



Perspectives of the “Materials 2030 Initiative”

EMN Advanced Manufacturing Open Stakeholders Meeting; 10 October 2022

Lars MONTELIUS

**Co-Chair Steering Board
AMI 2030**



Agenda

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1. **Intro Materials Manifesto/
Draft Roadmap**
 2. **Interim Governance and structure**
 3. **The positioning
of the initiative in the
European Eco-System**
 4. **Invitation/Engagement process**
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Why Advanced Materials?

- ▶ Backbone and source of prosperity of an industrial society
- ▶ Crucial role for enabling green and digital transition
- ▶ Key driver for innovation and creating new opportunities on multiple dimensions and sectors

Global Sustainability frameworks

- ▶ UNFCCC
- ▶ Agenda 2030 (SDGs)
- ▶ European Green Deal Green Deal & Digital Strategy by the European Commission

The Vision

A **strong European Materials ecosystem** to drive the green and digital transition alongside a **sustainable inclusive** European society through **systemic collaboration** between upstream developers, downstream users, and citizens and all stakeholders in between

Objectives of the Materials 2030 Initiative

Driving cross-sectoral industrial innovation by supporting new applications across all industry sectors

Paving the way for the engagement of all advanced materials stakeholders

Fostering the collaboration based on common grounds between stakeholders to create more sustainable products and material-based technology

Addressing all value chains and innovation markets for planet, people, and prosperity



4 main objectives

The Materials 2030 Initiative:



Planet



People



Prosperity

To respond together
scalable and efficiently

through

A systemic development
of next generation
solution-oriented
advanced materials

create

Opportunities for
Europe's society,
economy, and
environment,
today and in the future

The draft Materials 2030 roadmap | Innovation Markets → materials for sustainability:

Health Care

1

Construction

2

**New
Energies**

3

Transport

4

**Home &
Personal
Care**

5

Packaging

6

Agriculture

7

Textiles

8

**Electronics
Appliance**

9

Expected benefits

Combination of digital technologies **revolutionises** research & development methodologies

- 1 Accelerating advanced materials / processing solution developments for Europe's innovation markets
- 2 Low resource utilisation, energy-efficiency and decarbonisation of materials processing
- 3 Industry-ready processes and technologies for establishing renewable material sourcing, manufacturing and/or recycling value chains in Europe
- 4 Alternative and lightweight materials processing technologies and solutions
- 5 Increased product customisation, guarantee, and labelling
- 6 Support product traceability and lifecycle management

Materials processing and scaling up creates/enables **new challenges/opportunities**

Building blocks of the Materials 2030 Initiative

Inclusive **Governance** -
a new form of cooperation

Materials digitalization

- New research and development methodologies
- Merging computational and experimental materials science based on modelling, simulation and high throughput characterization

Materials scaling up

- Identifying common manufacturing technologies & conditions for the processing and scale up of new materials

Materials priority areas

- Priority areas form the basis for the development of a novel European strategic materials agenda

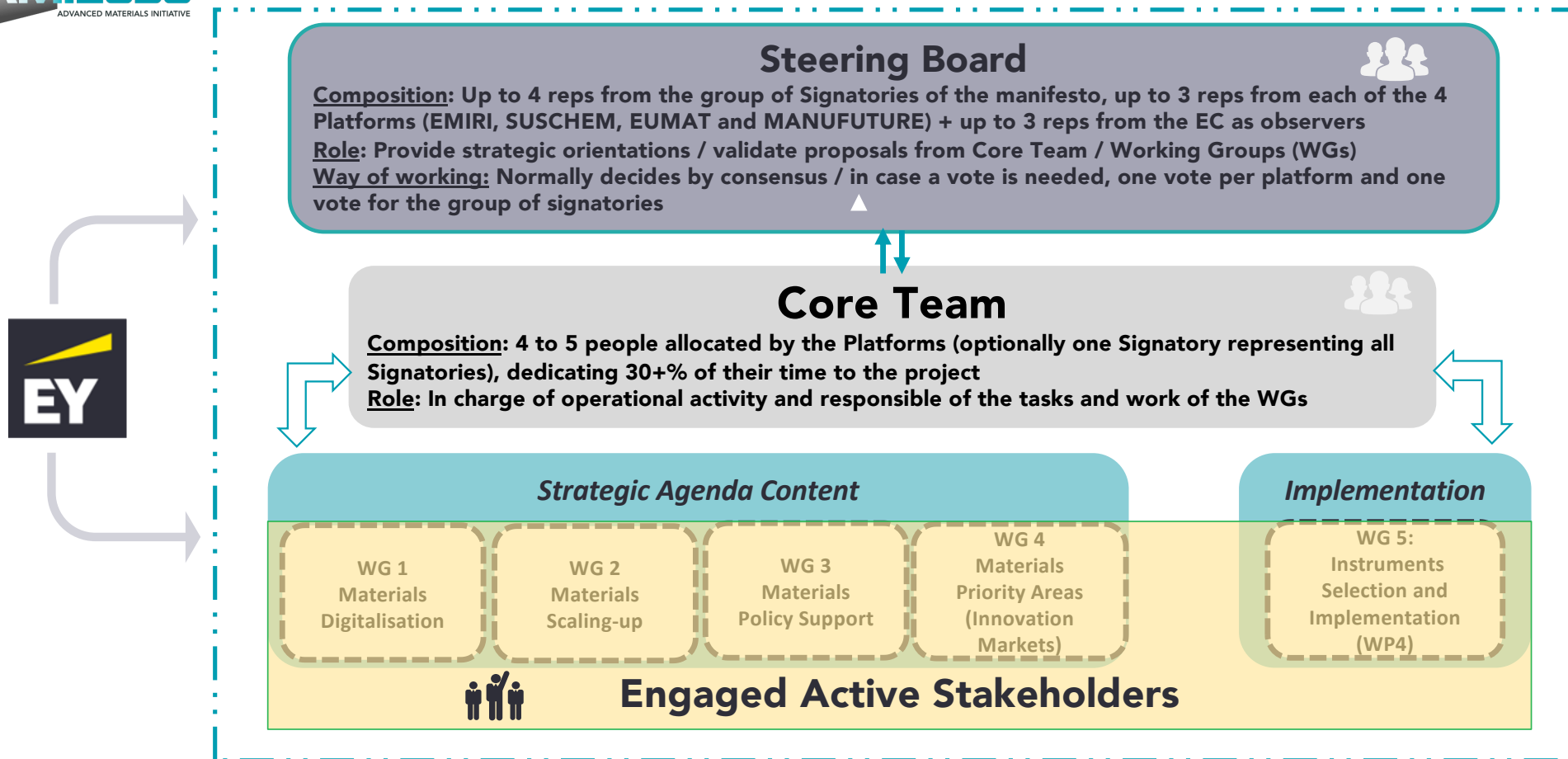
“Blue Sky” Research

Framework for evidence-based policy recommendations

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Present State:
Interim Governance and structuration

INTERIM GOVERNANCE



Core Team and Working Groups

CORE TEAM

EMIRI	Philippe	JACQUES
	Jérôme	GAVILLET
EUMAT	Amaya	IGARTUA
MANUFUTURE	José	CALDEIRA
SUSCHEM	Christian	SEITZ
FHG	Christiane	BUCHER

WORKING GROUPS

WG #	Thematic	Contemplated leader	Core team member (facilitator)
1	DIGITAL	Gerhard GOLDBECK (EMMC)	Ph. JACQUES (EMIRI)
2	SCALE-UP (Manufacturing and processing technologies)	Marta CANDEIAS Head of Research & Innovation Funding support Associação do Instituto Superior Técnico para a Investigação e Desenvolvimento - Lisbonne	José Caldeira (Manufuture)
3	Policy Support	TBD	Christian SEITZ (SUSCHEM)
4	Materials Innovations Markets	Eva SCHILLINGER (SUSCHEM)	Amaya IGARTUA (EUMAT)
5	Instrument Selection	Christiane BUCHER (Fraunhofer) + EY Support	

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The positioning
of the initiative in the
European Eco-System

Positioning the AMI2030 initiative: Defining the „areas of intervention“

At least, four axes along which to position this initiative:

1. Innovation cycle coverage

Which levels of the innovation cycle is AMI2030 going to address, from blue sky research to market uptake and end of life management?

2. Innovation markets coverage

Which innovation markets/application sectors is AMI2030 going to cover and how?

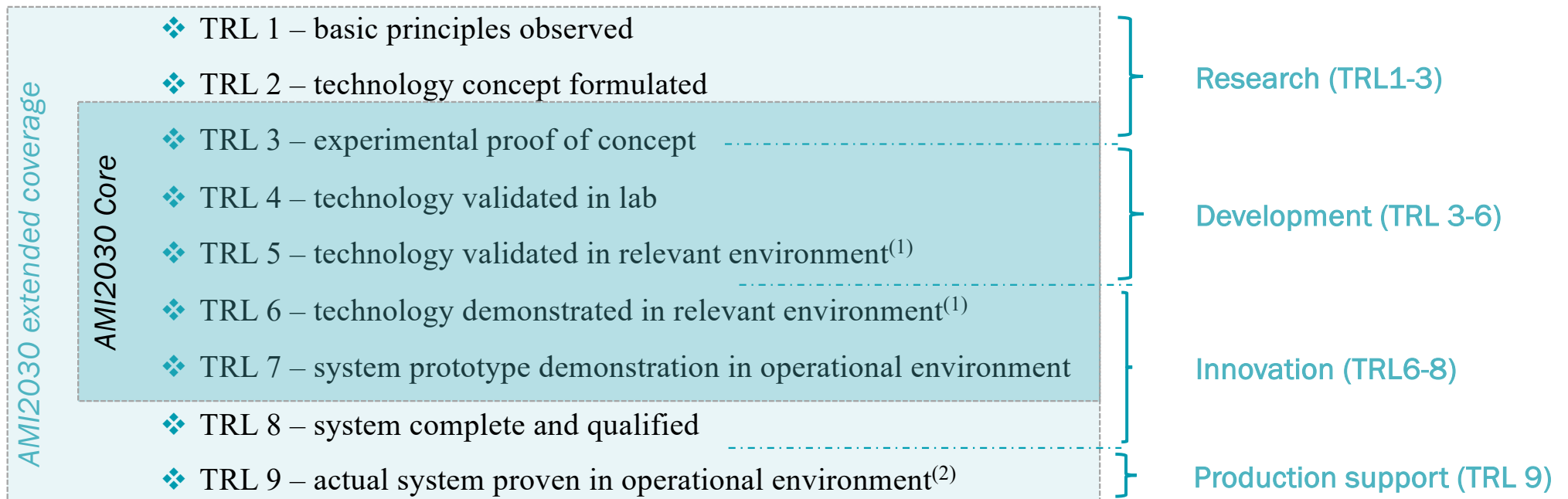
3. Non-R&I activities coverage

Which activities complementary to R&I activities (such as education & skills; entrepreneurship; regulations, certifications & standards;...) is AMI2030 going to cover?

4. The European R&I landscape

How is AMI2030 going to ensure coherence and synergies within the EU research and innovation landscape, between EU programmes (including amongst them, e.g., Horizon Europe and Digital Europe), and national and regional programmes for research and innovation?

AXE 1 – The Research & Innovation cycle



(1) industrially relevant environment in the case of key enabling technologies

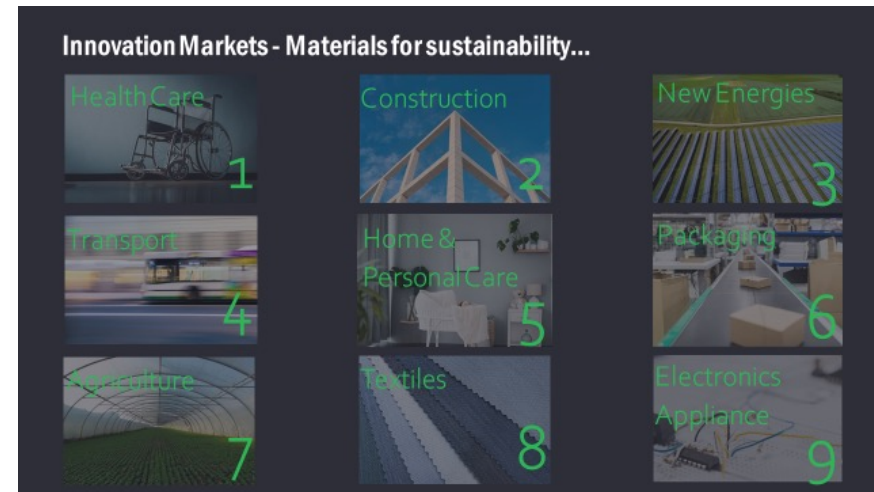
(2) competitive manufacturing in the case of key enabling technologies

AXE 2 – The innovation markets

2 possible options (at least...)

1. THE SEQUENTIAL APPROACH

- In an initial phase, focus only on a few (1-3) high-priority innovation markets
- Gradually extend (or move) to the others



2. THE SPILL-OVER APPROACH

- Focus on activities addressing needs & challenges **common to as many innovation markets as possible**;
- In a first step, identify 1 or 2 high-priority innovation market(s) as use case
- In a second step, replicate to the other relevant innovation markets (spill-over)

AXE 3 – Non-R&I activities

Activities aiming at market, regulatory and societal uptake

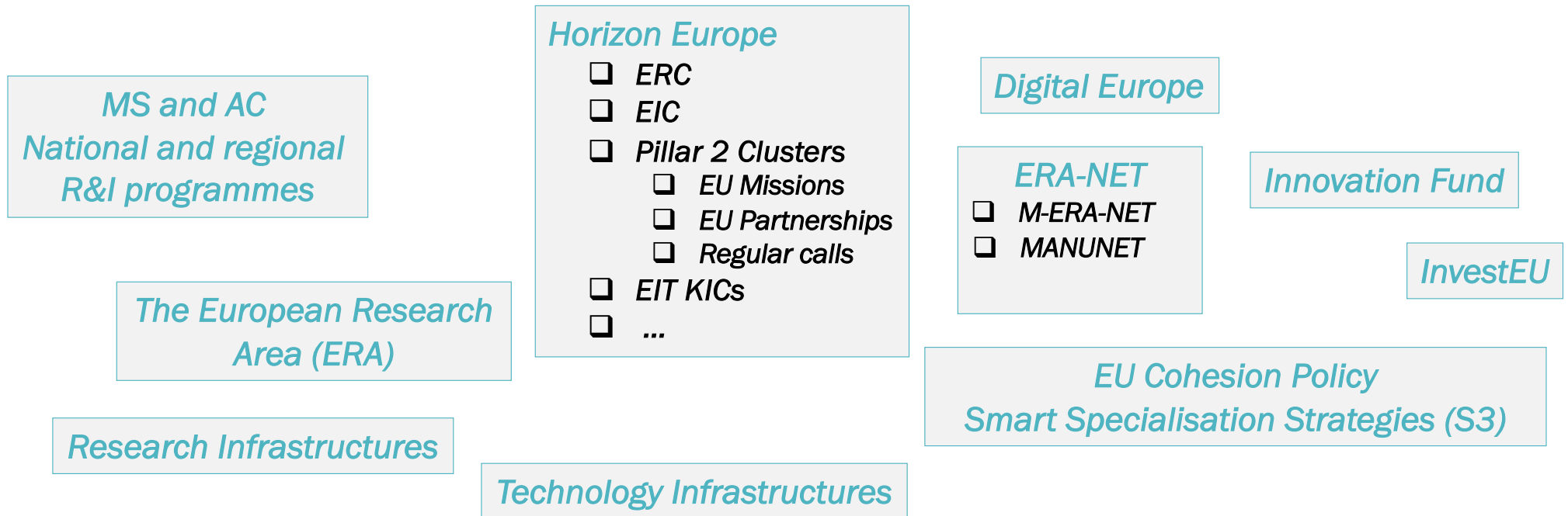
1. ACTIVITIES SUPPORTING A SUSTAINABLE FRAMEWORK FOR MATERIALS KNOWLEDGE & DATA
2. SCIENTIFIC INPUT FOR INFORMED REGULATIONS AND RELATED POLICIES
3. ACTIVITIES SUPPORTING CERTIFICATION AND STANDARDISATION BODIES
(especially on safety and sustainability aspects)
4. ACTIVITIES CONTRIBUTING TO THE EDUCATION AND TRAINING OF FUTURE SKILLED WORKFORCES
5. ACTIVITIES CONTRIBUTING TO ENTREPRENEURSHIP
6. ACTIVITIES CONTRIBUTING TO THE PUBLIC AWARENESS and CITIZEN INVOLVEMENT
7. ...?

Although it could be argued that these activities are part of the innovation cycle, they appear in most cases as “independent”, including when it comes to the funding programmes.

AXE 4 – Connecting the dots...

AMi2030 in the European Research & Innovation Landscape

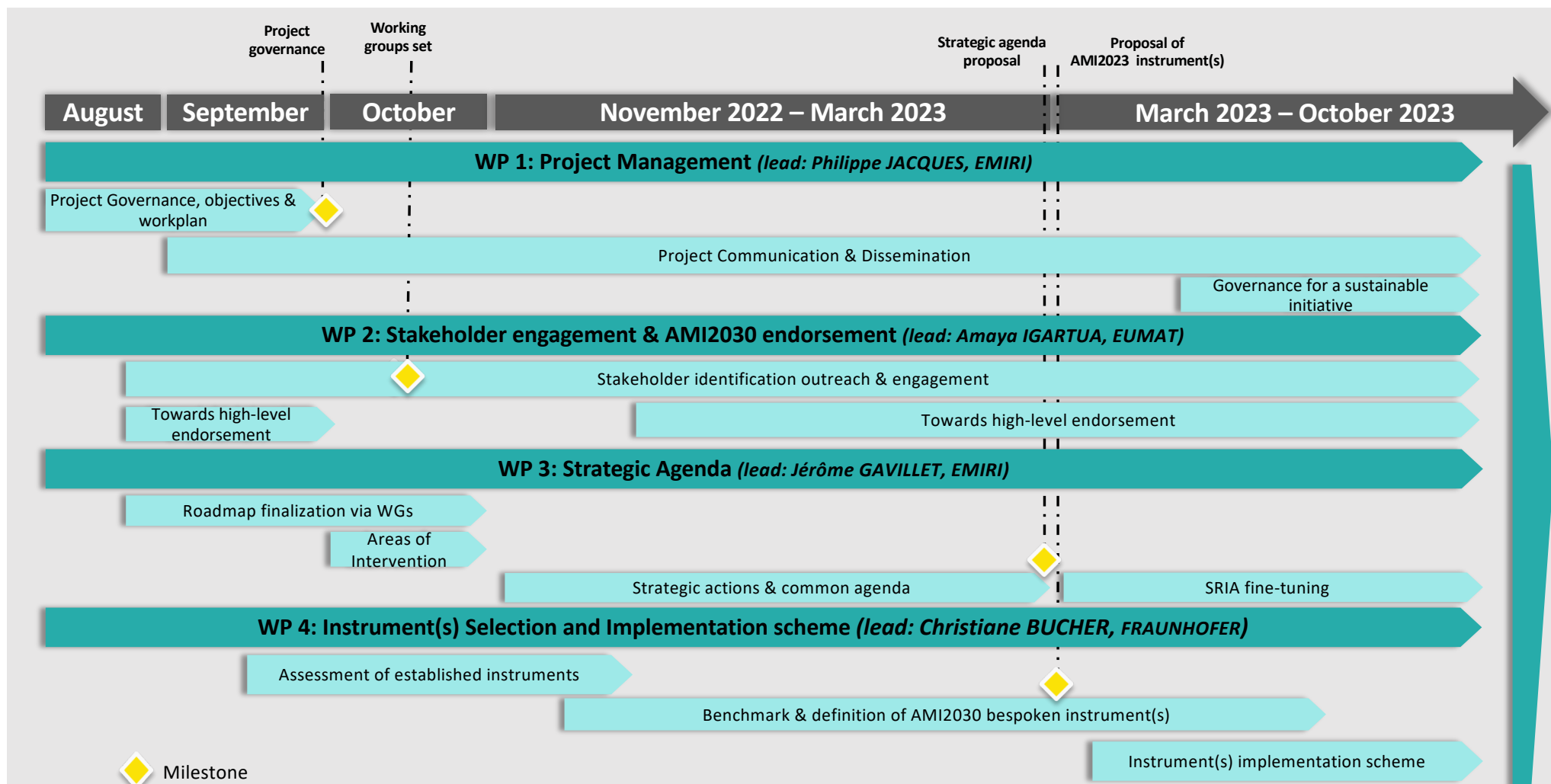
What are the most relevant programmes and initiatives?



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Invitation & engagement process

Overview and timeline



Call for stakeholders to join the initiative

WHO CAN JOIN?

Any European organisation

- ✓ with activities of significant relevance for advanced materials development, production, integration, use, recycling...
- ✓ which agrees to the Declaration of the Advanced Materials 2030 Initiative

HOW TO JOIN?

By registering via the online form available on AMI2030.eu

1. the organisation (if not yet registered)
2. personal contact details and fields of interest of the individual contributors

HOW TO CONTRIBUTE?

By actively contributing to the working groups

- ✓ Defining the Areas of Intervention (based on the roadmap)
- ✓ Drafting the Strategic Research and Innovation Agenda

WHEN?

The “Join us” communication campaign was launched on **October 6, 2022**



Thank You!