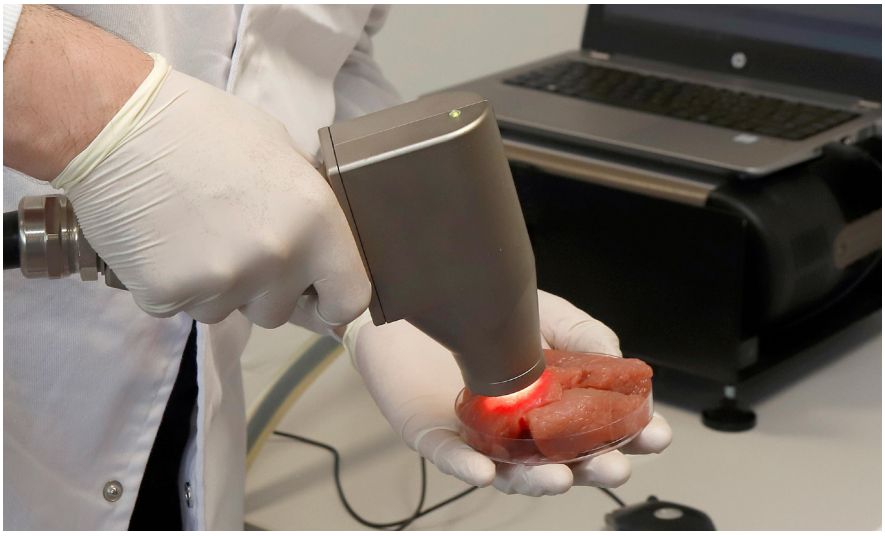
ZEROW
innovations for zero food waste

ZeroW has received funding from the European Union's Horizon 2020 programme under grant agreement No 101036388.

Funded by the European Union



Food waste reduction through advanced data-driven production process control and optimisation

It has been clearly demonstrated that the digitalisation status of food processing SMEs is closer to Industry 2.0 than the targeted 4.0. A significant gap is also evident in large food processing companies when compared with their counterparts in other industries. This has a significant impact, such as:

- The calculation of food loss and waste is mainly qualitative.
- Common lab practices are offline, destructive, and time-consuming (hours or days), limiting the implementation of corrective actions.
- Food control and optimisation strategies are mainly based on the analysis of a limited amount of monitoring data.

As a result, a more evidence-based system is needed to optimally balance trade-offs among, e.g., production rate, product quality, and food loss. To respond to this increasing need, this pilot is focused on ALDELÍS processing line, and it works on the development and piloting of advanced digital tools:

- Two applications based on the use of a handheld sensor device based on Near InfraRed (NIR) technology and the development of corresponding chemometrics for the real-time determination of salt content on chicken and turkey minced-based products.
- One optimization layer addressed to quickly and easily extend the applicability of the previous models to other types of minced meat products produced by ALDELÍS.
- Optimisation of the defrosting process based on the intelligent analysis of data acquired ■