



A recipe for value

The pivotal role of retailers in reducing food waste throughout the value chain

“Customers want availability, up to closing time.

They want zero out of stock.

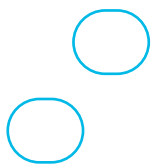
They won't buy misshapen vegetables.

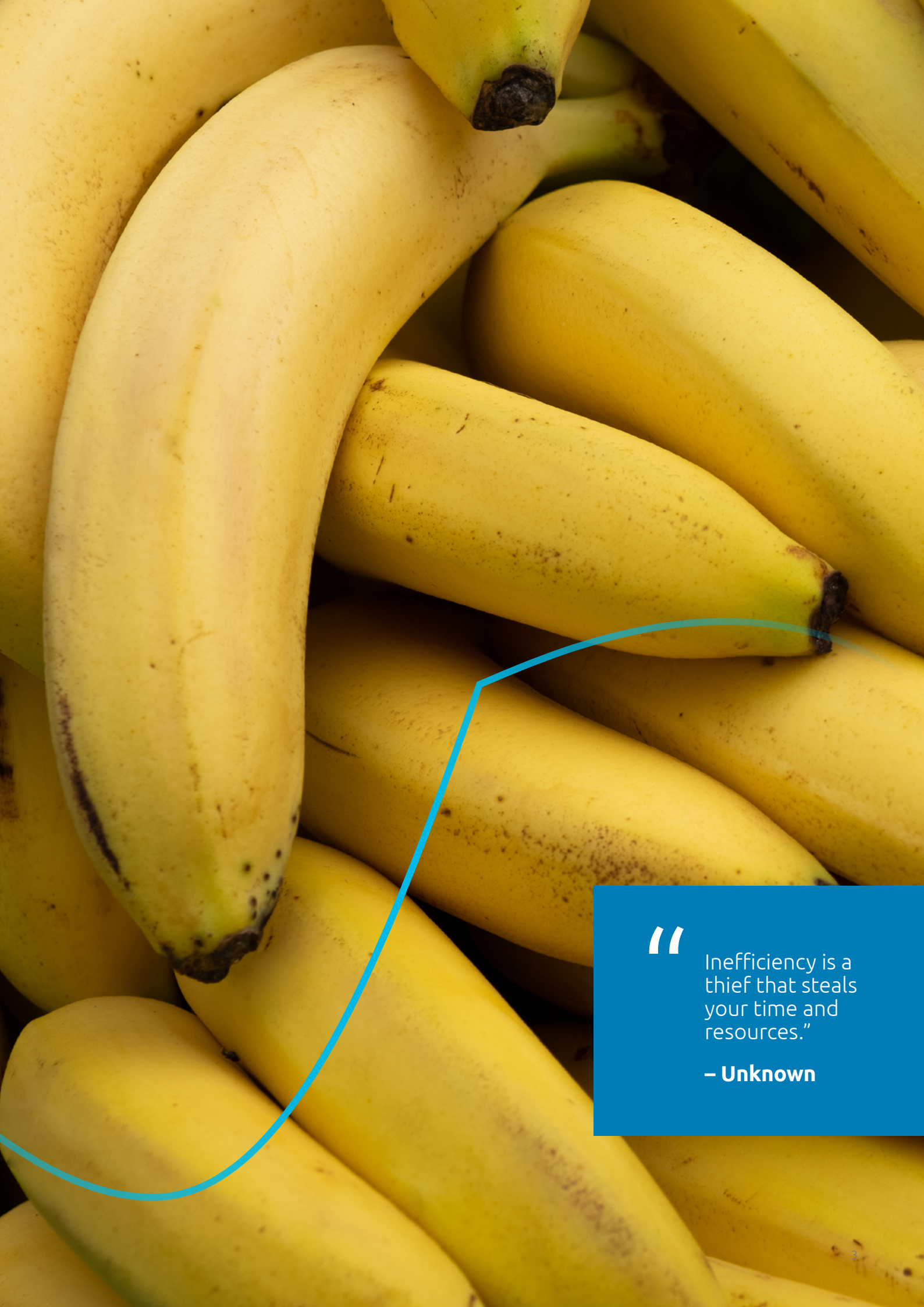
They won't tolerate bruised fruit.

At the same time, they're frustrated when food gets wasted...

Sure, our company would like to reduce waste, but that's easier said than done!”

**If food waste reduction was worth the effort, why didn't it happen long ago?
What's changed?**





“

Inefficiency is a thief that steals your time and resources.”

– **Unknown**

The scales have tipped

With nearly 2.5 billion tons of food going uneaten annually, food waste is a global challenge. For retailers, it's also an immense opportunity.

By reducing food waste, you'll not only contribute to a sustainable environment, you'll tap into a pool of overlooked savings estimated at a trillion dollars. And now, more than any time in history, the conditions have aligned to make food preservation practical and profitable.

This is not a new topic for most retailers. Many initiatives are already in place, reducing waste and creating value every day. Now retailers have a chance to do even more, achieving true impact at scale from an overall value chain perspective (upstream and downstream), and by tapping into new innovation opportunities.

Dramatic gains in preventing food waste are possible today in part due to an explosion of new efficient technologies. At the same time, the consensus on sustainability is helping to align interests for green initiatives like never before. Along the entire value chain – including your customers – every player stands to benefit.

Today, we can stop taking food waste for granted. We can recognize more than 30% waste as an aberration,

unthinkable in most industries. And in dozens of small but significant ways, we can start to bring that number down.

Pressure is mounting from all sides:

- Retailers themselves have been stepping up their commitments to reducing food waste; many have set ambitious targets of [cutting 50% of food waste by 2030](#).
- Governments are enacting new food waste reporting regulations.
- Consumers are frustrated when they waste food, they [demand retailers help them reduce waste](#), and they're rewarding retailers who make the effort.
- With increasing margin-pressures, food waste reduction investments are demonstrating financial benefits in return.

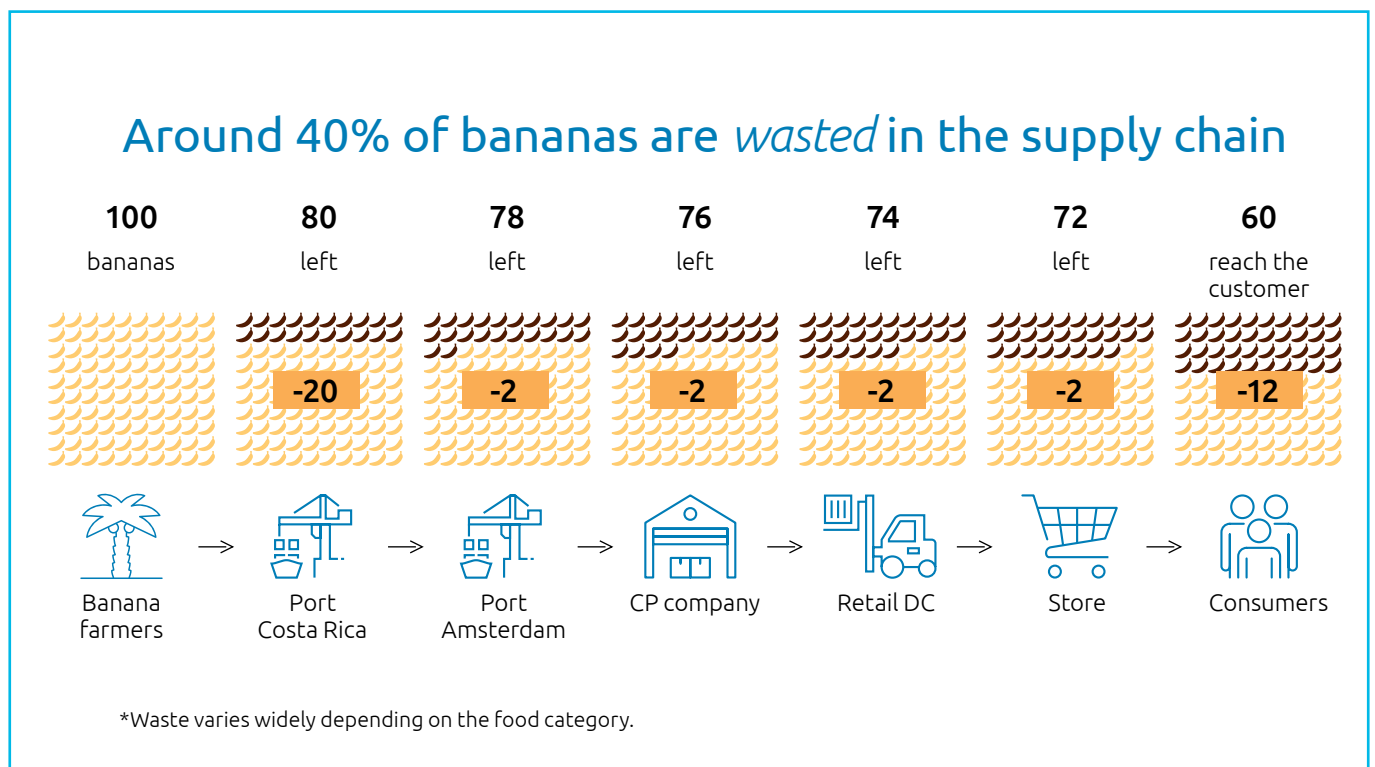
In this report, we'll explore ways for your retail company to reduce waste, while leading with a sense of purpose that customers increasingly reward.

Here's how you can illuminate the waste, eliminate it, and take the lead.



Gains throughout the *value chain*

From the farm to the fork, food is lost at every link of the supply chain. For example, it's estimated that out of every hundred bananas grown, just sixty will reach consumers.



Retailers hold a pivotal position within the value chain – with the ability to influence consumers on one side, and everyone from farmers to producers and suppliers upstream. The benefits of this shift accrue to everyone involved, and include:

- Lower COGS and operational costs
- Lower scope 3 and scope 1 emissions
- Full legal compliance
- Brand leadership recognition

In a time when consumers increasingly favor brands that lead with purpose, reducing food waste can powerfully affect a company's reputation. And due to the added value of rescued food, plus overall improvements to efficiency, this brand enhancement costs nothing – it actually comes with substantial savings.

From vision to reality: *key changes with massive leverage*

“Leverage” may be the most overused word in business writing, which is unfortunate, because the original meaning highlights a powerful concept: if you know where to apply pressure, even the largest objects can be moved.

At first glance, the problem of food waste looks too big to move. Too many steps and stages. Too many

processes. Too many people involved, regulations, customer expectations, systems, and too many other competing priorities. But in fact, a few well-placed changes can yield immense change. We’ve identified four areas to focus on, where moderate effort can yield outsized rewards. Let’s take a look.

<p>1</p> <p>Product innovation and sustainable packaging</p> <p>Embrace innovative approaches to product specifications and packaging to meet consumer needs and support environmental sustainability.</p>	<p>2</p> <p>Connected supply chain and inventory management</p> <p>Enhance transparency and efficiency in the supply chain to reduce waste and improve product freshness, using real-time data sharing and logistics optimization.</p>	<p>3</p> <p>Rescue and reuse</p> <p>Develop and implement strategies for repurposing unsold food and engage with the entire supply chain to identify and mitigate potential waste.</p>	<p>4</p> <p>Influence customer behavior</p> <p>Implement strategies to encourage consumers to make more responsible and efficient purchasing and consumption choices through dynamic pricing, targeted promotions, and rewards.</p>
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91%

of consumers are willing to buy from brands/retailers that disclose information on their food waste

1. Product innovation and sustainable packaging

Retailers are in a leading position to set the specifications of products and influence the way they're packaged. Let's take a step back, and consider what customers are looking for. One of the most interesting findings from our [2024 Consumer Trends Report](#) revealed that consumers want sustainable options... but they don't want to pay extra for them. In fact, in 2023, only 40% of consumers were willing to pay 5–10% more for sustainable products. For retailers that treat sustainable products as something akin to luxury items, this consumer shift poses a serious challenge.

One way retailers can achieve affordable sustainability is by widening the range of fruits and vegetables that are considered high quality. Specs related to health and freshness won't change. But realigning food specs to reflect the natural, normal variation in fruits and vegetables is a simple way to reduce food waste that benefits everyone.

Reducing the amount of materials in packaging is another win-win-win, and it's already happening. Retailers can accelerate this process by setting standards for waste and selecting sellers with sustainable packaging.

A related source of waste is due to the amount of food packaged into one item. Americans have long complained about the mismatch of [ten hotdogs and eight hotdog buns](#), a small hassle that highlights a real issue. And it's more difficult to solve than it might appear. Too much food leads to more food expiring. Too little food per package may waste less food, but it can also create more packaging waste. This is a place where data and consumer research are crucial, and retailers are in a prime position to collect that data.

The amount of food per package is one part of a larger issue. Circular product packaging is another pivotal step in the effort to curb food waste. By designing packaging with circularity in mind, the life cycle of materials is extended, minimizing environmental impact. Retailers can play a transformative role by setting industry standards that prioritize circular design principles, encouraging suppliers to adopt eco-friendly materials and packaging formats. As retailers champion circular product packaging, they contribute significantly to a more resilient and responsible food supply chain, aligning business practices with the imperative of minimizing waste and maximizing sustainability.



2. Connected supply chain and inventory management

In any large refrigerator or pantry, which food is at greatest risk of going bad? Of course, it's the food at the back that we can't see. The same applies to a supply chain, which is why a more transparent, connected, traceable supply chain is at the heart of any food waste solution.

By implementing advanced tracking technologies, retailers can ensure that the journey of each product from farm to shelf is meticulously documented. Traceability solutions illuminate the entire supply chain, allowing for swift identification and mitigation of potential issues. This not only bolsters food safety but also empowers consumers with the knowledge of a product's origin, bringing consumers into the conversation and fostering trust.

It's also important that the supply chain as a whole functions as quickly as possible. Streamlining logistics helps mitigate the risk of spoilage, so efficiencies in transportation, warehousing, and distribution channels can significantly impact the shelf life of perishable goods. Retailers are well-positioned to collaborate with logistics partners to optimize routes, implement smart inventory management systems, and leverage emerging technologies such as IoT sensors for real-time monitoring of temperature-sensitive products. A well-orchestrated logistics framework not only safeguards the integrity of products but also contributes to a more sustainable and cost-effective supply chain.

Finally, enabling real-time communication and data sharing between stakeholders will be crucial to improving forecasting for all the parties in the value chain. More accurate forecasts reduce the need for safety stock and help prevent demand and supply mismatches. Communication and data sharing also help partners respond quickly to market fluctuations, reducing the likelihood of overstocking or stockouts, and ultimately minimizing food waste.

Cloud-based platforms and data-sharing protocols can ensure that crucial information about inventory levels, harvest forecast and timing, quality assessments, and demand forecasts is communicated in real time. By streamlining logistics, embracing real-time communication, and fostering data sharing among stakeholders, the industry can not only extend the shelf life of perishable goods but also contribute to a more responsive, environmentally friendly, and cost-effective supply chain.

41%

of consumers that switch to an organization that is active on food waste become loyal customers



3. Rescue and reuse

Once your supply chain comes into clear focus, the real action begins. You can begin to work with suppliers to rescue food at every stage of the supply chain. Shared data management tools ensure that surplus or close-to-expiration items are identified in time, while machine learning (ML) and AI solutions suggest the most optimal intervention scenarios to put that food to use.

Ideally, surplus and close-to-expiration items will be sold. In the following section on influencing consumer behavior, we'll explore a few strategies for prioritizing the sale of at-risk foods. Foods that cannot be sold can be redirected to areas of need, like food banks or donation programs.

Repurposing unsold food is both eco-friendly and socially impactful. Retailers can partner with local initiatives to creatively transform surplus food into meals for those in need or, as a last

resort, upcycle food waste into useful products like animal feed or compost.

So far we've been looking upstream at producers and suppliers. Retailers can also look downstream, and influence their customers' shopping behavior. Signage, social media, or loyalty programs can convey simple tips on smart shopping, proper storage, and creative use of leftovers.

By empowering consumers with knowledge, retailers contribute to a broader culture of waste reduction, benefitting both the environment and community welfare. We'll have more to say on educating consumers in our next section.

83%

of loyal consumers promote sustainable organizations to other consumers





4. Influence consumer behavior

Getting customers on board is the final, crucial step to a comprehensive food waste strategy. Fortunately, consumers are already facing in the right direction. They're increasingly conscious of the global effort to combat climate change and increase sustainability. They're becoming more health conscious. "Natural" is in. In that context, the stage is set to work with your customers and reduce food waste together.

One approach for retailers to sell perishable items before they risk becoming waste is dynamic pricing. By adjusting prices based on factors like product freshness and demand, retailers can incentivize customers to purchase items nearing their expiration dates. This becomes much easier with digital price tags, which make it possible to organize vast numbers of prices instantly.

Strategically planning promotions work similarly. Retailers can align promotions with the parameters of the supply chain – accounting for harvest times and product shelf lives – offering discounts or special deals on items approaching expiration. Promotions go hand in hand with loyalty programs. Retailers can reward customers who make eco-conscious choices, such as buying products nearing their due dates. By integrating sustainability into loyalty programs, retailers foster a sense of shared responsibility, promoting both consumer engagement and waste reduction.

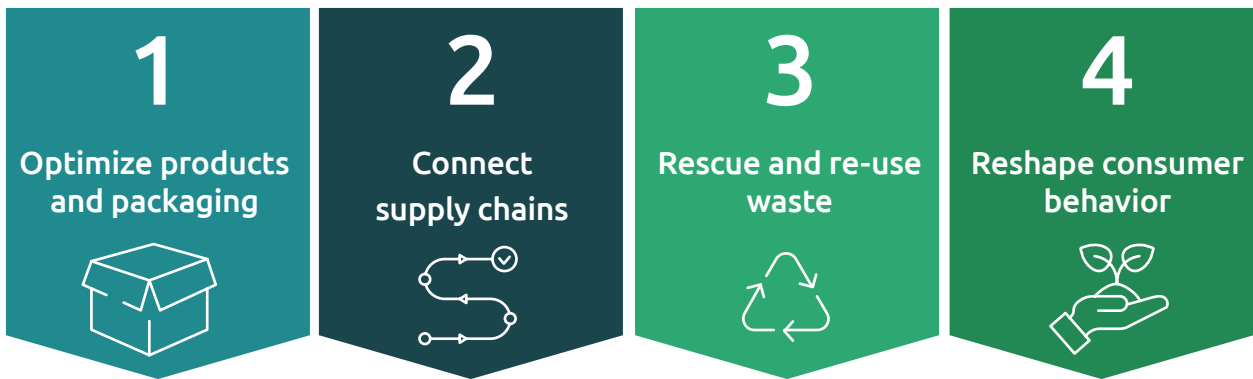
“ The first retailer to truly cut food waste across their value chain by 50% is going to change the industry.”

– Kees Jacobs

How we can *help*

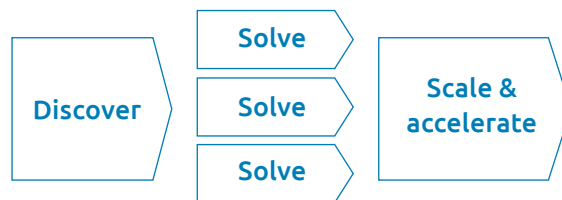
There are many ways to bake a cake. Retailers who want to make their meal from scratch can avail themselves of multiple software solutions that help track shipments, expiration dates and inventories. Or, you can bring in experienced chefs: consulting firms that will help you dig deeper into customer and employee incentives and advise you in change management.

You build a portfolio of capabilities based on specific solutions...



...tailored to each food category...

- Bread and baked goods
- Fresh meat and fish
- Fruit and vegetables
- Dairy
- Ready meals
- and more...

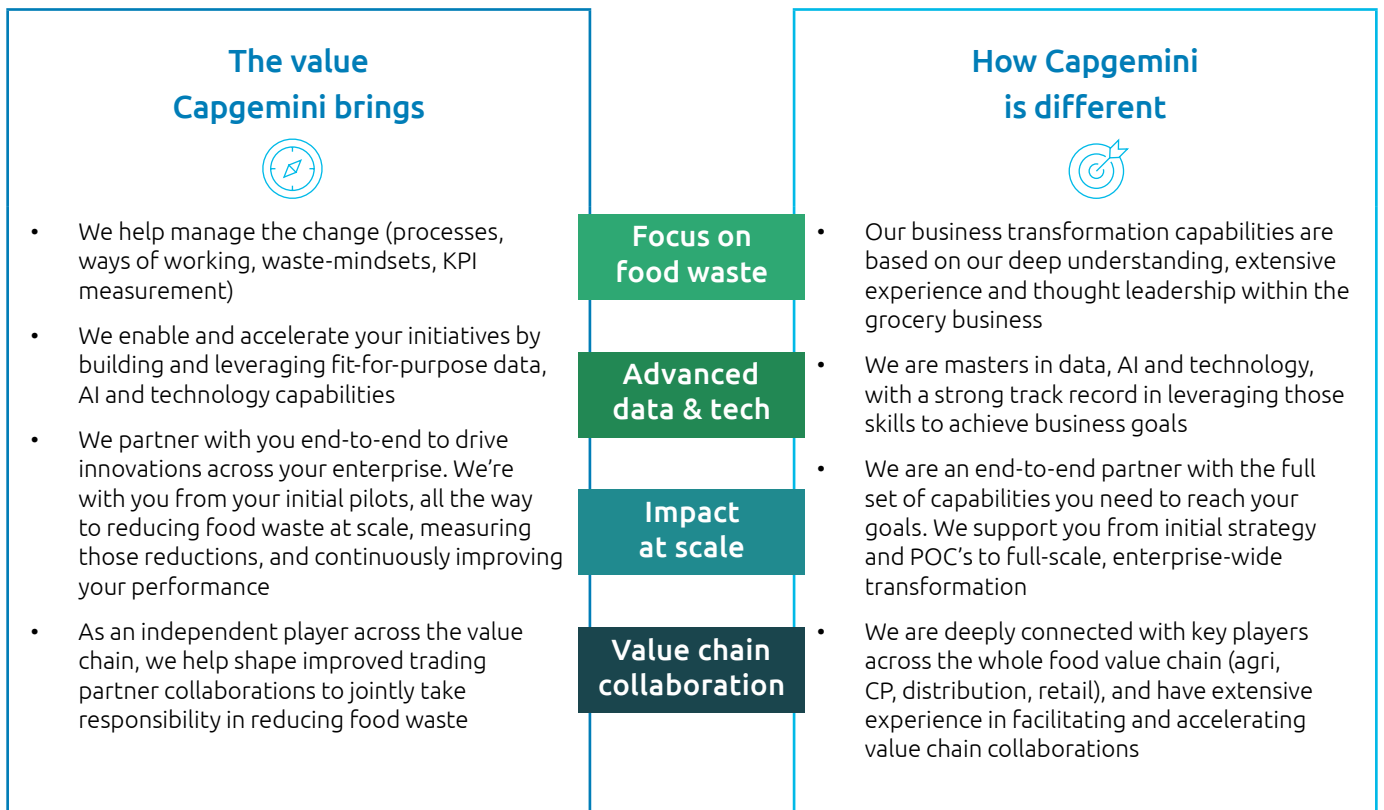


...for lasting results.

- Food waste: - 50%
- Lower costs / higher margin
- Lower CO₂ emissions
- Increased customer loyalty

Where our team stands out is through our comprehensive, end-to-end support. We bring decades of cross-industry experience, coupled with deep expertise in retail. We leverage a full stack of solutions to help you reach your goals at every step, and our network of retail leaders will help you build the partnerships that take you over the finish line. We don't just bake the cake; we bring the ingredients, and we measure success at every step to ensure your continuous improvement.

Capgemini is the *perfect partner* for your journey



Dramatic gains in preventing food waste are now within reach, in part due to an explosion of new efficient technologies. At the same time, the consensus on sustainability is helping to align interests for green initiatives like never before. Capgemini is a recognized leader in both domains.



Here are just a few examples of how we partnered with companies to reduce wasted food:



This leading French retailer was looking for ways to reduce their food waste. They partnered with Caggemini and Wasteless to implement dynamic pricing AI into their systems.

The AI system integrates and connects markdowns to the POS, requiring no intervention by Carrefour employees.

Key benefits:

1. Revenue growth
2. Increased customer value with freshness-based offers
3. Ease of use for employees
4. Ease of technical implementation within their in-store devices



Albert Heijn, a leading retailer in the Netherlands, with the mission 'to make the ordinary affordable and the extraordinary attainable,' began partnering with us back in 2000.

Their goal was to centralize replenishment for all 800 stores and 25,000 SKUs in the network. From forecasting to follow-through, every aspect of delivery was moved to one central location.

The results were revolutionary: increased efficiency, reduced costs,

and a new level of collaboration with suppliers.

But why stop there? In 2017 we teamed up again to optimize the accuracy of the replenishment algorithms. We used AI to look through years of forecasts, compared them to actual sales, and made multiple improvements.

Today this retailer enjoys one of the world's most efficient replenishment systems – and they remain committed to continuous improvement.

One of the leading omnichannel supermarkets in Spain wanted to reduce perishable produce waste. To do that, they needed the ability to amend prices in real time.

Caggemini built a tool that combines inventory and pricing information, and relays that to employees via a simple app.

Alerts are sent to store managers via a mobile app to advise on the best timing for price changes. This information is integrated with POS to make real-time changes to electronic pricing tickets.

The demand model system learns from real-time data and amends forecasts to reflect the current priorities.

The solution we built is now being used across their stores and value chain. With over 20,000 price changes per day, the retail giant is now able to make agile decisions based on real-time data, decreasing waste and raising revenue.

The race to *cut waste* is on

Inefficiencies at this scale needs to end. With inflation driving prices to the limits of what customers will tolerate, and supply chain disruption upheaving the industry, waste on this scale simply cannot continue.

Retail leaders are finding more and more ways to tap into the trillion dollars being lost each year; their prices will come down, and their esteem in the public eye will rise.

The only question is – which retailers will get there first?

To learn more about our retail food waste capabilities, contact our Food Waste Reduction Solutions for Retail team.



Kees Jacobs
Portfolio lead
Capgemini global CPRD / I&D
Kees.Jacobs@capgemini.com



Lisa Verbeek
Food waste expert
Capgemini Invent-NL
Lisa.Verbeek@capgemini.com



Karel Jan van der Kaaden
Food waste offer expert
Capgemini BTS - NL
Karel-jan.vander.kaaden@capgemini.com



Josieke Moens
Food waste expert
Capgemini BTS - NL
Josieke.Moens@capgemini.com



Maaïke Slagter
Food Waste expert
Capgemini Invent-NL
Maaïke.Slagter@capgemini.com



Huub Sijbers
Food waste expert
Capgemini Invent-NL
huub.sijbers@capgemini.com



Zouhir Oumedjkane
Retail Innovation Leader
Capgemini France
zouhir.oumedjkane@capgemini.com



Claire Williams
Portfolio lead
Capgemini Invent-UK
Claire.Williams@capgemini.com





About Capgemini

Capgemini is a global business and technology transformation partner, helping organizations to accelerate their dual transition to a digital and sustainable world, while creating tangible impact for enterprises and society. It is a responsible and diverse group of 340,000 team members in more than 50 countries. With its strong over 55-year heritage, Capgemini is trusted by its clients to unlock the value of technology to address the entire breadth of their business needs. It delivers end-to-end services and solutions leveraging strengths from strategy and design to engineering, all fueled by its market leading capabilities in AI, cloud and data, combined with its deep industry expertise and partner ecosystem. The Group reported 2023 global revenues of €22.5 billion.

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