ECCA
European Circular Composites Alliance
by EuCIA

# EUROPEAN CIRCULAR COMPOSITES ALLIANCE

## 1st Working Group Meeting

*August 2025*

# WELCOME

To ensure a smooth and engaging session, please follow these guidelines :

- *Comply with ECCA rules, Respect the EuCIA Antitrust Code of Conduct and Ethics and comply with EU Competitions laws.*
- *Keep Your Microphone Muted.*
- *Feel free to ask your Questions in the Chat. Response to some questions may be provided at a later time*
- *GDPR Notice : By participating, you consent to the recording and processing of your data for the purposes of the webinar.*

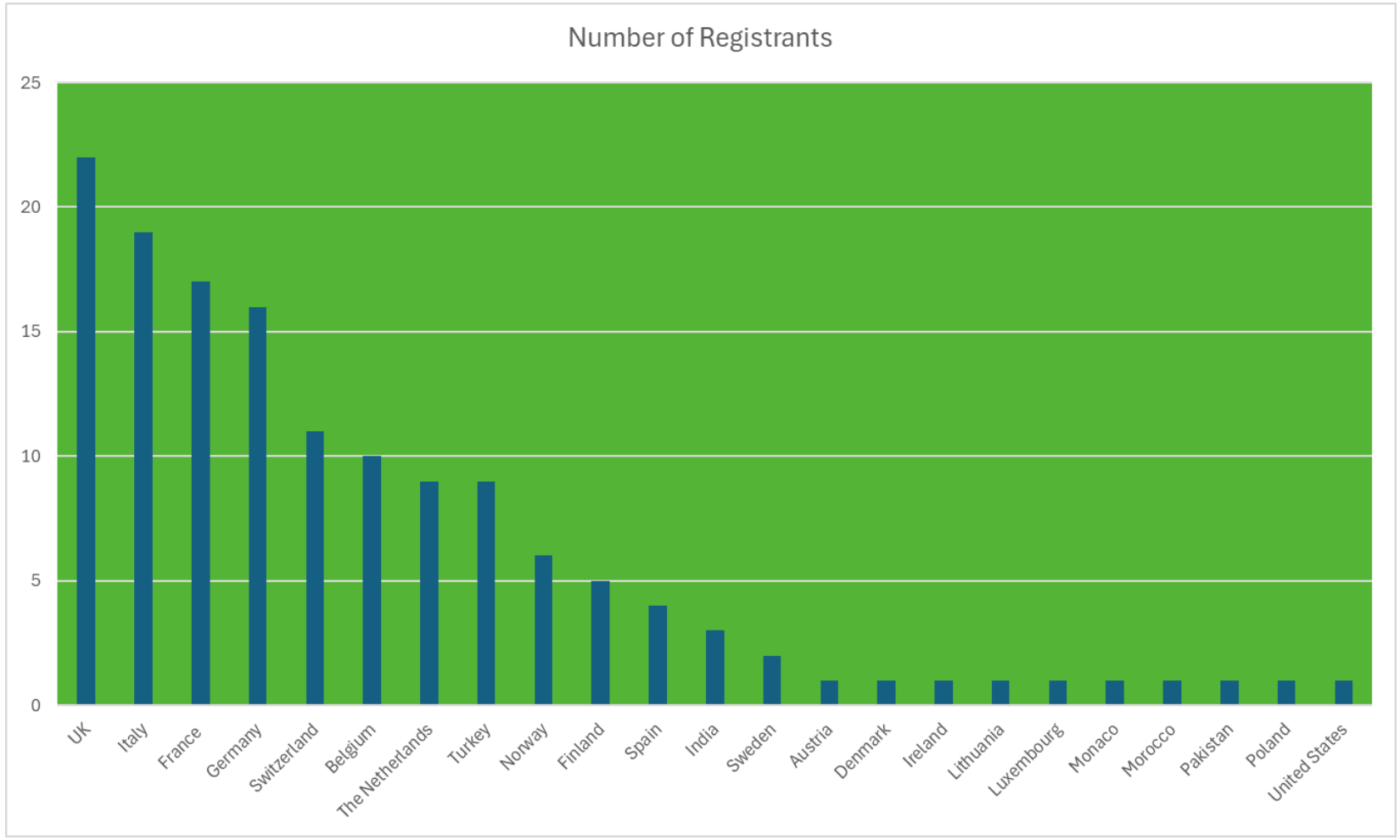
Thank you for your cooperation !

# Outlook

- Objectives of ECCA
- The role of EuCIA
- The Working Groups
  - Develop tailored solutions for different compositions/markets
- How are WGs managed?
- What do we know?
  - Basic knowledge package provided by EuCIA's WG "*Sustainability*"

# ECCA Members by Country

143 signatories

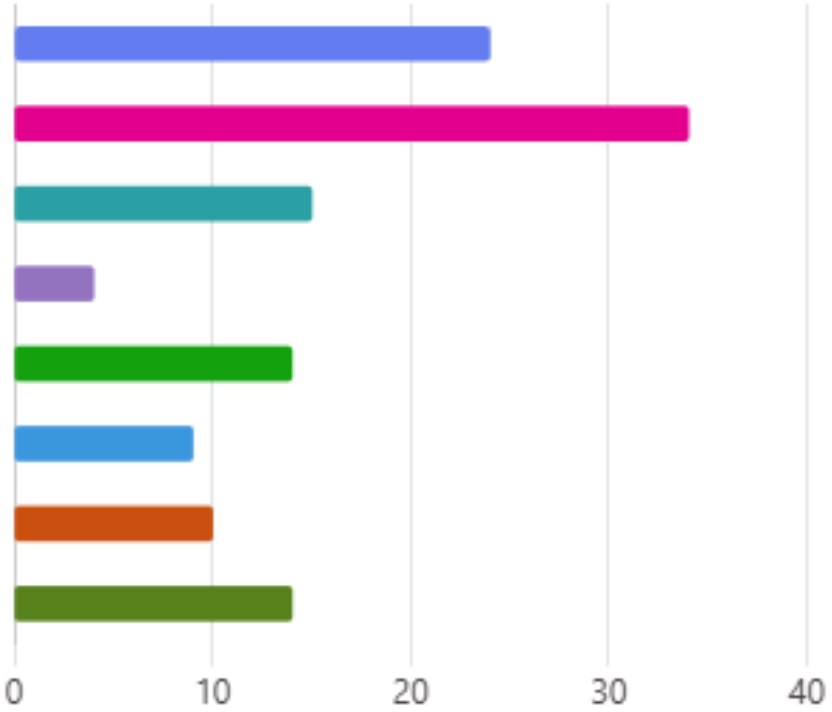


# ECCA Members by Working group

| | | |
|---|---|---|
|  | Aerospace & Defence | 30 |
|  | Road Vehicles | 36 |
|  | Industrial & Recreational | 75 |
|  | Construction | 29 |
|  | Cross over | 46 |

# ECCA Members by Category

| | |
|---|---|
| Part manufacturer and OEM | 24 |
| Raw materials | 34 |
| Recycler | 15 |
| Waste management | 4 |
| University and research center | 14 |
| Trade association | 9 |
| Consulting and engineering company | 10 |
| Other (consortium, professional, etc.) | 14 |



# Our Mission

*(as the community of composite materials in Europe)*

## Let's take control of our own destiny

- Composites are genuinely circular
- Composites are essential contributors to society
- Composites are important for the net-zero transition

# ECCA Mission *(based on Declaration)*

**Advance the circular economy for composite materials by:**

- Bringing together all stakeholders
- Driving collective action
- Speaking with one voice to the external world

# ECCA Mission *(based on Declaration)*

**Which means**:

- Prove that composites are valuable resources for the circular economy
- Facilitate composite materials conservation through proper supply chains
- Identify and resolve barriers to increase the use of recycled materials in new products
- Develop circularity strategies and design guidelines
- Align with EU regulators

# Objectives *(based on Declaration)*

- **Promote public awareness** of the benefits and value of recycled composites
- **Foster voluntary pledges** from industry to **use recycled composites**
- Set-up **design for circularity** and recycling guidelines
- **Develop standardized methods**: LCA; quality of sorted composites waste, supply chain
- Create a **harmonized EU monitoring** system for traceability of recycled composites
- **Mobilize investment** into recycling and R&D infrastructure; public and private

**How?** activate **dedicated WGs** to coordinate actions

# Deliverables *(based on Declaration)*

- **Increase circularity of composites** and **realize the full potential of recycled composites:**
  - **Enhance the uptake of recycled composites in products** ensuring their safety and quality by **setting and working to targets**
  - **Improve** collection, sorting, and recycling rates
  - **Optimise waste codes** to enable best solutions to develop
  - Aim to **significantly reduce landfilling** of composites **by 2050**
- **Identify and resolve** legal, economic, and technical barriers to composites recycling
- **Enhance environmental protection** by reducing raw material extraction
- **Publish** annual progress results from Working Groups

# Inputs from EU Commission

*Laure Baillargeon (DG Grow)*

- **Policy Alignment** is Crucial**:** ECCA is seen as a dialogue platform

  ECCA should **align with EU policy priorities** (e.g., the Clean Industrial Deal, Circular Economy Act) to enhance visibility, impact, and policy influence ➔ **a contact point for the Commission**

- ECCA as a **valuable interface,** capable of structuring dialogue and aggregating views.
  - Voluntary Alliances for **dialogue** with EU Authorities
  - Voluntary, bottom-up initiatives **can act more quickly than legislation**
  - Play **a vital role** in **preparing future regulations**.

# The Working Groups

Solutions will be dependent on:

- **Composition** (resin/fiber type, fiber content, value, etc.)
- **Market** and logistic
- **Regulatory** constraints
- **Quality** and consistency of the products

It is recommended that each WG starts with the least common multiple for **first product/market entry**
(*an "easy" entry as a basis for success …*)

# Working Group Name

| | WORKING GROUP NAME | DESCRIPTION / CONTENT |
|---|---|---|
|  | Aerospace & Defence | |
|  | Road Vehicles | Car, Truck, others |
|  | Industrial & Recreational | Wind blades, Boats, Train, Electric, Sports & Leisure, Pipes & Tanks |
|  | Construction | Structural elements (bridges, panels, claddings, window frames...) |
|  | Cross over | Policy, Regulation, Investment, Monitoring, Metrics and Reporting |

# How will the working groups be managed?

- Role of EuCIA
- WG Basic rules
- Start from knowledge package developed by WG Sustainability

# Role of EuCIA

- Acting as coordinator of the WGs
- Legal representative / Respect compliance
- Administrative tasks (invitations, Minutes)
- Coordination between the WGs
- Share previous knowledge with the WGs

# WGs basic rules

- Governance
  - Chair and vice-Chair
  - Secretary (EuCIA for the time being)
- Reporting
  - To the Steering Committee (Composition: 5 WG Chairs + EuCIA President + EuCIA Managing Director + 1 representative of  the EuCIA Sustainability WG)
  - To General Assembly (Composition: all signatories)
- Objectives and scope
  - Define the mission: what problems are to be addressed?
  - Set specific objectives:  work against targets
  - Agree on deliverables and deadlines

# Job description of ECCA Chair:

## lead the WG's activities with WG secretary's support

- Member of the ECCA steering Committee
- Preparing draft document to be reported to ECCA Steering committee (ESC) or Subcommittee
- Convening meetings, acting as the meeting chairperson
- Ensuring the correct composition of the WG for the task
- Circulating documents via the electronic platform, seeking clarification from the ESC when needed
- Ensuring the work is completed within the specified timeframe

**The Vice-chair is replacing the chair, during his absence, with the same role**

# Today's tasks

- Elect a Chair and vice-Chair
- Agree on reporting mode
- Define specific missions for the market segments involved
- Preliminary discussion of objectives
- Set the dates of 2025 WG meetings

# 1st ECCA General Assembly, Brussels, December 3 or 4, 2025 (to be confirmed)

- 9h30 : Welcome Coffee break
- 10h00 : Opening by Prof Roberto Frassine
- 10h10 : EU Commission introduction speech (30 min)
- 10h40 : Networking break
- 11h15 : Presentation of WG 1, 2 and 3
- 12h30 : lunch break / Networking
- 14h00 : Presentation of WG 4 and 5
- 14h45 : Wrap up
- 15h30 : Closing of the event
- 15h30 – 16h30 : Networking session

- **Please confirm your participation before Sept 5th, following the below link**

https://forms.office.com/e/8Y1fnGes1n?origin=lprLink

By submitting this form, you agree to the processing of your personal data under GDPR

# What do we know?

# “Knowledge Package”

*provided by EuCIA’s WG Sustainability*

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| 9 | Taking Composites circularity to the next level |
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| A2 | Recycling processes for Composites |
| A3 | Analysis of the different recycling processes |
| A4 | Cradle-to-gate LCA analysis of Composites : EuCIA's eco impact calculator |
| A5 | LCA analysis of recycling processes |
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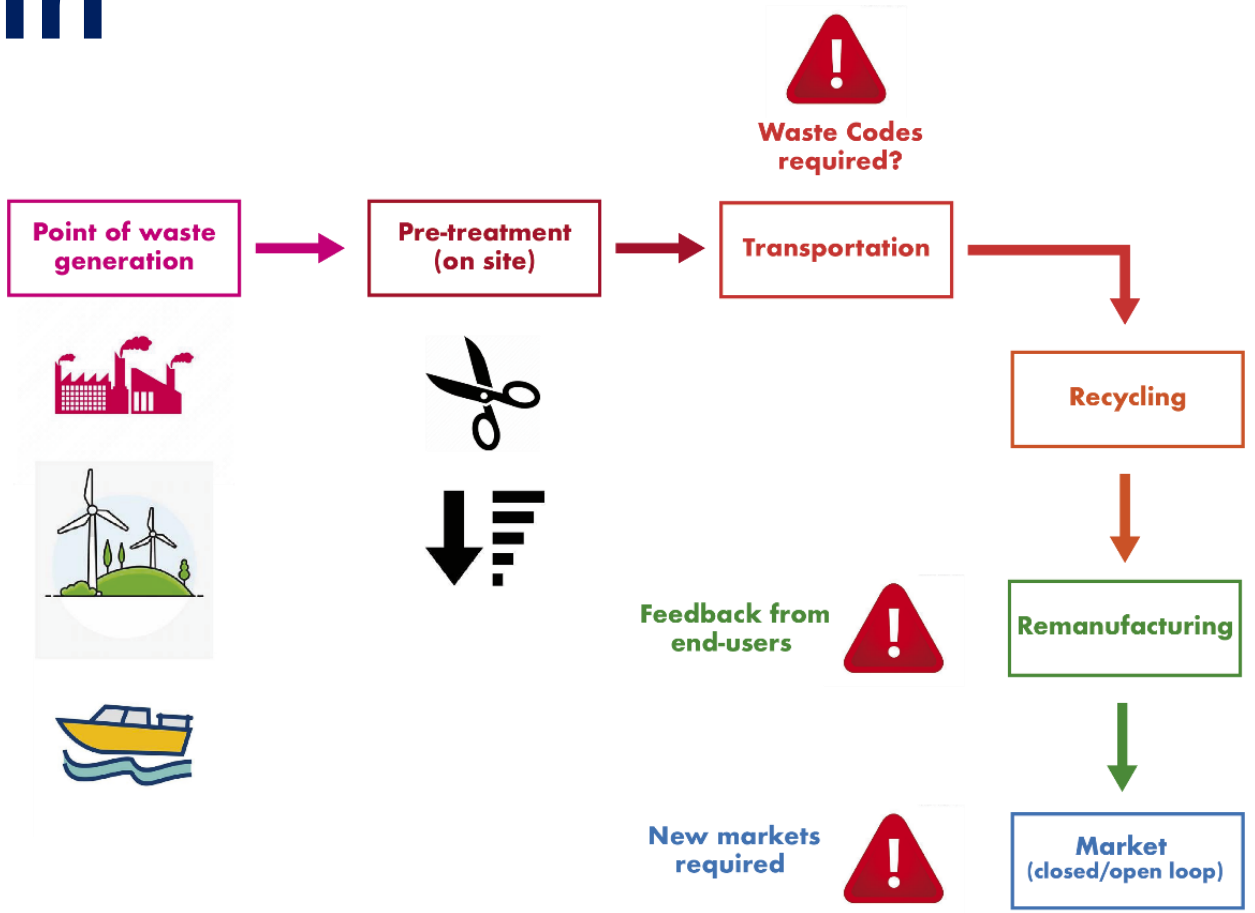
# The barriers to a well-established circular value chain

A. Collection, sorting and **transportation** of waste

B. Remanufacturing of **recycled products** (*to transform them into secondary raw materials*)

C. <u>Promoting and creating **end-use markets**</u> for the secondary raw materials

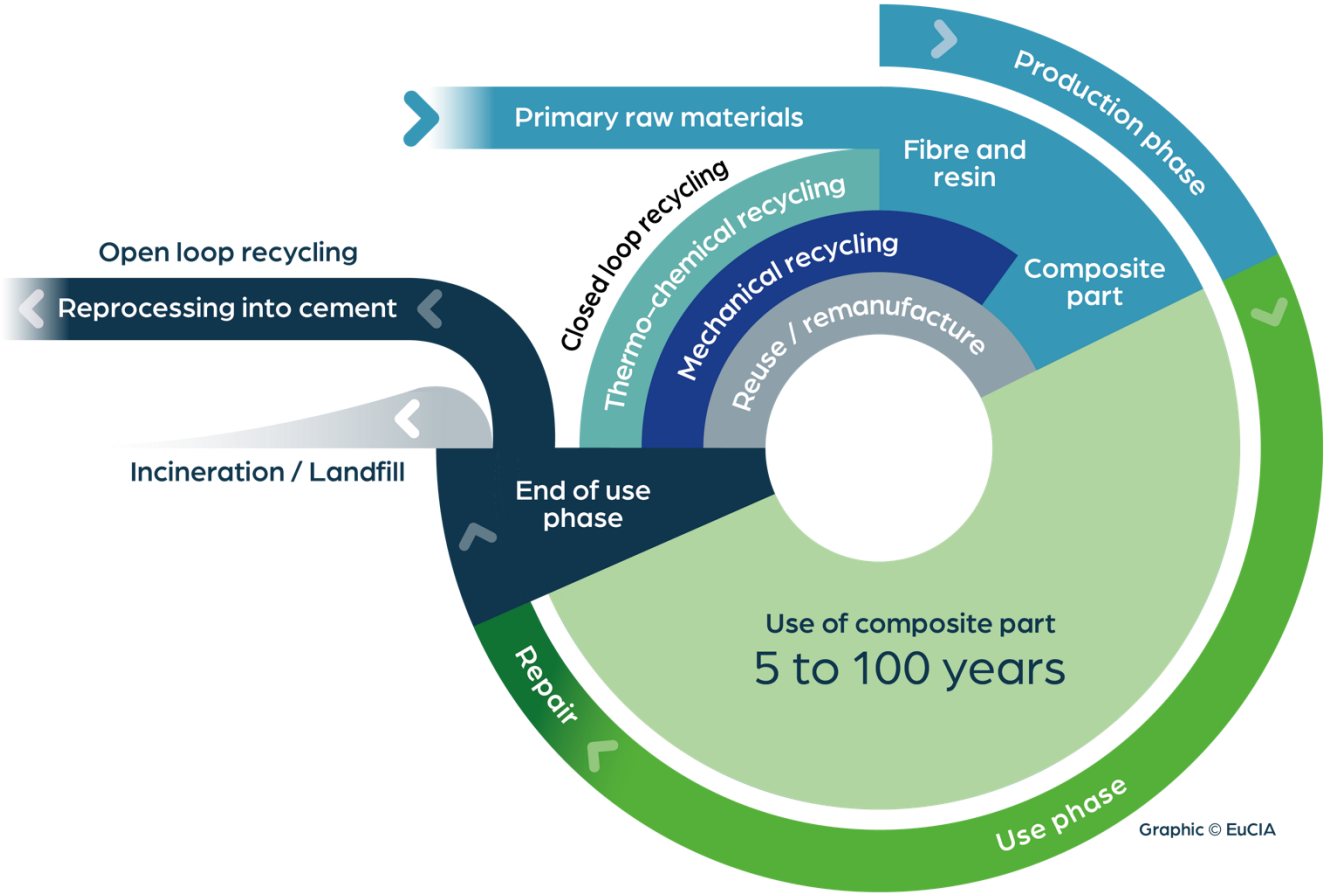


# Composites are made to last

- Enable **advanced and flexible lightweight design,** are **durable** , require low maintenance and enable **key applications**
- Provide a **long service life**
- Are indispensable materials to society
- Support **EU Green Deal**: net-zero transition

# Composites are Genuinely Circular Materials

- Many **recycling technologies** are already available, and more are under development
- Composites are **circular materials** because they can be **re-used** both in closed loop and open loop applications/markets
- Find out more at:

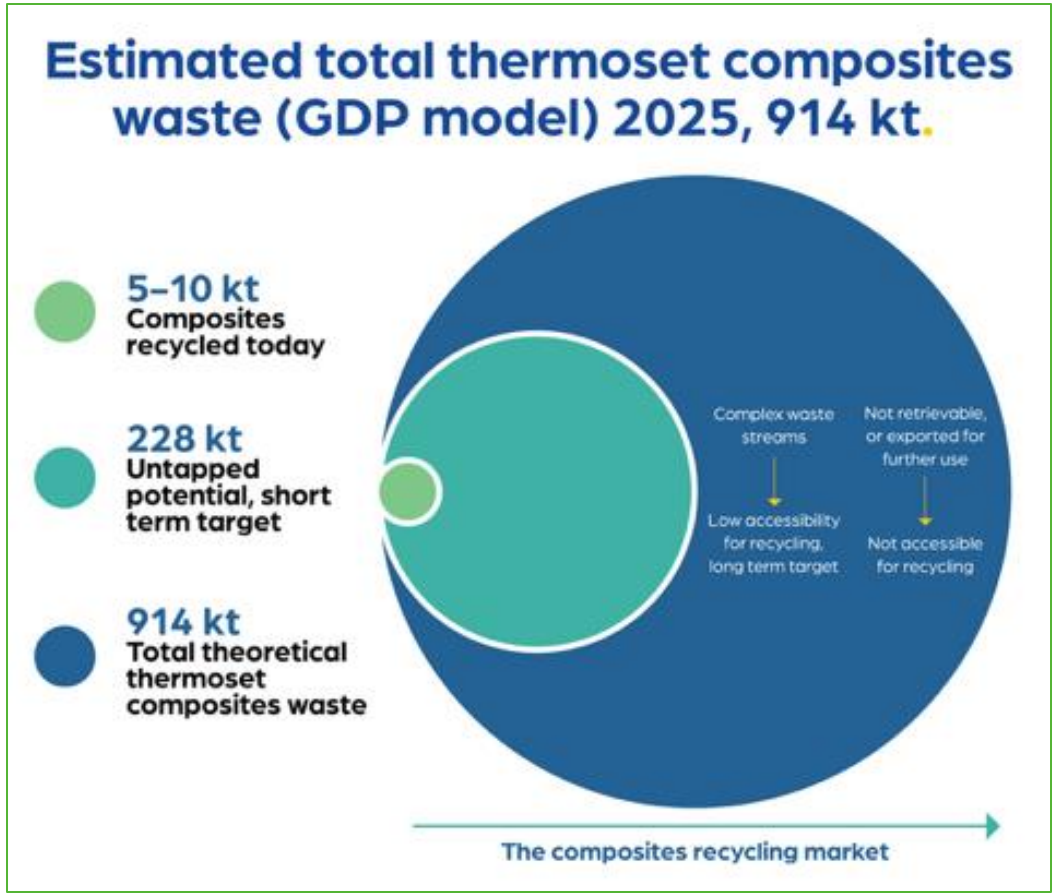


# Composites for the Net-Zero Transition

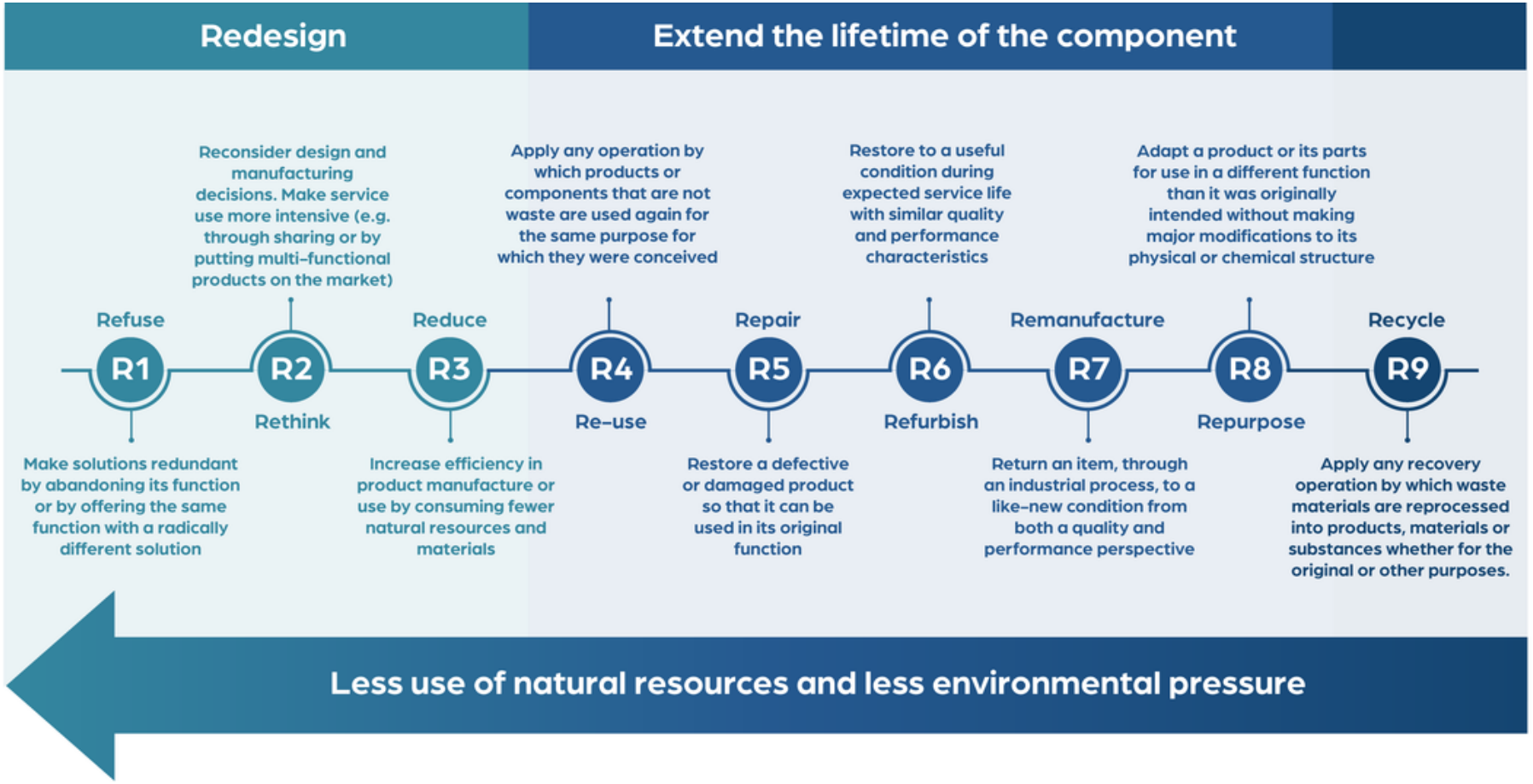
- Support net-zero targets and EU Green Deal goals by
  - Low weight and long life enable low carbon footprints
  - Reducing emissions in transport, energy, infrastructure and uniquely enabling essential applications through material and process technology
- Re-usable End of Life parts and materials
  - reduces need for primary resources
- Find out more at: ECCA European Circular Composites Alliance PDF

# End-of-Use Composites as a New Resource

- Estimates ~914 kt thermoset composite waste in EU by 2025
- Only ~228 kt accessible for recycling; <5% actually recycled
- Large untapped resource with circular potential
- Need for improved circular ecosystem
- Find out more at: ECCA European Circular Composites Alliance PDF



# Circularity of End of Life parts and materials




- Find out more at:

ECCA PDF

ECCA VIDEO

# The need for a common language
*Definitions*

- **ISO 59004** and the European **Waste Framework** Directive are bases for definitions
  - *Example*: ***Closed Loop*** *Definition: system* by which *products* or *resources* are used and then recovered and turned into new products or *recovered resources*, without losing their **inherent properties**.

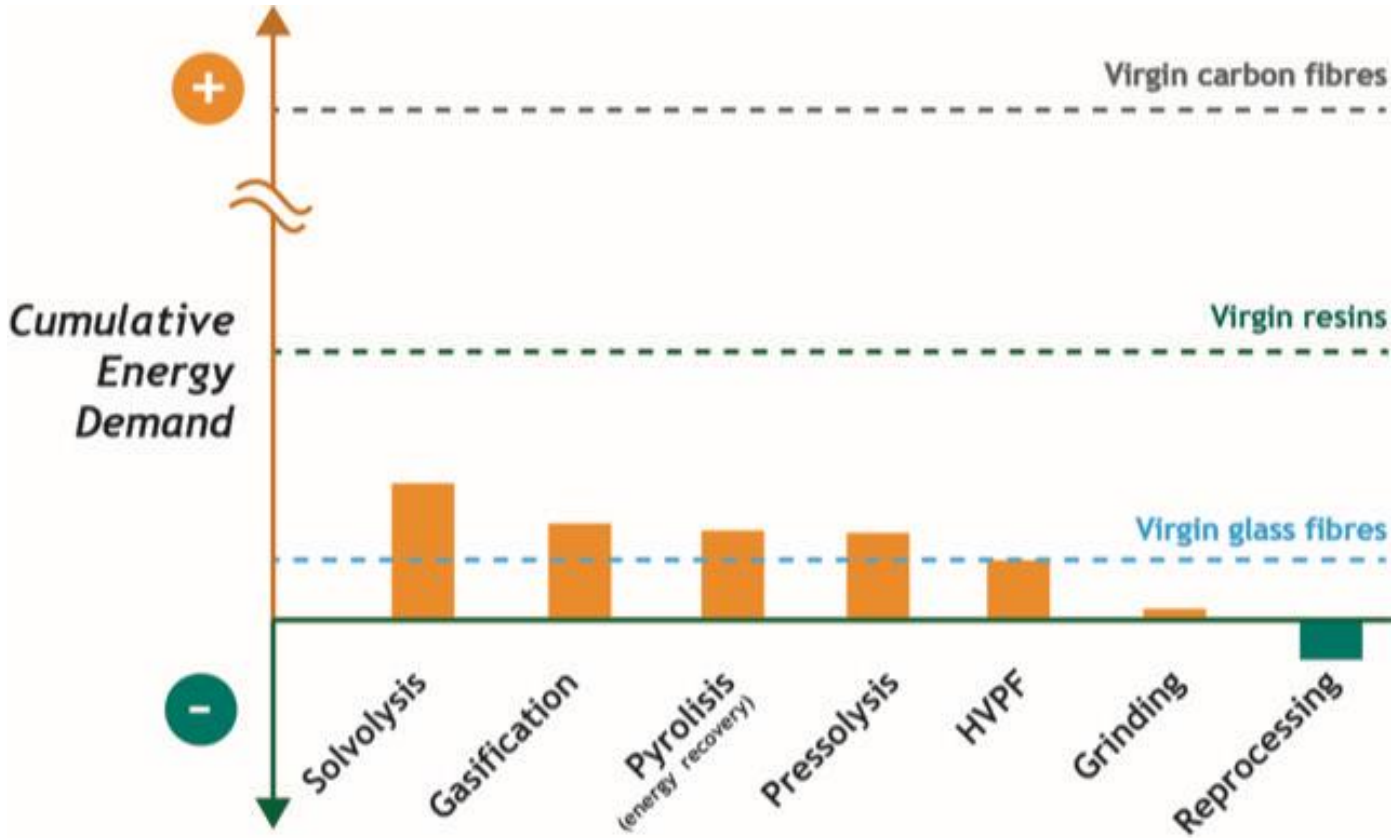
  This means :

  - **Maintain intrinsic composite properties** for a holistic approach
  - **Material-oriented** – *not application-oriented* – definition

- Find out more at:

# Choose the right EoL processes!!

*Estimated energy demand versus virgin raw materials footprint*

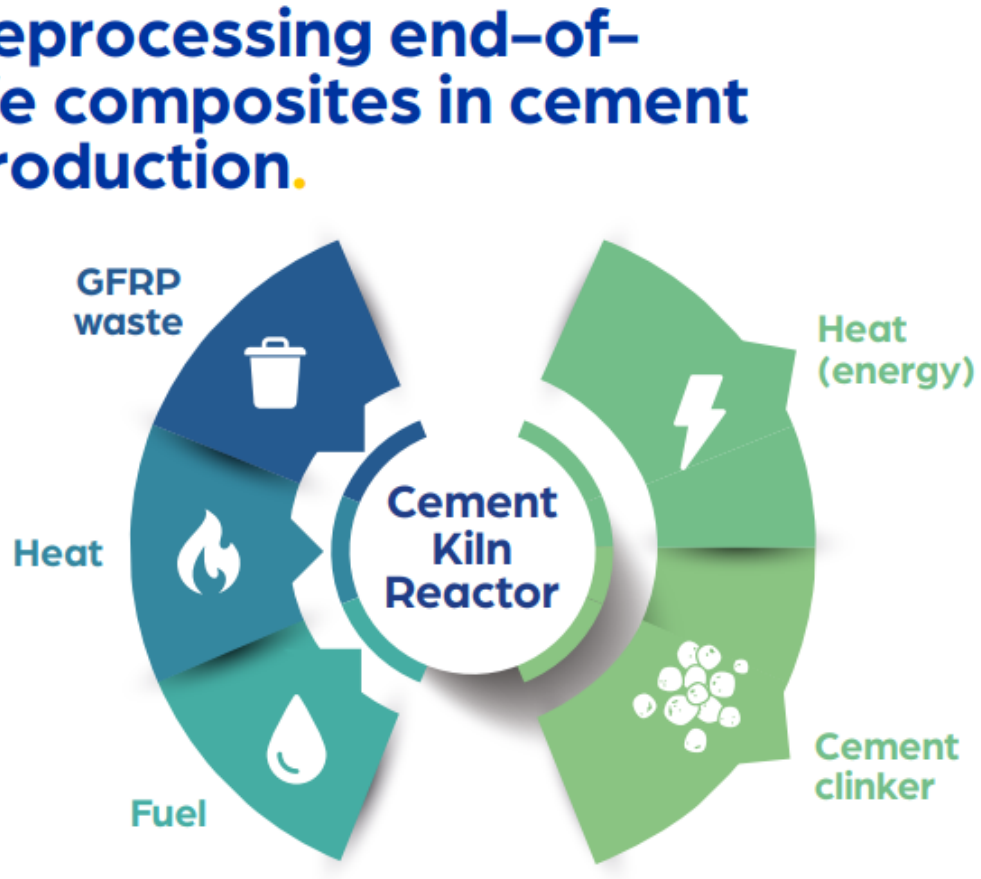



- LCA footprint for **GFRP** and **CFRP** quite different
- there is a clear added value in **re-deploying** composites
- tailoring of technologies for cost and sustainability

# Getting value from End-of-Life Composites

## *Reprocessing in cement*

- Cement re-processing is sustainable recycling with a **very positive LCA**
- Fossil fuels and raw materials are replaced – **resource savings**
- Route is **scalable** and $CO_2$-efficient
- **Industrial capacity** already available
- Find out more at: ECCA PDF

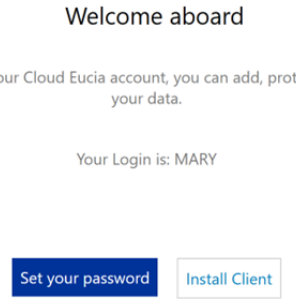


# Summary: Circularity of Composites

- Composites are **genuinely circular** and can be recycled through both **closed and open loop** processes, but…
- There is a **lack of scale solutions**: technologies, regulations, applications….
  - Large difference between LCA footprint GFRP and CFRP
  - Composition and market segment call for tailored recycling solutions
  - Additional solutions are needed beyond technology…

# SHARE POINT

- You will receive an invitation by email
- The invitation will ask you to create your password
- Once your account is activated, you can log in to SharePoint
- You will have access to the dedicated SharePoint site of your Working Group. Documents and collaboration tools will be available there




# Thank you very much for your active participation