The World Health Organization estimates that 600 million people fall ill each year as a result of eating contaminated food, with 420 000 dying due to foodborne diseases. Spanish start-up, YPSICON, aims to tackle this issue via their unique and environmentally friendly sterilisation solutions.

The company, born out of the Universitat Autònoma de Barcelona in 2011, set out to overcome the obstacles presented by the traditional, heat-based approach to sterilising food, which – while it is effective in killing microbes – can also reduce the nutritional value of the food. The sterilisation technology the team developed is based upon ultra-high pressure.

In the early stages, the company faced three main challenges. The initial prototypes were very small, so there was a considerable task ahead to scale the technology up to make it fit for industrial supply chains. The equipment was expensive, which made it hard to bring an attractive commercial proposition to market. They also had to ensure that the technology was extremely reliable, both for commercial and regulatory reasons.

Continuous modification of the technology enabled the company to overcome these challenges and produce a solution to process 10,000 litres per hour. It is designed to be as environmentally friendly as possible, and is capable of reducing the carbon footprint of the process by approximately 88%. Together with securing the intellectual property of the technology, the foundations had been laid for future success.

Expanded networks

YPSICON is a pure technology company, so works in partnership with industrial companies to build and install the industrial equipment into the food supply chain. The company worked hard to develop key contacts with vendors across the most important food multinationals, as well as a large number of SMEs in the food and beverage sector. They have projects ongoing with several big names in the industry, and have agreements to implement the technology in industrial production.

The partnership with EIT Food has been crucial in developing these connections. YPSICON work closely with the AZTI food technology centre in Spain on a number of European projects, and they proposed involvement in a project with EIT Food in 2016, which resulted in the company becoming part of EIT Food’s RisingFoodStars network.

‘EIT events provide a great way to interact with key players from the food industry, as well as start-ups that we may have synergies with,’ YPSICON’s Leo Moreta said. ‘EIT Food is a great and unique ecosystem for innovation and allows interactions between science, entrepreneurs, universities and the big food multinationals, and provides a coming together of the food innovation community that doesn’t happen anywhere else.’

Innovation in Europe

The food industry in Europe employs over 4.5 million people, with a turnover of EUR 1.1 trillion per year. It’s vital that the sector remains innovative at a time of growing pressure to provide affordable, nutritious food with minimal environmental footprint. This requires an ecosystem that produces great innovations and supports those innovations with the finance and route to market to help them reach scale.

‘I think there is a lot of innovation in Europe, but the landscape and ecosystem is perhaps less innovation friendly,’ Moreta said. ‘There are many innovative people, but in other regions they might have more funding opportunities with a greater acceptance of risk.’

For existing and budding entrepreneurs, however, Moreta believes the start-up lifestyle affords a tremendous opportunity to be creative and really step outside of your comfort zone. The smaller scale of start-ups provides the ability to try things in a way that is often impossible in larger, more bureaucratic organisations, with the ability to make fast decisions and pivot accordingly, a key advantage.