EERA
European Energy Research Alliance
BIOENERGY

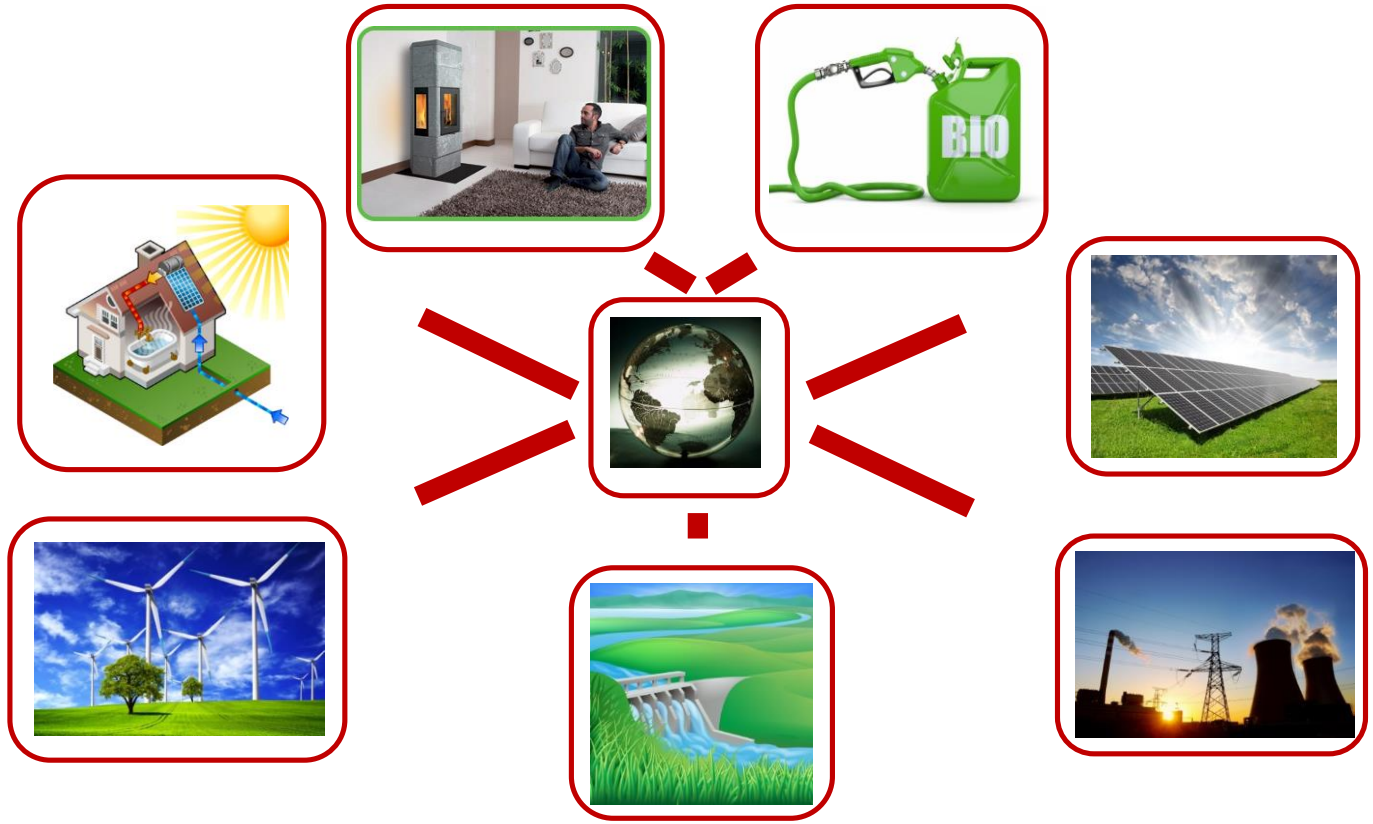
4th UNI-SET Energy Clustering Event

Universities in the Energy Transition: Focus on Sustainable Transport and Carbon Capture, Storage and Use

Imperial College London, 27-28 March 2017

Berta Matas Güell
EERA Joint Programme Bioenergy
Management Board Member

Bioenergy – new challenges

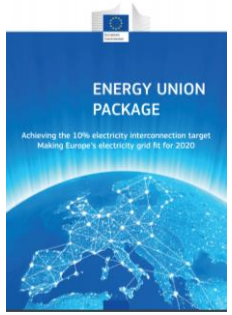


Bioenergy in the context of future energy mix including hybrid technologies

Bioenergy – new challenges

Bioenergy in the context of the biorefinery production and bioeconomy

THE NEW SET-PLAN: PRIORITIES



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SET Plan Integrated Roadmap (13 themes)	ENERGY UNION R&I & Competitiveness priorities	SET Plan (10 key actions)
T10: Development of renewables T8: System flexibility	N°1 in Renewables	1. Performant renewable technologies integrated in the system 2. Reduce costs of technologies
T1: Engaging consumers T2: Smart technologies for consumers T6: Modernising the electricity grid T7: Energy storage T8: System flexibility T9: Smart cities & communities	Smart EU Energy System with consumers at the centre	3. New technologies & services for consumers 4. Resilience & security of energy system
T3: Energy efficiency in buildings T4: Energy efficiency in heating & cooling T5: Energy efficiency in industry & services	Efficient Energy Systems	5. New materials & technologies for buildings 6. Energy efficiency for industry
T7: Energy storage T13: Biofuels, fuel cells & hydrogen, alternative fuels T11: Carbon capture storage/use T12: Nuclear energy	Sustainable Transport	7. Competitive in global battery sector (e-mobility) 8. Renewable fuels
		9. CCS/U
		10. Nuclear Safety

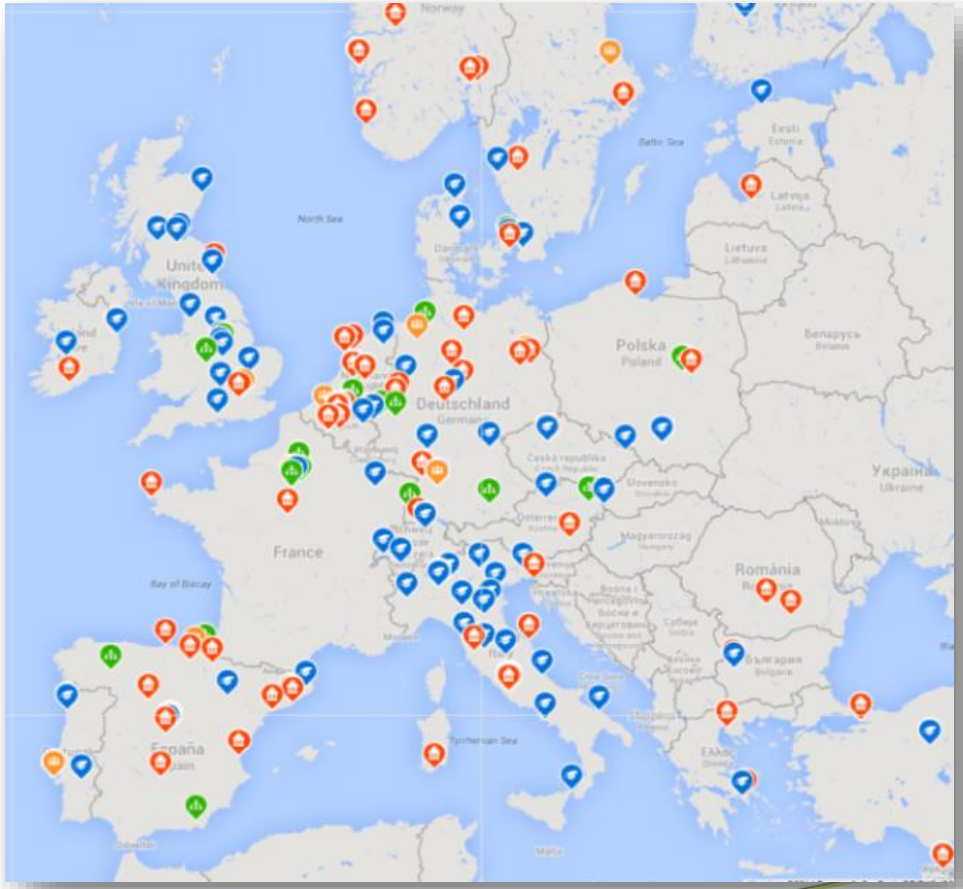
New R&I activities

Dec 2014 Feb 2015 Sep 2015

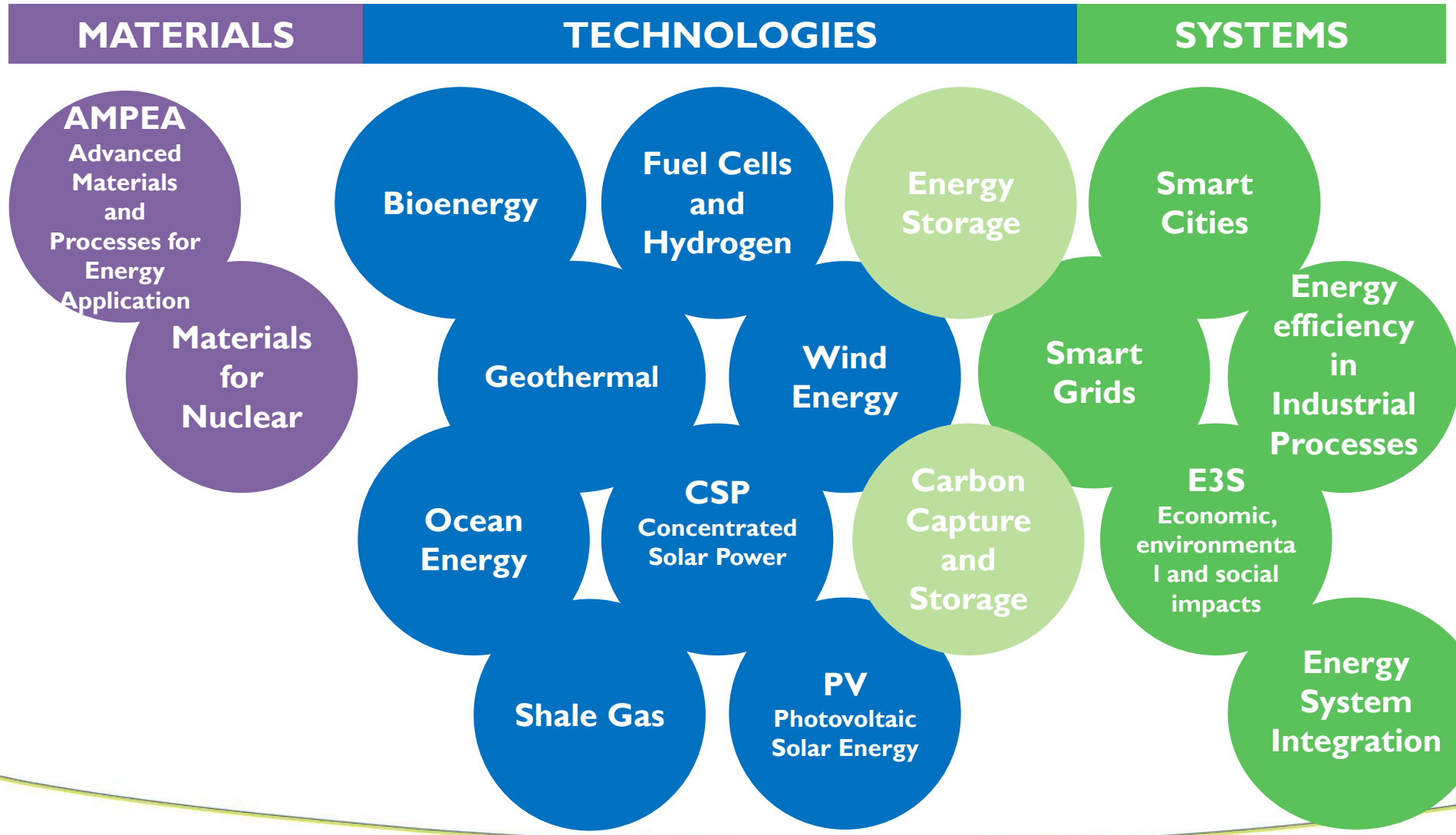
European Energy Research Alliance

- The key actor in European energy R&D

- EERA strengthens and expands Europe's capabilities in sustainable energy research by connecting European energy research activities
- A cornerstone of the European Strategic Energy Technology Plan (SET-Plan)
- Bringing together 175+ research organisations
- 17 Joint Programmes
- Covering 24 EU member states + Turkey, Norway and Switzerland
- Approx. 90% participation in FP7 projects in energy
- Collaborating with European industry through European Technology Platforms, European Industrial Initiatives and other partnerships
- Promoting national research alliances with a track record of 7 national alliances
- Global outreach

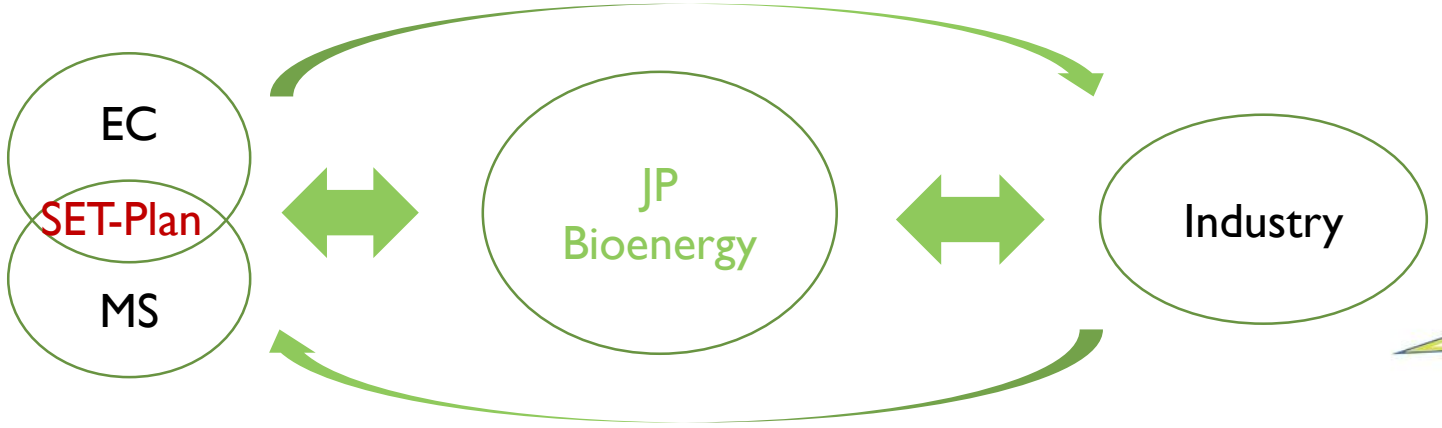


European Energy Research Alliance

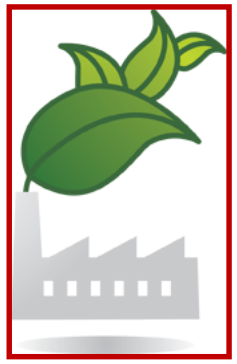


EERA JP Bioenergy – Objectives

- Overall objectives
  - ALIGN research activities at EERA JP bioenergy institutes to give a technical-scientific basis to further development of **advanced bioenergy** routes and to promote the possibilities for **joint** technology development, in order to contribute to accelerate the objectives of the **Set Plan**
  - ALIGN research **national agendas** within bioenergy
  - ALIGN research activities at **EERA JP bioenergy** institutions with **industrial priorities**



EERA JP Bioenergy – Current focus areas



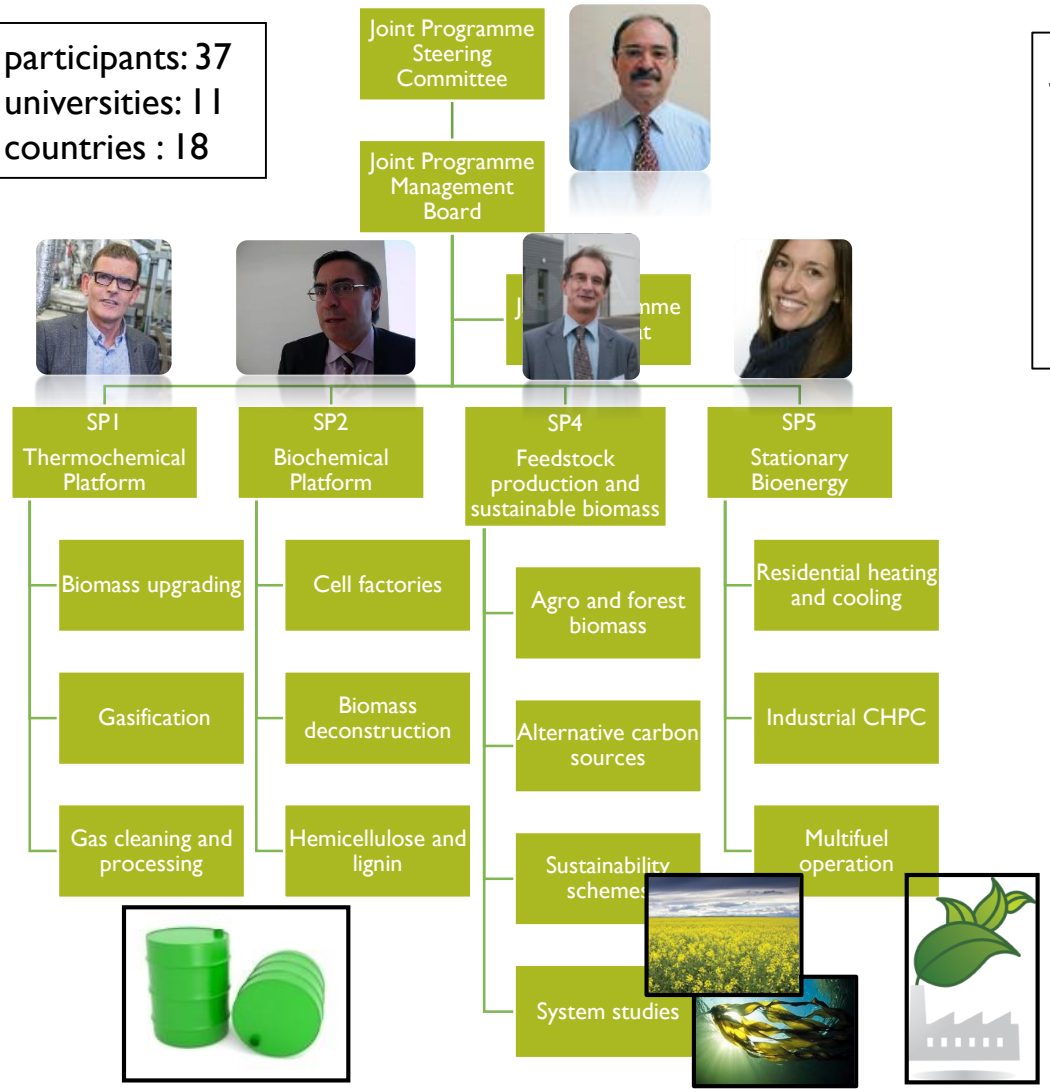
ENERGY MIX
Bio

BIOECONOMY

BIOREFINERIES

EERA JP Bioenergy – Current focus areas

Number of participants: 37
Number of universities: 11
Number of countries : 18

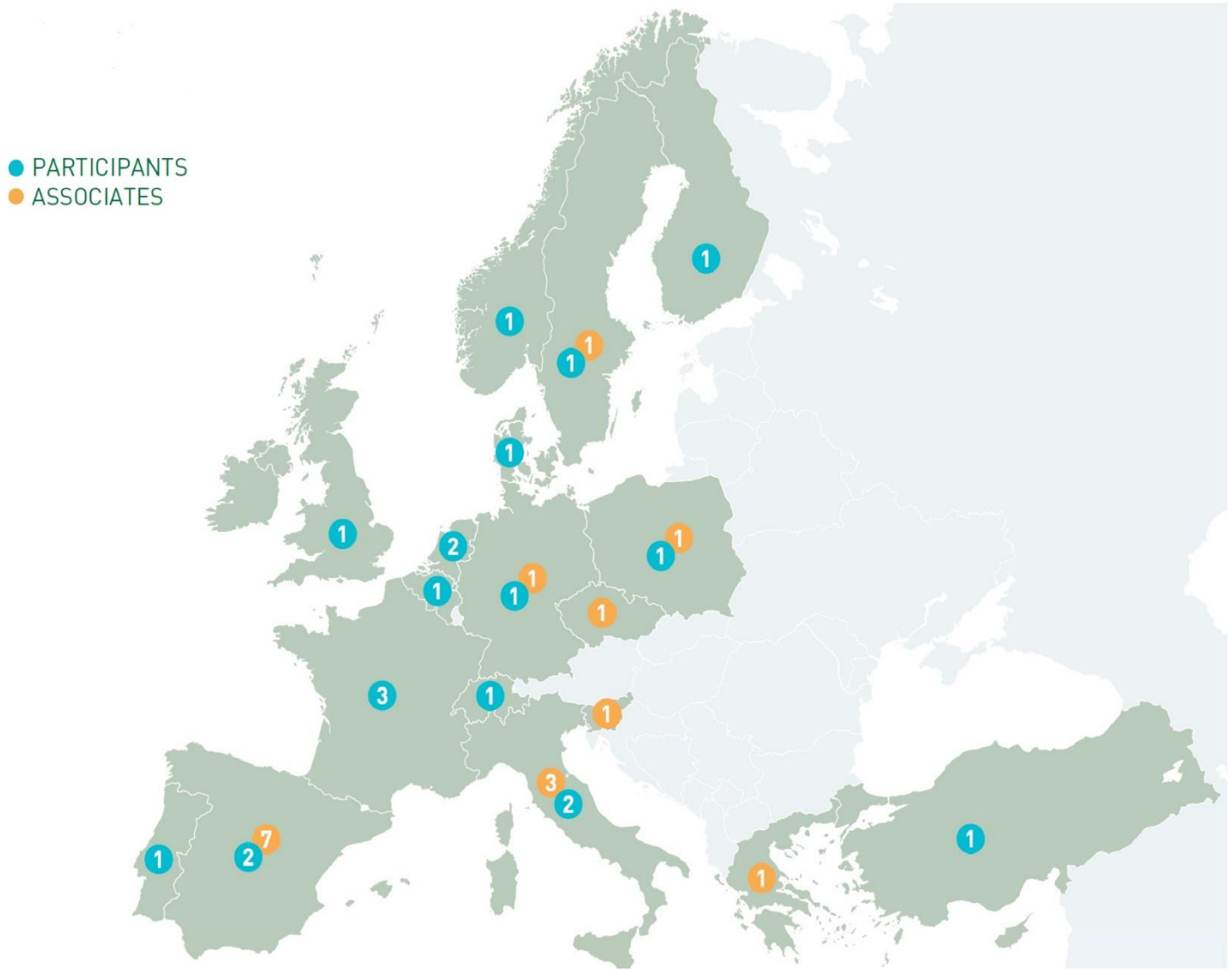


JP Coord: J. Carrasco – CIEMAT

SP1 Coord: J. Kiel – ECN
SP2 Coord: F. Girio - LNEG
SP4 Coord: J. Tayeb- INRA
SP5 Coord: B. Matas-Güell - SINTEF

Process for defining new DoW started!

EERA JP Bioenergy – Partners

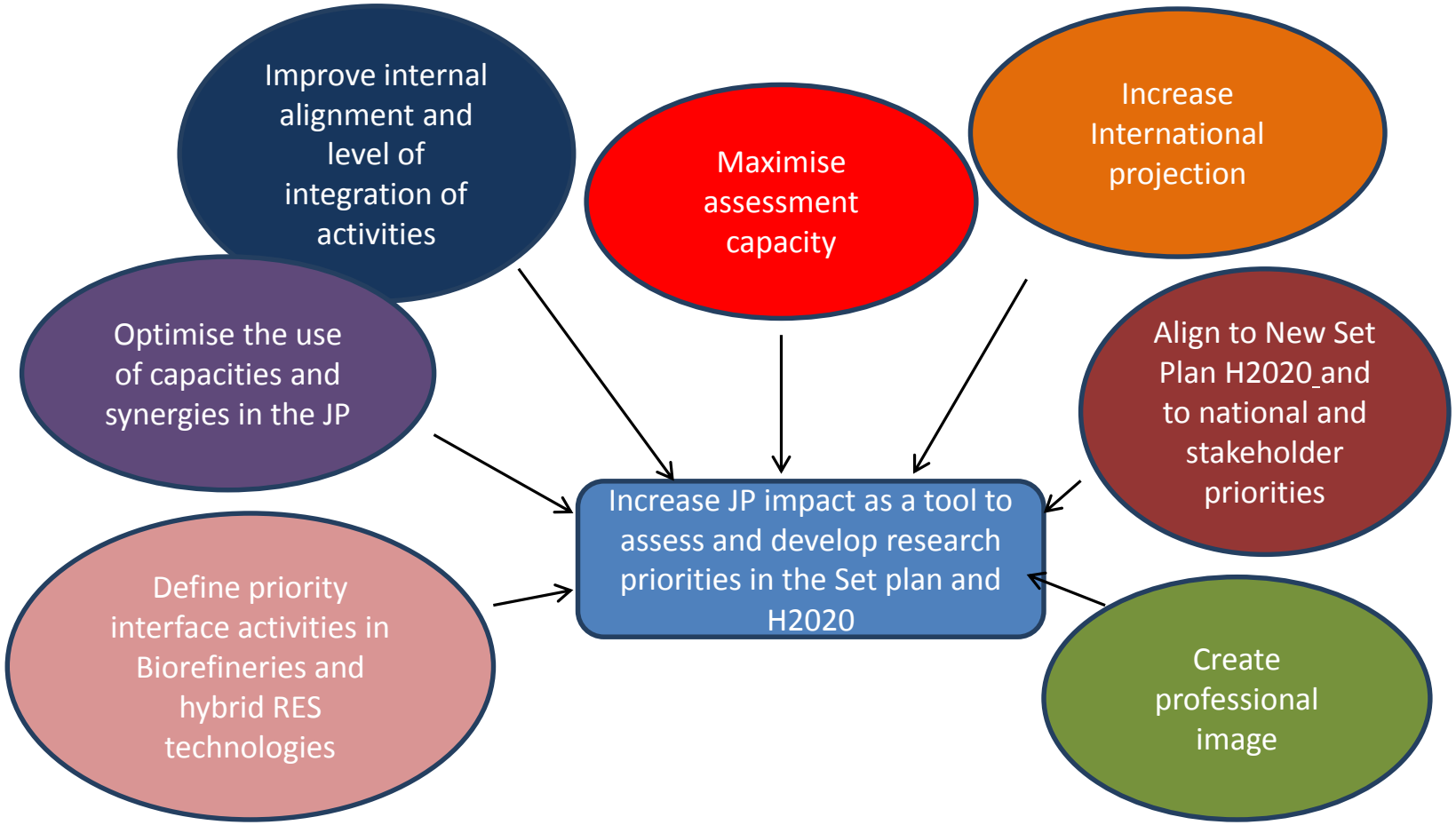


Universities @ EERA JP Bioenergy

- PARTICIPANTS (3)
  - KIT - The Research University in the Helmholtz Association (Germany)
  - ASTON UNIVERSITY - UKERC (United Kingdom)
  - WUR. Wageningen University & Research (The Netherlands)

- ASSOCIATES (7)
  - Department of Energy Technology - Aalborg University (Denmark)
  - IFK Stuttgart. Institute of Combustion and Power Plant Technology – Universität Stuttgart (Germany)
  - NTUA. The National Technical University of Athens (Greece)
  - UNIBO. Universitá di Bologna (Italy)
  - Università degli Studi di Padova (Italy)
  - Università degli Studi di Perugia - CRB - Biomass Research Centre (Italy)
  - VŠB. Technical University of Ostrava (Czech Republic)

EERA JP Bioenergy – Process for DoW 2018-2020



EERA JP Bioenergy – Process for DoW 2018-2020

HWG | SP1 WG | SP2 WG | SP4 WG | SP5 WG

Phase 1
- Working groups established
- Co-ordinated working programme HGW and WGs and final working calendar defined

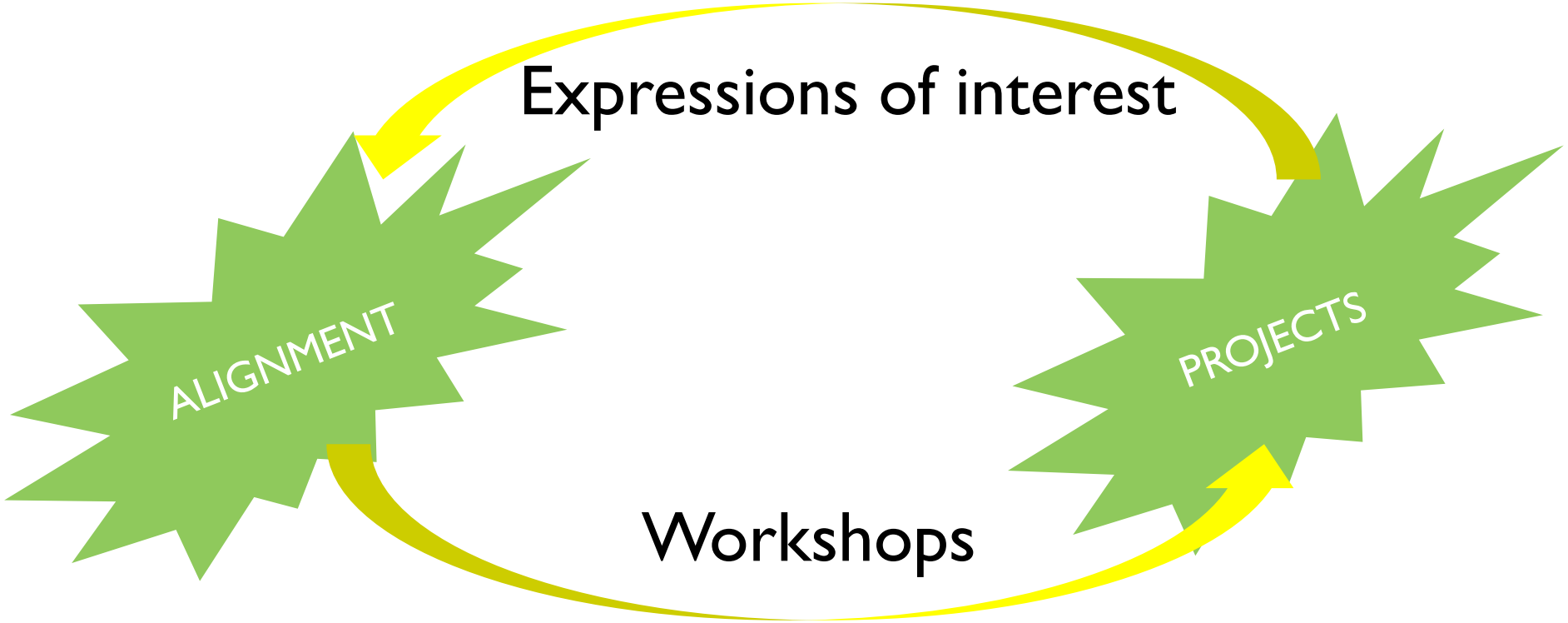
Phase 2
- Mapping of JP participants, expertise, infrastructures and interests
- Priorities in interfaces on hybrid RES Technologies and Bio-based economy fields
- Value chains and Technologies assessment.
- Co-operation areas/activities among SPs

Phase 3
- Structure and priority activities of the JP defined
- First JP 2018-2020 DoW draft. Integrated version of the WGs

Phase 4
- Comments to DoW by all JP participants and final draft.
- JP 2018-2020 DoW draft approval

Phase 5
- Editing and publication of Bioenergy Global view paper.

Tools to achieve EERA JP Bioenergy's objectives

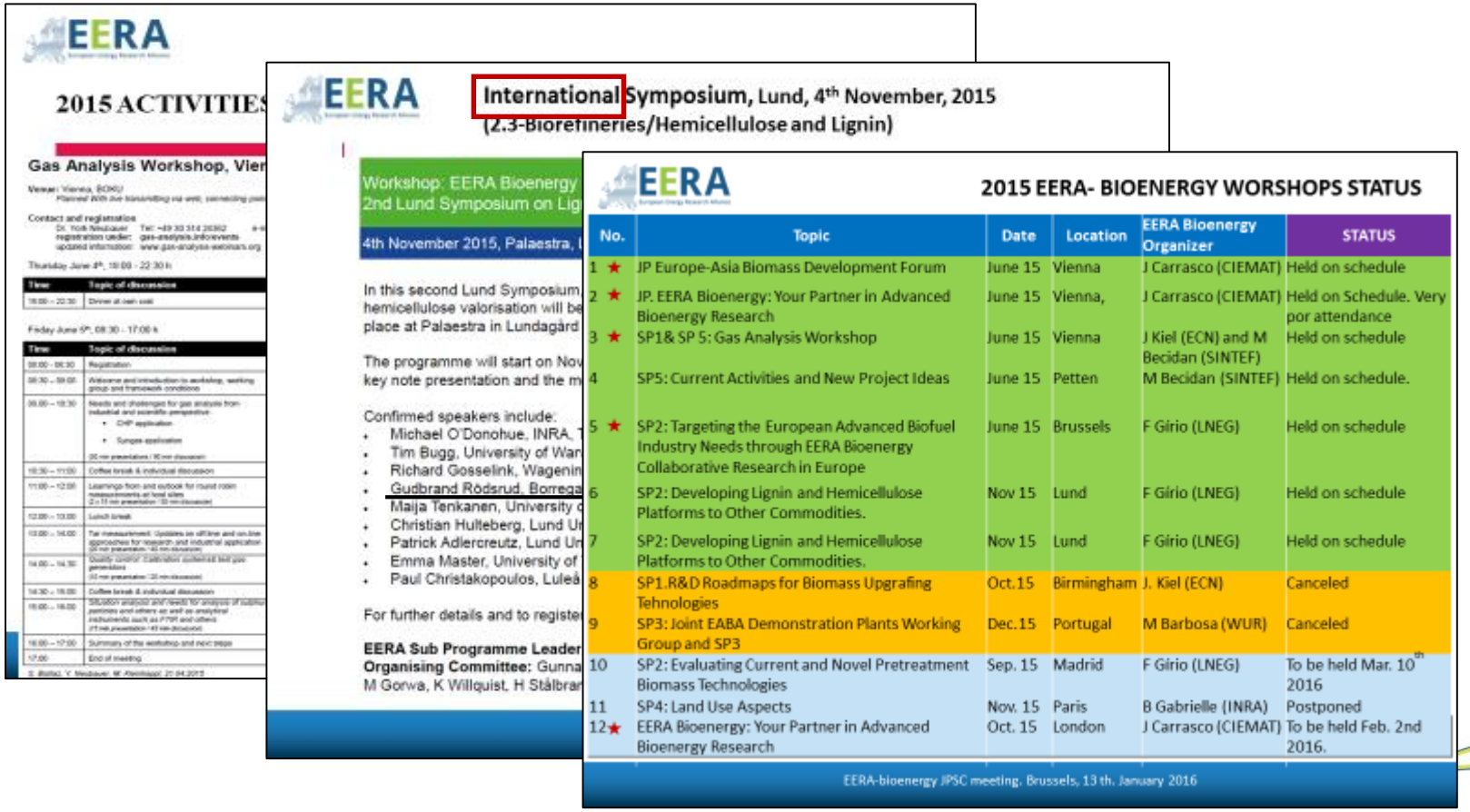


Alignment – EC/MS

- Contribution to Issue Papers on renewable fuels (#8)
  - Workshop on the preparation for Issue Papers on bioenergy **- prior issuing**!
  - Close dialogue with the EC and European industrial associations

Alignment – Industry

- Arrangement of dedicated workshops in existing international events

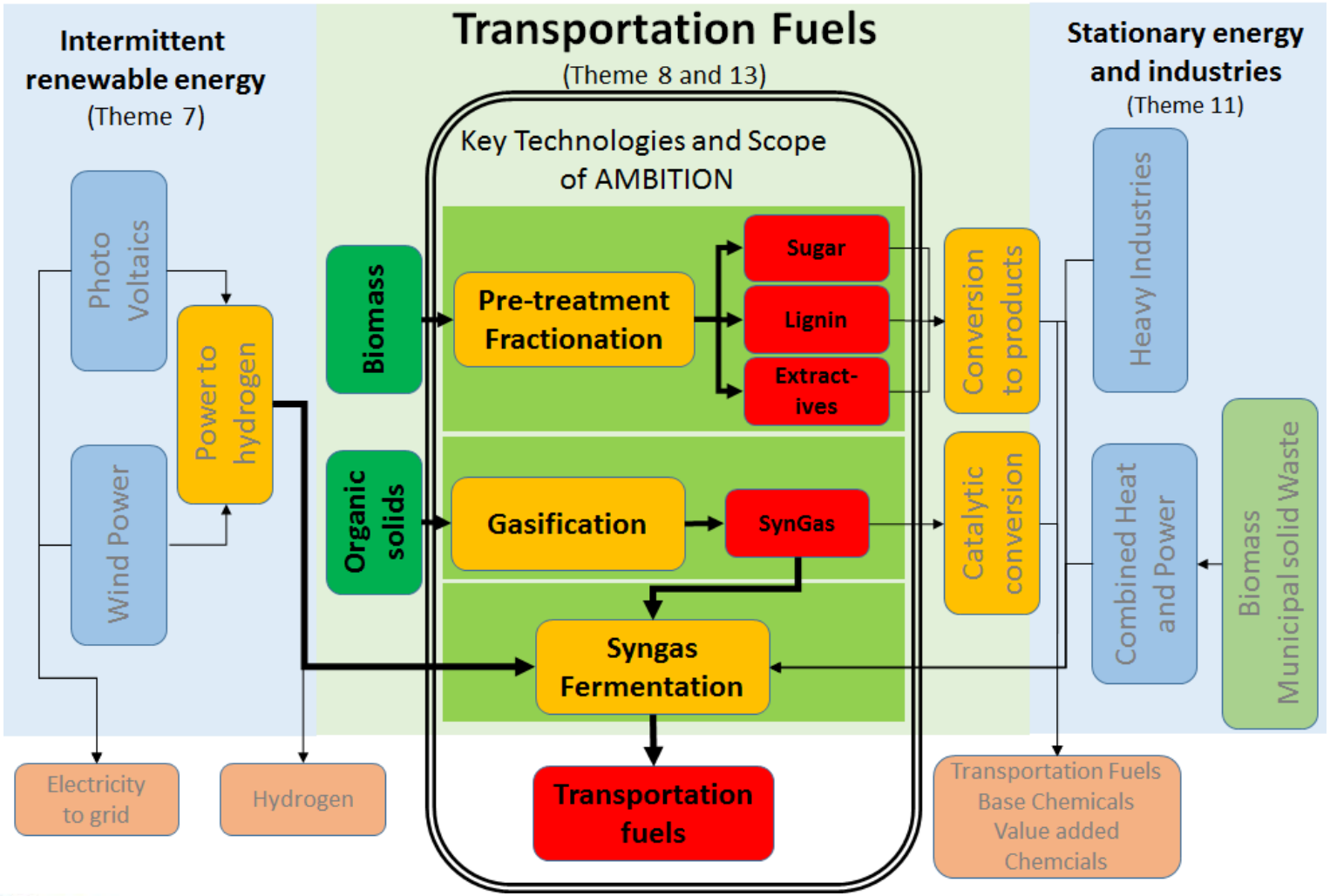


Project proposals 2016 as a result of Workshops

	Proposals submitted (Acronym/Coordinator)	Call	EERA Bio Parters	RTO & Univ.	Total number of partners
	BIORAV/LNEG (JP member)	LCE-6	5	6	12
	FLAME/WFBR (JP member)	LCE-6	6	6	6
	HTFLEX/CEA (JP member)	LCE-8	4	7	12
	ECOFUELS/LTU (Non JP member)	LCE-8	2	3	8
	ALG-Ternative/LNEG(JP member)	LCE-8	5	8	12
Granted	BECOOL/Unibo (JP member)	LCE-22	4	8	14
Granted	AMBITION/SINTEF (JP member)	LCE-33	8	8	8
	BIOMGRIDS/CIEMAT (JP member)	LCE-33	8	7	8
Granted	BRISK II/KTH (non JP member)	INFRAIA01	7	15	15

AMBITION

Advanced biofuel production with energy system integration



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THANK YOU

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