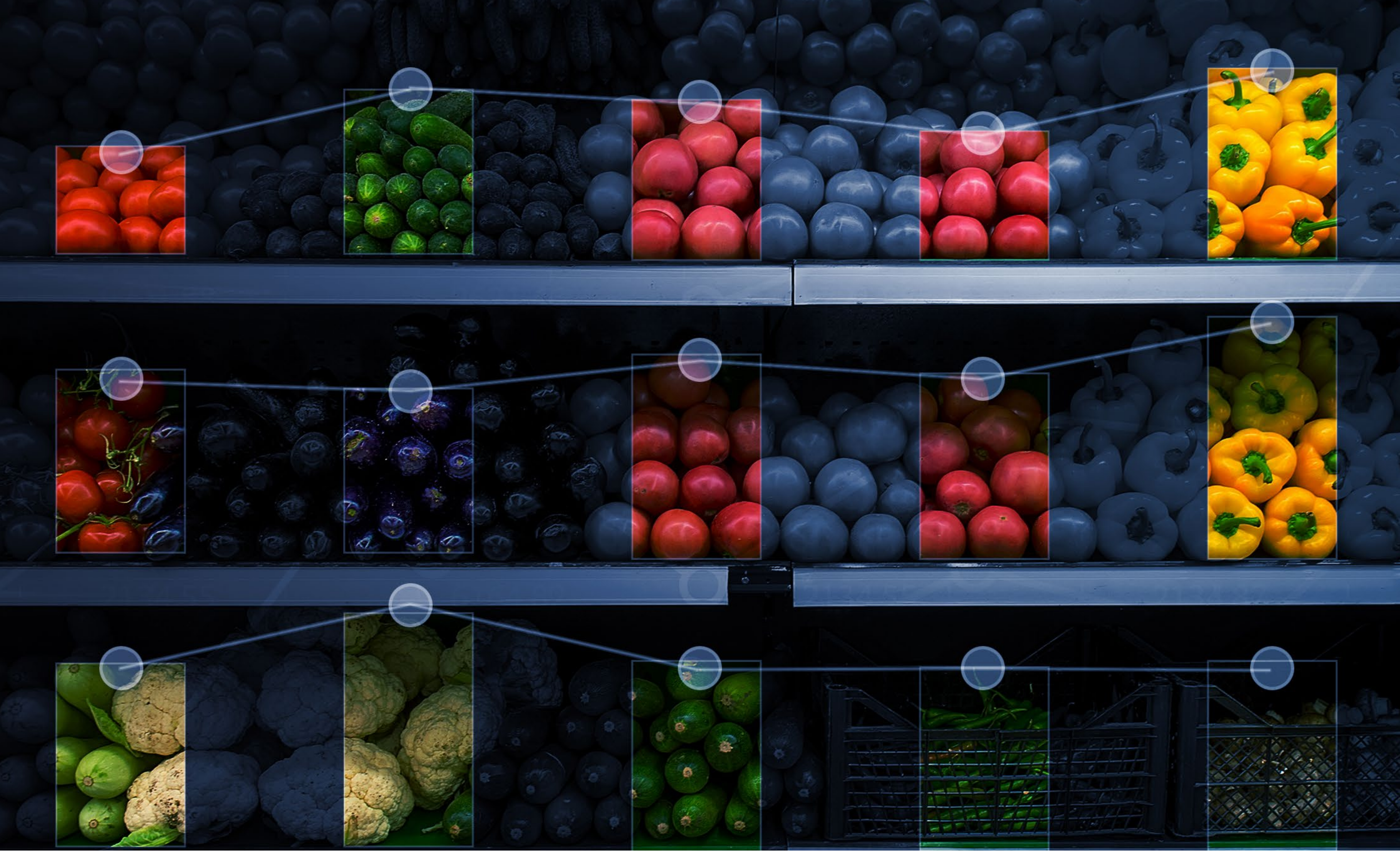


2019 EUROPEAN GROCERY INSIGHTS DATA REPORT

What European grocery shoppers really want and how supermarkets can deliver it with AI

EUROPEAN SUPERMARKETS UNDER INTENSE PRESSURE

There's a gap between what European consumers want and what grocery retailers can profitably deliver, and this gap threatens to impact sales and margins.

Current forecasting systems are either over- or under-stocking, leading to lost sales where goods are unavailable, or waste when goods are unsold, a particularly costly impact when it comes to fresh foods. And waste is no longer a cost issue but a reputational one, as consumers expect better sustainability credentials from their chosen supermarket.

Our report puts the need for more accurate forecasting and replenishment into context, as new research commissioned in the UK, France and Germany by Rubikloud shows that, beneath consumers' general approval of supermarkets, there are worrying levels of dissatisfaction.

The research reveals that European shoppers' high expectations for sustainability and consistency of service when it comes to omnichannel grocery, are simply not being met. And regional variations show that chains with international operations need to ensure they are responding to differing expectations.

And in an increasingly competitive market, the range of things that consumers care about when shopping are becoming more numerous and more influential on where they choose to buy.

With a massive **79%** of European consumers agreeing supermarkets could do more to reduce their packaging and food waste, the findings raise the question whether grocers are adequately addressing this topical and emotive issue. Certainly, retailers are caught in the crosshairs of media and public opinion, and increasingly the target of waste legislation. Public debate about waste is set to intensify as the 'green' lobby continues to question the sustainability of big business and mass consumption.

For supermarket groups across Europe, a failure to satisfy consumer needs is impacting a range of commercial, service and social indicators - operating costs, margin, productivity, environmental commitments and shareholder value.

EUROPEAN GROCERY CONSUMERS EXPECT MORE

79%

of European consumers think supermarkets could do more to reduce their packaging and food waste

42%

would advocate fines for supermarkets who fail to reduce their waste levels

Eye-catching price promotions are important – **47%** of our survey said they would switch supermarket for better deals. Yet planning promotions accurately across multiple channels, with minimal waste, is not something leading groups are truly capable of today. Indeed **46%** of consumers agreed that retailers should offer fewer price promotions because the temptation of price alone often led them to buy goods that were then not needed and thrown away. The ability to match stock and pricing to demand leads to reduced complexity for both parties and of course, less waste.

Consumers don’t trust the consistency of promotions and pricing across channels with only **37%** confident that they are getting the same deals and promotions online as they would get in store.

Our report explores how data insights and machine learning can help supermarkets, health and beauty, and general merchandise retailers regain margin, reduce food and packaging waste, and meet the high expectations of consumers, particularly when they can collaborate with supplier brands that are part of the volume, price and promotion equation.

Our view is that there is no need to accept spikes in profitability from one channel to another, because once each channel is performing according to the specific needs of each buyer, around availability, price, promotion and sustainability, it is possible to create near perfect forecast and replenishment models for every SKU and every channel.

WHAT EUROPEAN CONSUMERS REALLY THINK OF THE MULTI-CHANNEL GROCERY EXPERIENCE

The vast majority - **85%** - of European consumers rate online grocery and health and beauty shopping as good or excellent, with only 15% hoping for better. The British are most satisfied, while the Germans are marginally less so.

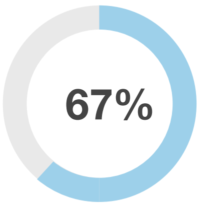
But as our exclusive research reveals, drilling down into consumer sentiment shows how dissatisfied the majority are when it comes to issues such as consistency of service across channels, food and packaging waste, and the sustainability of the multichannel grocery model.

There are frustrations with traditional store shopping too, which are likely to escalate due to entrenched consumer fears about environmental damage and waste.

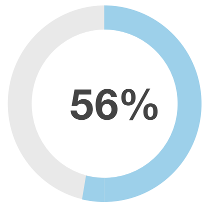
KEY FINDINGS

Our market research has revealed consumers' dissatisfaction with elements of both online and instore grocery shopping, as well as deep anxieties surrounding product and packaging waste in the supermarket supply chain.

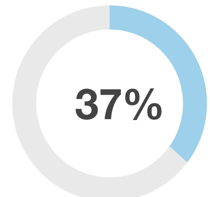
LACK OF FAITH IN ONLINE GROCERY SHOPPING



of European consumers feel food is fresher instore than when delivered online

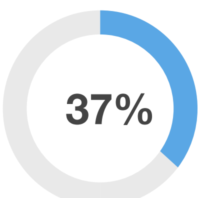


of European consumers feel there is more product choice instore than online

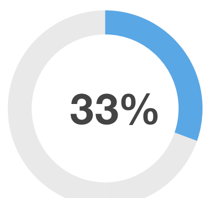


of European consumers are confident that they are getting the same deals and promotions online as they would get in store

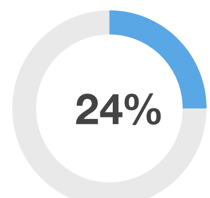
FRUSTRATIONS WITH INSTORE GROCERY SHOPPING



of European consumers say items being out of stock annoys them when store grocery shopping

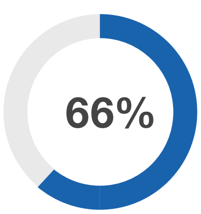


A third of European consumers say too much packaging annoys them

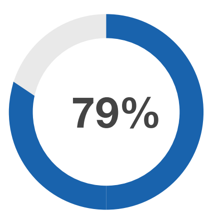


cite pricing discrepancies as a major irritation when grocery shopping in stores

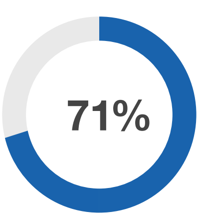
MAJOR CONCERNS ABOUT FOOD WASTE AND PACKAGING WASTE



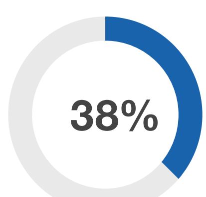
of European consumers would be more likely to stay loyal to a supermarket that had made a commitment to reducing food and packaging waste



think supermarkets could do more to reduce their packaging and food waste

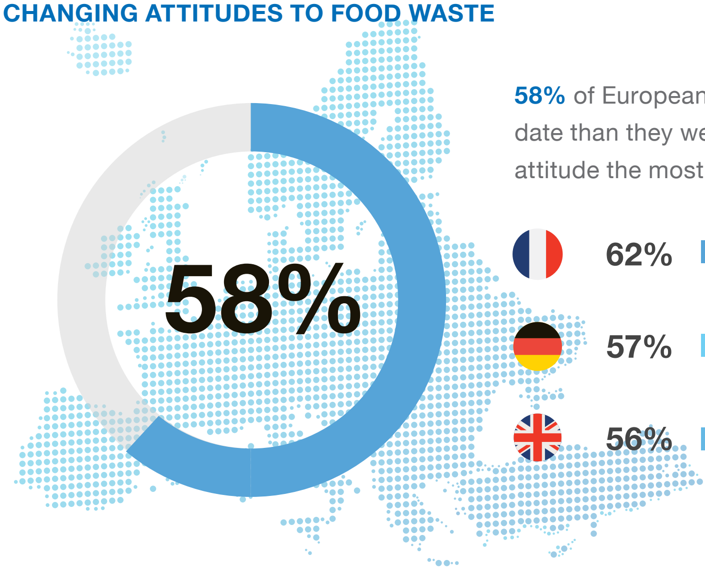


think large supermarket groups should be legally required to produce annual reports on their food waste and packaging waste levels



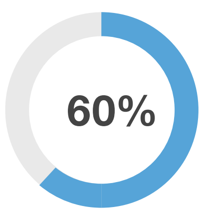
would switch to a supermarket that had a better track record on food and packaging waste

CHANGING ATTITUDES TO FOOD WASTE

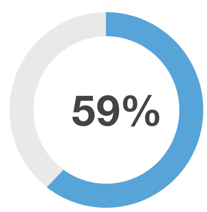


58% of European consumers are less likely to throw out food on the ‘use by’ date than they were 3 years ago – French shoppers (**62%**) have changed their attitude the most, followed by German (**57%**) and UK (**56%**) consumers.

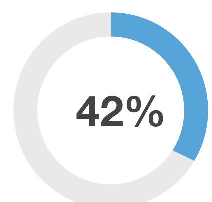
ONUS IS ON SUPERMARKETS TO RAISE THEIR GAME



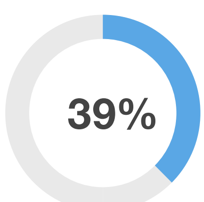
believe retailers and food manufacturers will make significant progress on the problem of food and related packaging waste by 2024



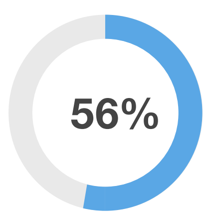
of European consumers feel that supermarkets and manufacturers should work more closely together to reduce waste



believe there should be fines for supermarkets who fail to cut their waste levels.



think supermarkets should improve their stock forecasting capabilities to reduce waste

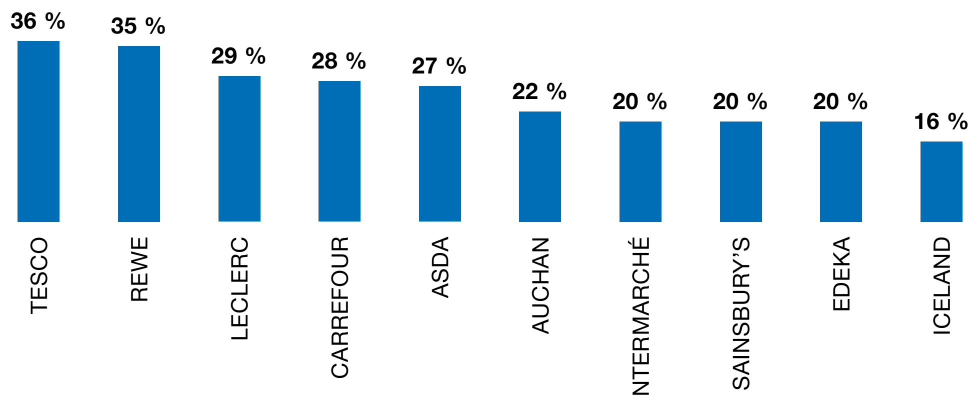


believe it will be the more technologically advanced supermarkets that succeed in cutting waste food and packaging

WHICH SUPERMARKETS DO CONSUMERS THINK ARE GETTING IT RIGHT?

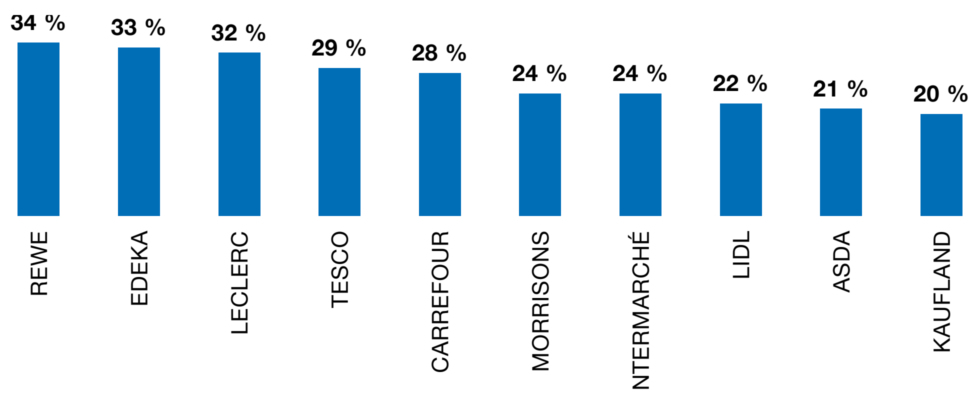
As our research shows, shoppers have a clear idea about which retailers they think are **mastering online grocery retailing**. The leaders are considered by European consumers to be Tesco, Rewe and Leclerc. These chains were selected as having mastered online shopping by **36%**, **35%** and **29%** of respondents respectively.

Which supermarket group do you think has mastered online grocery and delivers a good service?



When it comes to reducing food and packaging waste consumers think most progress is being made by Rewe and Edeka in Germany, Leclerc and Carrefour in France and Tesco and Morrisons in the UK.

Which supermarket group do you think is making progress in 2019 on reducing food and packaging waste?



WHAT HAPPENS WHEN CONSUMER EXPECTATIONS SIMPLY AREN'T BEING MET?

UK research findings

British consumers have embraced online grocery shopping more readily than their French and German counterparts. Almost three quarters of Brits (**73%**, rising to **78%** of Londoners) regularly or sometimes do their grocery shopping online compared to **48%** of Germans and **56%** of the French.

And Brits are significantly more trusting than their neighbours when it comes to expecting pricing, deals and product availability to be consistent across online and stores.

However British consumers have deep reservations in some key areas. They are more annoyed about items being out of stock in stores than other Europeans (**42%** cited this as a bugbear, compared to **37%** of French and German consumers). They are more irritated by wrong items being delivered with their online order too - **32%** cited this as an annoyance of online shopping, compared to **16%** of French and **24%** of Germans. **17%** of UK shoppers, rising to **24%** of Londoners, feel guilty about shopping at supermarkets because of their poor track record on waste and high carbon footprints. This is the same as how Germans feel (**17%**), while the French feel slightly more guilty (**22%**).

Two thirds (**66%**) of British consumers would be more likely to be loyal to a supermarket group that had made a commitment to reducing food and packaging waste. And **65%** agree that it will be the technologically advanced supermarkets that will be best place to do so looking ahead. It's heartening that 65% of British consumers are confident retailers and food manufacturers will have made progress of reducing food and related packaging waste by 2024 – five years' time.

But the pressure is clearly on for UK supermarkets to improve execution of their multichannel offer whilst protecting their margin for the sake of their own survival. All this at a time when traditional grocery groups Tesco, Sainsbury's, Asda and Morrisons face the threat of competition from Amazon and the European discounters Aldi and Lidl. Lidl grew its UK market share to **5.9%** in the three months to August 11, 2019, according to Kantar, while Tesco remains the UK market leader with **27%** of the market - down from **27.4%** a year ago.

The greening of UK grocery

Climate change protests led by environmental groups such as Extinction Rebellion have had a powerful impact on the consumer psyche in the UK, and retailers understand the importance of responding to shoppers' growing concerns.

British supermarkets' efforts to 'go green' with sustainability programmes and high profile promises to reduce food waste and packaging have proliferated in the last three years. In May 2019 Tesco called for more businesses to publish food waste data. Working with the trade body IGD and waste charity WRAP large supermarkets and manufacturers are signing up to efforts to drive down the UK's annual £20bn food waste bill by committing to halving waste from "farm to fork" by 2030. The aim is that by 2026, all large food businesses should have a target to cut waste from their operations.

- **Waitrose Unpacked** – A handful of trial stores have been launched in 2019 testing consumer reaction to packaging free shopping. They feature dedicated refillable zones with unpackaged products on offer, and special dispensers for dried and frozen goods, coffee, beer and laundry detergents.

- **Tesco's Green Pledge** - The market leading supermarket chain has greatly reduced packaging on own brand products and has published an annual statement on its food waste target since 2013.

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WHAT'S THE REASON BEHIND SLOW TAKE UP OF ONLINE GROCERY SHOPPING IN GERMANY?

Germany research findings

German consumers are less committed to online grocery shopping than the British and French, with over half - **52%** - never having done so. Only **7%** 'always' shop for groceries in this way (rising to **13%** in Berlin) compared to **21%** of UK consumers and **9%** of French consumers. Over a quarter (**27%**) of those who do online grocery shopping rate the experience as adequate or poor, compared to just 13% of Brits who think so. Interestingly, **50%** of Germans questioned thought the high cost of delivery was a major annoyance of online grocery shopping, while only **36%** of French and British shoppers thought this.

Those who do shop online have reservations about the freshness of food they receive, as **72%** agree that food is fresher instore than when it is delivered. There are concerns about consistency of the price promotions available, and the amount of extra packaging and food waste being generated. Over a third (**35%**) of Germans think pricing is not consistent across online and in-store, compared to just **11%** of Brits.

When it comes to grocery shopping in-store **43%** of Germans think there is too much packaging waste generated by the system, compared to **29%** of British shoppers who think so. Only **17%** of Germans feel guilty about using supermarkets, compared to **22%** of French shoppers, and the main concerns here are packaging waste (which **30%** cited) and food waste (which **23%** cited).

Germans care passionately about environmental issues, our survey confirms, with **45%** saying they would switch supermarkets in favour of a company with a better track record on efficiency and waste control, compared to the European average of **38%** who think this.

Germans are marginally less hopeful for the future than the French and British, with fewer thinking supermarkets will have progressed on improving food and packaging waste by 2024.

Supermarket groups Rewe (**34%**) and Edeka (**33%**) are considered by German consumers to be leading the field in terms of improving their waste food and packaging. These two companies came top of all European grocery retailers considered.

Rewe is second only to Tesco in the ranking for supermarkets considered to have mastered online grocery retailing. In total **35%** of Germans rated Rewe, compared to **36%** of Brits rating Tesco.

TACKLING FOOD WASTE IN GERMANY

Including wastage by the supermarket and catering industries and in private households, approximately eleven million tonnes of food is thrown away per year in Germany. Per capita, that means that each German wastes around 55 kilograms of food every year.

The German government has set a target of halving food waste by 2030 and plans to include the business sector as well as consumers in order to be effective.

Meanwhile the German Food Retail Association (BVLH) has in recent years coordinated an information campaign on the “best before” date led by the German Federal Ministry of Nutrition, Agriculture and Consumer Protection. This campaign disseminated four million flyers at more than 20,000 points of sale in 10 different German retail chains. The flyer included questions and answers on the difference between “best before”, and “use by” dates and on how long to keep an open packet.

Rewe’s forecasting reduces loss ratios

On its website Rewe Group explains how food waste is being tackled by its use of modern forecasting systems - partly taking into account the weather forecast - and automated ordering procedures, supported by the commercial experience of its employees. “This already makes it possible to supply the markets with fresh goods very well and according to demand,” says Rewe.

The supermarkets (REWE / toom) and discount stores (PENNY) now sell around 98% of their food on average over the year. Since 1996, REWE has provided the majority of the remaining 2% free of charge to around 900 local Tafel food bank initiatives across Germany.

LACK OF ONLINE PRODUCT CHOICE AND PRICE INCONSISTENCIES ARE CONCERNS FOR FRENCH GROCERY SHOPPERS

France research findings

In 2019, over half (**56%**) of French consumers shop for their groceries online, while **44%** are yet to try it.

There is suspicion about the consistency of deals offered across the channels, with **35%** of French shoppers feeling the same deals are not available (compared to the European average of **28%** thinking this). French shoppers also worry that there is not as much product choice online as in-store, with **24%** citing this, compared to **10%** of British shoppers and **14%** of German shoppers thinking so.

A third (**33%**) of French shoppers are annoyed by pricing discrepancies when grocery shopping instore, far more than the European average of **24%**.

Waste is a bugbear once again. **83%** of French consumers believe grocery retailers could do more to reduce food waste, compared to the European average of **79%** thinking so.

On a positive note, **62%** of French consumers think by 2024 supermarkets will have made progress towards better controlling food and packaging waste, and **78%** agree that companies should be legally required to published annual reports on waste (compared to the European average of **71%** agreeing this). **45%** of French think supermarkets should be fined for excessive levels of waste, which is above the European average of **41%** agreeing with this.

Our survey found that French consumers rate Leclerc highest in terms of making progress to reduce food and packaging waste (**33%** cited Leclerc), with **29%** citing Carrefour and **24%** citing Intermarché.

The supermarket considered to have best mastered online grocery retailing was Leclerc (chosen by **29%**) closely followed by Carrefour (**28%**), and Auchan third (**22%**).

PROGRESS ON FOOD WASTE IN FRANCE

In 2016, France became the first country to ban supermarket wastage - requiring unsold food to be donated to food banks or charities. Under the rules supermarkets can be fined up to €3,750 for each infraction if they fail to comply.

Public awareness of food waste is high in France thanks to government initiatives and retailer activity. It's impressive that **63%** of French consumers are less likely to throw away food on its sell by date today than they were three years ago, while only **55%** of British and **57%** of German consumers think this way.

Carrefour combatting waste

Anti-wastage committees across the group are implementing initiatives to reduce the problem. According to Carrefour's website, there is a focus on "improved stock management, more carefully tailored orders, product assortments designed to cater for customers' needs on a store-by-store basis". Committees' recommendations are very quickly applied out in the field.

Carrefour is also working closely with its suppliers. For example, if surplus quantities of a particular foodstuff are produced one season, special in-store campaigns to sell off excess stock at attractive prices are implemented. An Anti-waste award has been devised to stimulate competition among our suppliers. Carrefour has also become known for selling products with short use-by dates at low prices – a win for consumers and an effective way to reduce waste.

SUPERMARKETS UNDER PRESSURE

Our research findings emphasise the limitations of current multichannel grocery retail models:

- Trading across multiple channels is too costly for supermarkets and health & beauty retailers, and there is a dangerous loss of margin. Is this sustainable?
- Too much food waste is being generated in the supply chain, exacerbated by multi-channel and badly planned promotions.
- There is too much packaging waste, exacerbated by home delivery.
- There's an operational strain on systems, people and processes, exacerbated by multi-channel complexities.
- There are inaccuracies in forecasting that cause stock outs, inaccurate assortments and overstocks.
- There are inaccuracies in pricing and promotions which consumers are increasingly aware of.

In order to close the expectation gap there needs to be:

- Greater collaboration between retailers and FMCG brands
- Greater collaboration between merchandisers, marketers and the digital commerce departments
- Improvements in planning, forecasting, replenishment, pricing, promotions and waste management

US RETAILER CUTS WASTE AND IMPROVES FORECASTING ACCURACY WITH RUBIKLOUD SOLUTION

TAKING WASTE OUT OF THE EQUATION

Not only did the client recognise the monetary value Rubikloud's platform would have to their business but they also recognised the impact this waste was for the environment.

When unsold grocery stock reaches its sell-by or expiration date, store managers must dispose of the waste. For example, in one year alone, US grocers toss 29,000 packages of lunch meat which equates to an estimated 17,500 pounds of waste. While plastic only accounts for 3% of that weight, the amount of plastic from pre-packaged cold meats can fill up almost 10 whales per year. Adding to the environmental impact, food waste that decomposes in landfills produces methane, which can lead to higher temperatures around the globe.

A top U.S. grocer was looking to improve forecasting accuracy around specific perishable categories where they were experiencing higher than acceptable losses. Sales were lost due to having to dispose of product following overstocks, and because out-of-stocks were commonplace. This grocer already leads the industry in forecasting perishables with half of normal losses when compared to the typical grocer, but they felt they could improve even more by working with Rubikloud's AI based platform.

RISING TO THE CHALLENGE

Like other large retailers, this client had very established systems and processes that could not be materially changed, so any solution they chose had to work within the confines of their existing environment. However, these legacy systems did not incorporate the effects of competing products (cannibalisation and halo effects), time effects (pull forward and over ordering), seasonality, promotion versus non-promotion, etc. Since Rubikloud is designed to work within complex retail environments, our solution can reduce the time and resources it takes by almost half, to ingest and control the quality of data, configure the product to meet specific needs and fully deploy the solution in record time. In just four months, we were able to prove that by leveraging our platform the client would be able to materially improve their forecasting accuracy without disrupting their technical footprint.

COMMERCIAL RESULTS

Rubikloud was able to show an initial 7% improvement in forecasting accuracy. To put this in perspective, each 1% improvement in the categories measured equates to 10's of thousands of cases of product. Monetarily, this improvement adds up to a $35M opportunity impact just within the focus categories.

> **"Recognising the environmental impact and profit loss, this leading grocer turned to Rubikloud."**

Better forecasting through the use of machine learning can make a difference to margin, and solve consumer bugbears like inconsistent promotions, stock availability and food and packaging waste. With AI it's possible to solve real business problems by delivering highly accurate, automated mass promotional demand forecasting at chain, store and SKU levels.

Rubikloud empowers retailers to leverage machine learning and big data systems in meaningful ways.

- We use our ML and AI to consider all necessary factors to improve forecast accuracy and drive profitable sales for enterprise retailers - at scale, across any channel, globally.
- Rubikloud's cloud native data platform was built specifically for retail. It accesses the widest range of inputs across POS, ERP, web and in-store analytics, mobile commerce, transaction databases and promotion planning, and is powered by AI to determine optimal stock, price and promotion in any category, SKU, SKU mix by basket and location/channel. Answers are produced instantly so that the insight can be deployed by operations, merchandising, marketing and supply chain immediately.
- The objective is to match supply to demand as accurately as possible in order to grow margin and reduce waste, particularly in fresh categories, due to unsold stock.

ABOUT OUR SURVEY

Rubikloud commissioned a market research survey of 3,127 consumers across UK, Germany and France in August 2019.