

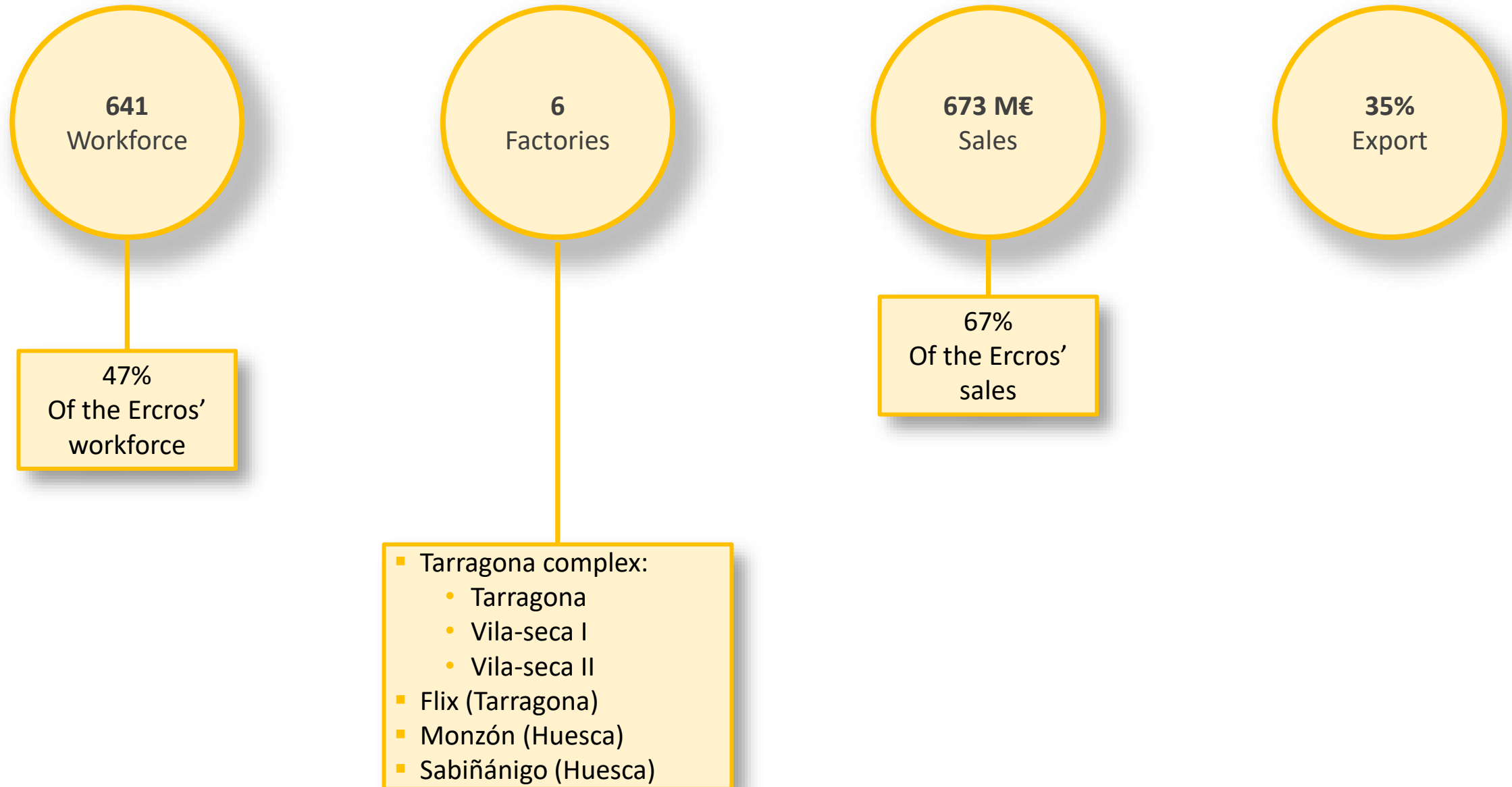


Division of chlorine derivatives



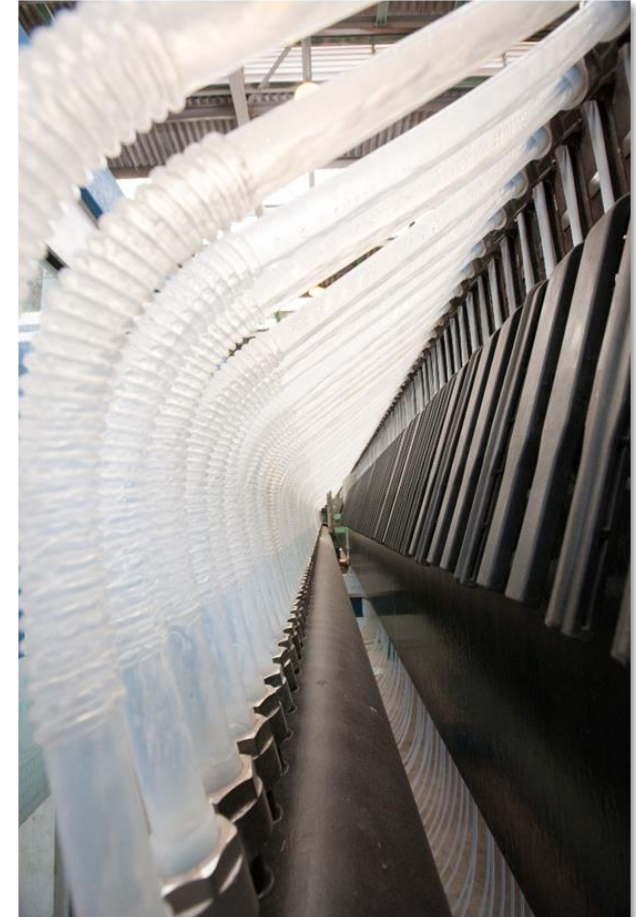
Ereros

Key data from the chlorine derivatives division. Financial year 2022

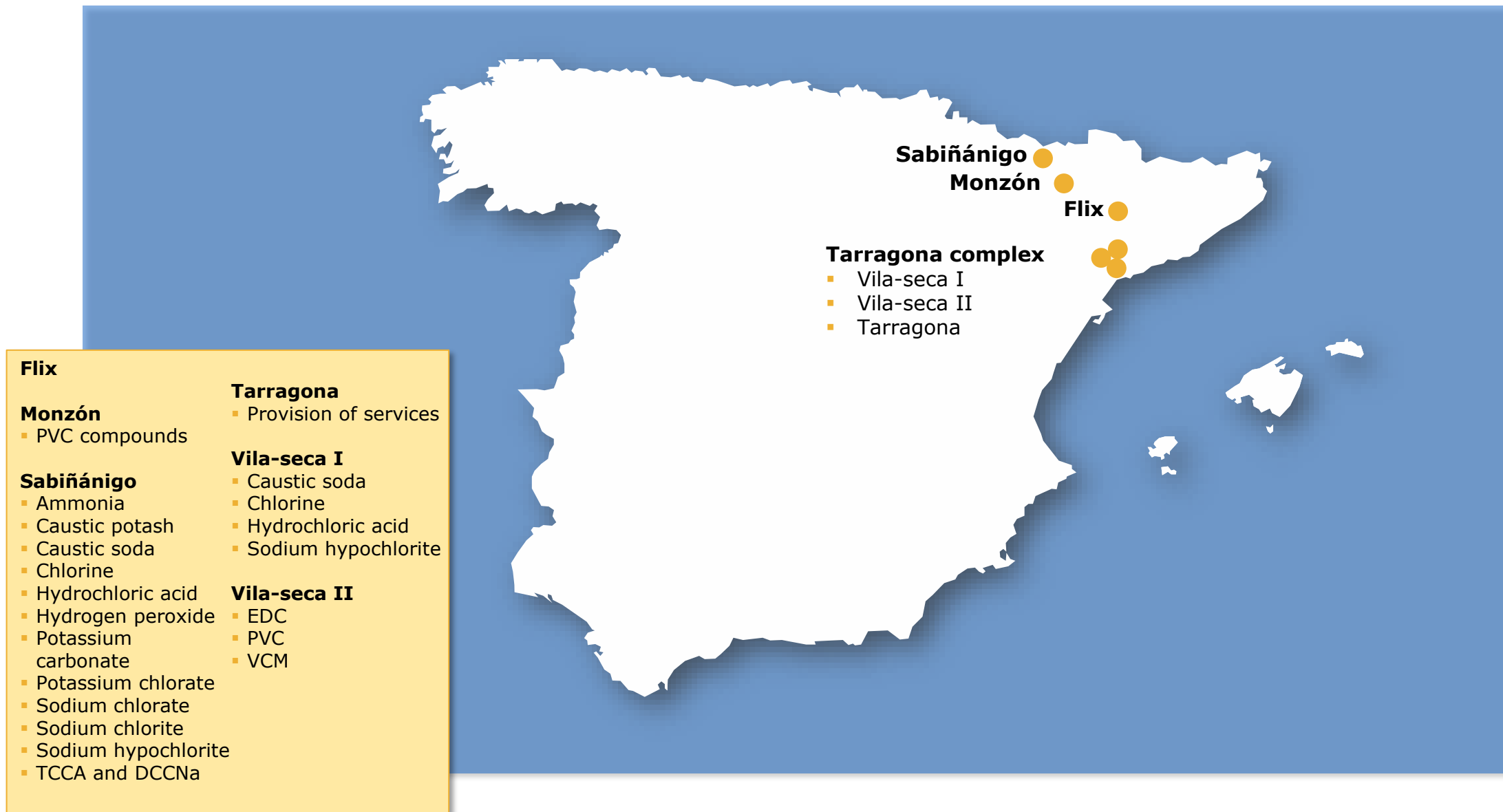


Business model

- The main activity of the chlorine derivatives division is the production of chlorine, caustic soda and its derivatives.
- Chlorine, caustic soda and hydrogen are obtained simultaneously in the same production process, by membrane electrolysis, from sodium chloride dissolved in water (brine solution) and electricity, in a ratio of 1 ton of chlorine per 1.12 ton of caustic soda and the equivalent of 28 kg of hydrogen.
- The chlorine produced by Ercros is mainly intended for the internal manufacture of chlorine derivatives, and specially for the manufacture of PVC.

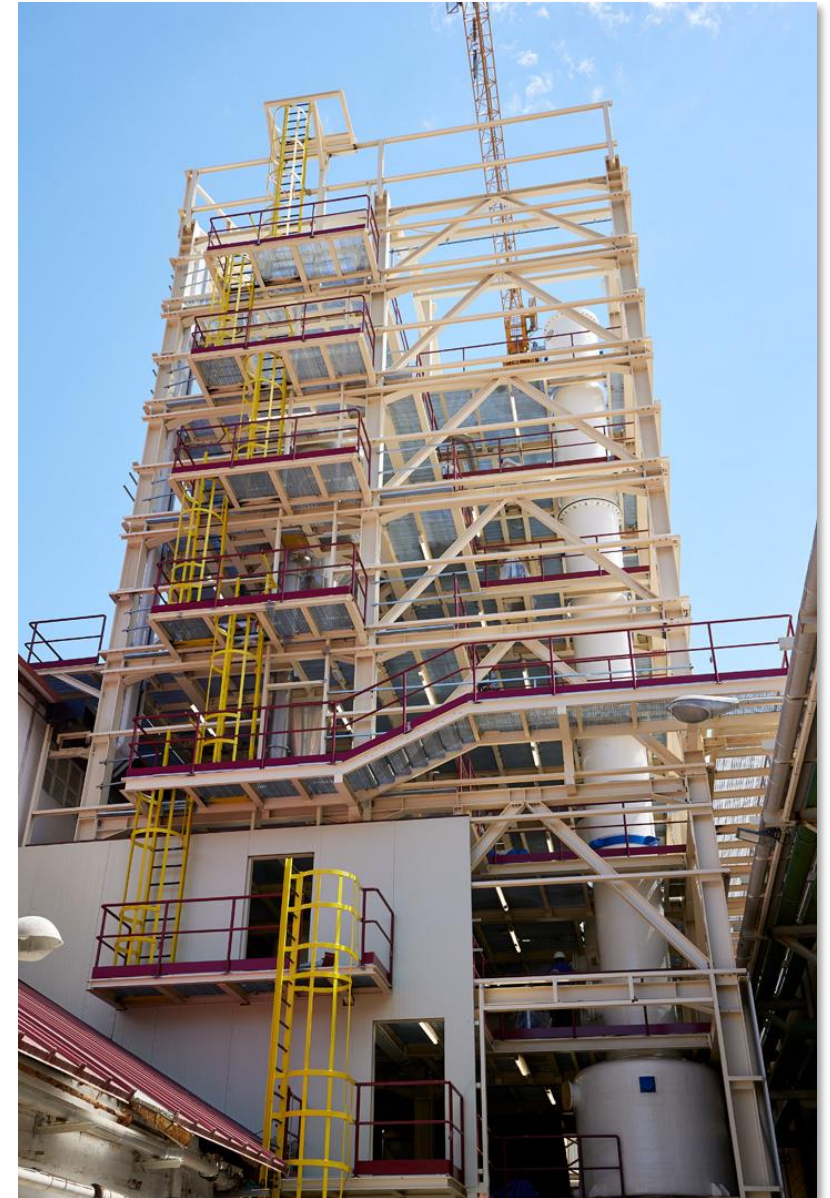


Factories



Strengths and challenges of the division

- The main strengths of this business are:
 - Integrated production.
 - Synergies and complementarity between the factories of the division.
 - Modernized and efficient industrial park.
- The main challenges are:
 - Continue making progress in reducing the carbon footprint of our processes and products.
 - Increase the weight of products with higher added value and with expanding markets.
 - Diversify the division's portfolio with new products.



Products, applications and market share. Financial year 2022

Products	Applications
Caustic potash	Chemical industry
Caustic soda	General industry
Chlorine	Derivatives manufacture
EDC	VCM manufacturing
Hydrochloric acid	General industry
PVC	Construction
Sodium chlorate	Paper pulp bleaching
Sodium chlorite	Water treatment
Sodium hypochlorite	Water treatment
TCCA	Pool water
VCM	PVC manufacturing

Ranking by market share		
	Spain	Europe
Caustic potash	1 st	7 th
Caustic soda	1 st	9 th
PVC	1 st	9 th
Sodium chlorate	1 st	4 th
Sodium hypochlorite	1 st	11 th
TCCA	1 st	1 st

The data provided come from calculations made by Ercros.

Diagram of the chlorine – caustic soda production process

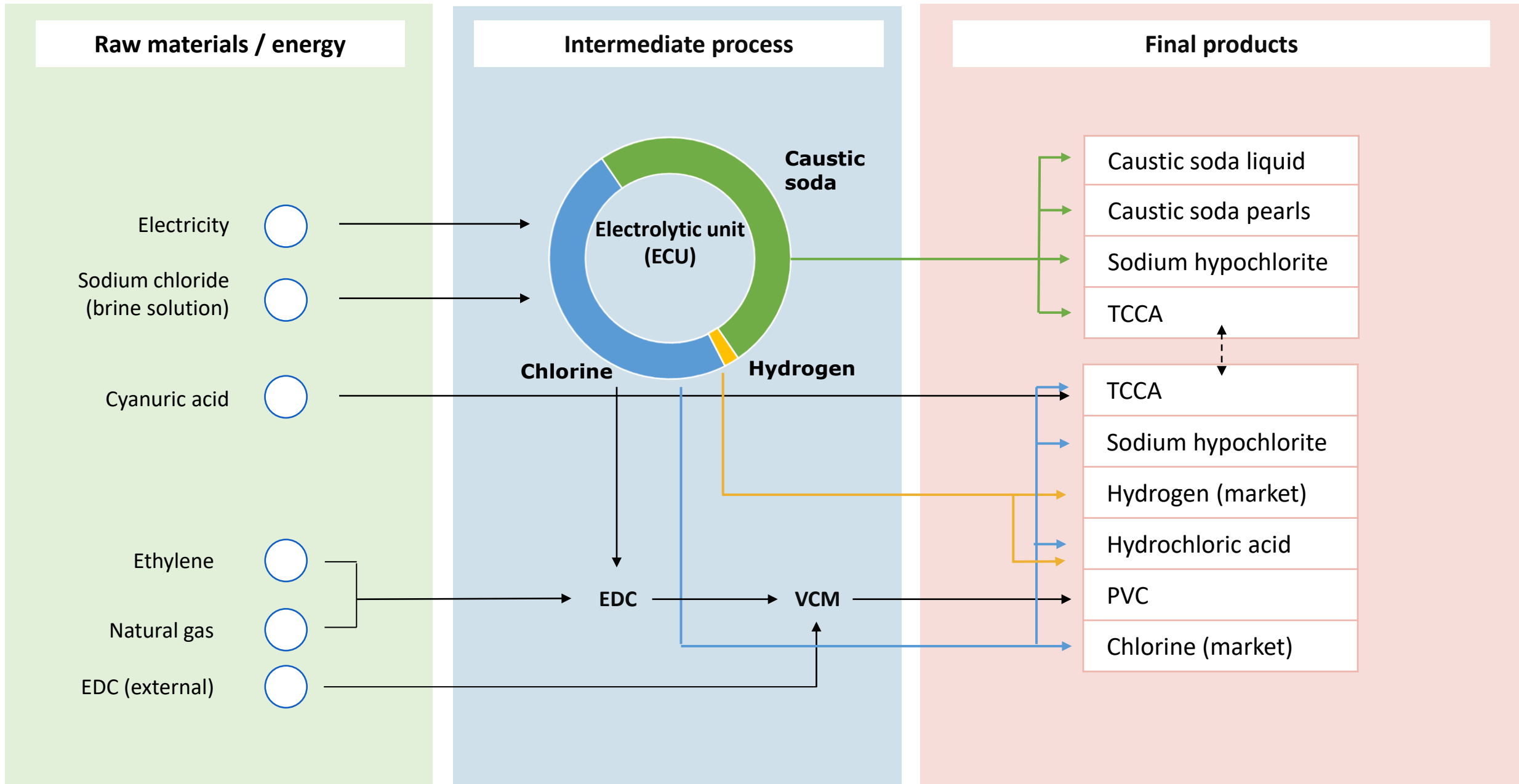
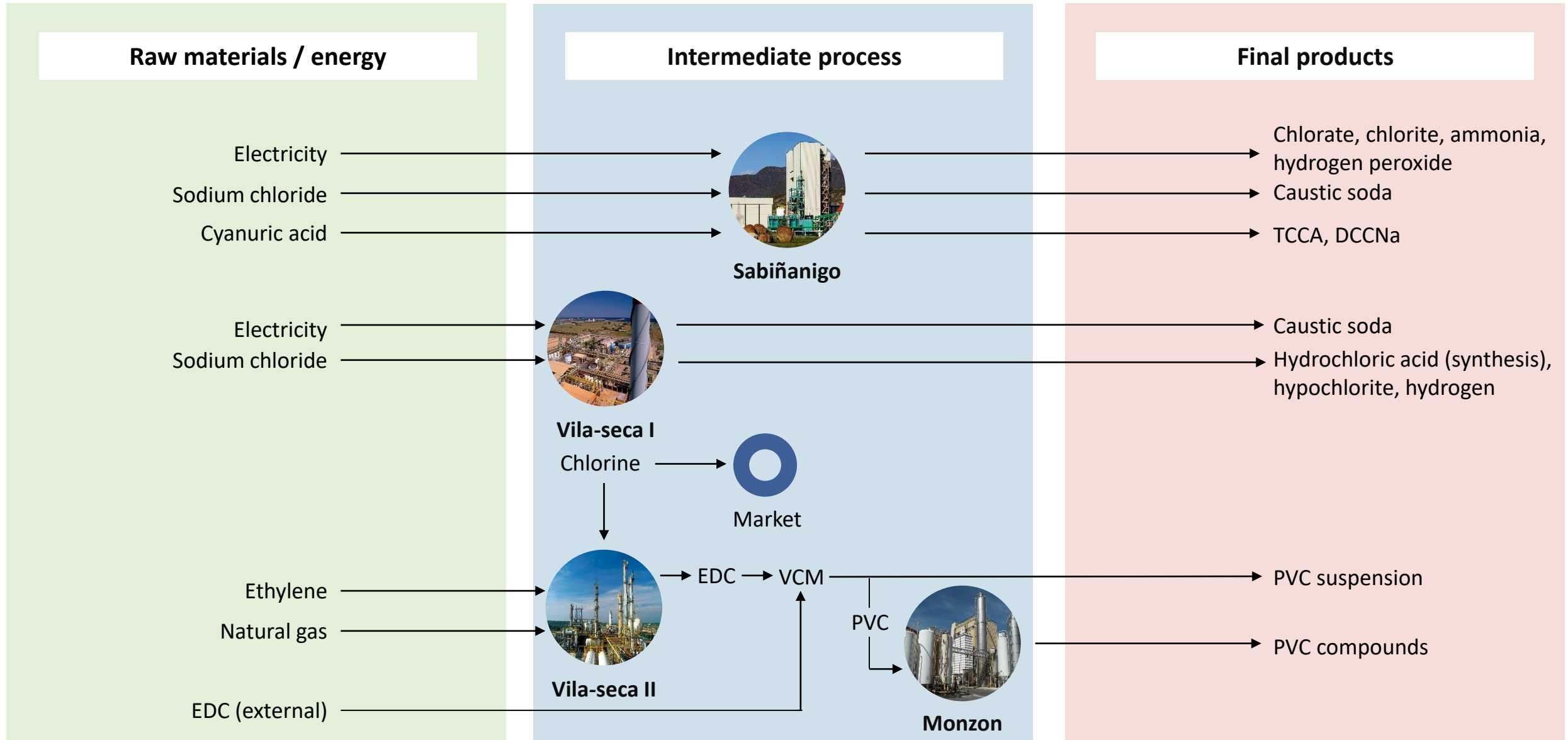
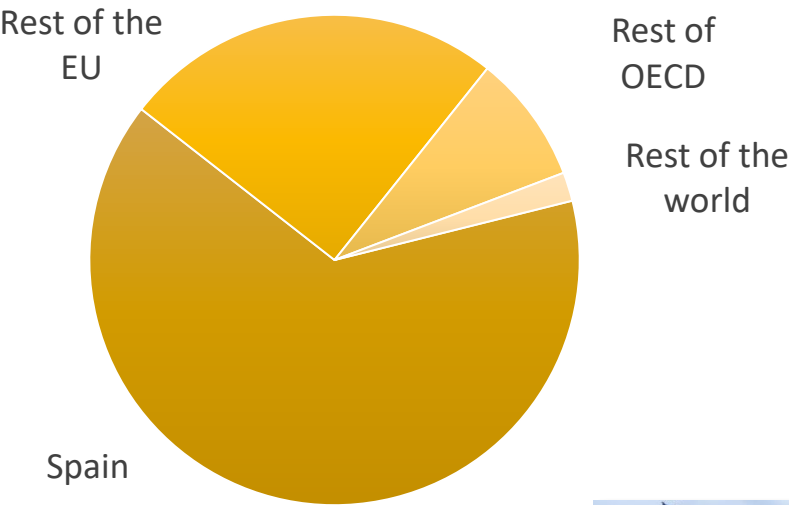


Diagram of the division's production process

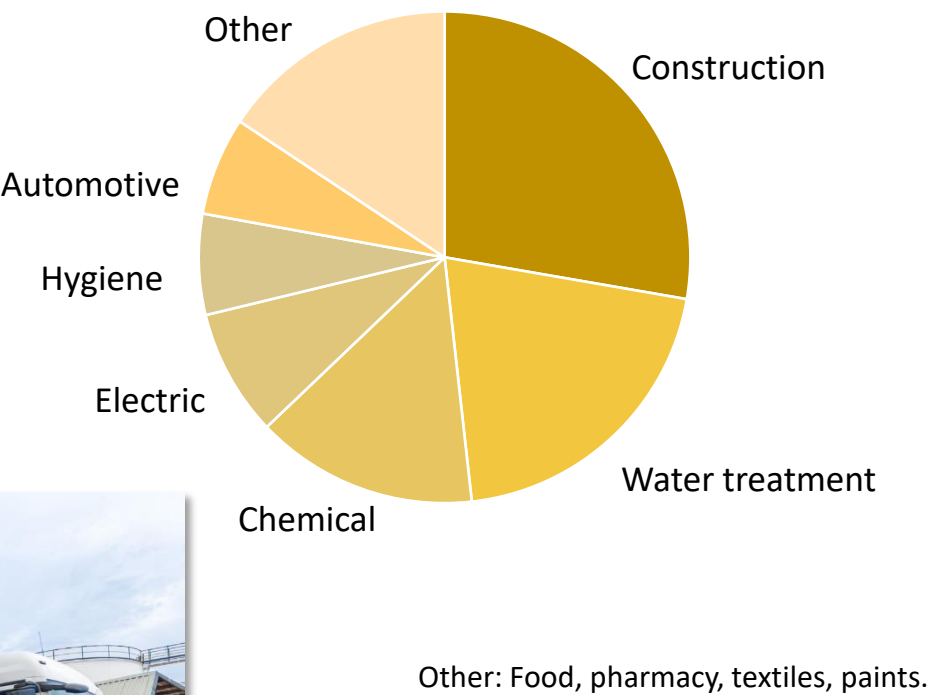


Markets and sectors. Financial year 2022

Where do we sell?



What sectors do we sell to?



Research and development

- The chlorine derivatives division has two own R+D centers located in the Monzon and Sabiñanigo factories.
- The main R+D projects of the division are:
 - New TCCA tablet formulations.
 - ErcrosBio: sustainable bioplastic formulations.
 - New rigid and flexible plastic materials for 3D printing.
 - New grades of PVC with the incorporation of recycled product.
 - Manufacturing processes of bio-based polymers.



ESG accreditations

- Prevention management system according to **ISO 45001 standard**.
- Quality management system according to **ISO 9001 standard**.
- Environmental management system according to **ISO 14001 standard**.
- Energy management system according to **ISO 50001 standard**.
- Verification of greenhouse gas (GHG) emissions according to **ISO 14064 standard**.
- Registration in the European eco-management and eco-audit register, **EMAS**.
- Verification of compliance with the good corporate governance index, **IBGC**.



Programs and ratings

- **Responsible Care:** Program of good practices in sustainability by the chemical sector.
- **Global Compact:** Program promoted by the UN that contains 10 principles of action.
- **Carbon Disclosure Project (CDP):** Organization to appraise the behavior of affiliated companies about the climate emergency.
- **Vinyl Plus:** Commitment of the European PVC industry to develop greener ways of producing, using and recycling this product.
- **ECVM Charter:** Sustainable practices program by European PVC manufacturers.
- **Operation Clean Sweep:** EU program to prevent the loss of microplastics at sea.
- **Southern Catalonia Green Hydrogen Platform:** Interest group led by the Rovira i Virgili University, which purpose is the implementation of green hydrogen.
- **RE4Industry:** EU project of 100% renewable energies for electro-intensive industries.
- **Climate action by the Generalitat de Catalunya:** Commitment to achieve neutrality of CO₂ emissions by 2050.
- **Ecovadis:** International sustainability rating (score 84/100 in 2022).



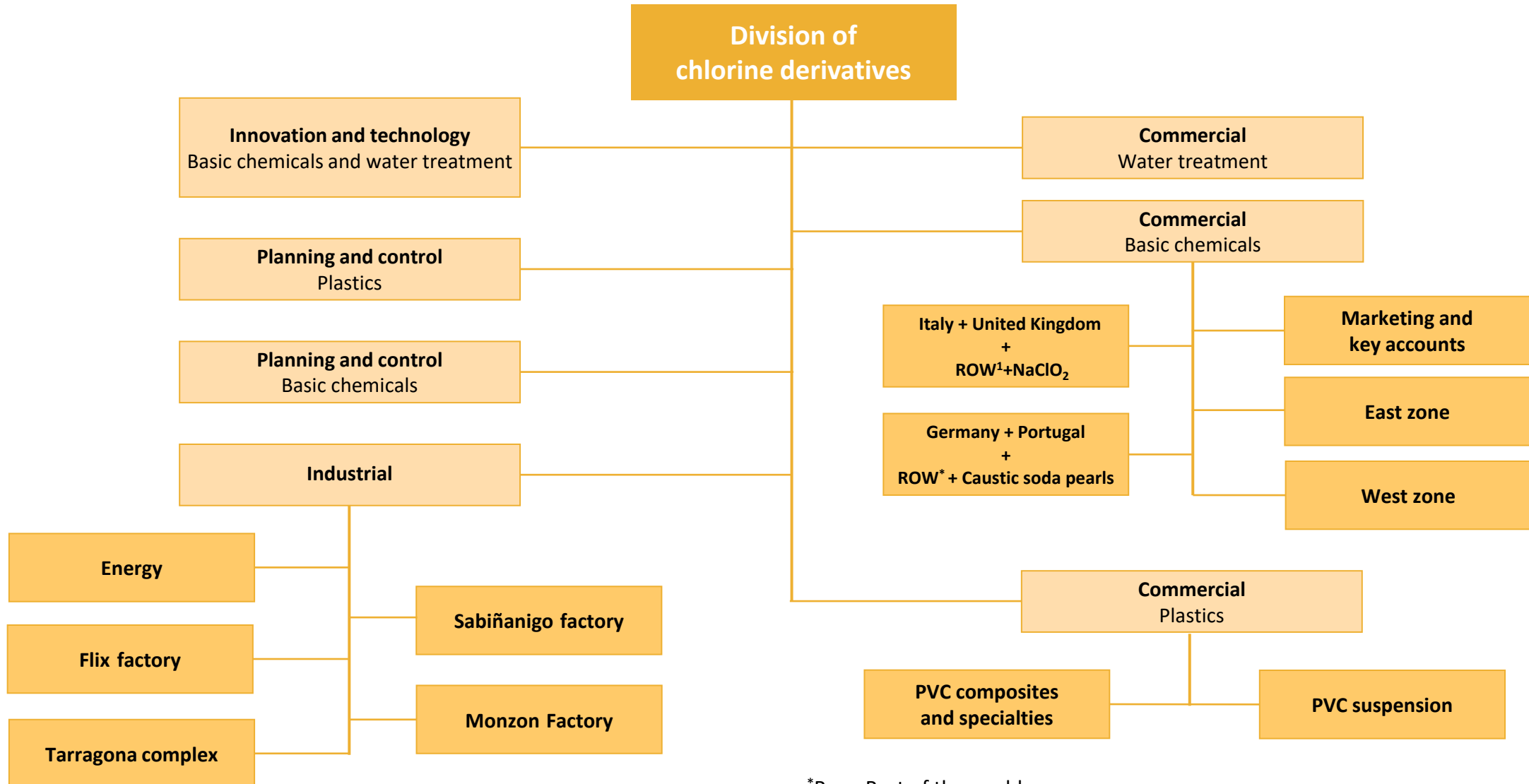
Fulfilment of the Sustainable Development Goals (SDGs)

- In the development of its activity, Ercros contributes to the fulfilment of the 17 SDGs set in the UN 2030 Agenda, although it has a special impact on:
 - **SDG 3:** Health and well-being.
 - **SDG 6:** Clean water and sanitation.
 - **SDG 7:** Affordable and non-polluting energy.
 - **SDG 8:** Decent work and economic growth.
 - **SDG 9:** Industry, innovation and infrastructure.
 - **SDG 12:** Responsible production and consumption.
 - **SDG 13:** Climate action.



**SUSTAINABLE
DEVELOPMENT GOALS**

Organizational structure



*Row: Rest of the world.

Division directory (1/2)

Division manager

Francisco España

Headquarters

Diagonal Av, 593-595

08014 Barcelona - Spain

E-mail: derivadosdelcloro@ercros.es

Tel.: +34 609 880 630 and +34 934 393 009

Basic chemicals

Commercial manager: **Carles Arias**

E-mail: quimicabasica@ercros.es

Tel.: +34 609 880 630 and +34 934 446 651

R+D department head: **Francisco Gracia**

Customer service centre (CSC)

E-mail: cac@ercros.es

East zone: Tel.: +34 902 518 100 and +34 934 446 682

West zone: Tel.: +34 902 518 400

Exports: Tel.: +34 934 445 337 and +34 943 446 675

Commercial delegation in France

E-mail: ercrosfrance@ercros.es

Tel.: +33 140 267 480

Industrial manager

Marc Fargas

Plastics

Commercial manager: **Salvador Casals**

E-mail: plasticos@ercros.es

Tel.: +34 609 880 630 and +34 933 230 554

R+D department head: **Manuel Tierno**

Customer service centre (CSC)

E-mail: cac@ercros.es

Tel.: +34 934 446 687

Water treatment

Product head: **Natàlia Torrents**

E-mail: tratamientoaguas@ercros.es

Tel.: +34 609 880 630 and +34 934 532 179

Customer service centre (CSC)

E-mail: cac@ercros.es

Tel.: +34 934 532 179

Division directory (2/2)

Facilities

Flix facility

Manager: **Jaime Molina**
C/Afores, s/n
43750 Flix (Tarragona) - Spain
Tel.: +34 977 410 125
E-mail: flix@ercros.es

Monzon facility

Operations head: **Rafael Mancho**
Carretera Nacional 240, km 147
22400 Monzon (Huesca) - Spain
Tel.: +34 974 400 850
E-mail: monzon@ercros.es

Sabiñanigo facility

Manager: **Luis Gállego**
C/Serrablo, 102
22600 Sabiñánigo (Huesca) - Spain
Tel.: +34 974 498 000
E-mail: sabinanigo@ercros.es

Industrial Tarragona complex

Manager:

Joan Miquel Capdevila

Tarragona facility

Poligono Industrial La Canonja
Carretera de Valencia, s/n
43110 La Canonja (Tarragona) - Spain
Mailing address:
P.O. Box, 450
43080 Tarragona
Tel.: +34 977 548 011
E-mail: complejotarragona@ercros.es

Vila-seca I facility

Autovia Tarragona - Salou C-31 B,
km 6
43480 Vila-seca (Tarragona) - Spain
Tel.: +34 977 370 354
E-mail: complejotarragona@ercros.es

Vila-seca II facility

Carretera de la Pineda, km 1
43480 Vila-seca (Tarragona) - Spain
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E-mail: complejotarragona@ercros.es



Thank you

For more information

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