

AUSTRALIA LEADING THE WAY?

**TACKLING FOOD WASTE AND
FOOD INSECURITY TOGETHER**





THE TIME TO ACT IS NOW

Change is urgently needed to protect our people and our planet. The statistics for both food waste and food insecurity are shocking, coupled with the recent need for emergency food relief resulting from the pandemic, bushfires, drought and floods. Australia wastes 7.6 million tonnes of food every year.¹ If this was rescued, it would be enough to feed everyone in Australia for six months.

The problems are both huge and inherently connected, but both are invisible and have social, economic and environmental implications. Whilst Australia has set targets to halve food waste and to reduce emissions by 43%, progress has been slow. We believe Australia should spearhead action towards these goals, seizing the incredible opportunity for innovation and economic growth.

A society and its leaders are judged by how they treat their most vulnerable, and by the legacy they leave for future generations.

We need leadership, and we need it now.

– Ronni Kahn AO, OzHarvest Founder & CEO

The Opportunity: Australia can be a global leader in tackling food waste and food insecurity together

There are many social, economic and environmental benefits of addressing food waste and turning it into a source of growth and productivity:

- new sectors and food waste technology developed
- businesses become more efficient and profitable
- Australians save billions of dollars
- hungry people get increased access to good food
- social and economic outcomes improve as a result of greater food security
- reduced waste management costs for local government
- substantially reduced environmental impact of food production and waste management

¹ FIAL, 2021. National Food Waste Strategy Feasibility Study

RECOMMENDED ACTION

Australia can become a global leader in tackling food waste and improving food security with four action areas:

1.

Ensuring surplus food feeds people, not landfill

- › Support the sector to increase both the volume of food rescued and type of food donated
- › Build, deliver and invest in cross-sector collaboration initiatives, food rescue commitment programs and pilots
- › Support voluntary commitment programs that engage business to reduce food waste

2.

Inspiring citizen behavioural change

- › Target behaviour change campaigns and activities that will have the most impact to prevent food waste at home
- › Embed the value of food and importance of reducing food waste by funding curriculum-aligned education programs to reach all schools
- › Improve Australia's food labelling to ensure it is better understood by consumers

3.

Helping farmers get food off the land and onto plates

- › Establishing incentives and support for reliable, consistent sources of seasonal labour for fruit and vegetable picking
- › Adopt federal tax reforms to incentivise farmers and logistics companies to donate and transport surplus food
- › Commission a review of the cold chain
- › Invest in regional food hubs to capture and redistribute surplus food locally
- › Develop a platform to share real-time data about food surpluses across the supply chain

4.

Putting an end to hunger in Australia

- › Develop a Food Security and Food Systems Plan to address the related problems of food insecurity and food waste
- › Support the food rescue sector to scale up to redistribute more good food to charities
- › Establish stand-by funding for rapidly scalable emergency food relief in times of crisis and natural disaster

WHAT WE KNOW

The Problem:

Food waste is a national issue ³



7.6 million tonnes of food is wasted each year.



\$36.6 billion is the annual cost to the economy.



312kg of food is wasted per person each year. ⁴

Food waste feeds climate change



17.5 million tonnes of CO₂ come from the food wasted in Australia (3% annual emissions). ⁶



8-10% of global greenhouse gas emissions come from wasted food. ⁷

Food insecurity is not going away ⁸



Half a million households do not have enough to eat on any given day.



2 million households have run out of food in the last year.



1.3 million children have gone hungry in the past year.

The Solution:

Scaling up food rescue

- Only 0.2% of Australia's wasted food is currently rescued. ⁹
- 10% of Australia's target to halve food waste by 2030 could be achieved by a ten-fold increase in the food rescue and relief sector. ¹⁰
- A proven and cost-effective solution to reducing food waste and improving food security, which could provide enough food for the entire charity sector at low cost.
- Increase food rescue across the supply chain, especially rescuing surplus food from farms.

Inspiring citizen action

- 1/3 of national food waste comes from households. ³
- United Nations research cites citizen education programs and behavioural change campaigns as a crucial way to achieve global targets. ⁷
- 2.5 million tonnes of food waste comes from the home. ³
- 70% of food wasted from households is perfectly edible.
- It costs an average household between \$2,000-2,500 each year.

³ FIAL, 2021. National Food Waste Strategy Feasibility Study

⁴ FIAL, 2021. National Food Waste Strategy Feasibility Study – Final Report

⁵ Arcadis, 2019. National Food Waste Baseline: Final Assessment Report

⁶ FIAL, 2021. National Food Waste Strategy Feasibility Study – Final Report

⁷ United Nations Environment Program, 2021. Food Waste Index Report 2021

⁸ Foodbank, 2022. Foodbank Hunger Report 2022

⁹ FIAL, 2021. National Food Waste Strategy Feasibility Study – Final Report

¹⁰ FIAL, 2019. A Roadmap for Reducing Australia's Food Waste by Half by 2030

TAKING ACTION

Action area 1: Make sure food feeds people, not landfill

There is a huge opportunity to rescue more food

OzHarvest food rescue 2022



11.5 million kg of good food rescued



3,000 food donor businesses

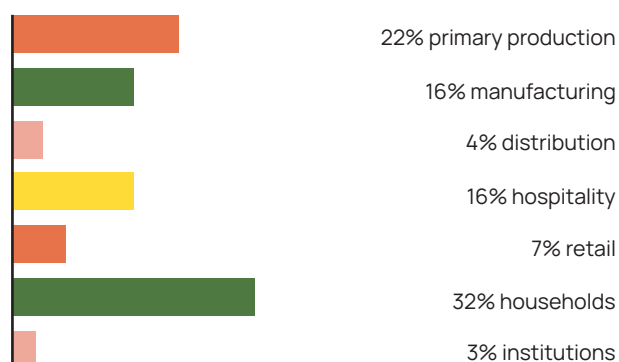


23 million meals delivered to people in need

OzHarvest rescues around 250 tonnes of food each week from a network of 3,000 national food donors. The bulk of donated food comes from supermarkets, restaurants, and supermarket fulfillment centres. OzHarvest uses agile, just-in-time logistics to target end-of-the-day fresh and short life food, preventing it from landfill. This food is distributed on the same day, directly and free of charge to charities. This also saves greenhouse gas emissions caused by organic food waste.¹³

Current volumes are just the tip of the iceberg

Food rescue is a proven solution, but our current volumes are just the tip of the iceberg. Only 0.2% of Australia's surplus food is donated – the bulk goes to landfill. Food rescue operations are currently focused on retail collection and mainly in major metropolitan areas. There are huge opportunities to rescue greater volumes of food across the supply chain, and closer to the source across Australia.



Food waste across the supply chain

Source: 2021 National Food Waste Baseline

This requires investment in sector capacity and incentives for participating businesses. If unlocked, a 10-fold increase in the food rescue and relief sector could deliver 10% of Australia's target to halve food waste by 2030¹⁶ and provide multi-faceted benefits for the economy, people and the planet:

- Economic: innovation, employment, savings for business
- Social: improved food security
- Environment: reduced greenhouse gas emissions

Action needed:

- Support the food rescue sector to develop their capacity to accept greater volumes and types of donations
- Build, deliver and invest in cross-sector collaboration initiatives, commitment programs and pilots
- Target and engage the business sector to sign up to the Australian Food Pact established by Stop Food Waste Australia.

¹² OzHarvest data

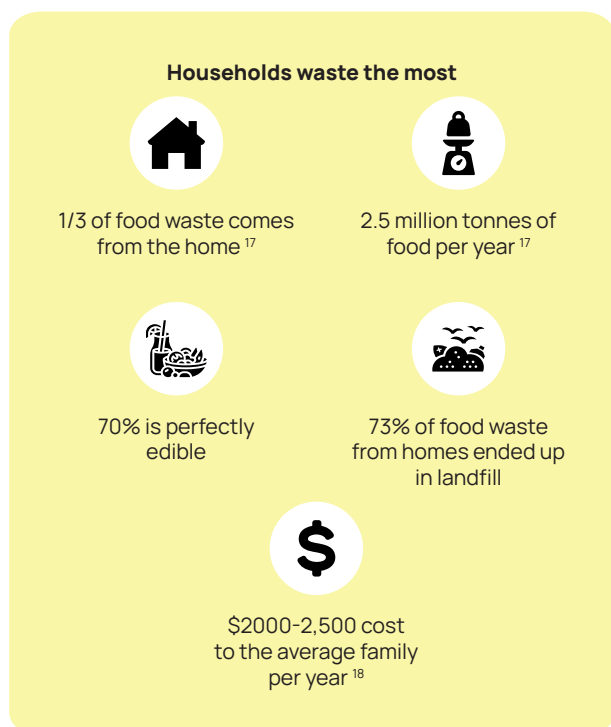
¹³ Sustainability Victoria, 2020. The Path to Half

¹⁴ Fight Food Waste Cooperative Research Centre website

¹⁶ FIAL, 2019. A Roadmap for Reducing Australia's Food Waste by Half by 2030

Target action 2: Inspire behavioural change

Tackling household food waste is crucial to halving food waste by 2030.



Consumer campaigns can change behaviour

Australia has a rich history of memorable and generation-defining campaigns that didn't just change the behaviour of individuals, they changed the culture. From sun safety (Slip Slop Slap) to anti-littering (Keep Australia Beautiful), these campaigns combined mass media messaging with school-based education programs that embed long-term, generational change.

Australia needs to Use It Up!

In 2020, OzHarvest commissioned BehaviourWorks Australia to undertake a world-first study to understand which household behaviours have the most impact when it comes to reducing food waste. The published report *Halving Household Food Waste: Which Behaviours Matter?* identified key behaviours for food waste reduction using an Impact Likelihood Matrix. These were:

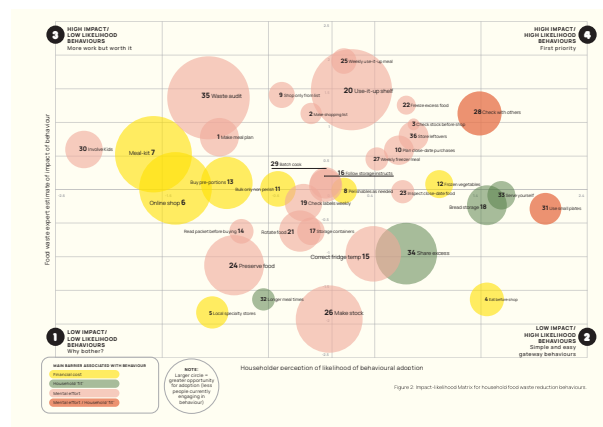
1. Make a weekly meal that combines food that needs to be used up
2. Implement a use-it-up shelf in the fridge, freezer or pantry

From these behavioural insights, OzHarvest launched the Use It Up campaign and pioneered a new product, *Use It Up Tape™*, to make it easy to waste less at home. Over 25,000 tapes have been distributed and the campaign is ongoing with engaging social media content, including regular new recipes and tips to embed the Use It Up behaviour.

Applying the insights

Government investment in consumer campaigns should leverage the Impact/ Likelihood Matrix to target behaviours that will have the most impact.

They should go beyond engaging businesses already inclined to sustainability, to target households and young people who are causing the most food waste to landfill. This is the most effective way to embed long-term behavioural change.



Impact/Likelihood Matrix of Behaviours
– see complete version in [Appendix](#)

Promising results

BehaviourWorks Australia conducted an impact study with households using the tape which showed the impact on behavioural change by acting as a visual prompt, a labelling tool which helped with meal planning and family communication. The results revealed:

1. 40% reduction in the average total amount of household food wasted
2. Perishable items such as fresh vegetables, fruit and meat reduced by almost 50%

¹⁷ FIAL, 2021. National Food Waste Strategy Feasibility Study

¹⁸ FIAL, 2021. National Food Waste Strategy Feasibility Study – Final Report



Inspiring future change-makers

School-based investment is essential to educate young people and inspire generational change. It is estimated that each year Australian students throw away, 5 million sandwiches, 3 million pieces of whole fruit and 3 million items of packaged food. Schools are a gateway to the nation's households and have the potential to directly influence behaviour when it comes to shopping and food waste.¹⁹ Building knowledge and awareness through schools and school children is where the seeds are planted for generational behaviour change, taking action on food waste both at school and at home can have immediate and long-lasting results.

OzHarvest's curriculum-aligned education program inspires kids to eat healthy food, waste less and become change-makers in their community. The program has been developed using evidence-based behaviour change practices and is aligned to the years 5-8 Australian Curriculum and is being rolled out to high schools in 2023.

Food label confusion

Australia's food date labelling should be streamlined to be made easier for consumers. Confusion over food labels means food is thrown out by households when it can still be used.

The Food Waste Australian Household Attitudes and Behaviours-National Benchmarking Study found only 51% of Australian household food managers understand the meaning of both food date labels²⁰ (use by and best before). Some consumers also struggle to understand how best to store food for longevity and improved food labelling can help better educate consumers.

FEAST Impact in Primary Schools:

582
schools
enrolled

907
teachers
trained

25,000
future
change-makers
inspired

Action needed:

- Target behaviour change campaigns that will have the most impact in reducing household food waste
- Expand school-based education programs to embed the value of food and reduce food waste, to every school in Australia.
- Streamline Australia's food date labelling system.

¹⁹ Boulet et. al., 2022. Influencing across multiple levels: The positive effect of a school-based intervention on food waste and household behaviours

²⁰ Fight Food Waste, Cooperative Research Centre, Food Waste Australian Household Attitudes and Behaviours, National Benchmarking Study

Target action 3: Help farmers get food off the land and onto plates

Agriculture is largely untapped for food rescue

Food waste costs Australian farmers billions per year



22% of national food waste comes from farms²¹



1.2 million tonnes of food never makes it off the farm²²



25% of all vegetables grown never leave the farm²³

Regions with the greatest annual food loss²⁴

South East SA 115,000 tonnes	Riverina NSW 58,000 tonnes
West TAS 100,000 tonnes	Shepparton VIC 56,000 tonnes
Greater Sydney NSW 89,000 tonnes	Central West NSW 34,000 tonnes
Barossa-Yorke-Mid North SA 69,000 tonnes	Western NSW 33,000 tonnes
Adelaide North SA 59,000 tonnes	South East NSW 33,000 tonnes
	Townsville QLD 32,000 tonnes

Food waste on farms is a complex issue

Market conditions and constraints imposed further up the supply chain are the cause of many waste issues, largely from harvest-ready produce that is not harvested or ploughed back in, and produce that does not even reach the market.²⁵

Farmers hate seeing their produce go to waste, but sadly price variation can make it uneconomic to harvest. Sometimes producers are unable to secure seasonal employees for picking. Edible produce is also regularly wasted due to strict cosmetic retail standards. Two independent studies conducted on banana and tomato farms in Queensland found more than two thirds of edible wasted produce was due to failure to meet supermarket product specifications.²⁶ A tax incentive scheme for farmers and logistics companies would reduce the financial burden of donating surplus food.

The cold chain causes expensive loss

There are significant logistical restraints to farmers getting edible food off the farm. The cold chain supply is complicated, with multiple links from farmer to consumer and frequent gaps, while the journey is characterised by varying extreme temperatures, long distances, and human error. Australia loses 18-22% of total fruit and vegetable production due to poor cold chain infrastructure and education.²⁷ This is an expensive loss, that greatly impacts the country's food security.

We need to understand the cold chain better: the interactions between sectors that cross the cold chain, precisely where most food is wasted, barriers to collaboration exist, and inhibiting or enabling policy and legislation.

Unlock food waste through regional hubs and creating local jobs

Investment in regional infrastructure which centralises the collection of surplus or off-specification produce and food waste would unlock significant volumes of rescued food. Regional hubs also offer the opportunity for local employment and alternative revenue streams for primary producers if surplus produce can be sold for repurposing.

Redistributing surplus food close to the source will provide increased and regular access to food relief for regional and remote communities, by allowing food relief organisations to rescue more food. These communities are already extremely vulnerable, often feel forgotten and are highly affected by natural disasters and climate change.

²¹ FIAL, 2021. National Food Waste Strategy Feasibility Study – Final Report

²² FIAL, 2021. National Food Waste Strategy Feasibility Study – Final Report

²³ Commonwealth of Australia, 2017. National Food Waste Strategy

²⁴ Ambiel et. al., 2019. Mapping of Australian Fruit and Vegetable Losses Pre-retail

²⁵ Arcadis, 2019. National Food Waste Baseline Report

²⁶ White et. al., 2011. The Impact of Fresh Produce Specifications on the Australian Food and Nutrition System: A Case Study of the North Queensland Banana Industry; McKenzie et. al., 2017. Quantifying Postharvest Loss and the Implication of Market-Based Decisions: A Case Study of Two Commercial Domestic Tomato Supply Chains in Queensland, Australia

²⁷ Ambiel et. al., 2019. Mapping of Australian Fruit and Vegetable Losses Pre-retail

Bridge the gap between producers, logistics companies and food rescue

Information-sharing is a major barrier to rescuing more food from primary producers. Government and industry need to work together to build a platform for transparent and real-time data sharing across the food supply chain showing food surplus and demand, so logistics companies can identify opportunities to transport food rescue donations using their existing capacity. Tax incentives for rescuing food will boost participation by farmers and logistics companies.

Action needed:

- Implement federal tax reforms to incentivise farmers and logistics companies to donate and transport surplus food
- Put in place incentives to encourage reliable, consistent sources of seasonal labour for fruit and vegetable picking
- Commission a review of Australia's cold chain
- Invest in regional food hubs to capture and redistribute surplus food locally
- Develop a platform to share real-time data about food surpluses across the supply chain



Target action 4: Put an end to hunger in Australia

Address food waste and food security together

Food insecurity is a complex issue with economic, social and health causes and results. It affects people from across the community and it's not always who you think. Many people experiencing food insecurity are employed but struggle to make ends meet.



There is urgent need for a plan

There is a lack of planning to tackle this issue, with no overarching framework, no forum for collaboration or coordination, and no robust evidence base. Reducing food waste and food insecurity should be tackled together, with opportunities for Australia to prevent food waste at the source and across the supply chain through interventions such as food rescue.

To achieve this, Australia needs a comprehensive food security and food systems plan which addresses the two as inherently related problems. The plan should draw on a broad definition of food security that includes sustainability and diet-related health, and employ a cross-government, multisectoral approach.

The plan should include measurable and time-bound targets to support existing government commitments such as halving food waste by 2030, increasing Australia's organic waste recycling rate and Australia's international climate commitments.

The entire charity sector can be fed at low cost

Every year 7.6 million tonnes of food is wasted in Australia.³³ This is more than enough to meet the needs of the entire charity sector. Edible food should always be redirected to feed those who need it most, rather than ending up in landfill.

OzHarvest's food rescue model is proven, cost-effective and scalable. With government investment, the volume of food rescued and distributed could be doubled, eliminating the charity waiting list for food. It already provides:

- Value-for-money: For every \$1 invested, OzHarvest can rescue two meals.
- Efficiencies of scale: Food is delivered directly to charities, removing barriers such as lack of staffing, transport and resourcing.
- Resource gains: Food is provided at no cost and distributed free of charge, allowing agencies to redirect their limited budgets to vital community services.
- Nutrition: 60% of rescued food is fresh produce and 90% is nutritionally valuable; this increases the proportion of fruit and vegetables consumed by food recipients.
- A Social Return on Investment analysis conducted by a top-tier consulting firm in 2022 found that for every \$1 invested in OzHarvest's Food Rescue program, \$8.97 is returned to the community via long-term health benefits, additional agency capacity, decreased landfill and reduced greenhouse emissions.

²⁸ Foodbank, 2022. Foodbank Hunger Report 2022

²⁹ Foodbank, 2022. Foodbank Hunger Report 2022

³⁰ Foodbank, 2022. Foodbank Hunger Report 2022

³¹ Foodbank, 2022. Foodbank Hunger Report 2022

³² Arcadis, 2019. National Food Waste Baseline: Final Assessment Report

³³ Arcadis, 2019. National Food Waste Baseline: Final Assessment Report

Food insecurity skyrockets in times of crisis

54% of food insecure households have someone in paid work. Low incomes, unexpected expenses, family breakdowns and now natural disasters are key drivers for food insecurity. These are exacerbated in times of crisis.

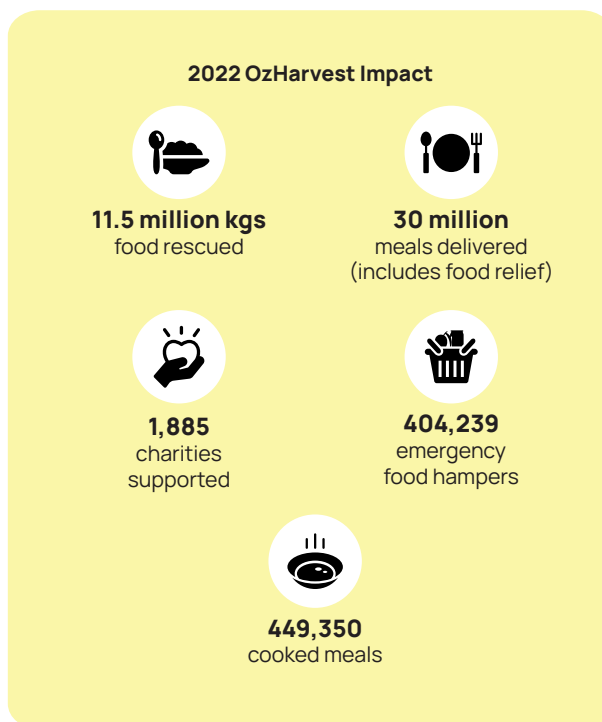
Over the past three years, Australia has been battered by bushfires, floods, a global pandemic and increased cost of living. The brunt of this has been felt by low-income, culturally and linguistically diverse families and regional communities. The pandemic saw the need for food relief hit an all-time high with many people turning to charities for the first time in their lives. The level of demand continues to be high as so many families grapple with the rising cost of living.

Funding enables emergency rapid response

Case study: When Sydney entered lockdown in June 2021, there was a spike in unemployment, charity closures and supermarket supply chain problems. Rapid access to NSW Government funding enabled OzHarvest to immediately start producing emergency food relief hampers for families and cooked meals for vulnerable people in transitional accommodation. This allowed us to meet the demand, delivering 96% more food than pre-pandemic levels, particularly in regional communities and outer suburbs..

Food insecurity is not a problem that's going away

Future crises will always occur and will only increase with ongoing effects of climate change. We need to expect, prepare, and plan for these times. The community sector needs the capacity to support people through the toughest times as the most vulnerable in our community are always hit the hardest. This includes the ability to distribute food quickly and efficiently.



Actions needed:

- Develop a Food Security and Food Systems Plan to address the related problems of food insecurity and food waste
- Support the food rescue sector to scale up to redistribute more good food to charities
- Establish stand-by funding and plans for rapidly scalable emergency food relief following a crisis or natural disaster

ABOUT OZHARVEST

Founded by Ronni Kahn AO in 2004, OzHarvest is a for impact organisation with a driving purpose to 'Nourish our Country' by stopping good food going to waste and delivering it people in need. Ronni started OzHarvest in Sydney with just one van, which now has operations nationally with seven state/city offices and 11 regional locations. Since inception OzHarvest has delivered over 225 million meals, preventing 73,000 tonnes of food from ending up in landfill.

OzHarvest rescues food in eight metro locations: Sydney, Melbourne, Newcastle, Perth, Adelaide, Canberra, Brisbane and Gold Coast, and in regional communities across Australia. During the pandemic, emergency food relief was delivered to the most affected communities to address the increased need.

The OzHarvest Market provides rescued food with a 'take what you need, give if you can' philosophy, serving over 85,000 customers in the last year.

OzHarvest runs three education programs with the aim of creating positive change, by increasing life skills around healthy eating, raising awareness about food waste and strengthening community connections. FEAST is a curriculum-aligned program in 580 schools, NEST teaches adults to cook and eat healthily on a budget and Nourish offers hospitality training and employment pathways for vulnerable youth.

Our advocacy work aims to empower others to fight food waste and promote food security, with a firm commitment to reach the national target of halving food waste by 2030, in line with United Nations Sustainable Development Goal 12.3 and Zero Hunger Goal 2. By working closely with government and stakeholder groups, OzHarvest provides a voice for food insecure Australians and insights on reducing food waste.

Continuous innovation guides our work to tackle food waste and feed hungry people. The latest social impact collaboration - Refettorio OzHarvest Sydney - is a unique community hub in Surry Hills serving those in need a nourishing meal at no cost.

For every dollar donated, OzHarvest can provide two meals to someone in need.

Read our 2021 Impact Report [here](#).

www.ozharvest.org



APPENDIX

Impact/Likelihood Matrix of Behaviours
 From the **Halving Household Food Waste** report by OzHarvest and BehaviourWorks Australia

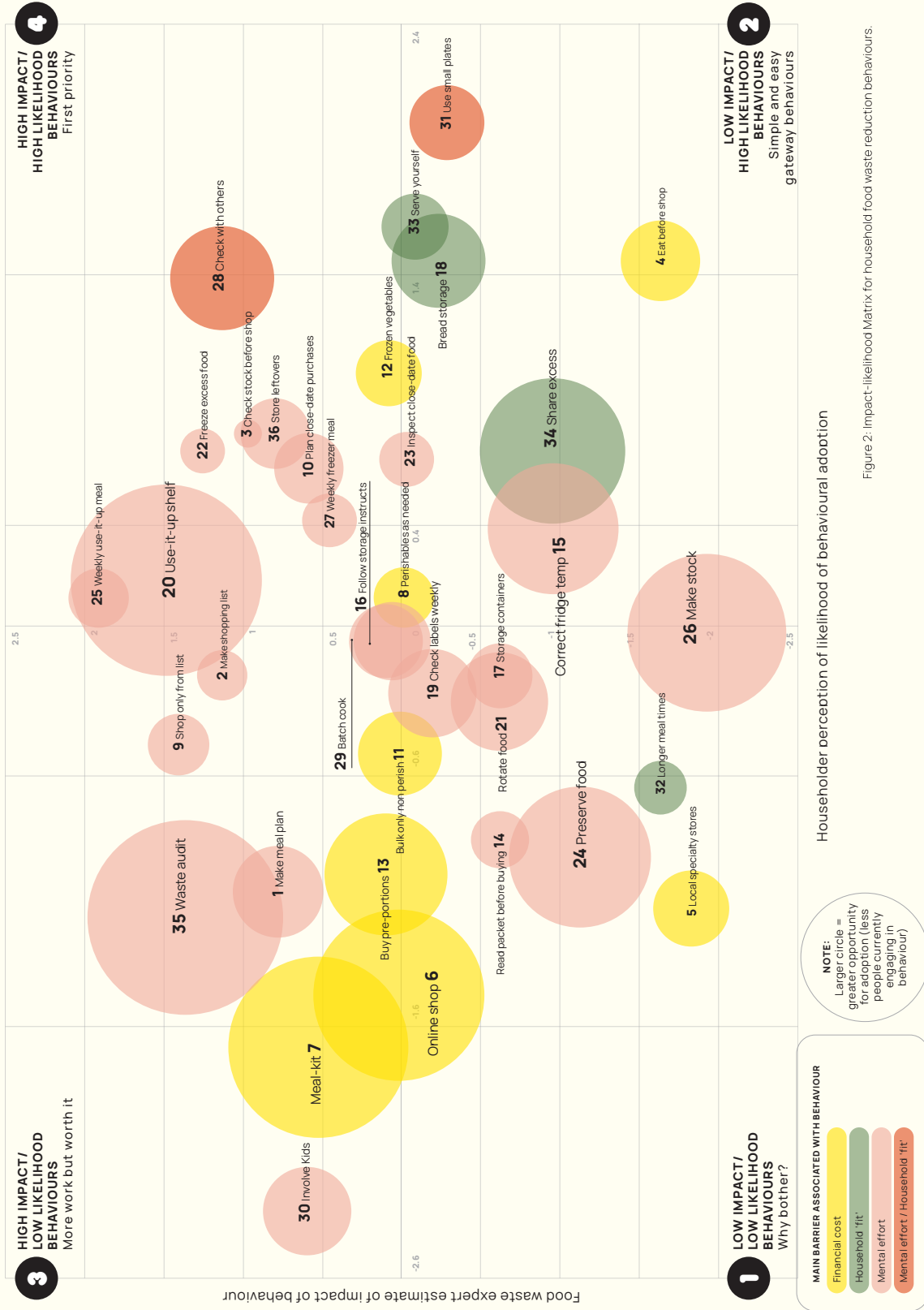


Figure 2: Impact-likelihood Matrix for household food waste reduction behaviours.