

shelf monitoring



store delivery and pre-sorting



initial shelf filling



refilling from the backroom



Novel mobile robotic systems in close and smart collaboration with humans will allow addressing the **main in-store logistics processes** for retail stores, leading to a smarter shelf refilling in supermarkets

ambition

REFILLS is aimed at introducing robotics solutions to **improve logistics** processes in supermarkets, revolutionising their current structure. In grocery retailing, in-store operations account for the **highest share** of logistics costs. Towards this goal, **scientific and technological progress** is expected in cognition-enabled and reactive control, perception, human-robot collaboration, robot design and integration.

approach

REFILLS will address all the current manual processes of in-store logistics using **novel modular robots**. The "smart shelf refilling" will be demonstrated through **three scenarios**: autonomous robotic monitoring of goods on the shelves, shelf refilling using robots in **collaboration** with the supermarket clerks, and **fully autonomous** robotic refilling.

impact

REFILLS will contribute to maintain **competitiveness** of the bricks-and-mortar retail businesses, ensure supply **reliability**, strengthen the **European market share** in professional service robotics. **Better workplaces** are also expected, with reduced barriers in **human-robot collaboration**, relief of staff and more attractive jobs in the retail environment with **improved ergonomic** conditions.