



**CIRCULAR
FUTURES**

Systems Mapping of Business Food Waste Separation

**Universal pain points in food waste
separation in three business models
in New South Wales**

Prepared by Circular Futures, 2025

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The [NSW Waste and Sustainable Materials Strategy 2041: Stage 1 2021–2027 \(WaSM\)](#) set the target to halve organics waste going to landfill by 2030 and committed to achieving this target by mandating the diversion of organics waste through a separate Food Organics and Garden Organics (FOGO) waste collection service.

The [NSW Government is implementing FOGO legislation](#) that sets out the requirements to have separate food waste collection service(s) for businesses from 1 July 2026 in NSW. The legislation details the business types captured and the staggered approach (2026, 2028 and 2030) for different-sized waste generators, along with recycling and avoidance strategies.

This research project set out to identify and explore the friction points experienced with food waste recycling within three commercial environments in NSW and to apply a systems lens. A total of nine businesses were engaged to participate in the research, and twelve sites were visited as part of the research. All participating sites were offered anonymity.

The research focused on three types of the larger food waste generators captured by the FOGO legislation:

1. Supermarkets

In this scenario, there are multiple food waste types generated and layers of management (in the store and with the head office).

2. Large Pubs and Clubs

In this scenario, there are multiple kitchens or meal service types for large numbers of people; however, the facility is centrally managed.

3. Shopping Centres

In this scenario, there are multiple independent businesses operating, but they share a central management structure for waste services.

Through desktop, observational, and qualitative research, this project explored the primary and secondary friction points that result in disengagement, contamination, and organic food waste recycling losses in three commercial scenarios in NSW.

A report is available at circularfutures.co.

Disclaimer

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Contracts

CONTEXT

Contracts set the terms and conditions for the multiple participants in the systems, which determine their understanding, compliance, and the suitability of the terms to the conditions.

FRICITION

Occurs when terms are unclear or are based on assumptions rather than data-informed actual needs.



Accountability

CONTEXT

Compliance and engagement at the store and dock level are affected by the presence/lack of dedicated staff to ensure efficiency, functionality, communication and process clarity.

FICTION

Occurs when there is either no allocated team member or accountability is unclear.



Cleanliness & OH&S

CONTEXT

Cleanliness and contamination management affected by cleaning processes, pickup frequency, and oversight measures.

FRICITION

Occurs if the washing process is unclear, if the level of food decomposition becomes high, and if there is dedicated staff to manage (see accountability).



Bins & Infrastructure

CONTEXT

Layout and design of the store, along with the size and weight of the bins, affect general hygiene issues and ease of moving waste from point to point.

FRICITION

Occurs when the size of the bins is either too small to fit all the waste, too heavy to lift, and/or if method of transport is too difficult.



Training

CONTEXT

Compliance and understanding of the system are affected by the amount and frequency of training, along with process reinforcement through signage & follow-up training.

FRICITION

Occurs when training is inadequate, infrequent, and/or unclear to the staff.



Data

CONTEXT

General system coherence depends on understanding the bin usage and needs, real-time data and efficient data collection systems.

FRICITION

Occurs when processes are not based on real-world data and usage metrics.

Establishment
Contracts
Bins & Infrastructure
Context

The waste contract needs to suit the specific site and business needs and have the flexibility to change.

Waste Data

Know how much waste is produced, which bins are available or needed, which parts of the contract work well and which don't.

KPIs & Cost Savings

Ensure there are financial incentives rather than disincentives for food recycling.

Bin Size

Select the correct size and shape of bins to ensure ease of use. Too big = heavy, too small = doesn't accommodate all waste or needs emptying often.

Bin Cleanliness

Ensure ongoing clean bins and bin bay areas encourage participation and avoid OH&S issues.

Infrastructure

Consider what additional infrastructure is needed, e.g., in the kitchen, transporting waste to the bin bay or in the bin bay room.

Management
Accountability
Training
Dedicated Manager

Assign a key person to be responsible for the system functioning well.

Follow Up

Have regular face-to-face feedback & communication to maintain high food waste separation with low contamination.

Processes

Establish standard procedures and regular check-ins to ensure that the system is easy to use and effective.

Initial Training

Conduct onboarding and regular refresher training to ensure all staff is aware of the expectations.

Signage

Install clear, easily understandable signage in appropriate locations to avoid contamination and increase recycling.

Recognition

Have regular follow-ups with staff and acknowledge or reward staff who do well. Encourage peer accountability and process improvements.

Maintenance
Cleanliness & OH&S
Data
Dock Oversight

Assign a key person to oversee the communal food and general waste bin area and pickups.

Bin Washing

Provide bin washing stations or services.

Pickup Time and Frequency

Ensure the pickup schedule aligns with volume rates, especially after peak times, to reduce build-up and odour risks. Ensure pickup times don't adversely impact processes.

Data

Monitor the number of bins used, how much waste goes into each stream, and contamination levels.

Data Management

Set up and maintain a real-time data management dashboard or service.

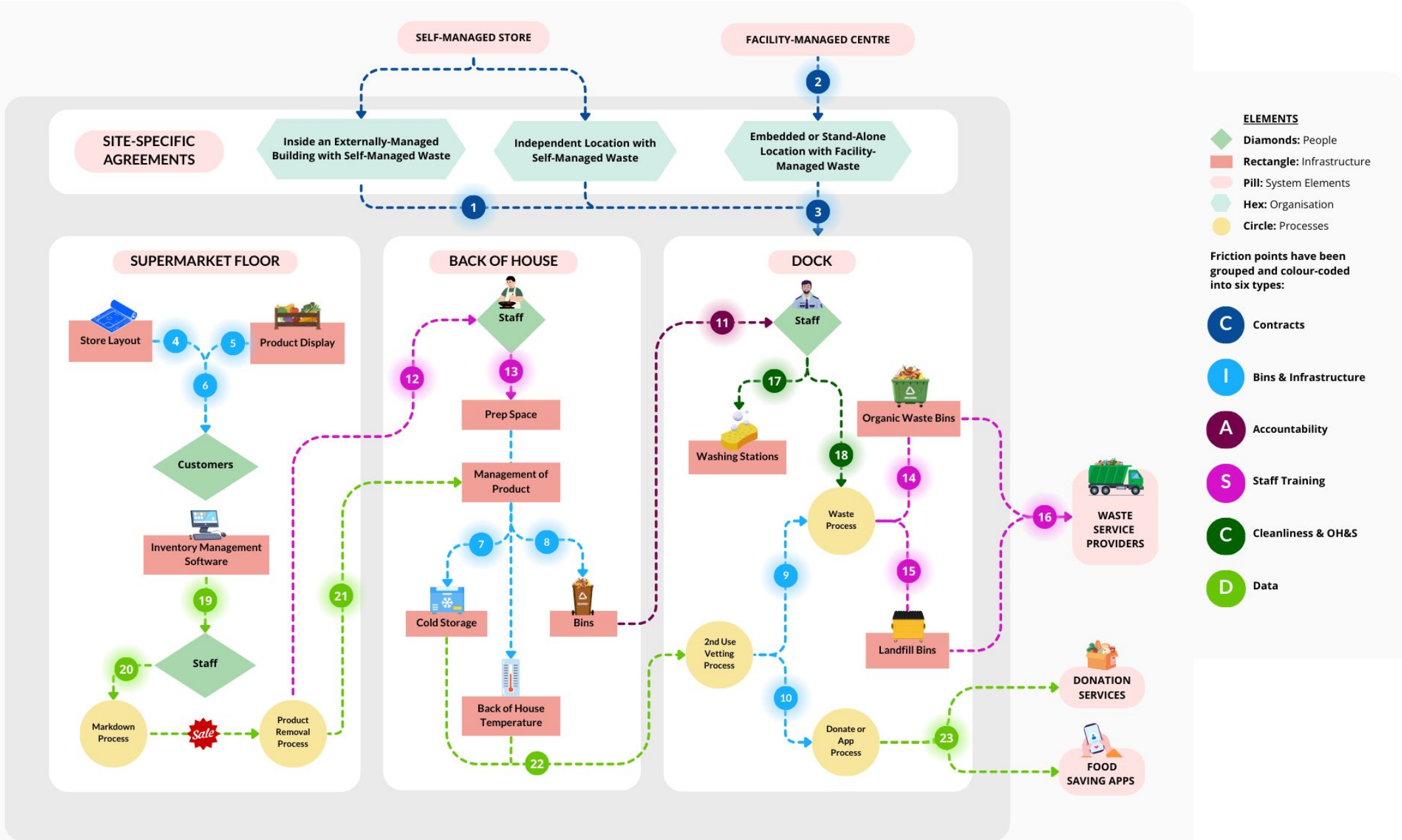
Response Systems

Establish systems in place to ensure that data is collected and responded to in a timely manner. Responses might include short and longer-term adjustments to systems and procedures.

Systems Mapping of Business Food Waste Separation



SUPERMARKETS



C Contracts

1 The store's location within an externally-managed building or a self-managed space will impact the waste management process, contract setup and available waste data. Friction occurs when contracts don't align with the supermarket's specific needs.

2 Supermarkets located in a facility-managed centre may be required to use macerators and waste services established by the management company. Friction occurs when the system is not the desired one, as supermarkets often prefer a packaged food waste collection service to reduce staff time.

3 Contracts with waste removal companies may be based on either the weight of waste collected or a per-bin collection fee. Friction can occur if the type of contract (kg or lift) impacts the fees associated with removal, increasing costs or decreasing savings as more food waste is placed into food recycling bins and less in landfill bins.

I Bins & Infrastructure

4 The store layout affects how customers move through the aisles and their purchasing habits. Friction occurs if the layout inadvertently results in damaged goods, newer rather than older products being sold, or poor sales.

5 Display of products affects customer purchasing rates, the time perishables can remain on the floor, and the associated amount of waste produced. Friction occurs if this is not optimised for quick flow-through, leading to food spoilage.

6 Customers may open packages or create damaged products. Friction occurs when damaged product results from spillage, fallen produce, and other behaviours that affect markdown waste and donation.

7 Food must be stored at a safe temperature for donation or food app resale use. Friction occurs when waste levels are impacted by the temperature in the back of house, and the amount of available cold storage space reduces the longevity of the donatable goods.

8 Room is needed for food waste bins and trolleys. Friction occurs when a lack of space reduces staff efficiency during cutting and trimming of produce and during sorting food waste for donation and recycling.

9 Many supermarkets use donation and/or food saver apps to reduce food waste. Friction occurs when food charities reject surplus unwanted inventory due to quality, quantity, pickup times, etc.

10 Quality and use-by and sell-by dates affect how produce is diverted to donation and food-saving app services. Friction occurs if the facilities are unable to properly store food for these services, increasing food waste.

A Accountability

11 Back of house and docks benefit from management oversight and clarity around expectations for all staff to participate in waste separation, donation, and recycling processes. Friction occurs when there is a lack of reinforcement and leadership demonstrating expected behaviours.

T Training

12 Some supermarkets use either macerators or depackagers to manage food waste. Friction occurs when staff don't have enough time to remove packaging for macerators or aren't adequately trained to use depackagers.

13 The turnover rate of staff and the amount of regular training they receive affect how food is stored, separated, managed, and the resulting waste levels. Friction occurs when there is a lack of onboarding/training.

14 Staff need to be adequately trained (face-to-face training with demonstrations is best) to know what can and cannot be put into either the macerator or the bins. Friction occurs when staff are not trained frequently enough, leading to higher contamination rates, reduced food donations, and poor recycling.

15 Waste is either sent to food waste or landfill bins. Friction occurs without adequate training, resulting in food waste in landfill bins and non-food waste contaminating food waste bins.

16 Food waste service providers, donation services and apps all require different degrees of food quality. Training affects the quality of the diverted or waste stream food. Friction occurs when training is inadequate, leading to higher rejection rates in those differing streams.

C Cleanliness + OH&S

17 Cleaning station setup and availability affect the ease of hygienic practices and the levels of odour, vermin, and insect infiltration. Friction occurs when there isn't a dedicated wash station or when the cleaning process is difficult, unclear, or time-consuming.

18 If an external bin cleaning service is used, the timing of the service will affect if staff use the general waste bins vs food waste bins, as food waste bins must be empty for cleaning. Friction occurs when this is not clearly communicated and the bins are not empty in time for cleaning.

D Data

19 The stock management system used can affect food waste generated and staff engagement with the resulting markdown and removal processes. Friction occurs if there is no robust system in place to manage inventory.

20 To reduce costs, supermarkets prefer to mark down food for fast sale, then sell via 2nds apps and donations to charities before recycling food waste. Friction occurs without data management systems, leading to lower efficiency.

21 Data availability and accuracy for inventory quantity and sell-by dates affect where the product is directed, how it is stored, and how much becomes waste. Friction occurs when accurate data isn't easily accessible to trained staff.

22 Data on which donation and food-saving apps accept waste affect levels of waste diversion. Inventory overstock, food preservation tactics, store display habits, customer misuse and sell-by-date tracking affect quantities of waste produced. Lack of data from and to these services can reduce the amount of food diverted.

23 Data on which types of food donation services will accept, and trends in food-saving apps, affect how much can be picked up by these services. Lack of trend data over time reduces opportunities for food diversion.



Importance of Contracts

Management Contracts

- Contracts between the facility where a supermarket is located (such as a shopping centre) or across a chain of supermarkets may result in predetermined waste management that is not ideally matched to the individual supermarket's needs or location.

Waste Contracts

- Contracts can be used to determine which type of technology and service is the best fit (e.g., inventory management, waste collection based on kg or lift, macerators, depackagers, bin washing, etc.) to ensure the best fit.
- Ensure flexibility in your contract in case your pickup needs change (more or less, timing, etc.).
- Contracts with waste service providers can pose issues if they are not set up to address the specific needs of the supermarket, such as the size and volume of waste produced, pickup frequency and timing, and whether food waste is packaged or unpackaged.
- Contracts (verbal or written) with donation services can reduce food waste and lower waste removal costs while benefiting the community.

Service & Site-Specific Contracts

- External service providers, such as cleaners, can affect hygiene levels and contamination rates in the system (e.g., when and how bins are cleaned, processes to ensure food waste is not sent to landfills, and contamination monitoring).

Example

Optimal Case: Contracts ensure the pickup frequency and bin size are best-fit to optimise cost savings, staff efficiency, and the flow of waste (e.g., more waste on Mondays after the weekend, waste not being collected when food is delivered, etc.).

Sub-Optimal Case: Waste service contracts are not based on best fit for the site, lack real-time data feedback, have infrequent or too frequent pickups, do not integrate cleaners into the process, and lack calibration to site-specific needs.

Recommendations

1. **Conduct a minimum 24/48-hour waste audit** to see how waste flows through the system and available space. This should indicate where improvements can be made in inventory management software, the impact of displays on customer behaviour, and opportunities to reduce food waste and donate excess stock (e.g., freezing meat before the sell-by date to ensure it can be donated). Use it to establish the number of needed bins, the lift frequency, and the cleaning schedule.
2. **Request that data transparency be built into contracts** to have access to information at the store level that will impact efficiency and costs.
3. **Ensure specific requirements are articulated**, such as flexibility to increase the number of food waste bins and decrease the number of landfill bins, and access to real-time data is provided when setting up or renewing waste service provider contracts.



Importance of Bins & Infrastructure

Size

- Bins are often only located in the back of house; smaller bins may be used to collect trimmings (e.g., excess leaves on cauliflower) and transport them to the dock area. They should be wheeled or easily maneuverable/ lifted into the main bins.
- Allocate enough cold storage space to preserve food that will be diverted from waste to donation.

Bin Cleanliness

- Bins should be regularly cleaned for hygiene, which may require an external service.
- Schedule bin cleanings right after pickups. Ensure staff are clear on when bins are cleaned and emptied so they don't put food waste in general waste during this period.

Frequency

- Ensure clear communication and clarity of the pickup schedule so filling can be optimised to save costs, prevent produce from degrading, etc.

Infrastructure

- Back of house needs space available for the addition of dedicated food waste bins.
- Signage in multiple languages that is relevant to staff on site may be helpful.
- Food recycling bins and food donation storage areas should be clearly marked.
- Incorporate waste collection, storage and customer movement patterns into future renovation projects.

Example

Optimal Case: Back of house has adequate storage space, appropriate bins sizes with clear signage, and room for cold storage. Dock has a wash station/or cleaning service aligned with waste pickup schedules.

Sub-Optimal Case: There is no consistency in cleaning schedules, not enough space for cutting and trimming, and food is sent to food waste rather than donation or food-saving apps due to a lack of available cold storage.

Recommendations

1. **Bin & Space Audit:** Conduct an audit of bin sizes and optimal collection times based on waste production frequency, and adjust the system to match back-of-house and dock needs.
2. **Scheduling:** Arrange waste and donation pickup times based on sell-by dates managed via inventory management systems, and make them frequent enough so storage areas don't fill up and waste accumulates.
3. **Signage & Diagrams:** Review current signs and develop new signage that ensures graphics, text, and recommendations are up to date and clear on what is accepted, when pickups occur/when to donate, etc. Include other languages if they are relevant to staff on site, and conduct regular training and orientation so that teams know how to successfully engage with the food waste system.

Importance of Accountability

Dedicated Manager

- Consider having a dedicated manager or other accountable team member, (eg., section manager or dockmaster), to facilitate processes, ensure compliance, and support record-keeping to reduce/redirect food waste.
- Section managers can be leveraged to ensure that stock management effectively redirects and reduces waste through markdowns and donations.

Follow Up

- Conduct regular check-ins on site and with staff to ensure size of bins, pickup frequency, and other parts of the system are working efficiently (cost and time).
- Get real-time data that feeds back to management for system adjustments; consider integrating it into the stock management system to limit food waste.

Processes

- Consider a code of conduct/waste hierarchy that staff must agree to or sign as part of their work responsibilities, including details on the use of bins and separation procedures.
- A daily bin audit system by the dock manager allows tracking of compliance and bin size needs, as well as monitoring which food waste is coming from which departments and why.
- Clear processes and procedures help establish expectations and efficient operations; having someone accountable for them helps ensure they are maintained and updated as needed.

Example

Optimal Case: A dedicated manager facilitates waste separation using regular audits to ensure waste is minimised and moving effectively through the system. An inventory manager tracks donation or food-saving app inventory and ensures food is distributed within the appropriate time frame, with any remaining items being recycled.

Sub-Optimal Case: No person is responsible for waste separation or following inventory management systems; there is no follow-up, resulting in increased food waste and increased waste management fees.

Recommendations

1. **Set up procedures:** Establish clear accountability procedures for management, staff, and the donation/apps process. This could include training and data collection to report on the performance of the food waste and diversion system.
2. **Oversight:** Set up a clear accountability system whereby it's part of a person's role/job to check in bins, implement procedures to avoid contamination, reduce hygiene issues, and reduce mixed waste streams. If available, have a dedicated dock manager to facilitate and guide staff, and to manage food donations.
3. **Seek Feedback:** Develop a formal feedback system to inform staff about the amount of waste separated/donated/saved, and to identify opportunities to increase motivation and streamline systems.



Importance of Training

Initial Training

- Develop a process for new staff onboarding that introduces them to your food waste system. Having another staff member demonstrate is a great way to ensure some accountability.
- Consider developing a waste hierarchy that goes from markdown to donation and then recycling; train staff on the system.

Signage

- Provide clear backup visual communication tools at all places where a staff member needs to make decisions about food waste recycling.
- Provide smaller signage and decals for use inside each store and on bins.
- Visually communicate your waste hierarchy and any steps staff need to take to direct food waste to the right pathway (donation, recycling, etc.).

Reinforcement & Rewards

- Training will need to be reinforced and rewarded regularly, especially as new staff onboard.
- Consider holding a regular new-staff training session to educate on the food waste system.
- Empower your management team to incentivise and motivate staff, and conduct check-ins on how to improve the system.
- Data can be used to check when/where training is needed.

Example

Optimal Case: Training is provided face-to-face for all new staff, and systems are set up to reinforce decision-making to redirect food waste to different pathways (donation, recycling, etc.). There are regular follow-ups for new staff and routine training updates on how to use the system effectively. Clear, visually-engaging signage is used at all points staff need to make decisions.

Sub-Optimal Case: Written materials are provided in only one language, there aren't follow-ups with regular training, and no visual cues are provided to remind staff of best practices.

Recommendations

1. **Start early & often:** Establish initial training sessions right from the start of new staff onboarding, and offer regularly scheduled in-person demonstrations and feedback so everyone is invested and aware of the progress and compliance.
2. **Visual reminders:** Develop and display clear, engaging visual reminders of all the best-practice processes and decisions staff should be making with regards to markdowns, effective storage for donation, and how to use the food waste recycling system well.
3. **Systemise procedures:** Establish standardised routines and processes to maintain consistency and reduce training costs. Consider decision trees or waste hierarchies as additional visual support tools for on-site use.



Importance of Cleanliness + OH&S

Training & Oversight

- Effective management procedures are in place to maintain the cleanliness of bins and dock areas.
- Data is provided by inventory/waste contractors/donation services and food-saver services so managers can monitor and maintain the system.
- Appropriate training has been provided for safe operation of any on site processes (such as macerators and/or depackagers).

Quality Control

- Systems set up to ensure that food is redirected to food-saving apps and donations in ways that preserve its quality and make it a desirable product for collection. This may involve refrigerating or freezing food before collection.
- Integrate stock management into workflows to ensure markdowns and redirects are handled most effectively and efficiently.

Pickup Frequency

- Waste contractors collect accumulated waste from the dock at the required frequency to avoid food waste accumulation; needs may increase/decrease due to seasonal factors, etc.
- Regularly audit the system to ensure operational efficiency and reduce health and safety risks.
- Food-saver app products and donations are stored in cool storage until just before pickup.

Example

Optimal Case: Stock is monitored and managed to flow efficiently via food-saver apps and donation services before being wasted. Effective scheduling and training help ensure bins and general areas are clean and hygienic, with the pickup/cleaning process aligned to flow efficiently and prevent waste from accumulating.

Sub-Optimal Case: Bins aren't emptied in time for cleaning schedules, food donations are left in the dock without refrigeration, washing stations aren't available/not scheduled effectively, and food expires before safety cut-offs for apps/donations, leading to a buildup of food waste. Donatable food is not stored correctly which increases waste.

Recommendations

1. **Incentivise through communication and training:** Motivate everyone to meet expectations for using the system effectively to maintain cleanliness and hygiene. This could be through regular face-to-face training, waste huddles, store rewards, very big signage, etc.
2. **Hire cleaners:** If you don't have space or resources for on-site cleaners, hire a bin cleaning company to regularly wash out the bins to reduce residue buildup and keep the system clean.
3. **Quality control:** Set up processes and systems that enable staff to check stock in time to redirect to food-saver apps and donation services. Implement food donation guidelines that preserve freshness and redirect in time for effective use.



Importance of Data

Data

- Set up data collection systems at the start to establish baselines for comparison, manage compliance, and identify areas within the store that need improvement, such as certain fresh products or meats/dairy.
- Real-time data helps improve the efficiency and cost-effectiveness of your system; build your own or integrate it into your inventory management system.
- Ask waste service providers for real-time data on the amount of waste picked up, contamination rates, and the cost of pickups for all types of waste to see cost reductions overall and improvements in organics.
- Ask donation services and food-saving app services to share data on the desired products to reduce rejections of unwanted/needed products.

Data Management

- Set up systems that enable each section of the store to report on why food is being wasted (e.g., not marked down in time, put on special, etc.) to create a feedback loop that enables changes to stock management that reduce waste.

Systems in Place

- Conduct regular audits to identify potential issues in each department and document improvements over time.
- Establish open communication and feedback systems with donation or food-saver app companies to respond to their needs.

Example

Optimal Case: Internal audits for each department establish baseline data on how and why waste is being produced, providing management and staff with the information needed to efficiently mark down or redirect food waste to donation and food-saver apps, as well as manage cold storage and ordering to avoid surplus inventory. This is managed through a centralised, easy-to-read dashboard.

Sub-Optimal Case: No or limited data is collected, leading to a lack of awareness of the system and resulting in inefficiencies, food waste, and cost increases.

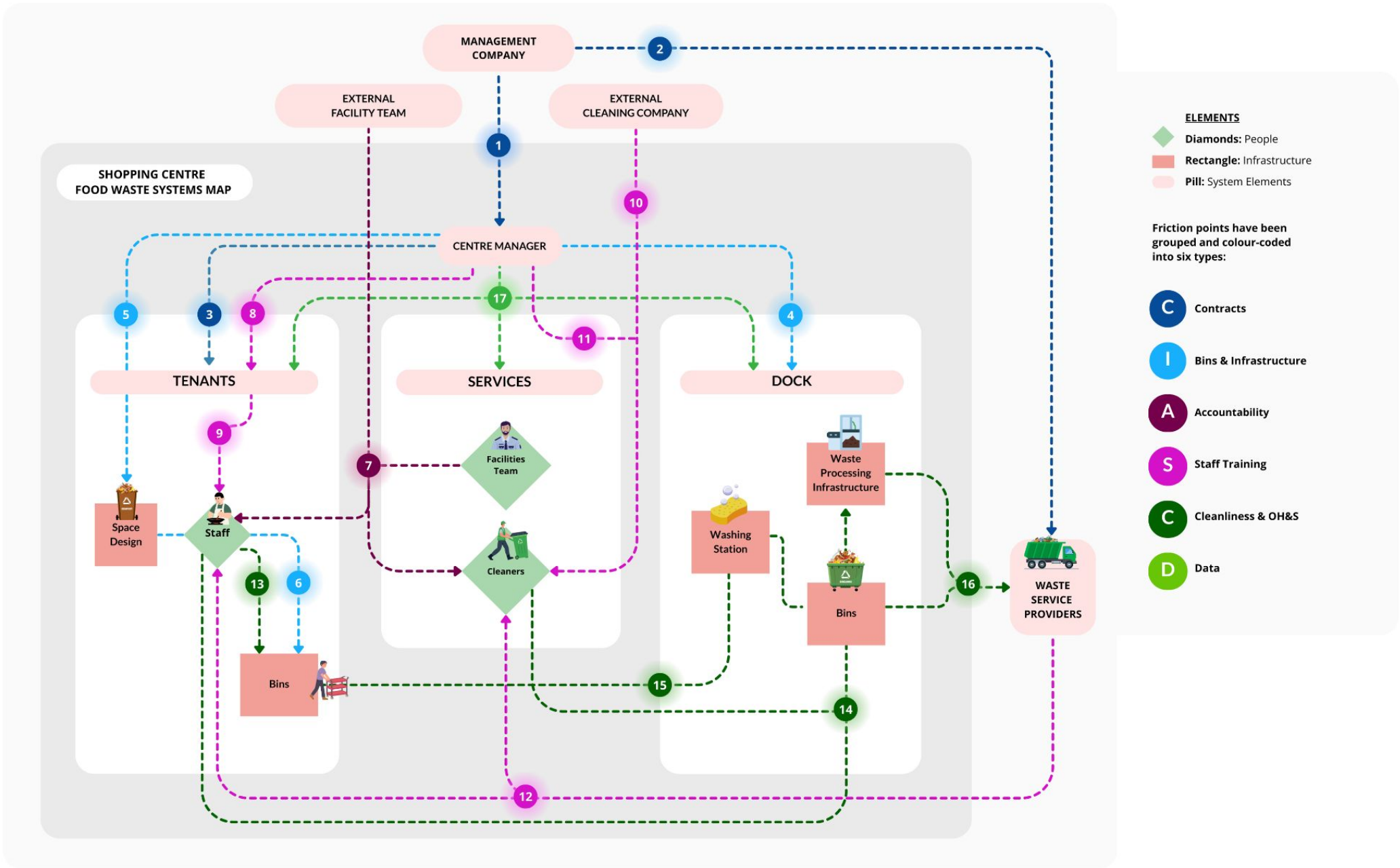
Recommendations

1. **Establish a baseline:** Conduct audits of each department to gather as much data as possible on your existing system. Consider implementing a regular audit (e.g., every 6 or 12 months) to assess performance. This can be done at the same time each month/quarter to see year-on-year data and improvements over time.
2. **Establish a data collection method:** Ask your service partners to provide real-time data and assess your monthly costs and revenues, look to optimise the system for cost savings and revenue potential, and consider building your own dashboard to monitor in real time.
3. **Create a data feedback process:** Share collected data with store managers so they can improve their system's performance. Compare stores to see where and how good performers are making changes, and share this with lower-performing stores.

Systems Mapping of Business Food Waste Separation



SHOPPING CENTRES



C Contracts

- 1 Management company contracts determine the waste management requirements for tenants. Friction occurs when contracts do not have clear terms around food waste management and expectations.
- 2 Management company contracts with waste providers determine the terms, scope, method and frequency of pickups from the facility. Friction occurs when there is a misalignment between actual needs and contractual services provided.
- 3 Centre management contracts with tenants define the terms for waste management. Friction occurs if these contracts do not specify clear requirements for food waste recycling.

I Bins & Infrastructure

- 4 Centre management manages the flow and use of the dock area, types of infrastructure (macerators, cleaning stations, etc), instructional signage, and support staff. Friction occurs when the infrastructure creates barriers to food waste separation with low contamination.
- 5 Centre management may provide requirements for the location of facility-provided waste bins and sizes. Friction occurs when the amount or type of food waste generated by tenants doesn't fit with the existing infrastructure.
- 6 Tenants decide on the design of their store and how much room is allocated for waste bins. Friction occurs when the size and location of the bins impact the ease and frequency of use.

A Accountability

- 7 In-house or externally contracted facility teams reinforce waste management practices by monitoring tenants and following up on food waste separation with low contamination. Friction occurs if no dedicated staff is allocated for oversight and standards, and if waste management procedures lack clarity.

T Training

- 8 Centre management trains tenants via online or in-person sessions, manuals and/or signage. Friction occurs when training is inadequate, unclear, or infrequent.
- 9 Tenants train their staff on store practices for the use and maintenance of food waste bins. Friction occurs when training is inadequate, unenforced, and infrequent.
- 10 External cleaners (if used) train their contracted staff on collection times, monitoring practices, and reinforcement. Friction occurs if the training provided doesn't match the tenant and centre management needs.
- 11 In-house cleaners (if used) receive training from centre management to establish processes such as frequency of collection, maintenance practices, and food waste separation with low contamination. Friction occurs if the training provided doesn't match the tenants' and cleaners' needs.
- 12 External waste providers train tenants and cleaners on how to use the specialist infrastructure (such as the macerators and dehydrators). Friction occurs when training is inadequate and/or infrequent.

C Cleanliness + OH&S

- 13 In-house or externally contracted facility teams reinforce waste management practices by monitoring tenants and following up on compliance. Friction occurs if no dedicated staff is allocated for oversight and standards, and if waste management procedures lack clarity.
- 14 Tenant staff or cleaners (in-house or external) decant waste into dock bins and machines (i.e, macerators). Friction occurs if there is contamination between streams, if the size/weight/location and number of the bins don't match needs, or if bins can't be quickly emptied and cleaned.
- 15 Staff or cleaners (in-house or external) either pick up a new bin that has been cleaned or clean it themselves and return to the store. Friction occurs if the cleaning process is difficult, unclear, or time-consuming.
- 16 Waste providers pick up waste on a schedule determined by management and may provide maintenance of infrastructure. Friction occurs if the provider is unreliable in either their scheduling, contamination control or maintenance.

D Data

- 13 In-house or externally contracted facility teams reinforce waste management practices by monitoring tenants and following up on compliance. Friction occurs if no dedicated staff is allocated for oversight and standards, and if waste management procedures lack clarity. Friction also occurs when data is not analysed to understand any poor performance.



Importance of Contracts

Management Contracts

- Contracts between the management company and tenants can provide clarity on waste separation and recycling requirements for effective food waste management.
- Contracts between management and tenants could be used to determine design requirements, such as integrated bins, etc. This presents an opportunity to provide guidance on bins and infrastructure to support waste separation in each shop.

Waste Contracts

- Waste contracts could offer incentives to reduce general waste and increase food waste recycling.
- Contracts with waste service providers can be set up to ensure the right size and number of bins, optimal frequency of collection, cleaning and real-time data provisions.

Service Contracts

- External service providers like cleaners could have the requirements for food waste collection, cleaning of bins, contamination management, etc., built in to their contracts.

Example

Optimal Case: Management contracts specify the requirement for dedicated, separate food waste bins and that the tenant's staff are trained in and responsible for correct food waste separation.

Sub-Optimal Case: Contracts with waste service providers are set up in such a way that the lift type, frequency and amount of waste collected do not match needs, resulting in increased costs, inappropriate pickups, etc., or discouraging food waste recycling.

Recommendations

1. **Conduct a minimum 24/48 hr waste audit** by setting aside bins, separating out and weighing each category (food waste, dry recycling, general waste, etc.), and identifying the amount of food vs general waste produced. This should give an indication of where improvements can be made and calculations of how much food waste is being generated and from which tenancies.
2. **Redesign contracts between management and tenants** to include requirements around food waste separation and recycling.
3. **Ensure specific requirements are articulated** and that real-time data is provided when setting up or renewing waste service provider contracts.



Importance of Bins & Infrastructure

Size

- Customised bin size to accommodate the type of waste (e.g., large bin for juice bar, smaller for cafe).
- The available space within the retail space will also determine the size/shape of the bin.
- Bins should be a manageable size for the staff to lift or move easily.
- pickup time and frequency should match the needs of each tenant.

Bin Cleanliness

- Bins should be easy to wash out to maintain cleanliness.
- Install bin wash stations in the dock area near where food waste is emptied.
- Liner bags can be used to maintain hygiene but may need to be removed before the food waste is taken off site.
- Ensure someone is responsible for shared bin cleaning.

Infrastructure

- Tenants need space available for the addition of a dedicated food waste bin.
- Tenants are more receptive to the separation of food waste if a collection service is provided to the shop (approximately 30% higher compliance).
- Signage should be available in multiple languages that are relevant to the staff on site.
- Decals or similar signage should be available to be put on bins and in prominent locations within shops.
- Incorporate waste collection, storage and movement patterns into future renovation projects.

Examples

Optimal Case: The dock area is clearly labelled with multilingual, easy-to-read signage, with all types of food waste identified. A wash station is available to clean used bins, and a dock master manages separation and cleaning operations. Pickup is organized by frequency of waste accumulation and managed by a dedicated provider.

Sub-Optimal Case: No cleaning service is used, signs are outdated/confusing, bins are too heavy to lift properly so accumulate waste, attracting bugs and vermin, and there is no oversight at the dock.

Recommendations

1. **Bin Audit:** Conduct an audit for the needed bin sizes and optimal collection times, and adjust the system to match tenant needs. Cleaners can do this by documenting what is being collected from each tenant over a dedicated period of time.
2. **Scheduling:** Arrange pickup times according to each tenant's individual requirements and make them frequent enough so bins don't become overloaded.
3. **Signage & Diagrams:** Conduct an audit of all signage and ensure diagrams, text and recommendations are up to date and clear. Include other languages that are relevant to the staff on site, and conduct regular training and orientation so that teams are aware of how to successfully engage with the food waste recycling system.

Importance of Accountability

Dedicated Manager

- A dedicated manager or other accountable team member (ie, cleaner or security guard) to facilitate waste management and compliance ensures there are regular checks on compliance and engagement.
- Dock areas that are checked regularly ensure contamination is not occurring and that tenants are complying with the correct separation needs.

Follow Up

- Tenants who respond to regular check-ins ensure that the size of the bins, pickup frequency, and any additional parts of the system are working for them.
- By following up regularly, issues can be resolved efficiently and with fewer OHS and cleanliness concerns.

Processes

- Establish a code of conduct for waste management for tenants to agree to or sign. Include details of the use of bins and separation procedures, training, etc.
- Daily visual bin inspection by dock manager or cleaners allows tracking of compliance and bin size needs along with seasonal changes to waste production.
- Clear processes and procedures help establish expectations and efficient operations; having someone accountable for them helps ensure they are maintained and updated as needed.

Example

Optimal Case: A dedicated dock manager facilitates waste separation, bin collections, and bin cleaning, using daily audits by the cleaning team to ensure enough bins in the right sizes and that pickup frequency is moving through the system.

Sub-Optimal Case: No manager is assigned to the dock and no audits are conducted. Tenants are left to decipher waste separation on their own, and there is no follow-up to ensure they are participating in the system. Increased contamination leads to reduced compliance.

Recommendations

1. **Set up procedures:** Develop clear processes and procedures for accountability among management, cleaners, and tenants. This could include the frequency of pickups, training, and data collection to report on the performance of the food waste recycling system.
2. **Oversight:** Set up a clear accountability system whereby its part of a person role/job to check in on tenants, implement procedures and ensure the dock is being managed correctly to avoid contamination, reduce hygiene issues and mixed waste streams. Have a dedicated dock manager to facilitate and guide tenants and/or cleaning service providers.
3. **Seek Feedback:** Develop a formal system to inform tenants about the amount of waste separated and any improvements to increase motivation, and allow feedback to flow from tenants to management on ways to improve the system.



Importance of Training

Initial Training

- Ensure that all new tenants are on-boarded into the system when they set up their store.
- Provide training materials that are easy to engage with, desirable to read/watch/follow.
- Provide one-on-one initial training to walk an accountable person through their obligations to separate and recycle food waste.

Signage

- Provide clear, well-labelled signage showing pictures of the types of food waste that can be recycled.
- Install signage in very prominent areas to reinforce the system training.
- Provide smaller signage and decals for use inside each store and on bins.
- If dock separation is required, ensure that signage is in multiple languages and that the system effectively communicates with people who are interacting with it.

Reinforcement

- Training will need to be reinforced, especially as new tenants and staff in each store change over.
- Consider having a regular new staff training session that can help to educate on the food waste system.
- Provide top-up training to management and conduct check-ins on how to improve the system.
- Data can be used to check when/where training is needed.

Example

Optimal Case: Training is provided in an accessible way across locations and begins with an initial session provided by a human. There are regular follow-ups for new staff and routine training updates on how to effectively use the system.

Sub-Optimal Case: Locations only provide written materials and don't follow up with regular training, or training processes are inconsistent and not provided to new tenants and staff which can result in them being aware of the requirements.

Recommendations

1. **Start early & often:** Establish initial training sessions from the start of a tenancy, offer regularly scheduled in-person demonstrations, and collect feedback so everyone is invested and aware of progress and compliance.
2. **Handbook:** Develop a handbook for each tenant that includes visually appealing graphic assets for printing and laminating. Consider providing content in the dominant languages used on your site. Don't rely solely on printed materials; provide regular reinforcement by accountable persons or cleaners.
3. **Systemise procedures:** Establish standardised routines and processes across all locations and tenancies to maintain consistency across sites and reduce training costs.



Importance of Cleanliness + OH&S

Training & Oversight

- Ensure all cleaners are trained in the effective and safe handling of bins, especially with regard to safe lifting weight limits.
- Establish effective management procedures to maintain cleanliness of shared bins and dock areas.
- Check data is regularly provided by waste contractors/cleaners so managers can monitor and maintain the system.
- For tenant-managed systems, ensure appropriate training has been provided for safe operation of any on site processes (such as macerators).

Bin Washing

- Provide washing stations so it's easy for tenants/cleaners to clean and return bins.

Pickup Frequency

- Check that waste contractors are collecting accumulated waste in dock areas at the appropriate frequency. Frequency may need to increase due to seasonal and other factors.
- Cleaner-managed systems should be set up with appropriate store pickup frequencies to ensure that bins don't overflow or are not left too long.
- Regularly audit the system to ensure its operational efficiency and to reduce any health and safety issues.

Example

Optimal Case: A cleaner-managed system with effective bin and infrastructure allocation and adequate training results in efficient pickups, clean dock areas, and returned washed bins.

Sub-Optimal Case: Tenants are left to manage the system themselves without the right infrastructure. They accidentally contaminate the bins and leave them in the docks. Dirt, odours or vermin emerge, and tenants avoid using the system.

Recommendations

1. **Consider a cleaning service:** Cleaner-managed systems can be more efficient to manage, and systems can be set up to ensure ongoing safe handling of waste.
2. **Bin size:** Make sure the right-sized bins are provided for the different parts of the system, and staff are trained in safe handling and correct use.
3. **Dock area:** Ensure the dock area is kept clean and free of hazards, and that appropriate infrastructure, such as bin lifts, is installed to support staff/tenants/cleaners in recycling food waste with minimal contamination. Consider installing cameras in dock areas to monitor the area.



Importance of Data

Data Set Up

- Set up data collection systems right from the start so you have a baseline for comparison.
- Collect real-time data to help you improve the efficiency and cost effectiveness of your system.
- Ask your waste service providers to provide real-time data on the amount of waste picked up, contamination rates, and cost of pickups.

Data Management

- Incorporate data collection systems so that management can see compliance and improvements over time, document any changes you make to see how this may or may not improve the system's efficiency.
- Ask staff, such as cleaners, to collect data manually, documenting how much was collected from each tenancy. This data can help identify noncompliance and improve the system's overall efficiency.
- Provide feedback on performance data to tenancies and staff to reinforce food waste recycling efforts.

Audits

- Conduct regular waste audits so that you can see where issues may be occurring and the impact of any changes in the system.
- Audits can be visual or weight-based, and it helps to communicate these back to stakeholders.

Example

Optimal Case: An initial audit was conducted to create baseline data. Real-time data is collected and provides management with performance updates that demonstrate cost savings, which allows these savings to be reinvested in services that improve the system.

Sub-Optimal Case: No data is collected, thus management has no way of knowing if the system is performing well or where there is scope for improvement.

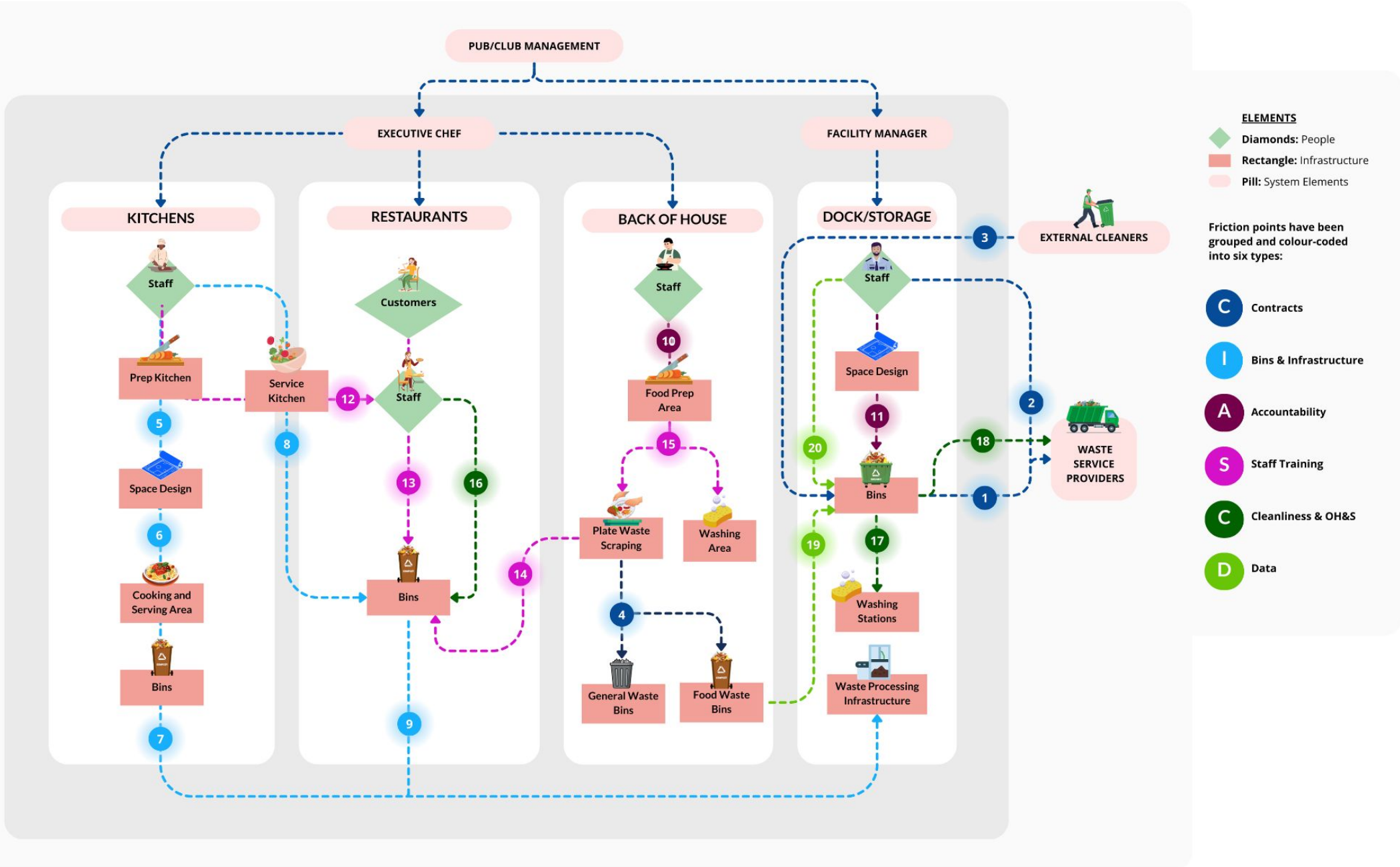
Recommendations

1. **Establish a baseline:** Review bills from previous years and conduct audits to gather as much data as possible. Consider implementing a regular audit to assess the system's performance. This could be every 6 or 12 months, for example, and doing it at the same time each year would give you year-on-year data to see improvements over time.
2. **Establish a data collection method:** Ask your service providers to provide real-time data, and assess your monthly costs/kg for the waste system. Look to optimise the system for cost savings and consider redirecting savings to staff costs so the system can be managed more efficiently. Have the cleaner who collects the organics conduct an audit of what was collected from each tenancy at regular intervals to help document non-compliers, and then follow up with them.
3. **Create a data feedback process:** Interpret data regularly to understand what is working well and what isn't. Update tenancies and staff on outcomes, and reinforce that performance is monitored and good outcomes are appreciated.

Systems Mapping of Business Food Waste Separation



PUBS & CLUBS



C Contracts

- 1 Contracts with waste management companies are affected by the total amount of waste produced (kg per day), frequency of pickups, use of compostable bin liners, and whether additional non-food items such as paper ramekins are allowed. Friction occurs if the service doesn't match the needs.
- 2 Contracts with waste management companies can result in friction if overage fees are charged for staff filling bins beyond the agreed amount or for bins with high levels of contamination. Conversely, friction occurs when patrons are present or when not all bins are full but are charged at the full-bin rate.
- 3 External cleaners can cause friction if adequate training is not provided on how to separate and manage the waste, resulting in contamination and overage charges.
- 4 Customers can generate significant plate waste. It can also occur when events do not attract as many diners as anticipated. Friction occurs when the frequency of pickups from waste service providers is inflexible or doesn't match the amount of food waste generated.

I Bins & Infrastructure

- 5 Chefs preparing food can add food waste bins to their station to reduce the need to make an extra step to use a separate bin before the general waste bin. Friction can occur when efficiency is lacking during food preparation and if the system is not easy to use.
- 6 Size and shape of the bins impacts their use. Friction occurs if the bins are too tall/skinny, becoming overfilled, heavy and hard to remove the biobag liners or empty the contents into the larger bins. Friction can occur if bins lack wheels or are incorrectly sized/shaped, making them harder to move.
- 7 Liners can be preferred if they help bins stay cleaner. Friction occurs when the bags are not strong enough and slip into the bins, are not certified compostable, there isn't enough budget to stock them, or the waste processor won't accept them.

8 At the end of service, food waste bins need to be removed from kitchens and emptied into larger bins for pick up. Friction can occur if bins are too large or too heavy for the kitchen hand to empty.

9 Plate waste scraping is affected by accessibility of bins, signage, and ease of use. Friction occurs when signs are unclear or access is confusing/difficult. Staff can also create issues if they allow non-organic materials to enter the food waste bins.

A Accountability

10 Oversight and management by a team lead (i.e., floor manager and/or head chef) can support staff compliance and improve system functionality over time. Friction occurs in the absence of oversight, resulting in increased waste and contamination.

11 Without someone directly responsible for training and process clarity, confusion and contamination occur (e.g., cutlery and non-compostable items in the food waste bins).

T Training

12 Staff may be resistant to the additional steps required to separate waste. All staff, including chefs, wait staff, prep chefs, and kitchen hands, should be trained on the system to reduce friction.

13 High staff turnover in hospitality, and the speed at which restaurants operate, can affect how effectively staff separate, and whether contamination increases or decreases during service. Friction occurs when training doesn't enable staff to build an effective, fast separation method into their work routine that prevents contamination.

14 Signage placed at plate waste stations, kitchen prep areas, and back-of-house areas influences where waste ends up. Friction occurs when there is inadequate training to understand signs, when accessible languages are not used, and when the information and visuals are confusing or out of date.

15 During plate waste scrapping, contamination can occur if gloves, cutlery, ramekins and paper products end up in food waste bins. Friction occurs if preventive training is not provided and waste contractors reject contaminated food waste bins.

C Cleanliness + OH&S

16 Plate waste is especially heavy, so bins can become very heavy throughout service and require more than one person to lift them to decant into collection bins. Friction occurs when the bins are too large/heavy to lift, or when stairs create mobility issues.

17 The dock and bins should be cleaned regularly to reduce the attraction of flies and vermin. Friction occurs when cleaning isn't done regularly, liners aren't used correctly, or waste service providers won't accept bin liners.

18 The frequency of bin collections from docks can affect the cleanliness of bins. Friction occurs when food waste is left too long and starts to rot, or when bins are located near customer car parks, creating undesirable smells.

D Data

19 Data on the amount of waste collected and contamination rates can impact the efficiency and management of the system. In large venues with multiple kitchens/services, data granularity is important for identifying hot spots. Friction occurs when data is unavailable, making it difficult to identify where performance needs improvement or to see potential cost savings that could help offset the cost of operating the waste collection system.

20 Record keeping and visual spot checks can help monitor staff compliance. Friction occurs when there is a lack of data management and record keeping, resulting in lack of transparency into where system weakness are occurring.



Importance of Contracts

Management Contracts

- Contracts for multiple sites in the chain, or multiple kitchens within a single premise, should provide clarity on roles and responsibilities for each food waste-generating area, as well as for shared infrastructure.

Waste Contracts

- Waste contracts can determine multiple downstream factors, such as number and types of bins and the frequency of pickup (and varying cleanliness outcomes)
- Waste contracts can affect the fees charged and, in turn, the overall cost and savings in the system. Eg., kg collected or number of collections, penalties for overweight or contaminated bins, and other factors affect how aligned the service is with the needs and current staff behaviours.
- Waste contracts should allow for fluctuations in the amount of food waste generated and separated throughout the week, month, and year.
- Waste contracts can determine service elements, such as whether they accept bin liners and what items can be placed in food waste bins, such as bones and oyster shells.

Service Contracts

- Service contracts can influence OH&S factors, such as size of bins provided by service providers, whether they are too large/heavy for staff to lift, if they have wheels, or if they are ill-suited to the facility (i.e., many stairs).
- Cleaning contracts require adequate training built into the agreement to reduce contaminated and overweight charges. This may be separate from staff training due to the provider's external nature.
- Bin cleaning services may be needed if no on-site option is available.

Example

Optimal Case: Data-informed contracts are built according to the needs of the specific facility and multiple food-waste-generating areas, ensuring optimal bin infrastructure and pickup frequency, and charging in a way that encourages food waste separation.

Sub-Optimal Case: Pickups are infrequent and have limitations, and staff are not adequately trained, resulting in poor food waste separation, contaminated bins, unhygienic docks, and additional charges that reduce the desire to maintain the system.

Recommendations

1. **Frequency and timing of pickup:** Ensure bin emptying aligns with the amount of food waste generated, and look for patterns and fluctuations in customer behaviour to adapt accordingly.
2. **Compare quotes and track fees:** Solicit multiple quotes and compare rates for different types of services; check whether compostable liners can be used and if that is part of your system's needs; ensure the waste collection contractor provide data on what's collected and where it ends up. Regularly review the collection fees, compare them with offsets from diverted food waste in general waste, and make refinements as needed to optimise cost efficiency. Share results with staff (e.g., tonnes diverted from landfill, tonnes of compost made, etc.) to encourage continued behaviour change.
3. **Service contracts** may be needed where kitchen staff are only responsible for filling, cleaning, and emptying kitchen bins into larger bins at the central dock or waste management areas; for example, a contract may be needed for bin washing/dock management, macerator maintenance, and staff training.



Importance of Bins & Infrastructure

Size

- Bins need to be manageable for staff to lift and move easily throughout your facility, whilst also being robust enough to withstand the weight of the food waste.
- Wheels or trolley bases on bins can be useful if they are large and the distance is longer, or even just to make it easier to manoeuvre around the kitchen area.
- Where two bins are required (general and food waste) in the kitchen, more space will be needed; consider reducing the size of each and emptying them more frequently.

Bin Cleanliness

- Install bin wash stations in the dock area near where organic waste is emptied, and wash after each use.
- Ensure someone is responsible for bin cleaning for the shared bins to maintain hygiene.
- Liners can be used to maintain hygiene if the contract with the waste provider allows them; tie them off at the top of the bins to prevent them from falling into the bins.

Infrastructure

- Infrastructure needs to facilitate both pickup and decanting processes, such as ramps or dedicated hallways, to enable bin mobility.
- Create a station near food waste bins to make it easy to remove contamination, e.g., cutlery.
- Create a station near food prep areas to collect trimmings for repurposing into stock and other uses.

Example

Optimal Case: Bins are in the right areas to encourage food waste separation. Bins are a manageable size for the staff to use, move, wheel and lift, with dedicated passages from location to location. Cleaning stations are clean, easy and pleasant to use and bins are always returned to kitchens clean. Staff are trained on when to empty bins to reduce build up.

Sub-Optimal Case: Heavy, wet, quickly degrading waste accumulates in large, heavy, overfilled bins that are infrequently cleaned and difficult to move. Smell and vermin infiltration make them undesirable to use, and if biobags are used, they are too small and fall into the bins when the waste becomes too heavy.

Recommendations

1. **Signage:** Clear, visual and multilingual signage placed at all locations where food waste bins are used helps to clarify what can and cannot go in the bins and reminds staff of the system's optimal use.
2. **Cleaning and clearing:** bins are emptied regularly to reduce build up (ie, after prep and before service to allow for plate waste). Bins are cleaned regularly to prevent food waste buildup and unhygienic conditions.
3. **Mobility audit:** Speak to staff to understand the process they go through to move waste through the system. Adapt bin sizes, bin liner sizes (larger than the bin size helps avoid slippage), bin wheels, ramps, and other methods of movement to optimise the process and make it easy for staff to improve the system over time.



Importance of Accountability

Dedicated Manager

- Consider having a dedicated manager (such as head chef or operations manager) to facilitate processes and compliance throughout the system (in kitchens, eating areas, and in the dock/main bin storage area)
- The dock/bin storage areas should be checked regularly to ensure that contamination is not occurring and that staff are engaging effectively with the system.

Follow Up

- Conduct regular check-ins with staff to ensure that the size of the bins, how they are using them, the frequency of pick-ups, and any additional parts of the system are working efficiently (both in terms of cost, time, and waste separation).
- Get real-time data that feeds back to management for system adjustments and changes as needed.

Processes

- Clear processes and procedures help establish expectations and efficient operations. Have someone accountable for this in each food service area.
- Check in with department heads (kitchen, bar, restaurant, etc.) to ensure staff are complying with the system and make adjustments to improve over time.
- A regular bin audit process, such as photos, can help track and improve the system by increasing bin empties or conducting top-up training.

Example

Optimal Case: A dedicated manager for each department sets up and manages the waste separation processes, regularly auditing the performance and ensuring waste moves safely and efficiently through the system. Regular training eliminates contamination by cutlery or non-compostable items. Observations of food waste are used to inform food waste-avoidance and donation opportunities.

Sub-Optimal Case: No person(s) is assigned responsibility for waste separation or training. There is limited follow-up to monitor the system and improve it over time, leading to contamination and associated fees.

Recommendations

1. **Set up clear procedures:** Develop processes and procedures for accountability, tailored to each department's needs, for management and staff. This could include training and data collection to report on the performance of the food waste vs general waste systems.
2. **Oversight:** Set up a clear accountability system in which it's part of a person's role/job to check bins, improve the process to avoid contamination, reduce hygiene issues, and optimise infrastructure. If available, have a dedicated dock manager to facilitate and guide staff, collect data, and provide feedback to head chefs.
3. **Seek Feedback:** Develop a formal system of feedback to inform staff about the amount of waste separated and any opportunities for improvement to increase motivation, and allow feedback to flow from staff to management on ways to improve the system.



Importance of Training

Initial Training

- Ensure that all existing and new staff are effectively onboarded into the system with face-to-face training.
- Have new staff be shown when they are hired what to do/not to do.
- Provide visual materials that are easy to engage with and desirable to read/watch/follow.
- Check in on staff, asking if there is any recommendations for improving the system to ensure they are engaged.

Signage

- Provide clear, well-labeled signage showing pictures of the types of food waste that can be recycled. Install signage in prominent areas and on bins to reinforce system training.
- Create signage highlighting the common contaminants found in the food waste bin.

Reinforcement & Rewards

- Training should be reinforced, and good waste management and recycling should be rewarded regularly.
- Consider holding regular new-staff training sessions.
- Provide top-up training to management and conduct check-ins on how to improve the system.

Example

Optimal Case: Training is provided in an accessible way and begins with an initial in-person demonstration session, followed by regularly-scheduled check-ins for new staff and routine training updates for effective system use. Clear signage is used.

Sub-Optimal Case: Training processes are inconsistent, which can lead to new staff not being aware of requirements, not separating food waste effectively, and increased contamination by cutlery, stickers, etc., resulting in higher costs.

Recommendations

1. **Start early & often:** Establish initial training sessions right from the start of new staff onboarding, and offer regularly scheduled in-person demonstrations. Collect feedback so everyone is invested and aware of the progress and compliance.
2. **Handbook:** Develop a handbook that includes visually-appealing graphic assets suitable for printing and laminating. Consider providing translated material for the dominant languages used on your site. Don't rely solely on printed materials; provide regular reinforcement from accountable persons.
3. **Systemise procedures:** Establish a set of standardised routines and processes to maintain consistency and reduce training costs. Consider a decision trees or waste hierarchies showing donations, trimming as additional visual support tools for on-site use, along with visual spot checks.



Importance of Cleanliness + OH&S

Training & Oversight

- Effective management procedures are in place to maintain the cleanliness of kitchen bins, public areas, and dock areas.
- Data is provided by inventory/waste contractors so managers can monitor and maintain the system.
- Appropriate training is provided for the safe operation of any on-site processes (such as bin lifters or macerators).

Weight and Movement

- Plate waste tends to be quite heavy, which can increase issues with moving larger bins and decanting into pickup bins.
- Consider emptying kitchen bins after food prep and before table service so they don't need to be emptied again during the busiest food service times.

Bin Washing

- Ensure washing stations are provided so it's easy for staff to clean bins and clean their hands after handling bins.
- If an external service is used for bin cleaning, ensure it aligns with kitchens' needs and avoids periods when patrons may be parking near the dock area.

Example

Optimal Case: Effective scheduling and training help ensure bins and general areas are clean and hygienic, bin sizes are optimised for safe decanting, and pickup/cleaning procedures are aligned to flow efficiently, preventing waste accumulation.

Sub-Optimal Case: Bins aren't emptied before they get too heavy, making it difficult for kitchen hands to empty them; washing stations aren't available, leading to food waste attracting vermin; and staff aren't comfortable using the system.

Recommendations

1. **Incentivise through communication and training:** Motivate everyone to achieve expectations when using the system effectively so it maintains cleanliness and hygiene. Provide feedback and positive reinforcement to improve system engagement over time.
2. **Bin size:** Ensure the right size and number of bins are provided throughout the system, that staff are trained in safe handling to avoid injuries and maintain cleanliness, and that prompt attention is given to cleaning.
3. **Dock area:** Ensure that the dock area is kept clean and free of hazards, and that appropriate infrastructure, such as bin lifts, is installed so that staff do not have to lift heavy bins and can easily follow contamination practices.



Importance of Data

Data

- Set up data collection systems from the start to establish a baseline for comparison.
- Collect real-time data to help improve the efficiency and cost-effectiveness of your system.
- Ask your waste contractors to provide real-time data on the volume and weight of waste picked up, contamination rates, and the cost of pickups for all types of waste.

Data Management

- Incorporate data collection systems so that management can see compliance and improvements over time, document changes you make to see how this may or may not improve the system's efficiency.
- Feedback performance data to each kitchen to reinforce food waste recycling efforts.

Systems in Place

- Conduct regular audits to identify where issues may be occurring and where food waste can be avoided.
- Establish open communication and feedback systems (e.g., staff, cleaners, and waste service providers) to ensure ongoing improvements and quick responses to issues.

Example

Optimal Case: Internal audits establish baseline data and provide management and staff with information needed to efficiently manage food waste. This is facilitated by a centralised, easy-to-read data feedback system that incentivises engagement and optimises cost savings.

Sub-Optimal Case: No or limited data is collected, leading to a lack of awareness of the amount and type of food waste and of the food waste recycling system, resulting in inefficiencies and increased costs.

Recommendations

1. **Establish a baseline:** Conduct waste audits to gather as much data as possible. Consider implementing a regular audit process to assess performance and drive improvements.
2. **Establish a data collection method:** Ask your waste service provider to provide real-time data and assess your monthly costs and revenues. Look to optimise the system for cost savings and revenue potential; consider building your own data system to monitor in real time and address food waste avoidance and donation.
3. **Create a data feedback process:** Share collected data with department managers so that they can make changes to the performance of their kitchen and service area systems. Consider incentives and feedback systems that encourage staff to improve their part of the system.