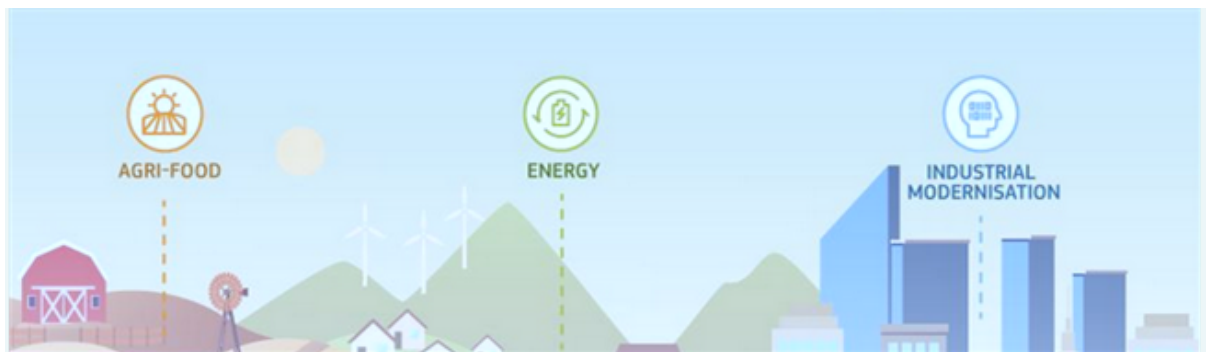


# Thematic Smart Specialisation Platforms Monitoring Progress Report

Fields marked with \* are mandatory.



## Thematic Smart Specialisation Partnership Monitoring Progress Report

This report is presented to the relevant Working/Steering Committee.

The report is updated every six months.

### Confidentiality:

The management report (section I) and progress report (section II) will be made available to the public via your Partnership's web page.

The part on self-assessment is confidential.

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

### \* Reporting period

January - June 2020

### \* Please select the name of your partnership

Advanced materials for batteries

**\* Start date of your partnership**

October 2018

**Partnership's webpage**<https://s3platform.jrc.ec.europa.eu/batteries>**I. Management report****\* Please provide the executive summary of the objectives of your partnership**

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 Castille 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 Thematic Areas. The AMBP Partnership has identified 6 Thematic Areas (or Priority Pilots). Each Thematic Area consists in an application area in which innovation investment projects will be delineated and operationalised with industry. The current Thematic Areas are the following:

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

4. Regional Coverage. The number of regions committed to the partnership grew from 25 (July 2019) to 29 (January 2020).

4. AMBP projects. The partnership is working on a list of about 10 projects. Among the 10 projects, two are more advanced: project 5 (NextBatt4EU) and project 9 (Network of prototyping & testing centres). The aim is to close the funding gap for at least one of them.

**\* Please provide the list of leading regions**

- 1 Andalusia (ES)
- 2 Castilla y León region (ES)
- 3 West Slovenia (SI)

**\* Please provide the list of participating regions.**

*If possible, please follow this format: "Name of the region in English (Country abbreviation), NUTS code".  
e.g.: Lapland (FI), FI1D7*

- 4 Aragon (ES)
- 5 Austria (AT)
- 6 Auvergne Rhone Alpes (FR)
- 7 Baden-Württemberg (DE)
- 8 Basque Country (ES)
- 9 Bavaria (DE)
- 10 Brussels - Capital Region (BE)
- 11 Central Ostrobothnia (FI)
- 12 Emilia Romagna (IT)
- 13 East Slovenia (SI)
- 14 Flanders (BE)
- 15 Kainuu (FI)
- 16 Lapland (FI)
- 17 Lombardy (IT)
- 18 Metropol Region Eindhoven (NL)
- 19 Navarra (ES)
- 20 Northern Ostrobothnia (FI)
- 21 Nouvelle Aquitaine (FR)
- 22 Pohjois-Savo (Northern Savonia) (FI)
- 23 Regione Piemonte (IT)
- 24 State Hessen (DE)
- 25 Valencia (ES)
- 26 Vestlandet (NO)
- 27 Viken (NO)
- 28 North Karelia (FI)
- 29 Galicia (ES)

**Please provide the list of interested regions or other entities** (other than national /regional authorities)

- Västerbotten (North Sweden)
- Extremadura (ES)

Please provide an overview of the **working areas** of your partnership

	Working area	Region in charge	Involved regions	Other actors
1	Thematic area 1: Solid state lithium-ion batteries (Generation 4)	Bavaria	Working area not active	
2	Thematic area 2: Sustainable Raw Material, Extraction and Processing	Castilla y León	ES and FI regions	
3	Thematic area 3: Recycling of existing Lithium Ion Batteries	Bavaria	Working area not active	
4	Thematic area 4: Liquid based batteries (stationary)	Basque/ Valencia	Working area not active	

5	Thematic area 5: Network of research & testing centers	West Slovenia	<p>Viken (Norway) – Vestlandet (Norway) - Sustainable Energy Norwegian Catapult Centre, Elkem, SINTEF; Basque region (Spain) - CIC Energigune, TEKNIKER; Castilla y León region (Spain) - CIDAUT, Foundation for Transport and Energy Research and Development, ICAMCYL, Institute for Business Competitiveness of Castilla y León; Auvergne Rhone Alpes region (France) – AXELERA, CEA, SERMA Technologies; Lombardy (Italy) - RSE (Ricerca Sistema Energetico), CNR (National Research Council of Italy); Emilia Romagna (Italy) - Valencia (Spain) - Andalusia region (Spain) - Aragon (Spain)</p>	
6	Thematic area 6: Improved lithium-ion batteries (Generation 3b)	Auvergne Rhône Alpes	Project ENWIRE: Arkema, Torrecid, ITE, AIT, Ulm, Fraunhofer, Leclanché	
7				
8				
9				
10				

Please provide information regarding past meetings, workshops and dissemination activities (six months prior to filling out the survey)

	Event	Date	Place	Any other information
1	SE regional meeting	20th January 2020	Online	
2	FI regional meeting	29-30 January 2020	Outokumpu	
3	AMBP update meeting (replacing the pitching meeting foreseen on 19-20 March)	4 April 2020	Online	
4	NRCG of Batteries Europe	23 April	Online	
5	Internal meeting with ReConfirm	25 May 2020	Online	
6	NRCG of Batteries Europe	26 May 2020	Online	
7	Meeting with the SP3 Mining industry Partnership	28 May 2020	Online	
8	NRCG of Batteries Europe	24 June 2020	Online	
9	Presentation of the European Partnership Proposal for an Industrial Battery Value Chain	26 June 2020	Online	
10	AMBP meetings for : 1/ regional coordinators to present ReConfirm and 2/ project coordinators to pitch their projects	10 July	Online	

Please provide information regarding planned future meetings, workshops and dissemination activities

	Event	Date	Place	Any other information
1	AMPB meeting for all to review progress on the partnership and in particular for the most advanced projects	September 2020	Online	
2				
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## II. Progress report

### Innovative results

Please describe innovative results and achievements that could be attributed to the partnership (specific examples of results vs. objectives)

Still early to report. Steps taken during the last six months:

1. The partnership was introduced to a broad range of stakeholders during regional meetings (in particular in SE and FI). Unfortunately, due to the Coronavirus outbreak, all meetings were cancelled as of the 3rd week of March, including the AMBP event prepared since mid-January with the support of ReConfirm and the region Nouvelle Aquitaine. These were replaced by a series of online meetings.

2. A short report summarising AMBP activities called "AMBP at a glance" was prepared on August 2019 and has been updated on January 2020 and March 2020. The short report has been posted on the JRC website of the partnership. The report targets a large audience and aims at disseminating information on the partnership activities.

3. Preliminary discussions were held with representative of the Business Investment Platform (BIP) from the European Battery Alliance. The platform was launched officially at the September 25th EBA meeting. It finances projects along the entire battery value chain. The launch of BIP was attended by more than 20 EU banks committed to support projects. As a practical next step, we agreed to organise shortly a meeting to present in more details BIP, AMBP, and in particular cases is need of investments. One barrier for AMBP projects is the requirement to propose a project with a budget above € 50 millions to be accepted by the platform.

4. The partnership is working on a list of about 10 projects. Among the 10 projects, 5 are based on the thematic area 6, 2 on the thematic area 3, and 1 on the thematic area 1, 4, and 5. The thematic area 2 has not reached the stage of a project yet. The progress status column reports the stage of development of the projects:

- 3 projects are still under discussion and may not go further
- 1 project is working on its first project description
- 6 projects provided a first description (even a preliminary one),

5. Projects progress:

- Carbone Savoie (project 2): should be funded by the second IPCEI on batteries (lead by Germany see <https://www-lesechos-fr.cdn.ampproject.org/c/s/www.lesechos.fr/amp/1183324> or <https://www.carbone-savoie.fr/les-echos-carbone-savoie-monte-dans-lairbus-des-batteries/>) and will be acquired by Tokai Carbon <https://contents.xj-storage.jp/xcontents/AS04435/04cd96c3/50ca/432e/a624/f4b365c011d8/20200410140247908s.pdf>

- FinnCOBALT (not in the list but identified during the FI regional meeting - <https://www.finncobalt.com>): has received funding from a Swedish company for its startup phase

- ENWIRE / NextBatt4EU (project 5): TAF application has been rejected and is currently competing for French funding (Bpifrance Deeptech, see <https://www.bpifrance.fr/Toutes-nos-solutions/Aides-concours-et-labels/Aides-a-l-innovation-projets-individuels/Aide-au-developpement-deeptech>)

- National Institute of Chemistry (project 9): Positive feedback from the SI government (ministry of education and research) for funding but need to confirm with the new government - 4th description under preparation. prepare TAFF application for October 2020

- CEGASA (project 10): Still discussing

- NANOPOW (not in the list): Prepare TAFF application for October 2020

Tangible short- and medium-term socio-economic impacts achieved or expected (specific examples)



Taking into account that the battery partnership is particular, thanks to the strong EU support (and in particular from the Commissioner Šefčovič and European Battery Alliance), two types of socio economic impacts:

- Concerning projects: one or several project identified have good chances to be funded. These projects will create jobs and generate new business and turnover. Carbone Savoie (see above): should be funded by the second IPCEI on batteries (lead by Germany) and will be acquired by Tokai Carbon. FinnCOBALT (not in the list but identified during the FI regional meeting) has received funding from a Swedish company for its startup phase
- Concerning regions: the need to insert batteries (or similar) into the S3 strategy and the mechanism for interregional projects are spread to the participating regions and possibly further regions. For example, a project from Norway is under preparation in parallel to the partnership. The understanding of the differences between a H2020 project and an AMBP project and in particular the key requirements for an interregional project are spread. As a reminder, the key requirements for the AMBP partners are:
  - Be an industrial innovation (TRL6+) project
  - Be driven by industry with the ambition to commercialise and scale-up
  - Aim to achieve commercialisation in the end of the project (TRL9)
  - Involve a minimum of 3 regions from 3 different countries
  - Demonstrate synergies between private and/ or public actors
  - Generate cross regional added value

## Inter-regional and inter-partnership collaborative results

Additional results obtained from working with other partnerships under the thematic S3 Platforms (specific examples)

One possible inter-partnership collaboration with the Mining Industry Partnership is currently explored (see <https://s3platform.jrc.ec.europa.eu/mining-industry>). The meeting in Finland last January 2020 agreed on leading projects together (contact Mr Ilkka Nykanen from Business Joensuu).

The TSSP mining industry (and the Outokumpu Mining Camp/ Joensuu Business Park) lead by Mr Ilkka Nykänen agreed to get closer to AMBP thematic area 2 - Sustainable Raw Material, Extraction and Processing - for preparing together project(s) on batteries/ mines. This thematic area is progressing very slowly at the moment for AMBP and most of region interested by this thematic area are in Finland or Spain (as for the TSSP mining industry).

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 into the AMBP partnership, in particular from clusters, SMEs and the business association (EMIRI).

The current phase is devoted to organise informal meetings (Skype or equivalent) at the project level to finalise the project description and to start the business case development for two projects with the support of ReConfirm.

Evaluation of whether the level of inter-regional cooperation is sufficient to potentially provide practical and relevant socio-economic impacts (specific examples)

The battery cooperation is special for the EU. It is one of the selected IPCEI key area. The AMBP Partnership complements other EU initiatives in the battery domain, such as:

- The European Battery Alliance and the Important Project of Common European Interest - IPCEI,
- Battery Europe - The ETIP /previously SET-Plan Working Group on Batteries,
- The European Partnership Proposal for an Industrial Battery Value Chain
- ERRIN Energy Working Group,
- Alistore ERI Community,
- EIT KIC raw material,
- EIT KIC INNO ENERGY (conducting the European Battery Alliance),
- The future of batteries (battery 2030+).

Together, these initiatives reach a high level of political commitment from the EU, national and regional actors.

These initiative reinforce each others to form a complete battery value chain in Europe.

The position of the Partnership (also expressed by the Šefčovič cabinet) is to add value by developing key components in the value chain through cross-regional collaboration (raw materials, active materials, battery cells components, and recycling). Considering the ambition (40% of the battery manufacturing being European), the partnership is needed as much as the other initiatives to reach the objective.

## **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 and one of the 10 project (Project 9 - Thematic area 5: Network of prototyping & testing centres) is lead by Slovenia.

No other EU 13 regions involved mainly because of the lack of capacity (not expertise). Hence the project developed by Slovenia aims at building capacity in EU13 by funding research equipment, material and pilot lines in research institutes and universities.

The Institute of Solid State Physics, University of Latvia has however expressed interest.

Involvement of regions/countries from outside of EU28 Countries. (Number of participants from non-EU countries (specify their contribution)

Norway only

Advancement and promotion of the Partnership through publications and other communication/outreach activities (number of outreach activities that resulted from the partnership)

A short report summarising AMBP activities called “AMBP at a glance” was prepared on August 2019 and has been updated on January 2020 and March 2020. The short report has been posted on the JRC website of the partnership. The report targets a large audience and aims at disseminating information on the partnership activities.

The report provides a clear picture of where the Partnership stands in terms of scope and activities as well as process-wise. The report is a living document formalizing the state of play. It will be updated along the progress of the Partnership.

Activities and projects with partnerships working under other S3 Thematic Platforms (AgriFood, Energy and Industrial Modernisation)

None for the moment






## 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 Agenda, 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?**

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Not applicable
Goal 1. End poverty in all its forms everywhere	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 2. End hunger, achieve food security and improved nutrition & promote sustainable agriculture	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 3. Ensure healthy lives & promote well-being for all at all ages	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 5. Achieve gender equality & empower all women and girls	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Goal 6. Ensure availability and sustainable management of water and sanitation for all	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment & decent work for all	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialisation & foster innovation	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 10. Reduce inequality within and among countries	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 11. Make cities & human settlements inclusive, safe, resilient and sustainable	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 12. Ensure sustainable consumption & production patterns	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 13. Take urgent action to combat climate change and its impacts	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal 14. Conserve and sustainably use the oceans, seas & marine resources for sustainable development	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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						
Goal 17. Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development	