

Carbon toolkit

NHS Supply Chain: Food

June 2026



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The climate-conscious kitchen

Meaningful carbon reduction in hospital food services.

Created specifically for NHS Catering Managers, this practical toolkit provides clear, actionable guidance to support more sustainable food and catering practices.

It empowers you to make informed choices that support the NHS Net Zero ambitions and the wider Greener NHS programme, enabling reductions in carbon emissions while continuing to deliver efficient, high-quality catering services.



Part 1

The carbon cost of cravings



The carbon footprint of food

The carbon footprint of food refers to the total greenhouse gas emissions (mainly carbon dioxide, methane, and nitrous oxide) generated throughout the lifecycle of food - from production to consumption.

This includes emissions from:



Agriculture

Livestock (especially cattle) produce methane and fertilisers release nitrous oxide.



Land use

Deforestation for farming reduces carbon absorption.



Processing and packaging

Energy-intensive steps that add to emissions.



Transportation

Especially significant for imported or out-of-season foods.



Retail and storage

Refrigeration and lighting consume energy.



Food waste

Decomposing food in landfills emits methane.



Food impact at a glance

The NHS has identified food and catering as a significant contributor to its carbon footprint, accounting for approximately **3%** of total NHS emissions - equivalent to approximately **1,543 kilotonnes of CO₂** each year.¹ Among the food products used, red meat (especially beef and lamb) and dairy products are consistently highlighted as the highest carbon contributors.²

NHS response and sustainable shifts:

- **Plant rich by default:** A growing number of NHS trusts are adopting a ‘plant rich by default’ approach, where plant rich meals are the default menu option, though meat is still available.
- **Cost and health benefits:** Transitioning to plant rich meals could cut food costs by a third and reduce the burden of chronic diseases, aligning with both environmental and public health goals.³

Carbon reduction is about balance, not removal.

Source:
1: Five years of a greener NHS - NHS England
2: Hannah Ritchie, 2020
3: University of Oxford, 2020



Food category	Example items	Carbon footprint	Notes
Red meat	Beef, lamb	Very high	Highest emissions due to methane and land use. Being phased out in many NHS trusts.
Dairy products	Milk, cheese, butter	High	Significant emissions from livestock and processing.
Processed meats	Sausages, bacon	High	High emissions and linked to poor health outcomes.
Fish and poultry	Chicken, white fish	Moderate	Lower than red meat but still notable.
Grains and legumes	Rice, lentils, chickpeas	Low	Staple in plant rich meals; low emissions.
Vegetables	Broccoli, carrots, spinach	Very low	Minimal emissions; promoted in sustainable NHS menus.
Fruits	Apples, bananas, berries	Low	Low emissions, especially when locally sourced.
Plant rich meats	Vegan curries, bean stews	Very low	Up to 75% lower emissions than meat-based meals.

Source:
Food impact at a glance, 2026

The NHS green plan

The NHS Net Zero ambition

The NHS is committed to becoming the world's first Net Zero national health system. It has set two key targets: achieving Net Zero for emissions it directly controls by 2040 and for emissions it can influence by 2045. These commitments shape sustainability action across all NHS organisations.

Local green plans

While the NHS does not have a single, national Green Plan, every NHS Trust and Integrated Care Board (ICB) must develop its own board-approved Green Plan. These plans outline how each organisation will reduce emissions and contribute to national Net Zero goals, in line with NHS England's Green Plan guidance.

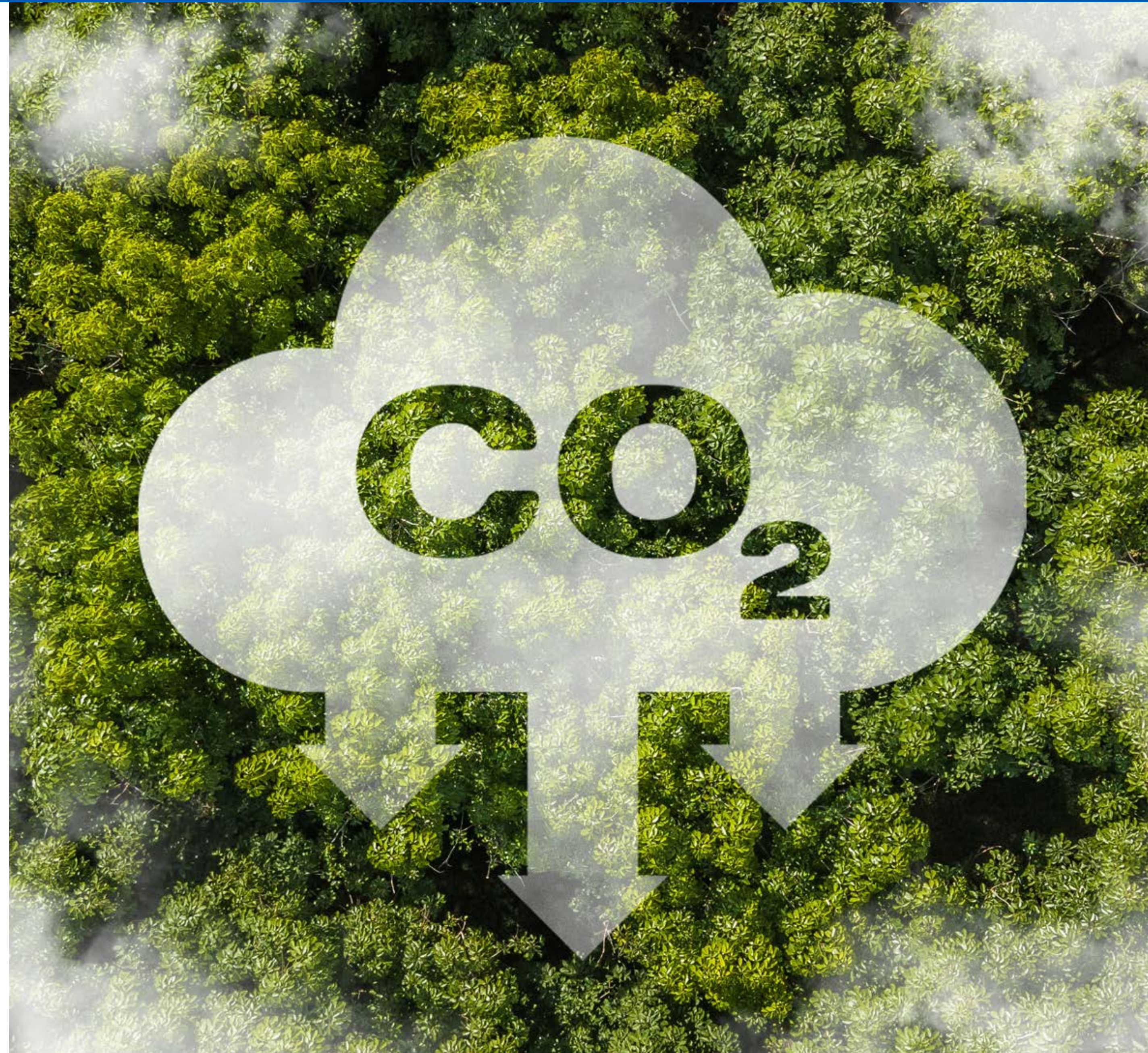
Reviewing Green Plans

Green Plans are no longer refreshed solely on a three-year cycle. Updated NHS England guidance requires each organisation to review and update its Green Plan annually to capture progress and reflect new priorities, technologies and enablers.

Carbon reduction as a core priority

Carbon reduction is central to achieving the NHS's Net Zero ambition. By implementing local Green Plans and reducing emissions, NHS organisations help safeguard public health, enhance resilience and support delivery of sustainable, high-quality care.

Source:
A Net Zero NHS, 2026



Greenwashing

Greenwashing is a deceptive practice in which a company or organisation exaggerates or falsely claims to be environmentally friendly in order to appear more sustainable than it really is.

Key characteristics of greenwashing:

- **Misleading labels or claims:** Using vague terms like 'eco-friendly' or 'natural' without evidence.
- **Selective disclosure:** Highlighting a small green initiative while ignoring larger environmental harms.
- **Imagery over substance:** Using green colours, leaves, or nature imagery to imply sustainability.
- **Lack of transparency:** Not providing verifiable data or third-party certifications.
- **No data:** No carbon figures, lifecycle data or independent evidence.

This can undermine Net Zero progress, increase risks audit and assurance failures, as well as, mislead staff, patients, and procurement decisions.



What does Net Zero mean?

Net Zero for the NHS means eliminating or balancing all greenhouse gas emissions for the emissions it directly controls and for those it can influence across its wider supply chain.

How it can be achieved:



Lower carbon food choices

More plant rich meals, less high-carbon foods (for example, beef, lamb, cheese).



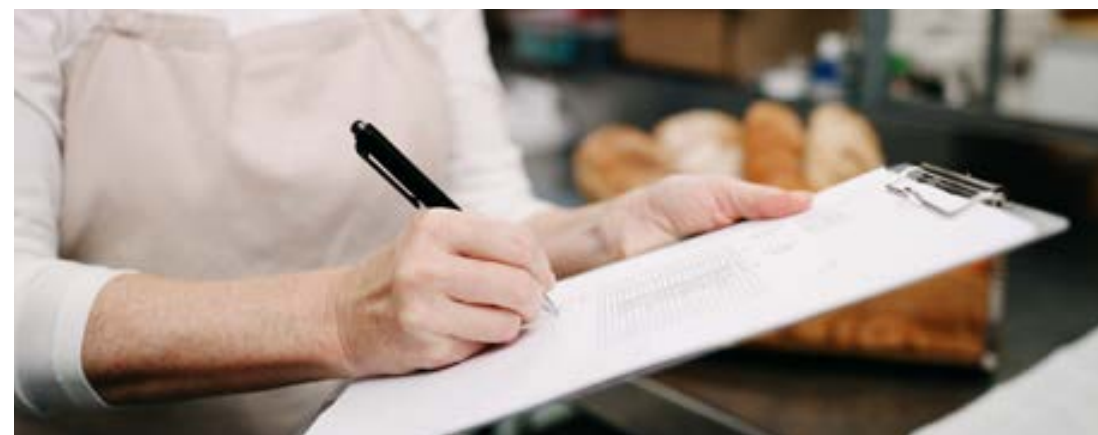
Reduce food waste

Better forecasting, portion control and surplus management.



Smarter procurement and deliveries

Fewer deliveries, local / seasonal produce, evidence-based supplier claims.



Offset last

Only after real reductions are made.



Cut kitchen energy use

Switch off idle equipment, efficient cooking and refrigeration.



Measure and monitor

Track food waste, energy use, plant rich uptake.



A catering service working towards Net Zero would use seasonal produce, move to plant rich foods and minimise food waste.

Part 2

Greener on your plate



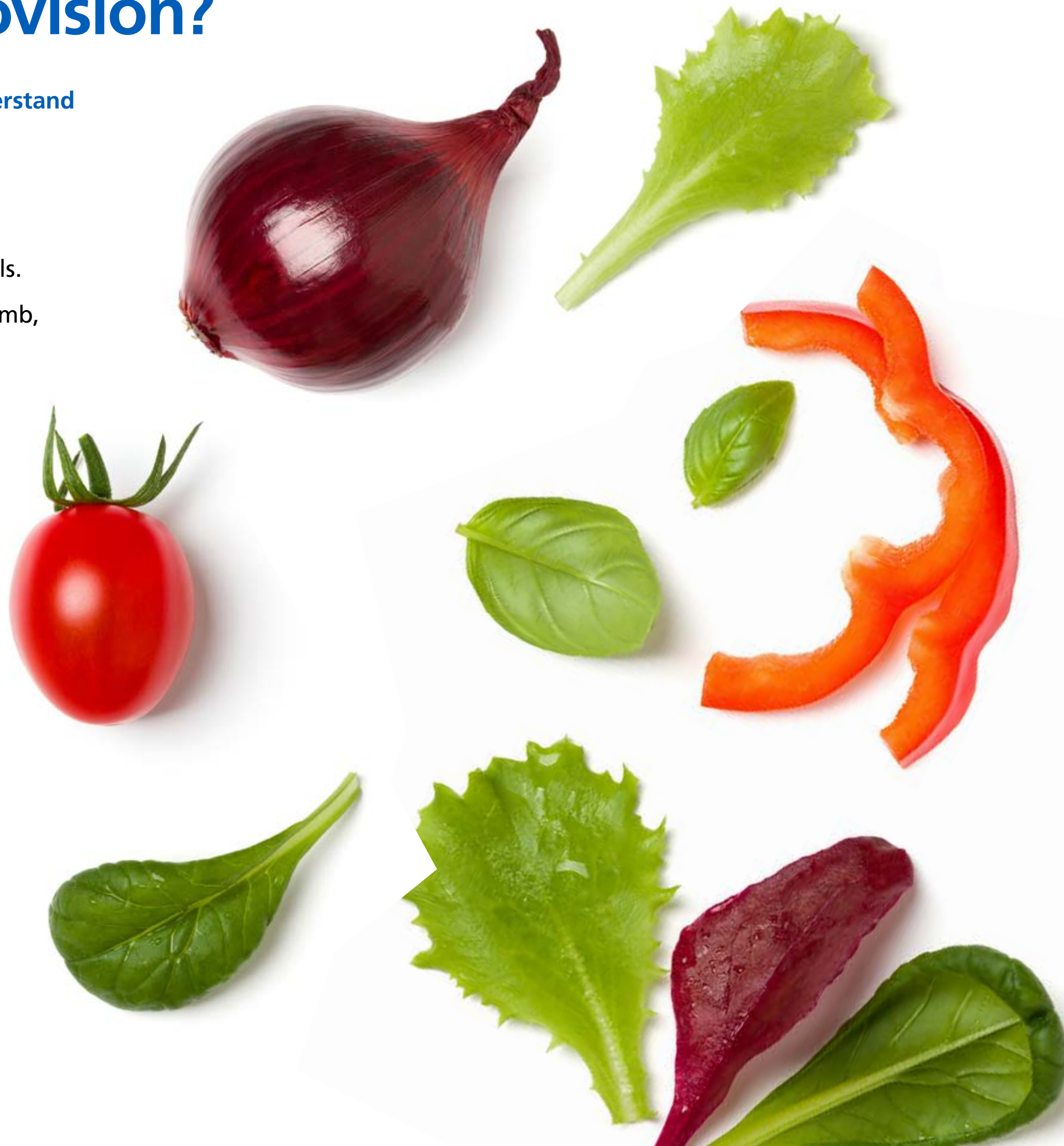
How can you assess your current provision?

Assess what you currently provide to understand what the next steps should be:

- Menus and recipes in use.
- Volumes of food purchased.
- Balance of plant rich vs. meat-based meals.
- High-carbon foods (for example, beef, lamb, cheese-heavy dishes).
- Portion sizes and patient uptake.
- Levels of food and plate waste.

Identify opportunities for improvement from your assessment:

- High-impact food swaps.
- Waste reduction opportunities.
- Energy-saving actions.
- Procurement changes.



NHS England offers essential tools to support progress towards Net Zero:

- Carbon and sustainability assessment.
- Alignment with national standards, such as Government Buying Standards for Food and Catering Services (GBSF).
- Evidence for audits and reporting.
- Tracking progress over time.

Ways NHS Supply Chain: Food can support your organisation:

- Helping understand what products you are buying.
- Review supplier sustainability information.
- Identify lower-carbon alternatives on framework.
- Benchmark purchasing patterns.



Menu carbon analysis tool

This tool, developed by the NHS Supply Chain Dietetic Team, evaluates how environmentally sustainable a menu is by comparing its composition to the EAT-Lancet Planetary Health Diet; a globally recognised framework for healthy and climate friendly eating.¹

It calculates the carbon impact of the menu and highlights areas where adjustments can reduce emissions while maintaining nutritional balance.

Why is it useful?

- **Promotes sustainability:** Helps caterers, dietitians, and food service providers align menus with climate goals.
- **Supports health:** Encourages dietary patterns that are good for both people and the planet.
- **Actionable insights:** Identifies high-impact ingredients and suggests alternatives for a lower carbon footprint.

How to access the menu carbon analysis tool:

Contact your relevant client account manager or contact the Culinary and Dietetics Team

Source:
1: EAT forum



What can be done?

Lowering the carbon footprint of foods in hospitals, especially within the NHS, has multiple benefits that align with environmental goals, patient health, and operational efficiency.



Seasonal and local menus

Highlight dishes made with locally sourced, seasonal produce to reduce transport emissions.



Smart swaps

Replace higher-impact ingredients, such as beef, with lower-impact alternatives.

Bonus ideas

- **Sustainability scoreboards:** Track and display progress on carbon savings, meat reduction, or waste diversion. Have posters promoting the carbon difference.
- **Interactive feedback:** Let diners vote on new sustainable dishes or suggest ideas.
- **Staff training:** Empower your team with knowledge on sustainability and how to talk about it with customers.



Carbon labels

Add carbon footprint labels to dishes to raise awareness and help diners make informed choices.

Use the expand icon to zoom in on the example label.



Carrot and Coriander Soup (200ml)

Freshly made in store today



Use by: 23rd Mar 2021

Each 235g portion contains:

ENERGY	FAT	SATURATES	SUGARS	SALT
414KJ 99kcal	3.7	0.8g	8.3g	0.53g
5%	5%	4%	9%	9%

of an adult's reference intake
Typical energy as sold per 100g: 176kj/42kcal



How can it be done?

More vegan / vegetarian options



- **Plant rich stars:** Create signature vegan dishes that are exciting and indulgent, not just alternatives.
- **Flexitarian menus:** Offer flexible dishes that can be made vegan or vegetarian on request, with simple customisations to ingredients or plating.
- **Global inspiration:** Use plant-forward cuisines like Indian, Mediterranean, and Thai to diversify options.
- **Menu placement:** Try putting the plant based options at the start of the server, or top of the menu choice.
- **Use of seasonal vegetables:** Instead of naming vegetables.

Hybrid recipes (50 / 50)



- **Blended burgers:** Combine minced meat with lentils, mushrooms, or grains for burgers with lower impact or proteins like Eat Curious.
- **Mixed mince:** Use lentils or beans in meat sauces, for example, bolognese or chili to reduce meat content without compromising taste.
- **Recipe cards:** Share hybrid recipes with customers to encourage sustainable cooking at home.

Meat-free and themed sustainability days



- **Fish Fridays:** Focus on sustainable seafood options with clear sourcing info.
- **No waste Wednesdays:** Feature dishes made from surplus ingredients or 'wonky' produce.
- **Descriptive naming of plant products:** For example, 'hearty lentil stew' vs. 'vegan stew'.
- **Carbon-conscious challenges:** Run weekly challenges for staff or customers to reduce food waste or try new plant based meals.

Seasonality

Seasonality describes eating foods at the time of year they are naturally grown and harvested, without relying on energy-intensive growing methods or extended supply chains.

How does it support carbon reduction?

- **Lower energy demand:** Seasonal produce grows under natural conditions, reducing the need for heated greenhouses, artificial lighting, and climate-controlled environments.
- **Shorter supply chains:** Foods in season typically move through fewer stages before reaching kitchens, which helps reduce emissions linked to transport, handling, and distribution.
- **Less reliance on cold storage:** Seasonal foods are used closer to harvest, limiting long-term refrigeration and freezing that increases energy use.
- **Reduced lifecycle emissions:** Aligning menus with natural growing cycles helps lower emissions across production, processing, storage, and distribution.

What can you do?

- **Menu planning:** Plan menus that adapt to seasonal produce availability.
- **Procurement:** Prioritise seasonal ingredients when sourcing and ordering.
- **Kitchen operations:** Align production planning with seasonal supply.
- **Staff engagement:** Provide teams with clear seasonal sourcing guidance.
- **Communication:** Promote seasonal menu choices to patients and customers.



Seasonality calendar

Vegetables season availability calendar:

UK crops in season UK stored / forced crops Imported crops - Northern Hemisphere Imported crops - Southern Hemisphere Out of season - imported crop (not recommended)

	January	February	March	April	May	June	July	August	September	October	November	December
Asparagus												
Aubergines												
Broccoli												
Broad beans												
Brussels sprouts												
Cabbage (Savoy)												
Cabbage (white and red)												
Carrots												
Cauliflower												
Courgettes												
Green beans												
Leeks												
Onions												
Parsnips												
Peas												
Potatoes (main crop)												
Potatoes (new / salads)												
Swede												
Sweetcorn												

Seasonality calendar

Fruit season availability calendar:

UK crops in season UK stored / forced crops Imported crops - Northern Hemisphere Imported crops - Southern Hemisphere Out of season - imported crop (not recommended)

	January	February	March	April	May	June	July	August	September	October	November	December
Apple												
Avocados												
Bananas												
Blueberries												
Cherries												
Citrus												
Grape												
Kiwis												
Mango												
Melon												
Pears												
Peaches and nectarines												
Pineapple												
Plums												
Raspberries												
Strawberries												

Seasonality calendar

Salad season availability calendar:

 UK crops in season  UK stored / forced crops  Imported crops - Northern Hemisphere  Imported crops - Southern Hemisphere  Out of season - imported crop (not recommended)

	January	February	March	April	May	June	July	August	September	October	November	December
Celery												
Cucumber												
Lettuce												
Radish												
Salad peppers												
Spinach												
Spring onions												
Tomatoes												
Watercress												

View the seasonality calendar online:

View online: www.supplychain.nhs.uk/categories/food



Part 3

Recipe for change



Behaviours, change and environment

Education and engagement:



Clear communication across platforms

Use posters, leaflets and digital screens to communicate the benefits of more sustainable, plant rich food choices.



Leadership and positive reinforcement

Lead by example in everyday practices and reinforce positive behaviours at every opportunity.



A culture of change for the future workforce

Focus on building a culture of change, particularly among younger staff, who represent the future workforce.

Engagement activities

Staff and patient feedback surveys



Taster sessions and cooking demos

For example, NHS Supply Chain: Food's engagement days provide the opportunity to trial new dishes.



Menu reformulation and smart rotation

To evenly distribute your carbon effects.

New ways of working that can lead to a better product for the future



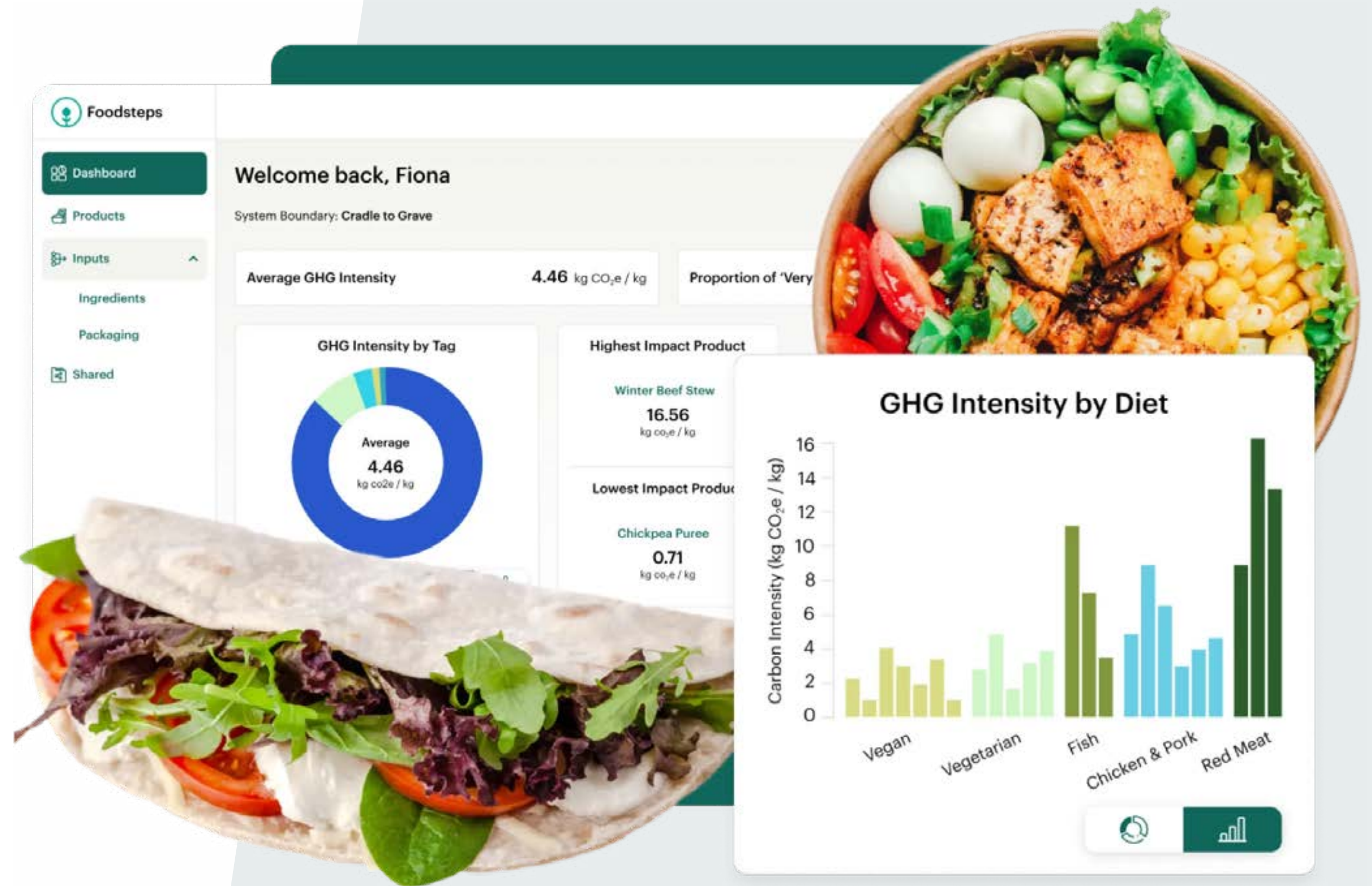
Staff training sessions

For example, NHS Supply Chain: Food's culinary academies promote food in the hospital and encourage entries to NHS Chef of the Year.



A top-down approach

To training and implementation within your trusts.



Operational efficiencies

Food waste:

6,500 tonnes

Unserved meals annually across NHS trusts.

£0.8 billion

The cost of providing inpatient food in 2022-2023, the food budget is £241 million.

18-39%

Food waste within NHS England (ranges widely, from 18% per Waste and Resources Action Programme (WRAP) to 39% per the Independent Review)¹.

To reduce waste, hospitals should:

- **Adopt portion controls:** Use standardised serving tools and clearly defined portion weights.
- **Implement electronic ordering systems:** Real-time systems reduce over-production, empower patients to choose closer to mealtimes, and support data collection.
- **Monitor waste consistently:** Weigh meals before and after service to track consumption accurately and identify high-waste menu items. Use Estates Return Information Collection (ERIC) or equivalent systems to analyse trends and adjust forecasting.

Source:

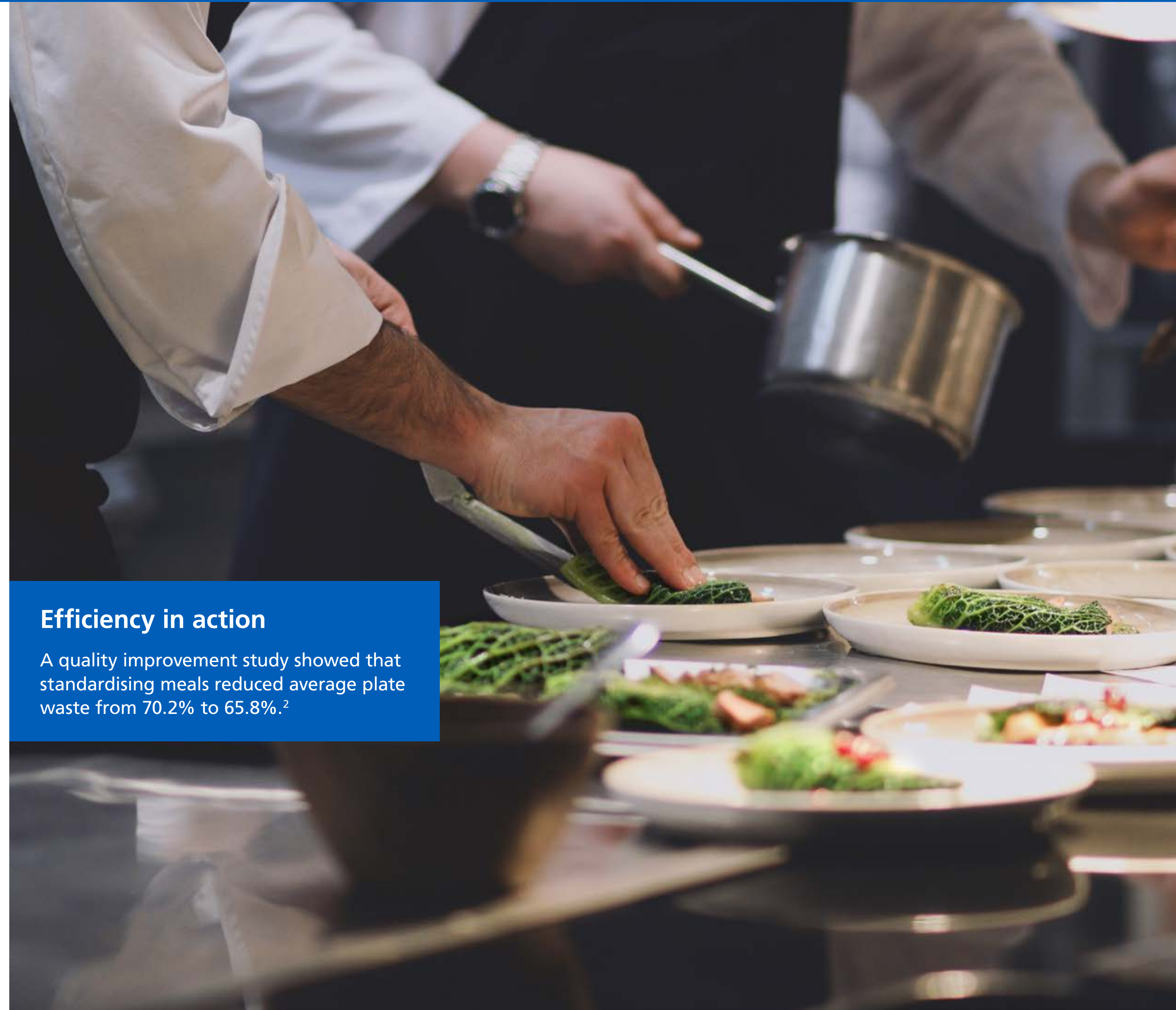
1: Adopt portion control

2: Soil Association



Efficiency in action

A quality improvement study showed that standardising meals reduced average plate waste from 70.2% to 65.8%.²



Operational efficiencies

Incorporate these strategies into green plans and toolkit resources to support ongoing Net Zero progress.

Maximising ingredient utilisation:

By combining portion control, data-driven monitoring, stakeholder engagement, and ingredient maximisation, NHS catering teams can significantly reduce food waste, control costs, and enhance sustainability.



Repurpose trimmings

Use vegetable peelings, meat bones, and other scraps in stocks, soups, sauces or stews.



Seasonal and creative planning

Incorporate seasonal produce and plan menus to cross-utilise ingredients, for example use broccoli stalks in casseroles or soups.



Leftover transformation

Convert stale or surplus items into new dishes, such as breadcrumbs from bread, croutons, or blended fruit compotes.

Operational efficiencies

Engaging staff and patients:



Training and awareness

Educate catering and ward staff on environmental, financial, and clinical impacts of waste.



Patient choice and portion flexibility

Offer standard and smaller portions by default, with larger servings on request - helping align intake with appetite and reduce plate waste.



Supportive mealtime environment

Encourage 'assisted mealtimes' and reduce interruptions to maximise patient intake and decrease waste.¹

Source:
1: NHS Supply Chain



Procurement support

Procurement and NHS Supply Chain: Food

All of our frameworks offer fully a compliant procurement route for our customers.

Our procurement team have a strong supplier relationship management programme in place, encouraging supplier improvement in this area.

We utilise Framework Agreements and Dynamic Purchasing systems making our tenders more accessible for Small and Medium-sized Enterprises (SMEs) and local suppliers.

Our procurement requirements:

More detail on our sustainability requirements can be found on the following pages, however in summary:

- All suppliers must have Carbon Reduction Plans that have to be updated annually.
- All suppliers must use the NHS Evergreen Assessment tool which evaluates the sustainability efforts of organisations - completed on annual basis.
- All suppliers must complete the Modern Slavery Assessment Tool (MSAT) on annual basis.

In addition to sustainability requirements the following are also required:

- All suppliers awarded onto our frameworks must obtain Micron 2 Food Standard certification.
- All suppliers must have valid employees, products and public liability insurances.



Supplier requirements

Carbon reduction plan

Suppliers bidding for new NHS contracts must publish a board-approved **Carbon Reduction Plan** confirming their commitment to reach **Net Zero** by **2050**.

The plan must outline key carbon-reduction measures, be publicly available, updated yearly, and include Scope 1, Scope 2, and selected Scope 3 emissions data in CO₂e.

Social value

Since April 2022, all NHS procurements must apply a minimum **10%** social value weighting, ensuring requirements are proportionate, practical, and considered early in the process.

The framework focuses on outcomes that support economic growth, clean energy, safer communities, wider access to opportunities, and improved workforce wellbeing across the supply chain.

Evergreen assessment

All suppliers must complete the Evergreen Supplier Assessment, an NHS England tool launched in June 2023 to streamline and standardise sustainability reporting. It stores supplier information in one place, reduces duplicate requests, and helps the NHS understand overall progress toward a more sustainable supply chain rather than ranking individual suppliers.

Horizon scanning

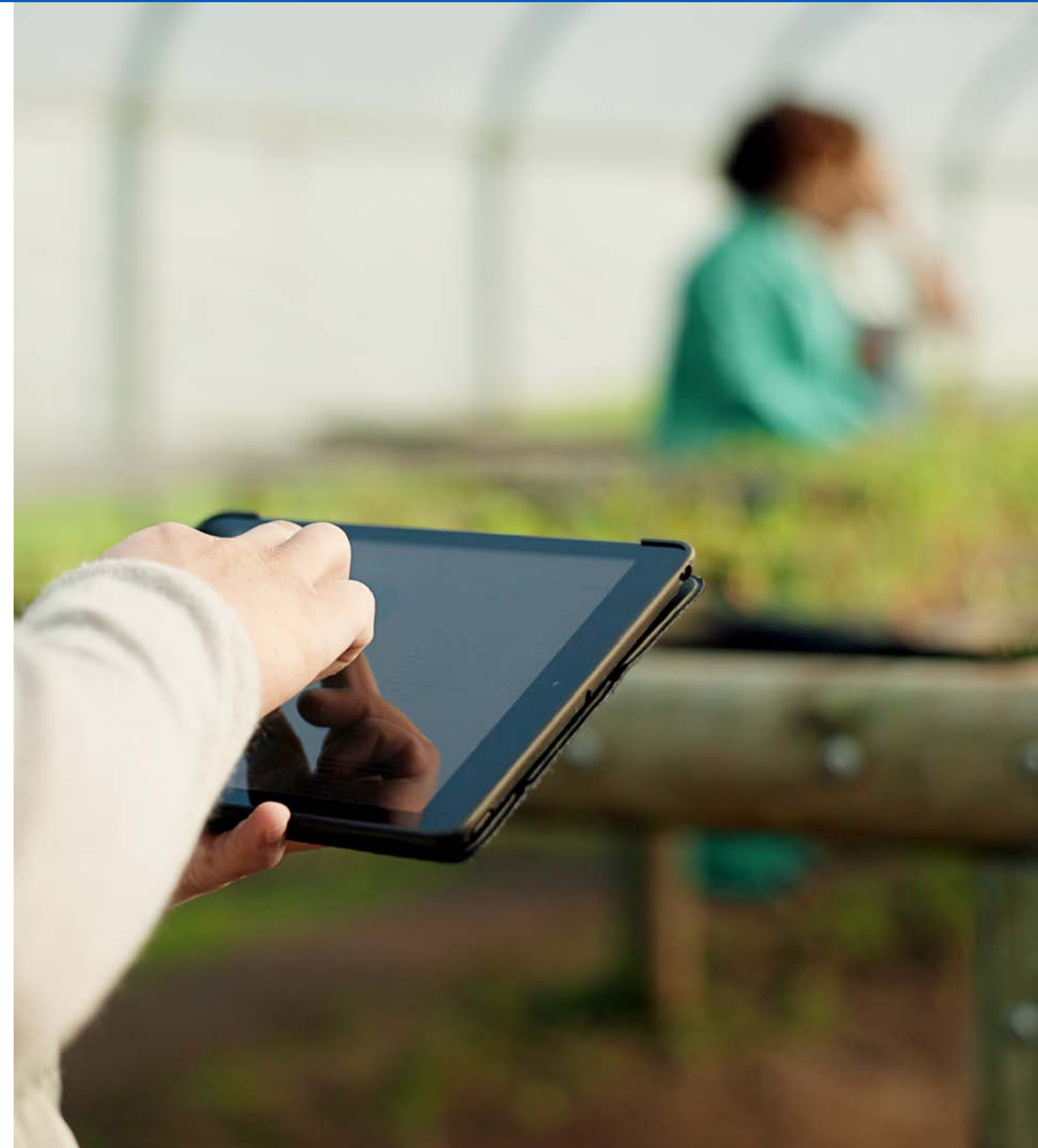
Forward planning is a key part of the NHS England Supplier Roadmap, which outlines the steps suppliers must take to align with the NHS **Net Zero** ambition through to **2030**.

Effective horizon scanning involves anticipating industry developments, regulatory shifts, and potential material bans, such as plastics, so suppliers can prepare proactively rather than react to change when it occurs.

Modern slavery

All suppliers must complete and maintain an up-to-date **Modern Slavery Assessment Tool (MSAT)**. This involves identifying risks much earlier in the procurement process, using the NHS England risk-assessment methodology to categorise frameworks as low, medium, or high risk, and applying different requirements depending on the risk level.

Source:
NHS Supply Chain



Where does NHS Supply Chain procurement fit in?

What else can we do to support you? Other procurement initiatives that can support:



Waste audits and reducing food miles

Audits across your food offer to reduce waste produced and improve operational efficiency. Local supplier sourcing to reduce food miles.



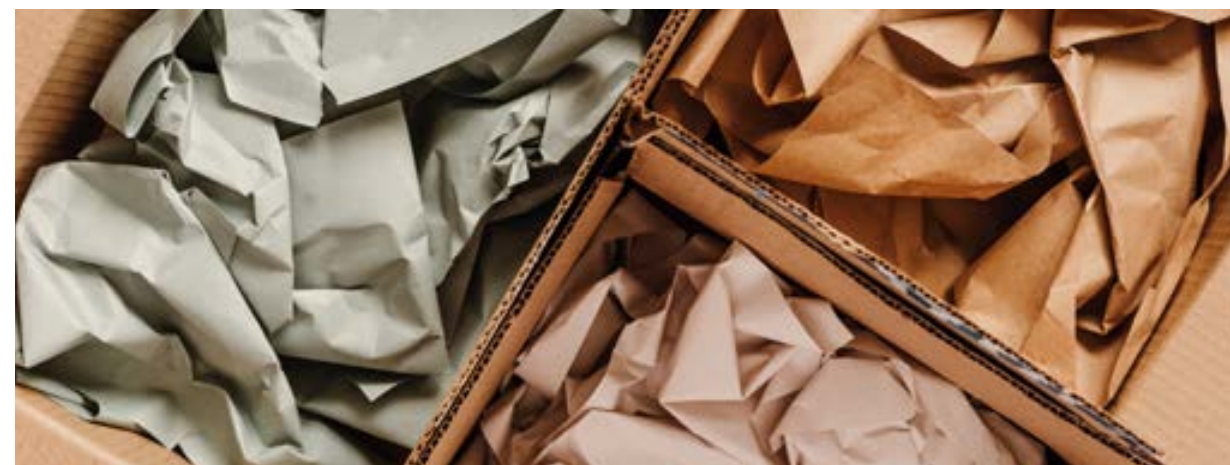
Encouraging collaboration

Reopening of competition exercises under our framework to encourage collaboration with trusts to streamline deliveries into the local area.



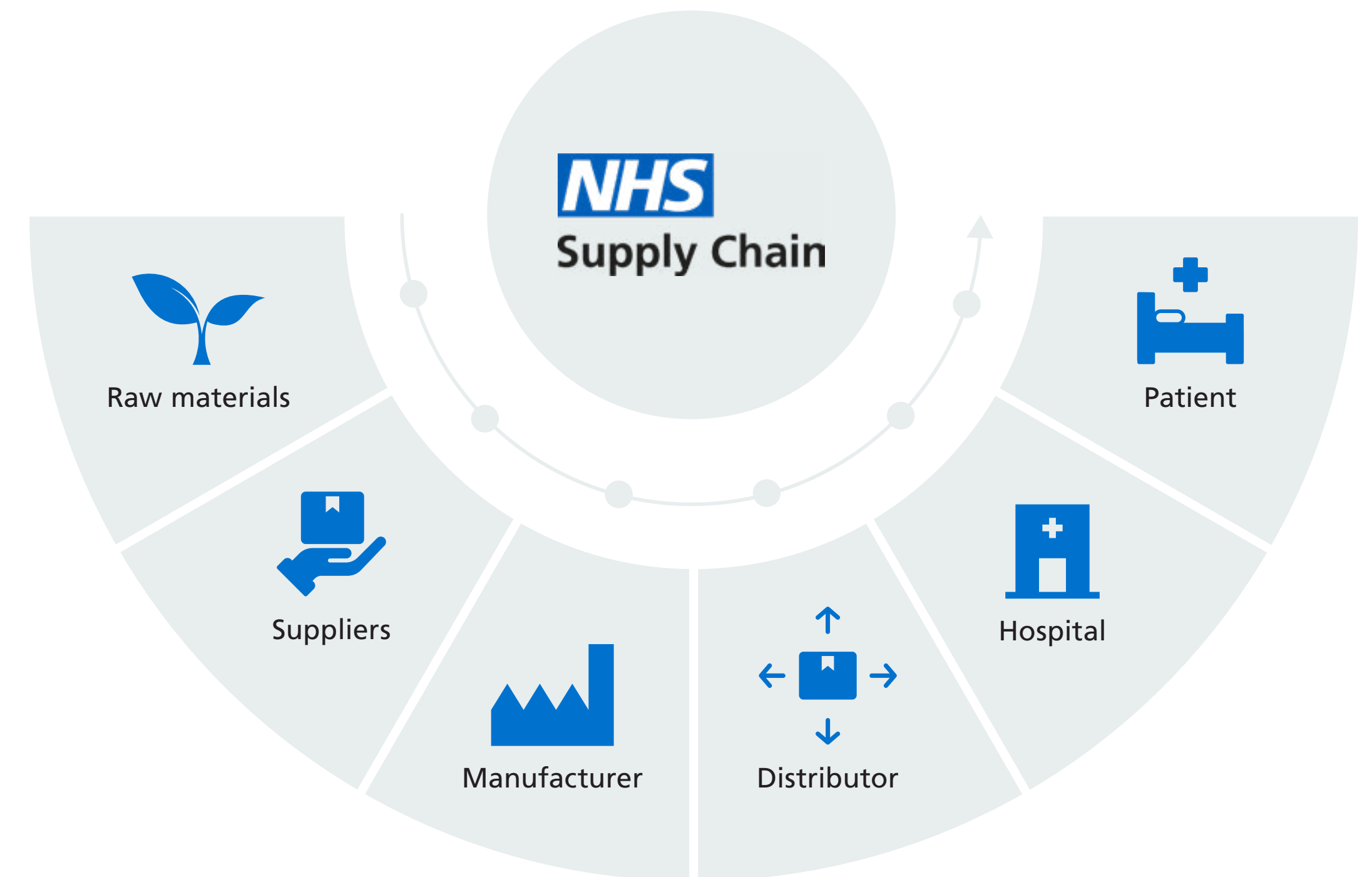
British produce and Red Tractor products

Increasing the volume of British produce, and sourcing Red Tractor products where required.



Recyclable packaging

Encouraging use of recyclable packaging.



Part 4

Client testimonials



From meat-heavy to plant-powered: Airedale's culinary transformation

Published: 11 December 2025

Aims:

- Reduce meat consumption
- Reduce carbon trust-wide
- Introduce more plant rich dishes

Going meat free in the North:

Airedale NHS Foundation Trust recently embarked on a bold and forward-thinking journey with NHS Supply Chain: Food, to reduce meat consumption across its catering services, in a drive to reduce carbon trust-wide, by introducing more plant rich dishes across their menus.

NHS Supply Chain: Food stepped in, and helped the trust to devise a Culinary Plan, a plan that looks at everything from looking at what is going on the menus to what ingredients are being used for dishes, innovative ways of working.

This initiative aligns with the Trust Green Plan and reflects a growing awareness of the environmental and health impacts of meat-heavy diets on patients' welfare.



Read the full case study

Visit: www.supplychain.nhs.uk/casestudy



Improving sustainability drives savings at the Royal Wolverhampton NHS trust

Published: 14 October 2025

Aims:

- Review ward beverage trolleys
- Implement consumables-saving methodology

How we can help your trust:

This approach could help unlock similar savings for your trust, and we would be pleased to work with you to review patient tea, coffee and hot chocolate consumption.

A simple change to hot drinks:

NHS Supply Chain: Food is leading the way in helping trusts generate savings through innovative initiatives. In this project, we made a simple change to hot drinks at a trust site, demonstrating how small adjustments can deliver significant results.

At Royal Wolverhampton NHS Trust, NHS Supply Chain: Food has implemented a new consumables-saving methodology.

This approach reviews ward beverage trolleys and replaces cardboard in-cup hot drinks with loose ingredients served in reusable mugs.

Read the full case study

Visit: www.supplychain.nhs.uk/casestudy



Royal free hospitals culinary transformation with NHS Supply Chain

Published: 23 July 2025

Aims:

- A more diverse menu with an emphasis on plant rich dishes
- A healthier culture and workforce

A culinary transformation:

The trust wanted support from the team to create a more diverse healthy menu with an emphasis on plant rich dishes to compliment the staple dishes currently on the menu. They were also keen to create a culture of a healthier workforce and change the mindset of people coming to the restaurant. They wanted to challenge and improve what they ate on a day-to-day basis.

They set the following catering objectives:

- Develop the culinary team.
- Help with recipe engineering (involving the precise calculation and documentation of ingredients, quantities, and methods required to create a dish).
- Support with training across all kitchen aspects.

- Make plant rich food shine and introduce the SmartPlate NHS concept.

The key benefits of SmartPlate included:

- **Nutritional Nudging:** Healthier options are made visible and convenient.
- **Diverse, culturally inclusive menus:** Supporting all dietary needs and preferences.
- **Interactive events:** BBQs, street food and global cuisines to engage staff and promote healthy eating.
- **Continuous feedback loop:** Monthly menu updates based on staff input.
- **Home cooking support:** Affordable, easy recipes to help fight food poverty.
- **Sustainability focus:** Low-carbon operations and British Dietetic Association (BDA) compliant meals.



Read the full case study

Visit: www.supplychain.nhs.uk/casestudy



Part 5

Resources and appendices



Resources and appendices

- Adopt Portion Control (2023), Improving quality and safety in healthcare, Article e002436.
- BBC Good Food (2026), Seasonal calendar.
- EAT Forum (2026), The Planetary Health Diet.
- NHS England (2026a), A Net Zero NHS.
- NHS England (2026b), Five years of a greener NHS: Progress and forward look.
- NHS England (2026c), Food and nutrition - Greener AHP Hub.
- NHS Supply Chain (2026a), Food waste: The work NHS Supply Chain: Food are doing to help reduce waste in trusts.
- NHS Supply Chain (2026b), Net Zero Supply Chain and Suppliers.
- Ritchie, H. (2020), ‘The carbon footprint of foods: are differences explained by the impacts of methane?’, Our World in Data.
- Soil Association (2026), Soil Association.
- United Nations (2026), Food impact at a glance.
- University of Oxford (2021), Sustainable eating is cheaper and healthier - Oxford study.

Contact us:

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Visit our account manager page: www.supplychain.nhs.uk/food-contacts



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June 2026

