

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](#)'

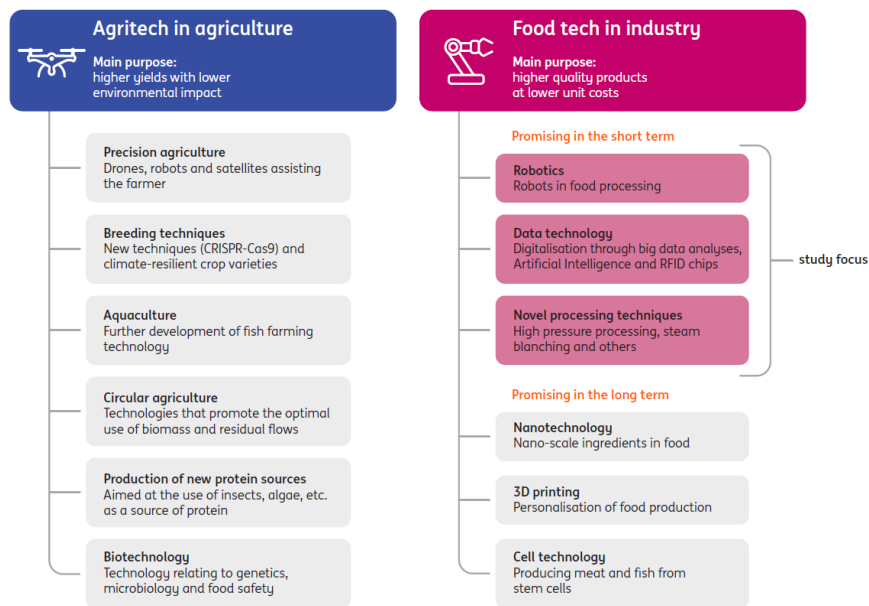


Source: iStock

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



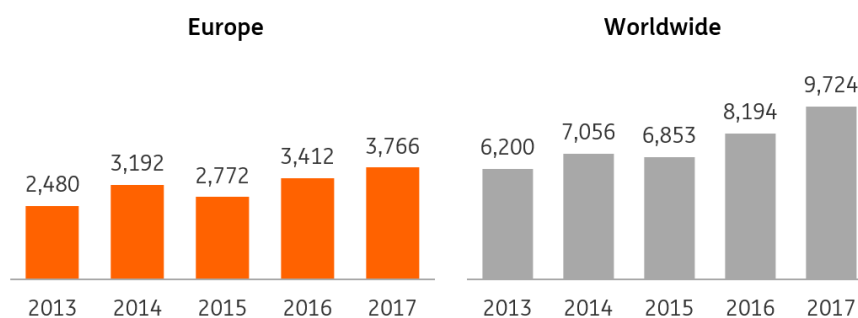
Source: ING

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



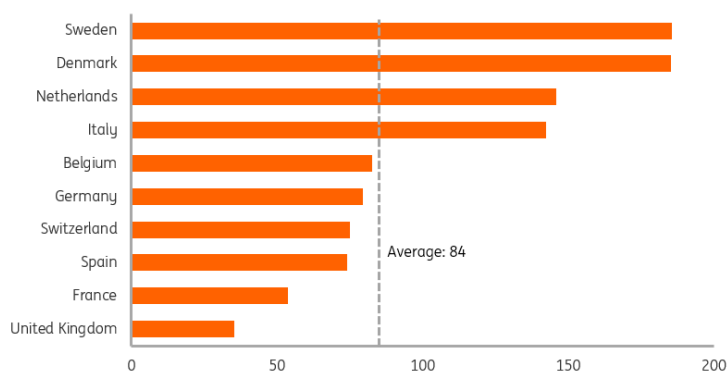
Source: International Federation of robotics (IFR)

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.

Author

Thijs Geijer

Senior Sector Economist, Food & Agri

thijs.geijer@ing.com

Disclaimer

This publication has been prepared by the Economic and Financial Analysis Division of ING Bank N.V. ("ING") solely for information purposes without regard to any particular user's investment objectives, financial situation, or means. *ING forms part of ING Group (being for this purpose ING Group N.V. and its subsidiary and affiliated companies).* The information in the publication is not an investment recommendation and it is not investment, legal or tax advice or an offer or solicitation to purchase or sell any financial instrument. Reasonable care has been taken to ensure that this publication is not untrue or misleading when published, but ING does not represent that it is accurate or complete. ING does not accept any liability for any direct, indirect or consequential loss arising from any use of this publication. Unless otherwise stated, any views, forecasts, or estimates are solely those of the author(s), as of the date of the publication and are subject to change without notice.

The distribution of this publication may be restricted by law or regulation in different jurisdictions and persons into whose possession this publication comes should inform themselves about, and observe, such restrictions.

Copyright and database rights protection exists in this report and it may not be reproduced, distributed or published by any person for any purpose without the prior express consent of ING. All rights are reserved. ING Bank N.V. is authorised by the Dutch Central Bank and supervised by the European Central Bank (ECB), the Dutch Central Bank (DNB) and the Dutch Authority for the Financial Markets (AFM). ING Bank N.V. is incorporated in the Netherlands (Trade Register no. 33031431 Amsterdam). In the United Kingdom this information is approved and/or communicated by ING Bank N.V., London Branch. ING Bank N.V., London Branch is authorised by the Prudential Regulation Authority and is subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. ING Bank N.V., London branch is registered in England (Registration number BR000341) at 8-10 Moorgate, London EC2 6DA. For US Investors: Any person wishing to discuss this report or effect transactions in any security discussed herein should contact ING Financial Markets LLC, which is a member of the NYSE, FINRA and SIPC and part of ING, and which has accepted responsibility for the distribution of this report in the United States under applicable requirements.

Additional information is available on request. For more information about ING Group, please visit <http://www.ing.com>.