Food waste reduction framework

The UK food manufacturing sector wastes approximately 1.4 million tonnes of food a year. Of that, about half is edible, valued at £0.9 billion. Much of this could be prevented.

Our three-step approach is a practical way for food businesses to tackle this waste:

Identify: Sounds simple, but the activity of identifying all your food waste can uncover surprises

Prioritise: You can't tackle everything at once, so prioritise based on impact and ease to start making progress quickly

Act: Your actions will depend on your priorities—but our core principles will help you do it well

Argon&Co

Identify

The first step to reducing food waste is truly understanding it.

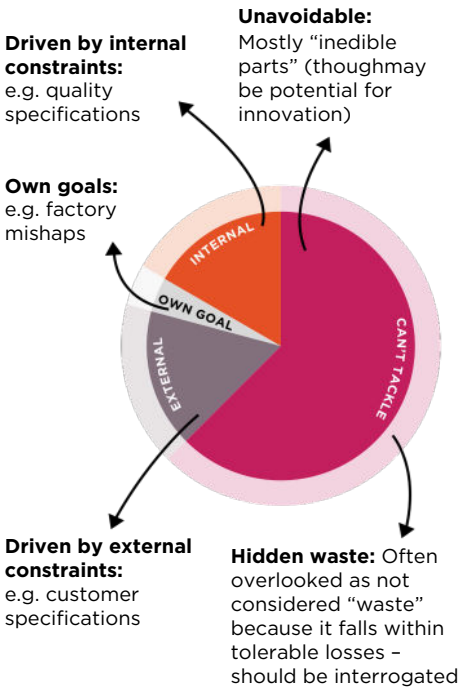
If not already doing so, start by collecting data on all loss/waste from your processes.

Remove all the filters - remember, your current KPIs might be hiding some waste such as 'standard losses'.

Then analyse the causes of waste and categorise based on your level of influence.

Typical categories of food loss and waste

Chart shows the proportion of food waste that usually falls into each category.



Prioritise

Focusing your efforts will deliver benefits sooner.

We recommend starting with the areas within your own control first (the "low hanging fruit"), prioritising these by size of prize.

Then quickly progress to those that require engagement with other stakeholders (internal and external) to unlock the largest potential savings.

Increasing potential opportunity though more challenging to execute

Own goals:
- Factory-led improvements
- Back to basics–e.g. LEAN, maintenance
- Leverage AI to spot patterns

Internal constraints:
- Quality specifications – are they too stringent?
- Process design – are we creating problems through our own SOPs?

External constraints:
- Engage suppliers & customers on unintended consequences of specifications
- Opportunities include SKU rationalisation, clear specs, ingredient consistency and new product design

Act

Put the plan into action, but look out for these pitfalls.

This step is often the hardest part to do, but where the real value comes.

We have identified some key get rights when acting on food waste that help avoid common pitfalls.

1. Align KPIs to avoid conficting priorities

A common reason for internal misalignment and inaction e.g. supply chain looking to simplify range, and commercial adding to it. KPIs should roll up into clear leadership priorities.

2. Don't be put off by sharing the benefit

Many fear value chain collaboration as don't want to share potential savings, but a shared saving is better than no saving.

3. Beware the status quo

"Because that's how it's always been done" mentality should be challenged – often these are arbitrary constraints.

4. Leverage technology

AI is a powerful tool for identifying patterns where none are apparent – particularly useful when root causing own goals.

5. Identify, Prioritise, Act cycle

This process should be iterative – the most common reason for slow progress is trying to do too much at once.

Food for thought...

Real life examples where the framework has been put into action

External constraints:

Variation between products for the same customer

Business: Food-to-go supplier

Situation: Discovered 10+ different tomato slice thicknesses for one customer in one site.

Solution: Agreed more consistent specifications with customer.

Internal constraints:

Quality standards causing avoidable wastage

Business: Confectionery supplier

Situation: Internal standard prevented recycle of chocolate with any caramel back into chocolate line.

Solution: Piloted higher caramel recycle rate and passed quality assessment without impacting product quality.

"Unavoidable" waste:

Better ways of managing waste for profits & environment

Business: Preserves supplier

Situation: Wastewater from cleaning the lines between changeover was being discharged to drains.

Solution: High sugar content ideal candidate for on site anaerobic digestion – renewable energy produced used on site.

Hidden waste:

Losses accepted as within tolerance but could be improved

Business: Ready meal supplier

Situation: Chicken was being overcooked causing larger moisture losses, leading to high levels of waste and poor product quality.

Solution: Refinement of cooking time specification to reduce moisture losses (additional benefit - more tender chicken).

Own goals:

"Random" waste issues

Business: Ready meal supplier

Situation: Many waste incidents in the factory considered random and therefore could not be addressed.

Solution: Use of AI to analyse multiple uncertain variables, which enabled trends to be identified and several issues to be addressed at root cause level.

WATCH OUT!

Protein losses are often largest opportunity on cost, but due to smaller absolute volume can be missed, especially when KPIs focus on performance to standard