BATTERIES| Towards a competitive European industrial battery value chain for stationary applications and e-mobility

A European Partnership under Horizon Europe

Agenda

- **Presentation of the Batteries European Partnership – Patrick Clerens, Secretary General, EASE**

  ➢ Ambition, objectives and challenges, scope and synergies with other Partnerships

  ➢ Batteries Partnerhsip in the EU R&I landscape

  ➢ The Shadow group and its main tasks

  ➢ Why joining the Partnership?

- **The Batteries European Partnership Association (BEPA) – Capucine Vannoorenberghe, Interim Partnership Secretariat**

  ➢ Presentation of the BEPA governance

  ➢ Calendar of the next steps

  ➢ How to become a member and apply to a governing position

- **Q&A session**

Presentation of the Batteries European Partnership

Patrick Clerens, Secretary General, EASE

Ambition of the Partnership

The Batteries Partnership's vision

To establish by 2030 in Europe the best in the world innovation ecosystem to boost a competitive, sustainable and circular European battery value chain and to drive the transformation towards a carbon-neutral society

- Only a **partnership**, i.e. a long-lasting and coordinated effort involving industry, research and the public sector, can live up to the challenge and bring predictability to the European battery value chain stakeholders.

By pooling Europe's resources and knowledge, partnerships have demonstrated their efficiency for accelerating the development, industrialisation and deployment of strategic technologies that underpin growth and jobs in key sectors of the European economy

Towards a competitive European industrial battery value chain for stationary applications and e-mobility

General objectives

1. Contribute to make Europe the 1st climate-neutral continent by 2050

2. Enable the European leadership in the battery industry across the value chain, creating economic growth and jobs in a circular economy

3. Contribute to achieve a zero-pollution ambition for a toxic-free environment
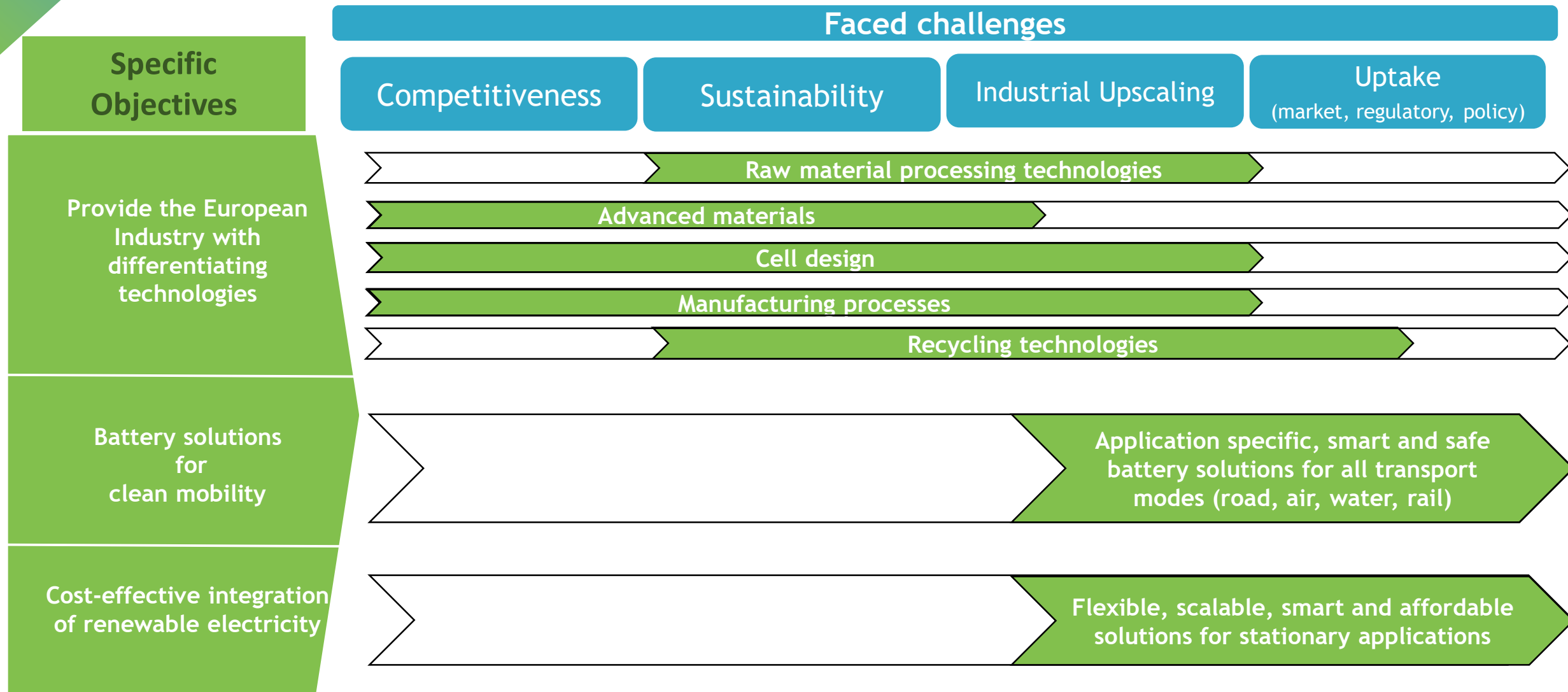
Specific objectives

1. Provide the European Industry with differentiating technologies, supporting the development of an innovative, competitive and sustainable battery manufacturing industry in Europe

2. Develop sustainable and affordable battery solutions for clean mobility

3. Enable a cost-effective integration of renewable energy sources in the power grid

Technical objectives
(2030 targets vs 2019 values, in line with SET Plan)

1. Increase energy density +60%

2. Increase power density and charging rate (charging time < 20')

3. Improve cycle lifetime > 2x

4. Reduce battery cost - 60%

5. Ensure battery safety[1] automotive 4 / aviation and waterborne 2

6. implement BAT in manufacturing and recycling operations (plants 4.0 or 5.0)

7. Improve sustainability and circularity)
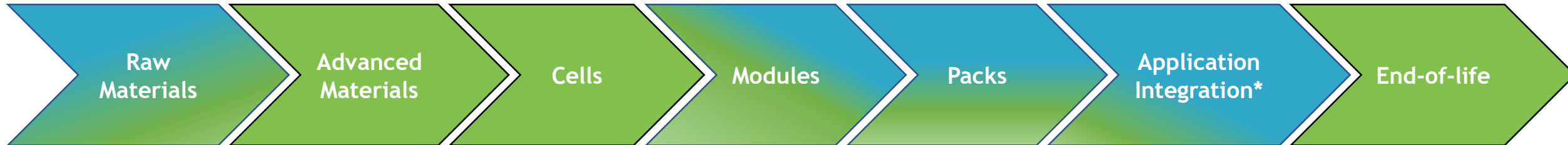
[1] EUCAR cell safety level

A clear intervention logic, identifying the key challenges to be tackled by the detailed targets for each specific objective

Specific Objectives	Faced challenges			
	Competitiveness	Sustainability	Industrial Upscaling	Uptake (market, regulatory, policy)
Provide the European Industry with differentiating technologies		Raw material processing technologies		
	Advanced materials			
	Cell design			
	Manufacturing processes			
		Recycling technologies		
Battery solutions for clean mobility			Application specific, smart and safe battery solutions for all transport modes (road, air, water, rail)	
Cost-effective integration of renewable electricity			Flexible, scalable, smart and affordable solutions for stationary applications	

Scope of the Partnership

- While R&I has to be conducted on all parts of the value chain, advanced materials development and battery cell design & manufacturing are seen as the key activities for which a well-structured coordination will allow Europe to develop the most differentiating technologies

Raw Materials → Advanced Materials → Cells → Modules → Packs → Application Integration* → End-of-life

- The Partnership should therefore allocate **a substantial part of its resources** on these segments of the value chain, along with circular economy aspects

  ➢ Active material and related components (battery-grade raw materials, cathodes, anodes, binders, electrolytes (particularly solid-state future electrolytes), the processes and equipment to manufacture them, and novel methods for accelerated discovery and engineering of materials and interfaces)

  ➢ Other materials (separators, casing, mechanical components,…)

  ➢ Cell assembly technologies: the transition to solid state creates the opportunity to invest in new technologies to compete worldwide, but it requires advanced technology for manufacturing: specialised equipment for new manufacturing technologies…

  ➢ Re-use, recycling, secondary raw materials from recycling

  ➢ Regarding applications, the Partnership will mainly focus on batteries for decarbonised transport and stationary energy storage.

- Appropriate balance between short-to-medium term and long-term R&I activities

  ➢ enhancement of close-to-market Li-ion technologies (TRL 5-8)

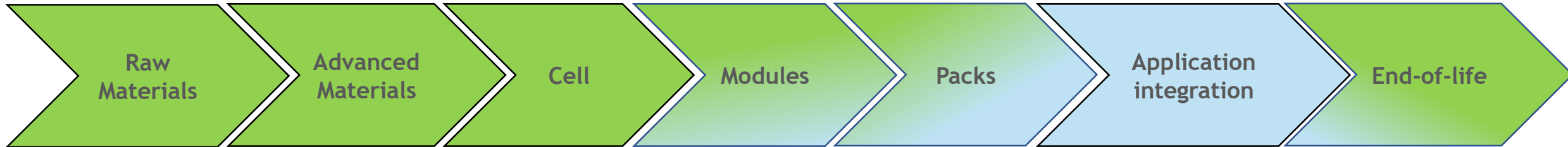 ➢ new promising and longer-term breakthrough technological solutions (TRL 2-4)

Interactions and synergistic effects with other Partnerships

Applications sectors with a dedicated Partnership
- 2Zero
- Clean Aviation
- Zero-emission waterborne transport
- Transforming Europe's rail system

The dedicated partnership takes the lead on the downstram R&I segment activities **specific to this sector**

2Zero Partnership as an example

| Raw Materials | Advanced Materials | Cell | Modules | Packs | Application integration | End-of-life |

- 2Zero will be responsible for R&I activities dealing with the **integration** in the vehicle, **charging infrastructures**, etc.

- Topics related to **battery modules**, **battery packs** and **battery management system** will be addressed as interface in both partnerships. The responsibility will be allocated to main research focus (i.e. either upstream (material, cell or battery manufacturing innovations) or downstream (vehicle integration,...)

The Partnership on Batteries in the European R&I landscape

Other R&I activities
(under Horizon Europe, IPCEIs, S3 interregional Partnership, national and bilateral instruments,…)

Other Partnerships
Battery downstream & complementary WP under Horizon Europe

Horizon Europe Pillar 3 and other market uptake instruments

Coordination / Collaborations
(facilitated by ETIP Batteries Europe)

Feedback for SRIA / roadmaps update

BATTERIES EUROPE
EUROPEAN **TECHNOLOGY** AND **INNOVATION** PLATFORM

BATTERY 2030+

ERTRAC

WATERBORNE

ETIP SNET

ACARE

SUSCHEM

MANUFUTURE-EU

Other strategic bodies…

Inputs to define R&I calls (SRIA / Technology Roadmaps …)

PARTNERSHIP ON BATTERIES

- Identify the high priority topics to be implemented in its R&I work programmes
- Support and oversee the portfolio of funded projects
- Reinforce networks between industry, RTOs, universities and other organisations
- attract engagement of more stakeholders in collaborative R&I activities and demo-projects
- Encourage a robust lab-to-market process and innovation and technology transfer

Innovation and technology Transfer

Skills development

eit InnoEnergy
Knowledge Innovation Community

eit RawMaterials
Connecting matters

INNOVATION FUND

European Investment Bank
The EU bank

The Shadow Group

- Gathering **Industry and Research actors** legitimately representing the different segments of the battery value chain

- A **temporary** Group - to "fill the gap" until the private-side AISBL of the Battery partnership is up and running

- Representatives already **well engaged in EU R&I policy** initiatives

- Preference to companies and institutions who will quite certainly **become an active member** in the to-be-created Partnership private-side AISBL

- **Supported** by the core group representative associations (EMIRI, EUCAR, RECHARGE, EASE)

Shadow Group composition	
Industry	EDF
	ENEL
	MANZ
	NORTHVOLT
	OUTOTEC
	SAFT
	SOLVAY
	UMICORE
Research Organisations	CIDETEC
	CSIC
	CEA
	UPPSALA UNIVERSITY
	SINTEF

The Shadow Group tasks – Summer 2020

- **Prioritisation of R&I topics for the Horizon Europe Work Programme 2021-2022** in coordination with the European Commission.

- **Preparation of topics description** to match the new EU Horizon Europe templates

- **Drafting of the initial Batteries Partnership SRIA** (as inputs: several documents recently published via already existing EU initiatives)

Why joining the Partnership?

The Batteries European Partnership have the following main missions:

- to provide re**commendations for calls for proposals supported within the specific parts of the Horizon Europe Work Programmes** related to batteries;

- to implement and regularly update the commonly agreed **Strategic Research and Innovation Agenda (SRIA) for batteries**;

- to **support and oversee the portfolio of projects funded under the Partnership Work Programmes**, to monitor their execution phase, and to disseminate their results ;

- to **create/reinforce networks** between the battery industry (including start-ups and SMEs), RTOs, universities and other organisations, and to ensure synergies with other European Partnerships and initiatives;

- to support the **development of EU regulations** on battery standards, safety, and sustainability;

- to actively **promote and monitor innovation uptake** in the market.

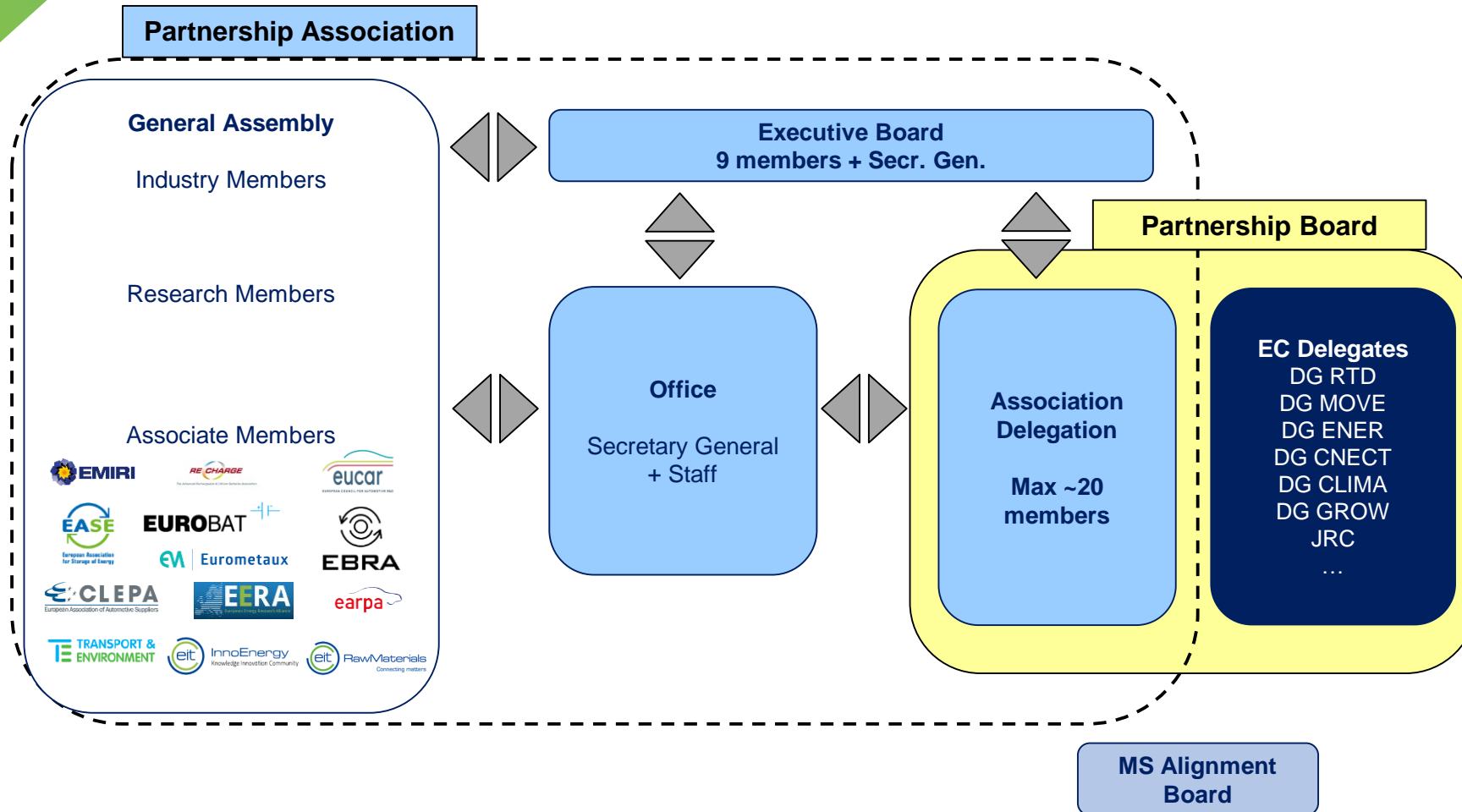# Why joining the Partnership?

Why joining now?

- to contribute to the updating of the **Partnership Strategic Research and Innovation Agenda** which defines the main R&I priorities for the next years;

- to provide **concrete inputs to the Horizon Europe Work Programmes**, and as part of the elaboration process, to get an early understanding of the R&I topics that will be proposed;

- to **network with the most high-quality entities** of the European battery sector;

- to **participate actively in the association's governance** via the elected positions but also in the design of the association's scope of actions (e.g. match-making activities, support to specific research fields, coordination with EU/national initiatives, etc.)

The Batteries European Partnership Association (BEPA)

Capucine Vannoorenberghe, Interim Partnership Secretariat

BEPA - Governance scheme

Partnership Association

General Assembly

Industry Members

Research Members

Associate Members

EMIRI · RE/CHARGE · eucar · EASE · EUROBAT · EM Eurometaux · EBRA · CLEPA · EERA · earpa · TRANSPORT & ENVIRONMENT · eit InnoEnergy · eit RawMaterials

Executive Board
9 members + Secr. Gen.

Office

Secretary General
+ Staff

Partnership Board

Association Delegation

Max ~20 members

EC Delegates
DG RTD
DG MOVE
DG ENER
DG CNECT
DG CLIMA
DG GROW
JRC
…

MS Alignment Board

The **General Assembly** - the supreme body of the Association
- approves the general policy of the Association on the basis of proposals of the Executive Board
- gives recommendations to the Executive Board for its application

The **Executive Board**
- follows the resolutions, instructions and recommendations adopted by the General Assembly.
- implements the policy and the work programme adopted by the General Assembly upon proposal of the Executive Board.

The **Association delegation**
- elaborates calls proposals in line with the work programme adopted by the General Assembly
- represents the private-side in the Partnership Board

The **Alignment Board**
- to align European and national priorities, identify opportunities for collaboration, avoid duplication of funding and disseminate information
- To identify outcomes of EU-funded projects of direct interest to national activities and offer demonstration possibilities to innovative solutions

The **Office** (under the authority of the Secretary General)
- Takes care of the daily management of the Association

BEPA - Governance bodies composition

Balanced representation
- between all sectors of the value chain, reflecting the key challenges
- between Industry and Research members

Executive Board and Association Delegation members
- represent their sector
- elected by G.A., possibly upon nomination from sector representative associations

3 types of members
- **Industry** Members
- **Research** Members
- **Associate** Members

Raw Materials	Advanced Materials	Cells	Modules	Packs	Application Integration*	End-of-life

Executive Board / **Association Delegation**

	1 Chair + 1 Vice-chair (Treasurer)					
1 RM		1 Batt. Manufacturing suppliers			1 Automotive 1 Other applic	1 Recycling
1 Research Vice-Chair + 1 Research						
Secretary General						
1 RM	2 Adv. Mat.	3 Cells & Batteries 1 Batt. Manufacturing suppliers			1 Automotive 1 Auto suppliers 1 Stationary 1 Other	1 Recycling
3 Research						
2 Observers from sector representative associations						

BEPA – Calendar of the next steps

- **October 30, 2020** – **Opening of the application process**

1. Industry members (incl. for-profit research)	
Large (headcount>5000 or turnover >1,5 bn €)	9.500,00 €
Intermediate (headcount 250-4999 or turnover 50 ml-1,5 bn €)	7.500,00 €
Medium (headcount 50-250 or turnover 10-50 ml €)	5.000,00 €
Small (headcount <50 or turnover <10 ml €)	2.500,00 €
2. Research members (non-profit)	
Large (headcount >250)	4.000,00 €
Small (headcount <250)	2.500,00 €
3. Associate members (membership without a voting right)	
Associations, NGOs and other stakeholders	1.000,00 €

  - ✓ Draft Articles of Association & Code of Conduct
  - ✓ Provisionnal schedule of fees
  - ✓ Application forms to join the Association and to candidate to the elected positions

- **November 30, 2020** – **Deadline for the Governing positions application**

- **December 2, 2020** – Publication of the Governing positions applications

- **December 14, 2020** – **1st Statutory BEPA General Assembly**

  - ✓ Review and validation of the Articles of the Association
  - ✓ Election of the representatives of the Governing Bodies
  - ✓ Approval of the 2021 budget and schedule of membership fees

How to become a member of BEPA?

➢ **To become a member of BEPA, please fill in the application form at this link.**

➢ Once the application is submitted online: singed PDF version must be sent out **via physical mail + email to BEPA Secretariat** (secretariat.bepa@clerens.eu)

➢ We cannot guarantee that applications for joining the Association submitted after **Monday, December 7, 2020,** will be dealt with before the Dec.14th General Assembly.

EUSurvey

☑ Save a backup on your local computer (disable if you are using a public/shared computer)

APPLICATION FOR MEMBERSHIP OF THE BATTERIES EUROPEAN PARTNERSHIP ASSOCIATION

Fields marked with * are mandatory.

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APPLICATION FOR MEMBERSHIP OF BEPA AISBL - THE BATTERIES EUROPEAN PARTNERSHIP ASSOCIATION

In order to proceed with your membership application, please complete and submit this form:

YOUR ORGANISATION

* Legal name (full name of the organisation)
ⓘ As stated in the legal statute of the registration act/decree establishing the organisation.

* Establishment / Registration country
ⓘ Country of registration or establishment of the organisation

Legal organisation's address:

How to apply to a governing position ?

➢ Governing positions are open **only to full members of BEPA.**

The member's representative can apply to one of the **24 elected positions** provided in the Articles of Association:

✓ **9 positions** for representatives in both the **Executive Board** and the **Association Delegation**

✓ **15 additional positions** in the **Association Delegation.**

➢ To apply to one of the above-mentioned governing positions, **please fill in by** November 30, 2020, **at the latest the application form availabl**e [at this link](#).

➢ **By beginning of December**: applications to the governing positions will be shared with all BEPA members.

✓ Save a backup on your local computer (disable if you are using a public/shared computer)

EUSurvey

Application for the elected positions of BEPA - the Batteries European Partnership Association

Fields marked with * are mandatory.

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APPLICATION FORM FOR THE ELECTED POSITIONS

Please note that

(i) **Elected positions in BEPA are accessible ONLY to Full Members of the Association**.

ii) **Applications to an elected position must be submitted via this online form by November 30, 2020**. *Uploading a CV is mandatory to complete the application process.*

iii) All information provided in this application form will be made available to all BEPA members for the purpose of casting a vote during BEPA General Assembly meeting scheduled on December 14, 2020. BEPA Secretariat will not further disclose or use this personal information without permission.

* Title

* Family name

Batteries European Partnership

Q&A Session

Thank you!

secretariat.bepa@clerens.eu

The Batteries Partnership Core team

with the support of