

ne'ma نعمة

المبادرة الوطنية للحد من فقد وهدر الغذاء
National Food Loss and Waste Initiative

How to reduce food waste using three low-cost nudges

A practical guide for canteens
and buffet restaurants

Prepared by:



THE
BEHAVIOURAL
INSIGHTS
TEAM

About ne'ma

ne'ma, the UAE's National Food Loss and Waste Initiative, is a reflection of President His Highness Sheikh Mohamed bin Zayed Al Nahyan's vision and a call to action to reduce food waste, encourage social responsibility and promote sustainable practices across the food supply chain.

Our target is clear: cut food waste by 50% by the year 2030, by affecting behavioural change in how we approach this challenge and collectively striving towards a sustainable future.

ne'ma is a collaborative effort with the UAE Ministry of Climate Change and Environment, Emirates Foundation and other stakeholders across the nation to build a network of trusted food loss and waste champions in the UAE.

Tackling food waste in the UAE is critical. As well as being a national priority, addressing this problem is also essential for the environment, the economy, and our society.

By cutting down on food waste, we can save resources, reduce the costs of distribution and disposal and, most importantly, reduce our environmental impact.



As part of ne'ma, the UAE's National Food Loss and Waste Initiative, we've already made a great start in addressing this issue through a pioneering experimental trial in staff canteens with Accuro. By making simple, cheap, and small changes to the canteen environment, we managed to **slash food waste by a staggering 44%**. Even small changes can have a significant impact on reducing food waste. And they have the extra benefit of boosting efficiency in canteens.

We're thrilled to build on this success and apply our efforts on a wider scale in the UAE. By working together, we can make a real difference in reducing food waste and creating a more sustainable food system. In this effort, every one of us has a role to play.

We call on everyone reading this to join us in this collective effort and take action to reduce food waste in their own operations. Together, we can create a brighter, greener future for the UAE!

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Key steps summarised

On the following pages, we show how you can make **small and easy changes** to your canteen to reduce food waste. In this guide, we call these changes ‘nudges’, which in this case are displaying model portions of food, using messaging to encourage food waste reduction and providing feedback on the food waste generated.

* Here, we summarise the key steps involved as a short summary.

More detail on each step can be found later in the guide.



01 / Secure 'buy in'

Get approval from management to apply the nudges.

Use our template letter on page 8 to share why you want to take part in the trial.

03 / Prepare your canteen

Apply the nudges to your canteen, in the right places.

Our canteen map shows you where to put nudges to maximise effect.

05 / Monitor your canteen

To reduce food waste, you need to make sure the nudges are implemented right.

Our plug-and-play form on page 18 helps you make sure the nudges are effective.

07 / Measure customer satisfaction

Make sure that customer dining experience was not affected by the nudges.

Use our ready-made customer satisfaction survey on page 22.

02 / Understand your current food waste levels

Measure food waste to find out your current food waste levels.

You'll find easy instructions on how to do this on page 10.

04 / Do the 'Day 1' Checklist

Check you have everything in place for 'day 1', after you've prepared your canteen.

Implementation is easy if you use our checklist on page 17.

06 / Measure changes in food waste

Measure changes in food waste over time to calculate the impact on food.

We've made a step-by-step guide on how to do this page 20.

Overview of this guide

This guide will walk you through how to use three nudges to reduce food waste in your canteen and show their impact. These nudges are small changes in the canteen that **encourage people to reduce food waste, without limiting their choices.**

* Best of all, you need no prior experience in reducing food waste or implementing a nudge!

Why did we make this guide?

This guide has been produced for ne'ma by the Behavioural Insights Team (BIT).

In 2022 ne'ma, in partnership with Accuro, worked with BIT to run a flagship trial to reduce plated food waste in canteens in the UAE. The results of the trial were outstanding:

Three simple nudges reduced food waste by up to 44%.

We created this guide so you can use these same nudges in your canteen to reduce food waste and contribute to achieving the UAE's target of reducing food waste by 50% by 2030.

What are the nudges?

01 / Messaging:

These posters use messaging informed by behavioural science that help to motivate diners to reduce their plated waste.

03 / Feedback on food waste:

A transparent bin and a tracker showing the weight of food waste help diners to understand how they personally contributed to food waste.

02 / Portion displays and prompting:

Model portions are used to help encourage diners to only take what they can eat, whilst the prompts help serving staff to explain the changes to diners.

*** More detail on each can be found in the 'Preparing your canteen' section.**

What is in this guide?

The guide has everything you need to implement the nudges to reduce food waste in your canteen. You'll find:

01 / A full guide on how to plan and implement the nudges.

02 / A timeline and checklist.

03 / "Plug and play" nudges.

04 / Tools to help monitor the nudges.

05 / A guide for measuring your current food waste and showing your impact.


How do I use the guide?

The guide provides a comprehensive overview of how to implement and measure all three nudges.

All three nudges are supposed to work together.


But, if it is not possible to implement all three in your canteen, you can also pick which nudges to implement and if you measure them, as we show below:

Option 1




- / Implement **all three** nudges
- / Measure their impact

Option 2



- / Implement **at least one** nudge
- / Measure its impact

Option 3



- / Implement **at least one** nudge

Case study:

Implementing all three nudges with *Accuro*

This case study summarises the results of the flagship trial which forms the basis for this implementation guide. All the resources used in this trial are included in this guide.

/ **What we did:**

01 / A series of messages:

posters and on-table messages encouraged customers to waste less food.

02 / Using portion displays:

smaller portions were served to diners who could come back for a second portion if they wanted.

03 / Transparent waste bin and feedback on waste: using a “food waste tracker” (a poster tracking daily and weekly food waste, see below) and a transparent food waste bin, to highlight how diner’s individually contributed to waste as they throw away leftovers.

/ **The result:**

We estimated a large reduction of food waste by 44%. The effect persisted throughout the entire 12 week period where the nudges were applied.

Around 1.7 tonnes of food waste was prevented during this period. If scaled across the 7 canteens we were monitoring, we would save around 17 tonnes per year.

Implementation overview



This guide will give you an overview of the following key activities. We outline the aims of key activities below.

More detail on each is provided later in the guide.

Key activities

The implementation guide is split into three sections:

- Section 01**
Preparing for launch
 - Building buy-in for the nudges
 - Understanding your current food waste to help track impact
 - Preparing the canteen to launch the nudges

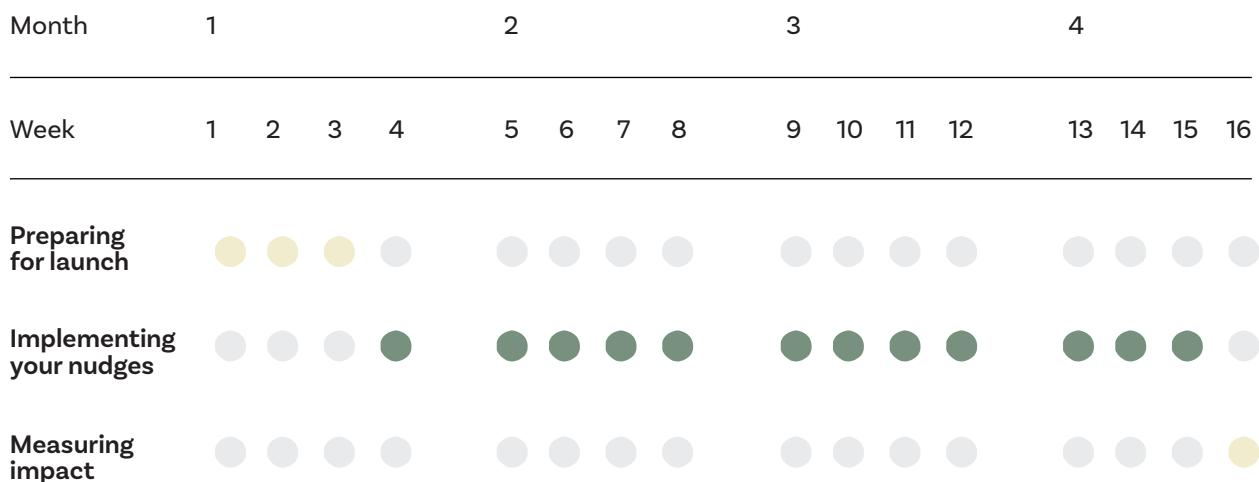
- Section 02**
Implementing your nudges
 - Launching the nudges
 - Monitoring your nudges to maximise impact

- Section 03**
Measuring impact and scaling
 - Showing the impact of the trial
 - Ideas for more nudges to reduce food waste

To help you plan these activities, the timeline below provides an example timeline for when you can do what.

The timeline outlines just one way you can plan for applying these nudges. You may want to adjust the time for certain activities, depending on the set up of your canteen.

Each box represents one week. The green circles indicate the implementation of your nudges' period.



* Importantly, if your goal is to measure the impact after applying the nudges, you need to measure your food waste from the 'Measuring current waste period' (week 3) to the end of the 'Applying the nudges' period (week 15).



Section 01

Preparing for launch

Securing buy-in

Making changes to your canteen is likely to require the approval of management. Buy-in is also important to ensure that you have the resources you need and that all staff understand the importance of the nudges and ensure they are implemented correctly.

This section provides advice on how to communicate why you want to implement these nudges and a template email to share with senior management.

How can I secure buy-in?

To help secure buy in from those that will be involved with the launch, we recommend **explaining the benefits** of the nudges. In particular, through explaining that the nudges:

- Achieved a 44% reduction in food waste when tested in the UAE.
- Are easy to implement.
- Are positively received - diners in our flagship trial were happy with the changes.
- Improve existing canteen practices (e.g, accurately measuring food waste).
- Save money by reducing food waste which can reduce the volume of produce required for meals.
- Improve your canteen's environmental impact.
- Support a national strategic objective to improve food loss and waste by helping to reduce food waste in the UAE.

Example email / letter to send to management

We outline an example email or letter that can be used and adapted when explaining why your canteen should apply these nudges.

Re: Implementing nudges to reduce food waste

Dear [Manager Name],

The UAE's National Food Loss and Waste Initiative's (ne'ma) has launched a guide to help canteens reduce plate food waste.

Having read the guide, I believe that implementing at least one of the following nudges could help reduce our plate waste:

1. **Messaging:** These posters use messaging informed by behavioural science that help to motivate diners to reduce their plated waste.
2. **Portion displays and prompting:** Model portions are used to help encourage diners to only take what they can eat, whilst the prompts help serving staff to explain the changes to diners.
3. **Feedback on food waste:** A transparent bin and a tracker showing the weight of food waste help diners to understand how they personally contributed to food waste.

A recent trial conducted by ne'ma in staff canteens in the UAE achieved a **44% reduction in food waste without any negative effect on customer satisfaction.**

These nudges are easy to implement and can help save us money by reducing the amount of food we order and dispose of, we can reduce our costs. They can also **improve our monitoring of food waste, have a positive environmental impact and contribute to the UAE's targets for reducing food waste.**

If you are interested, I am happy to discuss when and how we can apply them to our canteen, as well as explaining in more detail what these nudges are.

Sincerely,

[Staff Member]

Understanding your current food waste

What do we mean current food waste?

By “current food waste”, we mean the average number of kilograms of plated food wasted in your canteen each day when none of the nudges have been implemented. This is the food waste which diners may scrape off their plates into the bin.

Why is knowing your current food waste important?

Knowing your current food waste will allow you to see any changes in food waste after you have implemented the nudges.

By comparing current food waste (simply, the level of food waste before applying the nudges) to food waste levels after implementing the nudges, you can judge whether or not they have been successful in reducing food waste in your canteen.

How can I find out my current food waste in my canteen?

To estimate your current level of food waste, you should weigh your food waste each day and record the number in kg to 1 decimal place (e.g. 20.4kg).*

First, we recommend using our **food waste logging** sheet to ensure that your food waste is recorded consistently and accurately (see Appendix A). The template has simple instructions to staff and is formatted to ensure that food waste is recorded to the same decimal place. Ideally, you will collect at least **one week of food waste before you track.**

* Note that if you want to be very accurate, you can also record the number of diners, so that you can calculate the average daily waste per diner.

Then, **calculate the average daily food waste** in Kg. As an example, we show the calculation for a canteen calculating their current average food waste, for a two week period, is shown below:

	WEEK 1							WEEK 2						
Day	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Food Waste (kg)	15.1	18.2	17.1	13.3	11.2	14.5	14.9	18.2	12.1	14.3	12.4	16.4	16.1	12
Current daily average of food waste	15.03 KG*							* Calculation: $(15.1+18.2+17.1+13.3+11.2+14.5+14.9+18.2+12.1+14.3+12.4+16.4+16.1+12) / 14$						

If you do not currently separate your edible and inedible waste, we recommend recording total plate waste (i.e., both edible and inedible before and during the launch of the nudges).

Preparing your canteen

This section will explain where and how you can apply the nudges to your canteen. We recommend implementing three nudges to maximise the reduction in food waste you can achieve:

01 / Messaging:

These posters use messaging informed by behavioural science that help to motivate diners to reduce their plated waste.

02 / Portion displays and prompting:

Model portions are used to help encourage diners to only take what they can eat, whilst the prompts help serving staff to explain the changes to diners

03 / Feedback on food waste:

A transparent bin and a tracker showing the weight of food waste help diners to understand how they personally contributed to food waste.

Figure 1:

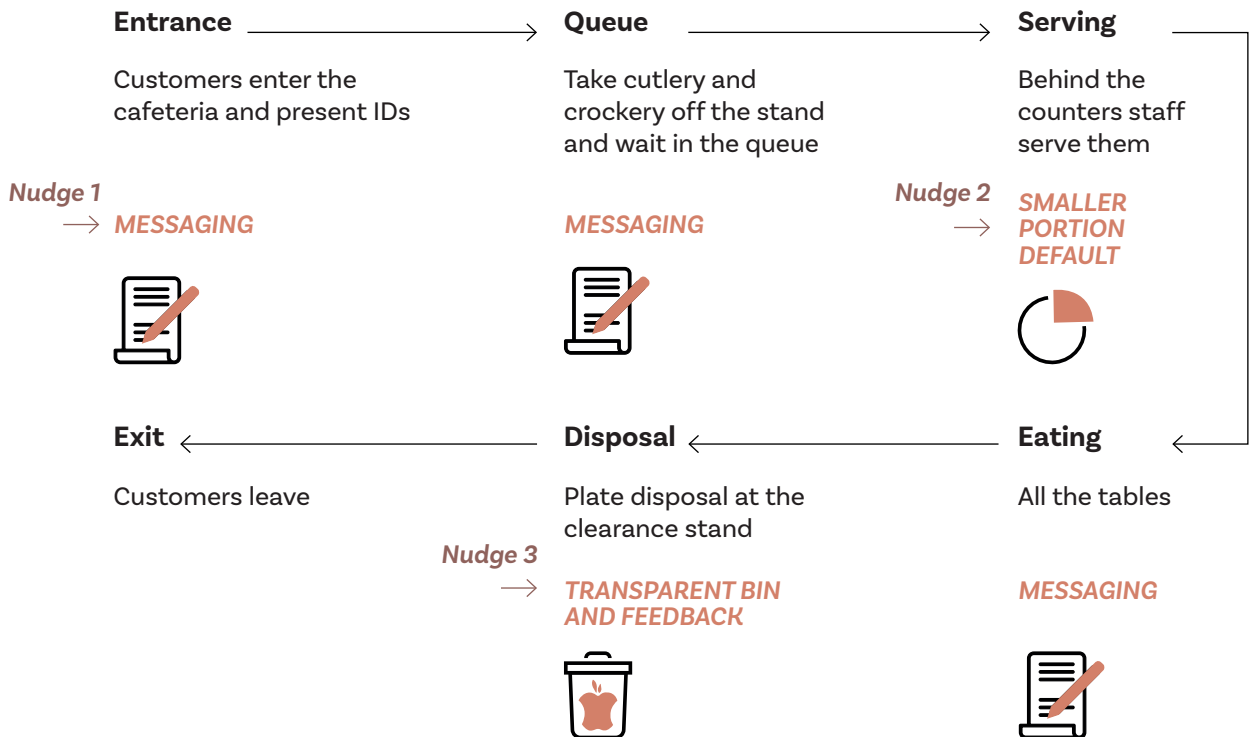


Figure 1 shows an example of how all of the nudges can be placed in a canteen so that the diner interacts with them as they enter, collect their food, dine and then dispose of their waste.

We outline below how to implement the nudges and all the resources you need to do so are included in *Appendix B and C*.

We recommend **prioritising portion displays and prompting** if you are unable to apply all of the nudges. This is because we believe that out of the three nudges outlined, it has the biggest effect on food waste.

Even if you can't implement all, each of these nudges is likely to have some impact on food waste.

Nudge 1 / Messaging

01 What is it and how does it work?

The messages are posters and flyers that provide timely prompts that encourage diners to think about food waste. They have been effective in reducing food waste by between 15-33% in various contexts. For instance, a student-focused educational intervention led to a 33% waste reduction in

main dishes and new hotel signage reduced food waste by 20% (see case study box on following page).

The text of the messages should be updated so that diners continue to notice them (see Annex for example posters that can be used).

02 Where can the messages be placed in the canteen?

The messages should be placed in areas where diners are likely to notice them. For example, this may include the main doors for entering and exiting the canteen,

as well as on the tables they eat on. *Figure 2* on the next page shows an example of multiple positions where messaging could be displayed in a canteen.

Figure 2:

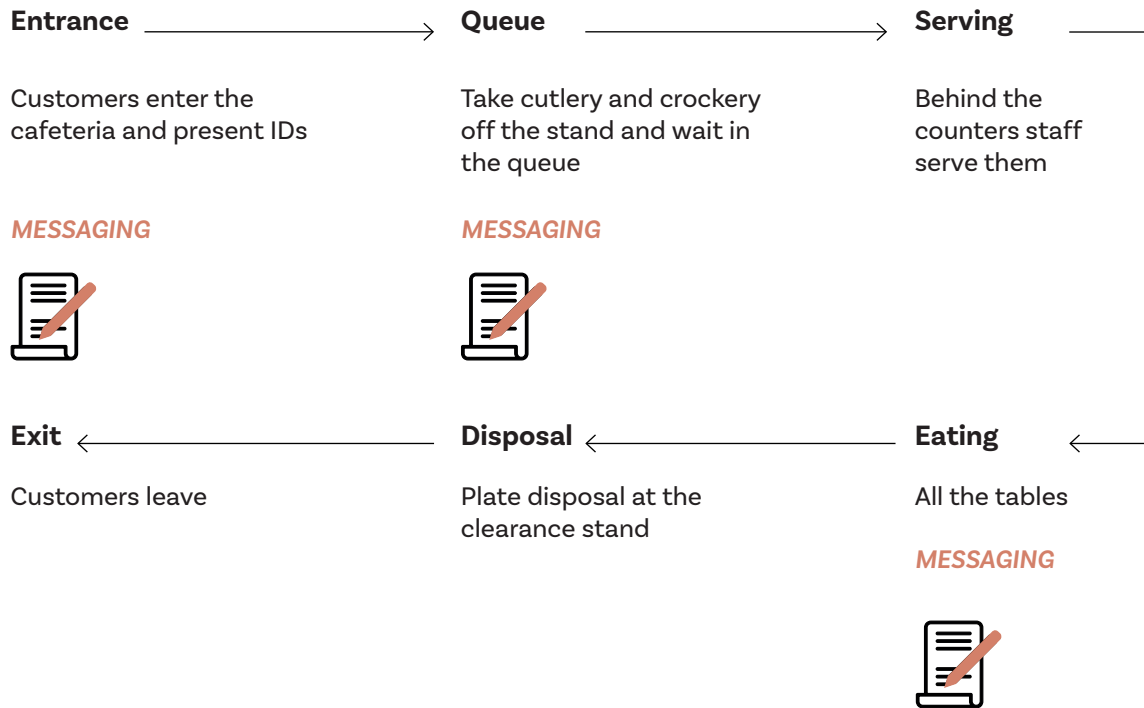


Figure 3:



Figure 3 shows messaging positioned on a table in the canteen and examples of other posters included in Appendix B for you to use.



Example of posters and positioning in a canteen.

Case study:

Nudging hotel guests in Norway to reduce food waste using messages and reducing plate sizes

This case study summarises the results of the flagship trial which forms the basis for this implementation guide. All the resources used in this trial are included in this guide.

/ **Background:**

A group of hotels in Norway conducted an experiment to explore ways they can reduce food waste by hotel guests from their buffets.

/ **What they did:**

They implemented two simple ‘nudges’: reducing plate size and providing **social messages through a sign at the buffet counter**. The message reminded guests that they could come up to the buffet a second time to refill their plates.

The sign said, in seven different languages: “Welcome back! Again! And again! Visit our buffett many times. That’s better than taking a lot at once”.

/ **The result:**

These nudges reduced food waste in the hotels that implemented them by around 20%. They also had no negative impact on guest satisfaction, potentially increasing profits.

Nudge 2 / Portion displays and prompting

01

What is it and how does it work?

The portion displays aim to show diners what a 'normal' portion looks like, so they don't ask for extra food that they won't be able to eat and throw away. Alongside the portion displays, staff should be trained to prompt diners to return for more food if they ask for more. For example, by stating:

"This is a portion of today's food. When you've finished it, you can come back for more if you're still hungry."

Portion size is one of the key reasons behind waste at the consumption stage. That is why nudges that reduce portion sizes (e.g., smaller plates) tend to have a **high impact, between 19% - 57% food waste reduction** in hospitality settings. Verbal prompts can also be effective in promoting behaviours. For instance, in one study aimed at reducing littering within a canteen, using both verbal prompts and visual prompts resulted in significant reductions in the rate of littering.

02

Where can the portion displays be placed in the canteen?

Portion displays should be placed on top of the food counter where food is served. They should be changed along with each meal, based on the desired serving size.

Figure 4. shows an example of where you can apply the portion displays to help moderate the volume of food diners put on their plates.

Figure 4:

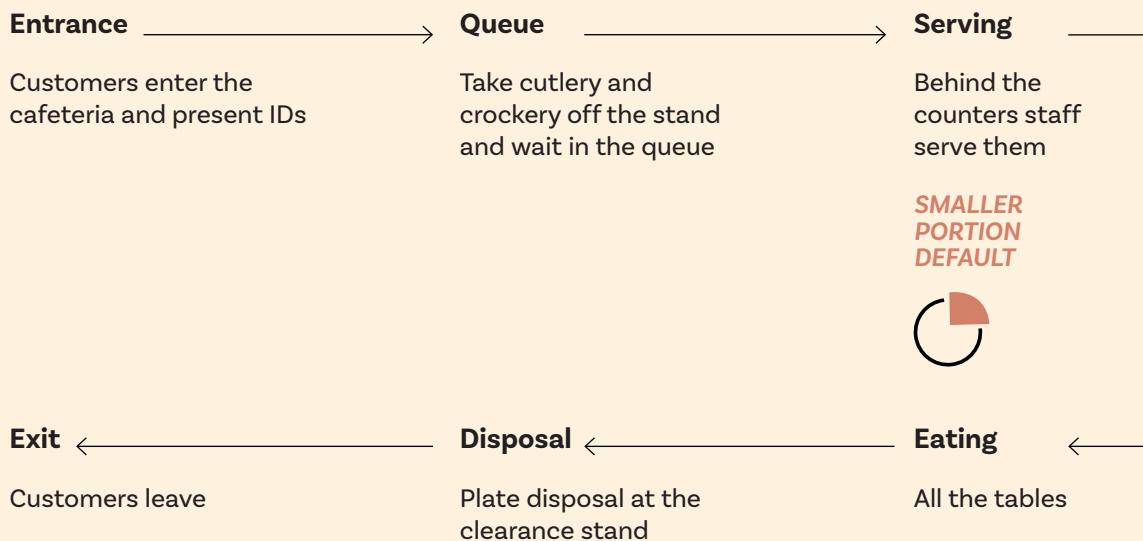
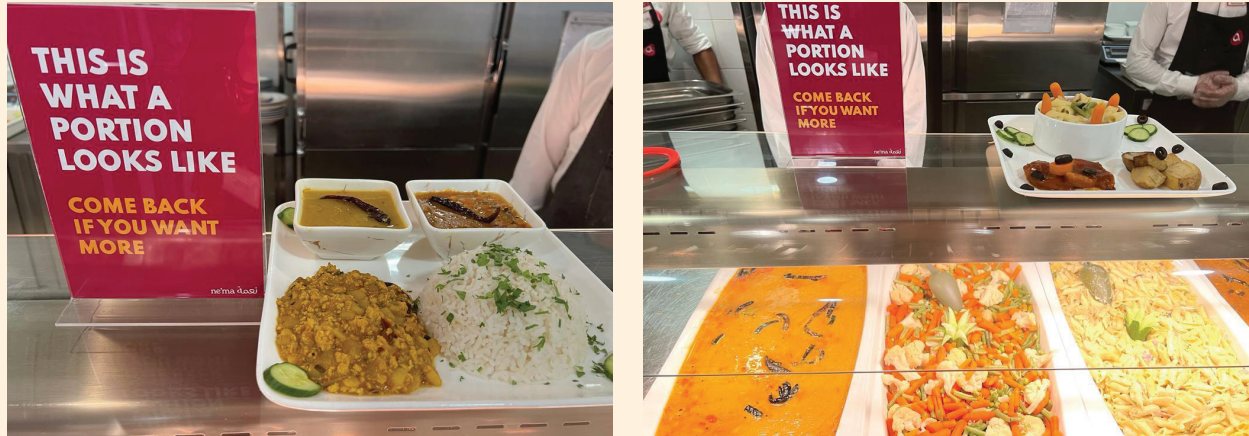


Figure 5:

Example of portion displays and messaging.



03

What are the prompts servers will use?

Servers should be trained to respond to diners who ask for more food with specific phrases. Prompts can include:

- ***“This is a portion of today’s food. When you’ve finished it, you can come back for more if you’re still hungry.”***
- ***“This is a helping of today’s food. Come back for more after you’ve finished if you’re still hungry.”***

If you have daily briefings ahead of service, we recommend adding these prompts as a daily reminder or integrating them into training for staff.

Nudge 3 / Waste disposal and feedback

01

What is it and how does it work?

The **transparent food waste bin** aims to make clearly visible how much food is being wasted in the canteen. The **food waste tracker** providing information on daily and weekly food waste informs diners how the amount of food wasted has changed over time and highlights the fact that the canteen is making an

effort to reduce waste.

As with the messaging, providing timely informational messages on food waste is effective. For example, an information prompt in the university cafeteria reduced food waste by 15% (see case study box on page 16).

02

Where can the transparent disposal bin and tracker be placed in the canteen?

The transparent bin should be placed where usual waste disposal happens. The food waste tracker can either be placed next to it, or in another noticeable place in the canteen where

diners will be able to see it easily. *Figure 6* shows an example of where you can apply the transparent bin and feedback to show diners how they are personally contributing to food waste.

Figure 6:

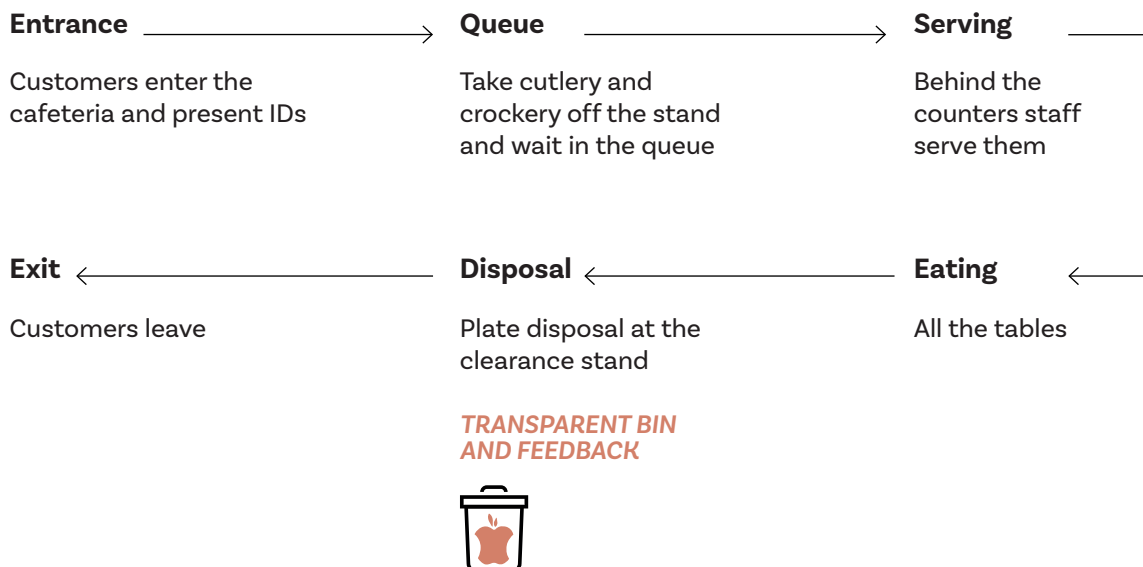


Figure 7:



Example of the transparent bin and food waste tracker.

Case study:

Providing feedback at a timely moment in university dining canteens

- Background:** A university in the state of Kansas (USA) used timely feedback through posters to try and reduce food waste by diners in their university canteens.
- What they did:** They implemented posters to remind diners, once they were in the canteen, of the impact they have on food waste.

In particular, the feedback poster stated: **On average, each resident wastes 2.15 oz of food each meal. This amounts to more than 32 pounds per person per semester.**
- The result:** The posters including feedback reduced food waste by 15% after they were implemented in the canteen.



Section 02

Implementing your nudges



It is important to check that your nudges are being applied accurately.

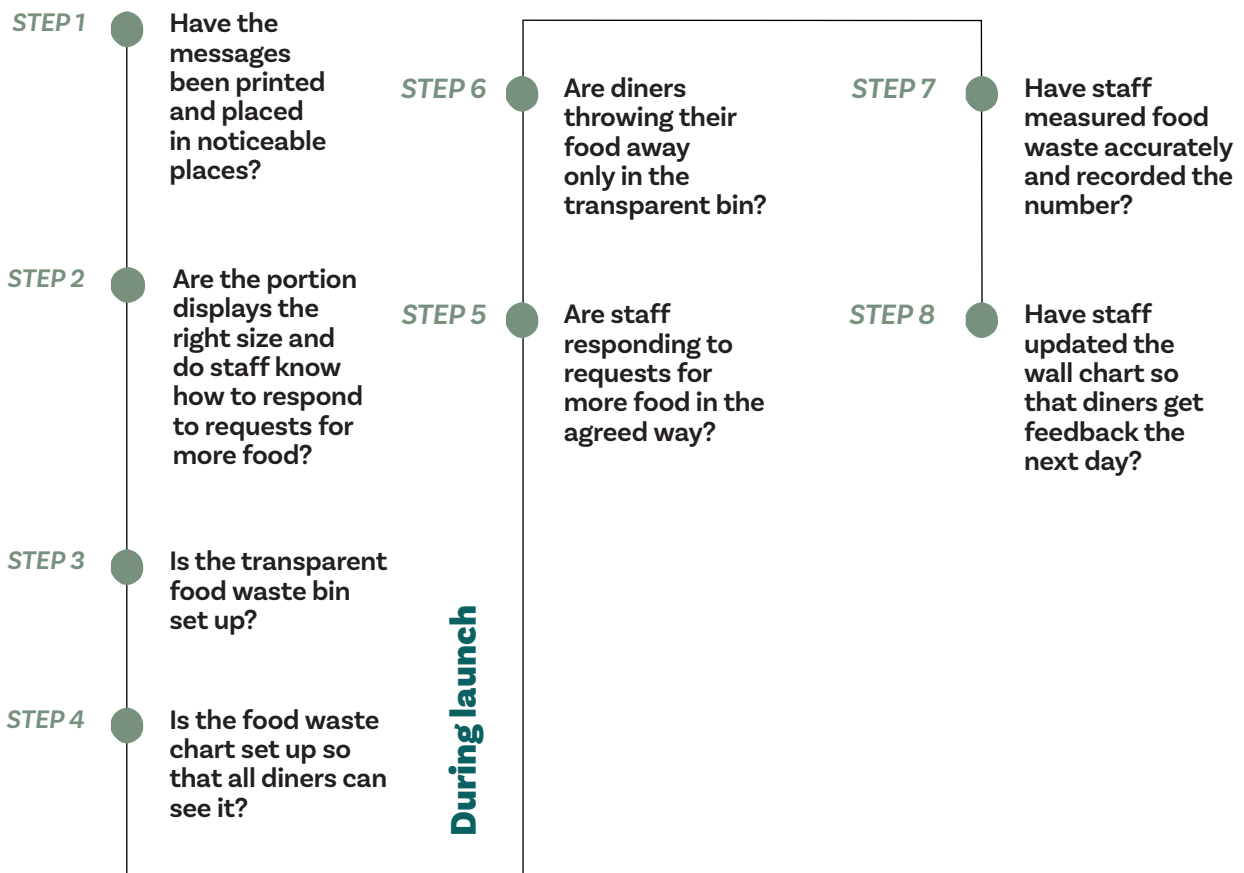
- / **Checking on Day 1 is critical** to ensure the nudges are all in their places and the servers are using the prompts.
- / **Continue to check during the trial** periodically (e.g., every week or two weeks) to ensure that the nudges continue to be implemented faithfully.

Day 1 implementation checklist - 8 steps

At this point, you will be ready to apply the nudges to your canteen. Before the first day of the launch, you will need to check that a number of steps have been taken.

Before launch

After launch



Monitoring the nudges

To make sure that the nudges are being applied accurately after day 1, you should continue to check at period intervals (e.g., every week or two weeks).



01 Who should do the monitoring?

- **One canteen is implementing the nudges:** it may be easiest to do this in person yourself.
- **Multiple canteens:** Either request that the canteen duty manager monitors or send staff who do not work at the canteen.

02 What should I look for when monitoring the nudges?

The survey for monitoring will have to be drafted based on the specific details of the trial design. However, the survey questions will all focus on:

- How the nudges are being implemented.
- Whether changes to the nudges are happening at the correct time. For example, are the messages being changed and is the feedback chart being updated?

An example of questions that can be used in the survey for monitoring the messages is included below. A full list of questions is included in Appendix C.

- * In addition, for each nudge, we mention the most important things to bear in mind so that they are applied carefully and accurately.

Key things to be aware of for each nudge

Nudge 01

Messaging

- Messages are printed and put in places where they are easy to see and read.
- Messages are changed every week, so that diners continue to notice them.

Nudge 02

Portion displays and prompting

- Portion displays are placed on top of the food counter where food is served.
- Displays are changed for each meal, based on the desired serving size.
- If diners ask for more food, staff should be trained to give a response about coming for more food later. For example: "This is a portion of today's food. When you've finished it, you can come back for more if you're still hungry."

Nudge 03

Waste disposal and feedback

- All food waste should be collected in a transparent bin.
- Only food waste should be collected in this bag - all other waste should be disposed of in a separate bin.
- Food waste should be weighed at the end of each day and the value should be recorded in the food waste chart, to use as feedback for diners.
- The food waste chart should be displayed in a prominent place in the canteen, where all diners will be able to see it.

Example questions to include in the survey, checking the posters and messaging:

Are the posters and messages at the entrance door of the canteen and on the tables clearly visible?

- Yes
- *In some but not all cases*
- No
- Other: _____

Please describe any issues you have spotted with posters and messages?

[Your answer goes here](#)

Is the correct message for this week being displayed?

Message this week: 'Help our home and planet'

- *Yes, this message is being displayed and all posters are the same colour*
- *Yes, but only some messages - some are different*
- *No, all the messages are from the wrong week*



Section 03

Measuring impact and scaling



It's the end of your trial period. You've monitored the nudges to ensure that they are faithfully implemented and weighed all your food waste.

Now, it's time to measure the effect of the nudges in reducing food waste, you can use a simple method: **"a pre/post analysis"**.

Instructions for simple pre/post analysis

What is a pre/post analysis?

A pre-post analysis is a way you can measure whether the amount of food waste generated in your canteen has changed over time.

This is done by comparing the food waste before and after you have applied the nudges.

What steps do I need to take to do it?

To do a simple pre-post analysis, you need to follow these steps:

01 / Measure your food waste at the end of each day,

before the nudges are applied. This can be done by weighing the food waste in the canteen over a specific time period, such as one or two weeks (see 'Understanding your current food waste' section for more detail).

03 / Measure food waste in the canteen after the nudges have been applied.

This should be done in the same way as you measured food waste before applying the nudges: weighing the food waste in KG.

02 / Apply the nudges

aimed at reducing food waste in the canteen. This involves hanging up the posters with the messages, applying portion displays and using the transparent bin and food waste feedback chart (see 'Preparing to launch the nudges' section for more detail).

04 / Compare food waste levels before and after applying the nudges, to test their impact.

This could be done by calculating the average food waste per day before and after the nudges, and then comparing the two numbers (see worked example in the next page).

Worked examples of pre-post analysis

01 Calculate your average daily food waste before applying the nudges

Let's imagine that a canteen had an average of 10 kg of food waste per day before the nudges were implemented. This number was calculated by measuring food waste over a two week period.

	WEEK 1							WEEK 2						
Day	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Food Waste (kg)	9.6	10.5	10.0	9.5	10.3	9.3	10.1	9.8	10.6	9.7	10.2	9.9	10.4	9.4
Current daily average of food waste	10.0 KG							* Calculation: $(9.6+10.5+10.0+9.5+10.3+9.3+10.1+9.8+10.6+9.7+10.2+9.9+10.4+9.4) / 14$						

02 Calculate your average daily food waste after applying the nudges

After the nudges were applied, the canteen generated an average of 5 kg of food waste per day. This number was calculated by measuring food waste over the next two week period.

	WEEK 1							WEEK 2						
Day	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Food Waste (kg)	4.7	5.7	4.1	5.9	4.5	6.3	4.8	5.1	5.5	4.9	6.1	5.4	4.2	3.6
Current daily average of food waste	5.0 KG							* Calculation: $(4.7+5.7+4.1+5.9+4.5+6.3+4.8+5.1+5.5+4.9+6.1+5.4+4.2+3.6) / 14$						

03 Working out the percentage change in average daily food waste

After the nudges were implemented, food waste **decreased by 50%, which indicates the nudges may have been successful.***

The nudges were successful in reducing food waste by 50%, as the average food waste per day decreased from 10 kg to 5 kg. See charts below for more detail.

Food waste before nudges	Food waste after nudges	Percentage change	Percentage change formula: <i>[(new value - old value) / old value] x 100</i>
10.0 kg	5.0 kg	50% decrease	$[(5.0 - 10.0) / 10] \times 100 = -50$

*** Note that it is not possible to fully attribute the reduction in food waste to the causal effects of the nudges, because other factors may have had an impact (e.g. a change in menus, different diners using the canteen while the nudges were implemented, etc.)**

Survey to measure customers satisfaction

It is important to make sure that applying the nudges has not affected the overall dining experience.

To take this into account, you can ask customers some questions and record other things you see through a simple survey. For example, you could ask the questions to:

- **15 diners**
- **Over a 5 day period**
- **In the 2 weeks after the nudges have been implemented, to get a range of viewpoints.**



A template of questions is included in the next pages.

Survey questions

Hello,

While you're having lunch I'd like to ask you a few questions about your experience in this canteen over the last few months.

It will only take a few minutes.

01 / How happy have you been with the amount of food you have been served in this canteen over the past month?

Show the participant the faces and circle the one they select.



Very unhappy Unhappy Neutral Happy Very happy

02 / Food waste is an important issue in the region. Is there anything you have learnt about this issue in recent months?

If they say 'yes', prompt them to briefly describe what they've learnt. Write the participant(s) responses, in their own words.

.....
.....
.....
.....

03 / We've been trying to reduce food waste at this canteen. Did you notice any particular changes introduced in the canteen at any point in the past 2 months?

If they say 'yes', prompt them to briefly describe the changes they've noticed and invite them to express their opinion about these changes. Write the participant(s) responses, in their own words.

.....
.....
.....
.....

04 / Have you personally made any changes to reduce food waste outside of the canteen? If yes, can you describe what they are?

Write the participant(s) responses, in their own words.

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05 / (Do not ask participants - record your observation) How many people were responding to this interview at once?

Either group or individual interviews are acceptable.

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06 / (Do not ask participants - record your observation) What was the gender of the individual/group? (circle)

- Man or group of mostly men
- Woman or group of mostly women
- Group of mixed genders

07 / (Do not ask participants - record your observation) What was the rough age range of the individual/group? (circle)

- Younger person / mostly younger people (under 35)
- Older person / mostly older people (over 35)
- Group of both younger and older people

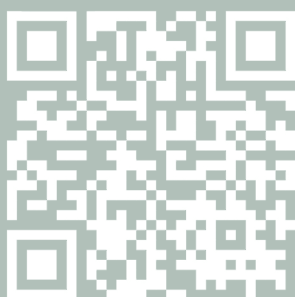
Join ne'ma

Start your journey

Once you have read this guide, you will be ready to start your food waste journey and contribute to the national food waste and loss strategy!

Becoming a *ne'ma* champion

To help us take on this challenge together, all you need is the following steps:



01 / Express interest to participate by scanning QR code

02 / Create an online profile on ne'ma food reduction dashboard via link provided in email

03 / Implement the nudges in your canteen/restaurant

04 / Measure changes in food waste, using the pre/post instructions outlined earlier

05 / Enter details of impact of nudges on ne'ma food reduction dashboard

And if you would like to conduct an experiment within your canteen, please contact the ne'ma or Behavioural Insights Team.

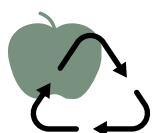
We hope you found this guide useful and, thank you, for doing your part to reduce food waste!

Next steps:

Further ways to reduce food waste

The nudges explained in this document are three easy and low-cost ways to reduce food waste in your canteen.

But, they aren't the only things you can try. There are other solutions that you can consider to reduce food waste. If you are interested in what these are, we outline three examples below.



Charge customers for leaving food on their plates.

If your canteen charges customers per meal, one solution would be to charge customers for food left on their plates. Importantly, even small charges will encourage people to change their behaviour and show that the canteen is taking the food waste issue seriously.



Use smart waste disposal systems.

New smart waste disposal systems, such as Winnow or Leanpath, provide users with quick and accurate information on food waste and its sources. This feedback can be used to improve existing behaviours and increase efficiency, in terms of food ordering and preparation, and therefore reduce food waste.



Use smaller plate sizes.

Even small changes in plate sizes often have a big impact (reducing waste by 19% - 57%). It also does not affect diner experience as people rarely notice the difference. An easy way to use smaller plates is simply to replace your current plates with slightly smaller ones.

Appendix A

Food waste logging sheet

Instructions:

01 /
Record plate waste in
format XX.Xkg
(for example: 20.7kg)

02 /
Record the exact total
amount of waste on the
scales

03 /
Do not reduce the total
waste to account for
plastics or other waste

Days	Breakfast					Lunch					Dinner					Midnight				
0*	1	2	.	3	kg	2	2	.	3	kg	1	5	.	3	kg	1	0	.	3	kg
1	1	1	.	9	kg	2	1	.	4	kg	1	5	.	1	kg	0	9	.	2	kg
2	3	5	.	8	kg	1	1	.	2	kg	2	2	.	8	kg	2	9	.	0	kg
3	9	3	.	6	kg	2	1	.	8	kg	1	6	.	2	kg	7	4	.	5	kg
4			.		kg			.		kg			.		kg			.		kg
5			.		kg			.		kg			.		kg			.		kg

* Day zero control weight before start of experiment.

Appendix B

Messages and poster templates

ne'ma نعمة
المبادرة الوطنية للحد من فقد وهدر الغذاء
National Food Loss and Waste Initiative



**We are
changing
habits
together.**

**Join the
movement**



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National Food Loss and Waste Initiative

**Almost 30% of
food is wasted
in the UAE
everyday.**



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@nema.ae

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Every bite counts, save our resources.




Join the movement



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National Food Loss and Waste Initiative

30% of the total food produced and imported annually is wasted, representing over AED 6 billion



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National Food Loss and Waste Initiative

Reduce food waste.




Join the movement.



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National Food Loss and Waste Initiative

The UAE is committed to reduce its food loss and waste by 50% by 2030 in line with the UAE Food Security Strategy and the United Nations Sustainable Development Goals”



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This is what a portion looks like.



You can always come back for more.



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Change starts with you.

Join the movement.



Appendix C

Observation survey questions

Instructions:

Please do a quick walkthrough of the customer journey through the canteen in order to fill out the checklist below.

Please do this at all canteen sites.

01 / Please select the physical features that are present at the canteen (circle)

- 'Reduce food waste' (or similar) messaging at entrance door of the canteen
- 'Reduce food waste' (or similar) messaging where the diners register
- 'Reduce food waste' (or similar) messaging where the diners pick up cutlery
- 'Reduce food waste' (or similar) messaging on tables where diners sit to eat
- Messaging with a portion size prompt placed on top of the serving counter
- Plates with model portion sizes are placed on top of the serving counter
- A see-through plastic bin liner is used to collect plated food waste
- A food waste feedback message/ board which shows weekly total food waste
- None of the above

02 / Are there anything you'd like to note regarding your response to the checklist above? (optional)

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Messages

The following questions focus on the messaging at the canteen you are visiting.

(You do not need to fill out this section if you did not spot any messaging elements)

03 / Are the 'reduce food waste' messages on the entrance door to the canteen, by the queues/cutlery stands, and on tables clearly visible, and up-to-date?

- Generally yes
- In some but not all cases
- Generally no
- Other.

04 / Please describe any issues you've spotted with the 'reduce food waste' messages

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05 / Is the correct variable message for this week being displayed? w/c 3rd October: "Help our home & planet."

- Yes, all messages except the food waste tracker and portion size prompts are the same colour
- Yes, but only some messages - there are some inconsistencies
- No, they are all from the wrong week

06 / Is the food waste feedback board visible and up to date?

- Yes
- No
- Other:

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07 / Please describe any issues you've spotted with the food waste feedback board

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08 / Please list any other waste-related messaging present across the canteen:

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Portion size implementation

The following questions are about the portion size component of the nudges.

09 / Are there correctly sized model portions located on top of the serving counter and visible to diners?

- Yes
- No, only one
- No, none

10 / From what you can see, are staff serving roughly the correct amount of food, matching the model portions?

- Yes - most or all of the time
- Yes - but only some of the time
- No
- Not sure - I was not able to observe this

11 / Do staff respond to diners' requests for more food by saying something similar to:

'This is the agreed portion size. Please finish your first serving before getting more food. You are of course welcome to return as many times as you'd like.'

Ideally, to be directly observed, but otherwise please confirm this with the supervisor.

- Yes - most or all of the time
- Yes - but only some of the time
- No
- Not sure - I was not able to observe or verify this

12 / Are there any other observations about the model portion sizes, and prompting behaviour by the serving staff that you'd like to note?

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Waste disposal

The following questions are about the waste disposal areas and waste logging procedures.

Please speak to the site supervisor to take you through the waste logging process.

13 / Is plated food waste being disposed of into a see-through plastic bin bag?

- Yes
- No
- Other.

14 / Is the 'reduce food waste' message clearly visible in the waste disposal area?

- Yes
- No
- Other.

15 / Are the food waste bin weight and general waste weight added together when completing the waste recording sheet?

- Yes
- No
- Not sure - I was not able to verify this
- Other.

16 / Is food waste being correctly logged in accordance with the instructions on the recording sheet (shown below for reference)?

- Yes
- No
- Not sure - I was not able to verify this
- Other.

17 / Please list anything that you thought was unusual, incorrect or otherwise noteworthy about the plate waste recording:

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General questions

18 / Has the supervisor received or heard any feedback (e.g. from customers or staff) about any aspect of the nudges?

If yes, please summarise the feedback

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19 / Has weekly messaging always been updated on time?

- Yes - always or most of the time
- Sometimes
- No
- Not sure - I did not get a chance to speak to the supervisor
- N/A - no messaging
- Other.

Acknowledgments

/ ne'ma would like to thank our valued partners, without whom this trail and guide would not be possible – *Accuro, JA Resorts and Jumeirah Group.*

/ The partnership with ne'ma through the implementation of these pilot projects is a testament to how introducing simple nudges can strongly impact current behaviors as we work **towards our 2030 goal.**

We have an opportunity to build on this success, by continuing to trial **different nudges across various sectors to achieve greater impact.**

By continuing to work together and share best practices and tips, we will build a network of trusted food loss and waste champions that will transform the way we all approach this challenge.



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