

The Challenge of Food Waste

Retailers step up to the next level
of inventory management

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About Planet Retail

Planet Retail's database ...

- provides retailers, suppliers and investors with critical insights on the global retail industry that create competitive advantage
 - has macroeconomic insights into 211 countries
 - monitors 7,000 retail and restaurant operations
 - delivers daily news, a weekly magazine, reports, executive opinion briefings
- Continually updated by global team of analysts.

The screenshot shows the Planet Retail website dashboard. At the top, there is a navigation bar with the Planet Retail logo and a search bar. Below the navigation bar, there is a main content area with several sections:

- Welcome to our new site!**: A banner with a sunset background and a "Listen here" button.
- DATA ANALYSIS**: A section with tabs for "Retail Rankings" and "By Data". It includes links to generate customized tables for "Retailer Data" and "Business Data".
- NEWS & INSIGHT**: A section with a "Full" tab and a "Page" icon. It displays several news items, including "Carrefour says 'Good' for Carrefour's Third Quarter", "Wendy's parent's Q3 reports disappointing", "JD-GROUPO's quarterly FY results", "STOCK MARKET posts strong Q3 results", "BURGER & HOLEY tests new chicken's area", and "CASHEO Big Carrefour CAPPEPOUR's Third quarter".
- REPORTS**: A section with a "Process" tab and a "Priority" icon. It displays a report titled "Can Carrefour planet save Carrefour?".
- CUSTOMISE HOMEPAGE**: A section with a "Full" tab and a "Page" icon. It allows users to add various content blocks to their homepage, including "Companies & Banners", "News & Insight", "Data Analysis", "Reports", "Cometix", "Images", "Site Tours", and "Latest Updates".
- LATEST UPDATES**: A section with a "Full" tab and a "Page" icon. It displays a list of updates.
- COMPANIES & BANNERS**: A section with a "Full" tab and a "Page" icon. It displays a list of companies and banners.
- STORE TOURS**: A section with a "Full" tab and a "Page" icon. It displays a list of store tours.

On the right side of the dashboard, there is a "MY ACCOUNT" section with a "Full" tab and a "Page" icon. It displays the user's account information, including the account manager's name, email, and phone number. There is also a "Help on this page" link and a "Planet Retail Alerts" link.

Sample Clients of Planet Retail



IT & Supply Chain Research

- In-depth insights into the retailers' technology deployment, logistics and supplier collaboration (ECR) strategies.
- Comprehensive IT & Supply Chain coverage for the world's top 50 retail groups.
- Enhanced IT & Supply Chain coverage of all operations monitored.
- Updated on a daily basis.
- Background, journalistically researched and written, also on failed projects. Not a collection of 'success stories'.



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The problem of food waste

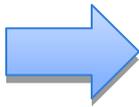
Discarded produce in highly developed markets entails environmental, economic and social problems.

- UK homes through away 8.3 million tonnes of food every year. This costs the average family with children EUR785.
- Food wasted by the US and Europe could feed the world three times over.
- In terms of CO₂, the removal of food waste would be the equivalent of removing one in four cars off the road.



Unsold food is one of the major challenges for grocery retailers.

- In the UK alone, retailers and wholesalers produce about 1.7 million tonnes of food waste every year, representing EUR1.9 billion.
- In the US, supermarkets, restaurants and convenience stores throw away 27 million tonnes of food annually, standing for EUR28.6 billion.
- Some retailers react to the situation by donating surplus food or by generating power in biomass power plants.
- However, overstocks considerably affect retailers' commercial success.



Food shrinkage and waste can cost retailers up to 4% of their sales revenue.

For all grocery retailers in Western Europe, this could mean losses of up to EUR41 billion.



2 The problem of food waste

The public's sensitivity to the manifold problems associated with food waste is increasing.



© Istituto Akatu



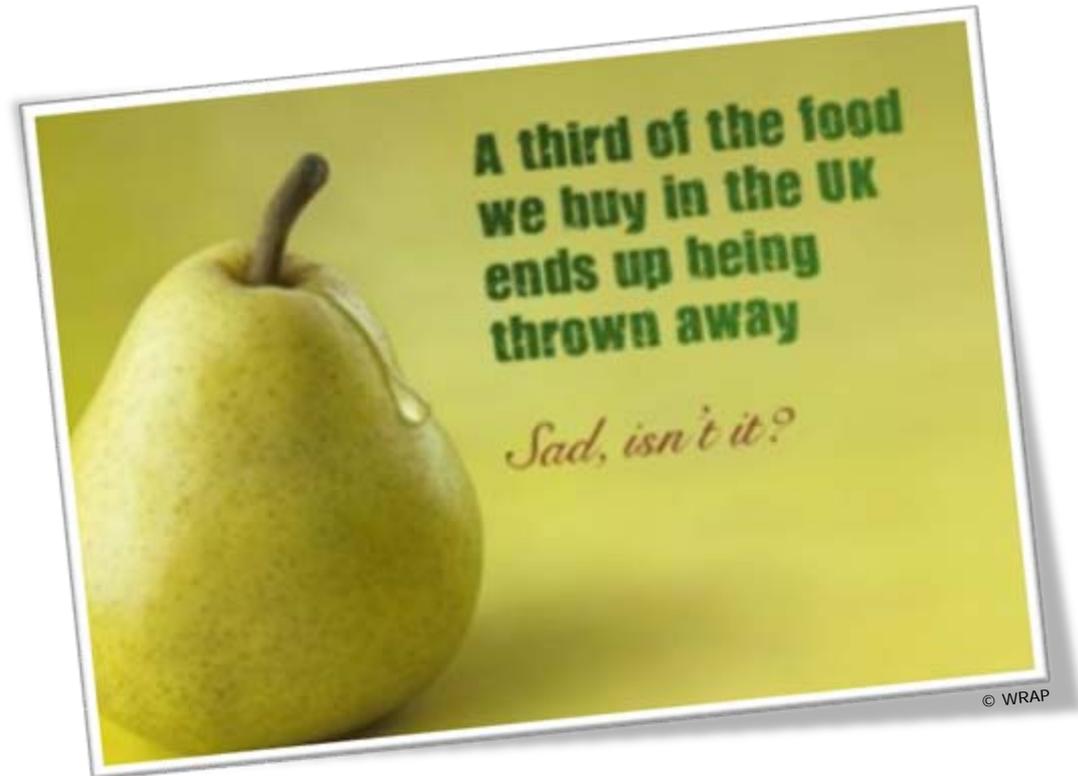
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Governments run campaigns to further increase public awareness.

- In the UK, the Waste and Resources Action programme (WRAP) tasked itself with halving the amount of waste that goes to landfills.
 - ▶ “Love Food – Hate Waste” campaign launched in 2007.
 - ▶ Estimated 137,000 tonnes of food waste avoided so far.
- Australia’s Department of Environment, Climate Change and Water started similar campaign.
- The Dutch government has the objective to reduce food waste by 20% by 2015.
- The EU and UN committed to reducing food waste by 50% by 2025 through the “Joint Declaration Against Food Waste”.



Retailers' current approaches to tackle the problem of food waste are mainly non-technological.

- They focus on instruments such as food donation programmes, organic composting and recycling initiatives.
 - ▶ US grocery retailer Supervalu donated 22,000 tonnes of food to the organisation Feeding America in 2010.
 - ▶ Sainsbury generates power for 500 homes in a biomass power plant in Scotland.
- However, even if retailers find ways to deal with overstocks in a socially responsible or environmentally-friendly way, food waste considerably affects retailers' commercial success.



© Green Flavour

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Technology-based solutions

Inventory optimisation and dynamic pricing technologies help retailers to reduce food waste.

- Replenishment automation based on forecasting software was the success story of retail technology over the last 10 years:
 - ▶ Increased sales and improved shopper satisfaction.
 - ▶ Reduced waste, fixed capital and stock-keeping costs.
 - ▶ However: often limited to ambient range and processed chilled food.
- New sophisticated technologies that optimise inventory also in the area of produce and instore produced food are now on the retailers' agendas.

"Out-of-stocks rate decreased from 3.5% to 1%. 10-15% less inventory. 40% less workload with orders."



Rewe supermarket in Germany

First retailers have started to use automated replenishment also for **fresh** products.

- Swiss grocery retailer Coop started to automate the ordering of dairy, meat, convenience products, fruit & vegetables, fresh bakery products in April 2011.
 - ▶ Using the same technology for its ambient range, Coop already reduced inventory in stores by 8% and simultaneously increased on-shelf availability.
 - ▶ Automated replenishment helped to plan deliveries at a much earlier stage, to improve staff scheduling and route planning.
- Marks & Spencer forecasts at item level with new software for inventory management, replenishment and order planning at its fresh food division.



Coop started automated replenishment for fresh food in the dairy department.

The journey has not come to an end: De-weatherisation further improves retailers' replenishment forecasts.

- In summer 2009, Tesco in the UK set up its own six strong supermarket weather team.
- The company developed a computer programme which produces detailed weather reports going back five years and analyses how weather affected Tesco's store sales.



A rise of 10 degrees Celsius led to a 300% uplift in sales of barbecue meat at Tesco.

Real-time inventory management could help retailers to optimise instore processes.

- Accurate inventory data in the systems are crucial for the success of replenishment automation.
- Monitoring stock levels over the course of the day, ideally in real-time, could further improve inventory management.
- Benefits of real-time inventory management:
 - ▶ Adapting instore production of delicatessen to current demand.
 - ▶ In-time shelf-replenishment with products from the store's backroom.
 - ▶ Optimising orders to the distribution centres for next store deliveries.
 - ▶ Changing prices of products according to how they sell.



Louis Delhaize in Romania, Cora hypermarkets.

Dynamic pricing enables price changes according to current stock and sales forecasts.

- Replenishment optimisation can help retailers only up to a certain point as there will always be some excess supply in fresh produce.
- This is where real-time inventory management and dynamic pricing come into play and help retailers to further reduce write-offs.
- By marking down prices, retailers can at least secure parts of their originally expected sales.

With dynamic pricing solutions, retailers can avoid drastic last-minute price reductions (Waitrose, Hershams, Surrey).



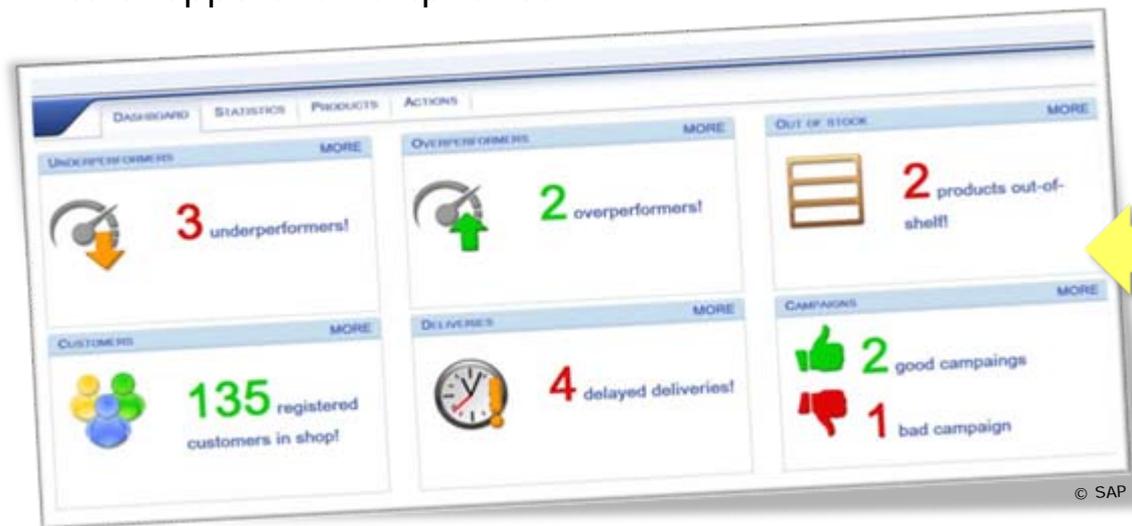
Albert Heijn tested mark-down optimisation to reduce losses from spoiled fruit and vegetables.

- The food waste reduction programme was launched in the retailer's store in Amersfoort in early 2010.
 - ▶ A price optimisation engine compared predicted and actual sales of fruit and vegetables and analysed expected deliveries and current stock levels.
 - ▶ Prices were marked down accordingly and communicated via Wi-Fi to 92 full colour 15-inch displays.
 - ▶ Shoppers using mobile self-scanning devices received updated price information and cross-selling offers.



Fresh item concept study selects Electronic Shelf Labels (ESLs) and smartphones to communicate marked-down prices.

- The solution is currently being tested at SAP's Future Retail Center in Regensdorf, close to Zürich.
 - ▶ Actual sales of fresh produce during the course of the day are compared with a continuously updated forecast.
 - ▶ The solution addresses store managers and alerts them to products that will be either overstocked or out of stock at the end of the day.
 - ▶ They trigger the necessary actions on the shop floor, sending price reductions to ESLs or to shoppers' smartphones.



With the help of this dashboard on their tablet PCs, store managers can immediately see how their outlet is currently performing.

Shoppers' mobiles offer additional upselling opportunities for retailers.

- By sending cross-selling promotions for full-priced items to customers' smartphones, retailers can counterbalance lower sales from marked-down products.
 - ▶ Requires self-scanning functionality with mobile devices or shoppers' smartphones.
 - ▶ Loyalty card information can be used for tailor-made discounts, coupons and promotions.

On the contrary:

Retailers can send alerts if shoppers want to buy a product they already acquired during a previous shopping trip:

Benefit:

Reduce food waste generated at shoppers' homes and sustainable and social responsible image for the retailer.

Drawback:

Counterproductive to every retailer's objective of selling as much as possible.



Ahold's Stop & Shop in the US started to pilot self-scanning with shoppers' mobiles in May 2011. The retailer sends out personalised messages according to customers' current instore locations.

The GS1 Databar facilitates automated mark-downs for perishables at the checkout.

- Albert Heijn uses the GS1 Databar to automatically reduce the prices of game and poultry products in one store in Zaandam.
 - ▶ The GS1 Databar does not only carry the Global Trade Item Number (GTIN) but can store information such as serial and lot numbers and expiry dates.
 - ▶ On the day of expiration, checkouts automatically apply a 35% discount.
- Drawbacks:
 - ▶ Not all retailers are ready to scan the GS1 Databar at the checkout.
 - ▶ This form of price reduction is not easy to communicate to the shopper.



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Conclusion & Outlook

- Looking ahead, solutions that help to avoid food waste will become increasingly important for retailers.
 - ▶ Customers expect an extensive and lush product offer of fruit and vegetables, meat, fish and dairy products at all times.
 - ▶ Retailers are increasingly positioning themselves by broadening their fresh produce offer.
- Reduction of food waste offers huge potential for retailers to increase their profits.
- Food waste reduction measures are not only to the benefit of the retailer's bottom line, but also convey a social responsible and environmentally-friendly image.

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