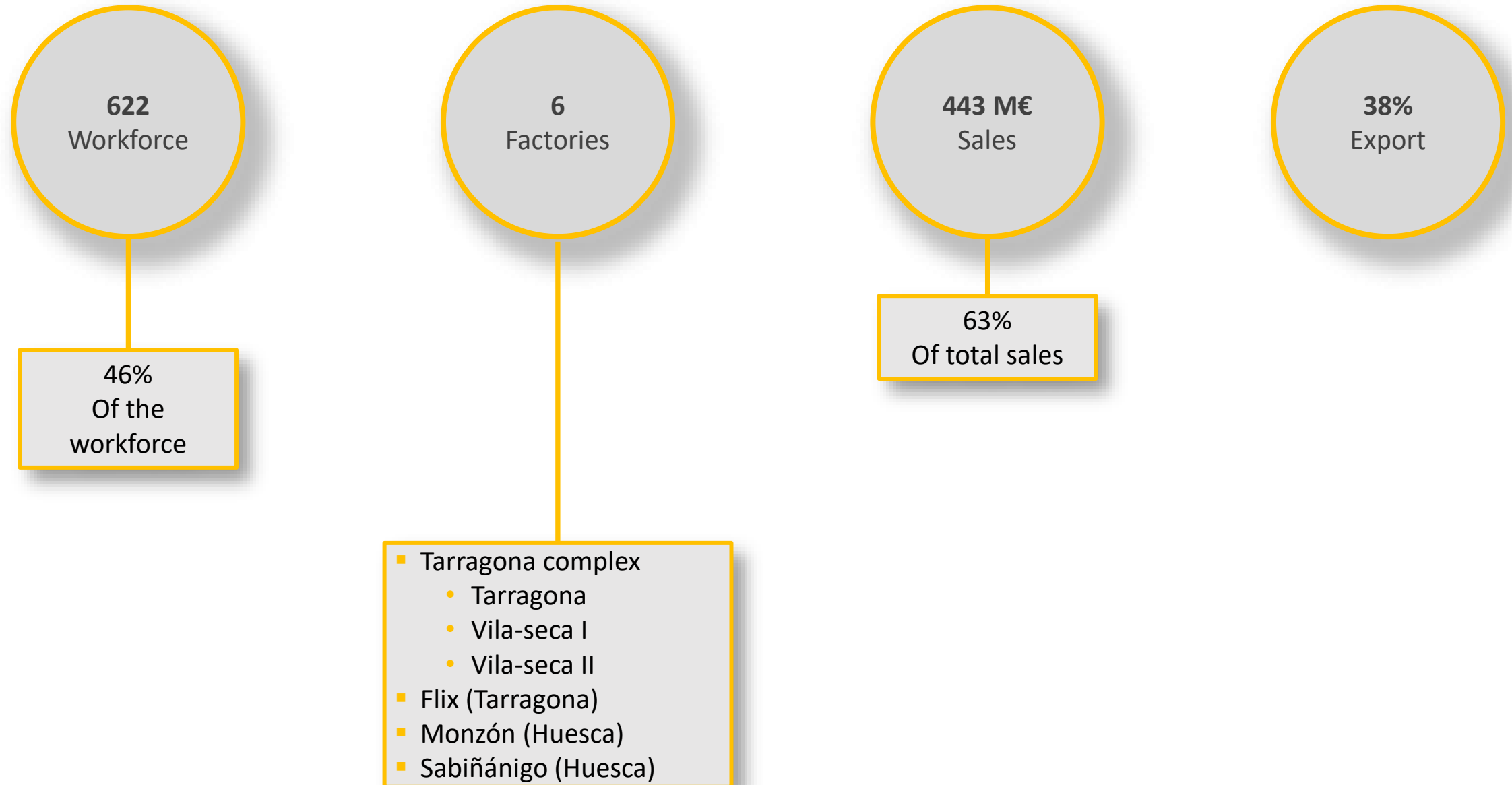




# Chlorine derivatives division

# Key data from the chlorine derivatives division. Fiscal year 2023



# Business model

- The main activity of the chlorine derivatives division is the production of chlorine, caustic soda and their derivatives.
- Chlorine, caustic soda and hydrogen are obtained simultaneously in the same production process, through membrane electrolysis, from sodium chloride dissolved in water (brine) 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 used for the internal manufacture of chlorine derivatives, and in particular for the manufacture of PVC.



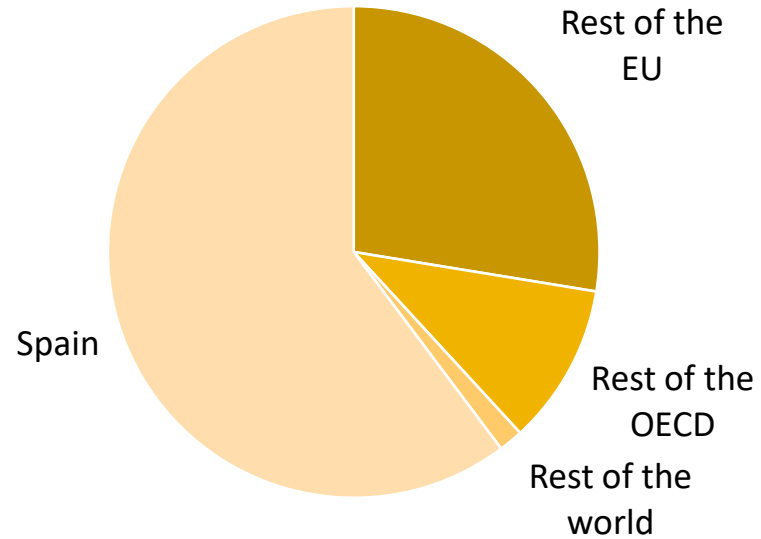
# Strengths and challenges of the division

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

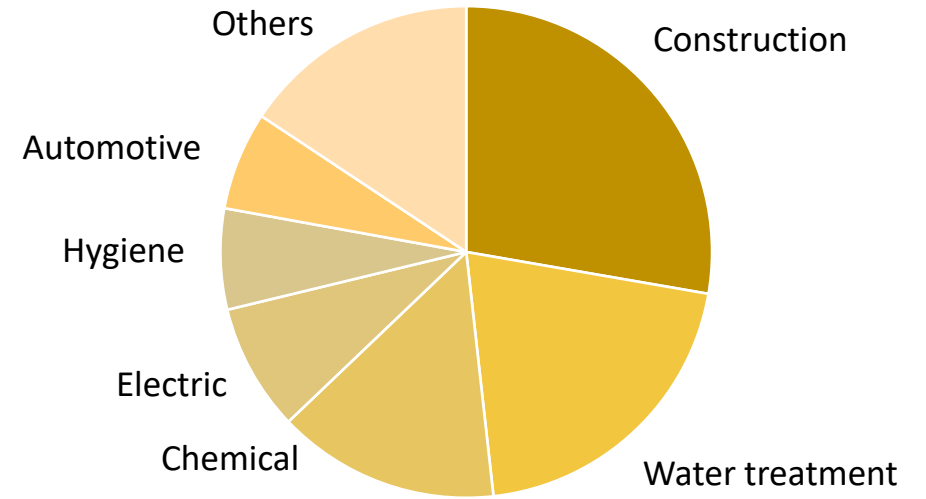


# Markets and sectors. Fiscal year 2023

## Where do we sell?



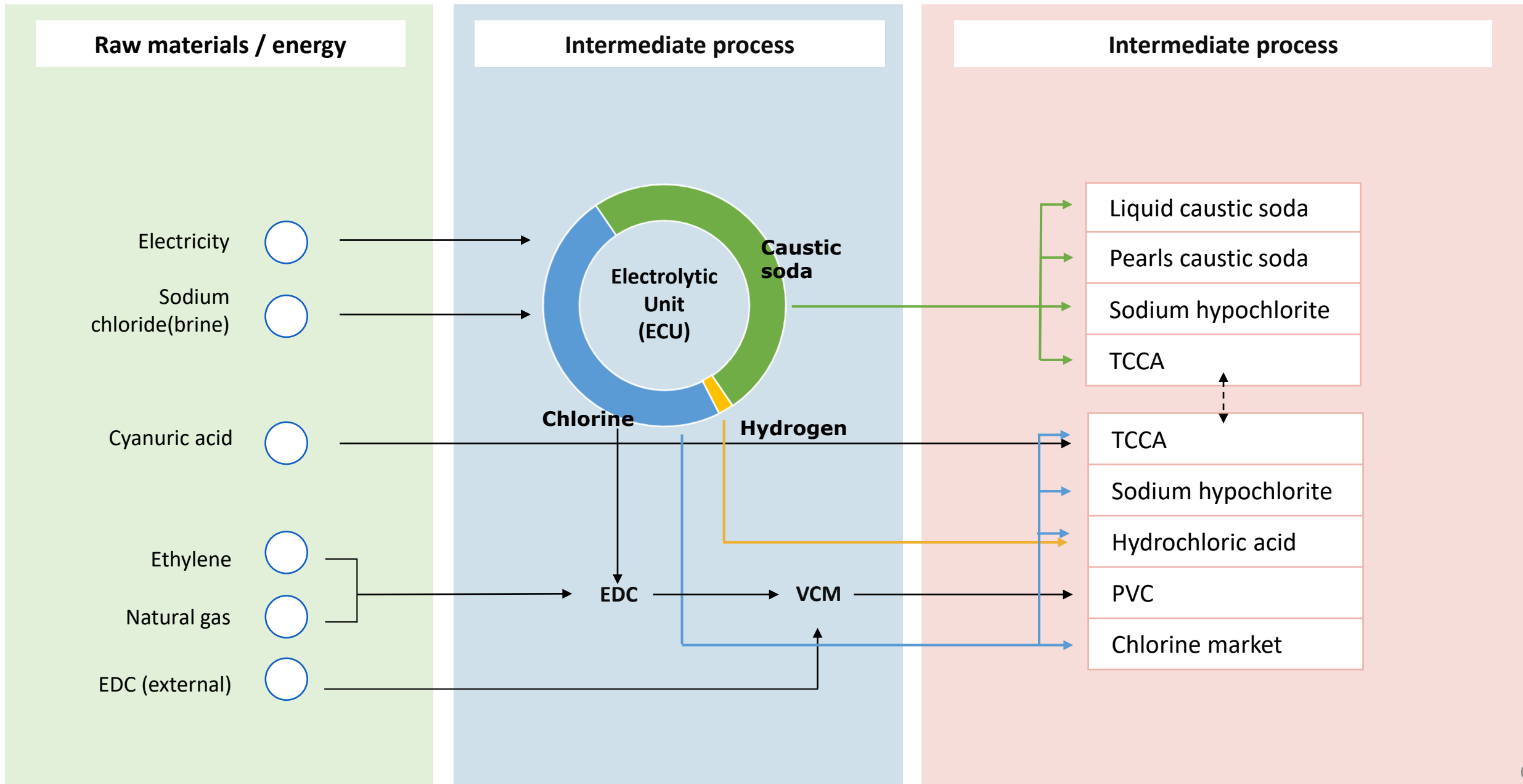
## What sectors do we sell to?



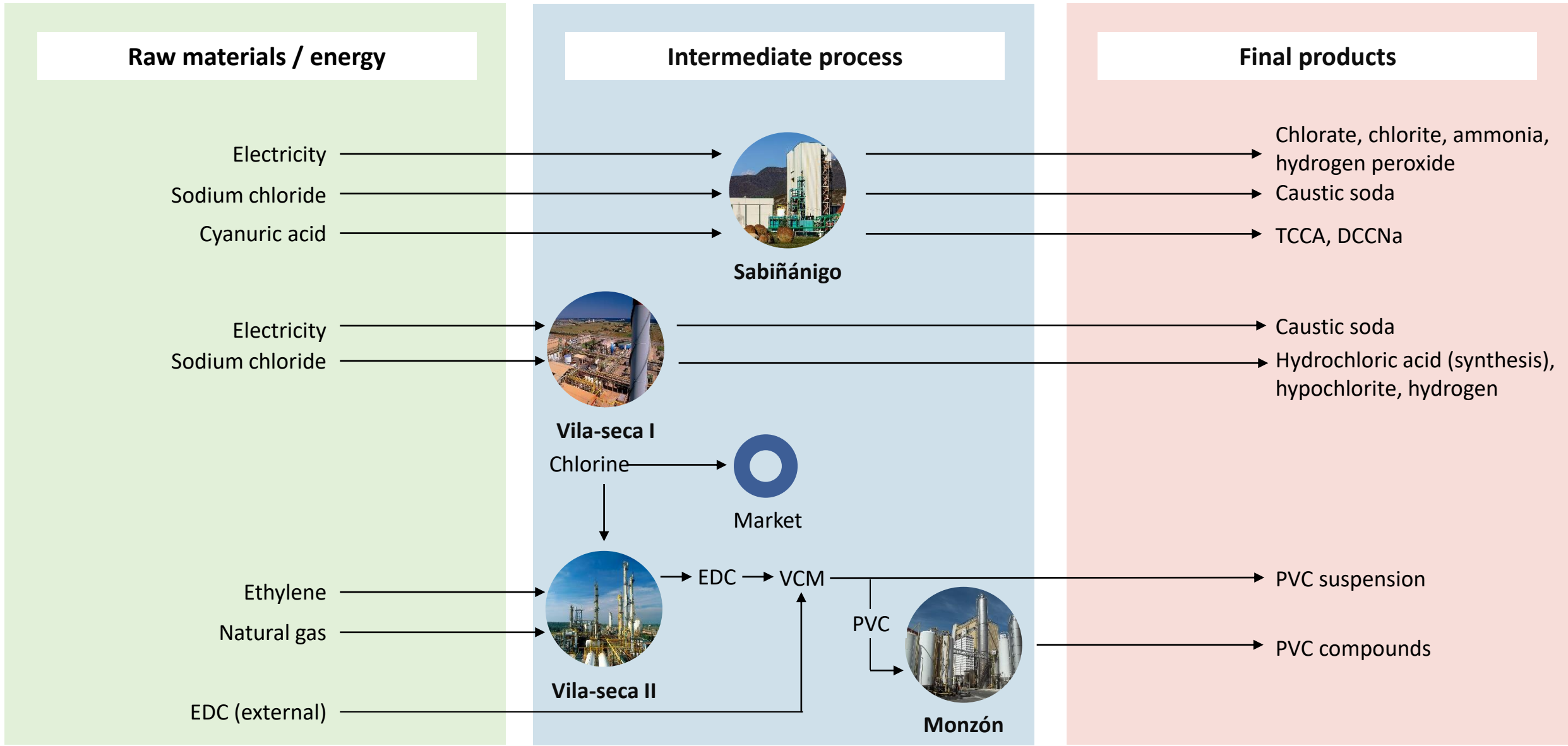
Others: Food, pharmacy, textiles, paints.



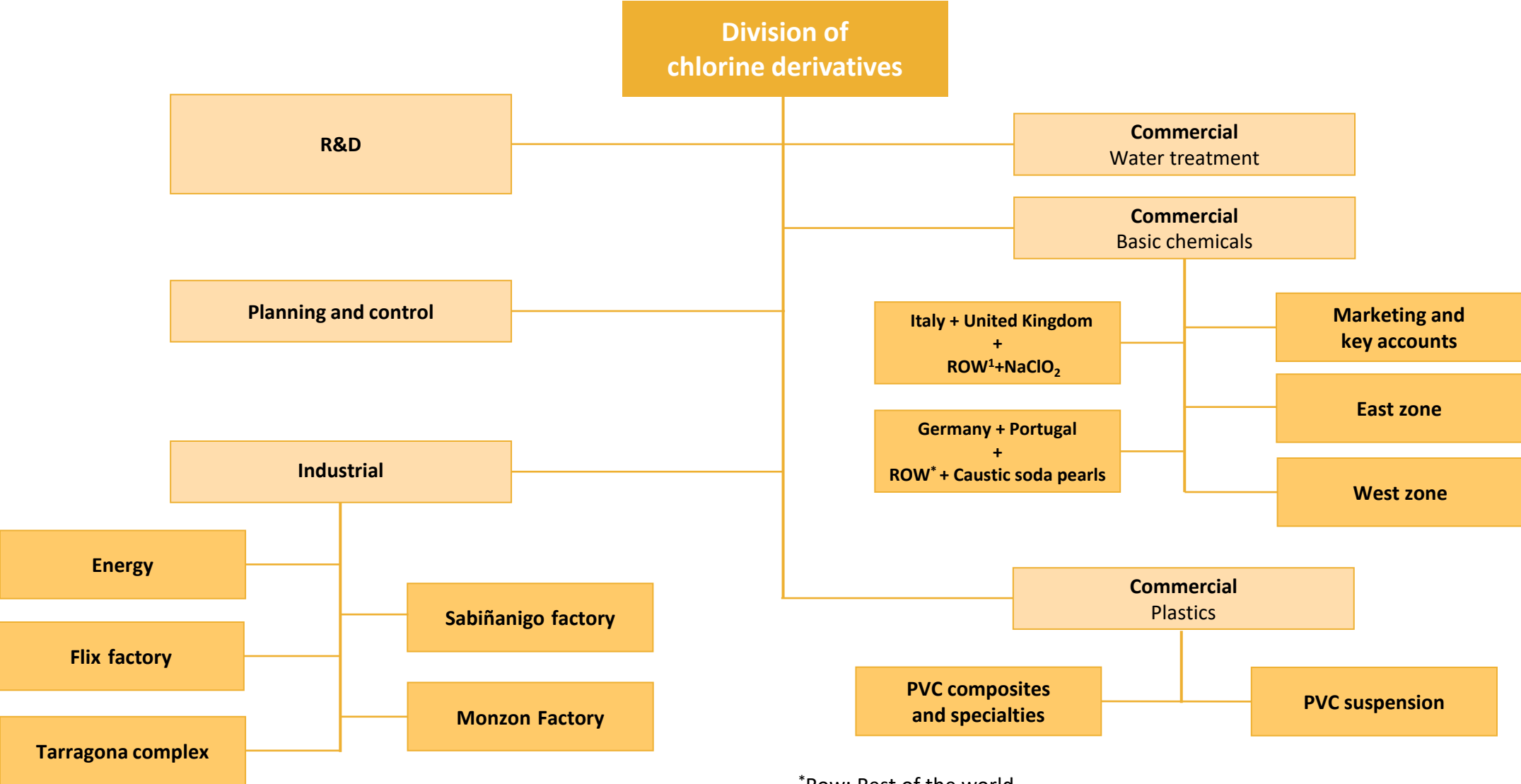
# Scheme of the production process of chlorine - caustic soda



# Scheme of the production process of the division



# Organizational structure



\*Row: Rest of the world.



# Products, applications and market share. Fiscal year 2023

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 <sup>st</sup>	7 <sup>th</sup>
Caustic soda	1 <sup>st</sup>	9 <sup>th</sup>
PVC	1 <sup>st</sup>	9 <sup>th</sup>
Sodium chlorate	1 <sup>st</sup>	4 <sup>th</sup>
Sodium hypochlorite	1 <sup>st</sup>	11 <sup>th</sup>
TCCA	1 <sup>st</sup>	1 <sup>st</sup>

The data provided come from calculations made by Ercros.

# Division directory (1/2)

## Division manager

**Francisco España**

## Headquarters

Diagonal Av, 593-595

08014 Barcelona - Spain

E-mail: [derivadosdelcloro@ercros.es](mailto:derivadosdelcloro@ercros.es)

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

## Basic chemicals

Commercial manager: **Carles Arias**

E-mail: [quimicabasica@ercros.es](mailto: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](mailto: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](mailto:ercrosfrance@ercros.es)

Tel.: +33 140 267 480

## Industrial manager of the division

**Marc Fargas**

## Plastics

Commercial manager: **Bernat Iserte**

E-mail: [plasticos@ercros.es](mailto: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](mailto:cac@ercros.es)

Tel.: +34 934 446 687

## Water treatment

Product head: **Natàlia Torrents**

E-mail: [tratamientoaguas@ercros.es](mailto:tratamientoaguas@ercros.es)

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

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

## Customer service centre (CSC)

E-mail: [cac@ercros.es](mailto:cac@ercros.es)

Tel.: +34 934 532 179

# Division directory (2/2)

## Facilities

### Flix facility

Responsible: **Gonzalo Navarro**  
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: **Elena Simón**  
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  
Tel.: +34 977 390 611  
E-mail: complejotarragona@ercros.es

# Main R+D projects

- The chlorine derivatives division has two own R&D centers located in the Monzón and Sabiñánigo factories.
- Main projects:
  - New formulations of ATCC tablets.
  - ErcrosBio: sustainable bioplastic formulations.
  - New PVC grades with the incorporation of recycled product.
  - Bio-based polymer manufacturing processes.
  - Activation of electrodes for electrolytic processes.

# ESG Accreditations

- Prevention management system according to **ISO 45001**.
- Quality management system according to **ISO 9001**.
- Environmental management system according to **ISO 14001**.
- Energy management system according to **ISO 50001**.
- Verification of greenhouse gas (GHG) emissions according to **ISO 14064**.
- Registration in the European Eco-Management and Eco-Audit Register (**EMAS**).
- Verification of compliance with the Good Corporate Governance Index (**IBGC**).
- Healthy Organization Management System (**Sigos**).





# Sustainability: programs, agreements and ratings

- **Responsible Care:** Program of good practices in sustainability of the global chemical sector.
- **Global Compact:** Program promoted by the UN that contains 10 principles of action.
- **Carbon Disclosure Project (CDP):** Organization designed to assess the behavior of affiliated companies regarding the climate emergency.
- **Vinyl Plus:** Commitment by the European PVC industry to develop more ecological ways of producing, using and recycling this product.
- **ECVM Charter:** Sustainable practices program for European PVC manufacturers.
- **Operation Clean Sweep:** EU program to prevent the loss of microplastics at sea.
- **Green Hydrogen Platform Southern Catalonia:** Interest group led by the Rovira i Virgili University, whose purpose is the implementation of green hydrogen.
- **RE4Industry:** EU project for 100% renewable energy for electro-intensive industries.
- **Climate action of the Generalitat de Catalunya:** Commitment to achieve neutrality of CO<sub>2</sub> emissions by 2050.
- **EcoVadis:** International sustainability rating (score 85/100 en 2023).



# Compliance with the sustainable development goals (SDGs)

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





**For more information**

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