

European Energy Research Alliance, how does it contribute to national programs' alignment?

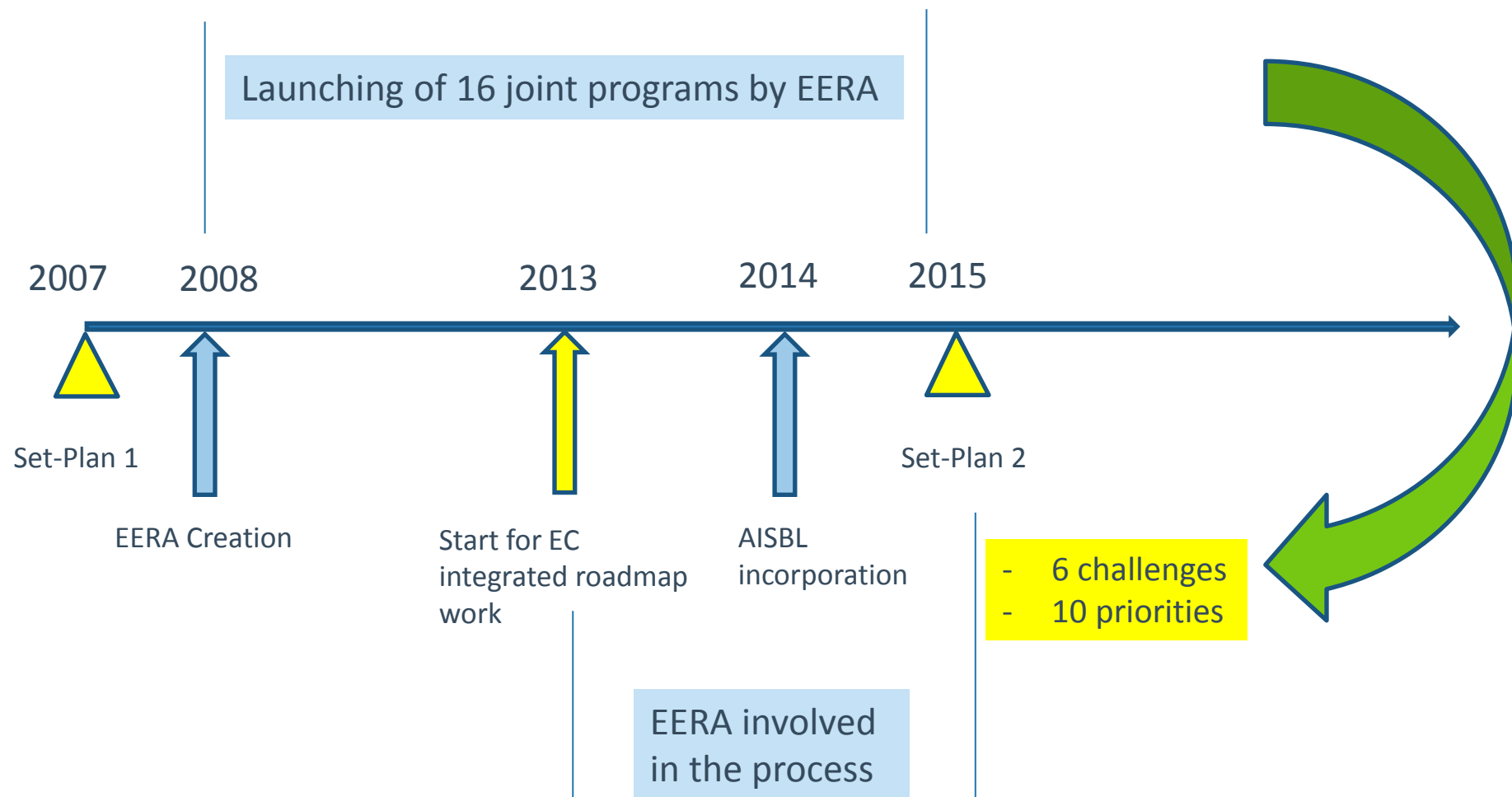
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- Very wide scope, large number of stakeholders,
- Strong links with global economy, regulation and market design,
- Great debates about energy mix between Member states, which impact research funding,
- **Highly political topic: the Set-Plan (Strategic energy technology Plan) as framework**

So discussions about energy programs are challenging

The key dates for energy research programming

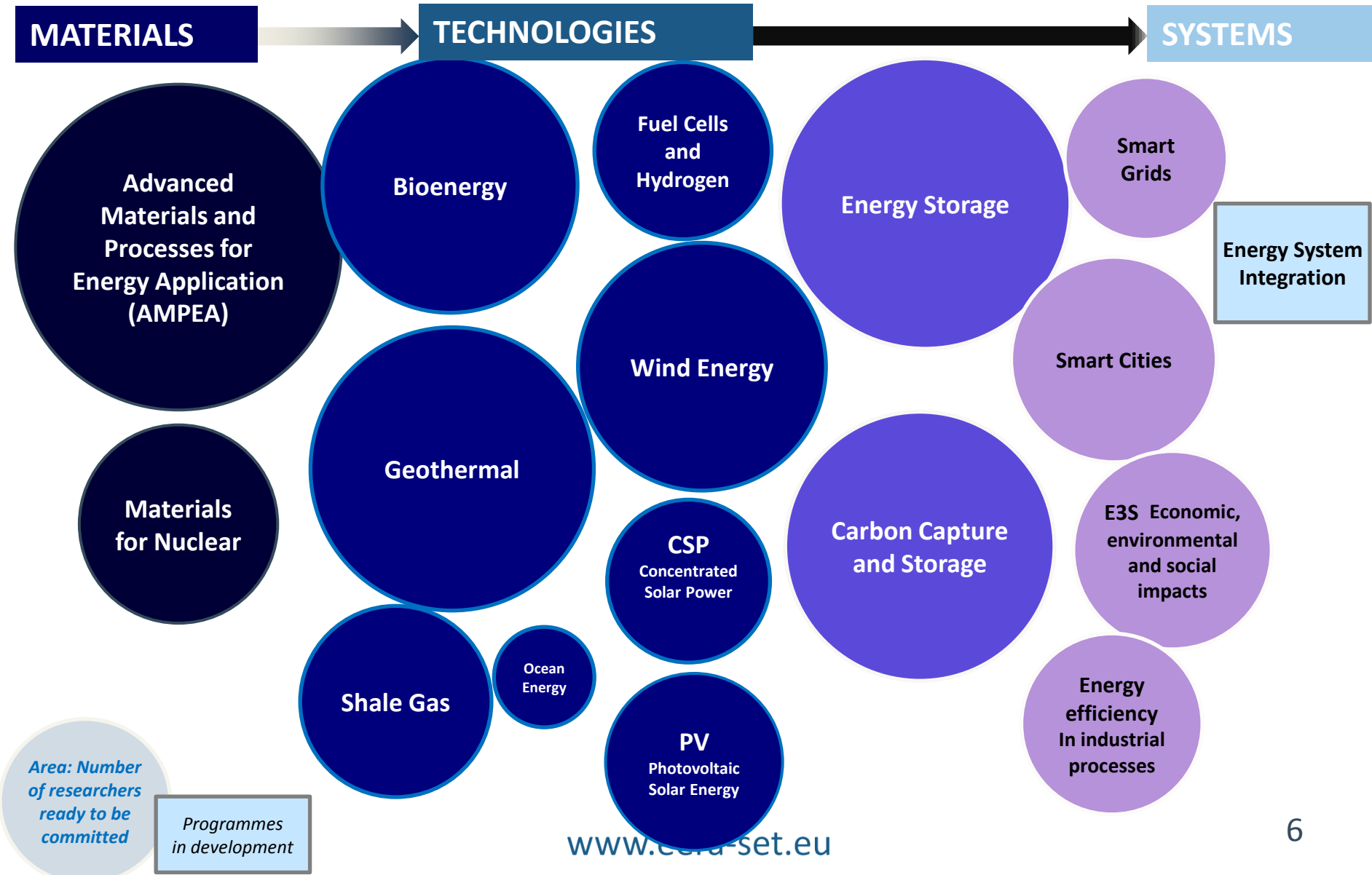


- EERA was created in 2008 in the political framework of the Set-Plan,
 - Initiated by the Commission, but built by the research organisations,
 - Initial ideas:
 - Opening of our programs to partners, pooling our in-kind research contributions
 - A program approach instead of project approach for EU funded common activities.
- In 2015, very few countries are able to implement this scheme, others aren't. Financial situations in organizations have changed!

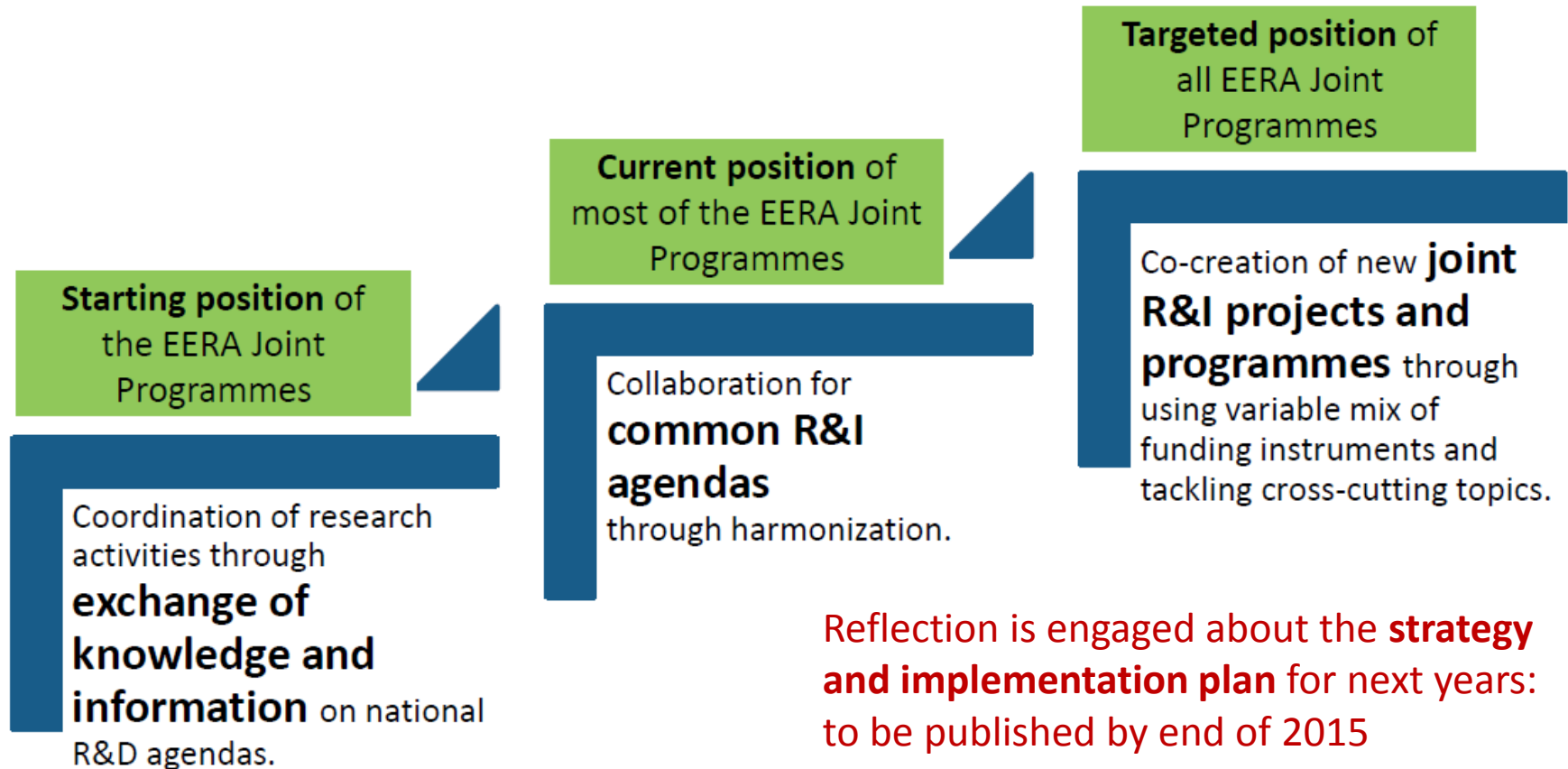
- Legal entity (AISBL) since April 2014:
 - 160 organisations.
 - 16 joint programs managed by joint program coordinators: networking + Description of Work + running common projects
 - Working so far on in-kind contributions from partners or some EU projects
- Three ambitions for EERA
 - Efficiently advising and guiding European policies,
 - **Working with the national authorities to contribute to the coherent alignment of national programs,**
 - Being a European research performer.

Alignment is clearly one of the objectives, probably the more difficult to implement



16 (+1) joint programs to speed up the development of technologies for energy



EERA turns knowledge in low carbon energy research into results at European level.



In parallel to EERA development, EERA participated in:

- The integrated roadmap: thick document (low carbon technologies, integration, efficiency, other topics)  **EERA contributed**
- The action plan: MS and EC are establishing fiches  **Organisations are consulted by MS for advices**

<p>NUMBER 1 IN RENEWABLES</p> <p><i>Being the world leader in developing the next generation of renewable energy technologies and integrating higher shares of renewables in the energy system and energy market.</i></p>	
<p>Main objectives:</p> <p><i>Develop those renewable energy technologies which are still in the early stages of development; and develop to full cost-competitiveness, supporting upscaling and market uptake, those renewable energy solutions which have already achieved greater levels of maturity and the technologies needed to integrate high shares of renewables in the energy system.</i></p>	
<ul style="list-style-type: none"> • <u>Wind Energy</u> • Objective: reduce the cost of energy by 50% (offshore) by 2025 and 30% (onshore) by 2020, compared to 2010 levels. • MSs/ACs interested in Joint R&I projects / programmes: BE, DE, DK, ES, FR, GR, LT, NL, PT, SE, UK, TR • MSs/ACs interested in common R&D 	<p>Annex II, page 1 indicates <i>Offshore wind needs to reduce its levelised cost of energy (LCoE) to 50% of 2010 levels by 2030 (...)</i> Onshore wind aims to reduce its LCoE by 20% in 2020 and by 30% in 2030, again with reference to the 2010 levels</p> <p>Instead of 2030, the objective proposed offshore is set for 2025 and the 2030 onshore is put forward to 2020.</p>
<p>agenda: BE, ES, FR, GR, NL, SE, UK, NO, TR</p> <ul style="list-style-type: none"> • Investments needed: Eur 1.5 billion 	<p>First, the “2010 levels” must be understood as the LCoE corresponding to projects with final investment decision (FID) in 2010 (not with commissioning in that year).</p> <p>Second, objectives have been advanced because of:</p> <ol style="list-style-type: none"> 1) A much more favourable financial climate in the last 18 months has significantly reduced the cost of debt (and equity). Given the capital-intensive nature of renewables, capital cost is a significant component of LCoE, thus the high impact of lower capital costs. 2) Second, we have now evidence of a technological leap forward in the form of larger rotors, which affects wind in general but in particular low-wind projects onshore. Even when the capital cost of these turbines will not reduce significantly, the strong relationship between swept area and energy captured guarantees significant reductions in LCoE under low-wind conditions, which will affect average LCoE figures.

A challenge approach like in H2020

- EU sets up a framework based on a **6 challenge approach** (ours is more a technology driven one):
 - Number 1 in renewable energy
 - The future smart EU energy system, with the consumer at the centre
 - Develop and strengthen energy-efficient systems
 - Diversify and strength energy options for sustainable transport
 - Driving ambition in carbon capture storage and use deployment
 - Increase safety in the use of nuclear energy

Examples of priorities in the new Set-Plan out of the 10 priorities

- Sustain technological leadership by developing highly performant renewable technologies and their integration
- Reduce the cost of key technologies
- Increase the resilience, security and smartness of the energy system
- Become competitive in the global battery sector to drive e-mobility forward
- Maintaining a high level of safety of nuclear reactors and associate fuel cycles during operation and decommissioning

...

- Strengths:
 - The main active players on a scientific topic are gathered in the corresponding joint program: better knowledge of what everyone is doing, of the available infrastructures
 - Getting a political framework (Set-Plan): strength or obstacle?
- Expected benefits:
 - At the end of the day, everyone will be focused on what he is the best at
 - Savings of fund due to share of infrastructure and competencies and reduction of duplication
 - The EU community of researchers working on a topic is networking. It is the entrance point for international collaboration

- Financial obstacles:
 - EC and MS are persuaded that alignment will immediately allow savings but at the start of the process, it costs money, so organizations claim for more funding for those coordination activities,
 - Basic funding of organizations is already committed as cofunding of competitive projects or for functioning expenses. No more ‘free money’.
- Structural obstacles:
 - Alignment might mean ‘suddenly change some directions’ to focus on what organizations are the best at:
 - Difficult for organizations
 - Most industries are not European but national so it is challenging to decide how to share the research tasks (and topics) which could impact national industry

EU sets up a framework based on a **challenge approach** and ours is more a technology driven one.

Convergence will come from discussions: foreseen meetings with EC and MS

Important statements to keep in mind:

“Joint calls can only be a limited part of JPIs’ implementation. **We also need to ensure that our institutional funding and our big research institutions better coordinate their work.**”

(Last Commissioner’s vision on alignment (MGQ), Dublin 2013)

“Alignment is the strategic **approach taken by Member States to modify their national programs**, priorities or activities as a consequence of the adoption of joint research priorities.” GPC definition



Thank you!

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