



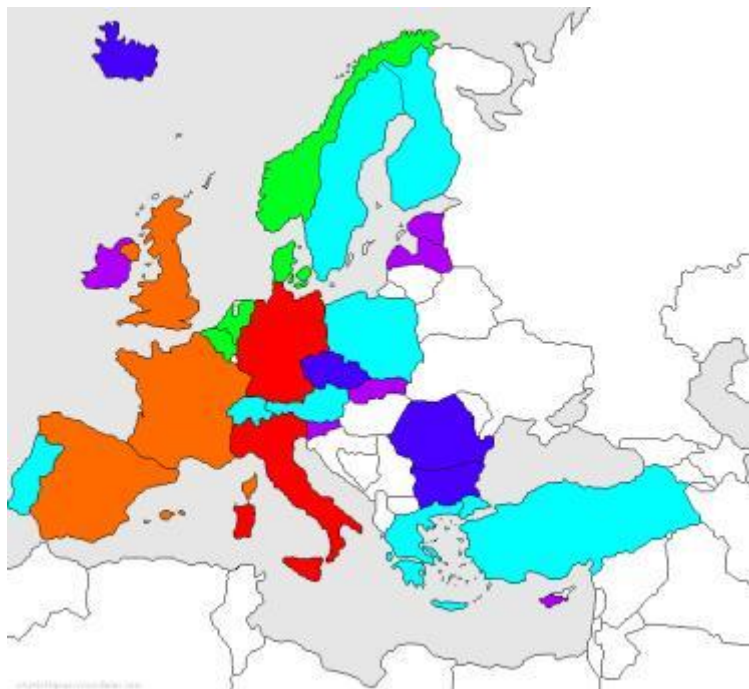
EERA Joint research Programme Photovoltaic Solar Energy

JP Coordinator :
Philippe Malbranche, CEA-INES

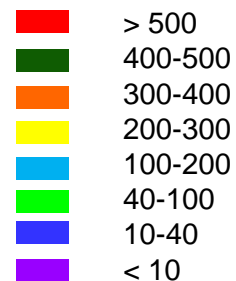


EERA in 2014

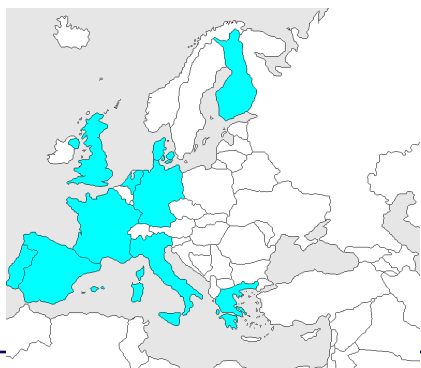
More than 3 700 researchers ready to be committed in EU and over



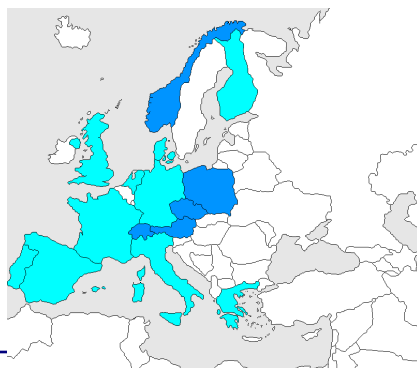
Reaserchers ready to be committed:



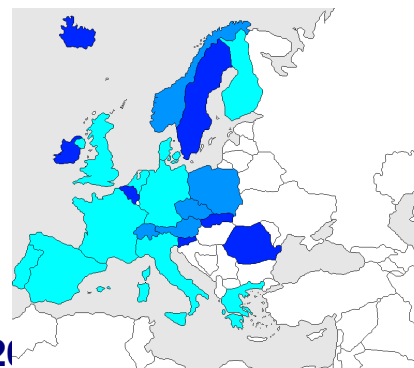
26 countries involved today



EERA 2008 : 10 countries



EERA 2010 : 15 countries



EERA 2012 : 23 countries

ber 20

H2020 / EERA positioning compared to other European instruments in the field of energy

TRL scale



ERC

FET Open

Mobility Marie Curie

EERA

JTI FCH 2

**KET : ICT, NMP,
Biotechnologies**

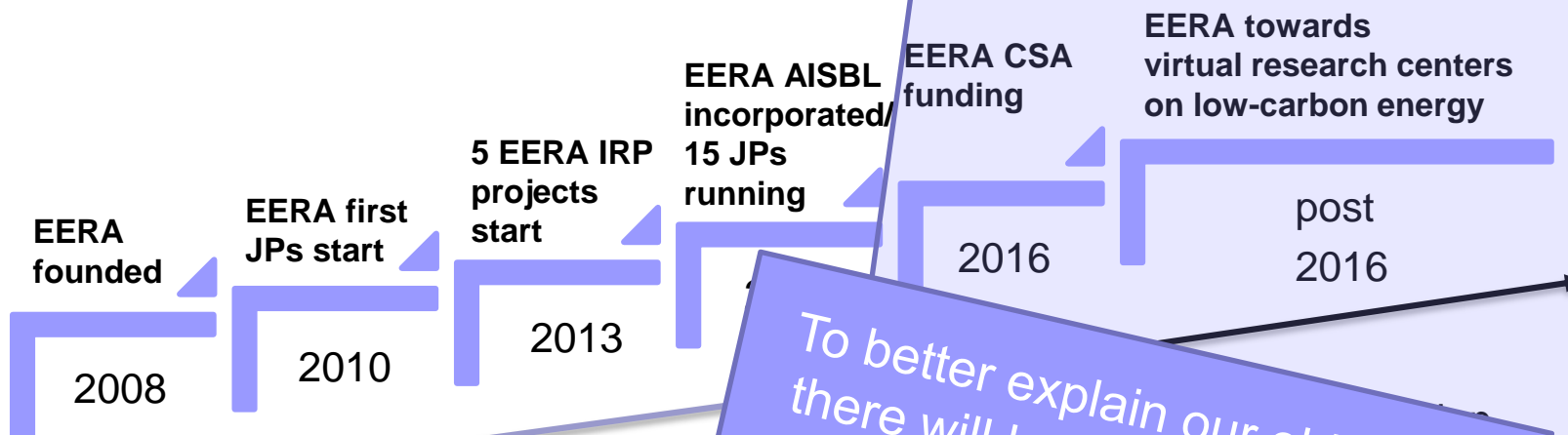
**Challenges Energy,
Transport, Climate**

**KIC Innoenergy
Innovation projects**

Infrastructures

Further steps: our initial proposal

EERA – achievements and future direction



To better explain our objective, there will be a continuation of already ongoing workshops for ExCos and JPCs in order to design an EERA Roadmap.

Integration levels: concept

- 
5. **Management of common research programme** through coordination efforts between research organisations, national authorities and the Commission= **virtual centre**.
 4. **Comprehensive structuring**: All coordination activities started in the IRP and dedicated research activities.
 3. **Joint strategy**: Agreeing on priorities and roadmaps, Sporadic common research efforts.
 2. **Harmonization**: First adoption of common criteria, validating test procedures
 1. **Networking**: Meetings to get to know each other, review of state of the art, first decisions.

Ambition of EERA-PV JP

- Accelerate development of photovoltaic solar energy towards an energy technology that can be implemented at a very large scale by **increasing effectiveness and efficiency of RD&D** in Europe
- **Contribute to development needs of the Solar Europe Industry Initiative** regarding cost reduction of solar electricity, in support of the SET plan (performance, lifetime/reliability, manufacturing costs)

Through alignment of (national) RD&D programmes by:

- Conducting joint research (joint programming)
- Sharing of infrastructure
- Exchange of scientists
- Complement Horizon 2020 programme

EUROPE INDUSTRY INITIATIVE TEAM

PV IMPLEMENTATION PLAN
2013-2015



15 April 2013

DRAFT

Added value : a gradual approach with several steps towards integration

1. Reviewing our Research Infrastructures

- Identifying current facilities and equipment
- Surveying characterisation procedures
- Listing of ongoing projects

2. Increasing our coordination

- Benchmarking and organisation of Round Robin tests
- Understanding the various criteria for improved characterisation
- Validating test procedures and characterisation methods

3. Developing a joint strategy

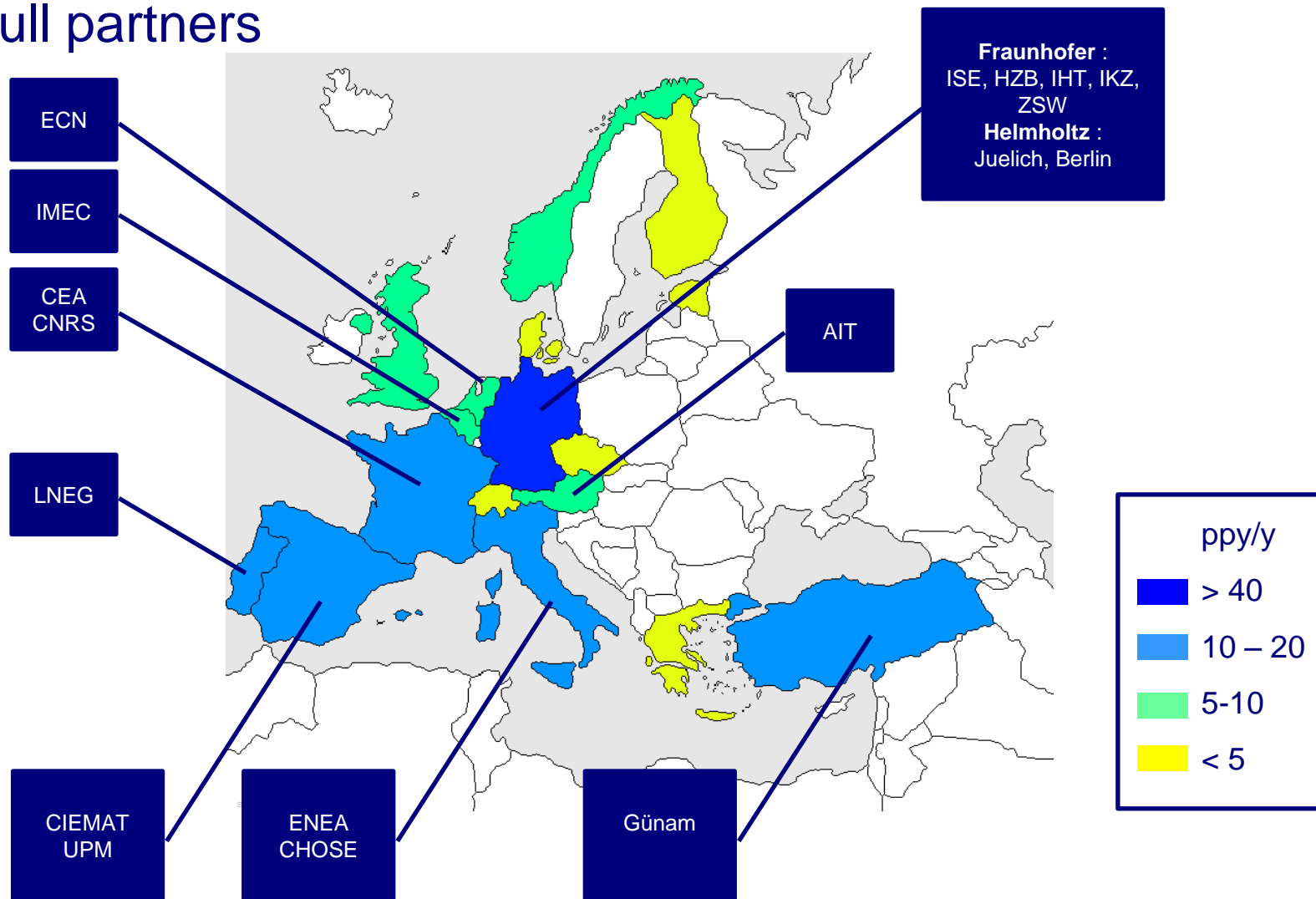
- Elaborating a roadmap
- Do some lobbying : at EC at MS levels on priority topics and actions

4. Collaborating on selected topics

- Dedicated scientific and technological projects , when sufficient resources available

37 participants with more than 170ppy/y from 18 countries

Main full partners



37 PARTICIPANTS:

24 Full participants

13 Associated partners

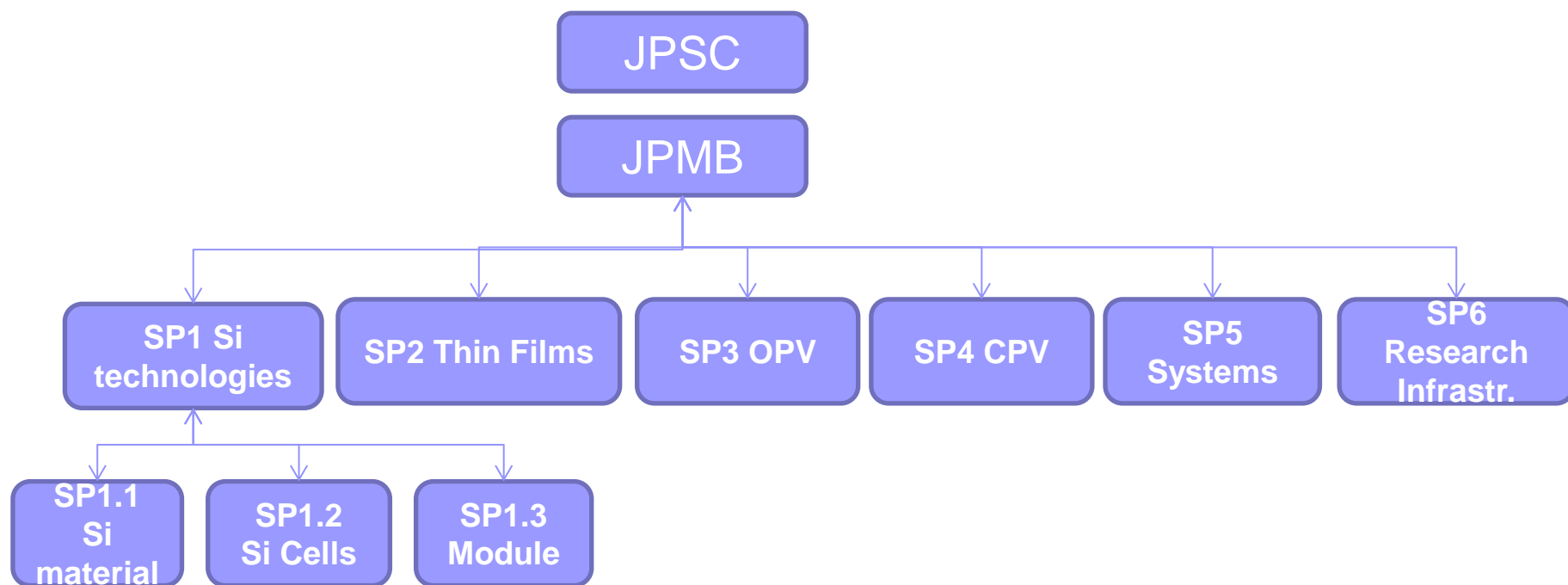
Committed person.years
: 169 py/y

From 18 countries

New applicants every
six months

AIT	Participant	Shokufeh Zamini
CEA-INES	Participant	Philippe Malbranche
CENER	Participant	A R Laguna
CHOSE - Tor Vergata	Participant	Aldo di Carlo
CIEMAT	Participant	José Herrero
CNRS	Participant	A Slaoui
CRES	Associate	Stathis Tselepis
CREST	Associate	Ralph Gottschalg
ECN	Participant	Paul Wyers
EMPA	Associate	Ayodhya Tiwari
ENEA	Participant	Franco Roca
EPFL	Participant	Nicolas Wyrsh
Fraunhofer ISE	Participant	Stefan Reber
Fyzikalni ustav Akademie ved Ceske republiky	Associate	Milan Vaněček
FZ Jülich	Participant	Jürgen Hüpkes
Günam - Middle East Technical University	Participant	Rasit Turan
Helmholtz Berlin	Participant	Martha Lux-Steiner
IFE	Participant	Arve Holt
IHT	Associate	Joachim Knoch
IKP	Participant	Thomas Boeck
IMEC	Participant	Ivan Gordon
Imperial College	Associate	Ralph Gottschalg
JRC	Associate	Heinz Ossenbrink
LNEG	Participant	António Joyce
NTC - Valencia	Associate	Guillermo Sanchez
NPL	Participant	Fernando Castro
DTU	Participant	Peter Sommer-Larsen
SINTEF	Participant	Aud Warnes
Tallinn University of Technology	Participant	Enn Mellikov
TECNALIA	Participant	Eduardo Roman
TUBITAK	Associate	Alp Osman Kodolbaş
University of Ljubljana	Associate	Marko Topic
University of Milan - Bicocca	Associate	Simona Binetti
University of Utrecht	Associate	W van Sark
UPM	Participant	Carlos de Canizo
VTT	Associate	Tommi Vuorinen
ZSW	Participant	Michael Powalla

A new JP structure, to cover more aspects of PV value chain:



It also includes :

- Project leaders on cross-cutting projects mixing subtasks of several SPs (like modelling and reliability)
- Contact persons to liaise with other JPs such as AMPEA, Smart Grids, Smart Cities, Storage, etc.

The main outcomes

- Setting up of new research project proposals
- Joint review papers, benchmarking analysis or position papers regarding the state of the art situation of key scientific issues
- Proposals or visions to go further
- Carrying out research projects: CHEETAH IRP for instance

Thank you for your attention!



PV Research Infrastructure(s) after the SOPHIA project

- The main outcomes
 - Better information exchange
 - Coordination :
 - Round robins
 - databases
 - Extended communication
 - Training and staff exchange
 - A strategic research infrastructure agenda

PV Research Infrastructure(s) beyond the SOPHIA project

- Four possibilities (so far):
 1. A larger « SOPHIA » project, or several projects focused on specific technologies ?
 2. E-infrastructures: PV data collection, data management, and then development of services to research community and society
 3. EU contribution on a Global Research infrastructure on PV quality and reliability
 4. A set of pilot lines to further prove the cost/ W_p ratio of several technologies



PV Research Infrastructure(s) beyond the SOPHIA project

- One opportunity (now):
 1. A larger « SOPHIA » project, or several projects focused on specific technologies ?
 2. E-infrastructures: PV data collection, data management, and then development of services to research community and society
 3. EU contribution on a Global Research infrastructure on PV quality and reliability
 3. A set of pilot lines to further prove the cost/Wp ratio of several technologies



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- CHEETAH : Integrated Research Project.

 - LCE 3