

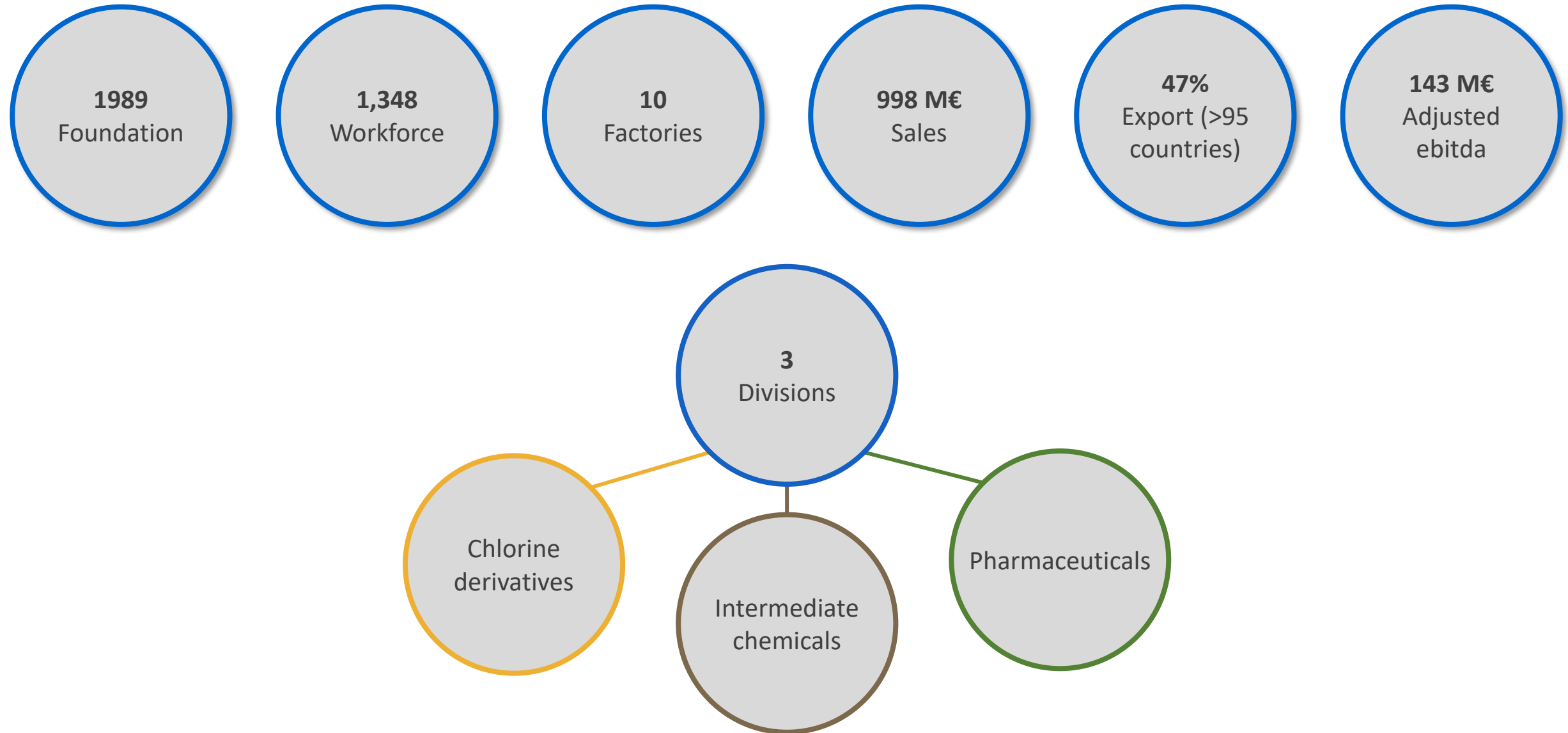


# Ercros



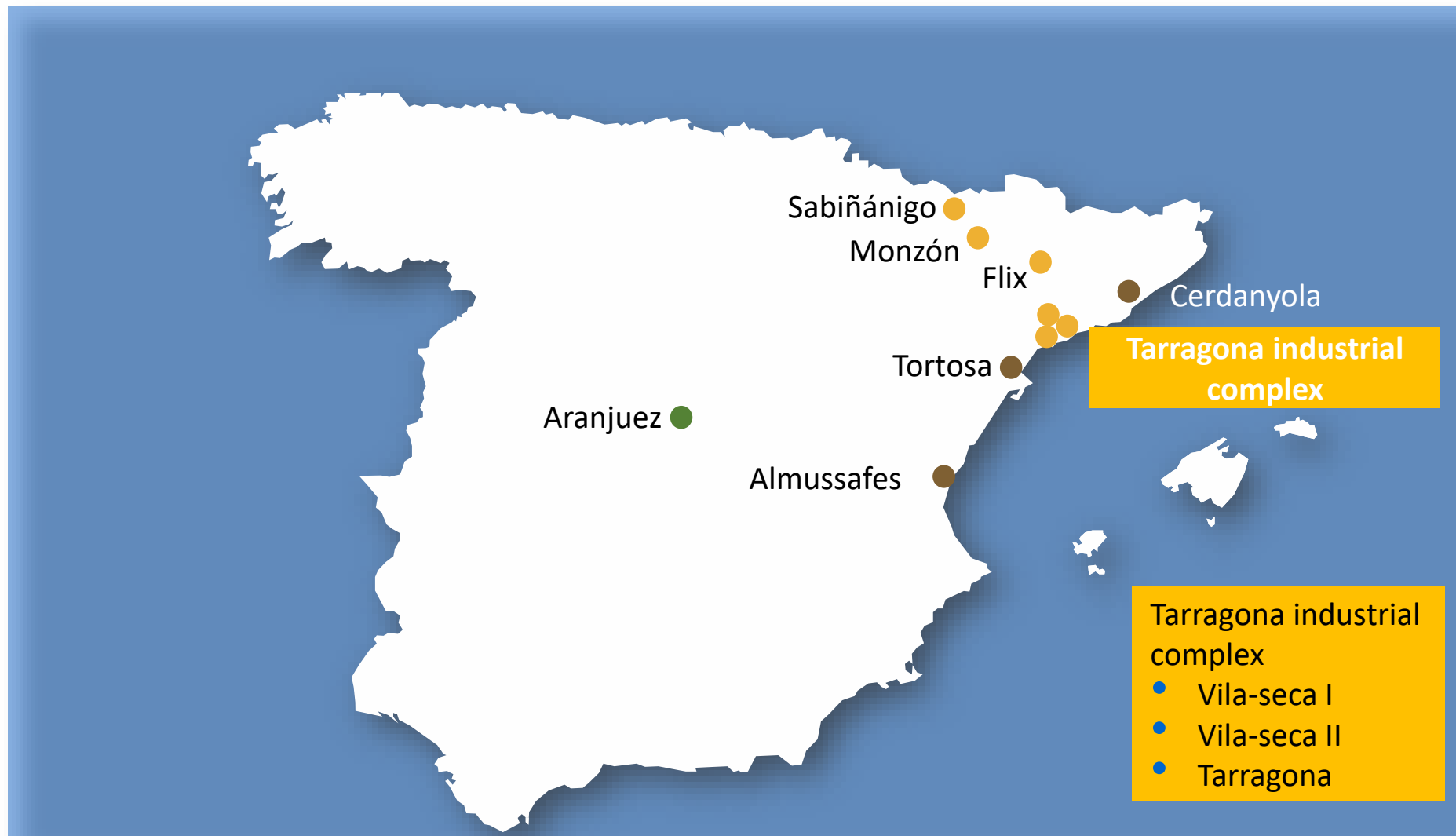
Tarragona industrial complex

# Key data. Year 2022





# Factories



Chlorine derivatives

Intermediate chemicals

Pharmaceuticals

# Key data of the Tarragona Industrial Complex (TIC). Year 2022

**331**  
Workforce

**3**  
Factories

**480**  
M€ sales

**Spain and  
the EU  
Markets**

- Vila-seca I
- Vila-seca II
- Tarragona



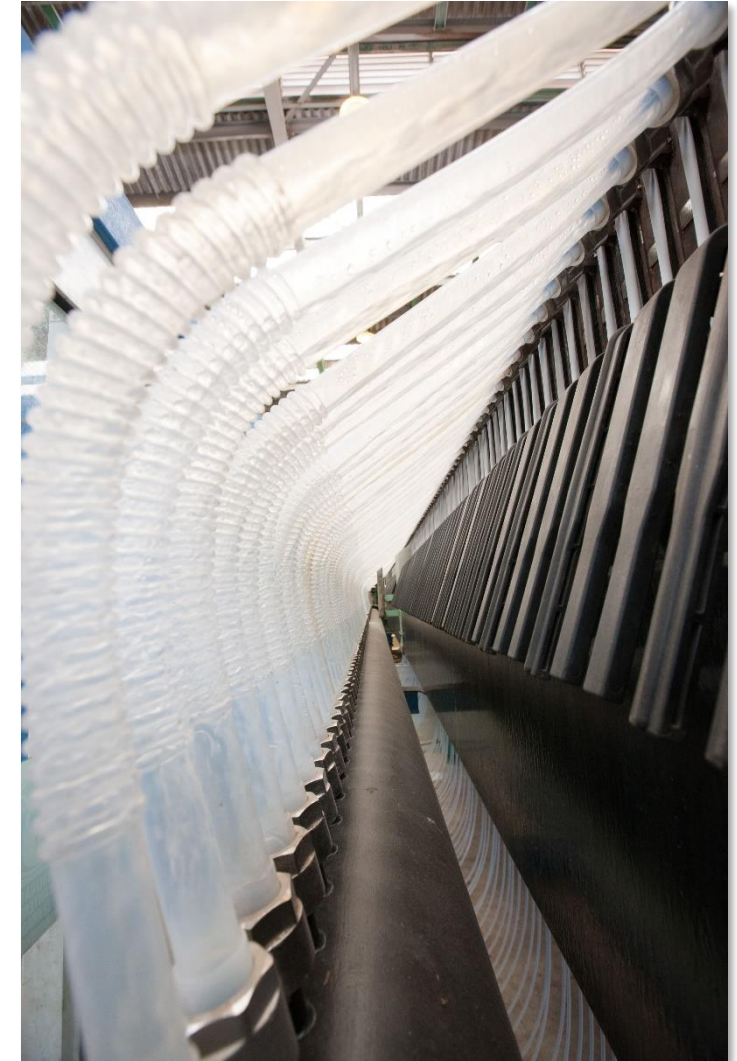


# Tarragona south industrial park



# Business model

- The main activity of the TIC is the production of chlorine, caustic soda and derivatives: sodium hypochlorite, hydrochloric acid and PVC.
- Chlorine, caustic soda and hydrogen are obtained simultaneously in the same production process, by 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 at TIC is mainly intended for the internal manufacture of chlorine derivatives, and in particular for the manufacture of PVC.





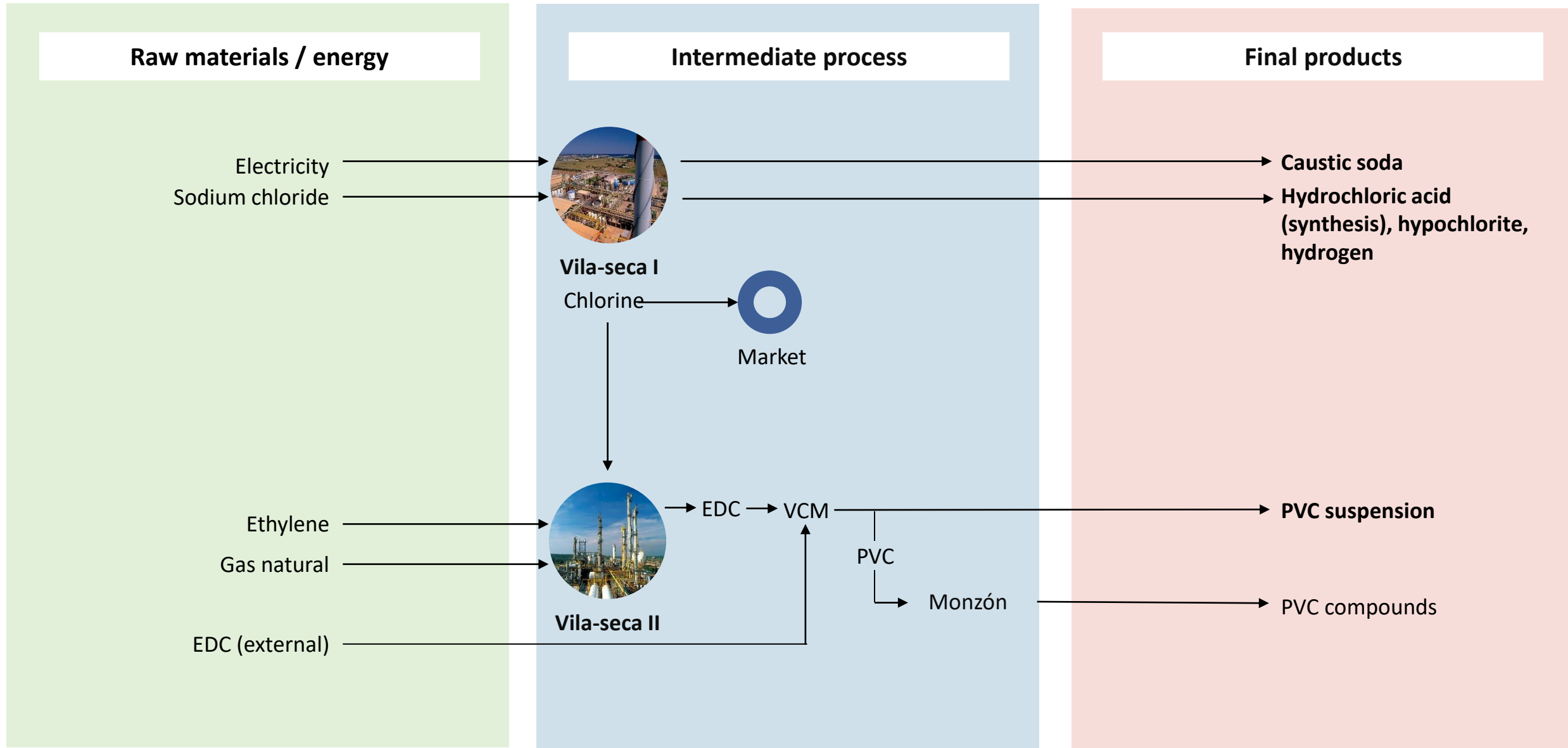
# Products, applications and market shares. Year 2022

Products	Applications
Hydrochloric acid	Industry in general
Chlorine	Manufacture of derivatives
EDC	VCM manufacturing
Sodium hypochlorite	Water treatment
PVC	Construction
Caustic soda	Industry in general
VCM	PVC manufacturing

Ranking by market share		
	Spain	Europe
Hydrochloric acid	1st	-
Sodium hypochlorite	1st	11th
PVC	1st	9th
Caustic soda	1st	9th

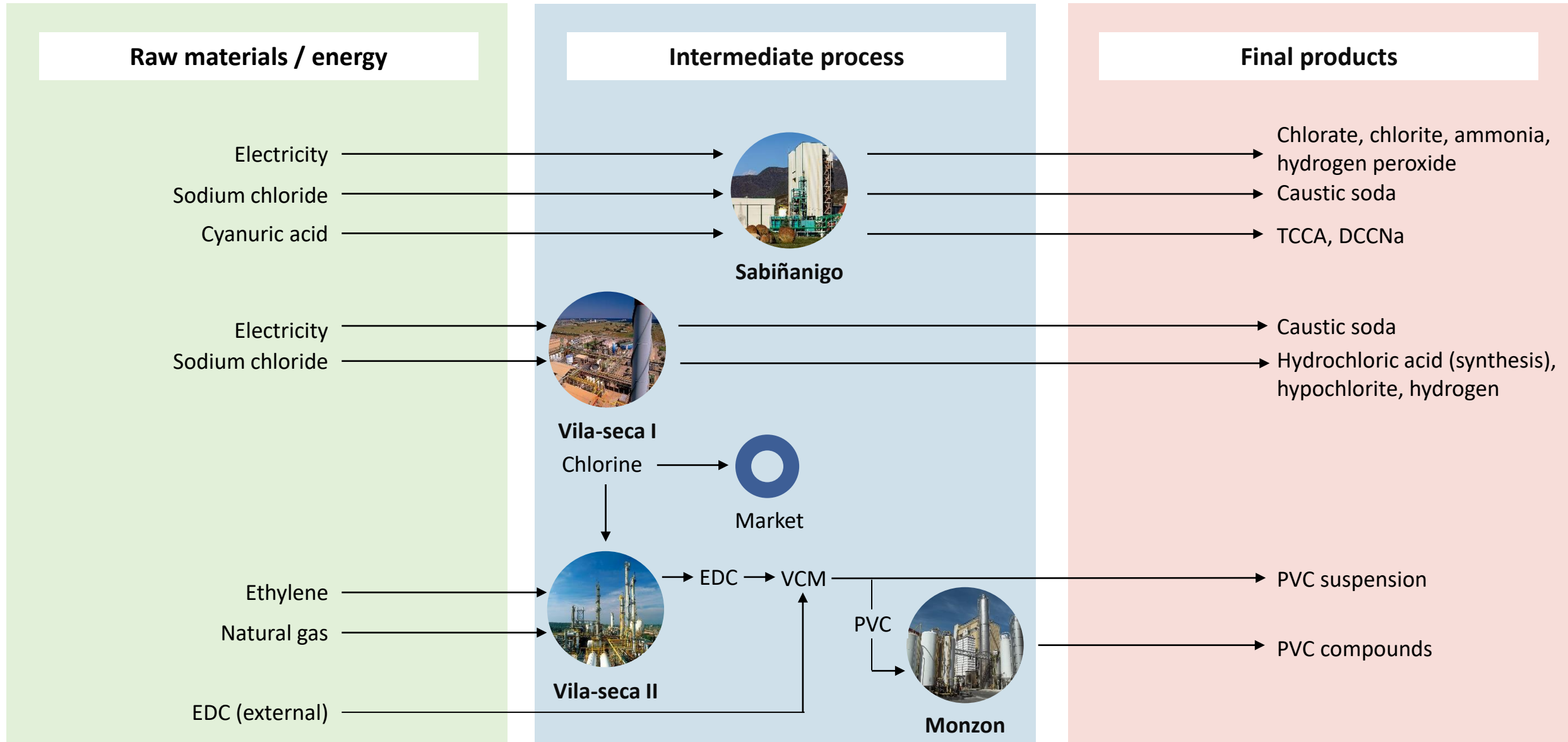
The data provided comes from calculations made by Ercros.

# Interconnection between factories





# Diagram of the division's production process



# The 3D Plan at the TIC

- The 3D Plan is the strategic plan launched by Ercros, which pursues its transformation into a sustainable company and is based on three dimensions: diversification, digitalisation and decarbonisation or the fight against climate change.
- Main actions included in the 3D Plan that affect the TIC are:
  - Use of surplus hydrogen generated and not consumed in manufacturing processes for the production of steam to replace natural gas.
  - Construction of a new steam production unit through the combustion of biomass, which is neutral in CO<sub>2</sub> emissions.
  - Change of technology of the EDC production plant to take advantage of the heat of the reaction to generate steam, which will be used as an energy source.
  - Installation of a heat recovery unit generated in the hydrochloric acid manufacturing process.
  - Implementation of Big Data, Internet of Things (IoT) and process automation.

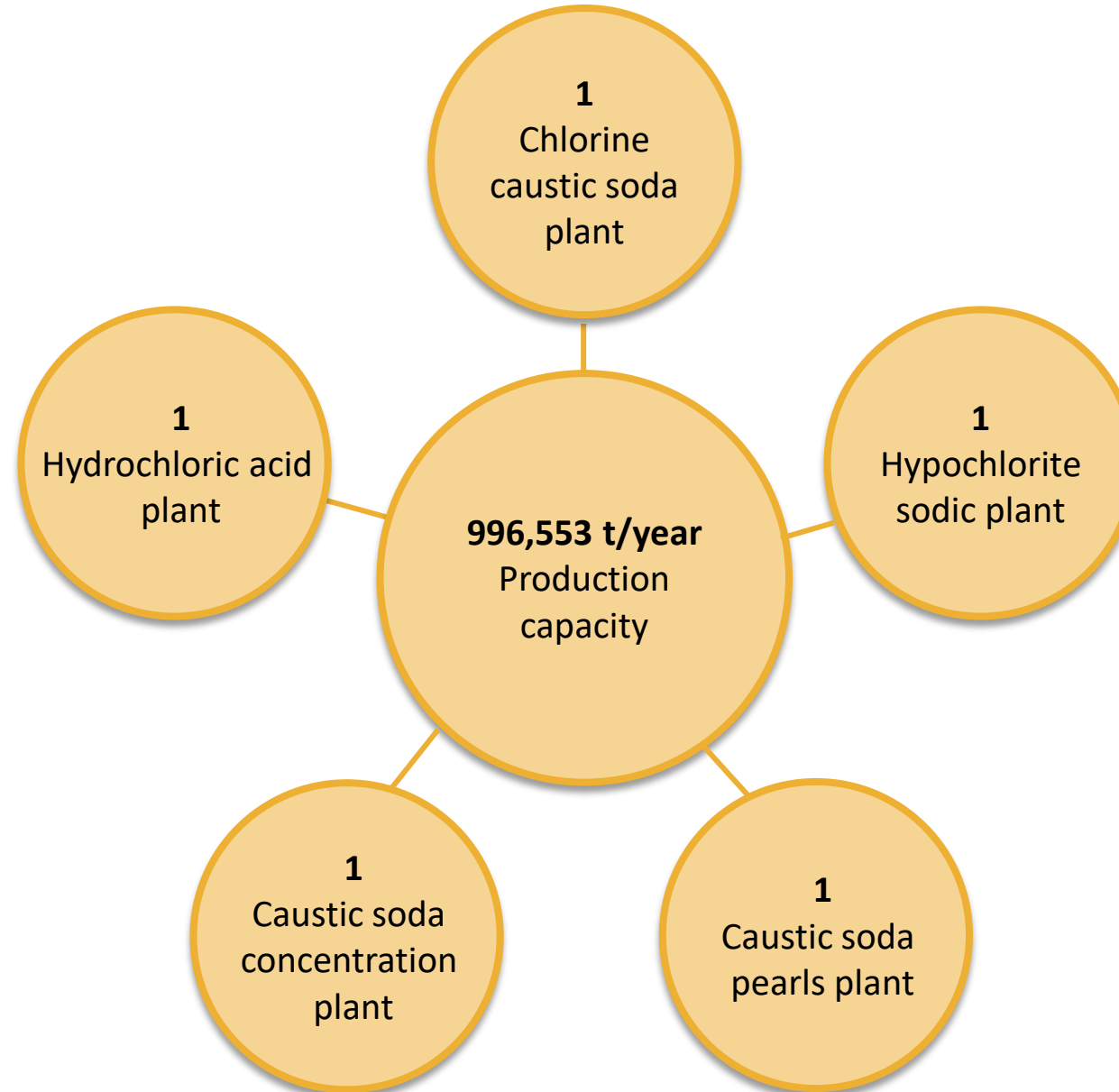




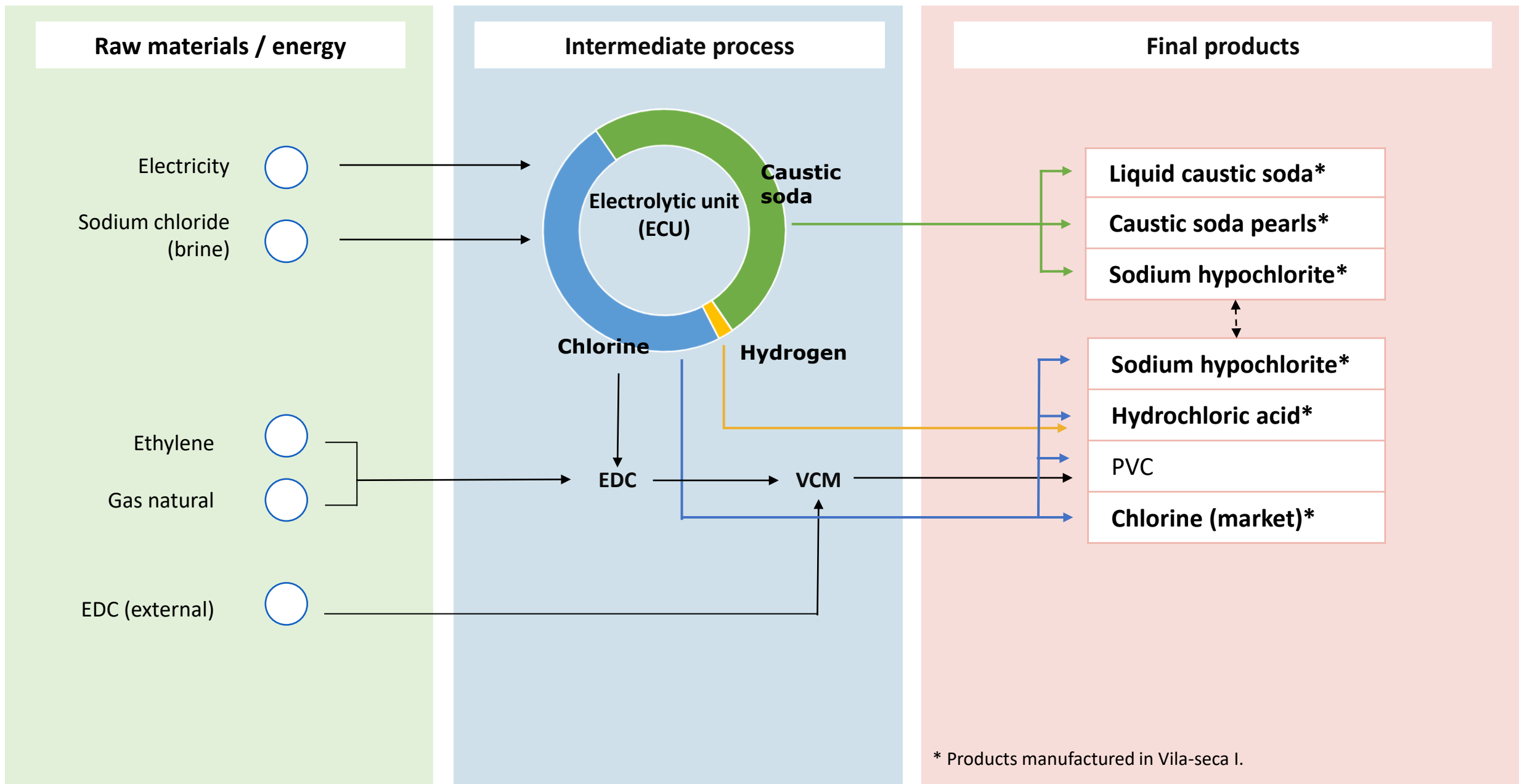
Vila-seca I factory



# Production and facilities



# Scheme of the production process of Vila-seca I



# Chlorine (Cl<sub>2</sub>)

- Chlorine is the chemical element most present in the daily activity of human beings, essential for health and to maintain the quality of life.

## Applications

- Manufacture of PVC.
- Manufacture of hydrochloric acid and sodium hypochlorite.
- Water purification.
- Disinfection of swimming pool water.

## Markets

- 20% is destined for self-consumption to manufacture chlorinated and PVC derivatives.
- The rest is sold.





# Caustic soda (NaOH)

- Caustic soda is a base product for the chemical, aluminum, textile, paper and cellulose industries.



## Applications

- Manufacture of aluminum.
- Manufacture of cellulose.
- Manufacture of detergents.

## Markets

- 30% is consumed in the centre itself.
- 80% is sold in Spain, 18% in the EU and the rest in other countries.

# Sodium hypochlorite (NaClO)



## Applications

- Water purification.
- Disinfection (bleach).
- Bleaching of paper pulp and textile fibres.

## Market

- Spain
- French

# Hydrochloric acid (HCl)

## Applications

- Industry in general.
- Pharmacy.
- Cleaning (salfumán).
- Agrochemistry and food.



## Market

- Spain

# Hydrogen (H<sub>2</sub>)

## Characteristics

- It is the most abundant chemical element on earth.
- It is a fuel with multiple applications.



## Applications

- Production of ammonia and methanol.
- Hydrogenation of fats and oils.
- Car battery as a source of clean energy.

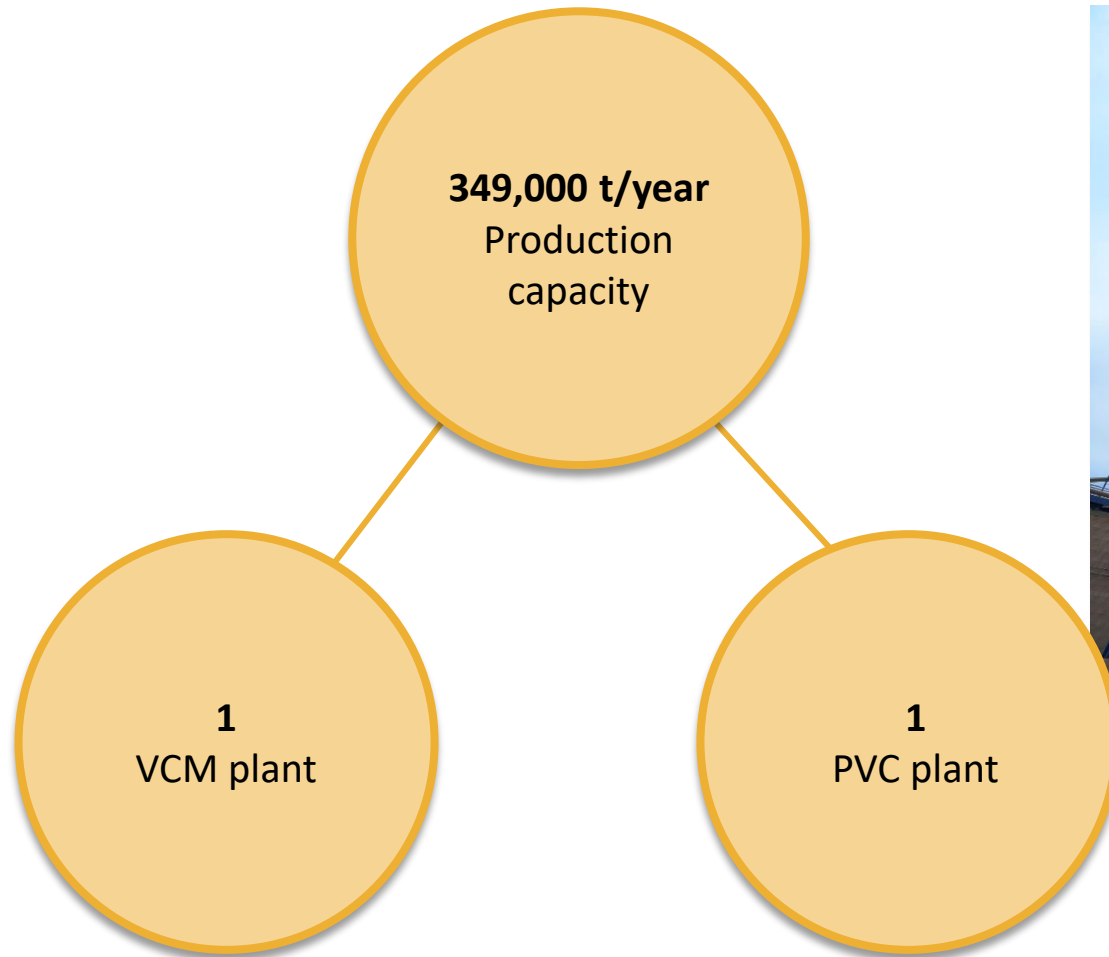
- Ercros is part of the Green Hydrogen Platform Southern Catalonia, an entity whose objective is to face the climate emergency and turn the region into a leader in energy transition.





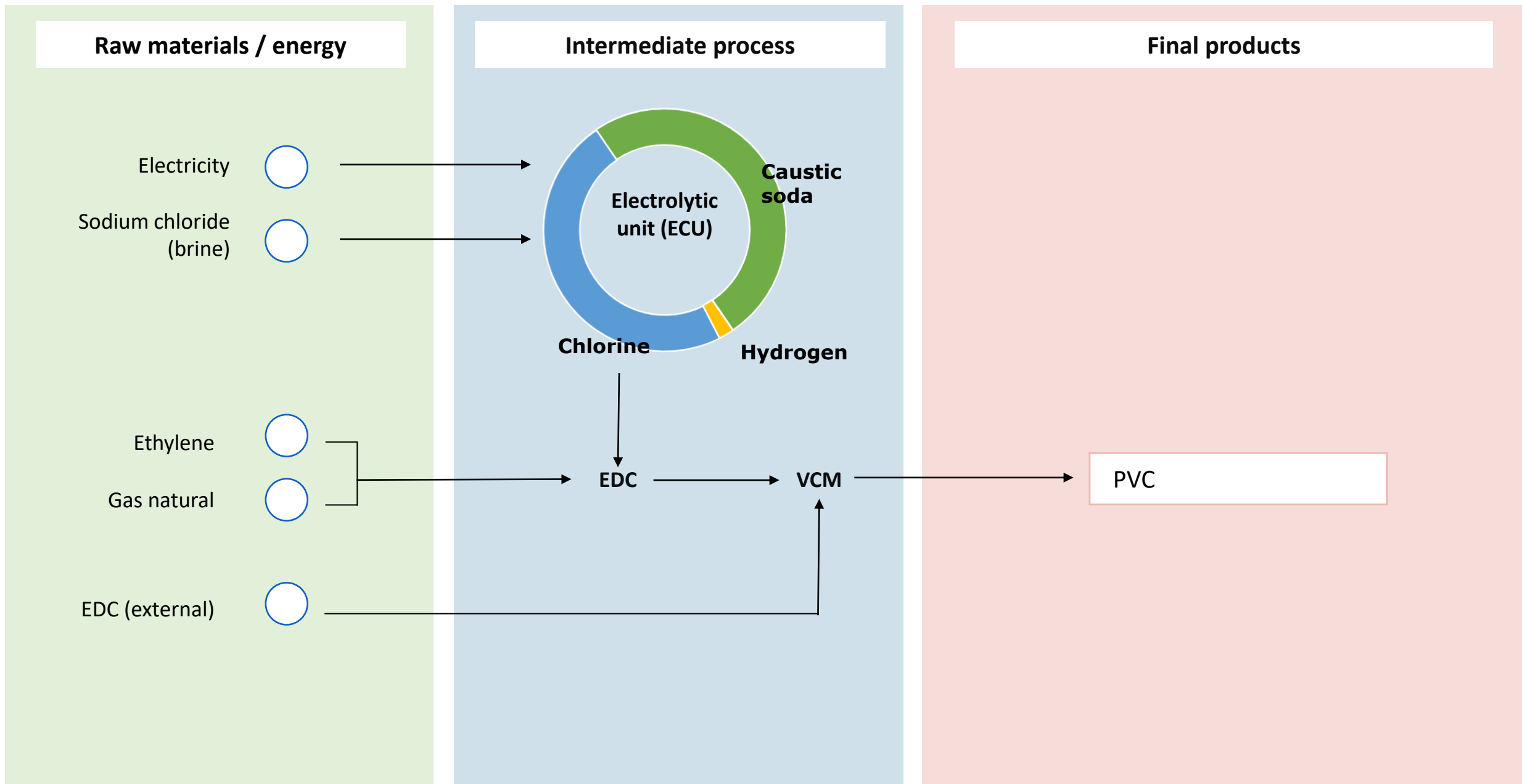
Vila-seca II factory

# Production and facilities





# Scheme of the production process of Vila-seca II





# PVC ( $(C_2H_3Cl)_n$ )

## Applications

- Pipes.
- Profiles for doors and windows.
- Cables.
- Film de PVC.
- Vinyl flooring.
- Isolates.
- PVC compounds.



## Markets

- 5% goes to the centre of Monzón to manufacture compounds.
- 65% is destined to the Spanish market and the remaining 35% is exported, mainly, to EU countries.







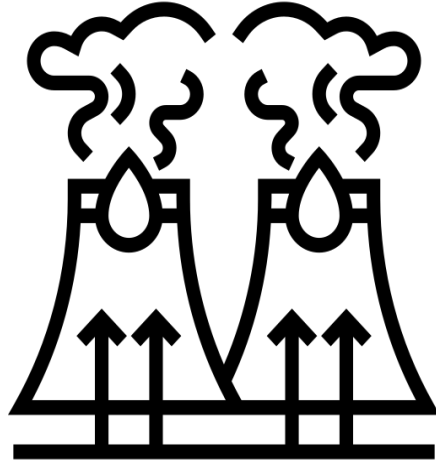
Tarragona factory



# Activity of the Tarragona factory

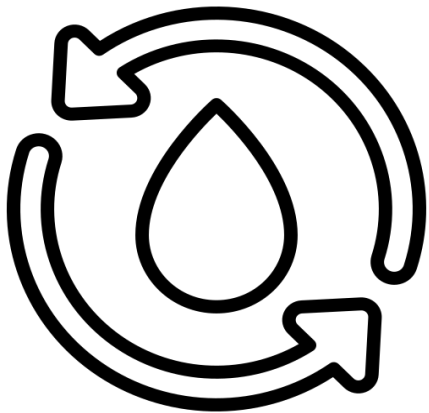
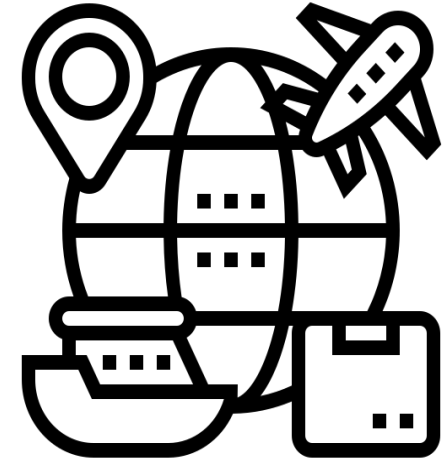
## Characteristics

- The Tarragona factory provides services to third parties.



## Auxiliary services

- Air.
- Cooling and demineralized water.
- Wastewater treatment.
- Vapor.



## General services

- Expeditions
- Prevention
- Gatehouse
- Surveillance
- Logistics



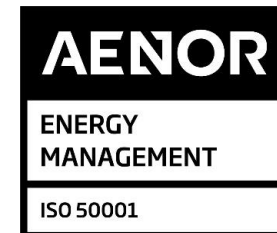
## Clients

- Andrés Pintaluba
- Sekisiu
- TDE



# ESG Accreditations

- Prevention management system according to **ISO 45001**.
- Quality management system according to **ISO 9001**.
- Energy management system according to **ISO 50001**.
- Environmental management system according to **ISO 14001**.
- Verification of greenhouse gas (GHG) emissions according to **ISO 14064**.
- Registration in the European Eco-Management and Eco-audit Register, **EMAS**.



# Programs 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 aimed at assessing the behavior of affiliated companies regarding to the climate emergency.
- **Southern Catalonia Green Hydrogen Platform:** Interest group led by the Rovira i Virgili University, whose purpose is the implementation of green hydrogen.
- **Climate action of the Generalitat de Catalunya:** Commitment to achieve neutrality of CO<sub>2</sub> emissions by 2050.
- **EcoVadis:** International sustainability rating (score 84/100 in 2022).
- **RE4Industry:** EU project of 100% renewable energies for electro-intensive industries.
- **Vinyl Plus:** Commitment of the European PVC industry to develop greener ways of producing, using and recycling this product.
- **ECVM Charter:** Sustainable practices program of European PVC manufacturers.
- **Operation Clean Sweep:** EU program to prevent the loss of microplastics at sea.



# 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.



# Associations and participations



**Rack Dixquímics**

**Ercekol**



# Thank you

**For more information**

**Ercros, S.A.**

**Tarragona Complex**

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