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# Measuring Food Waste Performance

## Lessons From the Best-in-Class Performers for Asian Retailers

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### Contents

Introduction	1	Food Waste Impact Assessment	8
The Four Cs of Food Waste Management: Communication, Control, Chain, and Consumer	2	Key Learnings	9
Peer Benchmarking: Food Waste Leaderboard	7	Conclusion	11

## Summary

Over the last few years, several of the world's largest food retailers and suppliers have committed to the United Nations' Sustainable Development Goal Target 12.3, which aims to halve per capita global food waste at the retail and consumer levels and to reduce food losses along production and supply chains (including post-harvest losses) by 2030. Among them are industry leaders such as Tesco, Carrefour, and Walmart. They have committed to reducing food loss and waste in their operations and in those of their priority suppliers. In addition, they have joined a new initiative called 10x20x30, which brings together 10 of the world's largest food retailers and providers to engage with 20 of their priority suppliers and aim to halve rates of food loss and waste by 2030.

Reducing food waste should become a business priority. Our in-depth analysis of leading grocery retailers reveals that the hidden costs of food waste are enormous, even at the best-performing chains. For example, we estimate that Tesco's food waste equals GBP 232m in lost sales value, close to 9% of 2021/22 adjusted operating profit.

The upside is that reducing food waste is highly achievable. Our analysis indicates that retailers that have set performance targets improved their food waste performance, reducing food waste by 13% to 45% from their target base year. For example, Tesco lowered food waste volume by 45% between FY2016/17 and FY2021/22. The reduction in food waste added approximately GBP 138m to its margins, ~5.2% of operating profit in FY2021/22. Tesco's example highlights a significant opportunity to reduce food waste, save financial costs, and reduce carbon footprint. Our research offers important learnings and a roadmap for retailers in Asia to narrow the gap with the best-in-class performers and make food waste reduction a strategic priority.

## Introduction

Food waste is a global problem and a greatly overlooked driver of climate change – food loss and waste account for 8% to 10% of total greenhouse gas (GHG) emissions. In our report, [No Time to Waste](#), we discussed this topic in detail. In this report, we compare the operational and strategic performance of leading global grocery retailers in Europe, the US, and Asia. The scope of food waste reduction is not just about stores, but about the entire supply chain. Our research covers all types of food waste, from fresh produce to meat, fish, dairy, bakery products, and others. Each retailer's reduction plan may differ in terms of scope and ambitions (see *Table 1*).

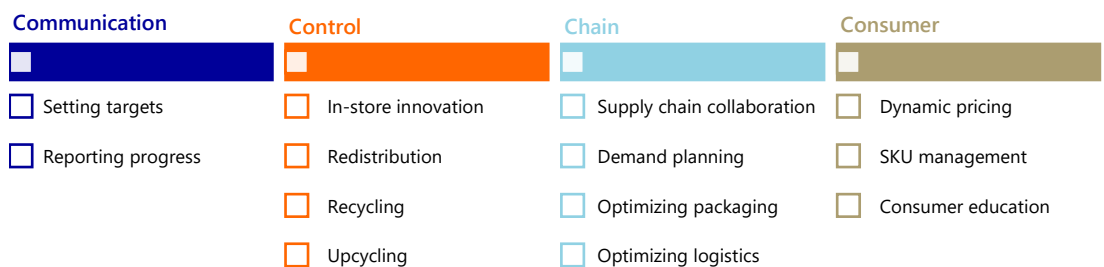
Our analysis underscores the critical difference in processes and practices between best-in-class (BIC) performers and others. Overall, European and US retailers have committed to food waste reduction targets and made progress earlier than their counterparts in Asia. The key purpose of this benchmarking exercise is to offer important learnings and a roadmap for Asian retailers to narrow the gap with BIC performers in Europe and the US.

## The Four Cs of Food Waste Management: Communication, Control, Chain, and Consumer

In this report, we benchmarked ten of the largest food retailers across Europe, the US, and Asia on their efforts to reduce food waste. Our analysis assessed their performance on the following themes (see Figure 1):

- **Communication:** Food waste reduction targets and progress.
- **Control:** Operational readiness to reduce, reuse, and recycle food waste.
- **Chain:** Supply chain initiatives to prevent food waste.
- **Consumer:** Guiding purchasing behavior to reduce food waste.

Figure 1: Food waste benchmarking parameters



Source: Rabobank 2022

### Communication: Setting Reduction Targets and Reporting Progress

Our benchmark cohort of large retailers has considerable impact across the supply chain. However, rapidly evolving consumer and technology trends and a low-margin, high-volume business model make their operations vulnerable to food waste and shrinkage. Therefore, measuring food waste is the first essential step toward an effective food waste management strategy.

There are multiple ways to track, measure, and optimize retailers' food waste performance. For example, creating a profile for each product – such as apples or chilled chicken – and then tracking the shelf-life performance against different suppliers and sales locations establishes a monitoring and communication framework that includes target setting and performance tracking of the products covered. Depending on the number of suppliers and stores covered, milestones can be reached in the food waste management roadmap.

Furthermore, we found that retailers that have set performance targets improved their food waste performance. Progress from the company's target base year (ranging from 2013 until 2020) to 2021 or 2020 was between 13% to 45% (see Table 1). For example, Tesco committed to reducing food waste by 50% by 2025 for its own operation (baseline year 2016/17) and has partnered with its suppliers to halve food waste in the supply chain by 2030. So far, the company has made progress in its own operations, reducing food waste by 45% by FY2021/22 versus the baseline year FY2016/17. As for its suppliers, 79 of Tesco's suppliers, which account for more than half of fresh food sales in the UK and a third in Ireland, have reported food waste data and progress.

Carrefour has set a goal of reducing food waste by 50% by 2025 (baseline year 2016). To achieve this, the company is implementing a global policy to combat food waste. The roadmap includes several measures, such as adopting a more digitalized approach in order to reduce waste at stores, donating to food banks, and extending the shelf life of Carrefour's private-label products and those of its suppliers. By 2020, Carrefour achieved a 28.7% reduction of food waste compared with its 2016 baseline.

Similarly, Walmart and Ahold Delhaize set a target of reducing food waste by 50% by 2030 (versus a 2016 baseline), and both companies reduced their food waste by 18% by 2021 versus the 2016 baseline.

**Table 1: Leading grocery retailers' targets versus progress**

<b>Retailers</b>	<b>Targeted waste reduction</b>	<b>Baseline year</b>	<b>Target and scope of reduction</b>	<b>Progress as per latest information available</b>
Tesco	50%	FY2016/17	A 50% reduction by 2025 in its operations, including stores and distribution centers. Collaboration with suppliers and support to consumers to halve food waste in the supply chain by 2030 (10x20x30 initiatives).	45% reduction of food waste by FY2021/22 versus the FY2016/17 baseline.
Carrefour	50%	2016	Ensure its own operational excellence in waste reduction (50% in 2025) and catalyze action among stakeholders (suppliers and consumers) throughout its business ecosystem (10x20x30 initiatives).	28.7% reduction of food waste by 2020 versus 2016.
Walmart	50%	2016	A 50% reduction in the value chain by 2030. Engage and provide suppliers with tools and resources (10x20x30 initiatives).	18% reduction of food waste by 2021 versus 2016.
Ahold Delhaize	50%	2016	A 50% reduction in its operations by 2030. Also joined 10x20x30 initiatives to partner with 20 suppliers to halve their food waste.	18% reduction of food waste by 2021 versus 2016.
Aeon	50%	2015	A 50% reduction in its operations by 2025. Also joined 10x20x30 initiatives to partner with 20 suppliers to halve their food waste.	17.9% reduction in food waste by 2020 versus FY2015.
FamilyMart	50%	2018	A 50% reduction in its operations by 2030.	13% reduction in food waste by 2020 versus 2018.
CP Group	Zero food waste to landfill	2020	To achieve the operational level of zero food waste to landfills by 2030.	30.8% reduction in food waste by 2021 versus 2019.
7-Eleven	50%	FY2013	A 50% reduction in its operations by 2030.	32.7% reduction in food waste by FY2020 versus FY2013.
Berli Jucker Co. (BJC)	15%	2021	A 15% reduction in its operations by 2030.	14.3% reduction in food waste by FY2021 versus FY2018.

Source: Company sustainability reports, Rabobank 2022

## Control: Operational Readiness To Reduce and Repurpose Food

Until now, in-store food waste management has been limited to shrinkage targets for store managers. However, there are innovative in-store and post-shelf-life initiatives that significantly impact food waste. For instance, active shelf management is essential to in-store operations. For retailers, the standard shelf analysis delivered suboptimal results due to time lag and limited access to real-time and high-frequency data on temperature, contact, etc. However, retailers are working with digital tools delivered via internet-of-things (IoT) solutions to monitor shelf-life patterns and improve ordering, stocking, and below-the-line (BTL) marketing decisions. (A BTL marketing strategy, in which products are promoted in media other than mainstream media, is more focused on targeting consumers and less expensive than above-the-line marketing.)

For this benchmarking, we divided operational control of food going to waste into four distinct themes:

### In-store Innovation

In-store initiatives are the perfect example of active food waste management. While this could include a myriad of activities driven by talented store managers, for this analysis, we have focused on initiatives that are centrally driven and supported by management. Broadly, this can be categorized in two areas:

- Imperfect foods policy – Imperfect fruits and vegetables make supply chains suboptimal and create significant food waste. Adopting an approach of selling imperfect foods is vital to benchmark corporate performance on food waste. For these large retailers, we also examined the practice of using imperfect foods in their kitchens and private-label manufacturing.
- BTL marketing to reduce or eliminate seasonal food waste.

### Redistribution

Redistribution of surplus and near-expiry food to food banks and regional charities indicates a systemic approach to food waste management. We focus on two indicators: meals donated and support to local projects. The latter goes beyond food redistribution and includes funding to redistribution organizations or volunteer time.

### Recycling

Recycling can create an efficient system to reduce GHG emissions. There are multiple examples of food waste being sent for recycling. We have also seen examples of closed-loop systems where retail food waste is sent to local pig farms as animal feed and the farm's pork is in turn used in the supermarket's deli.

In these criteria, we score supermarkets on their recycling efforts. Typically, recycling waste management relies on an external contractor and the extent to which it allows a business to easily and efficiently respond to changing waste management needs. Therefore, retailers with a closed-loop system score higher under recycling.

### Upcycling

Upcycling also takes a closed-looped approach to food waste. However, unlike traditional closed-loop recycling, where the destination is animal feed, upcycling converts food waste into high-value products. Therefore, we scored retailers on a systemic approach to integrating food waste into an upcycled product value chain.

The operational readiness of grocery retailers shows a mixed picture. Some retailers are doing very well on reducing, reusing, and recycling/upcycling food waste, while others lag behind with traditional processes and policies.

We find that leaders are typically those that consistently and transparently report their performance with objective metrics instead of just generic spiel. FamilyMart Japan, for example, reported its food recycling rate at 60.8% in 2020. The company recycles food waste generated by its stores into animal feed, fertilizer, and methane. In addition, the company applied a closed-loop food recycling approach: It supplies food waste from stores to pig farms with an integrated feed factory. FamilyMart then uses the pork provided by the farms in prepared meals cooked in its deli department.

Tesco UK has been at the forefront of in-store innovation to prevent and reduce food waste. For example, the retailer partnered with farmer suppliers in the UK to successfully market cauliflowers during the 2017 glut. The agile marketing and supply chain collaboration enabled the retailer to push 220,000 additional cauliflowers, helping to tackle the excess production and supporting farmers.

Another underused strategy is upcycling, where most retailers have significant room to improve, although we see some retailers experimenting. For example, CP ALL (Thailand) used excess citrus fruits and pineapples to make biofermented water.

Similarly, redistribution can be more effective. The common traits we found among leaders included:

- Transparent reporting.
- Supporting businesses working in near-expiry food redistribution.
- Actively working or investing in a surplus distribution model.

Yet the surplus redistribution model remains a cost center (donation to food banks or social organizations) for most retailers, including leaders. We believe the surplus distribution division should ideally operate under a profit center model with revenue and margin targets. Food distribution to high-volume, high-frequency customers (airlines, schools and universities, hospitals, etc.) is an established and profitable channel where grocery retailers can play an active role, with or without a dynamic wholesale business format.

## Chain: Supply Chain Initiatives To Prevent and Optimize Food Waste

The supply chain covers the full spectrum of the food life cycle – from growers to consumers. By partnering with growers, retailers can reduce the information gap between demand and supply. Similarly, by engaging manufacturers and logistics, grocers can work on extending shelf life. We have divided supply chain initiatives into the following themes:

### Collaboration With Growers

Fresh produce significantly contributes to food waste through inefficiencies in the supply chain. One example is excess production and the inability to pass on the output through the chain. Therefore, we score retailers on initiatives to manage temporary production fluctuations by partnering with suppliers and growers.

### Demand Planning

Digitalization has substantially improved retailers' ability to predict consumer footfall and demand. Retailers with an established mechanism to share this insight with suppliers scored higher on this metric. We also saw retailers sharing best practices in the supply chain to encourage better food waste management.

## Optimizing Packaging

Our assessment of packaging optimization primarily includes improving produce conditions to extend shelf life. The criteria scored retailers on their collaboration with suppliers in the areas of:

- Innovation to preserve freshness and prolong shelf life.
- Standardization of labeling through transparent and realistic information on product expiry to improve purchasing and usage behavior.

## Optimizing Logistics and Supply Chain

Logistics and supply chain initiatives can prevent food waste in many ways. For these criteria, we scored retailer performance on three metrics:

- Optimizing time in the supply chain for food.
- Logistics infrastructure.
- Local sourcing to reduce transit distance and time and extend product shelf life.

Given the focus on the supply chain, we were surprised to find areas for improvement across all parameters.

Few retailers have established collaborative arrangements with farmers and growers beyond a supplier relationship. For example, grocery retailers have strict produce specifications – cosmetic rather than nutritional – that farmers and manufacturers must meet. These strict cosmetic specifications result in the waste of fresh produce, as grocers do not accept cosmetic imperfections. We noted that Carrefour and Tesco have relaxed cosmetic specifications for standard lines and have adopted a whole crop purchasing policy – buying entire crops from producers and using ‘imperfect produce’ in their private-label production.

Similarly, there are areas for improvement in supply chain logistics for all retailers. Some examples of best practices that caught our attention include the following:

- Tesco cut two days out of the supply chain with suppliers in Spain for citrus, lettuce, and tomatoes in 2016.
- FamilyMart uses cold storage chains to control delivery temperatures in the ‘frozen,’ ‘chilled,’ and ‘fixed’ categories throughout the chain.
- Aeon Vietnam increased sourcing from local farmers for Vietnamese agricultural products to reduce supply chain time for fresh produce.

We also noted that some retailers are falling behind in optimizing packaging for better food waste management. For instance, one of the factors likely driving food waste is the over-reliance on expiry dates and best-before dates. In some countries, such as the UK, supermarket chains such as Waitrose have removed best-before dates from labels, hoping that this will cut down on food waste. Retailers that have not done so should collaborate with manufacturers and suppliers to improve labeling, especially in the area of expiry dates and other innovations. Mimica Touch, for example, uses a temperature-sensitive cap to indicate food freshness. In addition, this intelligent label can help to store food at the right temperature, reducing food waste by no longer relying on the wasteful worst-case scenario expiry date.

Demand planning is perhaps the area where we saw most retailers adopt best practices. However, there is room for improvement, especially in the area of digitalization, which remains underused. Most retailers have applied digitalization to their in-store operations, but not throughout the supply chain. In contrast, BIC performers collaborate with suppliers on order placement and forecasting to prevent food waste from overproduction via intelligent ordering systems like Afresh.

## Consumer: Guiding Purchasing Behavior To Reduce Food Waste

Grocery retailers' consumer support can significantly influence purchasing behavior. This theme relates to the tools and techniques retailers can use in-store to influence customers' buying decisions. Traditionally, retailers use planograms to guide the customer's journey and purchases, not to reduce food waste. We believe that planograms should also consider food waste reduction in product placement and displays. In this parameter, we benchmark retailers in the following areas:

### Dynamic Pricing

Food retailers usually offer consumers discounts to purchase foods past peak quality. Dynamic pricing allows retailers to promote near-expiry products based on the time of day, customer footfall, etc., to avoid wastage. This technique generally relies on a digital solution to auto-update shelf information on expiry, pricing, and inventory. In these criteria, we score retailers on the active use of dynamic pricing to manage in-store food wastage.

### SKU Management

Based on purchase analytics, management of stock-keeping units (SKU) also helps to reduce food wastage. For these criteria we score retailer performance on packaging size, promotions, and assortment.

### Consumer Education

This criterion focuses on retailer initiatives to improve customer awareness through campaigns and in-store marketing, such as recipes for fridge leftovers and effective use of pantry inventory.

Our analysis highlights that all retailers have initiatives to guide purchasing behavior to reduce food waste. However, the range of programs is typically limited to education materials or on-shelf price promotions. For example, Carrefour France ran an in-store program in partnership with Barilla to create recipes for using excess vegetables in pasta dishes.

We observe that in-store price promotions have become a self-fulfilling practice. Astute consumers know that sooner or later the store will run 'buy one get one' (BOGO) offers and act accordingly. Worse, instead of analyzing demand patterns by day of the week or time of day and properly managing inventory and in-store promotions, BOGOs are an easy and perhaps lazy solution for store managers. By using the power of store managers to run BOGO promotions, for example on fruit and vegetables, and making them stick to the spoilage and wastage target, Tesco managed to change behavior at the operational level. Of course, corporate training and insights supported the implementation, but the point was made.

We believe there are opportunities to work more frequently with brands on consumer education and digitalization to proactively indicate which foods are nearing expiry. To encourage consumers' willingness to buy those near-expiry products, retailers must invest in digital solutions to auto-update shelf information on expiry, pricing, and inventory.

## Peer Benchmarking: Food Waste Leaderboard

Tesco is the global BIC performer in hyper/super formats and sets the performance standard for food waste prevention. When we looked at Tesco, the first thing that stood out was that it had adopted these preventive practices earlier than many other retailers. For example, Tesco discontinued its BOGO offers on fruits and vegetables in 2013 – nearly a decade ago! Furthermore, the company has established a systemic approach to food waste and has successfully taken its customers on that journey. That's important and underpins the company's success in reducing food waste over the past five years (*see Figure 2*).



On communication, European retailers are setting the standard for reporting. Generally, Asian retailers scored lower, with inadequate reporting on performance and reduction targets. On the control theme, retailers' performance varied widely, with substantial differences between BIC performers and others. Only Tesco scored a maximum of five points for the operational readiness theme, while the average score was around two – less than half of the maximum score.

In terms of supply chain initiatives for food waste reduction, we see that, overall, European retailers performed considerably better than their counterparts in Asia. Thus, it appears that supply chain initiatives are at the core of food waste management for European and US grocery retailers, whereas they are not yet for Asian retailers. As environmental, social, and governance regulations become stricter, investments in preventive measures and collaboration with supply chain partners to reduce food waste could give Asian grocery retailers a leg up on their sustainability journey.

Finally, consumer support is an accessible area where most retailers perform well. Unsurprisingly, Tesco is again at the top of the scorecard, which means that either Tesco is doing something exceptional, or that there may be clues that other retailers are missing. As highlighted above, consumer education and in-store price promotions are the two areas where we see almost universal coverage. In addition, there are opportunities to drive food waste reduction initiatives around SKUs and smart measures, such as tactically reducing or redirecting BOGO practices to guide purchasing behavior.

Figure 2: Food waste performance leaderboard

Retailer	Targets and reporting	Own operations	Supply chain initiatives	Consumer support	Relative position on food waste
Tesco	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓	1
Carrefour	✓✓✓✓	✓✓✓✓	✓✓✓	✓✓✓✓	2
Walmart	✓✓✓✓	✓✓	✓✓✓✓	✓✓✓✓	3
Ahold Delhaize	✓✓✓✓	✓✓	✓✓✓	✓✓✓	4
Aeon	✓✓✓	✓✓	✓✓✓	✓✓	5
FamilyMart	✓✓✓	✓✓	✓✓	✓✓✓	5
CP	✓✓✓	✓✓✓	✓✓	✓✓	5
7-Eleven	✓✓✓	✓✓	✓✓	✓✓	6
BJC	✓✓	✓✓✓	✓	✓✓	7
RT-Mart	✓	✓	✓	✓✓	8

Source: Company reports, Rabobank 2022

## Food Waste Impact Assessment

Food waste has clear ecosystem impacts on grocery retailers. We use the BIC performer, Tesco, to illustrate the impact of food waste across three dimensions: food waste volume, sales impact, and CO2 emissions (see Figure 3). (Learn more about emissions from Rabobank's reports [Deadline 2030: Slashing Value Chain GHG Emissions by a Third](#) and [How Food Retailers Are Tackling Their Carbon Footprint](#).)

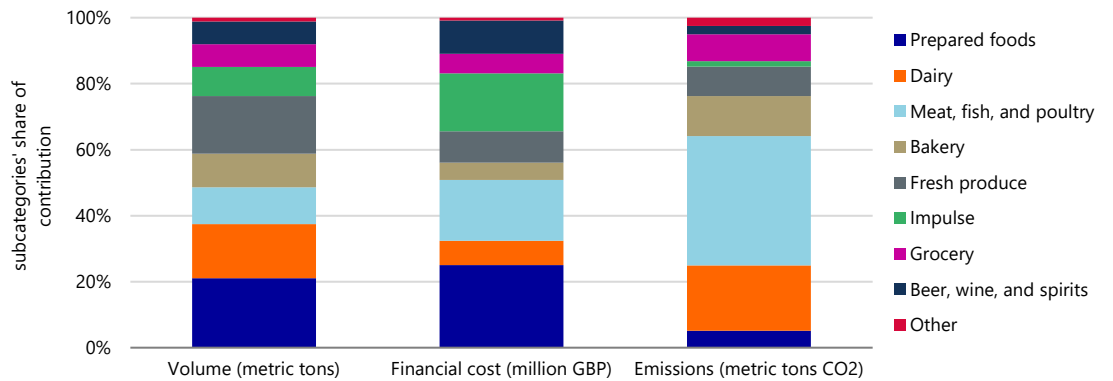
Tesco reports that fresh products, such as fresh produce, meat, fish, and poultry, and prepared foods are the top two contributors to its total food waste, accounting for ~50%. Based on an average category price, we estimate that Tesco's total food waste equals GBP 232m in lost sales value, approximately 9% of 2021/22 adjusted operating profit. Similarly, using the CO2 emissions data from the Food and Drink Federation and Our World in Data, fresh products and prepared foods contribute the largest share. On the other hand, the dairy category is over-indexed on CO2 emissions due to GHG emissions from enteric fermentation and livestock feed production.



It appears, therefore, that there is a choice to be made – financial versus environmental. For example, Tesco could prioritize financial costs and focus its food waste management efforts on products with the greatest financial impact. Alternatively, the company could opt for environmental costs as the key consideration and prioritize its food waste management efforts accordingly. To minimize financial impact, food waste reduction of fresh products and prepared foods would be the focus. On the other hand, reducing waste from GHG emissions-intensive meat and dairy products would support its carbon emissions reduction targets.

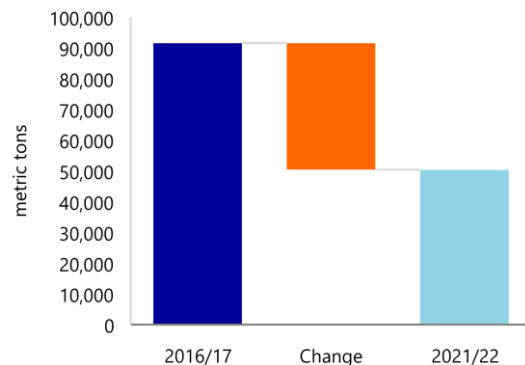
Tesco adopted a third approach – a hybrid of a financial and environmental approach. Between 2016/17 and 2021/22, Tesco reduced food waste volume by 45%, increasing its margins and at the same time reducing carbon emissions. Under this balanced approach, fresh product waste declined 49% and waste in the prepared foods and dairy categories decreased 43% and 42%, respectively, in absolute volume terms. Food waste reduction added approximately GBP 138m to Tesco’s margins, ~5.2% of operating profit in FY2021/22. The impact on carbon footprint was also significant, equal to 5% of the total Scope 3 emissions reduction between 2016/17 and 2021/22.

**Figure 3: Contributions of Tesco’s food waste subcategories by volume, financial cost, and CO2 emissions, 2021/22**



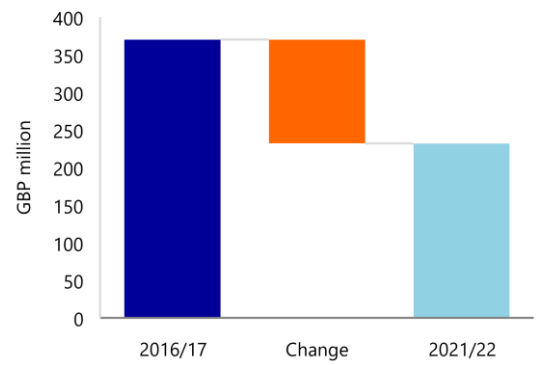
Note: Booker’s food waste volume is excluded from the total  
 Source: Company sustainability reports, company annual reports, FoodDrinkEurope, Our World in Data, Euromonitor, Rabobank 2022

**Figure 4: Tesco’s food waste reduction by volume, 2016/17-2021/22**



Source: Company sustainability reports, FoodDrinkEurope, Our World in Data, Euromonitor, Rabobank 2022

**Figure 5: Tesco’s food waste reduction by value, 2016/17-2021/22**



Source: Company sustainability reports, FoodDrinkEurope, Our World in Data, Euromonitor, Rabobank 2022

## Key Learnings

Tesco's success makes it clear that there are significant opportunities for Asian grocery retailers to reduce food waste, save financial costs, and reduce their carbon footprint. To replicate Tesco's success, other retailers need C-suite sponsorship to make food waste reduction a strategic

priority. But, on the other hand, our conversations with industry players underscored that food waste remains, at best, a tactical priority. As a result, our benchmarking identified three areas to reduce blind spots in food waste management.

## 1. Make Food Waste Reduction a Strategic Priority

As discussed above, Tesco has successfully reduced food waste. Encouraged by its notable success, the company decided to bring forward by five years its pledge to halve food waste by 2030. In addition, in October 2022, Tesco became the first retailer in the UK to align executive performance pay with key sustainability measures, including the reduction of food waste. This stance underscores the importance that the company places on sustainability and food waste.

Reducing food waste will require key stakeholders' agreement and steadfast support within and outside organizations. Food retailers view food waste as a missed opportunity across the value chain, not as a cost center or a topic that primarily concerns the sustainability department. It is necessary to make food waste reduction a strategic priority in order to combine the ambition, oversight, and funding required to narrow the gap with the BIC performers and achieve sustainability targets.

Strategic alignment is necessary but insufficient to achieve food waste reduction. Grocery retailers need to involve the supply chain and consider the reduction of food waste as a source of profit to close the loop.

## 2. Prevention Is Better Than Cure: Supply Chain Collaboration To Prevent and Reduce Food Waste

We believe solutions should prioritize prevention because solving the waste problem at the source is likely to be the most cost-effective. This approach also supports achieving long-term sustainability goals. This requires a collaborative food system approach to address the systemic challenge of food waste. Relevant players in the value chain must acknowledge that food waste is a system-wide problem and collaborate to implement solutions.

The corollary to this is interdependence, which leads to better and more efficient supply chain alignment. For example, a fruit juice processor can be used to process some surplus produce. Digital technologies will be vital in preventing or reducing food waste and creating a collaborative approach to food systems. Employing waste tech can offer retailers two significant benefits:

- Grocery retailers can allocate cost savings to store improvements or offer competitive prices.
- Positive social/environmental impact.

A range of digital technologies to combat food waste exist, with an increasing number converging into a one-stop solution, such as Afresh. Waste tracking is another type of waste tech that is becoming popular with retailers. Companies such as Winnow, Good For Food (Singapore), and Leanpath offer smart metering and a digital scale to measure food waste that ends up in the trash. By monitoring the sources, amounts, and value-chain stages of waste generation, retailers can adjust their ordering and in-store processes to prevent or reduce food waste.

Active packaging can play a role in improving the condition of fresh products to extend shelf life. Fresh produce and meat, fish, and poultry account for 20% to 40% of total food retail food waste. This implies that retailers need to invest in food waste management in the fresh categories. Tesco partnered with Apeel to trial edible packaging that extends the shelf life of fresh fruits. Given the environmental impact, other retailers ought to consider packaging technology to manage food waste.

### 3. Turning Food Repurposing From a Cost Into a Profit

While prevention is preferred, other food repurposing measures, such as redistribution and recycling, are also crucial for managing food waste. On the other hand, as discussed above, most retailers continue to view the business model for repurposing food as a cost center. In the following section, we provide some examples where transforming the food repurposing division into a profit center model with revenue and margin targets led to superior results.

#### Company Shop Group: Surplus Food Redistribution

Company Shop Group, the UK's leading redistributor of surplus food and household products, illustrates the potential to turn food waste into a revenue stream. The company works with the fast-moving consumer goods (FMCG) supply chain, including all major grocery retailers, to redistribute surplus food at deeply discounted prices to its member stores. Members (over 10,000) who bought those discounted purpose-led products reported average savings of GBP 212 per month on food. The business model generates revenue and shares profit with its partners. In 2021, it processed more than 98m surplus products and paid GBP 32.9m to its retail and manufacturing partners.

Company Shop Group offers an innovative solution to the problem of surplus food. Food retailers should consider turning their surplus redistribution division into a 'profit-with-purpose' model by providing a platform that connects surplus food sources with institutional buyers.

#### SugaRich: Creating a Circular Business Model

SugaRich is a UK-based, innovative surplus food processor. Most UK grocers, including Tesco, and food manufacturers work with SugaRich to convert surplus or expired food into animal feed. The company produced over 400,000 metric tons of high-quality farm feed using food waste. As feed costs remain elevated, this could become an attractive revenue source for retailers, besides being a carbon-positive business.

Food retailers should collaborate with innovative companies to create a circular model that gets the most out of food while being carbon neutral or carbon positive.

#### UglyGood: Upcycling Food Waste Into Value-added Products

UglyGood, a Singapore-based manufacturer, turns fruit peel waste into high-value products, such as orange essential oil and household cleaning solutions. Similarly, Toronto-based Genecis Bioindustries is upcycling food waste into biodegradable plastics and other high-value materials. According to the company, using food waste to make biodegradable plastics reduces costs by 40% compared to using corn or sugarcane crops. It can also cut GHG emissions by 80% versus virgin plastic.

There is enormous potential to collaborate in the value chain, turning food waste into value-added products or ingredients. For innovators, food waste offers a competitive, stable raw material source. In addition, food retailers can collaborate with innovators to develop a new use case for high-value products.

## Conclusion

To conclude, the recent shift among leading food retail companies toward reducing food waste has far-reaching implications for the food value chain. However, our discussions with industry players in Asia indicate that food waste reduction is not a strategic priority for many companies yet. This requires sponsorship at the C-suite level. We believe there are opportunities for Asian food retailers to cut costs and improve their sustainability performance, and the risks of inaction will be far greater.

# Imprint

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