



# The ultimate guide

## Monitoring and measuring food waste

Get the evidence you need to take  
effective action on waste



**EUROPE & SCOTLAND**  
European Regional Development Fund  
Investing in a Smart, Sustainable and Inclusive Future



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### We can help you prevent food waste

If you're a food and drink business, we can help you implement a monitoring and measuring system in order to prevent unnecessary food waste. Call 01786 433 930 or email [food.drink@zerowastescotland.org.uk](mailto:food.drink@zerowastescotland.org.uk) and ask about our free food and drink opportunity assessments.

[www.zerowastescotland.org.uk/FoodDrink](http://www.zerowastescotland.org.uk/FoodDrink)



# Why monitor your waste?

If you want to reduce food and drink waste then you need to know what you're wasting, where you're wasting it and why. That's what monitoring and measuring is all about.

Working to reduce waste makes good business sense. We've seen time and again how food and drink businesses can save money by minimising waste. Some savings come through reduced waste disposal costs, others from avoiding the unnecessary waste of raw materials that you've paid for and should be using. You can also make money by recovering and reusing your waste within your business or finding a market for it.

Saving waste is not only financially rewarding, it has the added benefit of reducing carbon emissions and thereby tackling climate change. But before you decide on any course of action, you need to know what waste is coming out of your business, where it's coming from and why it's happening. Knowing the total tonnage of your food waste is only a part of the bigger picture.

For example, if you're a restaurant, the majority of waste might be coming from customer plates or it might be coming from the preparation stage in the kitchen. It might be coming from somewhere else entirely, but until you know for sure you can't focus attention on reducing portion sizes or changing kitchen practices or doing something else altogether.

Measuring and monitoring your waste isn't as difficult as you might think. First, you decide what information you need. Then you put in place a system that will collect the data. You then analyse and evaluate that data to get the information you need for decision-making. That information provides an important baseline. Continued monitoring of your waste will gauge the effectiveness of any actions you put in place, and help keep staff motivated.

**This guide aims to get you started, but remember we can offer further help. Call 01786 433 930 or email [food.drink@zerowastescotland.org.uk](mailto:food.drink@zerowastescotland.org.uk) and ask about our free food and drink opportunity assessments.**




# Getting started





# What you should measure

You can measure your total tonnage or measure what's being produced to identify waste hot spots.



There are two ways to measure your waste. You can measure the total of all waste that your business is producing. Or you can measure waste at different points in your business. The latter approach helps you zero in on individual processes and see which are responsible for producing the biggest chunks of waste. You can then put in place a waste prevention solution that's targeted to that process, and is therefore more likely to be effective. To decide what data you're going to collect and monitor, you need to have an idea where waste is being produced. Talking to your staff is an invaluable part of the process. The people working on the frontline will see where waste is being produced. If you know waste is being produced at some point on the factory floor, or in your kitchen, or when your customers are leaving food –

then these are the places you should be examining more closely.

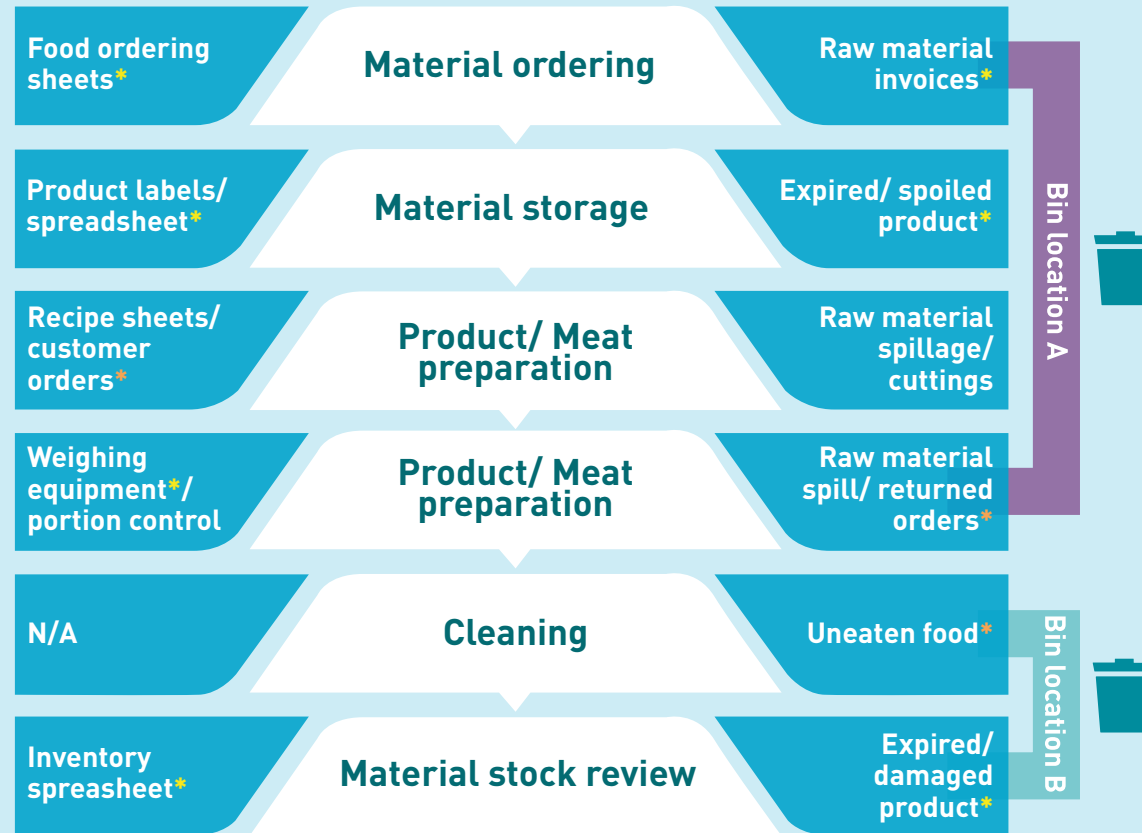
Producing a waste map can help. This identifies all the sources of food waste in your business and what processes are involved – for example, food ordering, preparation, serving and disposal. It should also capture the inputs that contribute to the cost of your waste – for example, the raw materials involved and the labour required up to the point that the waste is created.

With a waste map you can start to see potential locations for your monitoring stations. Mark these on the map and get ready to gather waste-related information. See the diagram on the next page as an example.

# Example

Input(s)

Output(s)



\*Current monitoring point  
 \*Potential monitoring point

A simple waste map can help you see where waste is arising and where you should put in place monitoring and measuring actions.





# How to monitor your waste

Once you've established where your business is producing waste, you're ready to put in place some monitoring and measuring actions.

There are manual and automated methods for monitoring and measuring food waste streams. The one that's best for you will depend on the size and output of your premises, and the level of capital investment available.

You should also consider the space needed to accommodate equipment and actions, as well as staff time and capability.





## Manual data collection

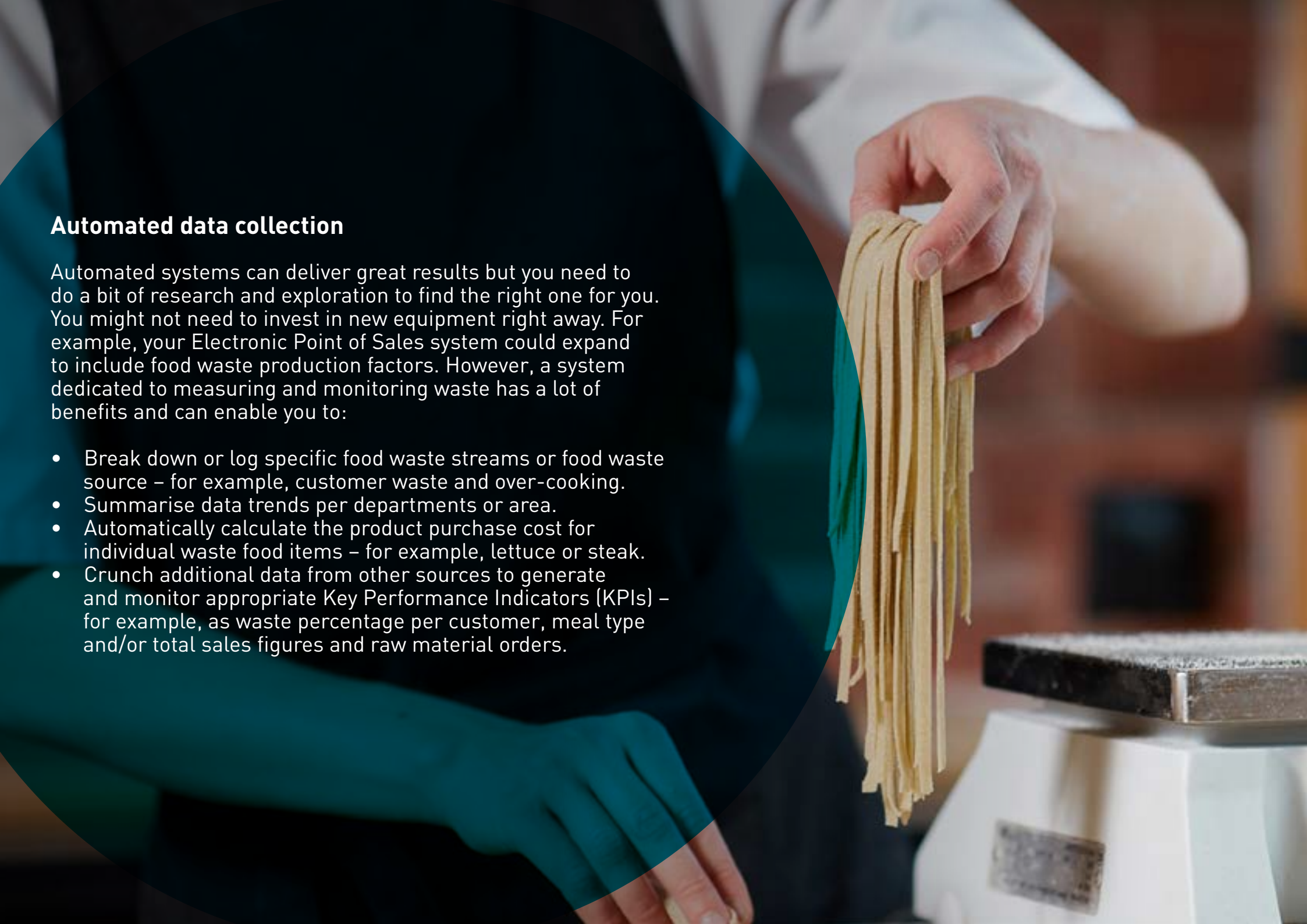
Manual data collection doesn't need to be complicated. Usually it's a case of providing multiple waste bins at key points or setting up weighing scales in different locations. All you need are decent scales and a number of containers or bins.

What you measure will depend on your individual business. If you're a hospitality business, you might want to measure food waste resulting from food preparation, spoilage and plate waste. A manufacturing operation might measure food waste from over-production, machine faults or incorrect storage. Retailers might need to get a handle on food waste resulting from poor sales management, incorrect handling, out-of-date stock or spoilage.

The important thing is making your staff aware of how to collect the food waste data. Let them know why it's important that you collect this baseline information. Provide any training necessary and support that with appropriate signage and written instructions.

Give staff a simple monitoring sheet to complete when food waste is weighed at the end of each production run or service. The data can be entered periodically into an electronic spreadsheet for analysis. The data should be collected over a suitable time period to provide an accurate reflection on food waste production – for example, over a period of four weeks.





## Automated data collection

Automated systems can deliver great results but you need to do a bit of research and exploration to find the right one for you. You might not need to invest in new equipment right away. For example, your Electronic Point of Sales system could expand to include food waste production factors. However, a system dedicated to measuring and monitoring waste has a lot of benefits and can enable you to:

- Break down or log specific food waste streams or food waste source – for example, customer waste and over-cooking.
- Summarise data trends per departments or area.
- Automatically calculate the product purchase cost for individual waste food items – for example, lettuce or steak.
- Crunch additional data from other sources to generate and monitor appropriate Key Performance Indicators (KPIs) – for example, as waste percentage per customer, meal type and/or total sales figures and raw material orders.



# Understanding and using your results

## Data gathering to plan actions.

### Setting a baseline

Once the data has been obtained, it can be used to set the current operating performance of the organisation or 'baseline' food waste performance. This baseline figure is a starting point for measuring the success of any improvements.

### Making sense of data

It is important to ensure that the data is presented in a clear and concise manner which is relevant to business operations. Key Performance Indicators (KPIs) are a metric used to evaluate factors that are crucial to the success of your organisation.

Whichever KPI is selected, aim for an indicator that can be reduced over time.

This will demonstrate a reduction in the amount of food being wasted, leading to cost savings.

Some example food waste KPIs are suggested below:

**Total % (by mass) of food purchased that is waste**

**Total waste from production run/ catering kg/ meal served**

**Total waste per £1,000 turnover**





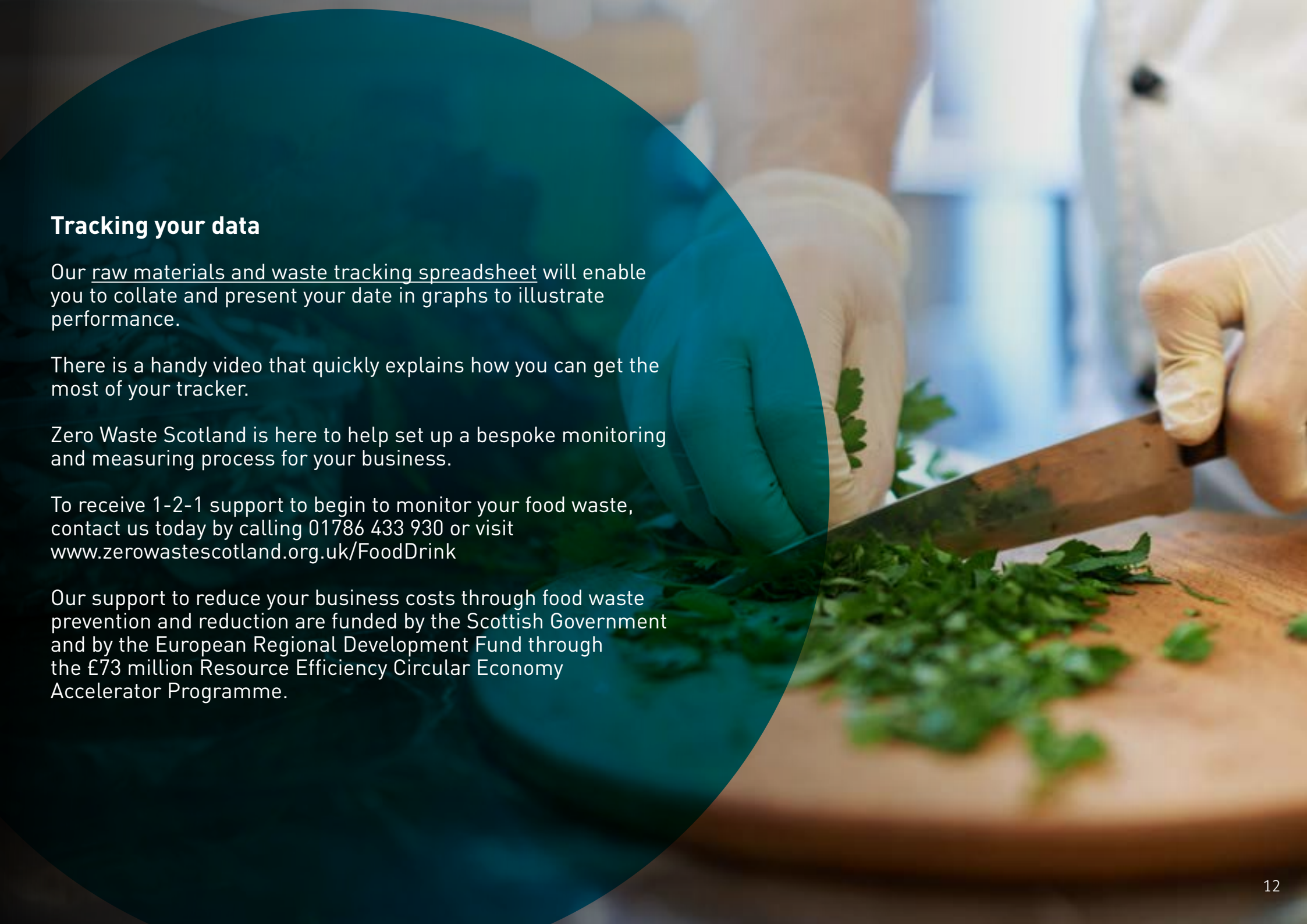
## Identifying actions and monitoring progress

Following the identification of baseline figures and KPIs, it is important to assess current performance against desired goals, and identify means of closing any gaps that exist.

Actions may be based on data collection means or application of the Waste Hierarchy. Where possible, actions should be aimed at enhancing KPI performance and preventing waste at source rather than recycling it.

Monitoring the progress of targets and KPIs over time gives organisations the opportunity to continually improve their performance, whilst continuing to look for further food waste prevention opportunities. Progress should be communicated to staff where possible, in order to demonstrate that their efforts are resulting in benefits to the company.





## Tracking your data

Our [raw materials and waste tracking spreadsheet](#) will enable you to collate and present your data in graphs to illustrate performance.

There is a handy video that quickly explains how you can get the most of your tracker.

Zero Waste Scotland is here to help set up a bespoke monitoring and measuring process for your business.

To receive 1-2-1 support to begin to monitor your food waste, contact us today by calling 01786 433 930 or visit [www.zerowastescotland.org.uk/FoodDrink](http://www.zerowastescotland.org.uk/FoodDrink)

Our support to reduce your business costs through food waste prevention and reduction are funded by the Scottish Government and by the European Regional Development Fund through the £73 million Resource Efficiency Circular Economy Accelerator Programme.

**Zero Waste Scotland offers all businesses help not only to prevent food waste but to save money, tackle climate change and to show customers that you care.**

**We're here to help.**

Call us on 01786 433 930

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