

Our vision is shaped by the accelerating demand for high-performance materials



A **SIGNATURE**


FOR A **VISION**

INNOVATIVE  
**MATERIALS**  
FOR A SUSTAINABLE  
WORLD

---

“Be the Specialty Materials leader, **offering the most innovative and sustainable solutions** to address our customers’ current and future challenges”

# Over time, we have built an unmatched portfolio of cutting-edge technologies



## Advanced Materials

Creating and strengthening

## Adhesive Solutions

Bonding and assembling

## Coating Solutions

Protecting and modifying

- High-performance polymers (bio PA11, PA12, Pebax®, PVDF, PEKK, Polyimide<sup>1</sup>)
- Fluorospecialties (1233zd, electrolyte salts)
- Niche performance additives (DMDS, biosurfactants)
- Pressure sensitive adhesives
- Engineering and thermal adhesives
- Specialty hot melts
- High-performance sealants (MS, PU)
- UV curing monomers
- Waterborne resins
- Rheology additives
- Powders

1. Subject to the approval of relevant legal authorities, closing expected end-23

# Our global footprint is the backbone of our strong customer intimacy



## R&D

- 1,800 researchers
- 16 R&D centers
- >200 filed patents/y
- €270m spendings

## Manufacturing

- ~€650m capex/y  
55% growth incl. exceptional capex<sup>1</sup>  
45% maintenance
- 148 production sites

**21,100** employees  
Presence in **55 countries**





# THERMOFIRE

Bio-based fire-retardant thermoplastic composites reinforced with natural fibres

**CBE JU contribution:** € 4.47 million

**Duration:** June 2023 – May 2027

**Feedstock:** [natural fibers, 100% biobased PA11, biobased flame retardant]

**Main products:** [aircraft interior seats, battery houses for electrical vehicle made in 100% biobased materials]



Design, develop and validate novel, lightweight and low-cost bio-based and recyclable thermoplastic composites with enhanced mechanical properties and fire resistance by the incorporation of natural fiber reinforcements and bio-based halogen-free flame retardants as well as to remove the EU's dependence on fossil-based polymers.

# THERMOFIRE

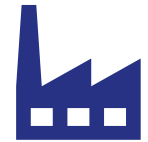
Project lead: Avanzare Innovacion Tecnologica SL (Spain)



2 RTOs



6 SMEs



4 Large Companies



**canoë**  
LE CENTRE TECHNOLOGIQUE  
NOUVELLE AQUITAINE  
COMPOSITES & MATERIAUX AVANCÉS

**SAFRAN**

**ARKEMA**

**NaturePlast**  
Bioplastics Expert

**POLYMERIS**  
Competence cluster for rubbers, plastics and composites



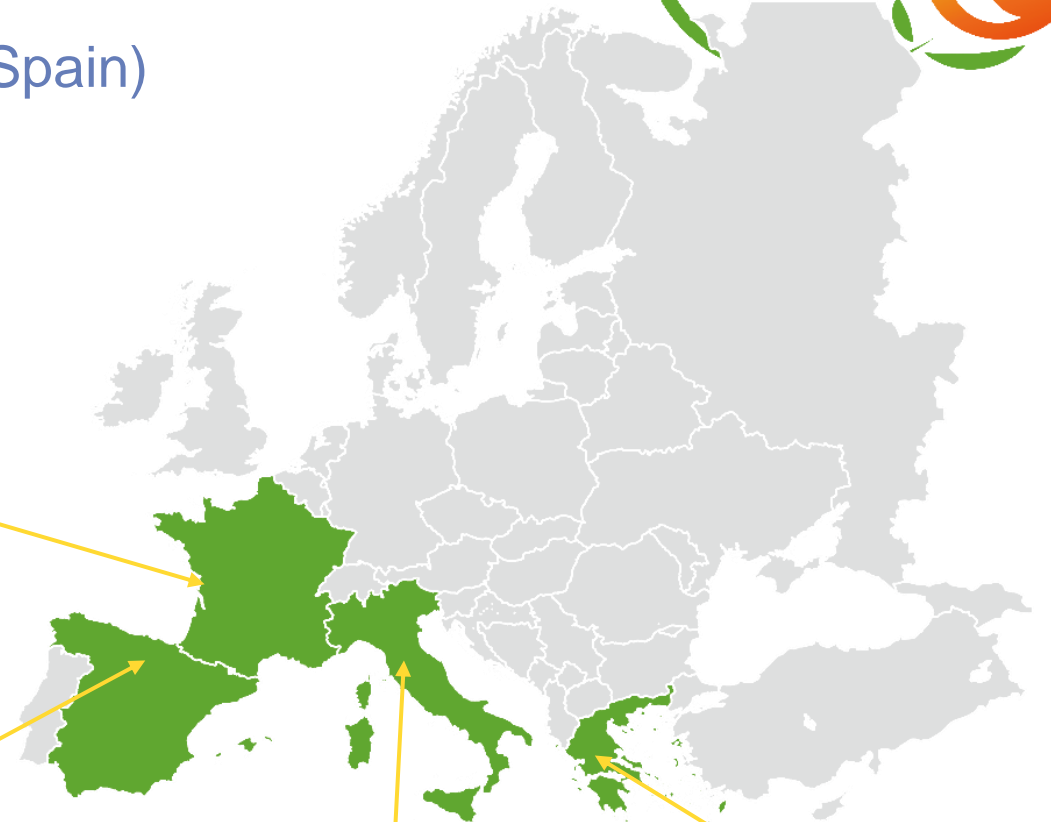
**GeoPannel**

**avanzare**  
inventing the future

**CTCF**

**Sensatec**

**CTME**





## THERMOFIRE

- The THERMOFIRE project aims to be a pioneer in the field of flame retardancy up to 100% bio-based composites. Fire retardancy is a key property of materials used for applications in the automotive, aerospace and textile sectors due to the need to minimize fire risk and meet safety requirements.
  - 100% biobased PA
  - Up to 100% bio FRs
  - Natural fibers

# Personal Feedback on EU CBE JU type projects

## Advantages

Interest of complete up/down **value chains** from RM suppliers to end users : Access of large groups and Decision makers to SME's

Simplicity and Intimacy of **relationships** inside the partners = **Networking**

Interest of **collaborative R&D&I** : Quality of the partners – No missing links in complex (textiles) or structured value chains (Automotive) – No sleeping partners

Valorization through **patents, publications and webinars** : contributes to give the company a positive differentiated **innovative image**

Many projects possibilities at different **maturation levels** : RIA – IA - Flagship

Many possibilities to head or join a project + support from clusters (B4C, ...) and EU with these **networking days**

**100% subvention** of the Research but not criteria N°1 (oom : 100k€/y for a RIA)

## Constraints & limitations

**Working load** at the proposal stage specially before the dead line : Mandatory to outsource the proposal writing (Euros) – No chance without **anticipation** (6 to 8 months)

**Working load** : need for dedicated person specially if project leader (>50% 4 years) : Project Leader > WP Leader > Participant

Not only available PL but also a **skilled PL** / Relations with EU PO + deliverables and Milestones follow up

**Discussions around CA** may be long and difficult / Lawyers + IP situation

**Computation of LCA** can generate confidentiality issues because LCA datas of the raw materials are confidential

EU PO are very demanding (more and more) concerning the **justification of the worked hours** (Person.month) => Need for special tools : Risk = loss of subvention

**Low success probability** can be demotivating (CBE 23 : 2 RIA / 32)