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**#AdvancedMaterials**

# **ADVANCED MATERIALS FOR INDUSTRIAL LEADERSHIP**

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# Advanced Materials – what is covered?

## OECD working description

- **Intentionally designed** and engineered materials which have:
  - **new or enhanced properties**, and/or
  - **targeted or enhanced structural features**to achieve specific or improved **functional performance**.
- Advanced materials include both:
  - **new emerging** materials from innovative manufacturing processes (high tech materials) and
  - materials that are **manufactured from traditional** materials (low tech materials)



# Policy Context



- Advanced materials offer a wealth of **solutions**
  - Key enablers & innovation drivers for the **Green Deal & Digital Transition**
  - Many application areas across sectors, e.g.:
    - clean energy technologies for the **Net-Zero Industry Act**
    - **potential to substitute** Critical Raw Materials (CRMs) for the **CRM Act**
- **Increasing demand** expected for advanced materials  
e.g. for renewable energy, batteries, zero-emission buildings, semiconductors...
  - Improved **efficiency** and **performance**
  - Customer demand for **circular, safe and sustainable** products
- **New Political Guidelines 2024-2029: Clean Industrial Deal**
- **Draghi report & Letta Report**



# Advanced Materials for Industrial Leadership

Commission Communication COM(2024) 98 final – 27.02.2024

→ Setting out 14 distinct actions for 2024 and 2025 along 5 pillars...

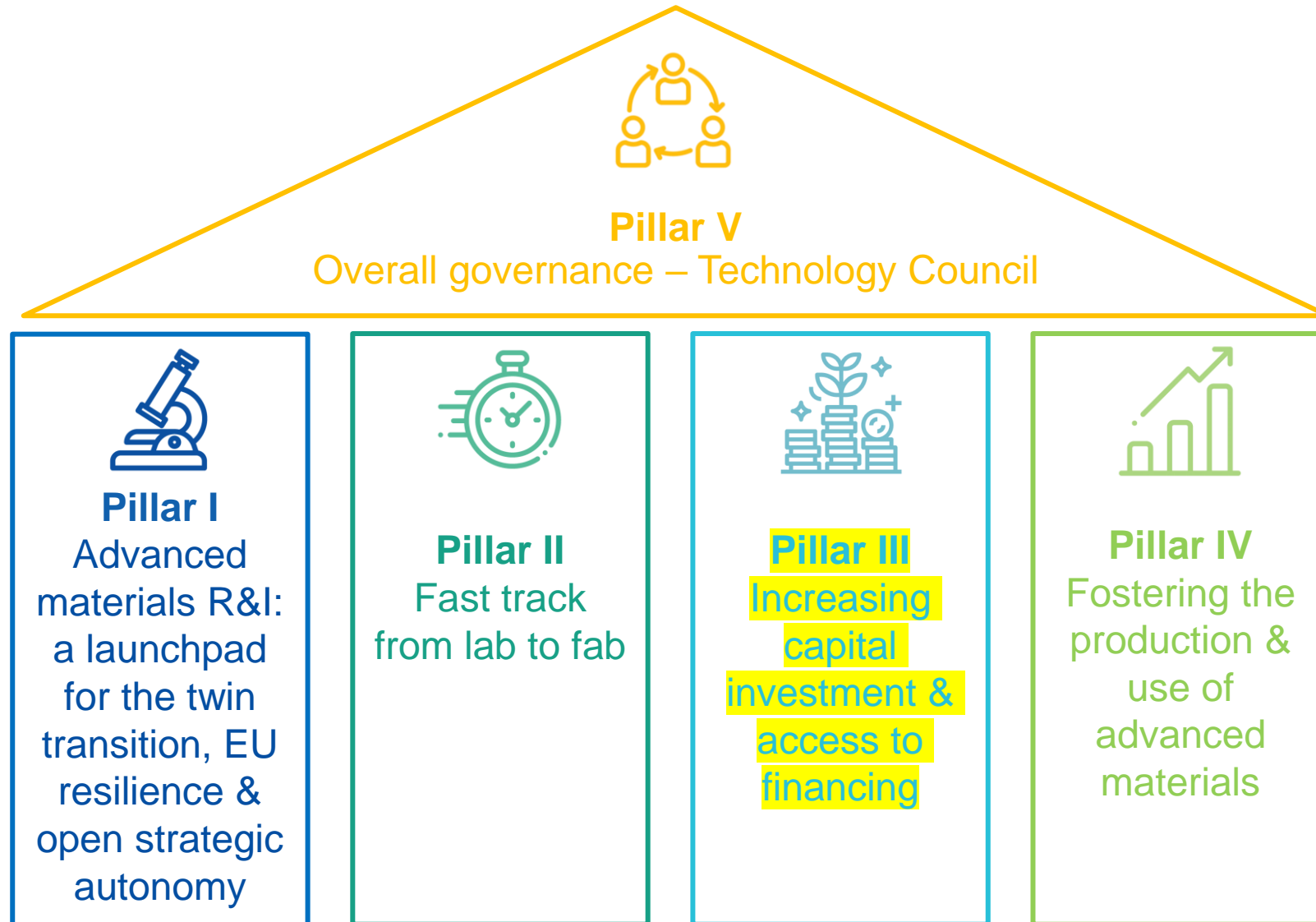
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# Ambition

To strengthen the EU's **resilience** and **open strategic autonomy** and to deliver on the **Green Deal and Digital Transition**, Europe must :

- **accelerate** its advanced materials research & technology development
- **scale up** its innovation and manufacturing capacity and
- **step up** the industrial uptake of advanced materials

# The Strategy



# Pillar 3 - Capital Investment & Finance



## 6. Horizon Europe partnership «Innovative Advanced Materials for EU»

- Co-programmed with industry (2025-2027) – launch February 2025
  - 250 Million€ EU funding and at least equivalent private funding
  - Industrial Association IAM-I under set-up and SRIA under development
- If interested and not already involved reach out to DG RTD

## 7. Important Projects of Common European Interest (IPCEI)

- Discussions with the Joint European Forum for IPCEI
  - AT in lead of an AdMat related IPCEI

## 8. European Innovation Council

- **New EIC topic for SMEs, WP2025**

## 9. European funding instruments

- Innovation Fund, Invest-EU, targeting topics in HE as STEP

# Common list of priorities – a starting point

## 1) ENERGY

- a) Renewable and low carbon energy conversion and generation
- b) Energy storage systems
- c) Energy distribution and the transmission grid
- d) Renewable fuels

## 2) MOBILITY

- a) Energy-storage and alternative fuels for different means of transport
- b) Advanced high-performance materials for lightweight, able to perform in harsh environments, highly reliable and durable transport applications
- c) Increased protection, resilience and durability for transport means and infrastructures
- d) Increasing circularity and addressing environmental performance of materials

## 3) CONSTRUCTION

- a) Improving energy efficiency in buildings
- b) Making buildings structures more robust and longer lasting and better monitoring of structural integrity
- c) Greater wellbeing in buildings
- d) Advanced materials for better performance, including specific characteristics to perform in harsh environments, reduced energy consumption and new functionalities of electronic components

## 4) ELECTRONICS

- a) Better performance, reduced energy consumption and new functionalities of electronic components
- b) Advanced materials for new chip production and packaging technologies



# Common priorities: crosscutting functionalities

- Digitalisation of advanced materials R&I: digital infrastructures, data & digital tools, automated labs
- Implementing the 'Safe and Sustainable by Design' concept will be at the core of the material transformation process
- Enabling circularity and use of secondary materials



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# Thank you