

What are we wasting for? Improving waste management in food courts



Several shopping centres in Portugal and Brazil.

<p>Portugal CascaiShopping RioSul Shopping</p>	<p>Brazil Manauara Shopping Franca Shopping Shopping Campo Limpo</p>	<p>More than 200,000 m² combined GLA</p>	<p>Sustainability</p>
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KEY HIGHLIGHTS

- As food courts become increasingly popular, shopping centres are making improvements to their waste collection and processing to create a better environment for visitors and the people who service them.
- This has several benefits: it leads to more waste being recycled, less waste being sent to landfill, lower transport-related emissions and efficiency gains.
- Shopping centres such as Manauara Shopping and Shopping Campo Limpo are implementing novel ways of composting their food waste, which reduces their waste footprint even further while allowing them to boost their reputation.

SOLUTION

- Across Sonae Sierra's portfolio, shopping centres have identified the most effective improvements to waste management in their food courts. These are mostly focused on:
 - Improved waste segregation facilities and processes for tenants and service suppliers; e.g. by transferring waste collection and sorting areas out of customers' sight.
 - Investment in composting facilities to divert food waste from landfill and process food waste into fertiliser using accelerated methods.

KEY NUMBERS

<p>85 tonnes food waste composted at Manauara Shopping and Shopping Campo Limpo per year</p>	<p>€27,000 annual savings from more efficient waste management at CascaiShopping</p>	<p>9% increase in the recycling rate of Shopping Campo Limpo</p>
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Abstract

Food courts are becoming an ever more important part of the shopping experience. They play a significant role in the choices consumers make when deciding where to shop – and shopping centre, developers, managers and owners like Sonae Sierra are paying attention.

New generation food halls offer unique and inspiring experiences where brands and consumers can interact to increase dwell time, footfall and consumer spend – but they also bring some problems. Food courts generate large amounts of organic and mixed waste – with recyclables often contaminated and unsuitable for further processing.

If not managed carefully, food waste can have a negative impact on the customer experience; and the waste generated by food courts also poses a financial challenge for shopping centres, as landfill taxes are increasing to encourage better waste management.

Sonae Sierra shopping centres are working to improve their waste management practices, solving the problems and capitalising on the opportunities presented by food courts.

The five shopping centres reviewed in this case study have made significant progress in their food court waste management by reorganising waste collection, installing equipment that facilitates waste segregation, and investing in innovative composting solutions. These actions, as well

What are we wasting for? Improving waste management in food courts

as bringing environmental benefits, have delivered sustained reductions in waste management costs, whilst maintaining a safer, cleaner and more hygienic environment for employees, suppliers and visitors. Furthermore, the improvements have enabled the shopping centres to avoid costs from sending waste to landfill and achieve savings due to efficiency improvements.

Introduction

Food courts are an increasingly important feature for shopping centre visitors. Food is more fashionable than ever, and consumer spending on eating out is growing. Our research shows that food is a key consideration when deciding where to shop.

Recognising their value, Sonae Sierra has invested significantly in its food courts to refresh them and add new experiences. New generation food halls offer unique and inspiring spaces that go beyond eating, offering novel experiences where brands and consumers can interact to increase dwell time, footfall and consumer spend.

For example, CascaShopping has transformed a previously-underutilised space into Cascais Kitchen – an innovative and disruptive food court with a casual atmosphere for families and friends to meet, eat and socialise. This has resulted in a 3% increase in footfall, and a 16% increase in food court spending per visitor.

This renewed focus on food courts can however cause issues with waste if not managed properly. Our shopping centres produce significant amounts of waste which can end up being disposed of in landfill sites. Food courts in particular are major contributors to waste which could, and should, be recycled. But when food waste is mixed with recyclables, the recyclables are often considered “contaminated” and are excluded from the recycling chain.

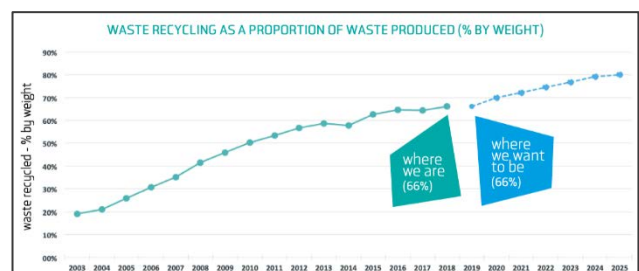
Effective waste management is a prerequisite for successful and attractive food courts. If done well, it keeps them clean, hygienic and free from unpleasant smells and sights – which is all part of maintaining a positive and welcoming environment that will attract visitors and maintain footfall.

Managing waste is therefore a win all around. Not only does better waste segregation and other improvements in waste management in food courts can improve the customer experience and bring about a significant reduction in waste sent to landfill, it also saves money on landfill charges, and reduces transport-related carbon emissions.

Background

Within the scope of our Safety, Health and Environment Policy and management procedures, Sonae Sierra is committed to reducing the quantity of waste generated in our shopping centres and to achieving high levels of waste recycling.

The company has already made significant progress and achieved sizable increases in the amount of waste recycled. Between 2002 and 2018, Sonae Sierra increased the recycling rate of its shopping centre portfolio by 248%.



Average recycling rate of 66.1% in 2018 across our owned operating assets

Furthermore, the waste reduction and management measures introduced during this time enabled us to avoid costs of €4.6 million in 2018.

As Sonae Sierra is committed to improve this further, it has set objectives to obtain a minimum recycling rate of 80% and a maximum landfill rate of 10% across our owned shopping centres by 2025 – with all shopping centres expected to progressively improve their waste recycling rate.

Our ability to achieve this depends on several factors; the infrastructure available to collect and sort waste, our tenants' support and participation (since they are responsible for most of the waste our shopping centres produce), and our service suppliers who are responsible for cleaning and collecting waste, predominantly from visitors

What are we wasting for? Improving waste management in food courts

and in the centres' food courts. It can also depend on the infrastructure available locally for recycling and the processing of organic waste.

Improving the facilities available to handle and sort waste and influencing tenants and service suppliers' behaviour are therefore the principal strategies we can adopt to reduce the impact of our shopping centres' waste production.

Challenge

Despite their strong performance, some of our shopping centres took a deeper look at their waste collection processes to enable more waste to be recycled and create a better environment for people who use the food courts.

They found that waste separation practices were often inefficient, with waste not always being sorted due to poor signage and facilities. Unsorted waste was often stored together with recyclable waste in the same waste management areas, offering little visible incentive for tenants and service suppliers to pursue correct separation.

There were additional challenges too. Some shopping centres, especially older centres such as CascaiShopping, were not designed with the space necessary to accommodate the equipment and facilities required to handle the number of waste streams promoted by Sonae Sierra's Safety, Health and Environment Management System.

Secondly, any improvement made to the waste infrastructure must be conducted while the shopping centres are in operation, so the impact on tenants and shopping centre visitors is minimised.

And finally, we knew from our experience across our portfolio that it was not enough to simply install new equipment and publish new guidelines for staff: they would need to make sure that tenants and service suppliers were fully motivated, engaged and committed to the project.

Solution

CascaShopping: New sorting areas improve visitor comfort

At CascaiShopping the team set out to reduce the amount of undifferentiated waste in the food court, while optimising the time required by cleaning suppliers to sort waste.

The team identified several measures including a centralised sorting zone and the replacement of two waste service stations with fixed areas for tray collection.

These were not without some problems. The centre's design and layout made it difficult to optimise waste collection and required several innovations: the centralised waste collection area in the food court, for example, required the team to design special waste chutes to direct the waste into respective containers according to its type.



Newly designed waste chutes for food waste in CascaiShopping

They nonetheless delivered some fantastic results, with an investment of €35,000 saving the centre an equivalent of €27,000 per year by allowing service suppliers to clean and sort waste more efficiently.

The food court floor area has also increased by 18m², resulting in 22 additional seating spaces and a reduced seating waiting time for visitors. The changes have also resulted in a higher level of cleanliness, fewer smells and less noise from the sorting of dishes, and no need to transport full waste containers in front of visitors from service stations.

What are we wasting for? Improving waste management in food courts

RioSul Shopping: Implementing a waste separation station

Meanwhile, RioSul Shopping set out to reduce the time it took to collect and process food waste trays. Each tray car was taking 10 minutes to process, mostly because customers would interrupt the cleaning team every couple of minutes. The solution was to move a central waste separation island to a technical zone which visitors could not access. This reduced the tray processing time to four minutes and resulted in an improvement in the recycling rate and a reduction in waste costs. In addition, they painted the floor of the zone using epoxy paint to create a hygienic environment for the workers.

These actions together had the effect of improving the efficiency and safety of the staff's working environment, and removing waste treatment from customers' sight, making their visit more pleasant.



Waste separation island in the technical area of RioSul Shopping

Manauara Shopping: Accelerated composting using enzymes

Other shopping centres have explored novel ways of reducing their waste footprint. After reviewing its options, Manauara Shopping decided to install an enzyme-accelerated composting facility to help manage the organic waste produced by the shopping centre's food court.

Here is how the project works:

1. Food scraps are placed into brown food waste containers. Waste produced by visitors is separated by the cleaning company, while restaurants are responsible for separating their own food waste, following instructions given by the centre's management.
2. The food waste is then taken to the composting facility where it is stored in a cold room; weighed; further separated manually to remove any non-organic items that may have passed through the first sorting; and crushed into small pieces, preparing it for the composting machine.
3. Next, the waste enters the composting machine, where special enzymes are added to remove the odour and humidity of the waste, transforming the organic matter into fertilizer. A process that would normally last around 120 days is done in little over an hour using this accelerated method.

In the first 10 months, the composter allowed Manauara Shopping to process 23 tonnes of organic waste, producing seven tonnes of fertiliser, all of which went to growing vegetables in the shopping centre's garden. As a bonus, almost two tonnes of greenhouse gas emissions have been avoided by processing the waste on-site rather than transporting it to landfill.

Vegetables from the inaugural harvest including cabbages, lettuce, coriander, tomatoes and peppers were donated to the nearby Don Milton Correa Pereira school helping to provide nearly 1,000 meals. The students themselves attended the garden to learn more about nutrition and waste recycling.



School students with the inaugural harvest of vegetables grown with fertiliser from Manauara's food waste composter.

What are we wasting for? Improving waste management in food courts

Franca Shopping: New food court layout for higher efficiency

The organic waste in the food court can bring an unpleasant experience and environment for both visitors and suppliers. Franca Shopping, in Brazil, needed to rethink its waste segregation space in the food court, since the food remains were causing bad smell and flies' infestation.

The team carefully analysed the process, mapping a new layout for the food court and it was possible to identify an area outside the food court that was able to be adapted for waste segregation, outside the visitors' sight.

Thus, a new procedure was designed, according to the new waste segregation place, and the cleaning supplier's team was reorganized and trained to guarantee that the process was smooth and almost invisible to visitors' eyes.

The new waste segregation area optimized Franca Shopping's food court environment, improved visitors' experience and the suppliers work conditions. Before the new procedure, in the peak hours it took 15 minutes on average to carry out the segregation in all trash cans and it was made in front of customers. With the new procedure it only takes 6 minutes to collect and leave the cart in the central segregation, and it allowed the following gains:

- Reduction of 60% in the time to remove waste from the food court;
- Improved cleaning of the area allowed the shopping centre to deliver a higher quality service to its visitors;
- The new procedure brought efficiency to the process and reduced costs with the cleaning supplier's team.



Franca Shopping's food court layout - before the intervention



Franca Shopping's food court new layout

Shopping Campo Limpo: Accelerated composting

Meanwhile, Shopping Campo Limpo has also used accelerated composting to avoid 62 tons of organic waste being sent to landfill.

The system uses heating, agitation and aeration to provide ideal conditions for the microorganisms (fungi and bacteria) that are already present in the food waste to decompose the organic matter within 24 hours.

The resulting compost is donated by Shopping Campo Limpo to the "Adopt a Square" project run by the City Hall of São Paulo which aims to conserve the city's green spaces and public gardens. The centre is also planning to use the compost in its own landscaping to reduce operating costs further.

Overall, Shopping Campo Limpo has increased its recycling rate by 3.95% since the project began. Apart from significantly reducing the amount of food waste sent to landfill, the swift processing of organic waste on-site has left Shopping Campo Limpo a more pleasant environment for staff, service suppliers and tenants.



Organic Product, or fertiliser, after leaving the composting machine at Shopping Campo Limpo

What are we wasting for? Improving waste management in food courts

Conclusion

Through these measures, Sonae Sierra's shopping centres are working to ensure that the growing popularity of eating out comes alongside improvements in waste management that benefit the environment, visitors and suppliers.

The improvements to waste management procedures have resulted in tangible benefits:

- Changes to RioSul Shopping's food court waste processing system allowed it to avoid costs from hiring additional staff.
- At CascaiShopping, the changes have contributed to savings to €27,000 per year by allowing service suppliers to clean and sort waste more efficiently, and reducing the time required to transport waste within the shopping centre.
- Franca Shopping achieved several improvements in the food court's environment and in customer experience beside saving costs and increasing recycling rate.

Improving waste management also brings additional benefits. At CascaiShopping, for example, consolidating two waste sorting facilities into one central area in the food hall increased the seating area by 22 seats thereby reducing waiting times for visitors. Waste food is no longer sorted in front of visitors which has created a visually more appealing environment and reduced noise and smells.

The feedback has also been overwhelmingly positive. Service suppliers at Franca Shopping, CascaiShopping, and RioSul Shopping have praised the new procedures and equipment and confirmed that they have contributed to a substantial improvement in customer and employee comfort.

With composting facilities at Manauara and Shopping Campo Limpo being met with resounding success, plans are now underway to introduce composting to other Sonae Sierra shopping centres; for example, CascaiShopping is planning to implement a composting unit to use organic waste in the centre's gardens.

All in all, Sonae Sierra is well positioned to keep on achieving ambitious waste recycling targets to all its clients.
