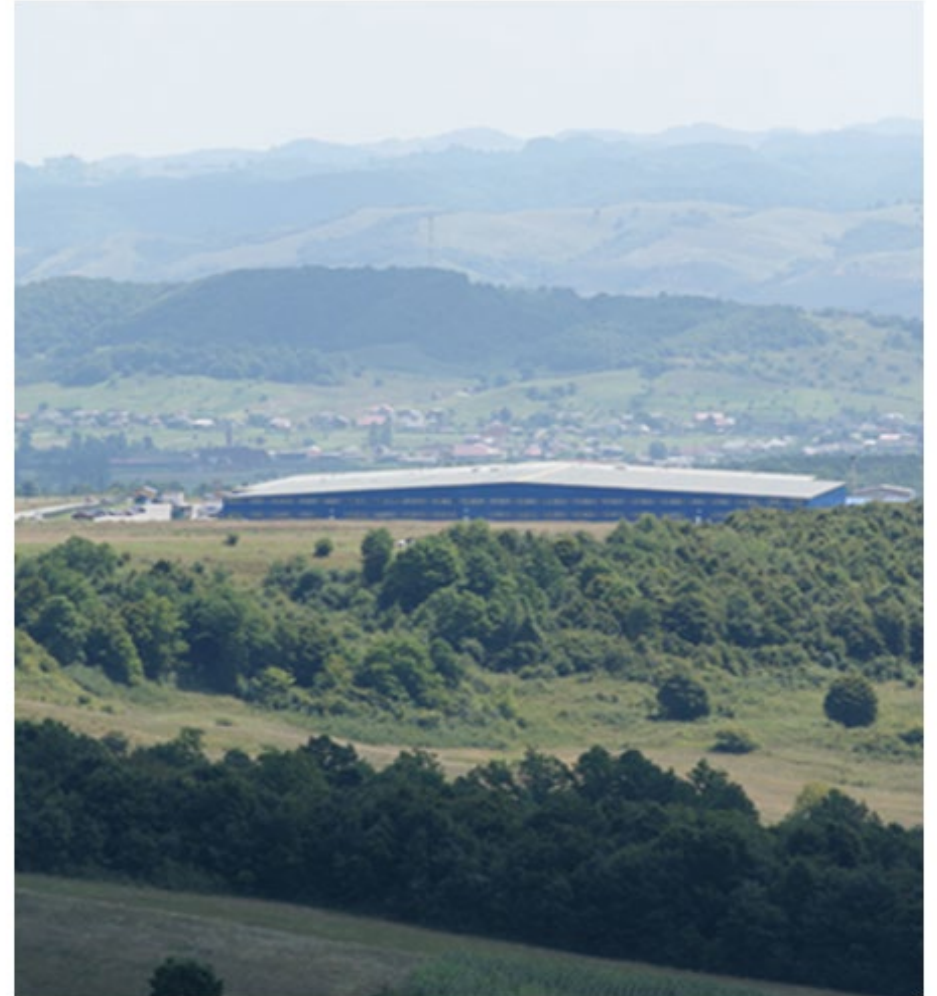


NGM New Generation Material

Business Model in Circular Economy

**Composite materials complementarity
for furniture industry, automotive and
other industries**

May 2021



The Taparo Group is a leading home furniture manufacturing group located in Romania, with a profitable foundation and a solid European customer base.



374.2 mRON
Combined revenue, 2019 unaudited



26 mRON
EBITDA, 2019 unaudited



20+ years
Operational track record



4
Production facilities



1600+
Employees



Romania (EU)
Location



100+
Customers, mainly in Europe



5,000+ units
Daily upholstery production capacity



10,000+ trucks
Order deliveries, 2018



200,000+ sqm
Production space and land

The Group has during its 20+ years existence specialized in the production of upholstery, comfort, and technical textiles...

THE TAPARO GROUP

TAPARO



- Area of activity: Upholstery
- Production space: 60,000 sqm
- Sofas, Armchairs, Beds
- Share of Group revenue: ~70 %
- Employees: 1100+

4BRANDS



- Area of activity: Comfort
- Production space: 10,000 sqm
- Foam comp., Pillows, Mattresses
- Share of Group revenue: ~12 %
- Employees: 250+

EUROCOMFIL



- Area of activity: Upholstery
- Production space: 10,000 sqm
- Sofas, Chairs, Beds, Armchairs, Polyester wadding
- Share of Group revenue: ~11 %
- Employees: 200+

TECHTEX

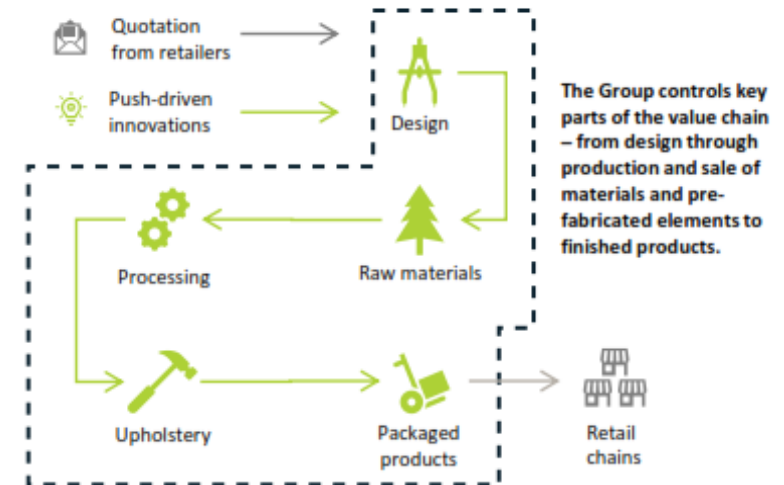


- Area of activity: Technical textiles
- Production space: 3,500 sqm
- Non-woven textiles
- Share of Group revenue: ~7 %
- Employees: 20+



SOFAWORKS
SofaWorks is a separate entity and is a subsidiary to the Group presented above.

...and has a strong focus on R&D, innovation and cost efficiency in the entire value chain.



“For more than 20 years, we have transformed our passion for the upholstery industry in a business that is continually developing year on year through innovation, quality, responsibility and trust.”

- Founder and owner

The Taparo Group is a high-performing and trustworthy furniture manufacturer driven by an innovation spirit.

MISSION STATEMENT

“Develop innovative products and provide superior quality and services to achieve the greatest customer satisfaction”

THE TAPARO FAMILY



The Taparo Group's non-profit, social responsibility organization

VALUES



PERFORMANCE



INNOVATION



TRUST



RESPONSIBILITY



The "Taparo Family" Association is involved in the local community by developing and implementing projects that **improve and support the lives of vulnerable people** in the Lapus region. The projects range from financial support to the implementation of social, educational, health, cultural, sports and environmental initiatives.



+500

Projects implemented

+150

Scholarships granted

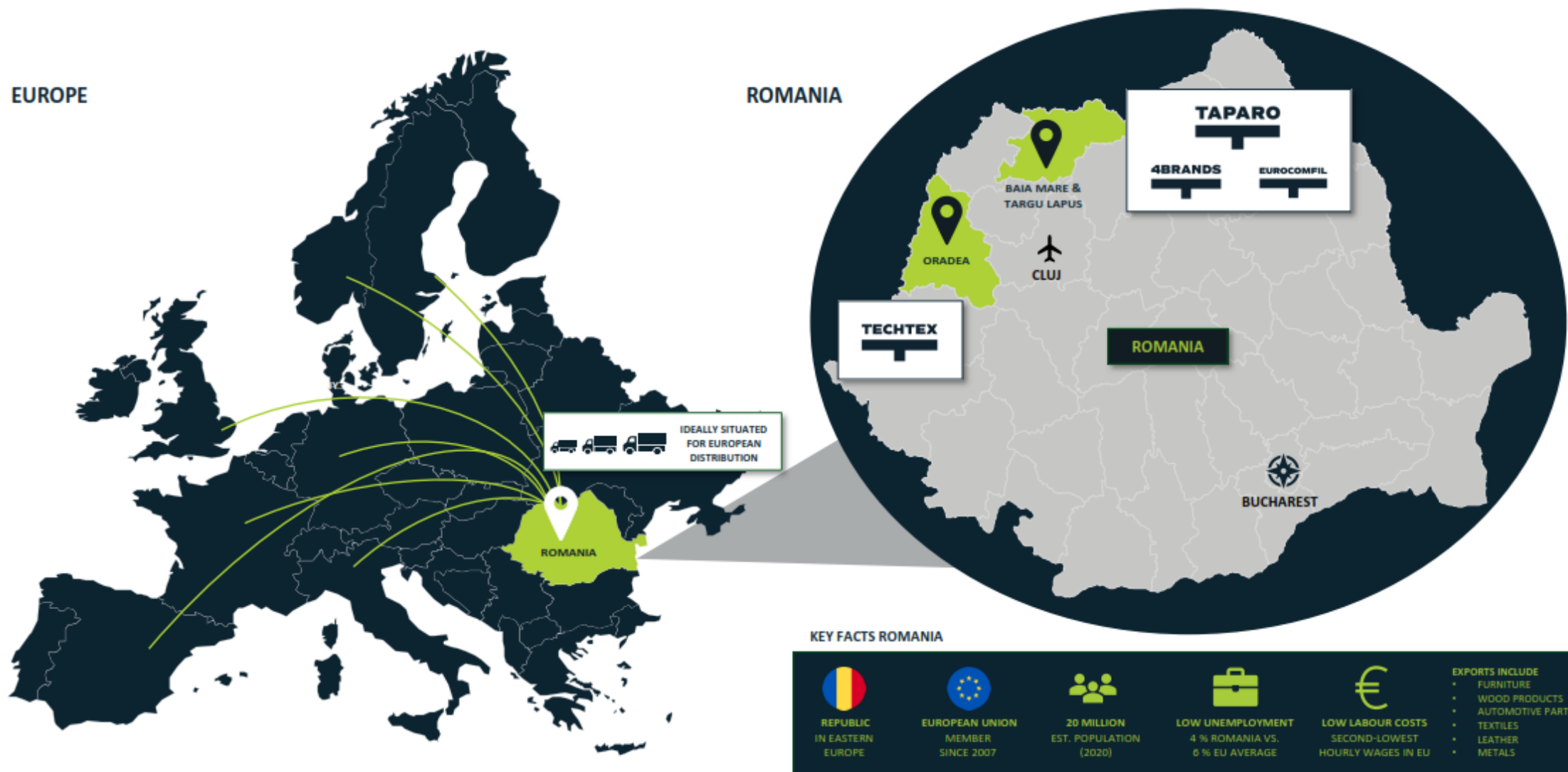
+5 mil

RON donated

+50.000

People reached

The Taparo Group is located in the Northern regions of Romania, and with Romania being an EU member state with low unemployment rates and labor costs, the location is key.



Source: Eurostat

Taparo has built close partnerships with various actors across industries, spanning from local government, universities and research institutions to furniture associations.

TAPARO PARTNERSHIPS

UNIVERSITIES & RESEARCH INSTITUTIONS



GOVERNMENTAL INSTITUTIONS



Romanian government



Maramures county



European Research Council
Established by the European Commission

FINANCIAL & AUDIT

BANCA
TRANSILVANIA®



OTHER PARTNERS



CLUSTER
MOBILIER
TRANSILVAN

Regional ecosystem for
innovation and new business



Romanian furniture
manufacturers' association

Taparo's Background

- Textile background company since 1972
- Experienced in chair and sofa upholstery from 1997
- Innovation oriented with own R&D department
- **Recyclability and sustainability in focus**
- Knowledge in composite materials production since 2016
- Good collaboration with specific Universities
- Able to attract governmental and EU grants for developments

Our vision is to create a synergy between composite materials and applications in many industries, providing solutions for alternative materials, parts and components based on Circular Economy.

The objective:

Finding a new raw material to meet all requirements, available, feasible, that will counter forecasted trends of cost increase of wood-based materials and supply a material that will be significantly more environmentally friendly, involving no adhesives, in line with the sustainability.

Taparo wants to be a platform for raw materials and components for furniture industry and others



Raw Material

Hemp Fiber

Linen Fiber

Sesal Fiber

Wilow/Popler Fiber

Jute Fiber

Cocos Fiber

Thermoplastic Fiber



Availability

Romania

Romania

Africa

Romania

India

India

Belgium

Ukraine

Ukraine

Bangladesh

Bangladesh

Russia

Belarus

Belarus

Korea

Characteristics

Every year

4-6

4-6

40 ton/hectares

10 ton/hectares

8-10 ton/hectares

ton/hectares

ton/hectares

Possibility to utilize another type of fiber

Canola fiber, Giant Chinese silver grass and another natural fiber

Technological Flow

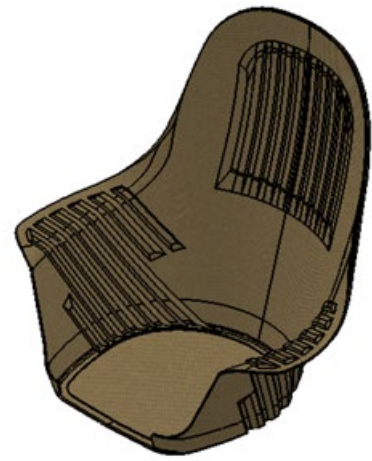
Raw Materials

Textile Composite Material

Consolidated Composite Material

Natural Fiber

Thermoplastic Fiber



Composite material in consolidated forms

Static thermo pressing



Thermo formed comfort element

Other industry



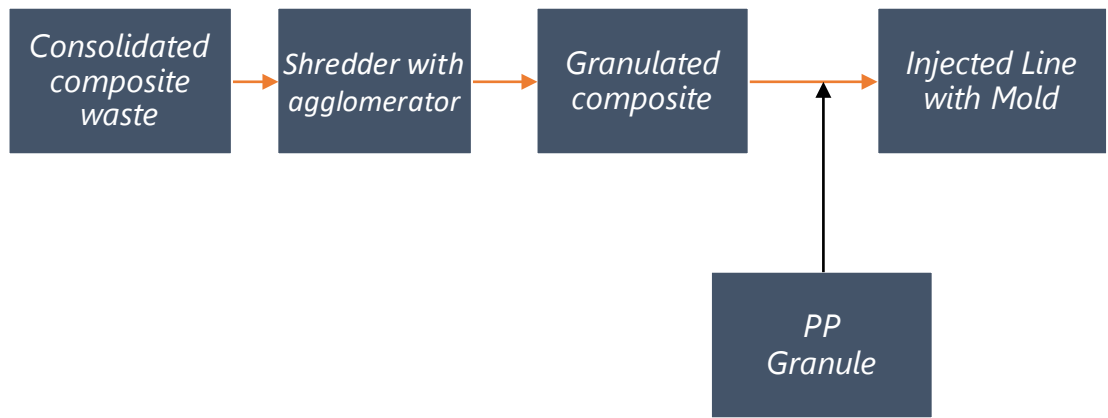
Continuously thermo pressing



Reinforcement for panels



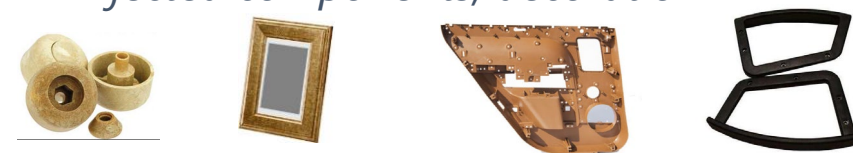
Composite injections



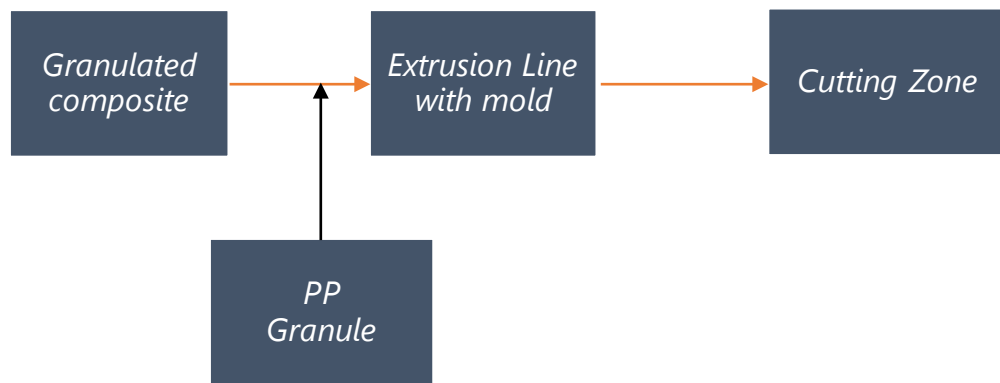
Injected elements from composite



Injected elements from composite for all injected components, decorations



Composite extruded



Advantages



Better resistance and high durability



Less formaldehyde and contamination risk



100% Reusable



Favorable split Behavior in crash loading



Good acoustic damping properties



Possibility for automatization production flow



Final product lighter



Low cost raw materials



Diversified raw materials base,



Multiple possibility for fixing: ultrasonic weld, stapeled, glued.



Increase the competitiveness and productivity



Easy handling

European Grants

Taparo attracted European funds for a research project together with two University, **Technical University Gheorghe Asachi Iasi** and **Technical University Cluj Napoca**, and 3 Faculty, **Chemical Engineering Faculty Iasi**, **Textile Faculty Iasi** and **Mechanical Faculty Cluj Napoca** in value of 8 600 000 euros for:

- Critical analysis for technology of obtaining natural fiber for composite (linen, hemp, jute, willow/poplar, coir, textile waste, etc.)
- 1 000 000 euros just for research
- Establishing innovative recipe for composite from natural fiber
- Elaboration and implementation of technologies for consolidation and thermoforming of composite material
- Increase the capacity from 1.000 to more than 10.000 tons/year
- Approximately 2.000 tons of waste can be reutilized
- Increase area for different type of raw materials
- Capability for continues thermoforming
- Make capacity for extruded technologies



Conclusions:

- More sustainable products
- Shorter and quickly production flow than wood and layer glued (100 years for wood versus 1 year for natural fiber)
- Increased OEE (Overall Equipment Effectiveness)
- Security business control
- Creates unicity for us, as supplier
- Increased competitiveness
- Increased filling rate
- European grants up to 60% free, for a capacity of 10,000 tons/year

