FOOD SERVICES PACKAGING SUSTAINABILITY GUIDELINES
Product packaging plays an important role in the food services sector. It helps to maintain the quality and safety of ingredients and products as they are delivered to restaurants, cafes and other food outlets. It also provides a convenient way for customers to ‘take-away’ the food that they purchase to consume elsewhere.

While packaging supports these essential functions, there is increasing pressure from consumers, governments and the community to reduce the environmental impact of packaging. In particular, there is growing awareness that food packaging often is not recycled. Moreover, when food packaging – much of which is manufactured from plastic and designed for single use – escapes into the environment, it has a significant impact on wildlife as well as terrestrial and marine environments.

From restaurants and cafes to mobile food vans and pop-up vendors, food service businesses vary widely in terms of size, product offerings and the extent to which sustainable packaging and recovery options are implemented or even available. However, there are common actions that food service organisations can take to reduce the environmental impact of packaging, without compromising food or product quality, safety or customer convenience.

This guide presents a step-by-step approach that any food service organisation can follow, to minimise packaging waste and to improve recycling and composting rates. A business can work through the steps in a sequential manner if the organisation is just starting out. If the business has already started making changes, then this guide can be used to review progress, identify opportunities for improvement, and take action on the next steps to improved packaging sustainability.

This guide also includes case studies from Qantas, GPT Group, Hobart City Council and Boomerang Alliance, providing real-world implementation examples and practical guidance on overcoming challenges.

The action steps outlined in this guide:

1. Establish the case for improving the sustainability of the business’ packaging
2. Determine what packaging is currently used across the business and where it ends up
3. Identify options for improvement
4. Implement sustainable packaging initiatives
5. Track and review progress
TOP 10 TAKEAWAYS
The following list of Top 10 Takeaways provides a summary of the key issues discussed in more detail through the guideline document:

1. To improve packaging sustainability in your business you will need management support and resources. To achieve this it is important to develop a business case for action that describes external drivers and the business benefits that will be achieved.

2. Establish the current waste situation in your business by creating a list of the types of packaging used in your business and the function, waste stream, quantity and cost of each. If you have a clear picture of what you’re using when you start, you can then paint a clear picture of what you’re saving as you go along – and then you can proudly tell your customers about it.

3. Use the waste hierarchy (Fig 1) to establish a range of options for improvement. The waste hierarchy will help you to prioritise the options that will achieve the highest potential environmental benefit.

4. Collaborate with your key business stakeholders including staff, similar organisations, packaging suppliers, waste recovery and APCO to better understand the options that have been implemented and the lessons learnt that are relevant to your own efforts.

5. There are a growing number of reusable, recyclable and compostable packaging products entering the market. Only select products where appropriate facilities exist for collection and processing.
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FOOD SERVICES PACKAGING SUSTAINABILITY

6. When selecting alternative products/materials, be mindful of unsubstantiated environmental claims on new packaging and endeavour to avoid greenwash. Working within the scope of Australian and international compostability standards will significantly reduce the risk of making poor selections.

7. Implement trials to establish the effectiveness of new initiatives.

8. Involve key business stakeholders in your trials, to build support and share experience.

9. Take time to gather baselines data, to enable a robust evaluation of each specific initiative, but don’t let a lack of data stop you from taking action.

10. Review the effectiveness of your overall approach regularly, to ensure that your initiatives are effective, to identify further opportunities for improvement and to promote achievements.
1. Establish the case for improving the sustainability of the business’ packaging

To improve packaging sustainability in your business you will need management support and resources to support the shift. Therefore, an essential part of building the case for action starts with establishing the business drivers and identifying the benefits associated with improving the sustainability of your packaging.

Consider the situation in your business:

- Are you concerned about the amount of food service packaging that your business uses?
- Are customers asking for more sustainable packaging options?
- Have staff highlighted the issue of waste and/or suggested improvements?
- Are there current or future regulatory requirements associated with single use packaging that you need or may need to address?¹
- Is waste management a significant operating cost?
- Are businesses that are similar to yours taking action to improve packaging sustainability?
- Do you operate in an area where there are proactive regional initiatives in place? For example, community or local council-based efforts to minimise the use of plastic packaging.²
- Does your organisation have sustainability policies or targets, including a commitment to reduce waste and improve recycling and composting rates?

Improvements in packaging sustainability can deliver many benefits.

For example:

- Operational cost savings
- Enhanced reputation
- Positive environmental impacts
- Growth in customer base and customer satisfaction
- An enhanced sustainability profile with which to attract and retain increasingly engaged staff
- A planned and proactive approach to current and emerging regulatory requirements.

Once you have established the drivers and benefits of packaging sustainability, it is important to communicate your business case to management. For small businesses, where managers may be directly involved in developing the business case for sustainable packaging, this is straightforward. For larger organisations you may need to undertake a more formal process that demonstrates your understanding of the business situation and presents a clear rationale for action.

¹ See Wollongong City Council and City of Hobart case studies – Local Government policy and by-laws; Also, ACT, SA considering state-wide Single-Use Plastic bans
² Ibid
2. Determine what packaging is currently used by the business and where it ends up

Once you have a case for action, it is important to establish the current situation in your business. Explore the four questions described below. You can bring the information together in a simple table or spreadsheet. This will provide a useful ‘snapshot’ of packaging in your business (Table 1).

Table 1. Questions that can be used to capture the most relevant information about your packaging types

<table>
<thead>
<tr>
<th>1. PACKAGING TYPE</th>
<th>2. PRIMARY MATERIALS</th>
<th>3. FUNCTION</th>
<th>4. WASTE STREAM, QUANTITY AND COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example 1:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single use coffee cup</td>
<td>Paper with plastic lining</td>
<td>Safety (hot liquid) and convenience</td>
<td>50,000 units per annum, $2,500 per annum to purchase, 30% of waste to landfill costs</td>
</tr>
<tr>
<td>Example 2:</td>
<td></td>
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<tr>
<td>Cutlery in plastic sleeve</td>
<td>Plastic</td>
<td>Convenience</td>
<td>100,000 units per annum, $1,000 per annum to purchase, 10% of waste to landfill costs</td>
</tr>
</tbody>
</table>

1. **Type: What packaging do you use?**
   
   List ALL of the packaging types that are used in your business. For example:
   
   - straws, cups, lids, stirrers, plates, bowls, cutlery, napkins and other packaging that you purchase and use to serve your food
   - boxes, containers, pallet wrap and other packaging that is used ‘back of house’ or in the provision and transport of end-user consumables.

2. **Primary Material: What is the primary material that your packaging is made from?**
   
   Noting the primary material of each packaging type may be useful in helping to identify the urgency with which the packaging should be reviewed, and provide a framework in which to plan the transition to alternative materials or systems.
3. **Function: What service does the packaging provide?**

The function of packaging is important to establish so that you can consider appropriate alternatives and identify any packaging that is not needed. Common functions include, but are not limited to:

- food safety
- food quality
- convenience
- protection.

4. **Waste stream: Where does your packaging end up, how much waste does it generate and what does it cost?**

To find out where your packaging ends up, you will need to consider the different waste streams.

Start with your ‘back of house’ packaging. Take a look in your bins to get an idea of how much you dispose of.

Establish how much waste is sent to landfill, recycling or to a composting facility – and how much it costs the business to do so.

**Where does the food packaging that you provide to your customers end up, how much waste does it generate and what does it cost?**

Make an approximate estimate of what your customers are likely to do with the food packaging that you provide to them.

Consider whether the packaging is likely to be disposed of in bins that are under your control or whether it’s more likely to end up in someone else’s bins that are outside your sphere of influence.

Consider if the packaging will contain food residue which may render a recyclable material non-recyclable.

How much might be taken home by customers?

What disposal options are available to those customers through local kerbside collections?

It can be difficult to get accurate quantities – especially the first time that you start to track your packaging supplies and waste streams, but don’t be discouraged. Even estimates can get you started by providing an idea of the main packaging types, quantities and costs that are relevant in your business. Even experienced organisations continue to improve their data – **do not let difficulties in data collection be a barrier to taking action.**

**Waste stream tip:**


**Waste stream tip:**

Sometimes it is difficult to quantify all components of your waste stream. For example, a number of different recyclables may go into the one type of bin. You may need to work with your waste service provider to get a better understanding of whether the recycling and organic waste that is collected is re-processed in the intended way.
3. Identify options for improvement

Once you have a snapshot of packaging in your business, you can start to identify alternatives. At this stage it is important to use a structured decision-making tool, such as the waste hierarchy (Figure 1) to consider a range of possibilities before prioritising the preferred options. The benefit of utilising the waste hierarchy is that it provides a clear framework in which to prioritise those options that will achieve the highest potential environmental benefit.

As you work through the waste hierarchy for each packaging type and identify areas for improvement in your current packaging, it may be helpful to draw on the experience and perspective of a range of key business stakeholders and information sources, including, (but not limited to):

- Similar organisations that have already made improvements
- Packaging suppliers to find out what options they can provide
- Waste recovery providers to determine the recovery options that are available in your area
- The information resources provided by local councils, state governments and other organisations that are actively promoting improvements in packaging sustainability
- The APCO Sustainable Packaging Guidelines⁴ and associated support materials, for those that want to better understand how packaging design can influence outcomes.

Collaboration is key to successfully addressing these issues and engagement can lead to much broader positive impacts, particularly for businesses operating in shared environments. Where food services are delivered in spaces operated and managed by others – shopping centres, office buildings, event spaces, markets etc. – it is important to engage with facilities managers, building owners and the like, early in the process. The timeliness of this dialogue will assist with understanding existing waste recovery options at the earliest stage of planning. It will also provide

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³ Waste Hierarchy as endorsed by APCO
1. How can you and your customers AVOID and REDUCE the amount of packaging that is needed?
Avoiding or reducing packaging is the best environmental option because it reduces the use of resources in the first place. This is a good option when:
- You have identified that a reduction in packaging will not lead to unintended outcomes, such as an increase in food waste.
- You are looking to achieve quick, cost-effective impacts that will have clear benefits to the environment and your business.
Many businesses, for example, have found that they can avoid packaging waste and save money by not providing customers with straws, pre-packaged cutlery sets or take-away bags as the default position. Instead, these businesses only supply these items upon explicit request, thus reducing their costs, enabling them to supply a more sustainable alternative despite a potentially higher price point.

2. How can your packaging be REUSED?
Re-using packaging can achieve a high environmental value because it retains the full value of packaging as a manufactured product for a longer period. This is a good option when:
- There are relatively small resource inputs required to enable reuse e.g. cleaning of reusable cups.
- The reused packaging can also be recycled or composted when it reaches the end of its useful life.

By rewarding customers for bringing their own reusable cups or offering in-house programs for take-away coffee, cafes are reducing waste directly while developing customer loyalty through return and reuse models.
Reuse examples are available in the GPT Group case study accompanying this report, and in the Reuse – Rethinking Packaging report available from https://www.ellenmacarthurfoundation.org/publications/reuse.

3. How can your packaging be collected for RECYCLING into other products?
Recycling has many benefits. It reduces the environmental impacts and costs of disposal; it helps to conserve non-renewable resources, and moreover, it provides raw materials for manufacturing that have a lower environmental impact and are often more cost-effective than virgin materials. This is a good option when:
- Your packaging can be collected in a way that minimises contamination with non-recyclable or organic material.
- You are confident that the recycled material will be taken to a facility that can process the packaging into a form that will then be used to create useful products.

Capture the options for alternative packaging and collection systems in a table or spreadsheet. Note down the key advantages and disadvantages of each option prior to determining the best initiatives. Key questions to ask and considerations at each level of the hierarchy are outlined below.
For example, paper and cardboard packaging are some of the most commonly collected and recycled materials available, but beware of fibre-based packaging that contains plastic or other polymer-based coatings added to make the material more robust or resistant to liquids. These coatings and additives may cause the fibre-based packaging products to be rejected as they pass through material recycling systems, so it pays to ask your supplier. Poorly informed selections may potentially push the materials out of the recycling system and into landfill, which in turn, may result in increased waste disposal costs for the business.

4. **How can your packaging be collected for processing into COMPOST?**

Composting provides a potential recovery pathway for packaging that is not recyclable through material recycling systems, or that might become food contaminated while in use. It may also assist in increasing the recovery of food waste and other organic nutrients.

This is a good option when:

- Access to organic recycling is available. It is critical to distinguish whether packaging used is suitable for industrial OR home composting, in order to determine the right recovery pathway. For example, some products require industrial compost conditions which means they may not break down in home composting systems. It is important to have access to suitable disposal points and organic recycling infrastructure.

- Your packaging is of an appropriate type and standard to meet the requirements of your recovery partner (for example Australian Standard (AS) 4736 or AS5810 for plastics composting).

- You can manage collection points and contamination rates by engaging customers with labelling, signage and education, to ensure that the material collected will not be diverted away from the composting facility to landfill.

5. **Other considerations**

Other questions that you should ask while exploring and prioritising options include:

- Can you purchase packaging that includes recycled content? This reduces the use of virgin material and creates demand for recycled products.

- For paper and cardboard packaging – do you have confidence that it is from a sustainable source (e.g. Forest Stewardship Certification (FSC))? Is the packaging labelled appropriately to encourage your customers to reuse, recycle or compost? For packaged take away foods such as beverages and ready-made meals, look for the Australasian Recycling Label (ARL) (arl.org.au) to identify if the packaging should go in the recycling or general waste bin.
4. Implement sustainable packaging initiatives

Once you have identified a range of sustainable packaging options you can then begin to prioritise them. Consider:

• which of the options will help to address your business drivers?
• which options will maximise the most benefits for your business?
• which options will deliver the greatest environmental benefits?
• whether the claims made by packaging providers and waste recovery businesses are transparent, credible, verifiable and practical?

This final point is particularly important. For example, if there are claims that a packaging item is ‘recyclable’ or ‘compostable’ then you will need to ensure that there are systems available to collect and reprocess the material. Otherwise, the recyclability or compostability of the packaging will not achieve the outcome that you, your customers and staff expect.

Planet Ark has developed two searchable databases - Recycling Near You (https://recyclingnearyou.com.au) and Business Recycling (https://businessrecycling.com.au) that you can use as a resource.

To implement your first initiatives it can be useful to conduct a trial. This will help you to understand what works and what doesn’t and to obtain feedback from staff and customers that can be used to support a more substantial roll-out later in the process.

Also, you might choose to implement a relatively small but tangible initiative to start with. Early success can provide a foundation for more substantial and challenging changes in the future and can be used as a point of differentiation in the marketplace, to bring your customers along the path with you.
5. Track and review progress

Whatever action that you take, it is important to track and review progress. When substituting an item of serviceware, identify how much of that material you were using from your ordering or annual summary reports.

As you move away from that material to a more sustainable alternative, you will then be able to quantify the reduction in single-use items that you have avoided by making the switch. As time goes by, you will really start to see the impact of your choices and the improvements you can make to the sustainability of your business.

You can also use the information that you obtain to improve what you are doing and to communicate with your customers and other stakeholders about what you (and they) have achieved by supporting your transformation to sustainable food service packaging.

In conclusion...

Packaging plays an important role in the food services sector. At the same time there is increasing pressure from consumers, governments and the community to reduce the environmental impact of food packaging. By applying the practical steps outlined in this guide, organisations can address emerging business drivers and deliver a range of environmental and business benefits.

In addition to these Food Services Packaging Sustainability Guidelines, APCO is working on a range of new materials to support the delivery of the 2025 National Packaging Targets. In the context of Food Service Packaging, the following list of resources may provide useful information for businesses seeking to address sustainable packaging challenges within the food service and hospitality sectors:

- APCO Food Services Packaging Sustainability Guidelines – Case studies
  - GPT Group Case Study – Supporting reuse in office buildings
  - City of Hobart Case Study – Salamanca Market Zero Waste Initiative
  - Qantas Case Study – Zero Waste Flight
  - Wollongong City Council Case Study - ‘Plastic Free’ Australia Day.
- APCO Sustainable Packaging Guidelines 2019
- APCO Working Group Reports on Problematic Materials
  - Biodegradable & Compostable Packaging
  - Polymer Coated Paperboard
  - Soft plastics.
- New Plastics Economy – REUSE: Rethinking Packaging
- Boomerang Alliance – Plastic Free Places

Reusable Serviceware Programs
- Viva la Cup (Vic) - [https://www.vivalacup.com/](https://www.vivalacup.com/)
- Returnr - [https://returnr.org/](https://returnr.org/)
- Huskee Swap - [https://huskee.co/swap/](https://huskee.co/swap/)
- Globelet - [https://www.globelet.com/](https://www.globelet.com/)
THE GPT GROUP

Supporting reuse in office buildings

The GPT Group is one of Australia’s largest diversified property groups. It owns and manages high quality Australian retail, office and logistics properties. GPT was the first Australian real estate company committed to the UN Global Compact and is a global Real Estate sector leader on the Dow Jones Sustainability Index.

GPT’s sustainability approach is innovative and aspirational, developing and trialling new approaches to challenging issues, while providing a premium experience for tenants. One current initiative is focused on avoiding food packaging waste through the implementation of reuse programs at 530 Collins Street, Melbourne, Victoria.

Reusing packaging can achieve a higher environmental value than recycling or composting, because it retains the full value of packaging as a manufactured product for a longer period. This retained value through continued use significantly reduces environmental impacts when compared to single-use or disposable alternatives, dramatically reducing the resource consumption associated with collection, sortation and recycling, and thereby reducing the embodied resource captured in the reusable packaging.

Starting with coffee cups

It is estimated that 1 billion takeaway hot cups are used each year. While disposable coffee cups often look like they are just made of paper, they typically have a plastic lining which allows them to hold liquids, but which also makes them difficult to recycle. Single-use coffee cups are the main contaminant in office recycling streams. The quality of the paper fibre can vary enormously, which can in turn impact on the potential number of reuses, meaning that the fibre is unlikely to be recycled indefinitely. Due to the nature of their use, coffee cups rarely contain more than 25% recycled content, if at all.

Subsequently, the best current solution to this waste challenge is to ‘choose to reuse’, to minimise use of virgin resources and to reduce or completely avoid the

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creation of problematic waste. Recently, a number of innovative service companies have emerged in Australia and across the world, providing disruptive models to support the uptake of reusable cups. To inform and evaluate the success of these initiatives, GPT needed to understand current reuse rates by tenants within their office buildings. They conducted internal research across the office portfolio, which highlighted that the proportion of Bring Your Own (BYO) reusable coffee cups being presented by customers remains low, at between 6 - 8%. Internal research also acknowledged that through marketing campaigns and discounts on reusable cups, the reusable rate could temporarily be lifted to around 10% but that this increase is not sustained post-campaign.

While GPT has focused on enabling people who wish to use a reusable cup, the company has also acknowledged barriers such as customers forgetting or not wanting to own, carry or wash their own cup. In an effort to address these barriers, they have looked at systems which will function effectively, and will outcompete on cost for all parties, including the café, cleaning contractor, tenants and building management – a major consideration in achieving support for such a program.

To this end, GPT has been trialling a partnership with the start-up company TCX® (The Cup eXchange). To participate in the system, customers agree to follow a few simple steps:
1. Join TCX via the app
2. Scan your membership at the Fourteen on 3 Café who will serve your drink in a TCX cup. The customer’s account code is matched to the cup via a QR code
3. When the customer is finished, they return it to the café or a return point in the building
4. The cup is washed by the Café or TCX, ready for the next customer.

An advantage of this approach to reuse is that, dependent on the subscription level, two or more cups may be held by an account holder at any one time. This means that if a cup is left behind when a person wants to purchase a drink, another cup can be obtained. Since the trial began, reuse rates have consistently more than doubled to between 18 and 25%. This increase has been achieved with very limited promotion which suggests that reuse rates could be even higher if combined with active promotion.

**Further initiatives to encourage reuse**

GPT is currently trialling reusable crockery and cutlery at 530 Collins Street. Each tenant in the food court has their own unique and distinctive crockery type, which proves to be the most cost and operationally effective model for tenants, cleaning staff and building management.

The initiative is expected to minimise the use of take-away containers for customers that eat in the food court area, while increasing food waste recycling, by scraping food residues into the organics bin before the reusable crockery and cutlery are washed. By contrast, single use packaging is generally just thrown in the general waste bin still containing food.

Additionally, GPT actively promotes other reuse initiatives to building occupants and food service tenants across its portfolio. In contrast to the TCX model, these initiatives typically require direct sign up from the food service organisations themselves. They include:
• Viva la Cup (Vic) - https://www.vivalacup.com/
• Returnr - https://returnr.org/
• Huskee Swap - https://huskee.co/swap/
• Globelet - https://www.globelet.com/
• CoCup - https://cocups.com.au/


What worked
 Good baseline data is useful prior to the commencement of new initiatives, to support the business case for change. In the case of the TCX trial, the baseline allowed existing reuse activity to be captured before the commencement of the trial, meaning that the impact of the TCX approach could be clearly and validly identified over the duration of the trial or in the wake of a more comprehensive implementation
 Care is needed to ensure that reuse or recycling initiatives do not result in unintended consequences upstream or downstream. In the case of the TCX initiative, GPT is adopting a life cycle approach, ensuring that reuse doesn't lead to greater impacts through the cleaning process. TCX’s system ensures that the reusable cups on which the system is based, are recycled in Australia in a clean resource stream with 100% circularity, once they reach the end of their useful life
 Careful engagement across multiple stakeholders is essential to support collaboration. In the GPT / TCX scenario, the stakeholder audience included the café owner and staff, the cleaning contractor, the property services manager and the building tenants.

Next steps
The TCX initiative has been identified as successful where there is a single café within an office building. GPT is now looking to broaden the trial to establish how effective the approach will be in buildings that have multiple cafes and food outlets.

Considerations for food service businesses
While GPT is in a unique position to encourage and trial food packaging reuse initiatives, there are important insights from this case study for food service businesses.

Establish the business case
 Packaging reuse is an effective way to reduce packaging costs, increase customer loyalty and reduce the need for storage and waste. Once these benefits are understood they can motivate businesses to take action.

Determine what packaging you use and Identify opportunities for improvement
 Partnerships play an important role in progressing new packaging initiatives. Food service businesses should approach building owners and managers to understand what initiatives are in place and to potentially develop new initiatives, while leveraging the benefits of working in partnership.

Implement sustainable packaging initiatives and review progress
 There are a number of organisations that offer reusable packaging solutions. Food service businesses can approach them directly and conduct their own small-scale trials.

For more information on Reuse models, please refer to the resource list included in the APCO Food Services Packaging Sustainability Guidelines.
Under its 2015 – 2030 Waste Management Strategy, the City of Hobart is aiming to achieve zero waste to landfill and is well advanced in the process of passing a local by-law banning single-use plastic takeaway packaging across the local government area. The City understands that to achieve these ambitious goals it must support business and the community in the transition to more sustainable systems.

Salamanca Market, proudly owned and operated by the City of Hobart, is located on the Hobart waterfront and is the largest and most visited tourist attraction in Tasmania. Open for business every Saturday, around 300 stallholders welcome close to one million visitors every year. The market is a test case to demonstrate how the transition to zero waste can be achieved. In particular, Salamanca Market provides an opportunity to explore the best approach to improving the sustainable sourcing and disposal of packaging associated with market-based food services, while driving the push towards a circular economy and improved resource recovery.

Understanding the size and scope of the challenge
The first step in understanding the changes required to move to a system free from single-use plastic was to better understand the waste streams that were being generated, when waste was created and where that waste was ending up. Starting in 2018, three waste audits were spread over a 12-month period. By conducting the audits in different months across the year, seasonal variations, such as the impact of changing visitor numbers and product types, could be better explored.

The audits identified that around 1.2 to 1.4 tonnes of waste were being collected weekly through 106 general waste and recycling bins. Of this, 50% consisted of organics including food scraps, compostable packaging and coffee grinds. The audit results also showed that 50% of waste generated onsite came directly from stallholders. This data confirmed that there was opportunity to divert a significant amount of organic / compostable waste...
away from landfill.

The recommendations from the audit that were subsequently implemented include:

• Repositioning bins and developing better signage to maximise recycling and composting
• Requiring all stallholders to use compostable packaging for food services including takeaway containers, cutlery and coffee cups
• Removing all non-compostable carry bags
• Creating a targeted engagement and communications plan
• Actively engaging with stallholders to support them with the implementation of the new system – particularly the transition to compostable packaging.

Working collaboratively with stallholders to implement change

One of the most challenging aspects of the project was the transition to compostable packaging for food services. Compostable rather than recyclable packaging was chosen for a number of reasons including:

• Food service packaging is often contaminated with organic material which can lead to the material being diverted from recycling to landfill
• There are limited recycling processing plants available in Tasmania which would lead to recycled material being transported to Victoria
• The City manages its own composting facility and so it can directly control the quality of the composting process.

Controlling the composting process has been a critical aspect of the transition. The City has run trials to test the efficacy of composting different packaging types and has confirmed that compostable takeaway food and beverages packaging that obtains quality certifications including Australian Standard AS4736 (Industrial Composting), AS5810 (Home Composting) EN13432 (EU), are suitable for composting within the facility.

Since many stallholders had already purchased non-compostable packaging in advance, the City allowed stallholders to swap their existing packaging for compostable packaging through a one-time ‘swap and go’ program. All of the plastics collected by the City were sent to a recycling plant in Victoria. The recycled plastic was then used to produce two park benches that were purchased by Salamanca Market.

To further support the transition process, regular briefings and information sessions have also been provided to stallholders. These include one-on-one discussions between the City’s waste officer and stallholders, and public sessions held at the market. The public sessions have helped to engage and educate the community and included presentations from packaging suppliers who are able to promote their certified compostable products.

To assist stallholders in purchasing the appropriate compostable packaging, the City provided a list of packaging suppliers on the Salamanca Market website alongside other information about waste management at the market.
Next steps
In addition to continuing the passage of the proposed single-use plastic by-law into force across the area, the City of Hobart will continue to work closely with stallholders to assist with any difficulties arising from the new system of sustainable sourcing and disposal of food service packaging.

Learnings
As owners of Salamanca Market, the City of Hobart has demonstrated that:
- experience from Salamanca Market – both from a waste management and consumer engagement perspective – is having a flow on effect, with local food service businesses recognising the ease with which transition has occurred and increasingly adopting similar initiatives voluntarily
- changes to the bin system have led to a reduction in litter and significant improvement in the recovery of recyclable and compostable material
- the successful delivery of the Salamanca Market project phase 1 resulted in an educated and engaged stallholder cohort, providing a solid foundation for further waste management initiatives onsite.

Considerations for food service businesses
This case study highlights a number of important considerations for food service businesses.

Establish the business case
- An increasing number of councils Australia-wide are looking to play a more direct role in minimising waste – particularly single use plastic packaging.

Determine what packaging you use and identify opportunities for improvement
- A transition away from single use plastic is achievable. It is important however, for food service organisations to plan carefully to exhaust old, non-compliant inventory in advance of any mandatory customer requirements and to manage any cost implications that may arise in making the transition.

Implement sustainable packaging initiatives
- There are a growing number of compostable packaging products entering the market. Where appropriate facilities exist for collection and processing, they provide an effective way to improve environmental outcomes for packaging and organics recovery
- When selecting alternative products/materials, businesses must be mindful of unsubstantiated environmental claims on new packaging and endeavour to avoid greenwash. Working within the scope of Australian and European compostability standards standards will significantly reduce the risk of making poor selections.

Track and review progress
- Review the effectiveness of your approach regularly to ensure that your initiatives are effective and meet regulatory requirements, to identify further improvements and to promote achievements.
QANTAS

Zero-waste flight

In February 2019, Qantas announced ambitious targets to improve the sustainable sourcing and disposal of packaging used to deliver its in-flight services. Having identified opportunities to reduce environmental impacts, the airline set about establishing targets and developing an associated action plan through which to deliver on its objectives.

Other tangible benefits made the exercise even more beneficial. These included meeting increasing expectations from customers and investors with respect to sustainability, and an improved platform for employee engagement, both internally and with airline passengers during flight.

Another somewhat unanticipated benefit was the ‘head start’ it gave Qantas in preparing for the increasingly likely imposition of regulatory requirements for the airline industry worldwide.

Qantas targets include:
- Reduce waste to landfill by 75% by the end of 2021
- Reduce single-use plastics by 100 million items by the end of 2020.

Achieving the targets will require Qantas and Jetstar to replace cutlery, hot cups and other inflight products with more sustainable alternatives.

In May 2019, Qantas conducted a world first ‘zero-waste flight’ from Sydney to Adelaide – a flight that typically produces 45 kilograms of waste per flight and approximately 200 tonnes of waste annually. The flight provided Qantas with an opportunity to trial new products and procedures. It also enabled Qantas to obtain feedback from passengers, staff and its packaging and waste management partners on how best to progress towards their targets.

Planning the zero-waste flight

A working group was formed to examine the full customer journey to ensure that unnecessary waste was eliminated or substituted across all aspects of the passenger experience. Food packaging was a particular challenge, due to several important functions that food packaging serves on flights. Firstly, it must ensure that food is safe to eat while quality, freshness and flavour is maintained. The packaging must also assist passengers to consume food comfortably while enabling efficient collection of packaging materials and other waste arising from the
In planning for the zero-waste flight it was determined that the most feasible short-term option was to use compostable packaging for the food service. This approach had several advantages:

- **Existing availability of alternative materials**
  Compostable packaging made from sugar cane and corn starch was readily available and met the required standards.

- **Established composting partners and facilities**
  Qantas’ food recovery partner Suez delivered all compostable waste to a composting facility in Adelaide that was suitable for the packaging alternatives and were able to confirm that the compostable packaging and any food waste would be processed appropriately.

- **Process efficiencies**
  Using compostable packaging would streamline the collection process and address the additional issue of food contamination as food waste left on plates and cutlery could also be composted.

- **Weight benefits**
  Compostable packaging has similar lightweighting benefits to plastic, ensuring no adverse increases to the weight of the plane and the consequential impacts on fuel consumption and emissions.

**Implementing the zero-waste flight**

Since the flight required new waste management procedures, crew members were provided with comprehensive training and several briefings prior to the flight. These focused on communicating common challenges associated with sustainable waste management, alongside the new procedures associated with the successful delivery of the ‘zero-waste’ objective.

Qantas acknowledged and responded to the high-priority need for staff education, to ensure that all participating staff understood the reasons behind the initiative and had the ‘buy-in’ required to successfully implement the change.

To improve the efficiency of the process, waste streams were separated on board through the use of two separate collection carts. To inform customers on the flight itself, a customised public announcement was made with instructions on how to hand the items to the crew for collection. During the collection process, the crew used the opportunity to explain the importance of the initiative. This communication was made possible through the crew training provided prior to the flight and served to help avoid the risk of confusion and cross-contamination.

At the end of the flight, all waste from the aeroplane was collected, sorted and weighed, to enable further analysis and to verify what had been achieved.

**Learnings**

The zero-waste flight has provided Qantas with many insights that it will use to progress towards its ambitious targets. These include:

- Food waste can be diverted from landfill by establishing an organic waste stream. In the case of Qantas, the choice of compostable serviceware and food packaging in flight, alongside organic waste collection, allowed for both the food and packaging to be collected and handled in a single stream, thereby simplifying the process and potentially offering costs savings through a streamlined waste handling process.
- A system-wide approach is essential to achieve a streamlined process and requires a coordinated approach across the whole system. Having all of the food service items made from compostable material streamlined the collection process for the cabin crew.
- Although compostable packaging was used for the flight, changes to food production were required to use this packaging. Further research and development is required to ensure compostable packaging can fit the unique requirements of Qantas operations and the aviation industry as a whole.
- It is important to support enthusiasm with targeted information and education. Customers and crew were well-informed, highly engaged and motivated to meet the zero-waste challenge, contributing to the success of the initiative.
An additional sort of the waste was required to ensure all items were correctly separated.

There remains confusion around the definition of commonly used terms such as ‘single-use plastic’ and ‘zero-waste’. It will be important for Qantas to demonstrate what these mean in practice, through alignment with government and industry-accepted definitions, supported by careful and verified measurement and communication.

**Next steps**

Qantas has used the zero-waste flight to trial new products and procedures, while obtaining feedback from passengers, staff and its packaging and waste management partners. Qantas is currently using the lessons learnt to work through sustainable packaging and recovery options with its suppliers across its flight network in Australia and internationally. A collaborative approach is essential – not just because of the challenges associated with identifying solutions but also to build capability and knowledge across Qantas’ partners so that they can extend their sustainable packaging solutions to other customers.

**Considerations for food service businesses**

While Qantas has some unique packaging challenges, the lessons learnt from the zero-waste flight are applicable to other food service organisations.

**Establish the business case**

Developing a business case is essential, to articulate the benefit of setting clear targets across the business and to support implementation and innovation.

**Assess recovery systems ahead of time**

It is vital to ensure that the packaging options selected will be recovered and processed in the right type of composting or recycling system. In the case of businesses that operate across multiple locations – such as airlines – this can be a particular challenge, since there are often differences in levels of access to composting or recycling facilities in different locations.

**Take the opportunity to implement sustainable packaging initiatives**

Closed/controllable environments such as airline flights, restricted access events and other such closed formats, offer an ideal setting to implement a zero-waste food service system. The Qantas trial has demonstrated that the careful planning of inputs, through effective supply chain engagement, allows for the development of a solid waste management strategy, underpinned by the vital functions of collection, sortation and processing.

It is essential to work in a collaborative way across the stakeholder spectrum to implement sustainable packaging changes. Key stakeholders in this study included airports, food and packaging suppliers and waste recovery partners, as well as staff and customers.

Trials and pilot programs are a very useful step in implementation, to understand what works and what doesn’t.

Engaging and educating customers and staff to take up the challenge of improving sustainable sourcing and disposal of packaging, drives ‘buy-in’ and supports the achievement of the business’ objectives.
WOLLONGONG CITY COUNCIL’S

‘Plastic Free’ Australia Day Event 2019

In September 2018, in response to the issue of plastic pollution, Wollongong City Council (WCC) proactively adopted a policy to reduce the prevalence of single-use plastics on all Council property and at Council-run events. In developing this policy, Council acknowledged the significant impact of plastic litter on marine environments and identified the need to set a precedent that sustainable alternatives were a viable solution for businesses. Through implementation, WCC publicly acknowledged that the transition to ‘closed loop’ waste management at public events is an essential step in the evolution of sustainable governance and made a commitment to the Wollongong community to take a sustainable pathway.

The Policy commits Council to ensuring that all Council run events on Council land and public spaces minimise single-use plastics. The first major event to fall under the new policy was held on Australia Day in January 2019. The event provided Council with an opportunity to test the application of the policy and to identify any future improvements.

Planning and implementing the Australia Day Event

In the lead up to the Australia Day event, Council informed stallholders that they were not permitted to use single-use plastic takeaway items in the service of food and beverages. Instead, these were to be replaced with certified compostable alternatives. To complement this directive, Council established a waste management system, with bins clearly labelled for landfill, recycling and compost, with the goal of separating waste at source to minimise landfill and maximise recycling, with a particular focus on organic waste and organic packaging material. Bin monitors were also provided on the day to assist the community to select the appropriate bin in order to minimise contamination.

Issues Identified

Throughout the event, representatives from the NGOs Plastic Free Wollongong and Green Connect visited each stall holder to identify what packaging
items were being used. Overall, whilst aware that the event was attempting to eliminate single-use plastic, stallholders were often confused about what products complied with the policy. Engagement with stallholders identified that many had not yet made the transition to certified compostable options – in part because they still held stock of non-compostable packaging materials and the Council had not adequately reinforced the policy compliance requirement in the lead up to the event.

**Lessons learned and future actions**

Experience from the Australia Day event highlighted a number of important actions that Wollongong City Council and other Councils should consider, to improve implementation of single-use plastic policies at Council events.

- Establish a stallholder’s agreement that clearly outlines the implications for stallholders if they do not adhere to the policy. Having a clearly defined protocol – including measures to address non-compliance – allows event organisers to engage with stallholders on non-contestable grounds and enables the event to be consistent with its “Plastic Free Status” should prohibited items be present.
- Provide specific information, recommendations and guidance to stallholders regarding which packaging can and can’t be used at Council events. This information must be researched and compiled in conjunction with the event’s waste service providers and be calibrated to match the capacity of these providers to handle and process the event waste. Ensure Australian composting standards and labels are referenced as a minimum threshold for compostable packaging, to avoid greenwash and confusion for stallholders, the public and waste management teams.
- Improve and standardise bin labelling and graphics. This will ensure that members of the public, including those from linguistically diverse backgrounds, can understand the signage and dispose of their waste correctly. Consistent signage is key, particularly when using a combination of event-specific and existing public place bins.
- Develop public education about the event, to engage and inform event-goers and improve disposal outcomes. For example, provide information on pamphlets next to bin stations; use banners and improve event signage to explain why the strategy is being implemented and encourage the public to be a part of it; utilise digital channels to provide information in pre-event communications; inform participants and attendees on what to expect, in advance of the event, to ensure that they’re prepared before they get to the event.
- Enhance monitoring and reporting back so that stallholders and the public are aware of the extent to which the intended policy outcomes were achieved and areas in which further improvement is needed. This also provides a benchmark against which to compare event outcomes and to measure progress towards achieving policy objectives.

**Considerations for food service businesses**

This case study highlights a number of important considerations for food service businesses.

**Establish the business case**

- Councils all over Australia are looking to play a more direct role in minimising waste and are leading by example within their own purview – particularly in relation to single-use plastic packaging. It is therefore important to understand current, and anticipate future...
It is important to work closely with customers (in this case a Local Council) to understand the requirements of new policies and to adopt a collaborative approach to achieving the desired outcomes of such a policy.

**Determine what packaging you use and Identify opportunities for improvement**
- Transitioning a food service packaging system away from single-use plastics requires a holistic approach that facilitates clear communication to all players active within the system. Planning for transition must take into consideration the packaging that you currently use and a full range of food service delivery options, some of which may not necessarily coincide easily with existing frameworks.
- As innovation continues to bring new alternative materials to the marketplace, food service organisations must be proactive in exploring the most appropriate products and/or models that are available to them. In some scenarios however, reuse models may offer a suitable alternative to the provision of single-use service-ware and must be included in the evaluation of alternative delivery options.
- A partially controllable environment presents a good opportunity for improving the end-of-life outcomes for food serviceware, by working closely with waste handlers to ensure that the collection, sortation (where appropriate) and processing of outputs is handled efficiently.
- Suppliers must also seek the highest quality and reliability from the certification standards against which their selected food service-ware is accredited – see AS 4736 and AS 5810. A transition away from single-use plastic is achievable and economically viable, but it is the responsibility of the Council (or event organisers) and suppliers to ensure that alternative materials meet Australian standards and can be successfully collected and will be accepted by local composters for processing.

**Track and review progress**
- Review the effectiveness of your approach regularly to ensure that your initiatives are effective and meet regulatory requirements, to identify further improvements and to promote achievements.
- Quantify the reduction in single-use plastic waste achieved by transitioning to more sustainable food service-ware, to demonstrate to ratepayers and visitors alike, the impact that the policy has had over time on achieving positive sustainability outcomes.
To contact APCO please visit our website
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