

Food manufacturers turn to robots to meet consumer needs

The importance of technology for food manufacturers continues to grow, according to our report, '[Food tech: technology in the food industry](#)'

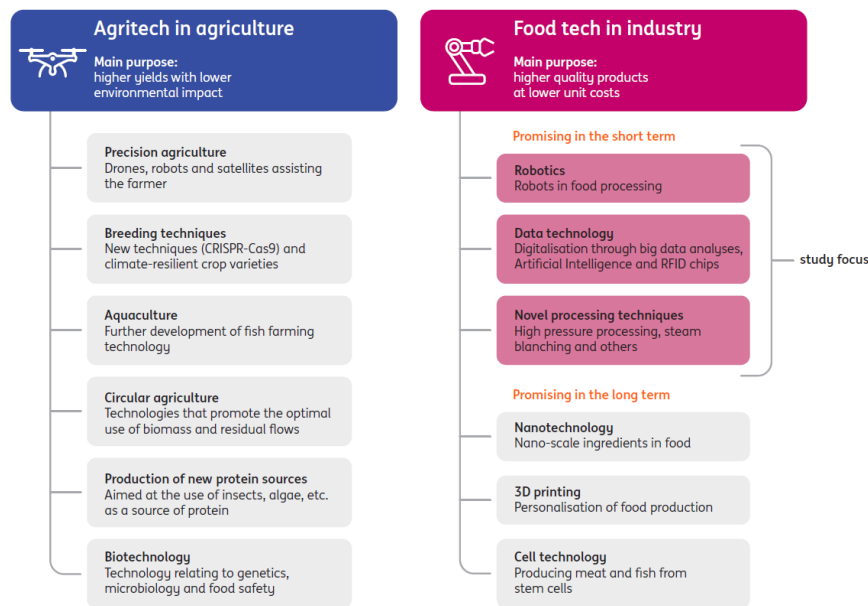


Source: iStock

Promising technologies for the food industry

Growing demands from customers, consumers and society raise the bar for food manufacturers and are having an impact on the uptake of technologies within the food industry. Retailers require larger volumes of food at low prices while pressures from consumers and society call for more measures to be taken for health and sustainability purposes. These demands are driving the need for the implementation of new technologies, such as robotisation and digitalisation, to help food producers increase productivity and improve production standards. Besides these key technologies, food manufacturers are also closely involved with the development of new technologies in agriculture as these help them to secure a high-quality and reliable supply of 'raw materials'.

Promising technologies within food & agriculture



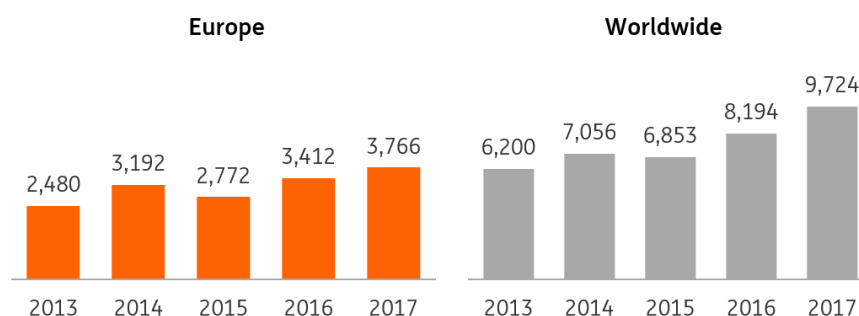
Source: ING

Robotics is becoming more commonplace

Robots are increasingly used within food production since innovations in image recognition technology and gripper technology have enabled robots to see and feel. This allows them to handle delicate and diverse food products and function in challenging environments, including heat, moisture and cold. At the same time, less human interference also reduces the risk of contamination, helping producers comply with strict food safety requirements. In Europe, robot sales to the food industry increased with 50% over the last five years.

Robot sales to the food industry are increasing

New robots sold to the food and beverage industry, per year



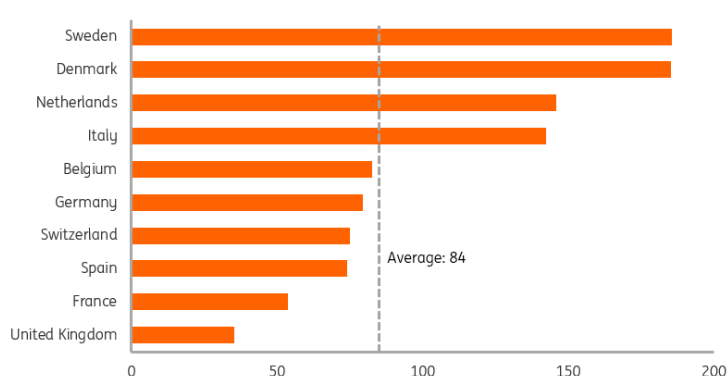
Source: International Federation of robotics (IFR)

High labour costs are a driver for robotisation in Europe

European food manufacturers account for almost half of the current worldwide robot stock in the food industry. The level of robotisation in the industry varies significantly between countries. Robot density, the number of robots per 10,000 employees, is especially high in Sweden and Denmark. These countries have relatively high labour costs, just like runner-ups including The Netherlands and Italy, increasing the need to automate manual labour.

Nordic countries have highest robot density in food & beverage industry

Robot stock in food & beverage industry per 10.000 employees



Source: International Federation of Robotics, Eurostat, calculations ING Economics Department

Food supply chain is getting digital

Besides the growing deployment of robots, food manufacturers increasingly turn to data technology. Applications in food production range from Artificial Intelligence software that improves the capacity use of production lines to digital field logs that help predict supply from farms and lead to a better match between supply and demand. The digitalisation of food supply chains is also used to create transparency from farm to fork, enabling consumers to trace the origin of an increasing number of food and beverage items in their shopping baskets.

Tech investment and human capital investment: Two sides of the same coin

For all opportunities robotisation and digitalisation bring to the food industry, increasing the complexity of production processes will also have its impact on the labour market. Labour productivity is set to increase further as employees will have more sophisticated machines and data tools at their disposal. Some jobs will disappear, others will change and new jobs will be created. As the skillset of employees within the food industry changes, investment in technology should go hand in hand with investment in human capital.

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