

CT drives the automation and digitalization of operations in the livestock-meat chain through the TRACVI R&D project.

CT is part of a group of multi-disciplinary organizations and companies, which have joined together to drive the optimization of product traceability and management of land logistics routes using artificial vision and data science.

The project is coordinated by Innovacc and has received a grant from NextGenerationEU funds covering 77% of the budget. Other participating partners are companies from the food sector, such as Matadero Frigorífico Avinyó (D'Avinyó) and Catalana de Embutidos (Grup Roma), and technology companies such as CT, Nevitec Vision Technologies, as well as CIAC - Clúster de la Indústria d'Automoció de Catalunya.

Artificial vision and data science to minimize human error and logistics impact throughout the whole product chain

The optimisation and automation of the processes in the food industry is growing exponentially, and the pork industry is no exception. The value chain of this sector is highly complex due to the different actors involved: livestock farms, transport agents, slaughterhouses, cutting rooms and distributors. For this reason, in-depth production control must be applied to avoid mistakes at any point in the chain. Different steps of the value chain will be addressed: cutting rooms (process and operations), distribution and transport (internal and external logistics).

In more detail and entering fully into the processes of the processing industry, in this case the cutting room, the meat traceability control and management systems are vital to identify and know the origin of the raw material, either by batch or by supplier. It is also very helpful to know the packaging and the container in which the meat is placed. This means that knowing the Kg of raw material that enter and exit the facilities will be especially important to optimise the process. In the logistics phase, which is one of the processes with the greatest impact on the meat industry, control the cold chain throughout the process is vitally important. And at every point in the value chain as well.

For this reason, this project is presented with the aim of researching new techniques to increase the control of foreign bodies in the cutting room and to maintain traceability from the cutting room to the end consumer (internal and external transport). The optimisation of logistics routes will also be affected. The solution will make it possible to optimise the production process and optimise the distribution of the producers themselves, reducing human error.

Project goals

The main goal of the project is to ensure the correct traceability of meat products from the moment they are cut, to the end consumer.

- Automate the point at which the operators are working so far.
- Ensure that there are no visible foreign bodies (plastic, gloves, etc.) on the surface of the boxes.
- Significantly reduce the environmental impact caused by the consumption of hydrocarbons, improving the quality of life of society.
- Accelerate digitalisation in the meat sector, boosting competitiveness at the national and international levels.
- Increase knowledge in enabling technologies 4.0.
- Change in the organisation of existing processes.
- Improvement in the planning and allocation of resources.
- Availability of historical and real-time data to design routes.
- Lower costs thanks to improved traceability and detection of foreign bodies.

Participants:

- Matadero Frigorífico de Aviñó SA
- Catalana de Embutidos SA
- Nevitec Vision Technologies SL
- CT Ingenieros de Catalunya, A.A.I SL
- CIAC – Clúster de la Indústria d'Automoció de Catalunya
- INNOVACC

About TRACVI: AEI2022b project, approved in the AEI 2022 NG grant line. “Optimising product traceability and management of land logistics routes using artificial vision and data science”.

Total proposed budget	Estimated grant
€151,762.53	€117,407.04

With the support of:

