



# **BATTERIES** EUROPE

## EUROPEAN **TECHNOLOGY** AND **INNOVATION** PLATFORM

**Process21: The National and European  
battery innovation landscape**

**WEB Meeting** 15 April 2020

Dr. Ilkka V. Kojo, Outotec

# What is Batteries Europe ETIP

A European Technology and Innovation Platform for Batteries  
An R&I focused network for all battery stakeholders

The "one stop shop for Batteries R&I"

BatteRIes Europe is not a funding program..

Network with the battery community

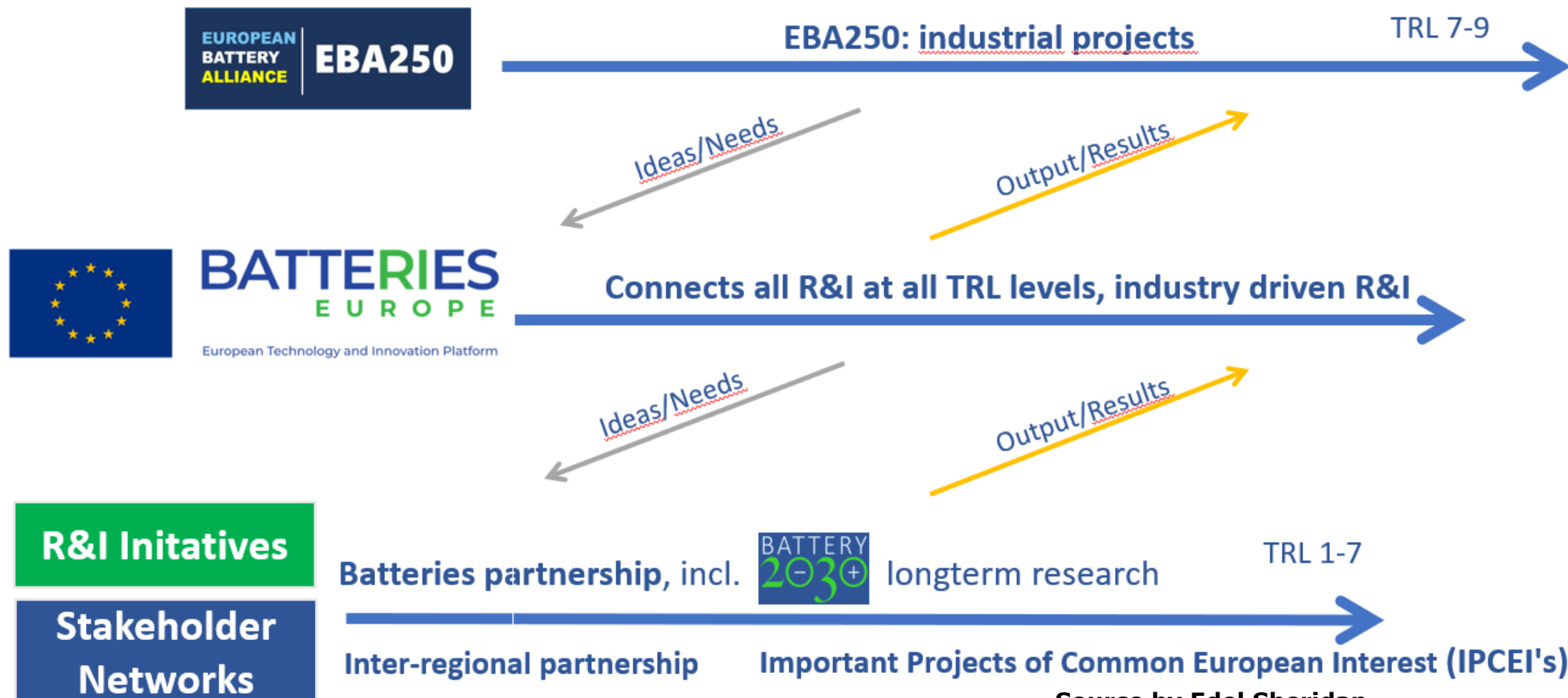
Understand the state of play in the battery eco-system

Influence the R&I agenda for batteries on both European and National level

**Source Edel Sheridan**



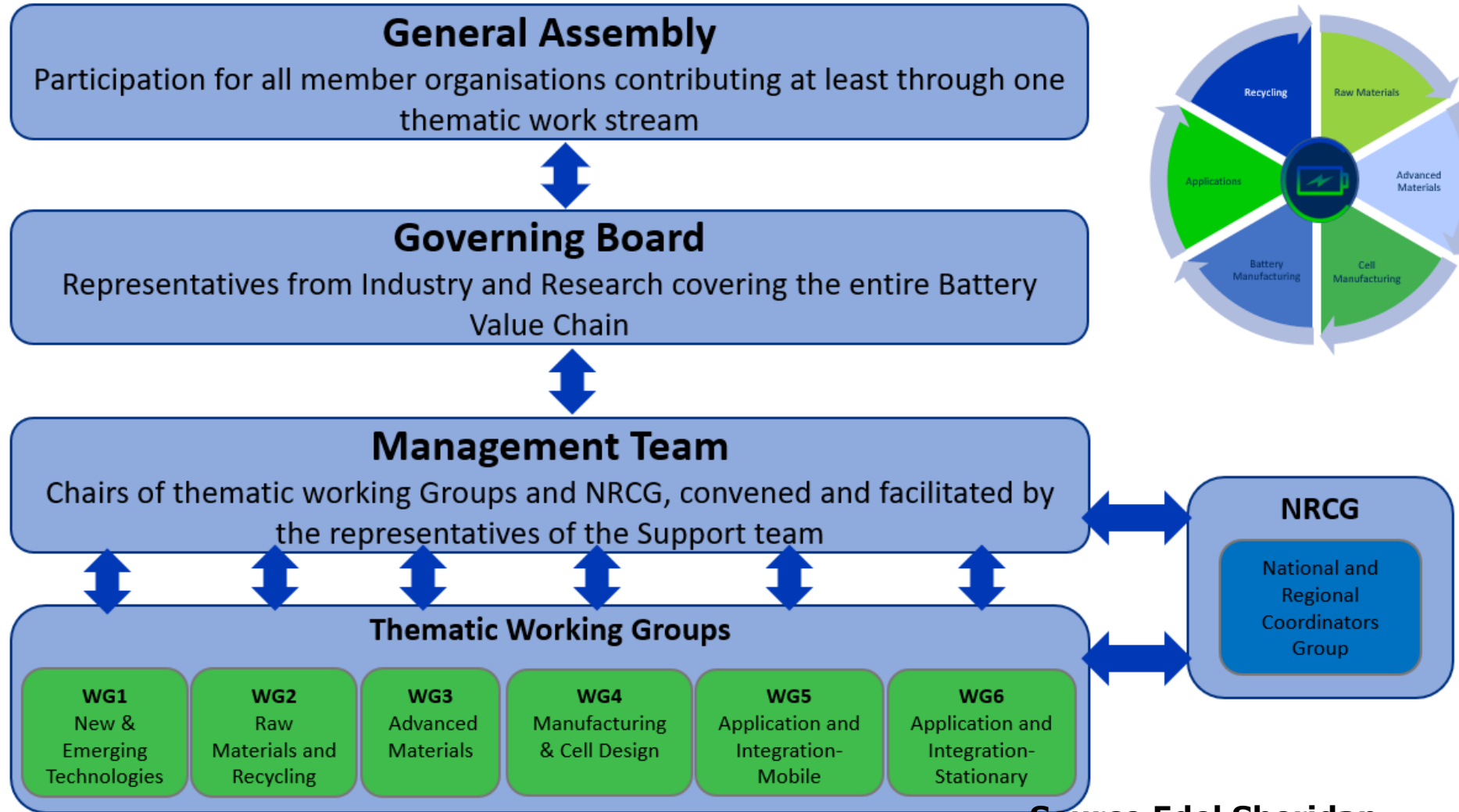
# Linking European Battery Networks



Source by Edel Sheridan



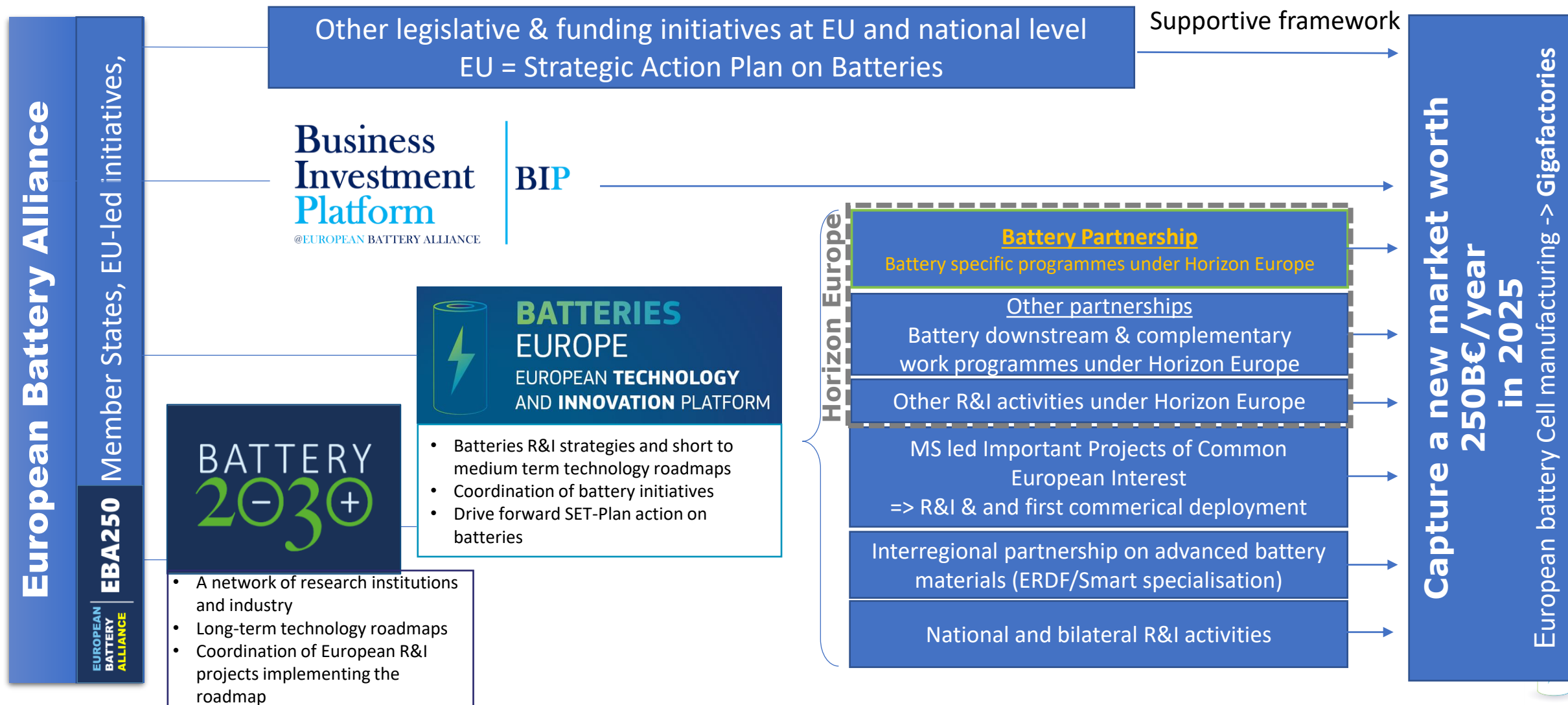
# Batteries Europe



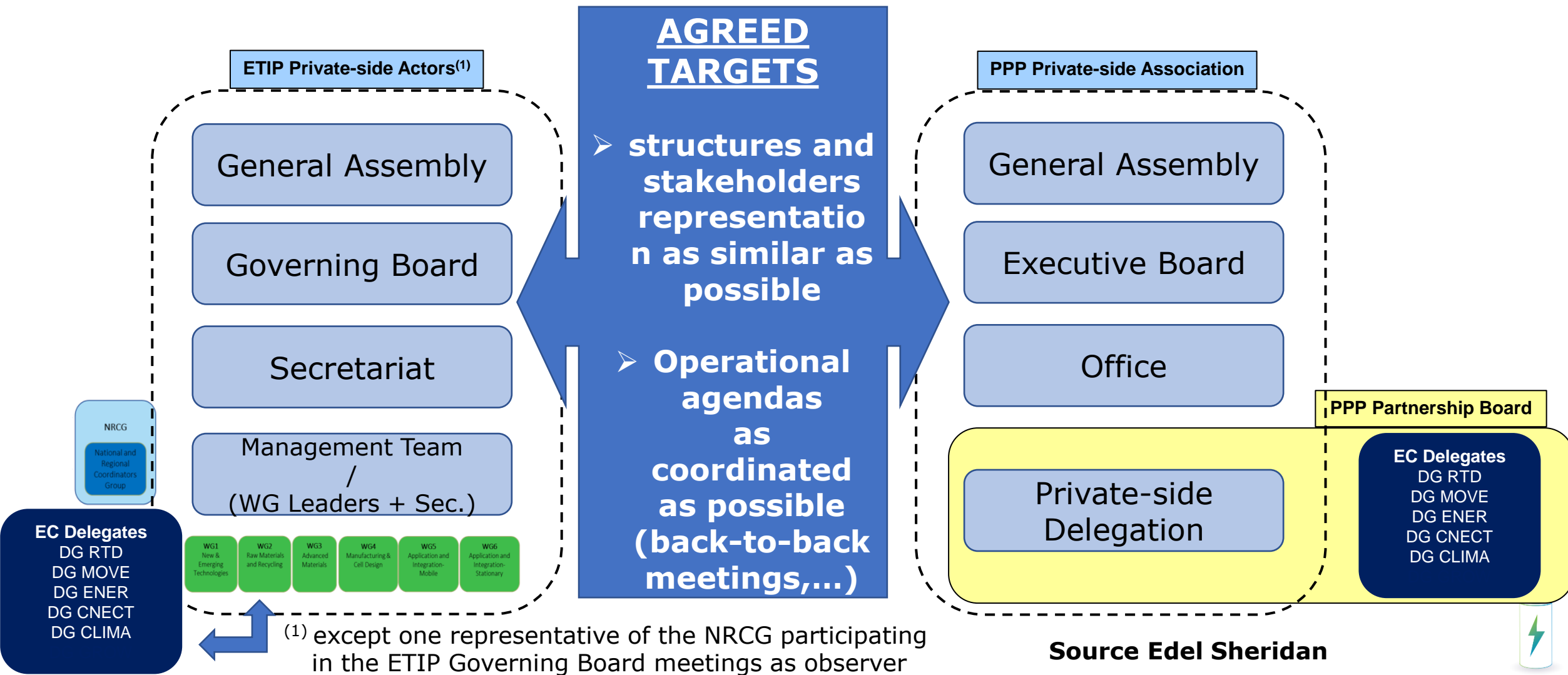
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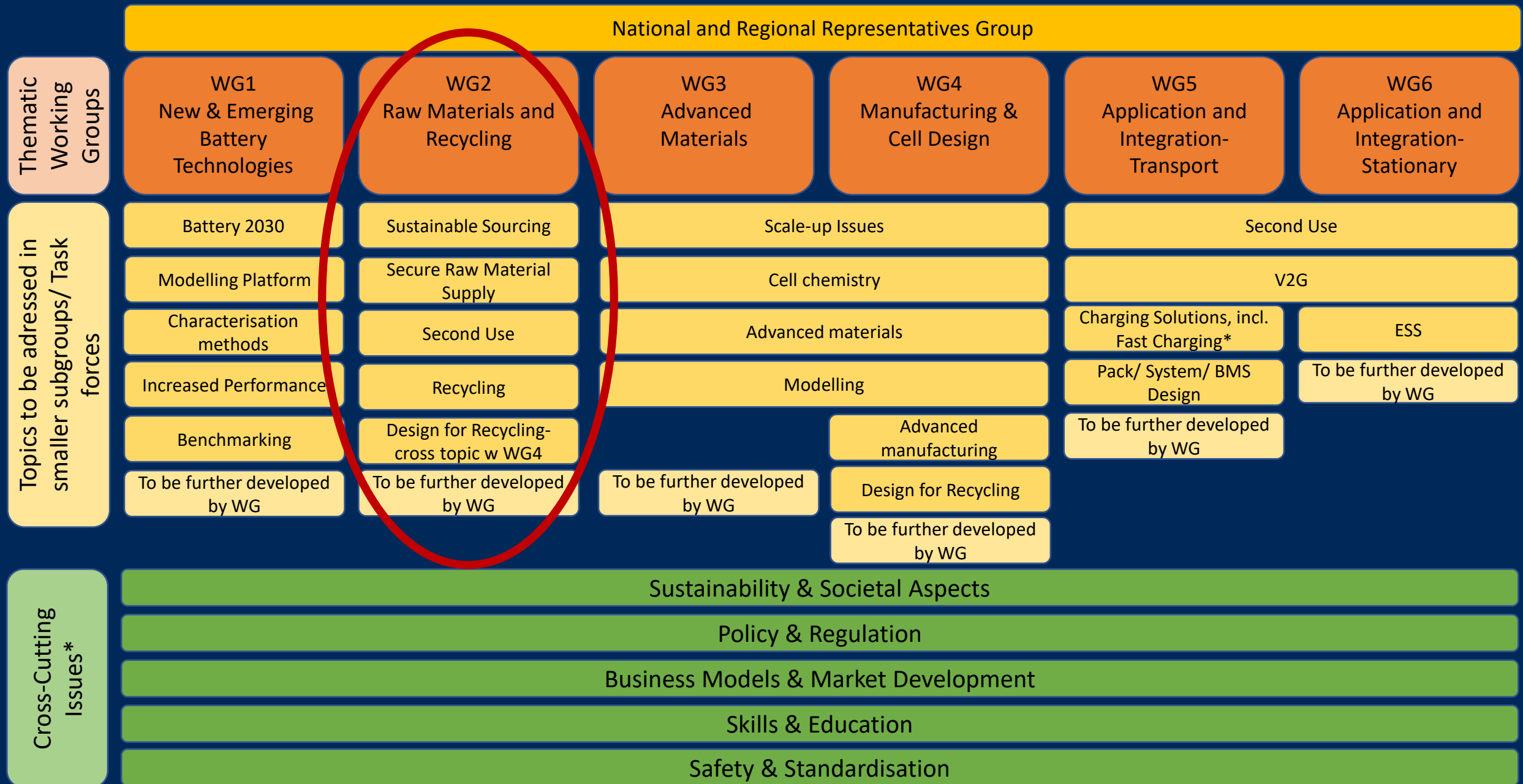
# Linking European Battery Networks



# ETIP vs. Public-Private partnership on batteries: for a smooth relation (1)



# Working Group Structure and topics to be addressed



# WG2– Raw Materials and Recycling

Chair: Dr. Ilkka V. Kojo, Outotec, supported by Prof. Mari Lundström, Aalto University

Co-chairs: Dr. Olli Salmi, EIT RawMaterials and Dr. Alain Vassart, EBRA



**Kojo Ilkka**  
*Outotec*



**Mari Lundström**  
*Aalto Univerisity*



**Salmi Olli**  
*EIT RawMaterials*



**Vassart Alain**  
*EBRA*





# SET Plan IWG Workshop in Espoo, January 2019; Batteries Europe WG2 Workshop in Milan, June 2019



# WG2 Raw Materials and Recycling



# Cross Cutting Item Task Forces

- Aim to deliver 10 pager position paper to be added as appendix to SRA
- Batteries Europe Task Force “Sustainability” (Emma Wiesner)
- Safety Task Force (Olaf Bose (ZSW) and Arnaud Bordes (INERIS))
- Education & Skills Task Force (Robert Dominko (National Institute of Chemistry))
- Second Life Task Force , under preparation
- Digitalization Task Force, under preparation



# WG2, call proposals

- Improved total recycling of battery materials
- Sustainable Processing of Battery Raw Materials
- Collection, reversed logistics and sorting



# WG2 Road Map scope

## Scope of Road Map

- Sourcing, sustainability and traceability of raw materials (Pertti Kauranen, Aalto Univ., Ilkka Kojo, Outotec)
- Collection, reverse logistics and sorting (Michal Zygmunt, Elemental)
- Raw Material LCA combined with material Flow Analysis (Maeva Philippot, Vrije Uni. Brussel and Carol-Lynne Pettit, Cobalt Institute)
- Sustainable processing of Li, Ni, Co and graphite and Value addition in metals refining (Olli Salmi, EIT RawMaterials)
- Dismantling of EV and industrial batteries (Alain Vassart, EBRA)
- Metallurgical processes and industrial integration and secondary material based precursors (Mari Lundström, Aalto Univ)
- Circular economy based business models (Arnaud Witomski, CEA)
- Safety in recycling (Isabel Vermeulen, Umicore)
- Second Life, Willy Tomboy (DETOMSERVE GCV)

## Stakeholders

- 27 Industrial
- 26 Academic
- 5 Associations etc
- follow up by DG RTD, DG ENE, DG GROW, JRC and INEA



# WG2 ongoing activities:

- Finalizing the call proposals asap
- Finalizing Final Draft of the Road Map of Battery Raw Materials and Recycling by end of March, 2020
- Strategic Research Agenda for Raw materials and Recycling by end of May, 2020



Outotec



Sustainable use of  
Earth's natural resources

BATTERIES  
EUROPE