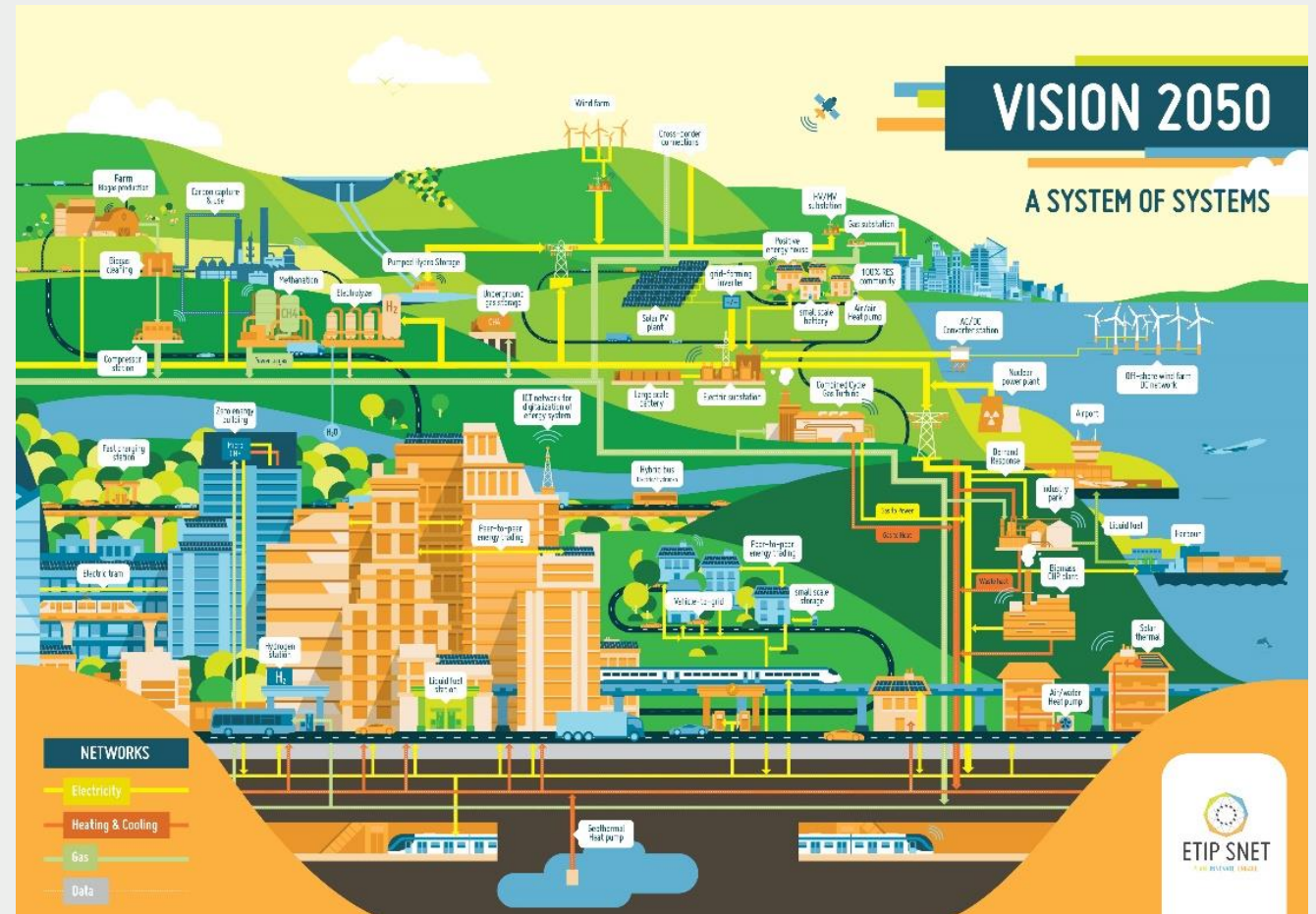
A call for experts' missing profiles will be soon launched



❖ ETIP SNET Vision

The WG2 members also participate in the elaboration of the ETIP SNET Vision, which is a document that should **highlight issues including and beyond those already documented, researched, implemented, developed,** and which are key for satisfying the needs of the future energy system towards 2050.

The Vision has been released the 27th of June 2018.





❖ ETIP SNET Roadmap and Implementation Plan

Several experts from different sector provided input; presented in June's workshop by WG2 co-chair

Main messages delivered by WG2:

- Overall simplification, overlaps correction and reduction of roadmap necessary
- Towards a simple and easy to remember message: ***6 actors developing 25 tools (or solutions) carry out 17 actions of 3 different types to reach 23 objectives***
- Include objectives on minimum resource consumption, high recycling rate and critical raw materials
- Discussions on whether non-renewable (fossil) generation should be an enabler → focus on decarbonization
- New enabler proposed on CO2 capture and utilization

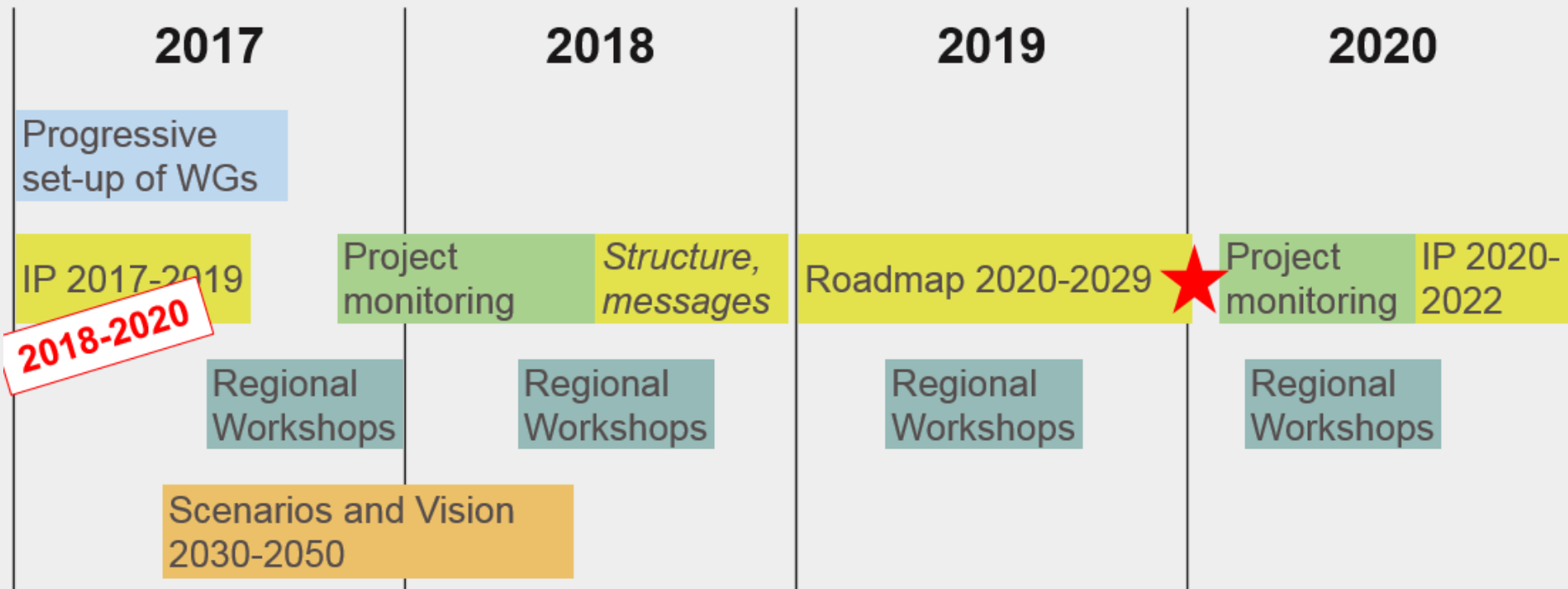
❖ Horizon Europe contribution

Working group 2 organised a workshop in September to discuss joint proposals for HEU topic, including:

- Integrated hybrid energy storage systems
- Assessment of second-life energy storage systems
- Improve the bankability of energy storage projects
- Sector coupled multi-purpose storages to serve different energy sectors
- Efficient usage of existing storage capacities
- Recover existing low cost storage options



WG2 next activities



❖ Common to all WGs

- Reply to European Commission consultation “on the strategy for long-term EU Greenhouse gas emissions reduction” (by 9th October)
- Start working on ETIP SNET Roadmap 2020-2029 (in 2019)

❖ Specific to WG2

- Participation/organisation of brokerage events for consortia building for joint projects (e.g. EERA JP Smart Grids Workshop on 12th September 2018 in Sophia Antipolis)
- Preparation of white papers on storage/sector interfaces issues

Questions for the roundtable:

- 1) How relevant is the risk of key materials shortage for different energy storage technologies?
- 2) What is your perception of the level of awareness of consumers about their potential role in energy storage? Is it time to think about their "education"?
- 3) Given the diversity of storage technologies, is the flexibility potential across various sectors (power, heat, gas) and segments (grid-scale, behind-the-meter) well understood by policymakers? The Commission's 2050 Long-Term Strategy for Greenhouse Gas Emissions Reductions, for example, models only the contribution of stationary front-of-meter storage – how to address the complexity of storage in modelling and system planning?
- 4) What are the biggest policy/regulatory/market design barriers to the widescale deployment of the storage technologies covered by the different projects?

**Thank you for your
attention !**

