



ETIP SNET

EUROPEAN
TECHNOLOGY AND
INNOVATION
PLATFORM

SMART
NETWORKS FOR
ENERGY
TRANSITION

PLAN.
INNOVATE.
ENGAGE.

ETIP SNET WG4 Update

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WG4 Digital Energy

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ETIP SNET WG4 : Digital Energy



WG4

Digitisation of the electricity system and customer participation

Maher Chebbo
(Chair)

Esther Hardi
(Co-Chair)

Miguel A. Sánchez Fornié
(Co-Chair)

Task Force 1

Antonello Monti
George Huitema

Digital Technologies
(enablers)

Digitalization is affecting the energy system at every level. In particular, the transformation from an electromechanical system to an electronic system is a fundamental change that will transform the fundamental principles around which the energy system is operating.

Task Force 2

Elena Boskov-Kovacs,

Digital Use Cases
(services)

With respect to the traditional concept of a Smart Grid and Smart Networks, the digitalization process involves other new factors such as Customer involvements and possible disruptive new business models that could emerge from this involvement

Task Force 3

Marcus Meisel

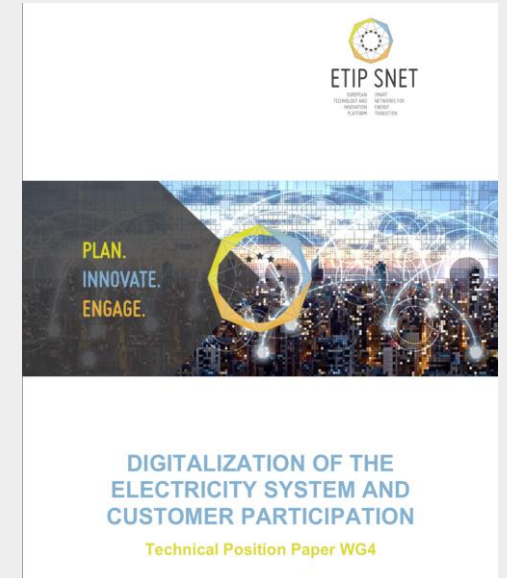
Digital Cyber Security
(robust)

Cyber-security is a crosscutting issue enabling the safe and secure use of new products, services, and technologies, in an increasingly more distributed energy system with a tighter inclusion of customers as prosumers.

Digitalization of the electricity system and customer participation

Published in September 2018

The objective was to address the use and impact of Information and Communication Technologies as a pervasive tool along the entire value chain of the power generation, transportation and use, and mainly on enabling customer participation.



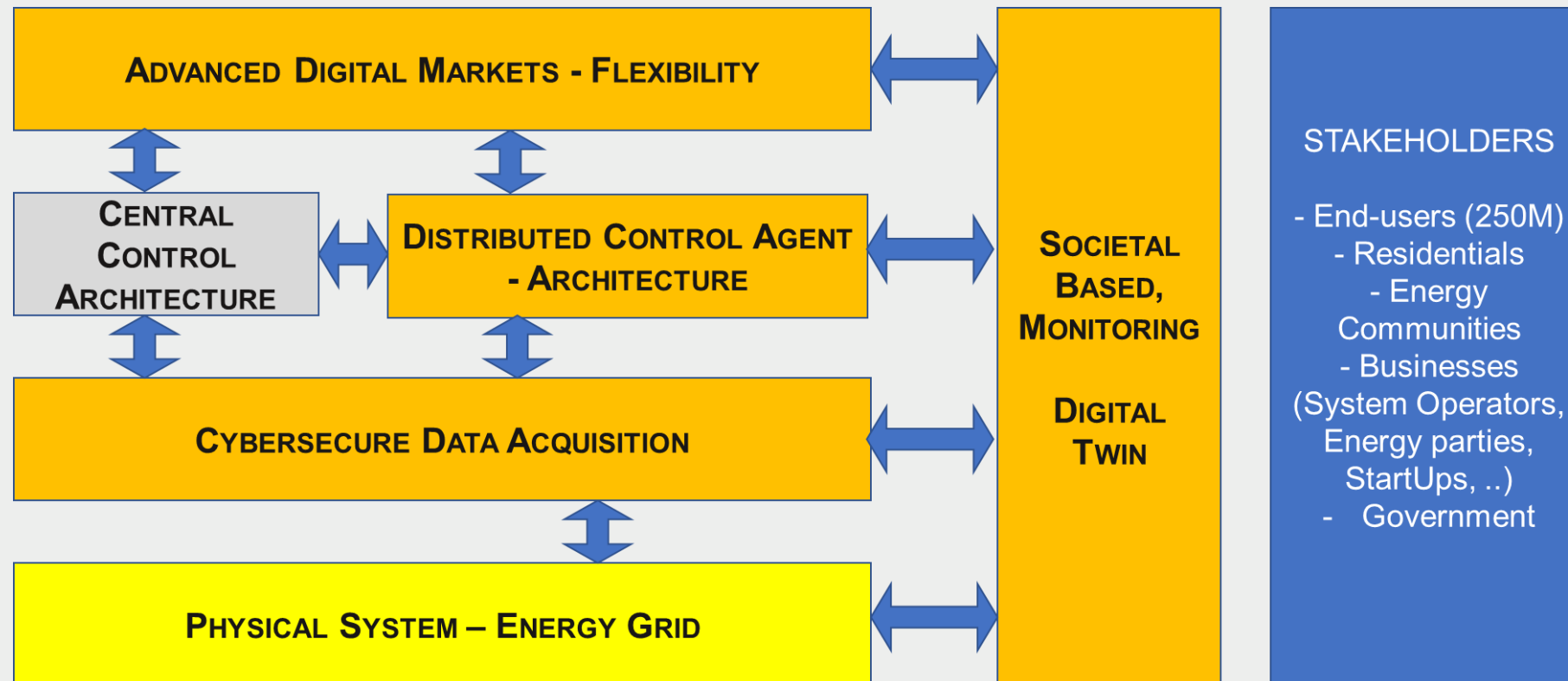
Digitalization of the electricity system and customer participation: Description and recommendations of technologies, Use cases and Cybersecurity

Published in October 2018

The summary document presents the main conclusions and recommendations, drawn from the technical paper, to energy stakeholders that may be less concerned with the technical specifications mentioned in the former.

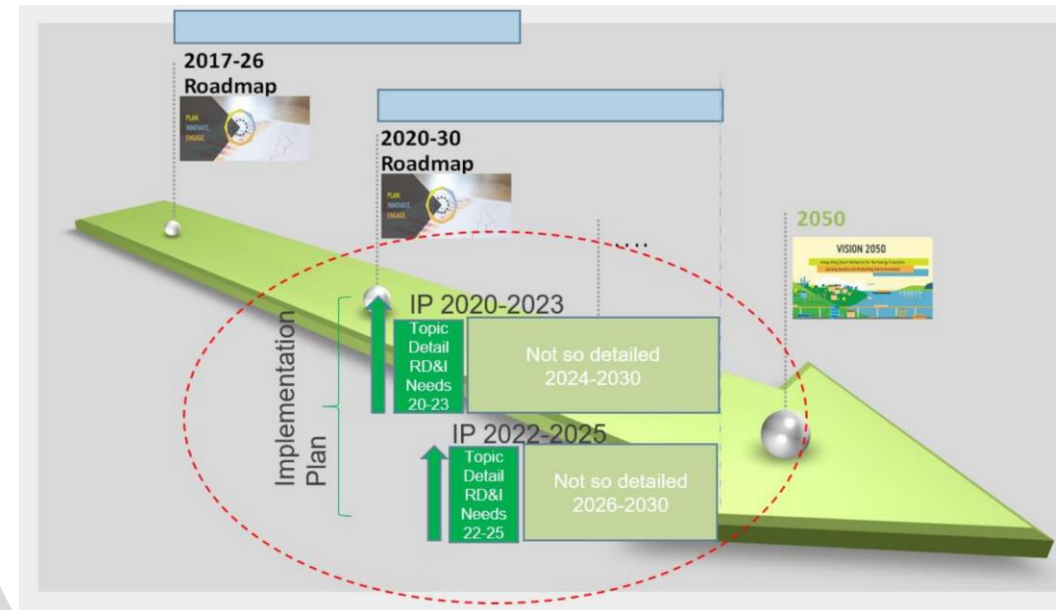


End-to-End Architecture – Need for democratized, integrated decision-making



Priority 2: Next Roadmap and Implementation Plan

- Feedback on ETIP SNET documents - Vision 2050, R&I Roadmap & Implementation Plan
- Participation in the Regional Workshops
- ***WG4 Position Paper provides extensive recommendations for research, demonstration and coordination priorities***



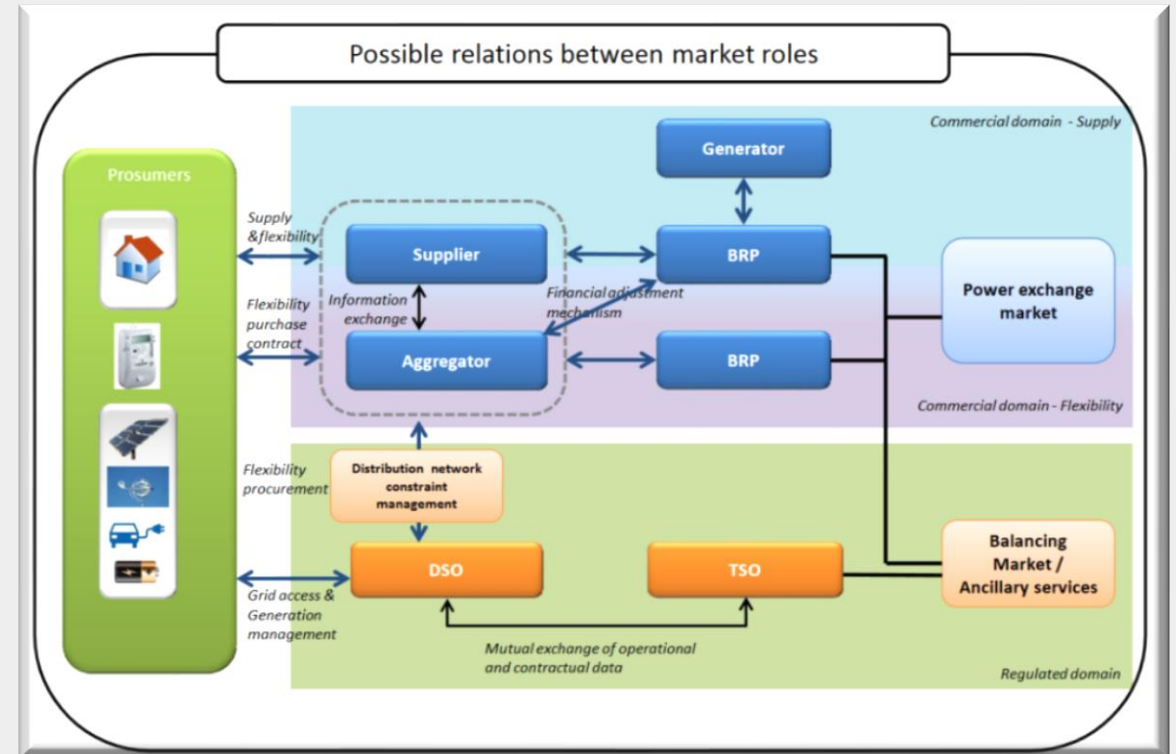


Priorities 2: Events participation and views exchanges

- Participation in conferences and other public events
- Continued strong participation (typical 45/60 for calls and meetings)
- Development of ideas for large initiatives
- Integrate recommendations across task forces



- Architecture
- Monitoring (advanced sensors), visualization, analytics
- Data exchange hubs
- Cross-sector coupling
- Local energy communities
- TSO/DSO/Customer coordination
- 5G and peer-to-peer communications, edge of grid
- Energy storage and EV integration
- Artificial Intelligence/Digital Twin applications
- Blockchain applications and technologies
- Congestion management/balancing/flexibility
- Real time control and supervision
- Models for advanced planning applications
- IoT platforms, secure internet
- Cyber security and resilience convergence (ISOC)



- Is the digital technology ready for the Energy transition?
- What are the interface requirements of the future grid (customer/community/service providers/DSO/TSO/markets/sensors/, etc.)?
- What digital use cases will make SmartGrids happen? Importance of the end-to-end architecture? Are there multiple architectures that can support the future grid vision?
- How will the future grid handle cyber security of distributed control systems and IoT platforms? Is CyberSecurity still a big risk? What are the challenges?
- Is Blockchain an opportunity?



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Thanks for your attention

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