

November 2021. Snapshot

Machinery for the food sector

in Catalonia

Machinery for the food sector I Snapshot

ACCIÓ

Regional Government of Catalonia (Generalitat de Catalunya)



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Execution

ACCIÓ Strategic and Competitive Intelligence Unit

Barcelona, November 2021

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Scope of study of the snapshot on the food machinery sector

For the purposes of this report, the food machinery sector snapshot includes companies manufacturing specific machinery for food companies.

The companies that have been considered in the mapping develop machinery aimed at one or different business segments in the food sector: meat, beverages and coffee, bread and pastry, fruit and vegetables, as well as dairy. Moreover, the manufactured machinery belongs to a specific segment: machinery for food processing, for food packaging and labelling and for refrigeration.

In the mapping, we highlight a group of companies covering a business segment and specialisation and which also specialise in the HORECA channel.

Also included in the mapping are ancillary companies: this is a group of companies we have grouped together in the digitalisation category. They include ERP companies specialising in the food sector, as well as companies specialising in Industry 4.0. These are companies with ancillary products that have a direct impact on the machinery of production processes.

Companies in this segment are clearly influenced by international trends and opportunities as well as innovation opportunities in two sectors: **the food sector and the machinery sector.**

Source: ACCIÓ

Food machinery sector in Catalonia

The sector on an
international level

Leading companies worldwide

TOP 20



Note: Orbis data of the top 20 companies worldwide by turnover, CNAE code 2893

Source: ACCIÓ, based on Orbis

Trends in the food machinery sector worldwide (I)

There are four global technological trends related to the food sector that will, unmistakably, bring about **changes in the food machinery sector**:



- **Organic food**, being healthy in a post-COVID-19 world, increases the importance of product traceability. Going beyond traceability in production processes and food safety, aspects such as nutritional benefits and food quality are also gaining momentum.
- **The creation of alternative and cell-based proteins**, a trend based on several international reports, such as *McKinsey's* 2019 report on alternative proteins, which revealed that sales of plant-based foods are increasing every year.
- **Increasing carbon sequestration through nature-based agricultural projects**. New production systems based on new technologies and the increasing rise of alternative proteins will shift livestock production towards a more sustainable model.
- **Food as medicine**, the global COVID-19 pandemic has affected every aspect of the industry. Likewise, it has also created opportunities, such as those driving the food as medicine movement.

Source: ACCIÓ, Forbes

Trends in the food machinery sector worldwide (II)

In the machinery manufacturing sector, in general, there are a number of trends, related to changes in the industry and changes in technology that **affect the production of food machinery:**

Changes in the industry

- **Standardisation**, production companies are increasingly standardising parts and components to improve productivity.
- **Company size and concentration**, trend towards mergers and acquisitions and companies with greater production capacity, in order to be more competitive in the global market.

Changes in technologies

- **Industry 4.0**, increase in electronics and software, with the aim of improving automation, productivity, accuracy and reliability of machines.
- **Product life cycle analysis**, with increasing importance given to assessing the environmental impacts associated with all stages of a product's life, including its production. New material to reduce weight and energy consumption of capital goods. Reduction of CO2 emissions.
- **Rapid manufacturing**, reducing production processes driven by new technologies, such as *3D printing*, and others that allow prototyping and enable production processes to be carried out in a more agile and fast way.

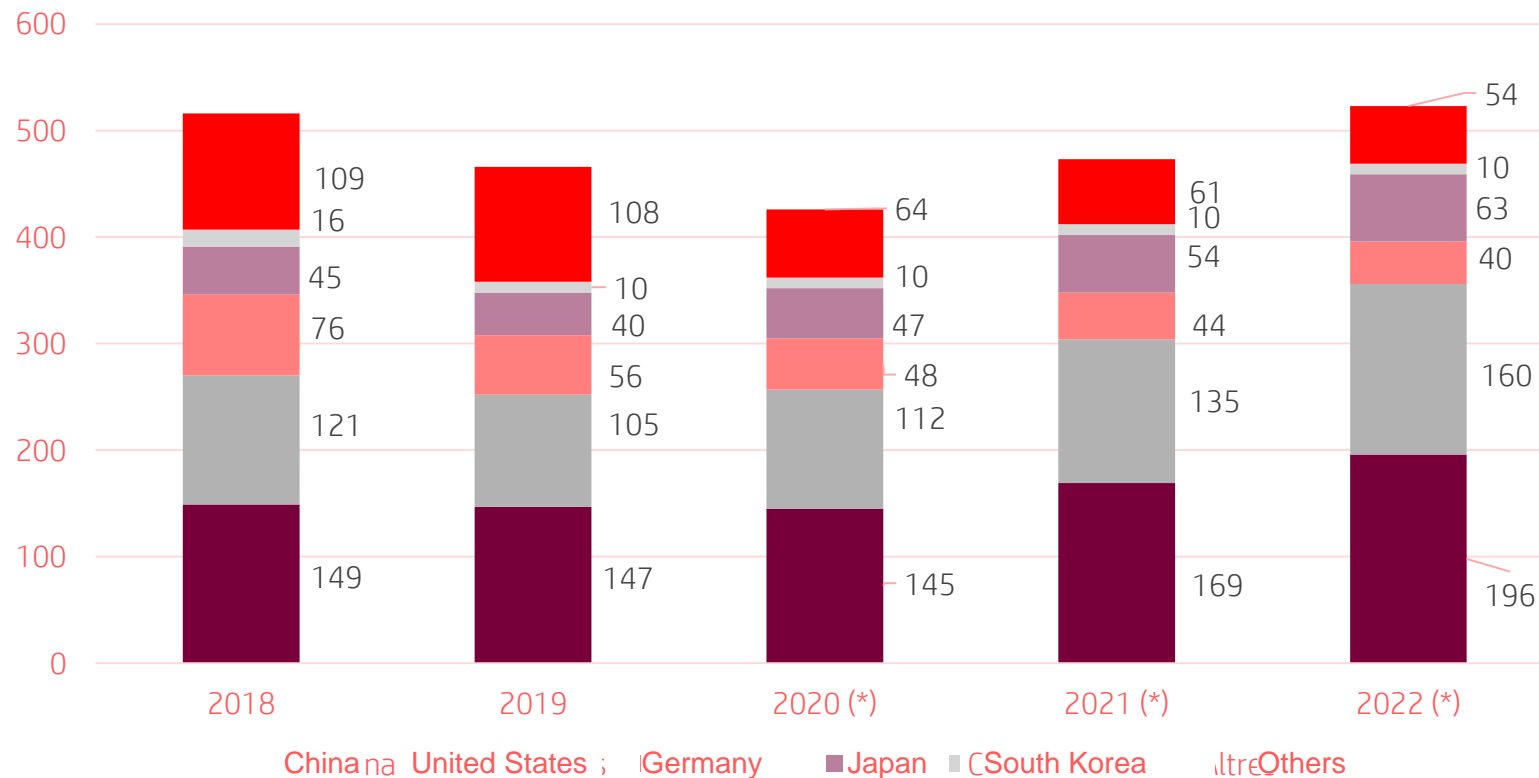


Source: ACCIÓ

Global food technology data

Sales value of new robot installations in the food and beverage industry worldwide 2018 – 2022, by country
sales in millions of US dollars

Sales of industrial robots in the food and beverage sector in 2022 are estimated to be **3%** of total industrial robot sales.



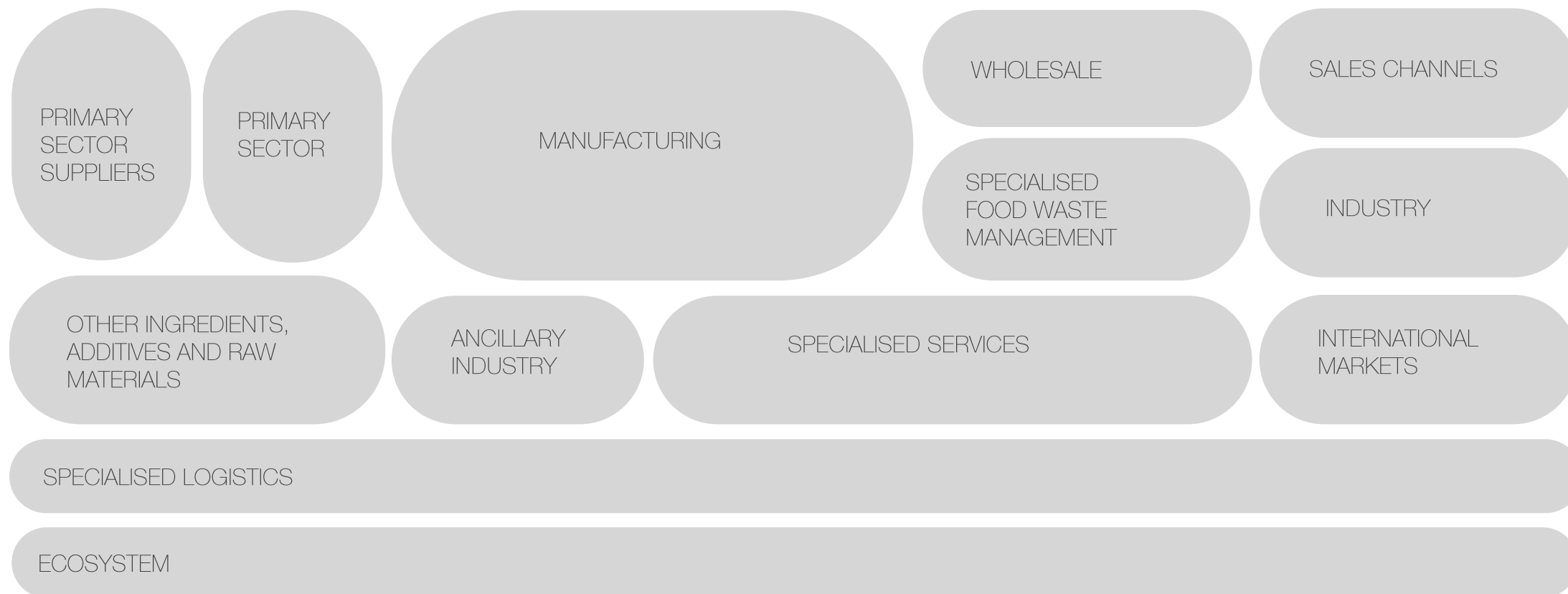
Note: (*) 2020, 2021 and 2022 data are estimates

Source: Statista

Food machinery sector in Catalonia

The sector in Catalonia

Food and beverage sector value chain



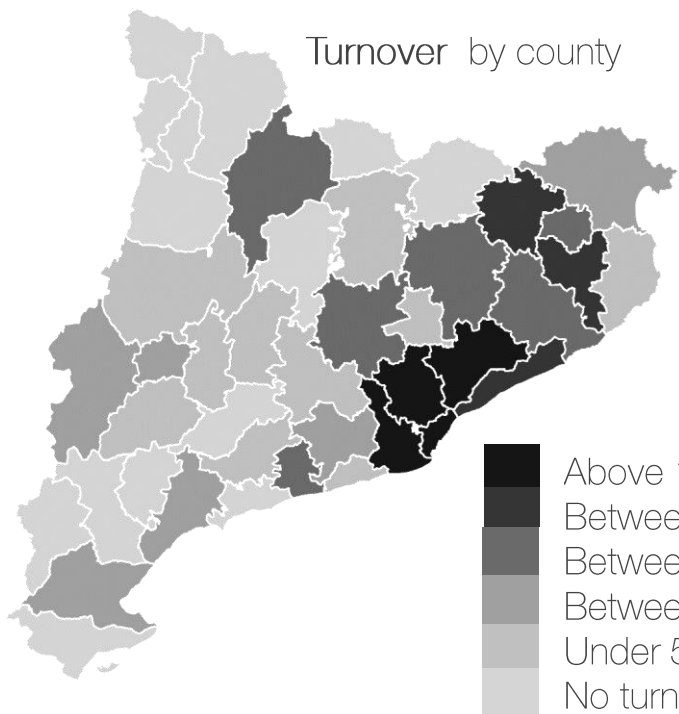
Source: Cluster Development, 2019

Focus of the food machinery sector mapping



Food machinery sector in Catalonia: mapping (I)

280 companies
1,162 millions in turnover
5,077 people employed



98% of the companies in the sector are SMEs

80% of Catalonia's turnover can be found in seven counties of two provinces: Barcelona and Girona.

84% of companies in Catalonia are exporters

88% of companies are more than 10 years old



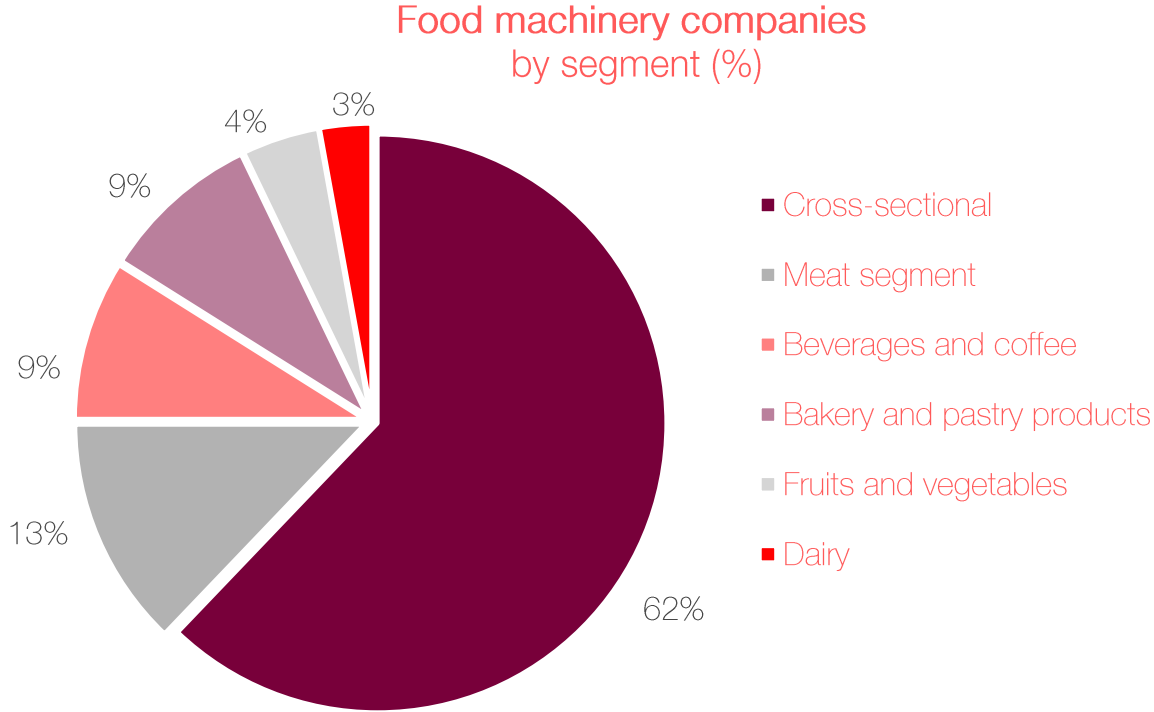
Source: ACCIÓ

Food machinery sector in Catalonia: mapping (II)

Sector-based business segment

62% of all companies in the mapping perform cross-sectional activities: they produce machinery for more than one sector segment.

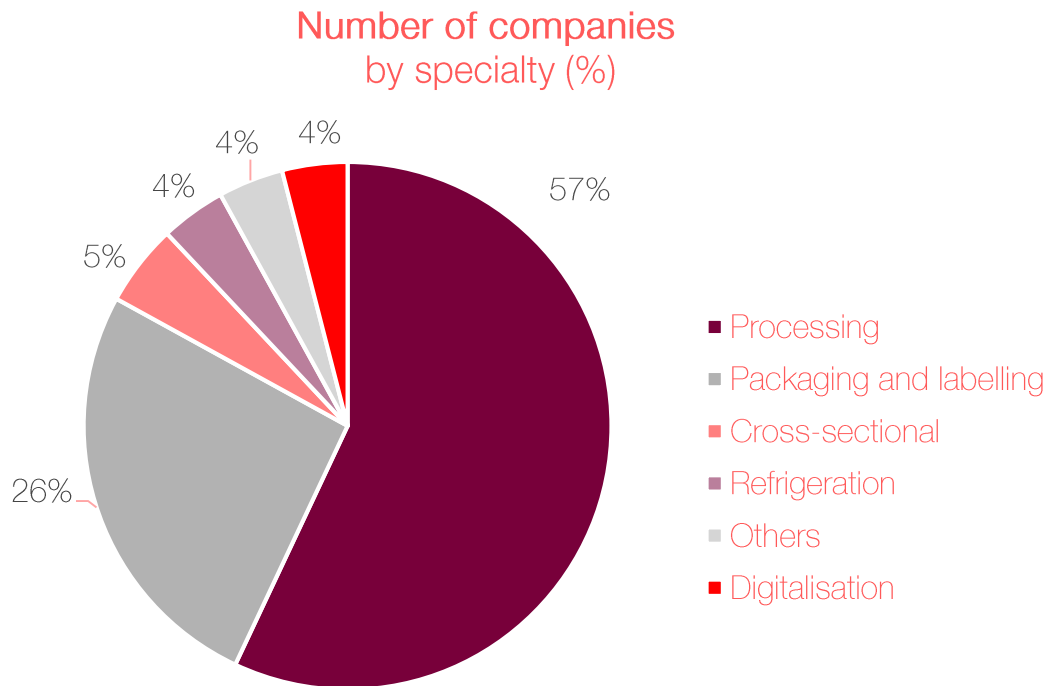
The segment with the largest number of companies specialising in a single segment is meat, with 13% of all companies.



Source: ACCIÓ

Food machinery sector in Catalonia: mapping (III)

Machinery specialty



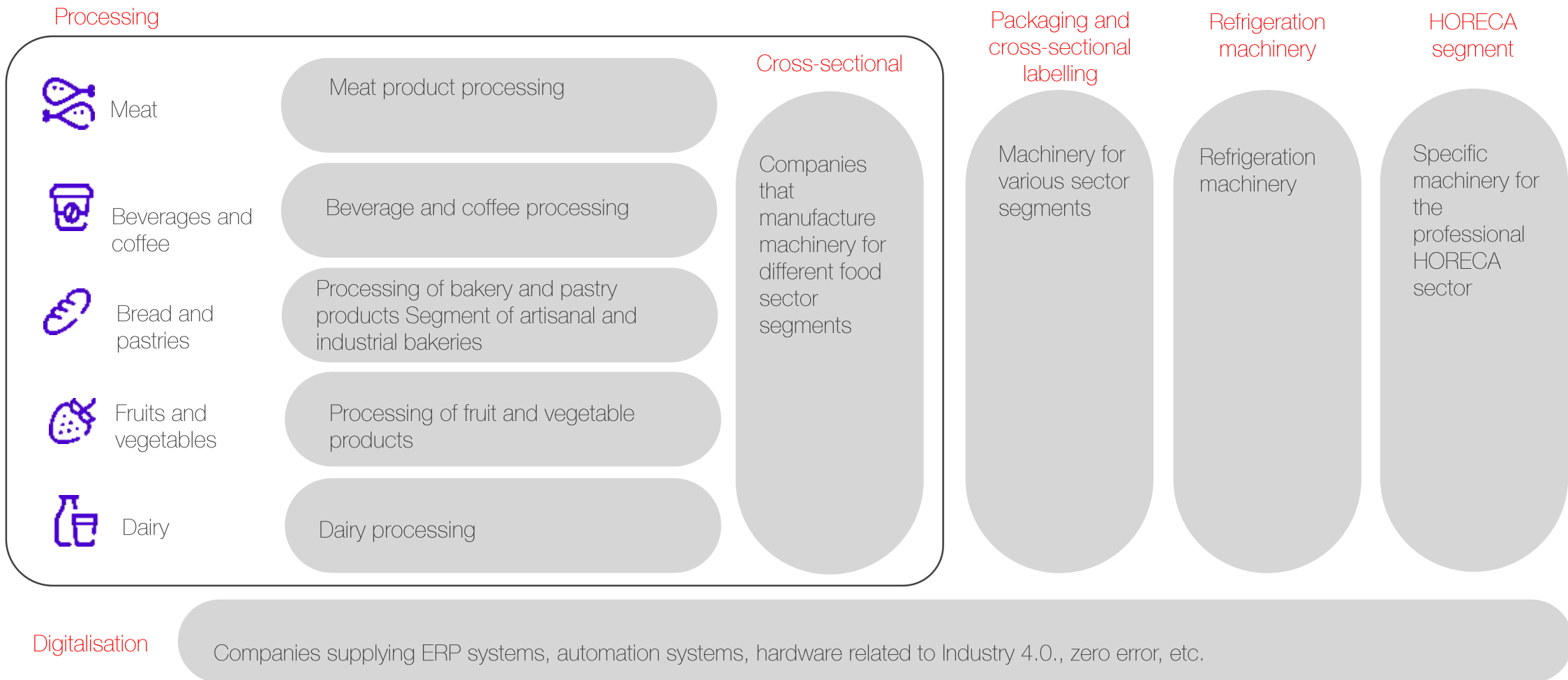
Other cross-sectorial information

14% of the companies in the mapping are distributors. Multi-brand distributors and distributors of private-label machinery not produced in Catalonia.

15% of the companies in the mapping produce machinery for the HORECA segment.

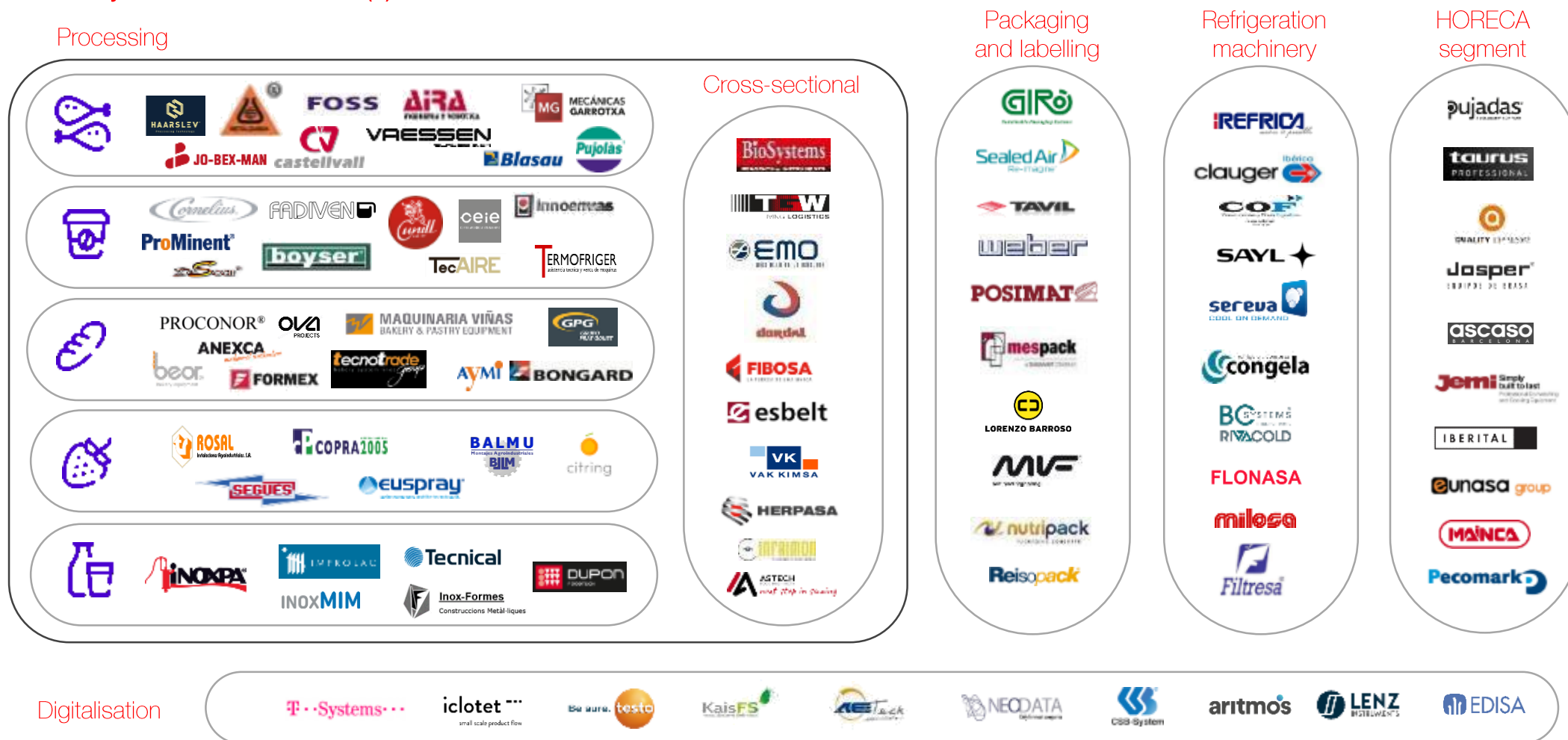
Source: ACCIÓ

Food machinery sector value chain (I)



Source: ACCIÓ

Food machinery sector value chain (II)



Source: ACCIÓ

Support ecosystem for the food machinery sector

Public policies and public development instruments



Universities and other training initiatives



Technology centres and research groups



Clusters



Business organisations



Trade fairs



Source: ACCIÓ

Foreign trade of the food machinery sector in Catalonia

€695 million

Exports (2016 – 2020)
28% of total in Spain

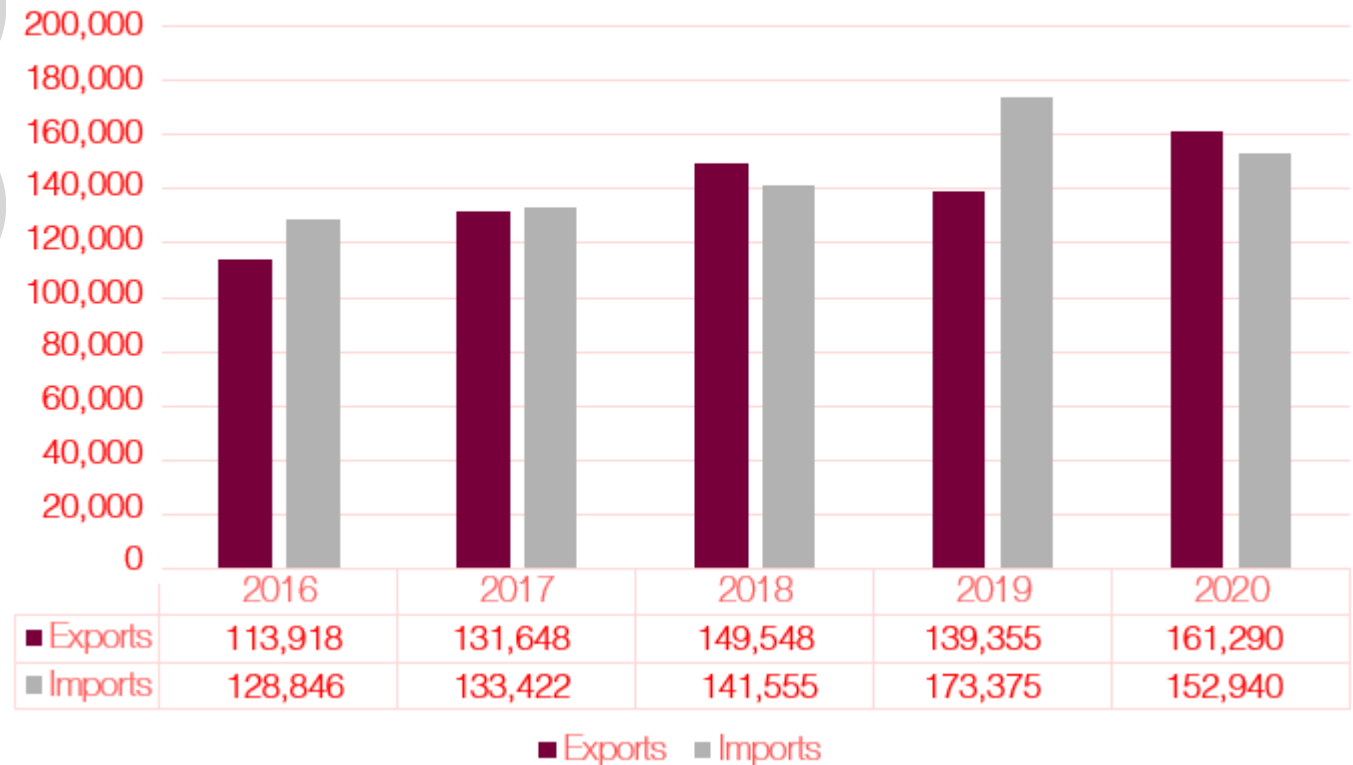
€730 million

Imports (2016 – 2020)
29% of total in Spain

In the five-year period of 2016 – 2020, Catalan exports have grown **41%**.



Export and import data in Catalonia
2016 – 2020 // thousands of euros



Source: ICEX, CNAE 2893 data

International business opportunities for the food machinery sector (I)

AFRICA



Cameroon

Industrial technology in Cameroon.



Ivory Coast

Industrial and agricultural machinery in Ivory Coast.



Ethiopia

Machinery and equipment for agriculture and agro-processing.



Ghana

Industrial technologies in Ghana.



Morocco

The Moroccan agri-food industry is looking for R&D, equipment and processes.



Namibia

Namibia offers opportunities in the food processing sector.



Senegal

Technology for the agri-food sector in Senegal.



South Africa

Inclusive reindustrialisation with 4IR, a priority for the South African government.

Source: Global Map of International Business Opportunities 2021

International business opportunities for the food machinery sector (II)



Argentina

Capital goods and machinery, necessary for agro-industry and food.



Costa Rica

Machinery, equipment and raw materials for the food industry.



Ecuador

Opportunities in technologies for the agro-industry in Ecuador.



Mexico

Incorporation of productivity-enhancing machinery.



Chile

Modernisation of the metallurgical, agricultural and metal/mechanical industries.

Source: Global Map of International Business Opportunities 2021

International business opportunities for the food machinery sector (III)

ASIA AND OCEANIA



India

Agritech and industrial machinery in India.



Kazakhstan

Agro-industrial machinery in Kazakhstan.



Myanmar

Myanmar is undergoing a delayed industrialisation process.



Nepal

Opportunities in the agricultural and processing sector.



New Zealand

Food processing and packaging machinery.



Sri Lanka

Food processing in Sri Lanka.



Thailand

Food and packaging industry in Thailand.



Uzbekistan

Uzbekistan is prioritising the modernisation of local industries.

Source: Global Map of International Business Opportunities 2021

International business opportunities for the food machinery sector (IV)



Bulgaria

Agricultural equipment in Bulgaria.



Croatia

Machinery and equipment for the agri-food industry.



Ireland

Machinery and capital goods in Ireland.



Macedonia

Agricultural equipment in Macedonia.



Poland

Investments in hardware of industrial companies in Poland.



Russia

Several Russian industries need machinery and equipment.

Source: Global Map of International Business Opportunities 2021

Opportunities: innovation

Next Generation

With the NEXT GENERATION adjustments for economic recovery, opportunities will arise for Catalan companies in two fields:

Sustainability and **digitalisation**



Horizon Europe

Horizon Europe is the EU's key funding programme for **research and innovation**. Catalan companies will be able to seek funding for their projects.



EIT Food

EIT Food, Europe's leading food innovation initiative, is working to make the **food system more sustainable**, healthier and more reliable.



Source: ACCIÓ

Opportunities: technology

Opportunities arise in the industrial sector related to new technologies. These opportunities appear in different parts of the chain.



The following technologies stand out



Big data/
artificial
intelligence

With the analysis of process and equipment variables and thanks to artificial intelligence, this improves efficiency and productivity, allows preventive maintenance while avoiding production stoppages, hence reducing maintenance costs.



Blockchain

Improves traceability and supply chain inefficiencies



Photonics

The use of advanced photonic sensors makes it possible to automate inspection and manufacturing processes, detect foreign matter and carry out quality control, hence reducing costs, energy consumption and waste.



3D printing

3D printing facilitates the development of custom machinery.



Internet of Things

Improved equipment and hardware that enables remote management. Enables a fast response and decision support.



Robotics

Process automation, which allows an increase in production, while maintaining quality and hygiene standards in those processes where repeatability and accuracy are important. E.g. *pick&place*, packaging and palletising, among others.



RV/RA

Training, maintenance, help with changeover routines to support the operator

Source: ACCIÓ and company website

Outstanding business cases in the field of food machinery (I)

Business case



Natural Machines produces the first smart kitchen appliance that speeds up the food-making process with fresh ingredients by means of a cutting-edge 3D food printer and an *IoT* (*Internet of Things*) kitchen appliance.

<https://www.naturalmachines.com>

Business case



Coolvacuum stands as a manufacturer of freeze-drying equipment. Since the company became part of the Dara Pharma Group, it has become one of the few manufacturers worldwide to offer 'turnkey' solutions for the processing of freeze-dried injectable drugs. At present, the company focuses on the needs of the pharmaceutical, chemical, nutritional, cosmetic, laboratory and R&D sectors.

<https://www.coolvacuum.com/es>

Source: ACCIÓ and company website

Outstanding business cases in the field of food machinery (II)

Business case

Braimex

The 'automated restaurant' gains a foothold in the US thanks to the Catalan company Braimex. The company has reached an agreement to distribute hot food vending machines in the US. The vending machines are located in crowded places and offer hot meals, such as burgers, pizzas, croquettes and burritos.

<https://braimex.com/>



Business case

YPSICON



Ypsicon is a technology-based company based in Barcelona. Its activity focuses on the development of new technologies, as well as the design and integration of components and equipment for the food, cosmetics and pharmaceutical industries.

<https://www.ypsicon.com/>

Source: ACCIÓ and company website

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More information on the sector, news and opportunities:

<http://catalonia.com/industries-in-catalonia/sectors/food-industries/>

