

Smart Specialisation Platform for Industrial Modernisation

Thematic S3 Partnership

Advanced Materials for Batteries Partnership (AMBP)

Start Date 8 October 2018

MONITORING PROGRESS REPORT

Reporting Period: from January 2019 to June 2019

This Report is presented to the relevant Working/Steering Committee.
It contains two main parts:

- I. Management Report prepared by the Lead Region(s)***
- II. Progress Report prepared by the Lead Region(s)***

The report is updated every six months.

Confidentiality: this document (part I) will be made available to the public via your Partnership's web page except for chapter *II.E. Self evaluation*.

Based on the monitoring results, the European Commission will decide on the following term's support.

Executive summary (max. 250 words):*The Advanced Materials for Batteries Partnership (AMBP) at a glance*

1. In September 2018, Slovenia proposed to lead a new interregional partnership on “Advanced materials for batteries for electromobility and stationary energy storage”, together with Castile and Leon, Andalusia, the Basques country, Auvergne Rhone Alpes, Eindhoven, and Nouvelle Aquitaine.

With support from the European Commission this new partnership was successfully launched at a kick-off event in Brussels on 8 October 2018. Other interested regions across Europe were invited to join the effort.

2. AMBP Ambition. The future of the battery market is expected to reach a yearly level of €250 billion from 2025 onwards, offering the opportunity of creating 4-5 million jobs. Regional actors are willing to act together to combine their forces to create jobs. The AMBP Partnership aims to take stock of this opportunity and accelerate the volume manufacture and deployment of advanced materials and battery cells with a 2025 Horizon. We work toward the generation of a pipeline of business investment projects and build upon existing regional assets to leverage complementary assets across the Partnership.

3. AMBP Pilots. The AMBP Partnership has identified 6 Priority Pilots. Each Pilot consists in an application area in which innovation investment projects will be delineated and operationalised with industry. The current Priority Pilots are the following:

- PILOT 1: Solid state lithium-ion batteries (Generation 4) (Lead Region: Bavaria)
- PILOT 2: Sustainable Raw Material, Extraction and Processing (Lead Region: Castile and León)
- PILOT 3: Recycling of existing Lithium Ion Batteries (Lead Region: Bavaria)
- PILOT 4: Liquid based-batteries (stationary) (Lead Regions: Basque/ Valencia)
- PILOT 5: Network of research & testing centres (Lead Region: West Slovenia)
- PILOT 6: Improved lithium-ion batteries (Generation 3b) (Lead Region: Auvergne Rhône Alpes)

4. Geographical Coverage. The number of regions committed to the partnership grew from 22 (December 2018) to 27 (May 2019) (See graph source: JRC S3 Platform, 2019).

I. Management Report prepared by the Thematic Platform/Lead Region(s)

I.A. Partnership Action Fact Sheet

- **Partnership:** *Advanced Materials for Batteries Partnership (AMBP)*
- **Partnership's web-page:** *s3platform.jrc.ec.europa.eu/batteries*
- **S3 Thematic Platform:** *Industrial Modernisation*
- **Objectives:** *The future of the battery market is expected to reach a yearly level of €250 billion from 2025 onwards, offering the opportunity of creating 4-5 million jobs . Regional actors are willing to act together to combine their forces to create jobs. The AMBP Partnership aims to take stock of this opportunity and accelerate the volume manufacture and deployment of advanced materials and battery cells with a 2025 Horizon. We work toward the generation of a pipeline of business investment projects and build upon existing regional assets to leverage complementary assets across the Partnership*

- **Lead Region(s):** *list of regions/countries leading this partnership*

<i>Andalusia (ES)</i>
<i>Castile and Leon (ES)</i>
<i>West Slovenia (SI)</i>

- **Official partner regions:** *list of regions/countries that have officially committed to follow this partnership and have been active in the last six months.*

<i>Aragon (ES)</i>	<i>Brussels - Capital Region (BE)</i>	<i>Lapland (FI)</i>
<i>Austria (AT)</i>	<i>Central Ostrobothnia (FI)</i>	<i>Lombardy (IT)</i>
<i>Auvergne Rhone Alpes (FR)</i>	<i>East Slovenia (SI)</i>	<i>Metropol Region Eindhoven (NL)</i>
<i>Baden-Württemberg (DE)</i>	<i>Emilia-Romagna (IT)</i>	<i>Navarra (ES)</i>
<i>Basque Country (ES)</i>	<i>Flanders (BE)</i>	<i>North Ostrobothnia (FI)</i>
<i>Bavaria (DE)</i>	<i>Kainuu (FI)</i>	<i>Nouvelle Aquitaine (FR)</i>
<i>Piemonte (IT)</i>	<i>Pohjois-Savo (Northern Savonia) (FI)</i>	<i>Valencia (ES)</i>
<i>Vestlandet (NO)</i>	<i>Viken (NO)</i>	

- **Other regions:** *list of regions/countries that have expressed their interest in this partnership but have not signed a commitment letter).*

<i>East Netherlands (NL)</i>		
<i>Any other comments</i>		

- **Intentions to join:** *list any regional/national authorities*
Extremadura (ES)

• Other participants (other than national/regional authorities):

(Please list here all other (non-region) participants (clusters, institutes, RTOs, etc.))

National Institute of Chemistry, Slovenia	ICAMCyL International Center for Advanced Material, Spain	Aragón Exterior, Spain.
Institute of Materials Science Aragon, Spain	European Lithium ECM AT GmbH, Austria	CEA Liten, France
IK4-TEHNIKER, Spain	Fraunhofer Institute for Silicate Research ISC, Germany	University of Oulu, Faculty of Technology, Research Unit of Sustainable Chemistry, Finland
ASTER S. Cons. P. A. agency, Italy	Innoviris, Belgium	VITO - Sustainable Materials Management, Belgium
Umicore, Belgium	Digipolis, Finland	RSE- Ricerca Sistema Energetico, Italy
Politecnico of Milan, Italy	Value Loops, Netherlands	Aquitaine Chimie Durable (ACD), France
Politecnico di Torino, Italy	Technological Institute of Energy (ITE), Spain	Institute for Energy Technology (IFE), Norway
EMIRI		

<p>Representative of Lead Region 1: <i>(name, institution, address, phone, e-mail)</i> Prof. Dr. Robert Dominko, National Institute of Chemistry, Hajdrihova 19, 1001 Ljubljana, Slovenia; +386 1 4760 362; robert.dominko@ki.si</p>	<p>Representative of Lead Region 2 <i>(if applicable): (name, institution, address, phone, e-mail)</i> Please enter here...</p>
<p>European Commission Coordinator: <i>(name, e-mail)</i> Fernando MERIDA MARTIN, Fernando.MERIDA-MARTIN@ec.europa.eu</p>	<p>Any other relevant information: Please enter here...</p>

I.B. Thematic Working Areas (WA)

• Thematic Working Areas *(if any, please list of WAs, region(s) in charge of it, names and affiliations of involved regional/national authorities, and other actors)*

Working Area	Region in Charge	Involved regions	Other actors
Insert Working Area...	Region in Charge	Other involved regions	Other actors
Insert Working Area...	Region in Charge	Other involved regions	Other actors
Insert Working Area...	Region in Charge	Other involved regions	Other actors
Insert Working Area...	Region in Charge	Other involved regions	Other actors
Any other comments			

I.C. Overview of activities**a. Overview of past activities (past six months, the 1st half of 2019)****Past Meetings**

<i>Title</i>	<i>Date</i>	<i>Place</i>
Scoping meeting	22-23 January 2019	Brussels
PILOT 5 meeting	7 May 2019	Brussels
PILOT 4 meeting	8 May 2019	Brussels
Any other comments		

Past Workshops

<i>Title</i>	<i>Date</i>	<i>Place</i>
PILOTS 1, 3, and 6 meeting	26 June 2019	Brussels
PILOT 2 meeting	28 May 2019	Valladolid (Spain).
Any other comments		

Past Dissemination Activities

<i>Title</i>	<i>Date</i>	<i>Place</i>
Draft scoping note	February 2019	Brussels
Initiale scoping note	March 2019	Brussels
Alistore ERI meeting (academic and industrial partners)	11. December 2018	Uppsala
EU Industry Days	5. February 2019	Brussels
BOOSTING INNOVATION FOR EU INDUSTRY	3. April 2019	Ljubljana

b. Overview of future activities (the next 6 months – the 2nd half of 2019)**Future Meetings**

<i>Title</i>	<i>Date</i>	<i>Place</i>
Partnership meeting	Tentative-September	Brussels or Slovenia
Any other comments		

Future Workshops

<i>Title</i>	<i>Date</i>	<i>Place</i>
Please enter title here...	Please enter date here...	Please enter place here...
Please enter title here...	Please enter date here...	Please enter place here...
Any other comments		

Future Dissemination Activities

<i>Title</i>	<i>Date</i>	<i>Place</i>
Please enter title here...	Please enter date here...	Please enter place here...
Please enter title here...	Please enter date here...	Please enter place here...
Any other comments		

II. Progress Report prepared by the Lead Region(s) of the partnership, describing **results achieved during this period**, in no more than 3 pages (the report is “cumulative”). All items listed in Sections A, B, and C, below, must be addressed.

Additional documentation such as extended technical reports and/or proceedings of workshops may be provided separately as an annex to this report (and should be referenced in the report).

II.A. Innovative results

- Innovative results and achievements that could be attributed to the Partnership. (Specific examples of Results vs. Objectives).

Too early to report. Steps taken so far.

The Advanced Materials for Batteries Partnership (AMBP) was launched on 8 October 2018. The preliminary steps known as learn and connect phases were conducted. They included the following:

1. Mapping of key capabilities and areas of common interest
2. Scoping meetings with 38 representatives on 22 & 23 January 2019
3. Multiple bilateral and group interactions
4. Networking and outreach to connect the partnership to other key initiatives related to this partnership,
5. Several notes and reports including this second version of the scoping note.

Achievements. The Partnership identified and reported:

- Driving challenges
- Mission
- Vision
- Rationale
- 6 PRIORITY PILOT AREAS and their description;
- Information gathering for the first Partnership mapping (several versions of the questionnaires and resulting mapping report).

- Tangible short- and medium-term socio-economic impacts achieved or expected. (Specific examples).
Too early to report

II.B. Inter-regional and inter-partnership collaborative results

- Additional results obtained from working *with other partnerships* under the thematic S3 Platforms. (Specific examples).

Too early to report

- Evaluation of the involvement of relevant business sector (clusters, SMEs, business associations, chambers of commerce, Digital Innovation Hubs (DIHs), etcetera) in the Partnership activities. (Specific examples)

Great involvement of all stakeholders. The current phase is devoted to organise meetings at the pilot level. Regions have been consulting their stakeholders to position themselves since our scoping exercise toward 6 PILOTS. In the course of March, Regional representatives generated preliminary investment project ideas under the coordination of each PILOT leader. A preliminary description of each PILOT was finalised early April and the first Pilot meetings took place in the first half of May.

PILOT meetings: The 6 PILOT leaders are working on the identification/operationalisation of Investment Projects. This process starts with individual PILOT meetings which aim to ideate/depict the baseline information of possible (industry-driven) investment projects. Below is the state of play of these meetings:

- *Joint meeting for PILOT 1. Innovative cell manufacturing for generation 4 (solid state), PILOT 6. Improved lithium-ion batteries (Generation 3b) & PILOT 3. Recycling of existing Lithium Ion batteries*
Date Wednesday 26th June, Representation of the Free State of Bavaria to the European Union
 - *Meeting PILOT 2. Sustainable raw material extraction & processing -> done*
Tuesday 28th May, Valladolid (Spain)
 - *Meeting PILOT 4. Liquid based batteries (stationary) -> done*
Date May 8th, Venue Basque Country Delegation in Brussels
 - *Meeting PILOT 5. Network of research & testing centers -> done*
Date 7th of May, Venue Slovenian Business & Research Association in Brussels
- Evaluation of whether **the level of inter-regional cooperation is sufficient** to potentially provide *practical and relevant socio-economic impacts*. (Specific examples)
To early to report

II.C. New activities

- Involvement of regions from EU13 Member States in the Partnership, in particular with respect to scoping, mapping and/or matchmaking. *In addition, justification should be provided if no EU13 regions are involved.*
The partnership is led by Slovenia.
- Involvement of regions/countries from outside of EU28 Countries. (Number of participants from non-EU countries. Specify their contribution).
None.
- Advancement and promotion of the Partnership through publications and other communication/outreach activities. (Number of outreach activities that resulted from the Partnership. A complete list with references and web-links should be given in an annex).
Presented the partnership in several battery related meeting:
 - *Alistore ERI meeting on 11 December 2018 in Uppsala (academic and industrial partners); <http://www.alistore.eu/events/150-alistore-eri- uppsala-meeting-11-12-december-2018>*
 - *ERRIN Energy WG meeting on 24 January <https://errin.eu/node/7534>*
 - *"High-Level EBA250 workshop - Bridging the gap between Financial institutions and Business" on 29 January 2019; <https://www.eba250.com/eba250-high-level-workshop-aligning-financial-and-business-needs/>*
 - *"SET Plan Working Group on Batteries - Face-to-Face meeting of the IWG and introduction on the ETIP on batteries" on 30 January 2019*
 - *2019 EU Industry Days on 5 February 2019; https://ec.europa.eu/eip/ageing/events/2019-eu-industry-days_en*
 - *Boosting Innovation for EU industry: Industrial Infrastructures and Open Innovation Ecosystems on 3 April 2019 in Ljubljana, <https://ec.europa.eu/research/index.cfm?pg=events&eventcode=A0786772-9F3B-AC2C-C49789764ED3B668>*
 - *ETIP on Batteries on 25 June 2019; <https://www.eba250.com/save-the-date-batteries-europe-kick-off-meeting/>*
- Activities and projects with partnerships working under other S3 Thematic Platforms (Agri-Food, Energy and Industrial Modernisation).
None for the moment.

III.A Your Partnership and the UN 2030 Sustainable Development Goals (SDGs)

The EU has a strong position when it comes to sustainable development and is also fully committed to be a frontrunner in implementing the UN's 2030 Agenda¹, together with its member countries and regions. Many interregional partnerships under the thematic S3 Platforms contribute strongly to the attainment of these 17 goals.

Please indicate to which Sustainable Development Goals and to what extent your thematic Partnership contributes?

Your Partnership and Sustainable Development Goals						
Goals to which your partnership (can) contribute:	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Not applicable
Goal 1. End poverty in all its forms everywhere	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goal 2. End hunger , achieve food security and improved nutrition & promote sustainable agriculture	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goal 3. Ensure healthy lives & promote well-being for all at all ages	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goal 5. Achieve gender equality & empower all women and girls	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goal 6. Ensure availability and sustainable management of water and sanitation for all	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goal 8. Promote sustained, inclusive and sustainable economic growth , full and productive employment & decent work for all	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goal 9. Build resilient infrastructure , promote inclusive and sustainable industrialisation & foster innovation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goal 10. Reduce inequality within and among countries	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goal 11. Make cities & human settlements inclusive, safe, resilient and sustainable	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goal 12. Ensure sustainable consumption & production patterns	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goal 13. Take urgent action to combat climate change and its impacts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goal 14. Conserve and sustainably use the oceans, seas & marine resources for sustainable development	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems , sustainably manage forests , combat desertification , halt and reverse land degradation and halt biodiversity loss	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goal 16. Promote peaceful & inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goal 17. Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

¹ The 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs), adopted by the United Nations (UN) in September 2015, gave a new impetus to efforts to achieve

III.B Your Partnership and the UN 2030 Sustainable Development Goals (SDGs)

The S3 Platform is currently considering carrying out a study which would feature how selected thematic S3 Partnerships are contributing to the Sustainable Development Goals.

Would you be interested to have your partnership considered to be included in this study? (Please feel free to put us in touch with a different region/colleague.)

Please enter here...