

EERA Joint Programme on Energy Storage

www.eera-set.eu



EERA is an official part of
the EU SET-Plan.

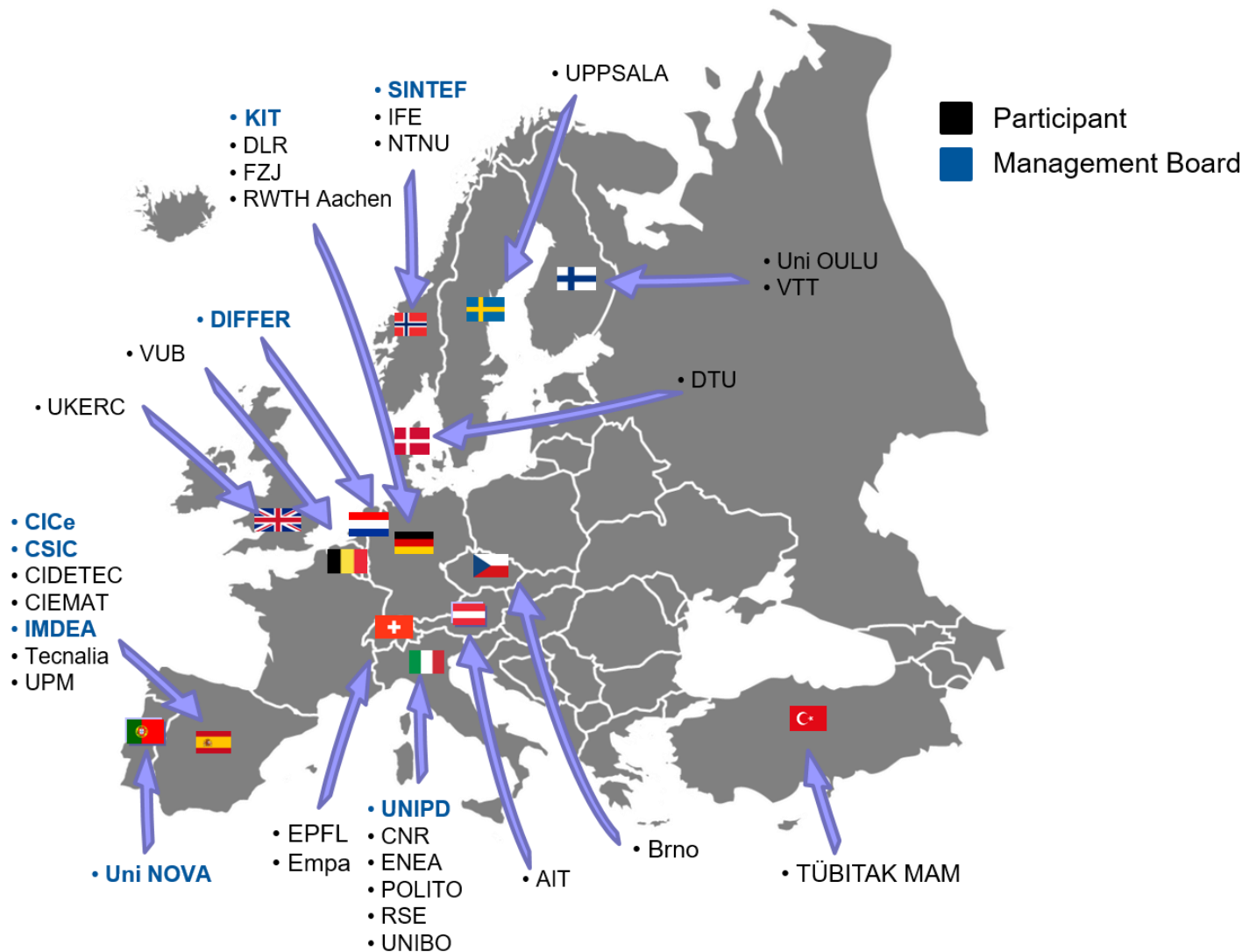
<http://setis.ec.europa.eu/>

- 1 Numbers and Figures
- 2 Members
- 3 Structure
- 4 Highlights
- 5 International Cooperations
- 6 Networking Activities

1. Numbers and Figures

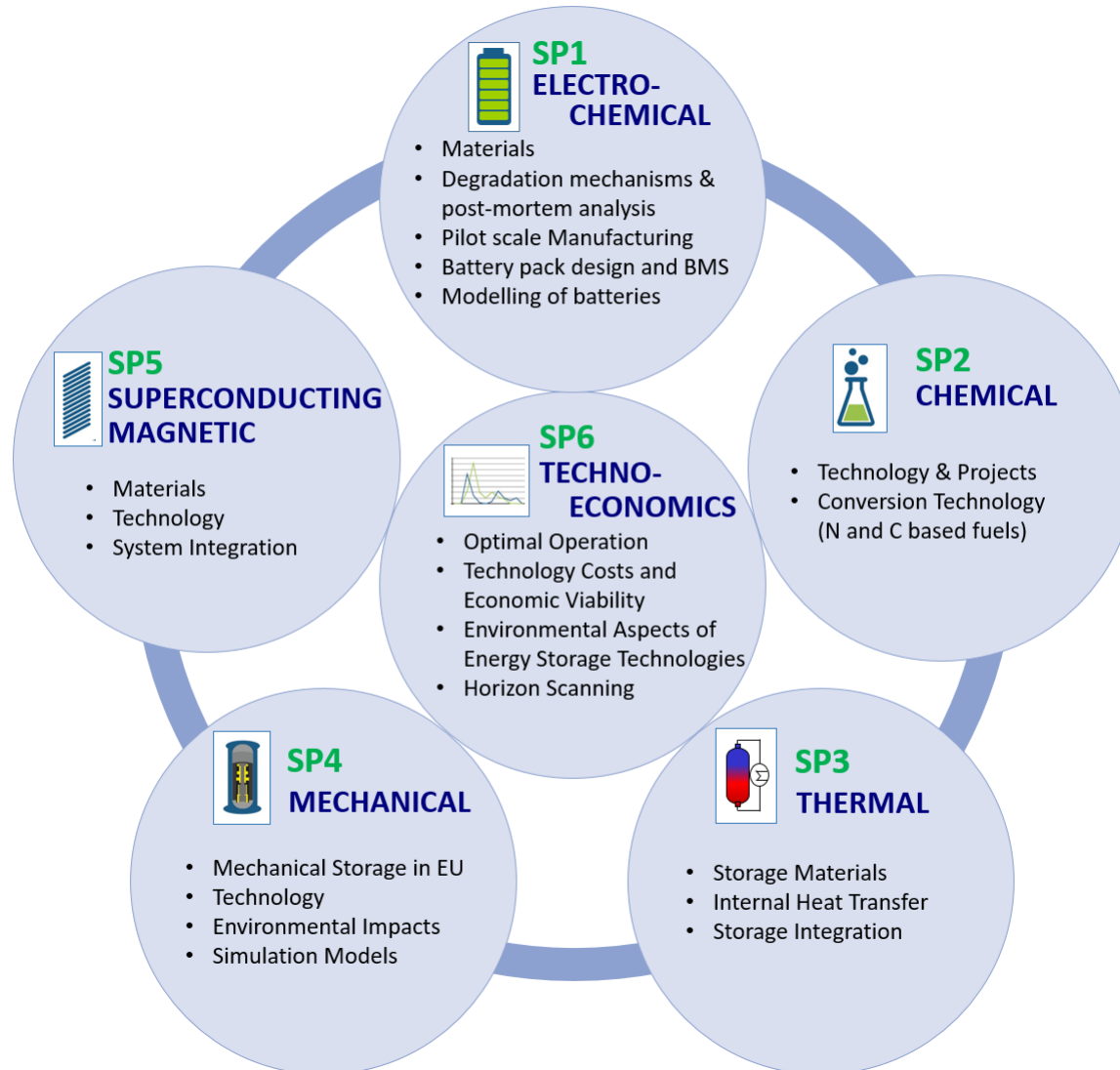
- Established on **2011**
- **33** ROs and Universities dedicated to low-carbon technology research
- **15** Member States /Associated countries collaborating through JP ES
- **19** Energy Storage technologies developed on JP ES across five different categories
- **2** FET-Flagships on Energy (2018)
- **1** European Technology and Innovation Platforms (ETIPs) with active JPES participation: SNET
- **1** Innovation Challenges of Mission Innovation: IC#7

2. Members



3. Structure

Sub-Programmes



3. Structure

Sub-Programmes

SP1 - EES

SINTEF



**Edel
SHERIDAN**

IMDEA



**Jesús
PALMA**

SP2 - CES

DIFFER



**Adelbert
GOEDE**

KIT



**Roland
DITTMAYER**

SP3 - TES

CIC Energigune



**Abdessamad
FAIK**

SP4 - MES

SINTEF



**Atle
HARBY**

UPadova



**Giovanna
CAVAZZINI**

SP5 - SMES

CSIC



**Xavier
GRANADOS**

FCT/NOVA



**João Murta
PINA**

SP6 – TE:ES

KIT



**Manuel
BAUMANN**

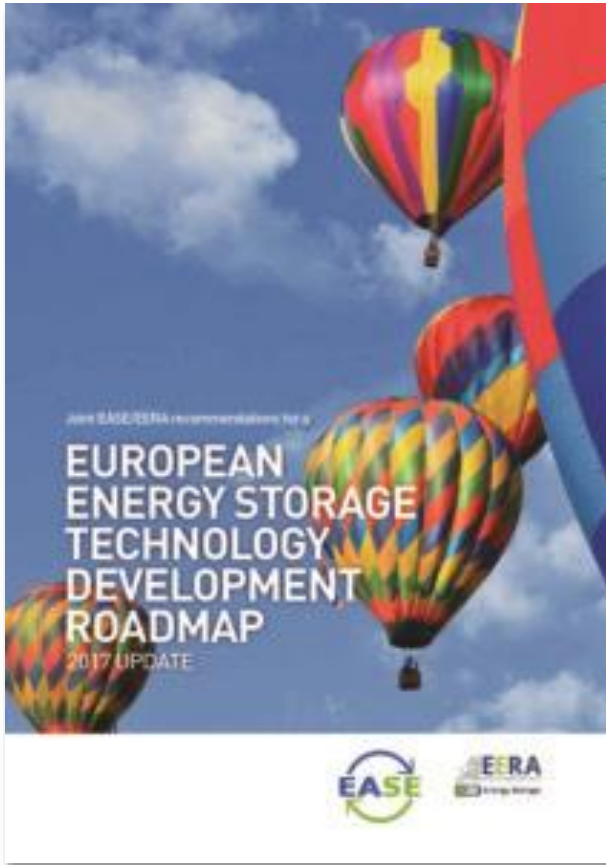
ITAE-CNR



**Marco
FERRARO**

4. Highlights

4.1 Technology Development Roadmap towards 2030

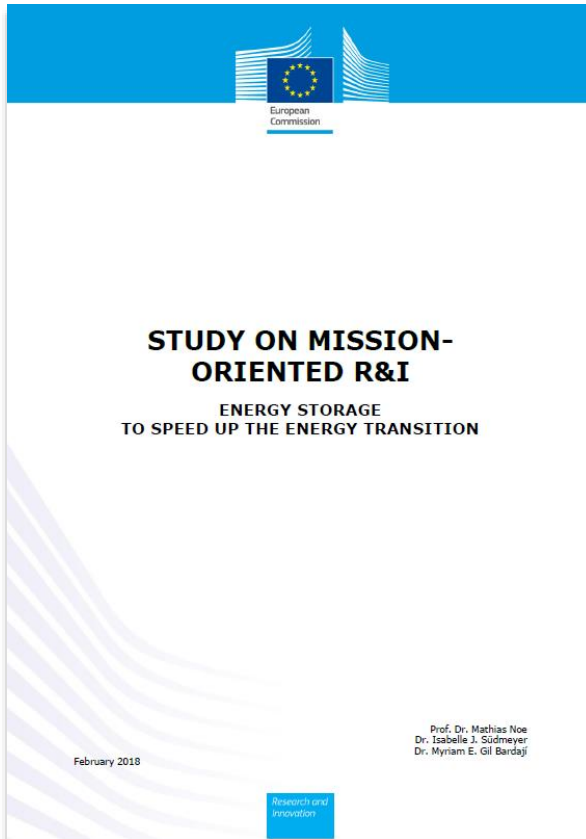


- Joint effort of EASE and the EERA Joint Programme on Energy Storage
- Overview of the energy storage technologies being developed in Europe today
- RD&D needs for the coming decades
- Contributions from over 80 experts
- Six recommendations for R&D policies and regulatory developments
- Official launch 18th October 2017, Brussels



4. Highlights

4.2 Study on Energy Storage to speed up the Energy Transition

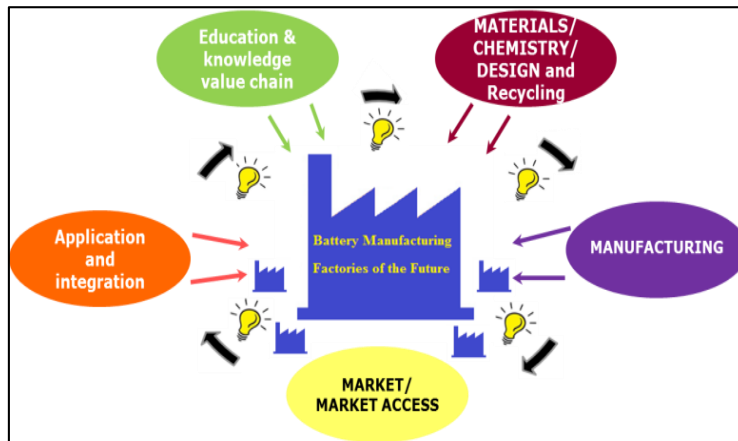


- Study on mission-oriented R&I on *energy storage*
- Aim: to increase understanding on how a technology-driven mission on ES can be designed
- Outcome: concluding recommendations how EU policy and funding instruments could best support mission-oriented R&I in the area of energy storage → FP9

4. Highlights

4.3 Integrated SET-Plan Action 7 – Implementation Plan

"Become competitive in the global battery sector to drive e-mobility and stationary storage forward"



Recommendations

- Industry and member states put most focus on the advancement of Li ion batteries and solid state batteries
- Funding of post Li ion will be more selective and may back fewer battery chemistries
- Integration of battery systems needs more focus
- Recycling and circular economy are important topics

4. Highlights

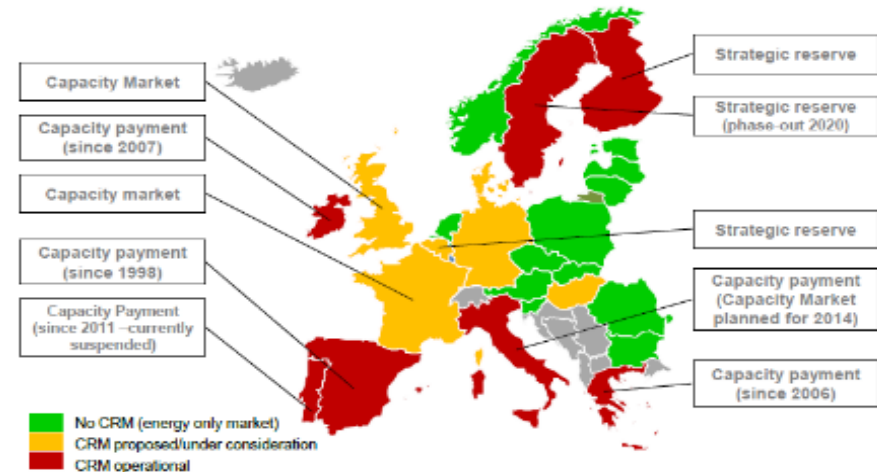
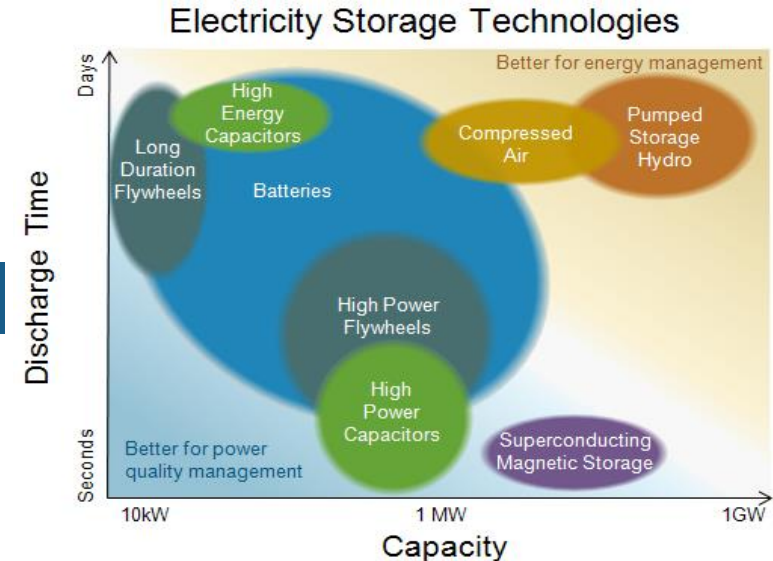
4.4 Series of Hybrid Energy & Energy System WORKSHOPS

1st WS: 22.03.2017 – S. Sebastian (ES)
2nd WS: 22.09.2017 – Rome (IT)
3rd WS: November 2018 – Brussels (BE)

More than 50 participants from 14 different countries

Recommendations to R&D and policy makers

- Study real applications of energy storage to obtain an accurate diagram MW – time
- Flexibility, capacity and capability markets must be developed across regions and countries
- We need to focus more on power and capability – rather than energy only → Focus on energy services
- Need to stack revenues from different markets → Change regulation?



4.5 ECRIA Project SmiLES

Smart Integration of Energy Storages in Local Multi Energy Systems for maximising the Share of Renewables in Europe's Energy Mix



National Projects

AIT: **LEAFS** and **OptHySys**

DTU: **EnergyLab Nordhavn**

EDF: **CERES-2**

KIT: **Energy Lab 2.0**

VITO: **Linear**

Coordinator: KIT

Consortium: KIT, AIT, DTU, EDF with EIFER, EERA, VITO

Type of Action: RIA

EERA Joint Programmes involved: JP ES, JP SC, JP SG, JP E3S

Countries involved: DE, AT, FR, DK, BE

Duration: 12/2016 – 11/2019

Total Budget: 16 Mio €

Requested EC-Contribution: 2,4 Mio €

5. International Cooperations



MISSION INNOVATION
Accelerating the Clean Energy Revolution



6. Networking Activities



Contact Details

More information about JP ES and
JP ES activities under
www.eera-es.eu



JP ES Coordinator
Prof. Dr. S. Passerini
eera-jpes@sci.kit.edu



JP ES Manager
Dr. M. E. Gil Bardají
eera-jpes@sci.kit.edu



JP ES Manager
Dr. O. Suminska-Ebersoldt
eera-jpes@sci.kit.edu