



Inventory of business change tools

Guidance and tools to support business change

D2.5 – Final



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List of abbreviations

CA	Consortium Agreement
DoA	Description of Actions
DSM	Decision Support Model
DSS	Decision Support System
DST	Decision Support Tool
FA	Framework for Action
GA	Grant Agreement
NGO	Non-Governmental Organisation
PWP	Pilot Working Platform
WP	Work Package

Glossary

- Decision Support System** A Decision Support System is a very broad term. Anything which produces an output that assists a decision can potentially be called a decision support system. In REFRESH we are interested in systems that can help people to make choices which help to reduce food waste
- Decision support tool** Decision Support Tools are aimed at decisions between options for which the effects and applicability are well understood.

1 Executive Summary

This report presents an extensive inventory of existing tools which support businesses to prevent food waste along the whole supply chain. The core objective driving the creation of this inventory is to inform further REFRESH research, to understand current business needs, and use this information to identify potential gaps in this market.

REFRESH is an EU Horizon2020 funded research project taking action against food waste. Twenty-six partners from 12 European countries and China are working towards the project's aim to contribute towards Sustainable Development Goal 12.3 of halving per capita food waste at the retail and consumer level and reducing food losses along production and supply chains, reducing waste management costs, and maximizing the value from un-avoidable food waste and packaging materials.

In order to inform the design and development of potential Decision Support Tools (DSTs), it was essential to understand what tools, resources and guidance were already in existence to support businesses along the whole supply chain to reduce food waste. These are referred to simply as "tools" in this report to represent the broad and varied nature of the resources we found.

Primarily, an inventory of tools was developed based upon carefully defined criteria to ensure those recorded were relevant to the aims of REFRESH. From this initial inventory, secondary criteria were applied, leaving a smaller number of more relevant tools for further analysis.

The information collected within the inventory forms the basis of a gap analysis in Task 2.5, which will provide key information on where opportunities lie, to inform the development of decision support tools for business. At this stage, the Gap Analysis will focus on understanding what is missing in the range of tools, what doesn't work so well yet, and what potential improvements could be made.

These tools will be tested and refined through the REFRESH pilots, and will contribute to the development of a blueprint for wider adoption of such framework approaches to tackle food waste along value chains in many additional countries.

Under these national pilots, smaller innovative projects will be initiated to support the aims of the Framework Agreement in each country. A core area for further exploration and testing is the use of Decision Support Tools which, as highlighted in the Grant Agreement, should:

"..facilitate effective decision-making, leading to actions that will prevent and valorise waste such that business behaviour change is accelerated, the tools commercial value is proven, and a clear route to wider take up is provided"

This piece of work sits within REFRESH Work Package 2, a key objective of which is to design and validate a range of framework models through pilots in four European Countries: the Netherlands, Germany, Spain and Hungary. The outputs and evidence generated through these pilots will provide stimuli for other EU and third countries, including China, to take action in food waste prevention.

2 Introduction

2.1 REFRESH

REFRESH is an EU Horizon2020 research project taking action against food waste. Twenty-six partners from 12 European countries and China are working towards the project's goal to contribute towards Sustainable Development Goal 12.3 of halving per capita food waste at the retail and consumer level and reducing food losses along production and supply chains, reducing waste management costs, and maximizing the value from un-avoidable food waste and packaging materials.

This piece of analysis sits within Work Package 2: Business Engagement – Frameworks for Action. A key objective of this Work Package (WP) is to design and validate a range of framework models through pilots in four European Countries: the Netherlands, Germany, Spain and Hungary. Instrumental to the success of these pilots is the active engagement of agents involved in all aspects of food production and supply, consumers, and those addressing waste generation, handling and by-product valorisation. The strong networks established in each pilot country will have the opportunity to contribute to and validate the projects research and evidence, particularly the design and development of the Decision Support System (DSS).

REFRESH runs for four years (until June 2019) and, over this period, the DSTs will be continuously tested and refined where necessary to ensure it is fit for purpose. The outputs and evidence generated through these pilots will provide the stimulus for other EU and third countries, including China, to take action. Hence, this is of particular interest to businesses and their supply chains across the EU and wider; and to those leading the development of insightful tools to aid the prevention of food waste.

2.2 Aims of the work

The main purpose behind the inventory of business change tools is to inform the Gap Analysis, with involvement from Pilot Working Platform (PWP) members, and to provide evidence on how to reduce food losses and valorise by-products in piloted supply chain projects.

The core objective driving the creation of this inventory is to inform further REFRESH research in the form of a Gap Analysis. The aim of the planned analysis is to understand current business needs through discussions with members of the four Pilot Working Platforms, and use this information to identify potential gaps in the market which would benefit from closer

Pilots are to be run to support each of the four Framework Agreements (FAs)¹. Potential interventions to be assessed are;

- extended shelf life and longer best-before dates (due to innovative packaging)

¹ Germany, The Netherlands, Hungary, Spain

- changes in replenishment strategies,
- changed consumer selection behaviour at retail shelves, and
- dynamic retail pricing strategies.

The DSS will be used as a management tool to analyse key food products within the FA piloted supply chains and evaluate the impact of potential innovations (that could then inform action in T2.3). The DSS will:

- Help organisations see the overall picture of food waste across the life-cycle, identify the location and size of savings, understand what actions at which life-cycle stages can deliver what cross-system savings, and select their own best actions.
- Help organisations see the win-wins that can only be achieved by collaboration across the system - for example, the different contributions to whole chain resource efficiency.

Not only does this piece of work feed firmly into the future development of the DSS, the inventory itself will feature on the “Community of Experts” platform being developed in Task 2.4 serving as a practical resource to aid any organisation wishing to access tools and resources to aid the prevention of food waste.

The agreed process for this work is summarised below;

- Agree scope and criteria for the inventory
- Incorporate this into the design of the inventory
- Circulate link for the inventory to REFRESH partners to populate within a set timescale
- Dependant on quality and quantity of entries, refine the scope to focus solely on tools which have a scenario-building element
- Undertake expert interviews with the leaders of these selected alliances
- Assess the success factors and understand the barriers that the selected alliances had to overcome, with the aim of learning from their experience.

3 Inventory of business change tools

The first task was to agree on the criteria to select business change tools and the content as well as structure of the inventory template. The objective of the template was to ensure that content gathered would capture core information required to feed into the gap analysis within T2.5. A first draft was developed and reviewed within WRAP and then circulated to all REFRESH partners to actively contribute to populating the inventory. The inventory focused on existing tools and guidance which “support the food industry to reduce food waste” by:

- Optimising packaging materials
- Promoting sustainable consumption patterns
- Reducing food poverty
- Converting food waste into value-added by-products (both food and non-food products)
- Monitoring / reporting on sustainability issues to introduce more transparency in supply chains
- Greater communication and management within the food supply chain

Additional criteria were agreed as follows;

- NOT included are tools aimed at the consumer to reduce waste in the home
- For the avoidance of doubt, the term "food industry" covers agricultural production up to, but excluding the consumers
- No geographical restrictions (EU and wider)

The inventory was populated by the contributing partners and the final document had a total of 561 tools. This inventory will be housed on the Community of Experts (under T2.4) once the platform has been finalised.

3.1 How the final tools were selected

Since the initial number of tools collected in the inventory by partners was too extensive, the list was then subjected to further selection and elimination criteria; initially to identify those that had similar appeal to the DSTs we are looking to develop in T2.5. Following this, the final inventory was reduced significantly to a total of 73 tools for further analysis.

A summary of the final list of tools selected through this process can be found at *Annex I: Selected Business Change Tools*. This information will now be fed through to provide the basis for a Gap Analysis.

4 Next steps

The objective of the analysis is to provide insight to the team on where (market) opportunities exist for extending the existing DST and model. In addition, we need to further understand what users should ideally be able to do with such a tool. Until the pilot projects are established, this is hard to define, as it is not possible to do a detailed analysis of user requirements for every tool available in this area. However, once a specific case is received from a pilot, we can then compare the users' wishes to relevant existing tools. At this stage, the Gap Analysis will focus on understanding what is missing in the range of tools, what doesn't work so well yet, and what potential improvements could be made.

More specifically;

- Are there target audiences for which there are no apps or software tools available yet?
- Are there key functions that are not supported yet?
- What are the most important gaps?
- Are there certain types of food not covered?
- Are there stages in the food chain that are missing, or are there a group of potential users that don't have access to tools?
- Are there tools that cover different disciplines, or are they all focused within one particular discipline?
- Are there tools for certain countries, but not for others?
- Is there a type of calculation/simulation/prediction that can't be done yet?
- Is the information in the tools kept up to date?

6 Annexes

6.1 Annex I: Selected Business Change Tools

Name of the tool / guidance	Developed / owned by	What were the reasons for producing the tool
W.A.S.T.E tool	WRAP	help businesses identify waste and reduce it within their operations and across supply chains. The goal is food waste prevention through lean manufacturing strategies.
Wise up on Waste App	Unilever	<p>Aimed to support the reduction of waste in professional kitchens (restaurants and catering) with tips and recipes.</p> <p>Features</p> <ul style="list-style-type: none"> • Week by week comparison to track your progress and identify the indicative cost savings for your business • You can choose to audit your breakfast, lunch and/or dinner waste • Browse waste action tips, recipes and spoilage prevention tips • View case study videos • Save downloadable practical tools into your own bespoke 'My Folder' for easy access • Learn how you can play your part in supporting the sector in reducing waste and recycling more <p>Use this waste tracker to repeat your audit and monitor your success over time. Share your successes with your team and managers.</p>
Tried and tested	Tried and Tested and Catchment Sensitive Farming	An agriculture industry initiative that helps farmers to improve nutrient management planning.

Food Futures	WRAP	<p>Information, analysis and recommendations for all roles in the supply chain.</p> <p>To highlight:</p> <ul style="list-style-type: none"> *The risks to the UK food system over the next 10 years if we don't embrace a business unusual approach to the way we manufacture, sell and consume food; *The huge wealth of opportunities that developing a Flexible, Intelligent and Transparent (FIT) supply chain will open to the sector; and *How a "business unusual" approach will enable the sector to respond flexibly to changes in demand and weather patterns, with a transparent supply chain that will limit food scares and scandals
Think Eat Save	UNEP, FAO, Messe Düsseldorf -UN Zero Hunger Challenge	<p>Think Eat Save is a campaign by UNEP, FAO and Messe Düsseldorf, and in support of the UN Secretary-General's Zero Hunger Challenge. The website is a portal/one-stop shop for news and resources for individuals and businesses to cut food waste.</p>
Online Resource Efficiency Hub	WRAP	<p>A suite of useful tools to help you embed resource efficiency in your business. These range from a virtual tour of various business premises; online training materials, with presentation slides, templates, video case studies; and a publication wizard to enable you to produce a resource efficiency guide tailored to your organisation.</p>
FoodBattle	Wageningen Food & Biobased Research	<p>An interactive way for households to prevent food waste, FoodBattle is a group-based behavioural change tool. Any organisation can initiate a 3-week FoodBattle period, in which the participants are invited to take note on the amounts of daily food waste in a food waste diary. Combined with surveys on the household behaviour related to buying, cooking and storage and practical tips to prevent food waste, the participants are stimulated to change their behaviour, and compare their results with the nation's and the other participants' average discard. FoodBattle has proven its effectiveness: participants to a FoodBattle throw away 20% less food on average.</p> <p>FoodBattle is a readymade concept, but can easily be extended to fit your organization's preferences, e.g. including demonstration events, cooking lessons, recipe competitions, involvement of supermarkets, farmers, waste management companies etc.</p>

Food donation guidelines for food manufacturers	Rhone Alpes Region (Direction régionale de l'alimentation, de l'agriculture et de la forêt de Rhône-Alpes)	
Food donation guidelines for the catering sector	Rhone Alpes Region (Direction régionale de l'alimentation, de l'agriculture et de la forêt de Rhône-Alpes)	
PSF Knowledgebase	WRAP	<p>The Product Sustainability Forum (PSF) is a collaboration of organisations made up of grocery retailers and suppliers, academics, NGOs and UK Government representatives.</p> <p>It provides a platform for these organisations to work together to measure, improve and communicate the environmental performance of the grocery products. WRAP provides the Secretariat for the forum.</p>
Carbon Calculator	WRAP	<p>The Carbon Ready Reckoner (CRR) is an online tool specifically developed to enable Courtauld 2 signatories and other interested parties to evaluate the carbon impact relating to design changes in: the weight of packaging; their recycled content or recycling rate; and product concentration and palletisation efficiencies in transportation.</p>
Collaborative Waste Prevention Toolkit	IGD	<p>A collaborative tool to help manufacturers and sellers make decisions to avoid and prevent waste to arise in one another's premise. It promotes the sharing of waste data, identification of hot spots, diagnosis of root causes and execution of solutions among multiple partners.</p>
Your workplace without waste (YWWW)	WRAP	<p>Six food waste prevention webinars with key advice for businesses to cut food waste. One webinar serves as an introduction, a second about reducing food waste in the workplace, another on Product life, then a webinar on Dairy, Fresh Produce, Meat/Fish/Poultry which were identified as priority areas,</p>
Food Wastage Toolkit	FoodDrinkEurope	<p>To help food and drink manufacturers prevent food wastage within their own operations and to show how food manufacturers can also help other supply chain partners prevent food wastage.</p>

Targeted Communication Toolkits	European Week for Waste Reduction	Communication tools to help address specific target groups (citizens, schools, businesses, public authorities and NGOs) more specifically when organising EWWR actions.
Packaging Optimisation Toolkit	Repak	To help companies optimise their packaging systems.
Waste Not Want Not series	SWR Waste Management	To help hospitality businesses to find innovative ways to reduce waste. Acquired by SWR in 2015, RUR3 provides consultancy services to the Anaerobic Digestion (AD) industry.
Reducing the Food Waste Footprint Toolkit	FAO	The aim of the Toolkit is to showcase concrete examples of good practices for food loss and waste reduction, while pointing to information sources, guidelines and pledges favouring food waste reduction
Sustainable Business Review/Food online self-assessment tool	Sustainable Business Review	The Sustainable Business Review is a new model of support for small and medium sized food companies to gain commercial advantage through innovative business practice. It has developed out of the Sustainable Supply Chains initiative. This was established in 2009 to demonstrate how Welsh Government policy for sustainable development can deliver growth opportunities for the food sector. The initiative has consulted with 100s food businesses and supported the delivery of many innovative projects.
Reduce your Waste - Improve your Bottom Line	Visit Scotland	Business waste toolkit for the tourism industry. It is designed to support Scotland's Zero Waste Plan. The toolkit includes a guidance booklet in waste reduction, a how to film, posters on waste management techniques, and top/tip postcards. It is funded by the European Regional Development Fund (ERDF) and has delivered almost 30 sustainable tourism workshops in the past year.
Pack4ecodesign	Fost Plus	Packaging optimisation: Pack4ecodesign is an internet tool that enables companies to test the recyclability of their packaging.
Business Resource Efficiency Guide: Packaging Optimisation for SMEs	WRAP	Packaging optimisation

FoodSave	London Waste & Recycling Board	FoodSave is a project to help small and medium-sized food businesses in London reduce their food waste, put surplus food to good use and dispose of unavoidable food waste more responsibly, through processes such as composting or anaerobic digestion.
GISWASTE IT tool	GISWASTE EU Life project	The GISWASTE Life project offers an IT tool which assists users in choosing the option which makes best use of vegetable, meat, and dairy by-products from the agrifood sector, rather than treating them as waste products. This project focuses on recovery alternatives in two specific areas: the generation of biogas and animal feed production.
Using animal by-products at compost and biogas sites	UK Department for Environment, Food & Rural Affairs / Animal and Plant Health Agency	Guidance for the animal by-product industry and waste management companies explaining UK & EU standards and procedures.
ADAT - anaerobic digestion assessment tool	University of Southampton	To allow modelling of the energy balance for AD of both crops and wastes
A Packaging Optimisation Guide for Food & Drink businesses in Northern Ireland	Invest Northern Ireland	Packaging optimisation: simple practical guide designed to offer food and drink businesses in Northern Ireland advice on how to handle packaging and packaging waste using an optimisation checklist.
Winnow System	Applied Waste Techniques	To monitor food waste in commercial kitchens, empowering catering teams with the insight to reduce food waste, enhance operational efficiency and increase profits.
LeanPath Zap Tracking Software	LeanPath	Tablet-based food waste monitoring system. LeanPath is an electronic smart meter which enables kitchen staff to track, monitor, and reduce food waste using a tablet device. The database allows kitchen staff to select food from 70 different categories and then to select the reason why it was disposed. It also gives the financial value of the wasted food immediately.
Free resources - case studies, webinars & guidance documents	LeanPath	Customer support and training

Managing Food Waste in the Hospitality and Food Service Industry	Resource Efficient Scotland	To help food businesses make efficiency savings and meet the requirements of the Waste (Scotland) Regulations 2012.
Know How Guide to Reducing and Managing Food Waste in Hotels	International Tourism Partnership / Green Hotelier	To help hoteliers and chefs understand how to manage and reduce food waste in hotels - what is the issue, how should it be addressed and what resources are on offer
Less Food Waste More Profit. A Guide to Minimising Food Waste in the Catering Sector.	Environmental Protection Agency, Ireland	Guidance document to reduce food waste in the commercial / catering sector. The development of the document stemmed from research that showed commercial facilities landfill over 433,600 tonnes * of organic waste each year. The catering sector (hotels, restaurants, hospitals, canteens) produces over 100,000 tonnes of organic food waste. This realisation led to new regulations and landfill restrictions.
Raw Materials Risk Opportunity Screening Tool	WRAP	WRAP has developed an online Raw Material Risk and Opportunity Screening Tool to help food & drink businesses identify where and how to address sustainable production and consumption. It is a high-level support tool for individuals who are responsible for making sourcing and buying decisions and setting associated strategies, policies and practices.
Reducing Wasted Food & Packaging: A Guide for Food Services & Restaurants	United States Environmental Protection Agency	To help food service establishments and commercial kitchens save money by reducing wasted food and packaging with suggested strategies, templates and case studies.
Food & Packaging Waste Prevention Tool	United States Environmental Protection Agency	The Food & Packaging Waste Prevention Tool automatically creates graphs and data summaries to help identify patterns of waste generation. Based on these patterns, a business can make strategic changes to their operation.
Food Waste Management Cost Calculator	United States Environmental Protection Agency	The Food Waste Management Cost Calculator estimates the cost competitiveness of alternatives to food waste disposal, including source reduction, donation, composting, and recycling of yellow grease
Eco-efficiency Tool-kit for the Queensland Food Processing Industry	Australian Industry Group	This eco-efficiency toolkit has been developed for food processing companies in Queensland, to increase their awareness and uptake of eco-efficiency.

Eco-efficiency for the Dairy Processing Industry	Dairy Australia	This manual has been developed to help the Australian dairy processing industry increase its competitiveness through increased awareness and uptake of eco-efficiency
SugaTrak	SugaRich	SugaTrak is a technology tool for reducing food manufacturing waste at source, enabling managers to pinpoint the causes of waste and reduce it at its origin, keep surplus food in the food chain, and save money on treatment and disposal.
Brewers Association Solid Waste Reduction Manual	Brewers Association	The manual is a consolidated resource for effective solid waste management solutions in the craft brewers segment. Solutions offered can apply to all breweries, regardless of location and operational size. Guidance is provided for brewers that are just beginning to explore solid waste reduction programs, as well as for brewers that are looking to improve a well-established program.
Taking action on waste: the business case	WRAP	To provide resources for hospitality and food service chefs and support staff. A set of PowerPoint slides to help them spread the word about how to take action on food and packaging waste with their staff, clients or customers.
WRAP's Food Waste Prevention Signpost	WRAP	This guide has been developed for manufacturers and retailers, providing all of the information and insights in one place that you need to help you take action to reduce your environmental impact and cut costs, for both your business and consumers.
Sustainable product design - demonstration projects - case study	WRAP	The objective of these demonstration projects is to develop a flexible best practice approach to sustainable product design that can be replicated across other grocery and DIY retailers and manufacturers and their supply chains.
Case studies: waste prevention in action in food and drink companies	WRAP	Produced from a series of projects to show how retailers and manufacturers have been taking a systematic approach to driving waste out of their businesses and targeting key hot spots.
Benefits of reducing global food waste	WRAP	This report highlights the need for action on food waste and provides concrete examples of how this can be achieved.
Foodstuffs donated to food aid	Evira	The purpose of the guidelines is to clarify food donation-related procedures and liability concerns. The aim is to provide guidance in such a manner that the amount of food waste can be reduced.
Réduire le gaspillage alimentaire en restauration collective	ADEME	

Guidelines for the donation of food to social welfare organisations	German Federal Ministry of Food and Agriculture	
FUSIONS Guidance on Hospitality Food Surplus Redistribution	FUSIONS project	There was no complete guideline available in this domain
Sector grocery map	WRAP & Product sustainability forum (PSF)	<p>The grocery sector resource map provides an at-a-glance summary of the environmental hotspots associated with the top 50 priority products identified by the PSF.</p> <p>The map highlights where they sit in the product life cycle, and which environmental metrics they relate to, e.g. does the hotspot relate to the greenhouse gas emissions or the water consumption associated with the product?</p>
Toolkit for fresh produce	WRAP	<p>A whole chain resource efficiency (WCRE) project uses a problem solving approach to reduce waste and losses and improve resource efficiency across the entire product value chain from farm to fork. This approach helps you focus your efforts on the most significant opportunities. It considers all forms of waste: product & materials waste; water; energy; time; space and money.</p>
Fresh-produce-problem-definition-screening-tool	WRAP	Excel tool that calculates financial opportunity for fresh produce within the supply chain.
Hospital Care Food Waste Measurement Protocol	Wageningen Food & Biobased Research	<p>The measurement protocol and tool box is developed to measure food waste within the dedicated setting of hospitals. The method is not only including measuring discarded food throughout the processes of the organisation, but also provides detailed insight into food waste by examining factors such as:</p> <p>The products that are discarded most</p> <p>Improvement options in terms of food waste reduction</p> <p>Simultaneous improvement of patient, staff and visitor satisfaction in relation with hospital diets and catering.</p>
DIY-Food-Waste-Calculations-Sheet	food save	A DIY food waste audit provides step by step guidance for measuring food waste streams and audit calculator.

Waste Prevention Calculator	WRAP	A standalone excel tool that compares the cost and carbon impacts associated with a local authority's waste management system and cost impacts when waste prevention schemes are implemented.
CARVE- Calculation Tool	Wageningen Food & Biobased Research	Need to identify food waste within a company through a comprehensive method. The CARVE Calculation Tool is based on the process steps within an agro-food company (or chain of companies) and couples to each process step a mass balance. It also identifies the destinations of product flows, including by-products and waste streams. The labelling of undesired flows (including food waste) can then be made in a following step/stage. The tool also enables a 'hot-spot' analysis, to detect the processes with the highest impact on food waste arising.
Catering Cut Costs and Carbon Calculator	Carbon Trust	
A Guide to Conducting and Analysing a Food Waste Assessment	EPA (U.S. Environmental Protection Agency)	
EPA's Food and Packaging Waste Prevention Tool	EPA (U.S. Environmental Protection Agency)	
Bakery Waste Analysis Tool	WRAP	<p>This tool was developed by LRS Consultancy and Tesco on behalf of WRAP and is intended to support the identification and resolution of the root causes of waste within a bakery manufacturing and retail operation. As part of a major project to map food waste arising in the business, TESCO found that 41% of waste was within their bakery departments.</p> <p>This tool consists of 3 main elements: A waste analysis overview, a waste analysis template and an overall waste analysis fishbone diagram. To highlight where efficiencies can be made in in-store bakeries</p>
Food Waste Management Cost Calculator	EPA (U.S. Environmental Protection Agency)	The tool evaluates waste disposal methods, both traditional and alternative, including composting, donation, and source reduction. The calculator determines new food waste management scenarios. Also discussed is the ability of the calculator to demonstrate that socially and environmentally responsible food waste management can be cost-effective.
Event Efficiency Tool	Unilever food solutions	

Calculating food waste and the environmental cost	BBC	
Reducing Food Waste in Schools - Back of the House	USDA Food and Nutrition Service	Component of US Food Waste Challenge. Back of the house focuses on "Planning, purchasing, receiving, storing, and producing"
Reducing food waste what schools can do today	USDA (United States Department of Agriculture)	Component of US Food Waste Challenge. Infographic to help schools and children waste less in the cafeteria. Includes guidance's such as "extend lunch period from 20 to 30 minute"
Join the U.S. Food Waste Challenge	USDA (United States Department of Agriculture)	
Food Waste Reduction Alliance - Best Practice & emerging solutions Toolkit	Food Waste Reduction Alliance	Cross industry toolkit focuses on strategies for food service operators to keep food out of landfills and reduce food waste at the source. (Tactics for overcoming obstacles to food donation such as liability and supply chain issues; emerging solutions and new technologies for recycling food waste, including energy production opportunities; strategies planning to avoid food waste generation.
W.A.S.T.E. problem-solving discipline: guidance on reducing waste in the food and drink supply chain	WRAP	
"Buffet Monitoring Tool"	Silpakorn University International College	The Buffet Cost Tracking template is a universal spreadsheet tool to help operators plan and manage their buffets.
Food Wastage Toolkit	Food Drink Europe	Toolkit is intended to help food and drink manufacturers prevent food wastage in their operations and also help other supply chain partners prevent food wastage. It gives recommendations to policy makers to support these actions.

<p>Toolkit Implementation Guide for the Food: Too Good to Waste Pilot</p>	<p>West Coast Climate and Materials Management Forum</p>	<p>This tool was intended to support the implementation of "Food: Too Good to Waste" pilot, a community based marketing social marketing campaign aimed to reduce food waste in households. The tool is designed to be adaptable to the implementing government jurisdiction or organization and flexible in relation to their objectives and resources. Currently there are five targeted strategies and associated behaviour change tools: 1) Get Smart: See How Much Food (and Money!) You Are Throwing Away, supported by the Food: Too Good to Waste Challenge; 2) Smart Shopping: Buy What You Need, Supported by the "Meals in Mind" Shopping List Template 3) Smart Storage: Keep Fruits and Vegetables Fresh, supported by the Fruit and Vegetable Storage Guide; 4) Smart Prep: Prep Now, Eat Later 5) Smart Saving: Eat What You Buy, supported by the "Eat Me First" Prompt</p>
<p>Reducing food waste in business</p>	<p>EPA</p>	