

1 OVERVIEW & MENU DESIGN



Menu creation comes as a crucial first step in the waste reduction journey: it identifies the dishes that you will present to your customers. Although the 'perfect' menu does not exist, waste-reducing menus typically focus on accurate forecasting, maximized ingredients' yield, and plans for food recovery. Building a low food waste menu is a trial-and-error process and requires adjustments depending on changes in customers' preferences, seasonality, and other external factors.

ACTION	MONEY TIME EFFORT	WHERE TO START
Pay attention to the ingredients yield	💰 🕒 ⚡	<ul style="list-style-type: none"> • Create an ingredient yield heat map in order to identify which ingredients in your cooking can be used in whole, are most versatile, and can be easily repurposed • Be creative! Experiment with pickling, drying, baking, and making soups out of leftover parts
Incorporate seasonal items on the menu	💰 🕒 🕒 ⚡	<ul style="list-style-type: none"> • Communicate often with your suppliers to know which produce are in season • It's easier with local producers! (See Chapter 3)
Shrink the size of your menu	💰💰 🕒🕒 ⚡⚡	<ul style="list-style-type: none"> • Monitor your sales to identify most popular items, and don't hesitate to directly ask your guests! • Ask your staff to keep an eye open: what is left on the plates? • Get rid of superfluous plating items or free sides
Provide choices of portion sizes	💰 🕒 ⚡	<ul style="list-style-type: none"> • Make sure that all your dishes can come in different sizes, and price accordingly
List the ingredients of the dishes on the menu	💰 🕒 ⚡	<ul style="list-style-type: none"> • Be absolutely transparent on the content of your dishes so that guests can easily spot allergens and food items they do not like • Train your staff to ask about allergens or if guests would like to remove an item from the dish

Topic/Title	Resource Link
The Business Case for Reducing Food Waste	The business case for reducing food waste: 5 big reasons to embrace the Stop Food Waste Challenge - Wicklow Naturally.
	The Business Case for Reducing Food Loss and Waste: Restaurants Champions 12.3
	Food Waste: The Hidden Cost of the Food We Throw Out ClimateScience #9 - YouTube
	Tristram Stuart: The global food waste scandal - YouTube
Food Waste Impact Calculator	Impact Calculator
Solutions to Reduce Food Waste	ReFED - Solution database
Zero Waste Menus for Inspirations	FIVE MENUS (PROPOSED)
	Zero Waste Recipes
	GREEN Christmas - Upcycling Tips for Food Leftovers
Case Study Reference - Roganic	Menus
	A Michelin Green Star for Roganic Hong Kong
Ingredient Yield Heat Map	Appendix G: Produce Yield Ranking Tool Hotel Kitchen

Topic/Title	Resource Link
Cross-Utilisation	How to effectively cross-utilize products in your independent restaurant
	Menu Ideas: Cross-Utilization of Seafood for Cost Reduction
Seasonal Ingredient Guide	https://www.kfbg.org/en/seasonal-highlights/vegetables-fruits-Herbs
	Seasonal calendar of vegetables and fruits from Hong Kong
	Seasonal Produce Guide SNAP-Ed
	Seasonal Food Guide
Menu Design	Menu Planner
	Our Menu – treehouse
	6 Restaurant Menu Design Hacks To Increase Revenue - 2.6.2 Profitable Restaurant Owner's Academy
Unpopular Food Items on the Menu	Food allergens
Business Plan	How To Easily Write A Restaurant Business Plan [Step-by-step] open a restaurant 2022



2 SOURCING & STORING THE INGREDIENTS AND DISH PRESENTATION



Most practices to be introduced in this chapter focus on dealing with the vast amount of food waste created throughout the food supply chain, i.e. food loss. To reduce it, we focus on 3 questions: where to source, what to source, and how much of food to source. Paying particular attention to sourcing will not only help drive down your food waste numbers but also create positive externalities on the entire food supply chain.

With all ingredients for the menu sourced, storing comes next. Between 4% and 10% of food purchased by foodservice operations is trashed before reaching the plate. This is why conscious storing of food items is a crucial step in reducing food waste. In this chapter, we explore 3 stages of the storing process: receiving, the actual storing, and monitoring.

Preparation leftovers, such as the improper handling of food products and over-preparation, is also a form of food waste. This chapter will provide you with ideas on ways to reduce food waste in the final stage of food preparation. The practices are following the processes of ingredients prepping, ordering and cooking, and the final presentation of the dish to customers.

ACTION	MONEY TIME EFFORT	WHERE TO START
Source from local/regional farmers	💰 ⌚ ⚡	<ul style="list-style-type: none"> Identify local farmers within a <500km radius to your restaurant Discuss which products they can supply and quantity Visit their farm Communicate often to be updated on outputs and seasonal produce
Source from sustainable suppliers	💰 ⌚ ⚡	<ul style="list-style-type: none"> Check for available information about your current/future supplier sustainability practices: delivery, packaging, and growing methods Ask questions and make suggestions!
Experiment with being self-sufficient	💰 ⌚ ⚡	<ul style="list-style-type: none"> Start small, like herbs, sprouts... Use the space you have, including basements, rooftops, terraces... Look for partners to help you
Source ugly produce	💰 ⌚ ⚡	<ul style="list-style-type: none"> Redefine what "beautiful" means: focus on taste, freshness and seasonality Inform your suppliers that you accept "ugly produce" Do not let your fresh produce age
Incorporate a running-out policy	💰 ⌚ ⚡	<ul style="list-style-type: none"> Coordinate with your suppliers to increase the frequency of deliveries Inform your staff and your guests about the change of mentality Pay extra attention to planning: measure exactly what you need depending on peak/less crowded days and popularity of the dishes
Check your deliveries	⌚	<ul style="list-style-type: none"> Check if the food is in good condition on arrival, including for example temperature on arrival for sensitive fresh products like fish
Communicate with suppliers	💰 ⌚	<ul style="list-style-type: none"> Set expectations with your supplier and give regular feedback Immediately tell your supplier if something is wrong
Make good use of your inventory sheet	💰 ⌚	<ul style="list-style-type: none"> Label all the incoming items Keep a thorough inventory sheet that includes key details on the food item stored
Store at the right place	💰 ⌚	<ul style="list-style-type: none"> Not all the storage places are equal! Some are more adapted to certain types of food and keep them fresh longer Reconnect with food: putting plants like salads in water for example will preserve them longer

ACTION	MONEY TIME EFFORT	WHERE TO START
Monitor the storage conditions	Ⓢ ⓁⓁ ⚡⚡	<ul style="list-style-type: none"> In link with the previous point, monitor essential storage conditions such as humidity, oxygen, light, temperature, and bacteria
Regularly check the food's condition	Ⓢ Ⓛ ⚡⚡	<ul style="list-style-type: none"> Set up a routine inventory-check process to check the quantity and expiry dates of the food in stock Assign clear responsibilities to your staff, and set up clear guidelines about "best-before" and "use-by" dates
Communicate with your kitchen staff	Ⓢ Ⓛ ⚡	<ul style="list-style-type: none"> The whole kitchen staff should be aware of the storage guidelines and be engaged in a waste-reduction mindset
Adopt a FIFO method	Ⓢ ⓁⓁ	<ul style="list-style-type: none"> "FIFO" stands for "First-In-First-Out", a principle where items that have been in stock longest are used in priority A successful FIFO method is based on all the actions that have been covered in this chapter
Pay attention to the washing and chopping specifics	Ⓢ Ⓛ ⚡	<ul style="list-style-type: none"> Wash and trim ingredients near the time of preparation Pay attention to storage specifics of washed items: some can be stored wet, some need to be dried
Avoid over- trimming	Ⓢ Ⓛ ⚡	<ul style="list-style-type: none"> Pay attention to the quantity of edible food that is thrown away during the trimming process Maximize the yield of food items by being creative with the trimmings!
Control complementary food items	Ⓢ Ⓛ ⚡	<ul style="list-style-type: none"> Pay attention to the quantity of complementary food items that are thrown away, and evaluate the need for them Eventually, ask your guests if they feel that the complementary dishes are needed If you decide to keep them, ask your guests whether they would like the free dishes or not
Be mindful of your guests' appetite	Ⓢ Ⓛ ⚡	<ul style="list-style-type: none"> Train your staff to spot signs of a declining guests' appetite level and to feel comfortable with asking guests if they still want their upcoming dishes Inform your customers about the size of the dishes For buffets, adapt the type of food produced with time passing
Nudge your guests	ⓈⓈ ⓁⓁ ⚡⚡	<ul style="list-style-type: none"> Explore different ways to "nudge" your guests, a way to alter their behavior in a predictable way without forbidding any options or significantly changing their economic incentives

TOPIC/TITLE	RESOURCE LINK
Sourcing Example	About Roganic
	How Roganic Puts Sustainability On The Menu, One Dish At A Time
Local/Regional Farms	Current Farming Projects Zero Foodprint
	5 Local Farms Selling Fresh Produce in Hong Kong - WELL Magazine
	Hong Kong's best local farms for fresh produce Localiiz
Labels/Certificate Recognition	Green Restaurant Environmental Protection Department
	FoodWaste Lean and Green Label Scheme Green Council 環保促進會
	Carbon Care Label Series
	Sustainable Seafood Certificate: Marine Stewardship Council
	Organic Certification Hong Kong Organic Resource Centre Certification Ltd.
Partners Who Practise Urban Farming in HK	Rooftop Republic
	Farmacy HK
	Common Farms
	Farm66

Topic/Title	Resource Link
Self-sufficient Inspiration	The Hideout Farm in Mui Wo Hong Kong
Case Study Resources - Ugly Produce	Edible, but Ugly The New York Times
	The Ugly Company: Changing the Way We Eat Fruit Secretly Awesome
	Beneath An Ugly Outside, Marred Fruit May Pack More Nutrition : The Salt : NPR
	Kadoorie Farm & Botanic Garden - Embrace 'Ugly Food' fruits and vegetables that are imperfect in appearance but are perfectly delicious and nutritious
HK-based Startup Upcycles Ugly Foods	FurryGreen - Hong Kong startup upcycles "ugly foods" as pet food
Food Safety	How to tell if "ugly" fruits and vegetables are still good to eat
	Understanding Food Labels - "Best Before" VS "Use By" Dates
	Do Cannabis Edibles Expire? Tips for Maximizing Freshness and Potency
	Source: 7 Ingredients to Source with Extreme Care - HowGood
Restaurant Inventory Management	TouchBistro
	Restaurant Inventory Management: Free Template & Tips
	Important Restaurant Food Storage Safety Tips You Need to Know - FoodSafetyTech
	Storing Food Safely
	Produce Manager Explains Different Ways of Keeping Vegetables and Fruits Fresh
	What is the FIFO Method of Food Storage?
	Solution database: First Expired First Out
Ingredients Prepping	Types of chopping board//type of cutting board//chopping board used in kitchen//Kitchen training
	How a Japanese Chef Turns a Whole Fish Into 6 Dishes Handcrafted Bon Appétit
	Huge Mistakes Everyone Makes When Prepping Vegetables - YouTube
Nudging Tips	Behavioural nudging: an effective way to promote food sustainability? FT Food Revolution
	Nudging food waste decisions at restaurants - ScienceDirect
	Small Plates, Big Impact: How Plate Size and Social Cues Affect Food Waste - Green Nudges
	Consumer Choice and Food Waste: Can Nudging Help?



3 DEALING WITH POTENTIAL & ACTUAL WASTE



The previous chapters covered preventive practices to reduce the amount of food waste created in the first place. Now, how to prevent items that remain at the end of the day and that could not be further repurposed from going to the landfill? In this chapter, we explore food rescue opportunities and creative in-house rescue processes as potential solutions.

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ACTION	MONEY TIME EFFORT	WHERE TO START
Partner up with food banks	\$ L L ⚡ ⚡	<ul style="list-style-type: none"> Assess the amount and type of food that you wish to donate and establish partnerships with foodbanks that would be able to redistribute it Find partners to repurpose in innovative ways food surplus that cannot be redistributed by foodbanks
Mark down the prices of cooked leftover dishes near the end of operation	\$ L ⚡	<ul style="list-style-type: none"> Near closing time, discount prices of items with short shelf-life in order to avoid food waste and recover the cost of throwing away food Communicate about the discounted items in-store or via an app
Encourage guests to take away leftovers	\$ L ⚡	<ul style="list-style-type: none"> Make it easy for guests to take-away leftovers: have take-away boxes ready (ideally from a sustainable material) and train your staff to ask guests if they wish to take away leftovers Communicate with guests the best way to store and consume the leftovers
In-house consumption of leftovers	\$ L ⚡	<ul style="list-style-type: none"> Explore the possibility to repurpose food in-house Talk with your staff about the possibility to allow them to consume or take home leftover food
Segregate, track, and analyse your food waste	\$\$\$ L L L ⚡ ⚡ ⚡	<ul style="list-style-type: none"> Keep in mind that 'We don't need a handful of people doing zero waste perfectly. We need millions of people doing it imperfectly.' Starting recycling food waste is a long journey, so be ready to try, fail, adapt, and - most importantly - learn! Start with knowing what food your establishment throws away, how much, where, and when - roll up your sleeves and dig into your trash! (or partner up with someone who will do it for you such as GREEN) Choose the food waste data collection method that is best fitted to your operations
Recycle your food waste	\$\$\$ L L L ⚡ ⚡ ⚡	<ul style="list-style-type: none"> After knowing how much and which type of food you waste, and depending on the characteristics of your establishment, you can proceed to choosing a food recycling program Explore the different types of food recycling programs, including for example: <ul style="list-style-type: none"> composting anaerobic digestion cooking oil recycling food waste as animal feed

TOPIC/TITLE	RESOURCE LINK
Notable Food Banks in HK	3,600 tons of surplus food is discarded in Hong Kong everyday' SCMP
	A Day with Food Angel
	What is food rescue? by Feeding Hong Kong
	Food Wanted, Not Wasted - How Feeding HK works with charities
	Give Food - Feeding Hong Kong
Alternatives for Easier Donation	HK Food Works - Breadline
	Sustainability HERoes: Food Waste Warrior
	CHOMP Food Waste
Companies Upcycling Waste into Other Products	HK Startups Leveraging Technology to Upcycle Food Waste - GREEN Hospitality
	Breer HK
	FurryGreen Fresh Pet Food
	Food Waste Upcycled as Pet Food - SCMP
	Using food waste for dyeing in a DIY workshop in Central
	Ways Out HK
	Not Only Powder
	Ergotek
BSFI	
Upcycleista	University of Hong Kong students turn food waste into dog toothpaste - SCMP
Markdown Solutions	Yindii
	CHOMP App
	RELEX Solutions - The Retailer's Ultimate Guide to Markdown Optimization
	RELEX Solutions - Markdown Pricing and Optimization Software
In-house Leftover Consumption	BBC Good Food - Leftover Recipes
	CHOMP Food Waste - Recipes
Circular Economy Solutions	Ellen Macarthur Foundation - Circular Economy in Detail
	O Park
	ECPAL - Food Waste Recycling
	Rooftop Republic Urban Farming
Methods for Food Waste Recycling	Hong Kong Waste Reduction - Map of Recycling Points
	ORCA Asia
	Foodcycle Plus
	Kowloon Biotechnology
	Hong Kong Organic Waste Recycling Centre
	E Farm Biotech
	ABS Biodiesel
	Environmental Protection Department - Waste Cooking Oil Recycling Scheme
DBS Manage Used Cooking Oil	
Data Analysis Systems	Food Intel Tech (FIT) by LightBlue Consulting
	LeanPath
	Winnow
	Lumitics

4 STAFF & GUEST IN SUPPORT TEAM AND THE ROAD AHEAD









The staff is the heart of your establishment, and staff morale is key to successful businesses. Waste reduction and sustainability presents ample opportunities within the industry to increase its investment in employees. We explore how you can incorporate employee engagement and leverage it in the context of waste reduction. In particular, we will look at 4 different practices summarized as the '4 As'.

F&B establishments have the power to influence guests' mindsets and create changes in the ways the current food system operates. We look at ways to do so by actively involving your guests in your waste reduction journey by understanding their attitudes and motivation, creating incentives and interactions, and communicating the importance of food waste.

Finally, we check out trends and innovations to keep track of in order to give you a glimpse of what the next steps look like on the journey of food waste reduction. Examples cover platforms, events, and creative initiatives implemented by food establishments from all around the globe. Get inspired, or inspire others by sharing how you reduce food waste in your establishment!

ACTION	MONEY TIME EFFORT	WHERE TO START
Engage your staff through: Awareness	💰💰 ⌚⌚ ⚡⚡	<ul style="list-style-type: none"> Bring your staff with you on the food waste reduction journey! Explain the various measures you have taken or are going to take, and why you are taking them Mobilize your partners to educate your staff If possible, try to link your "why" with your staff's motivations and aspirations
Engage your staff through: Accountability	💰 ⌚⌚ ⚡⚡	<ul style="list-style-type: none"> Set a common goal and S.M.A.R.T. targets to reach it Assign clear responsibilities Communicate regularly with your staff regarding the advancement of the goals and targets
Engage your staff through: Action	💰 ⌚⌚ ⚡⚡	<ul style="list-style-type: none"> Include the aspect of food waste reduction in your training and brainstorm with your team on how to best implement the reduction measures Monitor the outcomes of the measures and frequently check in with your team to see if they encounter any difficulties or have any ideas to improve the system
Engage your staff through: Awards	💰💰 ⌚⌚ ⚡⚡	<ul style="list-style-type: none"> Each step matters, so celebrate all successes, even small ones! Focus on the collective efforts Celebrate your failures to learn from them, as a team
Understand your guests' attitudes and motivation	💰💰 ⌚⌚ ⚡⚡	<ul style="list-style-type: none"> Understand which types of drivers guide your guests' attitude towards food waste: cultural, economic or geographic Seek for your guests' feedback about food waste reduction Identify which kind of incentive your guests are most sensitive to: financial, societal, environmental...
Create incentives and interactions	💰💰 ⌚⌚ ⚡⚡	<ul style="list-style-type: none"> Financial incentives (done right) is usually a good place to start to change guests' behavior regarding food waste Use nudges! Be positive and encouraging

ACTION	MONEY TIME EFFORT	WHERE TO START
Communicate the importance of food waste reduction to your guests	     	<ul style="list-style-type: none"> In order to create durable change in your guests' behavior (and not only in your restaurant), explain the underlying environmental and social dimensions of your actions Use your sustainability efforts to create a deeper connection with your guests: showcase your efforts on social media, contact relevant media partners, and create events around your sustainability efforts Be transparent on what you do to reduce food waste and how you do it, and openly share your successes and your failures
Get inspired by creative initiatives from across the globe		<ul style="list-style-type: none"> See how F&B businesses across the world champion food waste reduction Get inspired by their story and philosophy
Learn more about the food waste crisis		<ul style="list-style-type: none"> Check out institutions that are focused on tackling food waste Learn more about the solutions they advocate for
Be at the forefront of current innovative technologies		<ul style="list-style-type: none"> Take a deep dive into the future of food waste reduction with innovations dedicated to prevent edible food to be thrown away and learn
Get involved in food waste reduction campaigns		<ul style="list-style-type: none"> Learn about local and international initiatives dedicated to reducing food waste in F&B operations Start being a part of the movement and share the word!

TOPIC/TITLE	RESOURCE LINK
Building a Great Support Team - Staff	10 Reasons Why It Is Important Create a Happy Workplace Inc.com
	The Complete Guide to Restaurant Employee Engagement
	A winning recipe Gabriel Stulman TEDxCambridge
	Forbes Coaching Council
	SMART Goals - How to Make Your Goals Achievable
	Restaurant Food Waste Action Guide
	Waste Management Training - why, when, how and what to do to engage your staff
Restaurant Analytics Systems	QSR Automations
Lessons Learned from Fighting Food Waste	Food Waste Alliance
	Deloitte - The power of employee engagement
Motivations for Guests	Motivations and practices behind reduced food waste SRUC
Cultural, Economic or Geographic Drivers to Reduce Food Waste	Sustainable Retailing - Influencing Consumer Behaviour on Food Waste
	Understanding the Effect of Dining and Motivational Factors on Out-Of-Home ConsumerFoodWaste
	Drivers of Food Waste at the Consumer Level and Implications for Intervention Design
Creating Incentives and Interactions for Reducing Food Waste	A comparison between different levels of incentive and interaction - ScienceDirect
	How Do Nudges Influence Consumer Decisions?

TOPIC/TITLE	RESOURCE LINK
Marketing - Genuine Connections, Technology and Social Media	Antony Damico Marketing is Hospitality
	The Power of Video Marketing for Restaurants: Boost Your Sales and Stand Out
	How to Use Restaurant Video Marketing to Grow Your Business Content Marketing Agency - ProfileTree
	15 Best Restaurant Social Media Tips - Touch Bistro
	The Expert Guide: Restaurant Social Media - Touch Bistro
Examples of Hong Kong Media	Green Queen
	Honeycombers Hong Kong
	Time Out Hong Kong
	Sassy Hong Kong
	Hong Kong Living
	Tatler Dining
	U Magazine
	Weekend Weekly
	Oriental Daily News
Use Sustainability Reports to Increase Transparency	Fairwood Holdings
	Langham Hospitality Group
Food Waste Action Guide	Restaurant Food Waste Action Guide - ReFed
Learn More About the Food Waste Crisis	Future Food Institute
	Future Food Institute - YouTube
	Misplaced - Hive Explorer
Notable Hong Kong Initiatives	Misplaced Ep.1 (Daisy Tam, HKFoodWorks) - Our Dystopic Food System
	Breadline
	Misplaced Ep.3 (Pol Fabrega, Rooftop Republic) - Farming In The City
	Rooftop Republic
	Misplaced Ep.5 (Punam Chopra, SpiceBox Organics) - Making Space For A Conscious Food Choice
	SpiceBox Organics - Online organic natural food store in Hong Kong
	Misplaced Ep.7 (Nicole Sartirani, MikroKosmos) - The Culinary Art Of Edible Insects
	MikroKosmos - Berlin
	Misplaced Ep.8 - (Thomas Riel, Livin Farms) - Insect Technologies For Waste Management
HK - Insect Farming and Food Waste Recycling	E Farm Biotech
	Organic Tech - Black Soldier Fly



TOPIC/TITLE	RESOURCE LINK
Current Innovative Technologies	IBM Food Trust Product Demo
	Graphene onto Food
	Accurate food freshness indication with Mimica
	Food Packaging - Freshness Indicator with Color Changing Smart Labels
	Smart label tells if your meat has gone bad: How start-up scores funding to fight food waste with technology The Straits Times
Food Waste Campaigns	Feeding the 5000 - Feedback
	How to organise a Feeding the 5000 event
	Feeding the 5000 Singapore - Highlights!
	Join the Zero Hunger Challenge UN Global Compact
	Food Wise Hong Kong
	Zero Foodprint Asia
Case studies - Creative Initiatives from Across the Globe	TREEHOUSE
	SiLo London
	Rub & Stub
	Restaurant Rest
	Moshimo
	Brighton's Most Sustainable Restaurant - MOSHIMO Brighton Sushi and Japanese
	Potato Head Singapore
	Kausmo
	Inside London's 'zero waste' restaurant FT Food Revolution
	Turning Food Waste Into a Fine Dining Experience - Rest in Oslo is Redefining Sustainability
Additional Resources	The Sustainable Restaurant Association - Food Made Good TAKE ACTION ON FOOD WASTE 2024

