



Investor Presentation

Paris 17th October

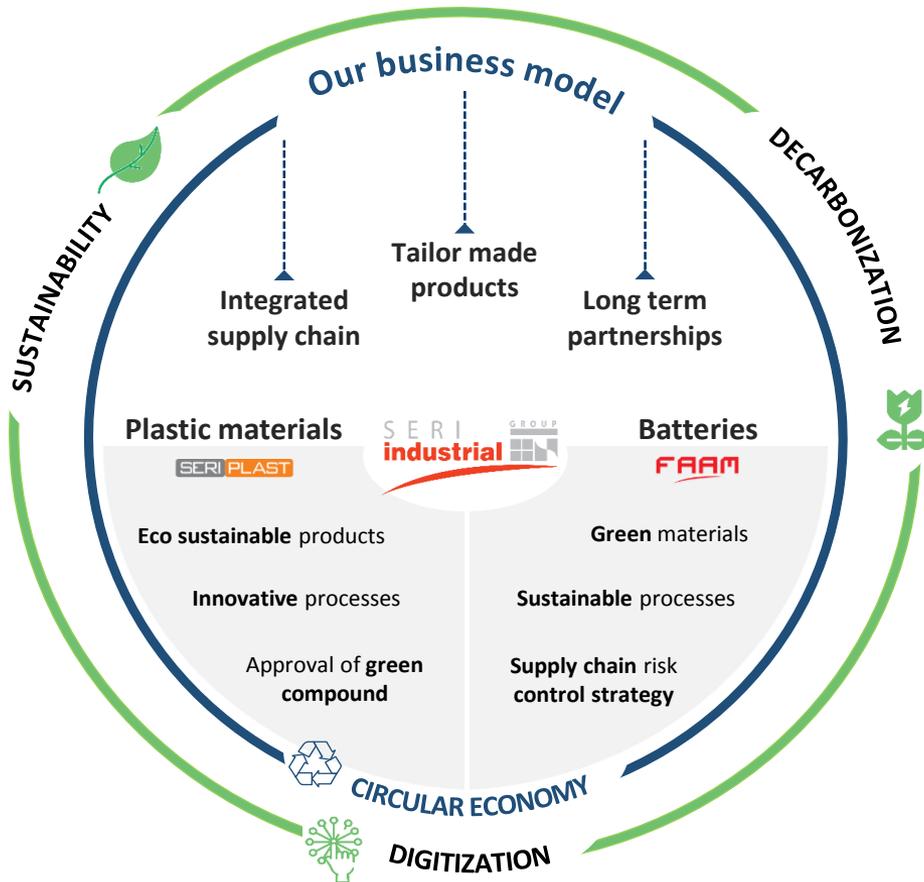
S E R I **industrial** GROUP



Mission

Mission

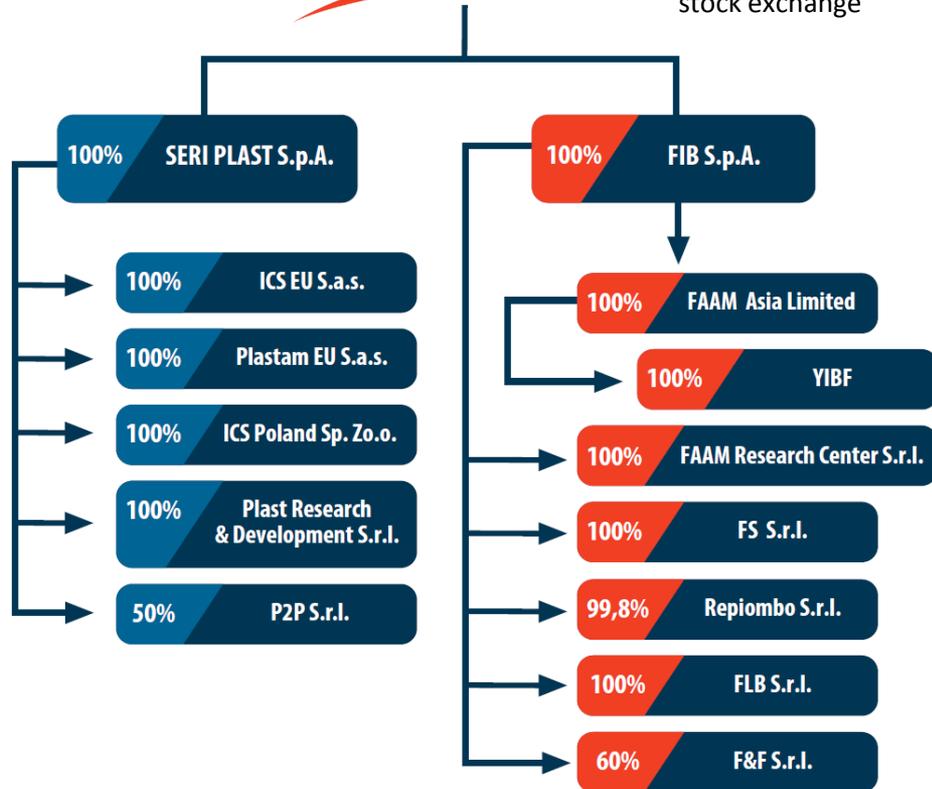
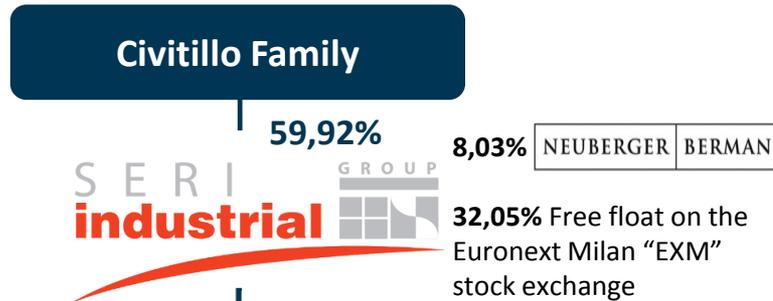
A new way of thinking the economy, with **sustainable processes and products** and supporting the **transition** of the paradigm from a linear model (take, transform and throw) to a full **circular economy model**



Seri Industrial is pursuing strategic goals **to accelerate the energy and ecological transition** in line with the Paris Agreement and recent European and Italian initiatives



Group Structure



SBU	ACTIVITY
 	Plastic Materials <ul style="list-style-type: none"> Production of special compounds for the moulding of boxes and lids for batteries Production of special compounds for the automotive and packaging Production of special compounds for the moulding and extrusion of pipes and fittings for the thermo-hydro sanitary market
 	Batteries <ul style="list-style-type: none"> Production and recycling of lead-acid and li-ion batteries for motive power, storage, starter and special applications Design and construction of plants for the recycling of exhausted batteries

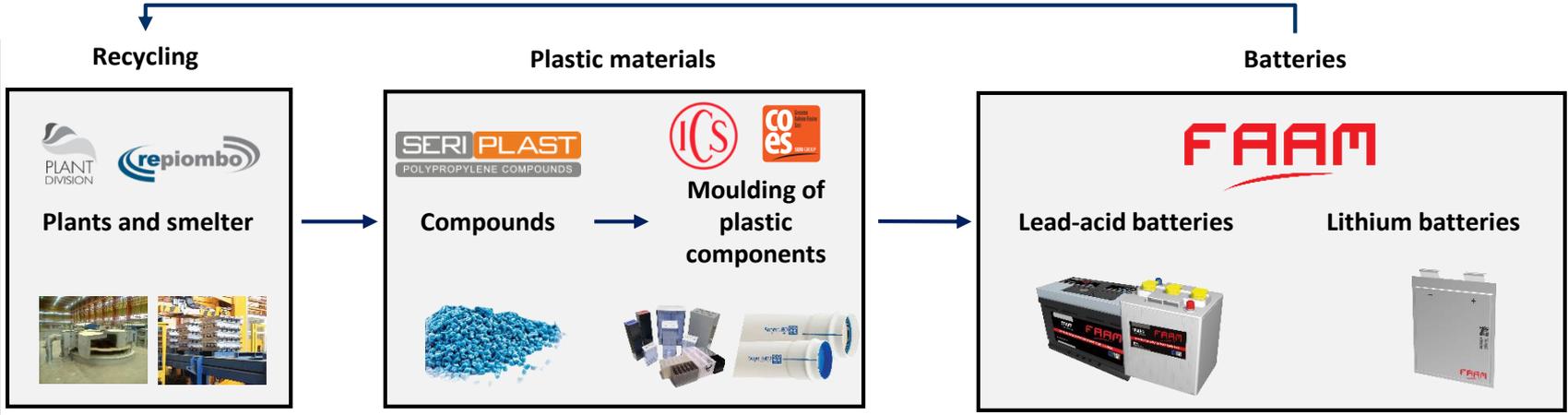
Milestones

1999: Seri creation as engineering company



Footprint

PRODUCT RANGE & CIRCULAR ECONOMY



16 Production sites*

800 People**

Plastic Materials



- Canonica d'Adda (BG) 73 FTE
- Pioltello (MI) 98 FTE
- Gubbio (PG) 46 FTE
- Alife (CE) 17 FTE
- Arras (France) 17 FTE
- Peronne (France) 40 FTE
- Brwinow (Poland) 25 FTE

Batteries

- Monte Sant'Angelo (FG) 75 FTE
- Monterubbiano (FM) 63 FTE
- Teverola 1 (CE) 112 FTE
- Yixing (China) 53 FTE
- Calitri (AV) 8 FTE
- Alife (CE) 13 FTE

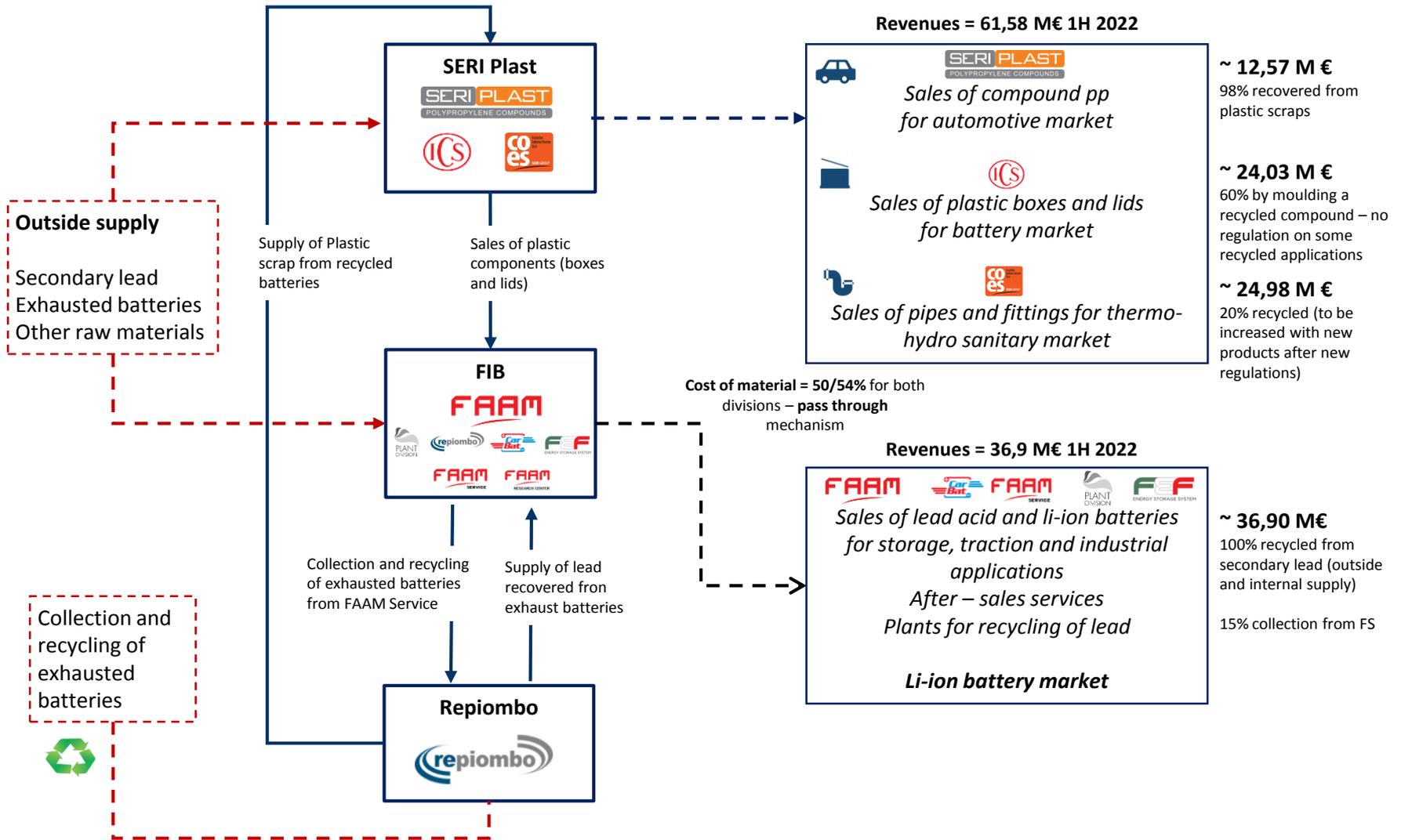


* including 4 after-sales branches

**including FTEs in the HQ (San Potito Sannitico office), Board members of the Group's companies, and external staff

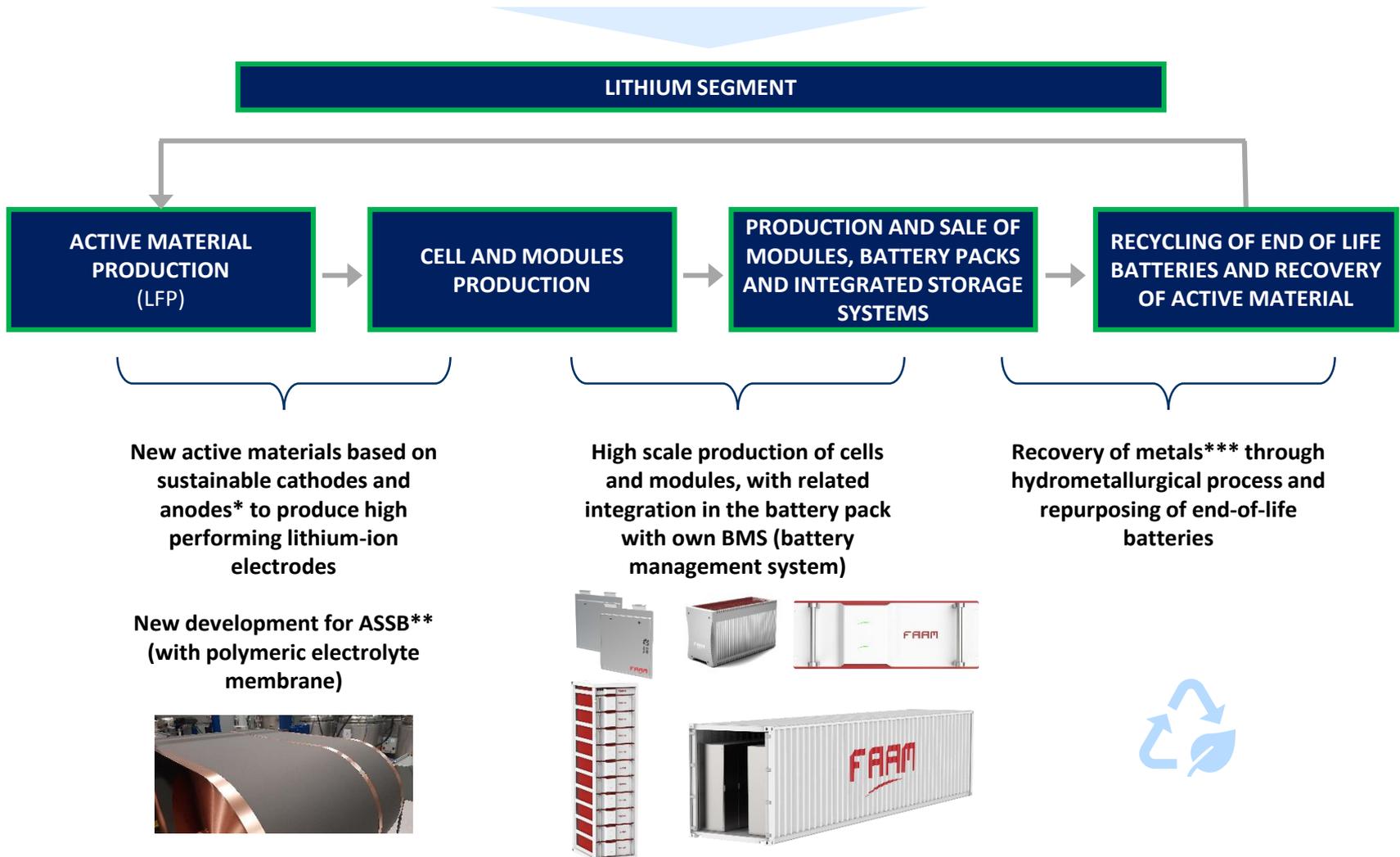
Our effort for the energetic transition

Circular Economy



Vertical integration in the Lithium

The goal is to replicate the successful vertical integration achieved in the lead-acid/plastic



* Mainly LMFP on cathode and Si/C on anode

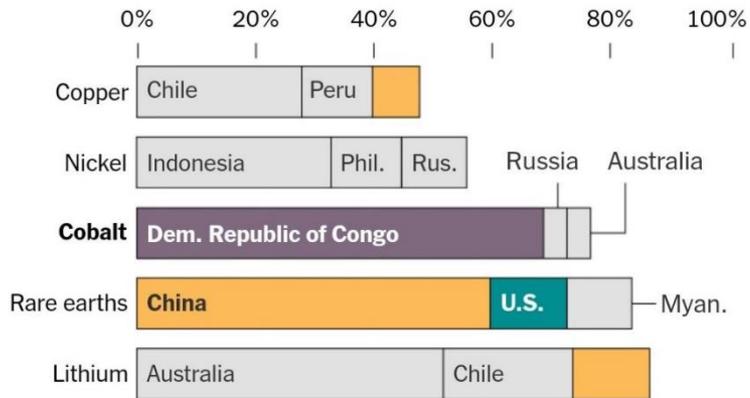
** All solid state batteries

*** Target metals are Co, Ni, Mn, Al, Li, Cu, Fe

Why Cobalt agnostic?

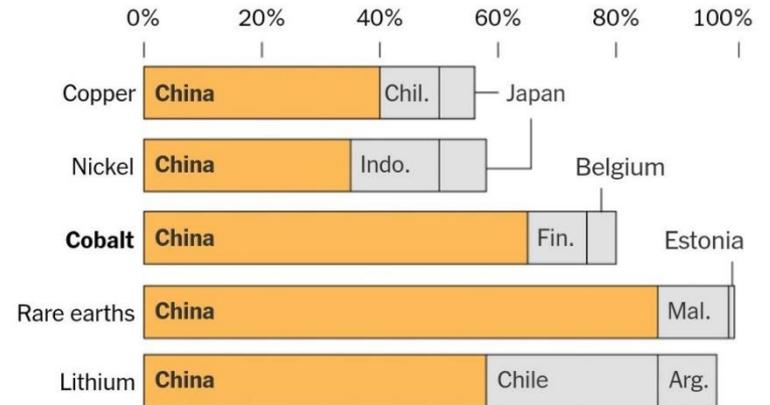
Where Clean Energy Metals are produced*

The production of key mineral resources is highly concentrated today. Chart show top three producers.

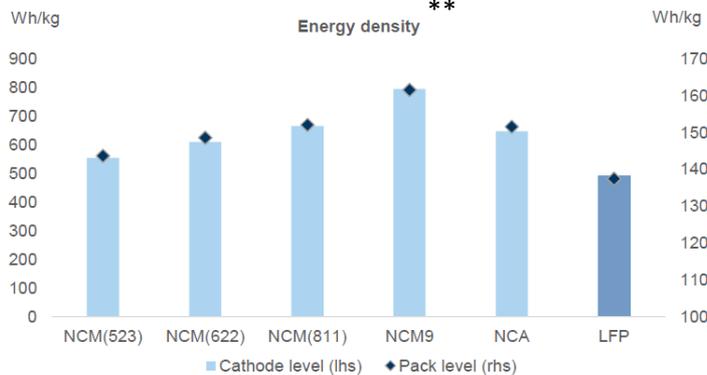


And where they are processed*

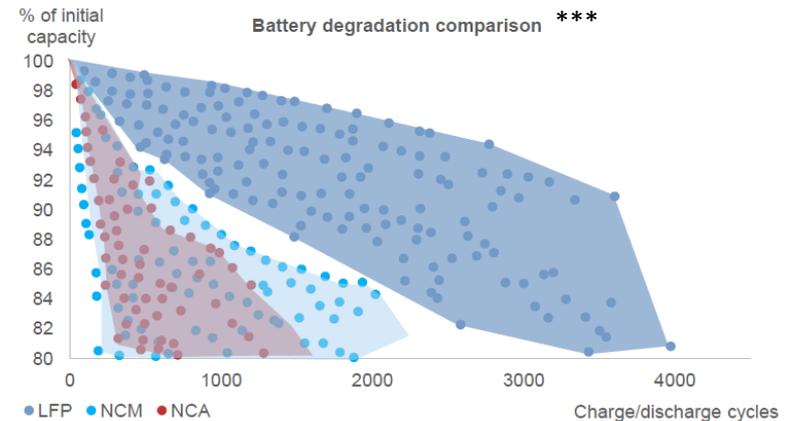
China dominates the refining and processing of key metals.



2022



LFP has a lower energy density than NMC...



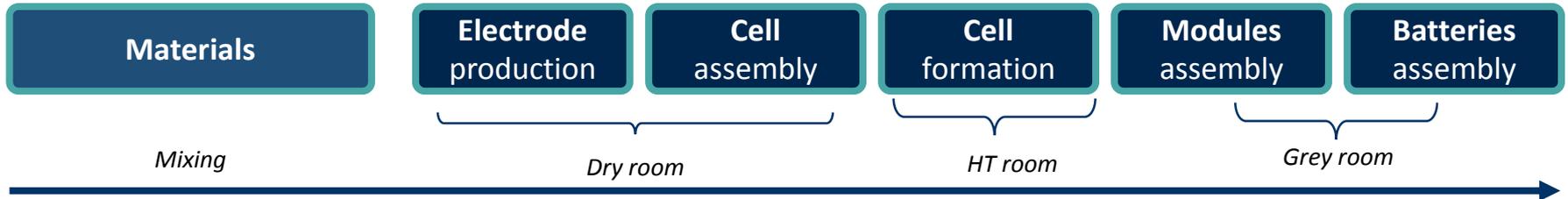
...but degrades at a much lower speed

*Source: International Agency – By The New York Times

**Source: Company data, Wood Mackenzie, SNE Research, Goldman Sachs Global Investment Research

***Source: Pregel et al. (2020)

Lithium battery manufacturing process in Teverola



- Lithium-Iron-Phosphate
- Graphite
- Water
- Aluminum (collector)
- Copper (collector)

Slurry

Lamination

Formation

Charge and discharge of modules

Coating

Stacking of electrodes

Battery packs and BMS

Slitting

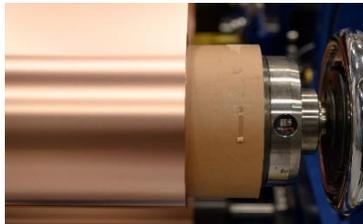
Notching

Electrodes production is based on a green and innovative water-based solution process

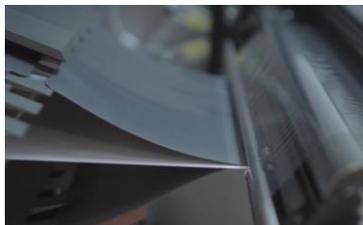
Aluminium



Copper



Coating



Soft pouch



Module



BMS



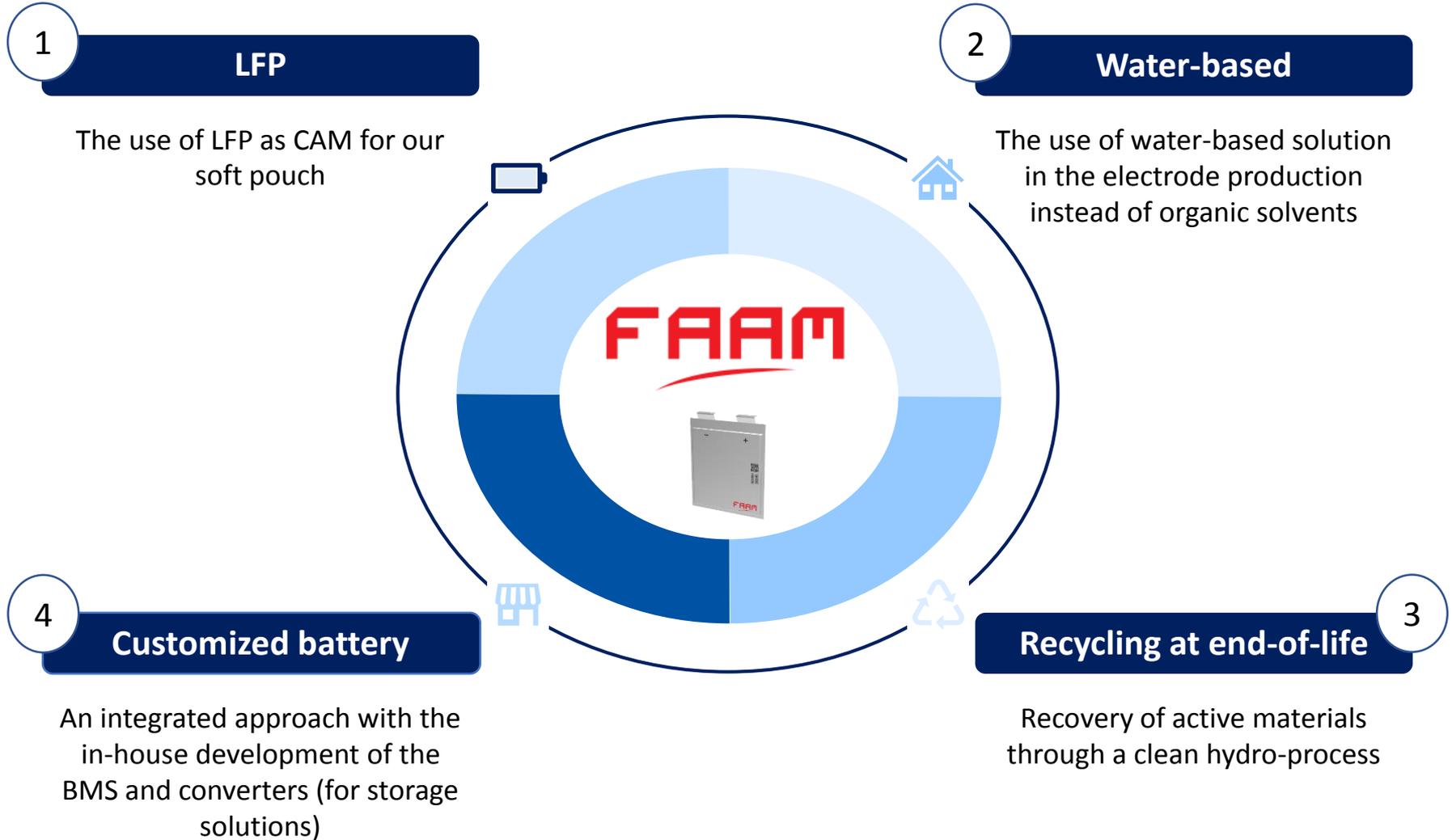
Storage System



Battery pack



Our 4 pillars vision on lithium batteries



Lithium cluster and new projects

Teverola Plant – present and future

TEVEROLA 1 - present

Capacity: 330 MWh

Technology: LFP soft pouch (50Ah) – high energy density applications with integrated BMS

70 M€ of realized Capex

Applications: Motive Power, ESS, Public transport, Naval and Defense



**265.000 sqm
of complex
area (82.000
indoor)**

TEVEROLA 2 (IPCEI)

Project timesheet: 2020 – 2027

Industrial Deployment: 2020 -2023 (2 years)

R&D: 2020 - 2027

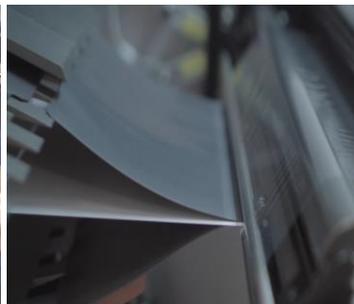
Capacity: 8/8,5 GWh

Technology: Gen 3b and 4 (solid state)

505 M€ of investments (Capex for 358.55 M€ and Opex for 147.29 M€, funded by grants)

50 ton/day of battery treatment in the **recycling pilot line**

Applications: Motive Power, Storage, Automotive, Public Transport, Naval and Defense



IPCEI Project

Key Highlights

FAAM project has been approved for the production of **beyond the state-of-the-art li-ion cells** and **recycling of end-life li-ion batteries**



Commission approves €3.2 billion support by seven Member States for project of common European interest for **battery value chain**

Raw and advanced materials	Cells and modules	Battery systems	Repurposing, recycling and refining
BASF	ACC	BMW	BASF
Eneris	BMW	Endurance	Endurance
Keliber	Endurance	Enel X	Elemental
Nanocyl	Eneris	Eneris	Eneris
Solvay	FAAM	Kaitek	FAAM
Terrafame	SEEL	SEEL	Fortum
Umicore	VARTA		SEEL
GIGAFACORIES			
			Umicore

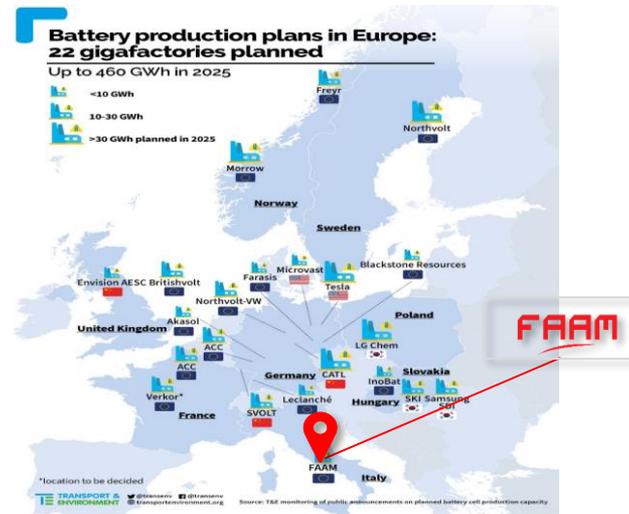
- Member States: Belgium, Finland, France, Germany, Italy, Poland and Sweden
- Integrated project comprising 4 workstreams, covering the battery value chain
- 17 undertakings (some active in more than one Member State) will receive State aid
- Cumulated maximum State aid: EUR 3.2 billion

A EUROPEAN BATTERY VALUE CHAIN

Teverola 2 Project

IMPORTANT PROJECTS OF COMMON EUROPEAN INTEREST

December 2019	Authorization Decision from the European Commission
April 2021	Inter-ministerial Decree defining the general criteria for the operation of the IPCEI Fund
July 2021	Activation Decree enabling the ICPEI Fund in support of the IPCEI Batteries 1
October 2021	Submission of the application for the grant
March 2022	<u>Concession decree in favour of FIB amounting € 417,046,521.84</u>



A Mediterranean Gigafactory

Teverola will become the **first technological cluster** to produce lithium batteries in Italy and among the first in Europe, with an **estimated production of about 8/8,5 Gwh/year**

Building ready – no issue in the construction

FAAM
265.000 sqm total
(82.000 sqm indoor)

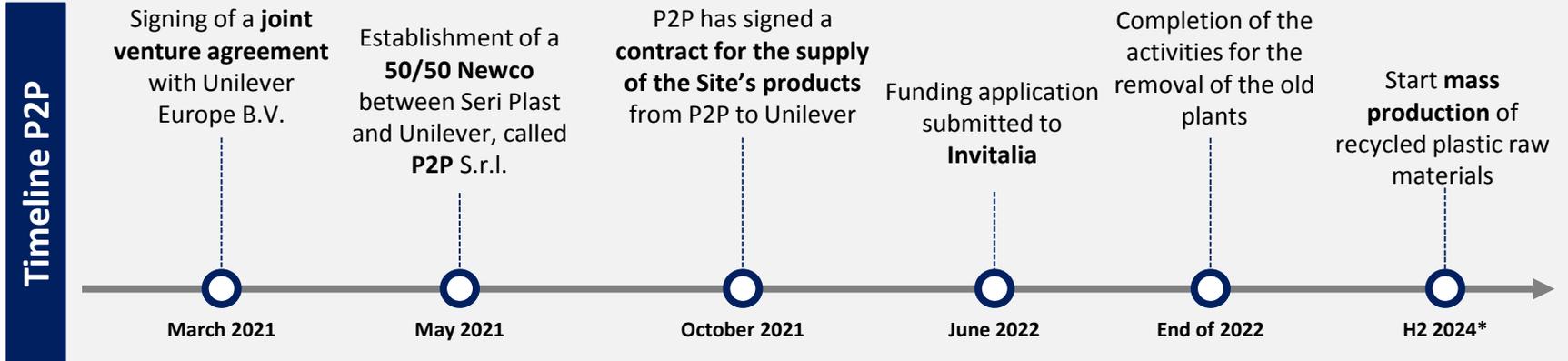
Next steps

Disbursement of grants to be made within the first semester of each year – first request may be arranged as a 20% advancement of the total amounts

Activation of a specific revolving credit facility to be opened by a pool of banks – to advance the amounts of the grant

Signing of the contract with the suppliers of equipment & machinery – talks are currently underway

JV and Off-take agreement with Unilever (1/2)



Off-take Agreement

Term of the Agreement 5 years, renewable for a further 5 years, making a total of **10 years**

Unilever's commitment to purchase at least **65 k tons/year** of recycled plastic raw materials

Unilever expected revenues **€ 110 mln/year****, € 1,1 billion in 10 years

About € 109 million expected CAPEX between production investment and R&D investment to be funded by subsidized loan of euro 43,7 million and non repayable grants for euro 38,4 million

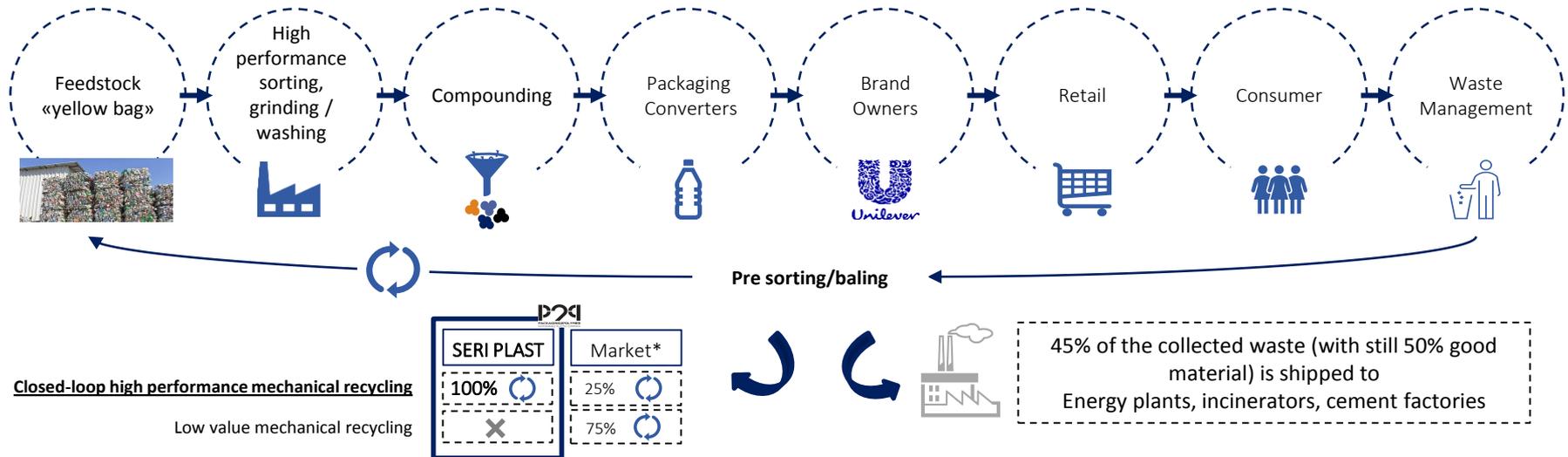
* The time period may be extended by a further 6 months.

**Based on actual prices of raw materials and on the pricing formula.

JV and Off-take agreement with Unilever (2/2)



POZZILLI PROJECT



Mechanical recycling 130k ton/y capacity

- Advanced presorting process.
- Grinding/washing/decontamination (food grade targeting on PET/HDPE/PP) – 4 lines
- Compounding/colouring – 5 lines
- Odour removal – 2 lines

Products

- rPP, rHDPE, rLDPE, rLLDPE, rPET
- Food Grade rPET

Technologies ready to produce also HDPE and PP food grades - when EU regulations will be ready to accept polymers from mechanical recycling into food packaging.

*Bain & Company, 2019

Seri Plast & P2P Procurement strategy

Source of plastic waste



180k ton
of plastic waste to be treated

Feedstock
(input)

Mixed rigid plastic providers

Mixed rigid plastics from MSW (Municipal Solid Waste)
Here there is the main innovation

«Own» collection infrastructure

Consortiums

Pre-sorted plastic packaging waste
Italian and European collectors



As a next step, in line with the business model in the battery business, it could be an opportunity exploiting Unilever channels

*And other consortiums

The Business Plan

SERI Industrial has approved an update of the Consolidated 2022-2026 Business Plan on 22 June 2022

Key Highlights of the Business plan

- **The business AS IS** (lead-acid batteries and plastic material) is included in the growth with a forecast based on commercial contracts and relationships with customers
- **Teverola 1** – the forecasts are confirming that the global lithium battery demand is linked to the installed (or announced) production capacity with a production deficit in Europe
- **Teverola 1** – the certification activities are still on-going with the commercial ramp-up expected in the IV quarter of 2022

IPCEI Project – Teverola 2

- **Production capacity of about 8GWh/year** - at fully operations
- The average selling price of the battery pack is € 200/kWh, with an expected turnover at fully operation of about euro 1,5/1,6 billions
- Mass production at full capacity is expected in 2025



Unilever Agreement – Key ratios

- Maximum production capacity of 130k ton/year with Unilever already committed to but the 50%
- Minimum guaranteed turnover of approximately Euro **110 million per year** (based on current raw material trend) only through the off taker signed with Unilever (for the 50% of production). Sales to be started in 2025 at full operations



Market forecast

Li-Ion Battery Market



+29,2%

CAGR₂₀₂₁₋₂₀₃₀

The global Li-ion battery market is estimated to grow to about **3500 GWh by 2030**, up from 348 GWh in 2021¹. More specifically, the global market for **ESS applications**, a segment of particular importance to the Group, **grows by +25% CAGR 2020-2025** in terms of volume².



Lead acid Battery Market



+2,4%

CAGR₂₀₂₁₋₂₀₃₀

The global market is estimated to reach **\$47 billion by 2030**, for volumes of 494 GWh, of which about **\$18 billion** is related to **ESS, UPS, Telecom, Forklift, Other Motive** - the Group's core segments - Power tools, E-Bikes and other applications³.

Automotive Plastics Market



+11%

CAGR₂₀₂₁₋₂₀₂₇

The **global plastic compounds market** is estimated to reach \$104.09 billion by 2028⁴. The increase will mainly be driven by the growing use of **PP compounds in the automotive industry**. Specifically, the plastics market in this industry is estimated to grow by 11% CAGR 2021-2027⁵.



Sustainable Packaging Market



+7%

CAGR₂₀₂₁₋₂₀₂₈

The **global sustainable packaging market** is a fast-growing segment, with **turnover of \$451.7 billion by 2028**, up from around \$267.5 billion in 2020. The **European market** is expected to be the most dominant with a **turnover growth of \$157.6 billion by 2028**⁶.

Plastic Pipes Market



+6,5% CAGR₂₀₂₂₋₂₀₂₈

The **global plastic pipes market** is estimated to reach \$83 billion in 2028⁷.

¹ Battery Metals Watch: The end of the beginning, Goldman Sachs, May 2022

² Batteries Made in Europe, Goldman Sachs, June 2022

³ The Rechargeable Battery Market and Main Trends 2020-2030 – Threats, challenges and opportunities”, Avicenne Energy, June 2022

⁴ Global Plastic Compounding Market Outlook 2022, Valuates Reports, January 2022

⁵ Global Automotive Plastics Market Report 2021-2027, Global Market Insights, February 2022

⁶ Green Packaging Market by Type, Application and Regional Analysis: Global Opportunity Analysis and Industry Forecast, 2021-2028, Research Dive, April 2022

⁷ Global Plastic Pipes Market Growth, Share, Size, Trends and Forecast (2022-2028), ReAnIn, June 2022

Main financials H1 2022



1H 2022 Highlights

€ 101,477 ^{thousands}

TOTAL REVENUES

€ 84,433 thousands in 1H 2021

€ 9,071 ^{thousands}

ADJUSTED EBITDA

€ 8,193 thousands in 1H 2021

€ (1,716) ^{thousands}

ADJUSTED EBIT

€ (885) thousands in 1H 2021

€ (4,286) ^{thousands}

**CONSOLIDATED ADJUSTED
NET RESULT**

€ (3,609) thousands in 1H 2021

€ 236,816 ^{thousands}

**NET INVESTED
CAPITAL**

€ 218,951 thousands in 1H 2021

€ 116,950 ^{thousands}

**CONSOLIDATED
EQUITY**

€ 120,934 thousands in 1H 2021

€ 97,178 ^{thousands}

**ADJUSTED
NET DEBT**

€ 75,047 thousands in 1H 2021

€ 6,402 ^{thousands}

**ADJUSTED INVESTMENT
ACTIVITIES**

€ 7,465 thousands in 1H 2021

1H 2022 Key Financials

YOY COMPARISON 1H 2022 – 1H 2021

Key Financials - €/Mln	1H 2022	1H 2021	Change	% 22 vs 21
Total Revenues*	101,477	84,433	17,044	20%
EBITDA	8,855	8,391	464	6%
Adjusted EBITDA	9,071	8,193	878	11%
EBIT	(1,932)	(1,376)	(5569)	40%
Adjusted EBIT	(1,716)	(855)	(831)	94%
Consolidated Net Result	(5,194)	(4,136)	(1,058)	26%
Consolidated Adjusted Net Result	(4,286)	(3,609)	(677)	19%
Cash flow from operating activities	(8,662)	7,947	(16,609)	(209%)
Adjusted investment activities	6,402	7,465	(1,063)	(14%)

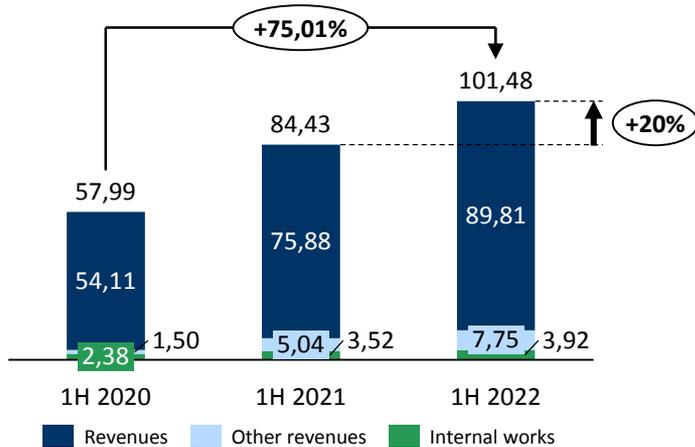
Key indicators - €/Mln	1H 2022	1H 2021	Change	% 22 vs 21
Net Invested Capital	236,816	218,951	17,865	8%
Consolidated Net Equity	116,950	120,934	(3,984)	(3%)
Net Financial Debt	119,866	98,018	21,848	22%
Adjusted Net Financial Debt	97,178	75,047	22,131	29%

* Revenues, other revenues and internal works

1H 2022 Key Financials – Total Revenues

Key Financials 1H 2022 – 2021 - 2020 (€/Mln)

Reported Consolidated Revenues



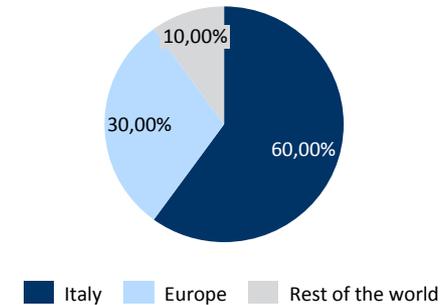
The Group has registered **Total Revenues** for € **101,477 Mln**, with a **+20,19%** growth compared to the same period in 2021 (€ **84,43 Mln**), due to both the increase in sales volumes and the increase in average selling prices.

Plastic Materials has registered **+19%** compared to the same period in 2021 (**+59%** compared to 2020)

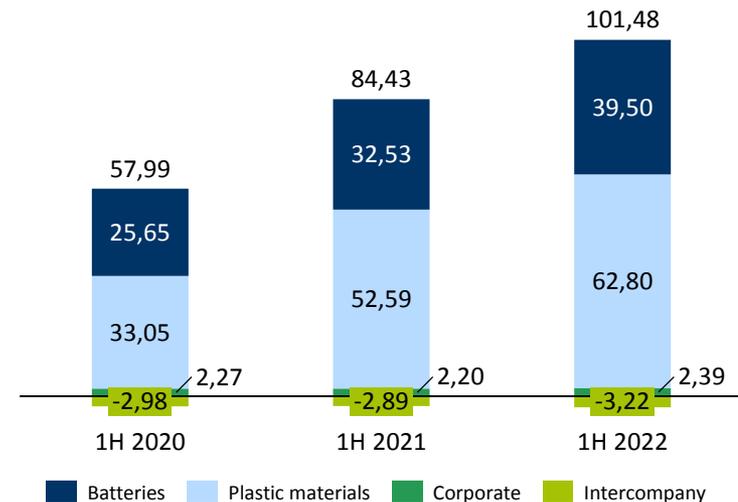
Batteries has registered **+21%** growth compared to the same period in 2021 (**+27%** compared to 2020)

Revenues breakdown

Consolidated revenues by geography

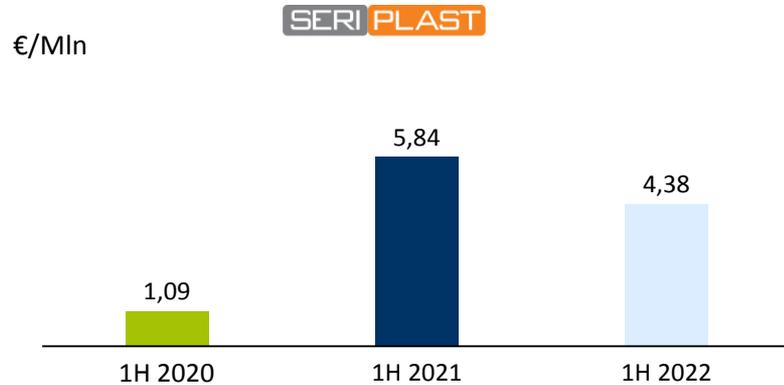


Revenues breakdown

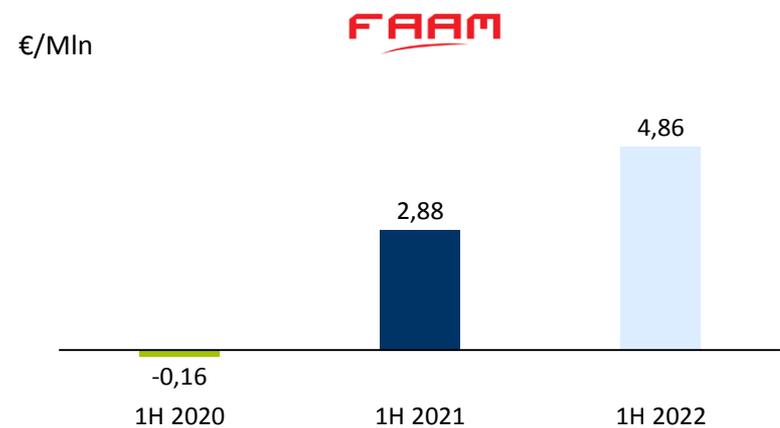


1H 2022 Key Financials – EBITDA

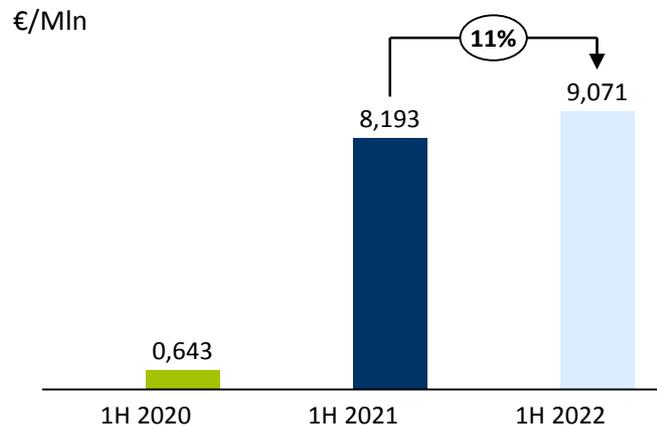
EBITDA – Plastic materials



EBITDA – Batteries

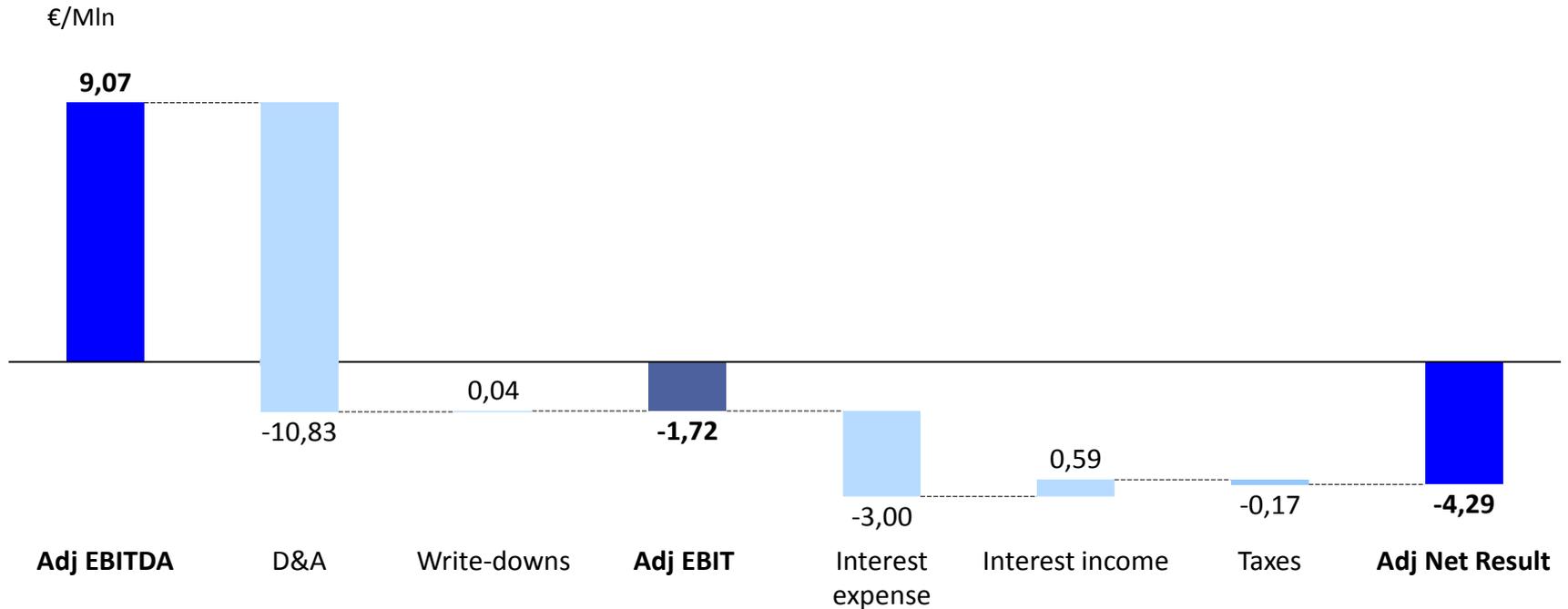


Adjusted EBITDA – Consolidated



- The Group has recorded a **profitability of 9% in the 1H 2022**, slightly down from the 9.7% achieved in the 1H 2021, **despite the current macroeconomic scenario characterized by a significant increase in the cost of energy**. The Group has estimated higher **energy costs equal to € 4,554 Mln** of which € 3,296 Mln in the plastic materials and € 1,241 Mln in the Batteries division.
- To compensate for the charges incurred due to the increase in the cost of energy, **the Group obtained grants amounting to €1,499 thousand**, as a result of the relief introduced by the **Sosteni-Ter Decree for energy-intensive companies** (€ 1,058 Mln in Plastic Materials division and € 0,441 Mln in Batteries division).

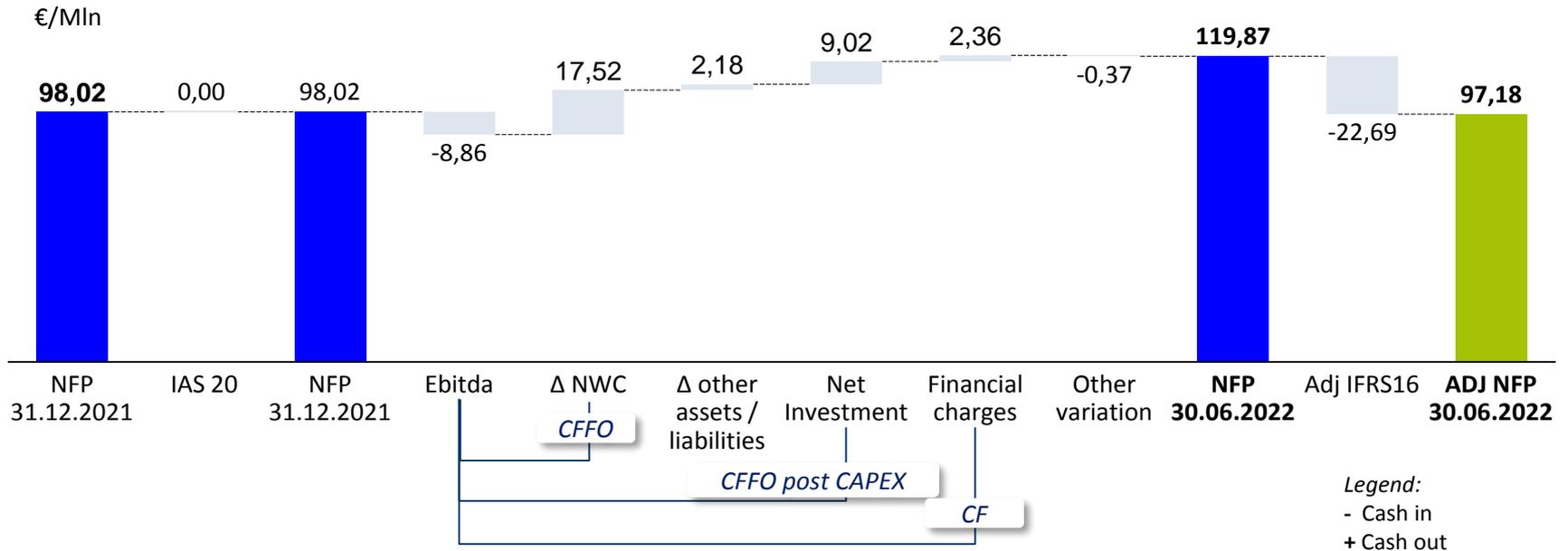
1H 2022 Key Financials – From EBITDA to Net Result



EBIT is equal to negative euro 1,932 thousand, after depreciation and amortization of euro 10,787 thousand.

The D&A are related to euro 5,410 thousand for the investment made and on-going in Teverola 1 and 2, of which euro 4,212 thousand related to amortization on realized investments and euro 1,198 thousand related to the rights of use concerning the lease of the Teverola 1 (euro 515 thousand) and Teverola 2 (euro 683 thousand) building.

1H 2022 Key Financials – Bridge NFP



The **Adj Net Financial Position** is equal to **€ 97,18 Mln** mainly related to the construction of the **Teverola 1 project**

The **increase recorded** in the period is mainly related to the increase in **Net Working Capital of euro 17,517 thousand**, due in particular to the increase in inventories, as well as the **adjusted investment activity for euro 6,402 thousand**

The **Net Financial Position** at the end of the period is equal to **€ 119,87 Mln** and it is including **€ 22,69 Mln** of IFRS 16 effects related to the Right of Use for lease contracts

Warrant Uno SERI 2017 -2022

n. Warrants expiring on 31 December 2022	81,439,887
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Max. n. Shares	8,143,989
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Cash and Cash equivalent	€ 40,964,263
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2022 Stock Option Plan



2022 Stock Option Regulations	<ul style="list-style-type: none"> ➤ 2 Option Attribution Cycles, by: <ul style="list-style-type: none"> • December 31, 2022¹ • June 30, 2024 ➤ Vesting Period: 5 Years ➤ Exercise Period: 2 years from Vesting Period ➤ 5 Exercise Windows for each Attribution Cycle ➤ Performance Targets: <ul style="list-style-type: none"> • TSR (<i>Total Shareholder Return</i>)² • ESG (<i>Environmental, Social and Governance</i>) 	ESG TARGETS	
		<p style="text-align: center;">PLASTIC RECYCLING</p> <p style="text-align: center;">Use in the production cycle of a certain (and growing) percentage of recycled material in relation to total raw materials</p>	<p style="text-align: center;">BATTERIES</p> <p style="text-align: center;">Development of technologies to facilitate the recycling of spent lithium batteries in line with circular economy policies</p>

¹As amended to the remuneration policy approved by the Board of Directors on June 28, 2022.

Appendix – Business units



Area	Value	Unit	Target
Production	1000	kg	1000
Quality	95	%	95
Cost	120	€	120
Energy	50	kWh	50
Waste	5	kg	5
Water	10	kg	10
CO2	20	kg	20

SERI PLAST
POLYPROPYLENE COMPOUNDS

PLAST RESEARCH
& DEVELOPMENT S.R.L.



SERI PLAST

Recovery of plastic scrap and production of compounds

Footprint & Operations



Alife, Caserta, Italy



Alife: 6.000 sm (indoor);
20.000 sm (outdoor)



Employees: 17 FTE

Background

In the Alife plant, Seri Plast is producing special plastic compounds from primary polymers and from the recycling of scraps (mainly exhausted batteries but also post consumer packaging at end of life). Compounds are mainly produced for battery manufacturers (Serilene product) and for Automotive (Serifill). New applications are going to be introduced for packaging applications (also through P2P initiative). The company has developed various innovative “recipes” homologated by main carmakers

Market: EMEA – end market on worldwide base

Main Clients: Tier-1 suppliers in automotive industry; brand owners

Main drivers

- Development of solutions for the recovery of mixed plastics from end-of-life packaging
- Consolidation in the Automotive market through new homologations of “green compounds”
- Organo Sheet R&D activity

Circular economy

The raw material comes, for the most part, from the waste plastic recovered from exhausted batteries (partially from virgin material).



After cleaning the pollutants and grinding the waste material, it is treated with additives and extruded.

Moulding of plastic material

Footprint & Operations



 **Canonica d'Adda:** 24.000 sm (indoor), 41.000 sm (outdoor) **Employees :** 73 FTE

 **Peronne:** 9.000 sm (indoor), 60.000 sm (outdoor) **Employees:** 40 FTE

 **Arras:** 15.000 sm (indoor), 60.000 sm (outdoor) **Employees :** 17 FTE

 **Brwinow:** 6.000 sm; **Employees:** 25 FTE

 **Pioltello:** 22.000 sm (indoor), 80.000 sm (outdoor) **Employees:** 98 FTE

 **Gubbio:** 19.000 sm (indoor), 50.000 sm (outdoor) **Employees:** 46 FTE

Background

Through **ICS and COES/GDS brands**, the company is a leader in the **molding of plastic material market**.

The company operates through two business units:



Plastic components (boxes, lids and accessories) for automotive, industrial and storage battery manufacturers;



Plastic pipes and fittings for thermo-sanitary market (Naval, infrastructure and building applications).

Market: Global

Main clients:

- **Battery market:** Exide Technologies, other international customers, FIB as intercompany
- **Pipes and fittings:** retail market at national and international level, Fincantieri for shipping applications

Key highlights



More than 1000 molds owned by the Company and homologated by final customers



COES product portfolio is highly integrated



Synergies in using the compound based on recycled raw materials



Plants located close to the main clients

Main drivers

- Increase the boxes and lids market share in Central/Eastern Europe thanks to the new plant in Poland – new plants in Europe coming soon
- Increase of recycled plastics applications in both business units
- Ecobonus in Italy as a new opportunity for Pipes and Fittings sector

Tools and materials



Canonica Plant: fiber glass/kevlar/carbon fabrics manufacturing

Teverola Plant: organo sheet line – laminated sheets with continuous glass, carbon, aramid or hybrid fibers

3 FTE



Product

The organo-sheet product is an innovative solution for the **Metal Replacement**

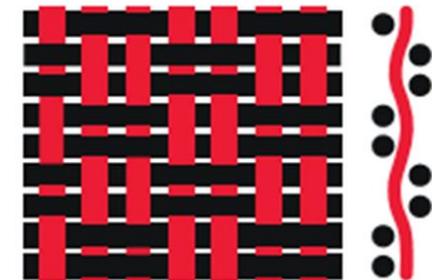
- Semi-finished sheets, the material is impregnated and consolidated
- Semifinished sheets – can be thermoformed and over injected
- Thickness of the sheet from 0,5 mm to 3 mm
- Fabrics with fiber orientation 0/90 degrees, bioriented fabrics
- Fabrics or strip with 0-degree fiber orientation, one-way
- Isotropic non-woven fabrics made from randomly arranged fibers called mat

Most used fabrics

Tela



Batavia





FAAM



FAAM
SERVICE

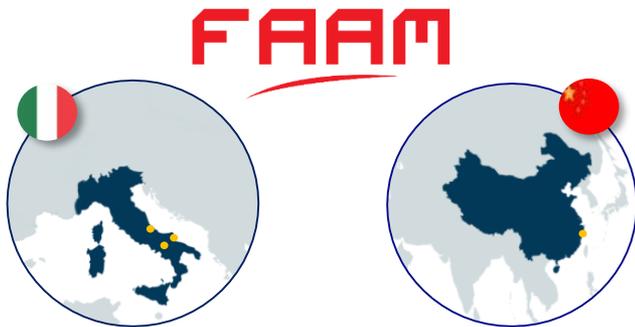
FAAM
RESEARCH CENTER



FAAM

Batteries

Footprint & Operations



Monterubbiano: 7.500 sm (indoor), 7.000 sm (outdoor); **Employees:** 63 FTE

Monte Sant'Angelo: 8.000 sm (indoor), 6.000 sm (outdoor); **Employees :** 75 FTE

Yixing: 9.000 sm (indoor), 4.000 sm (outdoor); **Employees :** 53 FTE

Teverola 1: 38.000 sm (indoor), 112.000 sm (outdoor); **Employees:** 112 FTE

Background

FAAM is specialized in the design, production and sale of **highly efficient lead acid and Li-ion batteries (including cell production)** for Motive Power, Storage, Starter and specialty applications. The main goal is to guarantee customized solution with high performances.

The product portfolio includes: **(i)** traction batteries for Aftermarket and OE customers; **(ii)** storage batteries for UPS, Telco, energy producers, both for AM and OE; **(iii)** starter batteries (automotive, heavy duty, motorcycles and specialties) for the Aftermarket; **(iv)** li-ion batteries for storage (domestic and BESS), industrial traction (forklifts, material handling, ground movement machines, agricultural, and light traction), military, automotive (commercial vehicles and public transport), and naval



Market: Global

Main clients: the main market is the Motive Power/heavy duty (OEM and aftermarket), stationary, naval, military and starter.

Main drivers

- Full speed of Teverola 1 in 2022
- Circular economy replication in the lithium (active material production and recycling)
- Increase of cell's performances currently produced in Teverola 1
- Teverola 2 Gigafactory start up of production
- Increase OEM customers for the lead-acid battery business as a cross selling opportunity with the lithium

After sales and R&D

After sales services



FAAM Service: service company providing after sales assistance throughout national/European level (and also collection of end of life batteries)

Brand **CARBAT:** B2C network supplying starter batteries to end users CARBAT is also an “on time” battery replacement provider to end users. **European coverage through distributors mainly in Benelux, France, Poland, Iberia, Nordics, UK , Maghreb, and Greece**

Employees: 36 FTE

F A A M C U S T O M E R S E R V I C E



FAAM Research Center



FAAM Research Center:

Teverola is the cluster and competence center for all the R&D activities In Monterubbiano there is a laboratory on lead-acid batteries and electronic components for lithium batteries (BMS and packs)

Some innovative projects:

- **FAR SEAS Project**, in collaboration with the Italian Navy (Marina Militare Italiana) for the development of a Li-ion battery technology (including a specific Battery Management System) for submarines
- **Military Vehicles Li-ion Battery Project**, in partnership with the Italian Ministry of Defense for the application of lithium technology on military vehicles
- **Public transport bus revamping**, based on the previous experience in the city of Turin together with GTT (public transport company) buses. FAAM operates a conversion of the old vehicles (equipped with lead-acid batteries), fueled with diesel, into a 100% electric vehicle using lithium batteries
- **Specific storage (ESS Large System)**, for the mass production of large storage systems, from 30 kWh up to 5 MWh
- **New chemistries for lithium-ion cells**, analysis on the performance for all the new materials scaled on the Turin labs and recovery of materials from recycling

29 Engineers in electrochemical, mechanical, electronic, and electrical engineering.

For Teverola 2 (IPCEI) expected more 120 R&D managers and technicians High level cooperation with a Chinese university (Changchun University) for cell development

Plants and Smelter

Footprint & Operations



 **Alife**, Caserta, Italy
Calitri, Avellino, Italy

Alife: 3.000 mq (indoor), 10.000 mq (outdoor);
Employees: 13 FTE

Calitri: 8.000 mq (indoor), 20.000 mq (outdoor);
Employees : 8 FTE

Future projects

- New Innovative projects in the recovery of Slag Heaps
- R&D projects on lithium-ion battery recycling

Calitri plant: strenghts

- FIB will reduce the material cost (lead cost)
- The plant will face an important reduction of the atmospheric emissions

Background

FIB is also focused in the design and construction of innovative plants for the recycling of batteries and in the recovery of lead from exhausted batteries (smelter activity for the production of secondary lead).
The production of secondary lead allows the upstream integration along the battery supply chain

The plant design activity has carried out a unique know-how on sustainable recycling of industrial scraps

Market: global

Main clients: other smelters and battery manufacturers; captive for FAAM

TRACK RECORD PLANT ACTIVITY – ALIFE PLANT



40 plants realized worldwide

R&D

The mission of SERI is to be a key actor in the transition to sustainability and decarbonization, through a continuous R&D activity to meet Circular Economy and Sustainable goals at European and global level



Plast Research & Development

Main goals & projects

Innovation of plastic products (PP compound)

Focus on specialties in the plastic pipes market

Organo sheet



FAAM Research Center

Main goals & projects

Full involvement of the R&D team in development of the Teverola 2 lithium cell production plant

New energy efficiency projects of lead-acid batteries

Li-ion batteries recycling projects

New chemistries

The other main goal is to realize tailor made products, based on customer specifications through a continuous R&D activity together with main stakeholders (clients, institutions, suppliers, universities and academic centres)

Joint venture

Since 2021



Joint Venture

On September 2021 FAAM and FRIEM signed for this JV with the main purpose to design and supply custom made energy storage solutions covering all the main applications on the market:

- Turn Key Solutions in energy Storage
- Made in Italy
- 2 production sites
- Internal Lab and workshop for the different applications
- Tailor made solutions
- One supplier for the full system
- Service agreements
- More than 100 years of experience together



Market segmentation



RE/POWER INTEGRATION



- Energy Storage Systems (ESSs) can help in mitigating potential grid concerns and integrate renewable energy resources without affecting grid reliability.
 - New and existing plants
 - Both AC or DC coupled
- ESS to manage peaks and make flat generation from traditional power plant

GRID SUPPORTS



- ESSs to provide services to the TSO*, such as:
 - frequency regulation: maintain the balance of supply and demand and hence the frequency of power
 - voltage compensation: reactive power to the transmission system in similar ways to a capacitor
 - investment deferral: ESS used to meet increase capacity in Transmission & Distribution

COMMERCIAL & INDUSTRIAL



- ESSs to provide benefits to the end users
 - Peak Shaving
 - Demand charge management
 - back-up power
- and utilities
 - meet capacity requirements
 - provide demand response

APPLICATION DESCRIPTION

Market segmentation



APPLICATION DESCRIPTION

MINIGRIDS



- Involve small-scale electricity generation and associated ESSs which serves a limited number of consumers via a distribution grid that can operate in isolation from national electricity transmission networks

RECHARGE



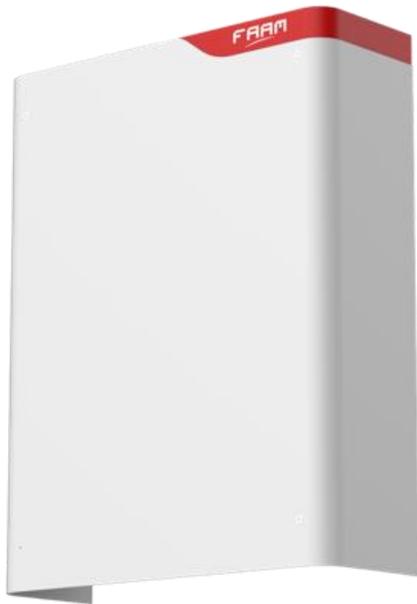
- ESSs to provide support for the deployment of electric vehicle charging stations to overcome the limits of network infrastructure.
 - Personal/Fleet Cars
 - Depot (Busses)
 - Port (Boats)

OFF-GRID INDUSTRIAL



- Micro-scale energy generation with associated ESS to provide reliable power supply to strategic monitoring and metering plants.

LiHOME



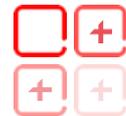
RELIABLE PERFORMANCE

LiHome provides reliability for your home with its industry leading longevity.



COMPACT SIZE

Allows you to place it anywhere you want, both indoors and outdoors.



EXPANDABLE

LiHome can be increased at your need.



SAFETY

The safety of Lihome is proven in ESS markets by FAAM tests.

LiHOME Features

Features

- Overvoltage
- Undervoltage
- Overtemperature
- RS-485 communication
- Wi-Fi communication by a proprietary App on both IOS or Android (at request)
- CAN Bus 2.0 communication for the BMS
- Pre-charging system
- High number of cycles (> 4000 cycles)
- Energy saving (efficiency > 98%)
- High energy density and power
- Zero emissions

