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Measuring Impact of Food Rescue in Aotearoa New Zealand: A Social Return on Investment

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This study can support a greater understanding of the value of three food rescue organisations in New Zealand and can be used to represent our best estimate of the value of the food rescue sector.

EXECUTIVE SUMMARY

Context and Approach

Over the past decade, food rescue organisations have emerged across Aotearoa New Zealand, responding to two key issues – food insecurity and food waste. Food rescue organisations rescue surplus, good, nutritious food destined for landfills and redistribute it to people in need. Food insecurity and food waste have been longstanding issues in Aotearoa. However, the Covid-19 pandemic disrupted the entire food system, exacerbating these issues. In 2020, the Aotearoa Food Rescue Alliance (AFRA) was established through funding provided by the NZ Ministry of Social Development's Food Secure Communities programme. AFRA is a national body encompassing 23 of Aotearoa New Zealand's major food rescue organisations. Food rescue in Aotearoa New Zealand, predates AFRA, with the first food rescue organisations starting in 2008. However, AFRA was set up in response to issues regarding Covid-19 and ongoing concerns about food insecurity and to provide cohesion and coordination of the sector through capacity building, best practice, collaboration, and advocacy, for an effective food rescue sector.

This Social Return on Investment (SROI) report aims to understand, measure, and value the impact of food rescue in Aotearoa New Zealand. AFRA commissioned the report. It focuses on three case study organisations representing the key food rescue models operating in Aotearoa New Zealand.

- **Satisfy Food Rescue (SFR) Christchurch** – Community Hub (collects, stores, sorts rescued food. Food is picked up by or delivered to recipient organisations)
- **Just Zilch (JZ) Palmerston North** – Free Store (collects, stores, and distributes rescued food directly to food recipients via a 'retail store' setting where food recipients select food free of charge)
- **Good Neighbour (GN) Tauranga** – Mixed model (community hub and additional components, e.g., community kitchen, community gardens).

SROI is a framework that aims to understand, measure and value an organisation's activities' impacts on various stakeholders. It uses qualitative and quantitative data to tell the story of how change is being created and experienced. Monetary values represent outcomes enabling a ratio of benefits to investment to be calculated, specifying the amount of social, environmental, and economic value created for every $1 invested.

The evaluation period for the analysis was the 2020-2021 financial year. This SROI is a forecast analysis, providing a benchmark SROI ratio for future evaluation of food rescue in Aotearoa, New Zealand. It is also the first SROI study to measure and value the impact of multiple food rescue organisations in Aotearoa New Zealand.

Stakeholders

Engaging directly with stakeholders is at the core of the SROI process, as it provides insight into the outcome's stakeholders experience (or will experience) due to their involvement with food rescue. We held 40 interviews with a variety of stakeholders: food donors (7), paid food rescue staff and volunteers (14), recipient organisations (17) and food recipients (4)[1]. The activities and outcomes of these three food rescue organisations inform the SROI calculations and final SROI ratio that follows.

Key Findings

The SROI analysis revealed the story of change and value created for stakeholders due to the activity of food rescue. The primary outcomes for each stakeholder included:

Food donors:

- Increased awareness of food waste and changing in-store practices
- Reduced waste removal costs
- Reduced environmental impact
- Increased reputation of doing 'social good'.

Food rescue volunteers:

- Increased social connection and community participation
- Increased sense of satisfaction through helping others**.**

Recipient organisations:

- Increased organisational capacity through access to free food.

Food recipients:

- Increased access to a variety of free food
- Increased connection to social support services.

In addition to these primary outcomes, stakeholders identified a range of additional (secondary) outcomes that food rescue indirectly enables. Appendix D further describes these outcomes. While this report notes these secondary outcomes, they do not contribute directly to this SROI evaluation.

Food rescue organisations are crucial in reducing food poverty and the environmental impacts of food waste. They act as community connectors, linking food donors to local community organisations and the people who use their services. Food rescue activities enable recipient organisations to increase their organisational capacity and extend their community outreach by freeing up resources spent on buying, sourcing, storing, and preparing suitable food. Recipient organisations would not be able to achieve the impacts they do without the support of food rescue organisations. Access to food at no cost also increased food recipients' access to a variety of food and their connection to social support services. Furthermore, many food rescue organisations play an essential role in helping shift the stigma and shame associated with food insecurity by carefully considering the experience of receiving suitable food and striving to ensure the dignity and mana (respect and pride) of recipients in the process. Food rescue activities have positive environmental

[1] Some interviewees occupied more than one role; therefore, the individual stakeholder numbers exceeded the total number of interviews. For example, some interviewees were food rescue staff members, volunteers, *and* food recipients.

outcomes by reducing food to landfill, increasing awareness of food waste, and changing in-store behaviours and attitudes of food donors.

Social Return on Investment (SROI) ratio

In 2020-2021, an estimated $2,182,381 was invested into the three studied food rescue organisations. The investment included financial resources, surplus rescued and donated food, volunteer and staff time, hard infrastructure and other goods and services. The analysis calculated a $9,791,890 value creation by the three food rescue organisations' activities.

These values equate to an SROI ratio of 4.5:1. Which signifies that for every $1 invested into food rescue (evidenced by the three AFRA food rescue organisations), it creates $4.5 of social value in return. It is important to note that this is a one-year forecast value and the first SROI study conducted for more than one food rescue organisation in Aotearoa New Zealand.

Implications and Recommendations

This forecasting analysis provides a benchmark SROI ratio and structure for future evaluation of food rescue in Aotearoa New Zealand. However, SROI is much more than a single figure. A combination of both qualitative and quantitative data is used to report on the impacts and value created for stakeholders through food rescue activities. Reporting, using, and embedding the research findings is a critical stage of an SROI analysis. We hope this research can inform discussion and decisions for AFRA's strategic direction moving forward and, ultimately, the food rescue sector across Aotearoa New Zealand.

This concluding quote highlights food rescue's vital role in New Zealand society -

> *'Many people would go hungry in the city, many people would feel less connected to the city, less seen, less heard, less cared-for. They would feel isolated and disengaged from the system'* – food rescue volunteer, Just Zilch.

1. INTRODUCTION AND BACKGROUND

1.1 The Aotearoa Food Rescue Alliance

The Aotearoa Food Rescue Alliance (AFRA)[2] is the national alliance of food rescue organisations in Aotearoa New Zealand. Food rescue organisations rescue surplus good, nutritious food destined for landfills and redistribute it to people in need. AFRA supports food rescue organisations to reduce food waste and increase food security through capacity-building, encouraging good practice and collaboration, and developing standardised methods to better account for and evidence the role food rescue plays in communities.

Since the establishment of AFRA in 2020, it has supported members in redistributing around 10 million kilograms of food, or the equivalent of over 29 million meals, preventing a total of $76 million worth of good nutritious food from going to landfill. AFRA has grown from 17 founding member organisations to 23, encompassing some of Aotearoa New Zealand's major food rescue organisations.

AFRA is proudly working with Kore Hiakai Zero Hunger Collective[3], The New Zealand Food Network (NZFN)[4] and multiple New Zealand Government departments and agencies to build the capacity of food rescue to reduce food waste and food insecurity.

AFRA's Mission

"Effective food rescue in Aotearoa – food for all: national support for local food rescue organisations to reduce food waste and increase food security."

Three broad food rescue models were identified, following evaluation of AFRA food rescue members' different operations:

- **Community hub food rescue** - collects rescued food, stores, sorts and often repackages this food, then the food is either picked up by or delivered to recipient organisations. This operating model does not usually involve the food rescue organisation directly distributing rescued food to recipients
- **Free store** - collects rescued food and stores and may sort and repackage this food, then distributes directly to food recipients. This distribution is often done similarly to a traditional 'retail' context where food recipients come and select food and take this free of charge
- **The mixed model** - acts as a community hub that includes food rescue but has additional components connected to food distribution. For example, a community kitchen, garden, or social enterprise focused on re-use and recycling.

[2] Aotearoa Food Rescue Alliance (AFRA)
[3] Kore Hiakai Zero Hunger Collective
[4] New Zealand Food Network (NZFN)

1.2 Why Measure Social Value

We know the impact AFRA members have had in the past year (2020-2021) in terms of:

- The kilograms of food rescued
- The associated dollar value of rescued food
- The equivalent number of meals provided from rescued food
- The environmental impact (CO_2 and water savings).

Figure 1. Impact of AFRA food rescue members during the year 2020-2021 (*image taken from the AFRA website – What's the impact of food rescue? In the last year we have:*)

While these impact statistics are beneficial, they only tell part of the story. We also need to understand the social impacts this rescued food has on individuals, whānau (family), and communities across Aotearoa New Zealand. A Social Return on Investment (SROI) is an effective social evaluation method to identify and demonstrate the effectiveness of a food rescue organisation's activities. There are substantial benefits to creating an impact measurement system. Firstly, to communicate to others, internally and externally, the value or real-world effects the organisation is creating for its stakeholders and generate reports to explain the value of their work to funders, investors, and boards, attracting funders and guiding the organisation's decisions about where to invest their money best. Secondly, to understand where value is being created (or not) and identify successes and gaps to make better decisions regarding resource allocation to improve their service, creating more value.

2. SCOPE OF ANALYSIS

2.1 Project Objective

This research aims to understand, measure, and value the impact of food rescue in Aotearoa New Zealand, as experienced by its stakeholders.

- To understand the outcomes of the stakeholders involved, in terms of changes experienced in their lives as a result of food rescue
- To measure the value of the change experienced
- To determine the impact and value of food rescue in Aotearoa New Zealand.

Earlier research on food rescue impact measurement suggests that food rescue has significant social, environmental, and economic outcomes. While an evaluation of outcomes was conducted for Kiwi Harvest in 2016[5] there has not been any evaluation of sector-wide food rescue outcomes using a multi-case study approach. AFRA commissioned this Social Return on Investment (SROI) report, and it is the first SROI analysis for food rescue to use a multiple case study approach in Aotearoa New Zealand.

2.2 Social Return on Investment (SROI) Methodology

Social Return on Investment (SROI) is a framework for measuring and accounting for a broad concept of 'value'[6]. It is a holistic approach, incorporating social, environmental, and economic impacts to tell the story of the change created. SROI involves directly engaging with those who affect or are affected by a programme or organisation's activities to understand and measure the change in ways relevant to stakeholders. Once stakeholder outcomes (changes experienced) are identified, monetary values are assigned to represent these changes, enabling a ratio of benefits to costs to be calculated. For example, a ratio of 3:1 indicates that an investment of $1 delivers $3 of social value. SROI is about value rather than money. Money is simply a common unit and is a practical and widely accepted way of conveying value. SROI was developed from social accounting and cost-benefit analysis. It is based on **seven principles** that underpin the methodology. These principles ensure the process is robust, consistent, and transparent. These principles inform the **SROI methodology,** broadly scoped into six stages. Table 1 outlines the six stages of the SROI methodology and the principles that underpin the methodology.

[5] Mirosa, M., Mainvil, L., Horne, H., & Mangan-Walker, E. (2016). The social value of rescuing food, nourishing communities. *British Food Journal*.
[6] The Social Return on Investment (SROI) Network. (2012). A guide to Social Return on Investment

Table 1. Six stages of the SROI methodology and seven principles which underpin it (adapted from The SROI Network: A guide to Social Return on Investment, 2012)

Six stages of the SROI methodology	Seven principles
• Establishing scope and identifying stakeholders	• Involve stakeholders • Understand what changes • Value what matters • Include only what is material • Avoid overclaiming • Be transparent • Verify the result
• Exploring and mapping outcomes	
• Evidencing outcomes and giving them value	
• Establishing impact	
• Calculating the SROI	
• Reporting and embedding	

2.3 Materiality

One of the critical principles of SROI is to '**include only what is material'.** This principle helps determine what information and evidence must be included to provide an accurate and fair picture of the stakeholder's experiences to understand the impact of an organisation's activities. In an SROI analysis, when determining materiality, relevance and significance filters are used.

- **Relevance** - applies to the stakeholder groups that affect, or are affected by, the activity and the outcomes they experience. Outcomes are included if they are identified directly by stakeholders or through existing knowledge (e.g. secondary research) as relevant
- **Significance** – determines the scale of each relevant outcome. Quantifying the scale of an outcome helps to determine the significance.

In considering materiality for this SROI analysis, qualitative data was used to judge relevance at two different stages. See Sections 4 and 5 for further explanation.

2.4 Type of Analysis

There are two types of SROI:

- **Evaluative** – conducted retrospectively and based on actual outcomes that have already taken place

- **Forecast** – predicts how much social value will be created if the activities met their intended outcome.

This study is a **forecast** SROI analysis, measuring the social value of three food rescue organisations' activities for the 2020-2021 financial year. This period was chosen because although food rescue is well established in Aotearoa New Zealand, there is no official collection of outcomes data or systems to measure, manage and report such data across different food rescue organisations. Secondly, AFRA is still in its infancy. Therefore, this SROI analysis provides a benchmark and framework for future performance evaluation.

3. PROJECT METHODOLOGY

The first task involved determining what this SROI would cover and who would be involved. Discussions with AFRA and member organisations revealed that an in-depth SROI case study of one food rescue organisation would not provide enough information to extrapolate across the wider sector. To address this issue, the team analysed the different operating models of AFRA members', identifying three broad categories: Community Hub, Free Store, and Mixed Model, as noted in Section 1.1.

3.1 Project Case Studies

Representative examples of each operating model were chosen as case studies to ensure the SROI provided a robust evaluation of the different food rescue operating models: Satisfy Food Rescue, Just Zilch, and Good Neighbour. Table 2 provides an overview of each case study. In selecting the three case studies, we sought to achieve geographic spread across the country and reflect a range of organisational sizes and length of operation. The SROI calculations that follow and the final SROI ratio draw on the activities and outcomes of these three food rescue organisations.

Table 2. Overview of the SROI case study food rescue organisations

Case study	Model type	Organisational capacity	Mission statement and values
Satisfy Food Rescue (SFR)[7] - Christchurch	Community Hub	Established in 2014 and has distributed an equivalent of 2,149,161 meals to date. In 2021, there were five paid staff and 35 volunteers. Focus on regional towns in northern Canterbury with a reach into Christchurch.	Thriving, strong, satisfied, and sustainable community. ● Effective ● Responsive ● Inclusive ● Generous.
Just Zilch (JZ)[8] - Palmerston North	Free Store	Established in 2011, they gave away 13,374 food parcels in the first year, and in 2021 they gave away 40,533 food parcels. In 2021, there were five paid staff and 130 volunteers. Operate a no judgement, no criteria, no questions asked model where food recipients do not need to demonstrate 'need.'	We rescue food and help people. ● **Justice** – social and environmental justice ● **Non-judgemental** – everybody is welcome ● **Aroha kore** – love without condition, and be kind, always ● **Kaitiakitanga** – together taking care of resources.
Good Neighbour (GN)[9] - Tauranga	Mixed model	Established in 2014 and has distributed an equivalent of 1,437,143 meals to date. In 2021 there were two paid staff and 122 volunteers.	To provide practical opportunities for people to support one another so that lives and neighbourhoods are transformed. ● Volunteers creating a serving culture ● Professionalism and quality workmanship ● Building relationships through sincere love in action ● Sustainability and environmental concern ● Collaboration and developing strong partnerships ● Loving people intentionally and equally ● Leaving a legacy of hope in the lives of individuals and families.

[7] Satisfy Food Rescue
[8] Just Zilch
[9] Good Neighbour

3.2 Identifying Stakeholders

SROI is stakeholder centric. Stakeholders are people or organisations that experience change due to the activity or those who affect the activity under analysis. This means involving and being accountable to all stakeholders that may experience change (both positive and negative, expected, or unexpected, and direct or indirect). Identifying stakeholders is the primary step of engagement with stakeholders in an SROI analysis.

3.2.1 Segmenting and Sampling Stakeholder Groups

The criteria for stakeholder inclusion include those who affect (or will affect) the activity and those who have been affected (or will be affected) by the activity. We undertook a desk-based stakeholder mapping process to identify the relevant stakeholder groups to involve in the qualitative research. To ensure we included all relevant stakeholders, we tested this map with case study representatives to get feedback and identify any missed stakeholder groups and segmentations or subgroups within the stakeholder groups. Through these steps, we confirmed four stakeholder groups: food donors, food rescue volunteers, recipient organisations, and food recipients[10]. Table 3 describes each stakeholder group. Appendix B outlines the rationale for stakeholder inclusion and exclusion in this SROI analysis. See Appendix A for the detailed stakeholder map of identified stakeholder groups per case study in numbers.

3.3 Ethics

This study considers ethical protocols. Ethics approval was obtained from the University of Otago Human Ethics Committee (reference number: **D21/304**) in October 2021 to ensure the safety and privacy of the participants. In addition, all participants provided written and verbal consent prior to engagement.

3.4 Stakeholder Engagement

The first two SROI principles include 'involve stakeholders' and 'understand what changes' to define outcomes ('changes experienced in their lives) relevant to them and then determine the importance of identified outcomes. After mapping and identifying stakeholders, key stakeholders were recruited to participate in the research via an introductory invitation from the case study representative and subsequently contacted by the lead researcher. Chosen participants were primarily based on their willingness and capacity to engage. Table 3 provides a summary of the engaged stakeholders.

Table 3. Key stakeholders, description, and summary of engaged stakeholders

[10] Stakeholder groups could be further broken down into sub-groups or categories. While this is acknowledged, for this forecasting SROI, these groups are most appropriate.

Key stakeholders	Description	SFR	JZ	GN
Food donors	This group includes supermarkets, local cafes and restaurants, bakeries, and more prominent food manufacturers and producers.	3	2	2
Food rescue volunteers	This includes individuals who have made a voluntary commitment to food rescue.	4	5	5
Recipient organisations	This group includes community organisations, schools, food banks and other meal providers, and healthcare and social support services, including those who are Māori and religious-affiliated.	7	5	5
Food recipient	This refers to individuals and whānau (families) needing temporary or long-term food assistance.	1	3	0
Total[11]		15	15	12

Semi-structured interviews were the primary method used to identify relevant outcomes for stakeholders. Semi-structured interviews were chosen as the most suitable method as they provided us with the flexibility to ask questions and enabled the participants to speak about 'their story of change' and what changes they had experienced through their involvement with the food rescue organisation'. The core research team conducted 40 interviews with various stakeholders; 29 during onsite visits and 11 were online when a face-to-face meeting was not feasible. Each interview was approximately 30 minutes long, equating to about 21 hours of conversation between researchers and stakeholders. The interviews were guided by a semi-structured list of questions (see Appendix C for the detailed interview guide). These questions included:

- **Introduction questions:** establish stakeholder rapport and glean background and contextual information about the individual and their relationship with the food rescue organisation
- **Understand what changes:** understand what changes stakeholders experience due to food rescue activities and the relative importance of changes to them. Questions covered both negative and positive experiences
- **Deadweight:** understand deadweight; how much of the change or impact would have happened if food rescue did not exist? The intention was to establish the gap food rescue organisations fill
- **Future of food rescue:** understand stakeholder perceptions of food rescue's role in the future. The intention was to highlight areas for future development for individual food rescue organisations and the wider sector.

After completing the interviews for each case study, the research team reviewed the transcripts and conducted a thematic analysis Using NVivo (a qualitative computer software) to identify, organise and develop outcome themes. These outcome themes represent

[11] As noted earlier, some interviewee's occupied more than role and therefore the individual stakeholder numbers exceed the total number of interviews. For example, some interviewees were both a food rescue staff member or volunteer *and* food recipient.

changes experienced by the stakeholders as a result of food rescue activities. This step helped confirm that we had gathered enough qualitative data to reach saturation as we heard familiar answers to our questions and no new themes emerged. Additionally, we drew on three identified SROI reports for food rescue, SecondBite SROI report (2013)[12], Council for the Homeless Northern Island (CHNI) FareShare SROI report (2014)[13], and NEF Consulting, FareShare report (2018)[14], shared similar stakeholders and outcomes. Lastly, the Incredible Years Parenting (IYP) SROI analysis (2019)[15], a model example of a well-designed SROI analysis, which also shared some similar stakeholders and outcomes. We then used the outcome themes, supporting qualitative data and secondary research to create a 'chain of events' or 'theory of change'. Section 4 outlines this theory of change.

3.5 Considerations and Limitations of the Study

This study is not without limitations. Future considerations include reviewing and verifying the significance of each outcome and identifying different sub-groups within each stakeholder group.

This SROI analysis identifies outcomes based on qualitative data. Stakeholders were asked to describe their experience and what they value about food rescue. Although the interview guide (Appendix C) indicates questions about 'valuing what matters', often, the rigid format of this question did not seem appropriate or sensitive to ask during the interviews. Considering the SROI principle **'verify the results',** future recommendations propose facilitating a focus group with key stakeholders. A focus group will allow stakeholders to review, discuss, and verify the outcomes they experience, providing confidence in the assumptions made and informing the development of the stakeholder questionnaire to quantify the significance of each outcome. Appendix F to I includes a list of questions based on the outcomes identified in this analysis. It asks stakeholders to rate each outcome by circling the response that best describes how they feel, then rank the outcomes based on their perceived value of importance.

Second, there is always a risk that the identified stakeholder lists are incomplete or overlook potential subgroups, which experience either different outcomes or the same outcome but to a different extent or value it differently. This SROI analysis excludes food rescue staff. Through the stakeholder mapping process, we identified that food rescue staff provided important information but did not experience significant personal outcomes from food rescue. This decision was an example of revising stakeholder relevance through the process of analysis. To revise and verify stakeholder relevance and segments (sub-groups) within the identified stakeholder groups. During the proposed focus group, stakeholders would be asked to identify people or organisations they think may affect, or are affected by, food rescue and whether they have identified people with different experiences of any outcomes.

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[12] Social Ventures Australia (SVA) Consulting. (2013). SecondBite National Food Distribution Activities: Evaluative Social Return on Investment Report

[13] Council for the Homeless Northern Island (CHNI) FareShare Food Sharing Network (2014). Social Return on Investment Report

[14] NEF Consulting (2018). The socio-economic impact of the work of FareShare

[15] Incredible Years Parenting (IPY) Programme. (2019). Forecast Social Return on Investment Analysis

Finally, Table 3 shows that we undertook fewer interviews with food recipients than other stakeholder groups. This decision was deliberate for three reasons:

- Two of the three case studies tended to have relationships with recipient organisations rather than food recipients. Hence it would have required more time than we had to develop these relationships
- Many of these stakeholders were experiencing significant stress due to food insecurity, and we did not consider it appropriate to add
- The research was undertaken during a national COVID-19 (delta variant) outbreak creating additional challenges to involving food recipients beyond the available resourcing.

Feedback from recipient organisations and some food rescues staff and volunteers (including food recipient testimonials that food rescue organisations had collected) addressed this gap, identifying food recipient outcomes. Future work could use a questionnaire to increase the involvement of food recipients. Appendix I provides a food recipient questionnaire addressing the primary and secondary outcomes identified in this SROI analysis and asks the respondent to rank and rate each outcome, to **'value what changes'**, and **'verify the results'.**

4. THEORY OF CHANGE

The theory of change tells the story of change due to a programme or organisation's activities. It describes:

- the issue that the organisation or programme is seeking to address (problem statement)
- the relationship or links between inputs, activities, outputs, and outcomes
- the overall impact of these outcomes.

Generally, outcomes are linked together to show causal ‘chains of change'. The theory of change diagrams ensures that the right outcomes are measured. Therefore, it can be used to identify where value is being created (or not) to inform decisions about where to direct resources to optimise social value.

4.1 Theory of Change: Food Rescue Organisations

In this analysis, the theory of change was informed and guided by the stakeholder groups that experienced the change and supported by secondary research. It shows the links between the three food rescue organisations' activities and the changes (outcomes) stakeholders experience resulting from these activities. Figure 2 represents the theory of change for this study's three food rescue organisations, representing AFRA operating models.

Problem statement: *An estimated 571,000 tonnes of food nationwide enter landfills annually. However, almost 40% of adults and 19% of children in New Zealand face moderate*

to severe levels of food insecurity. Food rescue organisations strive to divert food waste from landfills into the plates of those who need it most.

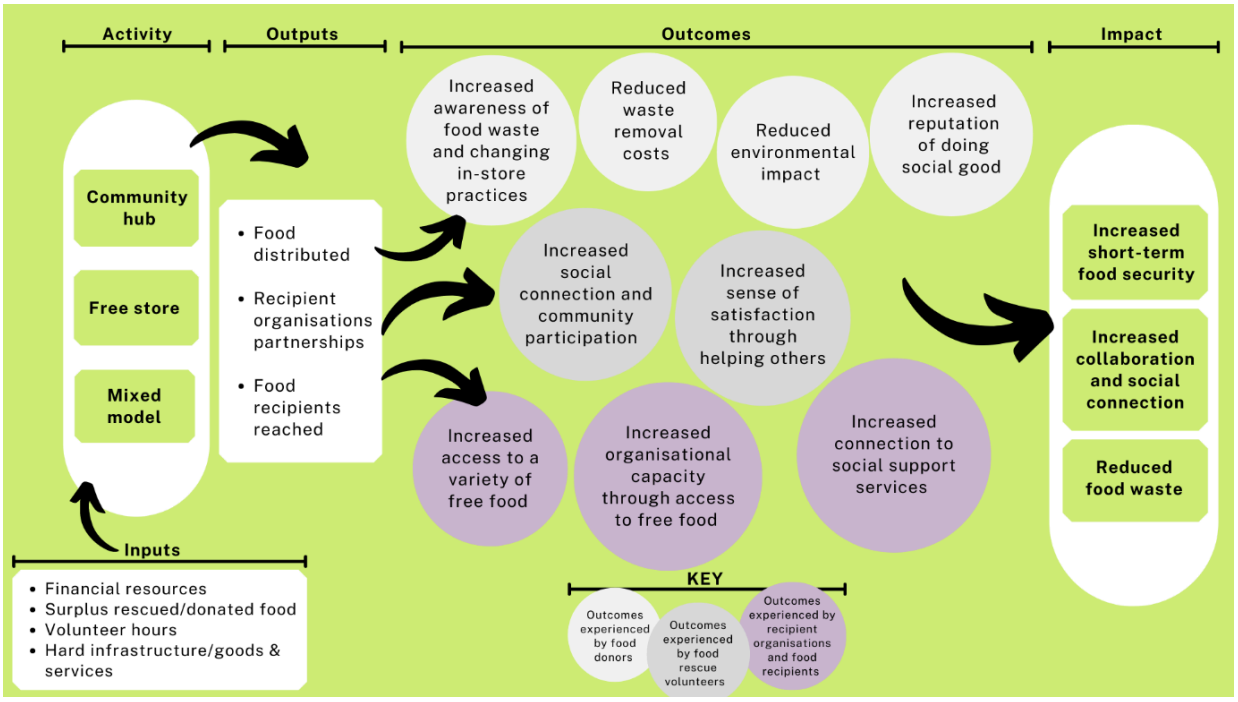

Figure 2. Theory of change: AFRA food rescue organisations (3)

5. OUTCOMES – WHAT CHANGES FOR STAKEHOLDERS

This section highlights the outcomes of food rescue activities identified by key stakeholders. Understanding and measuring outcomes that matter most to the stakeholders is integral to defining outcome materiality. As mentioned in Section 2.3, the criteria of relevance and significance are used to assess materiality (importance to the stakeholder). The primary outcomes in this SROI analysis were identified as relevant if every stakeholder in a subgroup described it. In other words, an outcome was identified as 'primary' if all food donors or all recipient organisations described the change experienced and valued it. It is important to note that stakeholders identified only positive outcomes from food rescue. No stakeholders identified any negative outcomes from food rescue.

A range of secondary outcomes were identified through stakeholder engagement; however, these have not been included in the SROI with associated monetary proxies for the following reasons:

- Not all stakeholder sub-groups identified the change as significant
- There was not adequate information or evidence to identify 'chains of change' for each sub-group
- It was too difficult to allocate a financial proxy due to a lack of comprehensive data or the holistic nature of the outcome.

While this SROI analysis does not include secondary outcomes, they contribute to revealing the flow-on and often far-reaching impacts and outcomes of food rescue. Appendix D provides quotes to illustrate these secondary outcomes.

5.1 What Changes for Food Donors?

This section describes the changes experienced by food donors who work with the three food rescue organisations. Figure 3 presents the theory of change for food donors, highlighting the activity, intermediate, primary, and secondary outcomes. This section describes the four primary outcomes valued by food donors.

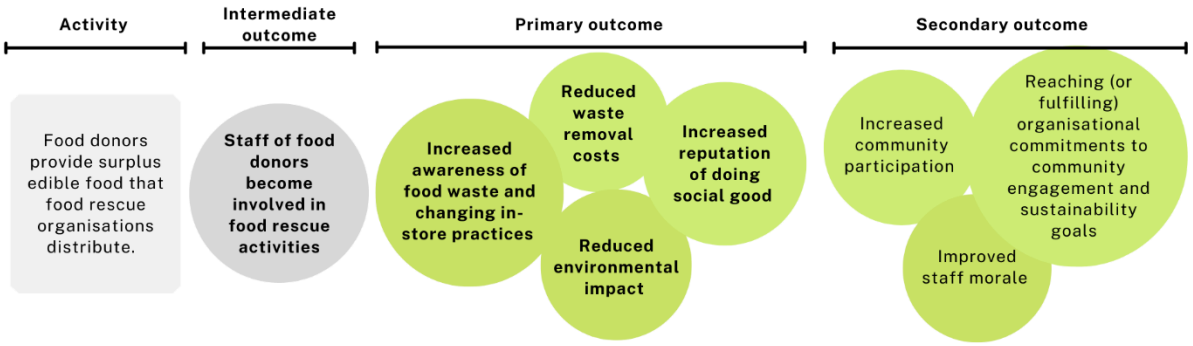

Figure 3. Theory of change: Food donors

Activity overview: Food donors

Food rescue donors include a range of food producers, distributors, and retailers of different scales. Some food donors are relatively large (such as supermarkets) and have formalised memorandums of understanding with food rescue groups. Other food donors are small (such as a single café or retailer) with informal, verbally agreed-upon relationships with food rescue organisations. The New Zealand Food Network (NZFN)[16] is a new large-scale non-profit food distribution organisation that collects surplus and donated bulk food from producers, growers and wholesalers and distributes this to food rescue organisations, charities, and iwi. With a distribution hub in Auckland and Christchurch. While the NZFN is not technically a donor, it has created consistency and efficiency across the country regarding food supply and logistics, allowing rescued food to travel further than before to those who need it most.

> *'The New Zealand Food Network has been so supportive. I will email our relationships manager like, "Heads up, this is coming" she always comes back to me, always prepared. When we request fruit to go to certain places, they facilitate that. They have been fantastic. Centralising it makes the process so much easier, and they record where everything goes anyway so that we can get these reports through. We have had a really good experience with them. I think it is a good move; obviously, it is government-backed, but I think it has taken food rescue to the next level, showing its impact. Also, by centralising it, you can fully take stock of everything and ensure stuff is going where it needs to go. Also, having the information and data all in one place and knowing exactly what is going where, I reckon that is a game-changer for its future'* - food donor, Good Neighbour

While practices varied across our case studies, food donors generally identify and put food aside (depending on the food type) which food rescue organisations collect. While we could acquire data from each case study on some metrics related to donated food, we treat these data with caution due to different measurement approaches. For example, while the three food rescue organisations track and measure the total amount of redistributed food, not all supplied food is redistributed. Some food may be considered unfit for human consumption or may not meet recipients' needs. Therefore, it is disposed of (generally composted or sent to pig farmers).

These transactions involved logistics on the basis that the donor organisation's staff have the knowledge and time to put food aside and coordinate the timing of pick-ups with food rescue organisations. Additionally, food rescue groups need suitable equipment to safely transport and store food (such as vehicles with chillers). Negotiating some of these activities was often complicated, requiring time, new practices and relationship management between food donor staff and food rescue organisations.

[16] New Zealand Food Network (NZFN)

Outcome 1: Increased awareness of food waste and changing in-store practices

Donor stakeholders noted that food rescue and the logistics involved in identifying and storing surplus edible food help to highlight, to their staff, the amount of food waste generated.

> 'It's *quite eye opening when you realise exactly what happens. So, I think organisations like this [food rescue] are a massive connection between preventing that waste and giving it to the people that need it*' - food donor, Good Neighbour

For donor stakeholders, involvement in food rescue helps educate their staff about reducing food waste by changing in-store practices in practical ways.

> '*It is educating the people that work in the supermarkets as well. Because now and then, the person on the dairy will change and they're not interested in it, they would sooner... throw it in the bin. You've got to get alongside them, saying, "Listen, that food can go to help somebody, don't just... throw it out*' - food donor, Satisfy Food Rescue.

> '*We have weekly meetings where we work with our fresh department, so many reminders are going out to say, "If you are pulling stuff off, we have got a labelled container in the big freezer, so remember to put it in there and donate it". It is changing behaviours and educating people'* - food donor, Satisfy Food Rescue

Outcome 2: Reduced waste removal costs

Donor stakeholders noted that food rescue reduced their waste removal and disposal costs and helped them to avoid sending edible food to either landfill or organic waste processing sites. The added benefit of food rescue, as noted by donor stakeholders, was that it ensured food was distributed to people who needed it first, rather than being sent to waste processing options lower on the waste hierarchy (such as composting or pig farms).

> '*If we have product that's getting very close to its best-before-date, at our storage facility... we let [Just Zilch] know and they go pick that up too. That's usually several pallets... That would have gone to landfill years ago, but now it's going to food rescue*' - food donor, Just Zilch

> '*The food rescue part is vital to our stores. We could go and redirect all our food to a pig farmer or farmer, that is an option, as our stores have organic collections on site. But again, it is that whole case where - this is good quality food that can go to people that need it the most, to support your community*' - food donor, Good Neighbour

This research draws on data for the financial year of July 2020 to June 2021. The cost of landfill waste disposal was low ($10 per tonne). This cost is set to increase progressively in the coming years. In July 2021, the cost was $20 per tonne. The Ministry for the Environment is signalling a ban on organic waste in landfill by 2025. These legislative and disposal cost increases will become increasingly significant for donor stakeholders and may drive further investment and relationship building with food rescue organisations.

Outcome 3: Reduced environmental impact

Donor stakeholders described how reduced waste removal costs were beneficial and how donating to food rescue also reduced the broader environmental impact of their activities. For some donor stakeholders, the reduced environmental impacts were described in terms of climate change emissions, while for others as a way to avoid unnecessary waste and redistribute food to those who need it.

> *'Our emissions would be much, much higher. I think that's what we've always recognised and is why we've gone to great lengths to support food rescue partners is that we absolutely understand the value that they offer to us. I think we're in quite an amazing position where we get to divert food from going to landfill and generating emissions, but also feeding people that really need help and support'* - food donor, Good Neighbour

> *'With zero food waste, we have got carbon emission targets, all these environmental targets that food waste directly correlates with. There are external pressures, but at the moment, it is a free service where you can give food back to the community, reduce your waste, and support those that need it. It is a no-brainer'* - food donor, Good Neighbour

Outcome 4: Increased reputation of doing social good

Donor stakeholders noted the tangible community benefits of food rescue and the enhanced reputation businesses could gain from supporting food rescue. For some food donors, this was about 'doing the right thing', contributing to society, and a practical way to express their genuine care for the wider community. While for others, food rescue is understood as part of a broader shift towards more sustainable and holistic business practices that link across waste, responding to climate change and socio-economic inequalities.

> '*I feel like in general... corporate social responsibility is so important. From the top down, our purpose is to help people, communities, and the environment, thrive through the goodness of kiwifruit, so, essentially that's our purpose and community investment directly links into that. And we back that, it's not just a token purpose, we do care about it. I think we are unique in that we do like to support local and support the Bay where we can, as well as the rest of the country. I think the genuine, authentic interest in it, and the care for our communities is important, and it does feel special to be a part of*' - food donor, Good Neighbour

> '*The food rescue part is vital to our stores... It's a massive part of the business... So, last year, our CE turned around and said - everyone must have a food rescue or food bank partner, and they do, they have some partner that they're working with. That is core to our business*' - food donor, Good Neighbour

'I think it's such a holistic approach to rebuilding and supporting a community. You obviously get the value from knowing that you are supporting such a valuable organisation within the community. We recently spoke with [Good Neighbour], and we didn't realise this, but they said that having Zespri's support further helped them get the support of others because the recognition of partnering with us helped them. That's a nice thing for us to know, that by supporting and backing them, our contributions are only so much, but then it can be multiplied by the other parties that come on' - food donor, Good Neighbour

5.2 What Changes for Food Rescue Volunteers?

This section describes the changes experienced by volunteers who work with the three food rescue organisations. The non-profit model of food rescue organisations means they rely heavily on volunteer labour to undertake their activities. Figure 4 presents the theory of change for volunteers, highlighting the primary and secondary outcomes. This section describes the two primary outcomes valued by food rescue volunteers.

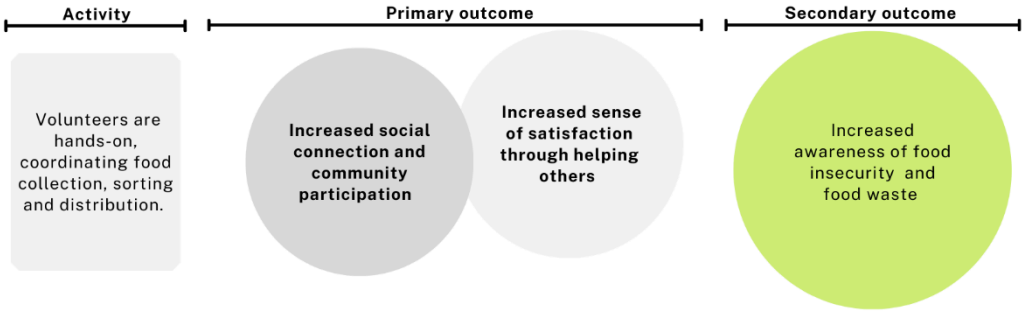

Figure 4. Theory of change: Food rescue volunteers

Activity overview: Food rescue volunteers

Food rescue personnel includes paid staff and volunteers who work for food rescue organisations. Reflecting broader research on the importance of volunteering in Aotearoa, New Zealand, our three food rescue case studies rely on small numbers of paid staff (often working part-time) and large numbers of volunteers. Paid staff manage critical roles such as overall leadership and management, administration, marketing, volunteer coordination, and sometimes collecting food from donors. Volunteers tend to sort food and pack it for redistribution, collect donated food and distribute food (primarily in the case of Just Zilch). At the time of research, 299 paid staff and volunteers contributed crucial labour across the three case studies, a total of 70,855 hours in 2020-2021. This section focuses on food rescue volunteer outcomes.

Outcome 1: Increased social connection and community participation

Food rescue volunteers described a primary outcome of volunteering in food rescue as increased social connection. Participants described this in different ways. Some highlighted the sociality and teamwork associated with food rescue and the positive working environment that food rescue organisations create.

> *'We have a ball; we laugh. Each shift has its own team; they always say, "We are the best team", but all the teams say that' - volunteer*, Just Zilch

> *'You ask any volunteer over there why are you coming to do this thing? It's not that they want to lift boxes of food around, it's that they are lonely. What I'm saying is that they want something purposeful and meaningful to do today'* - volunteer, Good Neighbour

While some described how volunteering for a food rescue organisation helped them develop connections with their wider community, these connections then had reciprocal benefits in their own and others' lives.

> *'What happens when you surround yourself with really kind, giving people is it makes you want to do better; it has a domino effect. A lot of people that have maybe received food parcels or help will then perhaps go into volunteering for these organisations. So, you see that perpetual cycle of helping others'* - volunteer, Satisfy Food Rescue

> *'You get to know a lot of people and you come in and they ask you how your weeks been. Especially when I had my accident, when I fell over outside, carrying two boxes then when I came back on the Friday everyone asked - how I was feeling'* - volunteer, Just Zilch

Others noted how food rescue provided them with a gentle yet structured re-entry into paid and volunteer work after being unwell, fostering improved well-being.

> *'For me, coming out of a sickness where I had to give up work, I had to give up everything, I had to move back home with my family because I couldn't support myself and needed looking after. Then having something to step back into, to begin my journey back to the world was huge. I was on a benefit, so it got me off the benefit and it got me back into the community'* - volunteer, Good Neighbour

Outcome 2: Increased sense of satisfaction through helping others

Food rescue volunteers described an important personal outcome of working in food rescue as an increased sense of satisfaction through helping others. Some volunteers compared it to previous work they had done that they did not find particularly satisfying or meaningful or did not utilise their skills and passions.

'*For the volunteers who help us it's always meeting some needs that they have, for me it's meeting my need that my job does not fulfil, my leadership giftings, or my sustainability and environmental passions and my social justice sort of side of things. The people I work with are great and that's basically what keeps me there is that I love the people I work with. It has fulfilled a need in me that wasn't being filled*' - volunteer, Satisfy Food Rescue

Others noted how volunteering in food rescue provided them with a well-being benefit and a sense of meaning through feeling like they were making a meaningful and practical contribution to their community.

'It's *an opportunity to help people in a practical way, and to use something that is still worthwhile that would otherwise be going in the rubbish... I think it's wonderful to be able to help people. Food is such an essential part of who we are as humans, it's such a need, if you don't have it, it puts so much stress on people*' **-** volunteer, Satisfy Food Rescue

'*The first time I rescued food it was satisfying a need in me as much as it is satisfying the people at the other end. People talk about volunteering and charities and there's nothing that's completely altruistic there. You may want to kid yourself that you're doing it solely for other people or solely for the good of others, but it's always meeting a need for the people who are doing that*' - volunteer, Satisfy Food Rescue

5.3 What Changes for Recipient Organisations?

This section describes the changes experienced by recipient organisations who work with the three food rescue organisations. Figure 5 presents the theory of change for recipient organisations, highlighting the activity and primary and secondary outcomes. This section describes the primary outcome valued by recipient organisations.

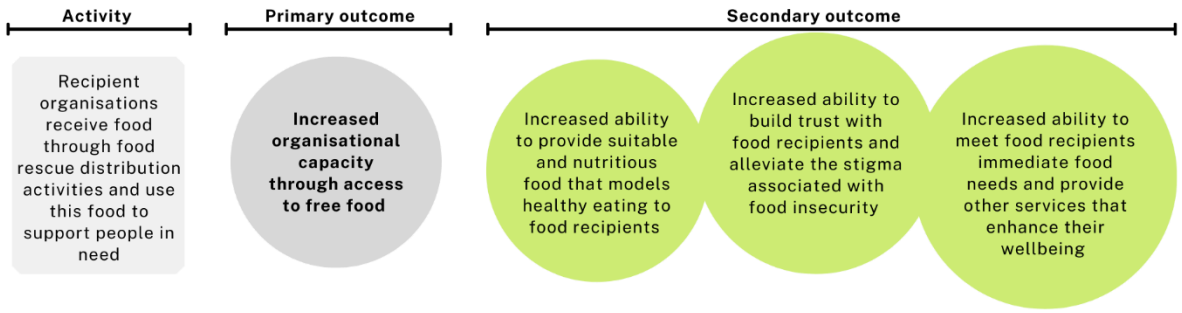

Figure 5. Theory of change: Recipient organisations

Activity overview: Recipient organisations

Food rescue organisations redistribute rescued food to a wide range of social service providers and other community organisations, who then distribute this food to people who use their services. Recipient organisations include iwi and Māori organisations, mental health and addiction services, schools and education support services, refugee and resettlement services, disability and health services, religious charities, food banks and community Pātaka Kai. While the three case studies have different operating models (with Just Zilch primarily distributing food directly to recipients), they work with a combined total of 231 recipient organisations and community partners.

Outcome 1: Increased organisational capacity through access to food

All recipient organisations described how rescued food increased their organisational capacity and extended their impact. This outcome resulted from not needing to spend limited funding and resources on buying or accessing appropriate food. Recipient organisations described how rescued food had enabled them to trial new programmes and initiatives relatively quickly and easily that would have not otherwise been possible.

> '*[B]efore Satisfy Food Rescue came along, we could maybe give them a muffin, but we were not able to provide regular hot meals through winter. We could maybe do two days a week, we could give them a hot meal, and then the rest of the week, it was snacks or sort of breakfast. We were able to extend giving out breakfast for a longer time slot, so more children got it. Now during the winter, we can provide a hot meal every evening. This is to the thanks of Satisfy; we would not have been able to do it without them*' - recipient organisation, Satisfy Food Rescue

> '*We have gone from strength to strength with [Good Neighbour], and we couldn't do what we do without them. Our funding would go through the roof because they save us so much money by giving us food to be able to run our programmes. [Good Neighbour] save us a lot*' - recipient organisation, Good Neighbour

> 'It's *enabled me to carry out some holiday programmes that I wouldn't have been able to. All our programmes we deliver are free. Just Zilch allowed me to be able to do that by giving me meat, tins, spreads, and cereals, everything to feed the kids, all I needed to buy was a little bit of extra bread. It was a lifesaver. It's also enabled me to get my job done quicker. Often, if there are families in places like [mainstream charities], they have a process where you have got to go in and give all the details of the whānau. Whereas, with Just Zilch you can just go line up no questions, other than telling them how big the family is. So, it is a lot quicker and easier. They've enabled me to be able to help people a lot easier, accessibility is a big thing too*' - recipient organisation, Just Zilch

Within recipient organisations' accounts was an implied but sometimes explicit explanation of food's vital role in attracting people to their services.

'*Food is a great ice icebreaker with people. If you have got a group of people who do not know anybody, you get them around the table for a feed. That breaks the ice and makes people feel comfortable, which is what it is about*' - recipient organisation, Satisfy Food Rescue

Recipient organisation participants often described the food as the 'gateway' or a 'foot in the door' and a fundamental way to build trust with people. This entry enabled them to discuss other support they might need beyond addressing people's immediate and pressing need for food.

'*Food can open doors. Say when you're dealing with the Police or Oranga Tamariki, sometimes that food is a way to get the door open to those services to connect the people. That's maybe how some of those groups use our service, to make a connection*' - recipient organisation, Good Neighbour

Most recipient organisations noted that without food rescue, they would not be able to provide the services they currently do without either significant increases in funding, sponsorship, or support from elsewhere.

'*We could not make the dinners. We could not support the people in the garden. We certainly, could not support the people at the camping ground. We could not do what we do*' - recipient organisation, Satisfy Food Rescue

'*Financially, it would be massive [if food rescue stopped]. If I think about how much we would spend on a holiday programme to feed 24 children for a week, every day, all day, it would be difficult for us to survive without [org]*' - recipient organisation, Good Neighbour

5.4 What Changes for Food Recipients?

This section describes the changes experienced by food recipients by various stakeholders, including food recipients, food rescue staff and volunteers, and recipient organisation staff. Figure 6 presents the theory of change for food recipients, highlighting the activity and primary and secondary outcomes. This section describes the two primary outcomes for food recipients valued by various stakeholders.

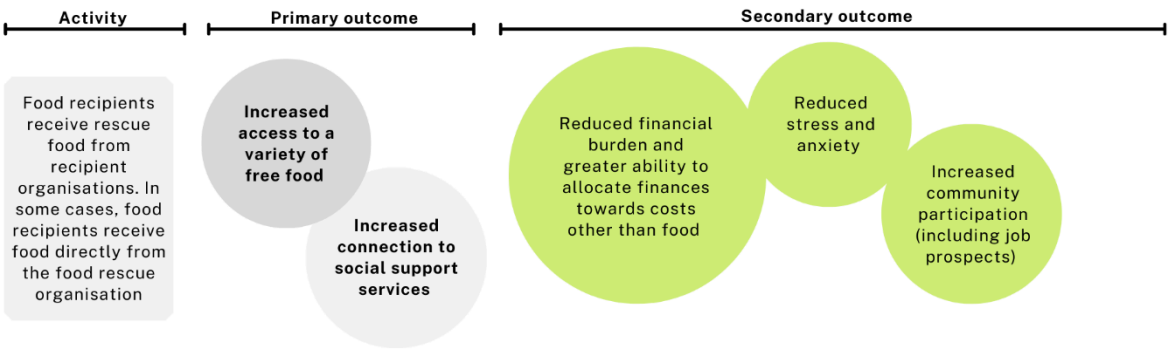

Figure 6. Theory of change: Food recipients

Activity overview: Food recipients

Food recipients include a wide range of people that recipient organisations are working with and food rescue staff and volunteers (in some cases). Stakeholders noted that food recipients include people across the socio-economic spectrum and that COVID-19 and associated disruption to work and businesses had meant an extensive range of people were experiencing food insecurity and increased inability to access suitable food.

Outcome 1: Increased access to a variety of free food

A key outcome for food recipients is increased access to a variety of free food. Various stakeholders noted the importance of food variety for improved health and well-being (including dietary needs and dignity).

> '*It is such a bonus that we can have meat packs once or twice every three weeks or four weeks. Also, they [food recipients] can take fruit and veggies away; it is awesome that they are the first thing to go; the bread is usually left to last*' - recipient organisation, Satisfy Food Rescue

> '*I will get comments [from food recipients] like, "This has made my day, I have had the shittest week, thank you so much "... when they see treats like, banana milk, or biscuits, or apples, chocolate*' - recipient organisation, Good Neighbour

Food recipients and others also noted the importance of food rescue in freeing up limited money for other priorities, such as car insurance, school uniforms for children, and participating in sports and other activities. Food recipients described how freeing up money in limited budgets expanded their choices and sense of autonomy, enabling them to participate in broader society in valued ways.

> *'I would come to Just Zilch as a customer when I first moved to Palmerston North, we used all our money moving, and we didn't have much money left. Both my husband and I aren't fit for work, I have mental health issues, and he has back issues. We... get along a lot better having the support of Just Zilch'* - food recipient, Just Zilch

Outcome 2: Increased connection to social services and support

Because recipient organisations have increased their organisational capacity and reach through food rescue, they can connect with more food recipients and provide services and support. The outcomes of this increased connection to social services and support emerged in different ways. Some recipient organisations described how they were now connecting with people they had not previously been able to – as a direct result of rescued food. These new connections enabled them to provide further services and support.

> '*[S]omething that's changed, is there were a lot of people that weren't on our radar, that are now on our radar, fully registered, accessing services. Also breaking down those barriers to want to ask for support... [L]ike back in 2019, we had this whānau that received their first kai box and now two years down the line they are financially stable... [What] we are noticing is that whānau are now aware of the support that is there, and if it's not needed for them, they are passing that information on to the next whānau. That's all about accessibility, and more whānau reaching out for support*' - recipient organisation, Good Neighbour

Other recipient organisations noted how rescued food was vital in diffusing tension and facilitating an environment that fostered connections between people.

> *'The key thing for me is watching them interact with each other on the campsite because the campsite can be volatile at times. If you bring people together around food, they communicate better. It might not sound important, but it is massively important. When they are waiting for me... they are all having conversations, building community and friendships'* - recipient organisation, Satisfy Food Rescue

5.5 Facilitating outcomes in communities

Individual food rescue organisations in Aotearoa New Zealand, generally emerge as grassroots community-led responses in specific contexts. They tend to start as either passionate individuals or groups of volunteers who collect donated food and redistribute this. Over time, many of these organisations have grown by securing funding for operational expenses (staff time, rent, power) and attracting volunteers and food donors. As they have grown, they have also developed place-based relationships with recipient organisations and, in some cases, food recipients. The studied food rescue organisations actively consider how they do things and seek to understand the needs of food recipients and the people they support to meet their needs better.

A key broad theme that emerged across our data was the importance of food rescue organisations knowing their local communities and working to establish and maintain relationships with food donors and food recipients (including organisations and individuals). Stakeholders emphasised the time and energy food rescue organisations dedicated to understanding local community dynamics and needs and prioritising relationships to enable food redistribution, often in specific ways, thereby making the outcomes of food rescue possible. All three food rescue case studies illustrate how the relationships, needs, and priorities of local communities were identified and supported, for example:

- Ensuring the food distributed is suitable for recipients to meet dietary, health, and cultural preferences
- Packaging food carefully to ensure it arrives at the food recipient in good condition
- Reflecting on the language used to emphasise the dignity and mana of food recipients
- Reflecting on a fair distribution of surplus food minimises spoilage and waste and provides transparent decision-making and allocation processes.

Intersecting across all three case studies is a value of radical generosity shown through the practice of redistributing edible food. For many people working in the sector, food rescue is a practical way to express values of kindness and generosity, underpinned by a passion for community and people.

6. INVESTMENT SUMMARY

A central output of the SROI method is a ratio of benefits to costs or investment. Therefore, it is vital to establish the value of stakeholder inputs in the operation of the activity. This project identifies two types of inputs, funding and resource inputs and time inputs. This analysis considers all investment data from the 2020-2021 financial year.

Volunteers primarily invest time into food rescue organisation activities. This analysis values volunteer time at $20 per hour based on the minimum wage in Aotearoa New Zealand, in 2021. Staff also invest time. Although food rescue staff are considered an operating cost, paid from the total financial investment into the organisation and therefore excluded from the SROI analysis. Nevertheless, the qualitative aspect of the report includes staff as key conduits of information.

All investment data was gathered through consultation with case study representatives. The total input value for the three case studies was $2,182,381. Table 4 shows the stakeholder inputs and values per case study organisation.

Table 4. Investment summary of the three case study organisations from the 2020 to 2021 financial year

Stakeholder group	Input(s)	Value ($) per case study		
		SFR	JZ	GN
Financial donors	Grants, fundraisers, donations	$387,246	$311,330	$260,106
In-kind donors	Infrastructure, transport, marketing, and communication	$21,874	$38,705	$47,200
Food donors*	Surplus edible food	$0	$0	$0
Volunteers	Time	$55,120	$800,800	$260,000
Investment per case study		$464,240	$1,150,835	$567,306
Total				**$2,182,381**

*Food donations are the core input for the food rescue organisation's operation. The kilogram of food is considered the key input and is the driver for all outcomes. As the food is donated and considered waste, the value of the food is $0.

7. VALUING OUTCOMES

Social valuation is how we refer to the value or worth that people place on social outcomes or 'changes in their life'. The purpose of valuation is to reveal the relative value or worth of changes or 'outcomes' experienced by stakeholders as a result of a programme or organisations activities. The ability of an SROI to monetise outcomes, moves us away from relying on gut instinct or assumptions, to accounting for social value in a consistent language that can be understood in a systematic way, valuing social outcomes is important for two main reasons:

- To communicate to others the value they are creating for their stakeholders
- To make better decisions through understanding where the most value is being created (or not) to improve and create more value.

7.1 Measured Outcomes

This section outlines the nine outcomes monetised in this SROI analysis. Table 5 describes each outcome and provides reasons as to why each outcome is included, i.e., what stakeholder perceived as important to them.

Table 5. Stakeholder outcomes and rationale for inclusion

Stakeholder outcome	Rationale
Food donors	
Outcome 1: Increased awareness of food waste and changing in-store practices	This outcome was considered relevant because of increasing requirements on food donors to manage food waste better. All food donor participants noted how involvement in food rescue had promoted food waste awareness and practice shifts in their organisation.
Outcome 2: Reduced waste removal costs	This outcome was considered relevant as all food donor participants noted it. This outcome will become increasingly important as the waste levy fee rises from $ 10 per tonne (at the time of research) to $60 per tonne from 1 July 2024.
Outcome 3: Reduced environmental impact	This outcome was considered relevant as all food donor participants mentioned it, with some noting they are already changing practices to address environmental impacts, either because of policy requirements, social demands, or the perceived importance to their business.
Outcome 4: Increased reputation of doing social good	This outcome is connected to outcome 3. While not every food donor participant specifically identified this outcome, all noted the importance of 'giving' back to communities somehow. Food donor participants expressed the connection between 'giving back' and reputation in different ways – for

	example, as an essential part of their organisation's values, to maintain their social licence, or through sustainability reporting and marketing.
Food rescue volunteers	
Outcome 1: Increased social connection and community participation	All volunteers identified this outcome as important to them.
Outcome 2: Increased sense of satisfaction through helping others	All volunteers identified this outcome as important to them.
Recipient organisations	
Outcome 1: Increased organisational capacity through access to free food	All recipient organisations identified this outcome as important to them. All recipient organisations described an inability or reduction in their capacity to operate and achieve impact without food rescue.
Food recipients	
Outcome 1: Increased free access to a variety of food	All food recipients identified this outcome as important to them.
Outcome 2: Increased connection to social support services	Most food recipients described this outcome. Food rescue staff, volunteers, and food recipient organisation participants identified this outcome as important, specifically how food rescue had increased their ability to connect with food recipients and provide greater support.

The qualitative approach of this report identified an extensive range of 'secondary outcomes. Although this SROI analysis does not include them, they hold value in telling the broader story of food rescue. Future considerations recommend administering the questionnaire in Appendix F to I to determine the secondary outcomes' relevance. The final section of the questionnaire, 'Importance of outcomes,' serves to understand the relevance of secondary outcomes.

7.2 Valuation Approach

This section of the report outlines the valuation approaches employed to value the nine material outcomes identified by the stakeholders in this SROI analysis. It focuses on the indicators used to measure each outcome and the representative value. Indicators employed in this SROI analysis are all subjective, based on participant reports of the outcome occurring. Monetary valuation techniques were then employed to value each outcome as money is a common social construct used to represent value in the context of an SROI analysis. Two valuation approaches were used to obtain market prices, representing the value of change perceived by each stakeholder outcome:

- **Cost-based approach** – considers the market trade-offs (or costs avoided with maintaining a change in an outcome). Different techniques include replacement costs, opportunity costs and potential cost savings. For example, the cost saving to the environment as a result of offset carbon emissions by food rescue organisations diverting food from landfill.
- **Revealed preference approach** – examines how people reveal their preference for goods and services through market production and consumption and the prices given to these goods (explicitly or implicitly). A technique includes substitute pricing. For example, the revealed cost for recipient organisations not having to collect, store and sort rescued food themselves.

Secondary research was employed to obtain financial values, which included government documents, databases, and consultations with experts. In addition, outcomes and financial proxy values were drawn from the three key food rescue reports referenced in Section 3.4. Given the novelty of SROI evaluations in Aotearoa New Zealand, particularly for food rescue activities, obtaining precise financial proxies was challenging. All selected financial proxies were contextual to Aotearoa New Zealand. When deciding between varying financial proxies, the most conservative proxy was selected. To avoid the SROI principle, '**do not over-claim'.**

Table 6 presents the employed valuation technique and subsequent outcome value (financial proxies). The full impact map detailing the financial proxy sources and calculations is in Appendix E.

Table 6. Outcome valuation

Stakeholder outcome	Indicator and source	Valuation technique	Financial proxy value
Food donors			
Outcome 1: Increased awareness of food waste and changing in-store practices	Participants reporting an increase is awareness around food waste leading to changes in in-store practices through interviews	Cost based (replacement cost)	$11,718
Outcome 2: Reduced waste removal costs	Participants reporting a reduction in waste removal costs through interviews	Cost-based (potential cost savings)	$13,343
Outcome 3: Reduced environmental impact	Participants reporting a reduction in environmental impact through interviews	Cost based (potential cost savings and damage costs avoided)	$104,904
Outcome 4: An increased reputation of doing social good	Participants reporting an increase in their reputation of doing 'social good' through interviews	Cost based (replacement cost)	$1,391
Food rescue volunteers			
Outcome 1: Increased social connection and	Participants reporting an increase in social connection	Revealed preference (substitute pricing)	$114,949

community participation	and community participation through interviews		
Outcome 2: Increased satisfaction through helping others	Participants reporting an increased sense of satisfaction through helping others through interviews	Revealed preference (substitute pricing)	$120,475
Recipient organisations			
Outcome 1: Increased organisational capacity through access to free food	Participants reporting an increase in organisational capacity through access to free food through interviews	Cost based (potential cost savings)	$1,601,977
Food recipients			
Outcome 1: Increased access to a variety of free food	Participants reporting an increase in free access to a variety of food through interviews	Revealed preference (substitute pricing)	$7,382,297
Outcome 2: Increased connection to social support services	Participants reporting an increased connection to social support services through interviews and testimonials	Revealed preference (substitute pricing)	$440,836
Total			**$9,791,890**

The best time to implement the following recommendation would be in between the qualitative stage (stakeholder interviews) and the quantitative stage (stakeholder questionnaires). Additionally, engaging with stakeholders to establish objective indicators and confirm subjective indicators aligns with the SROI principles '**involve stakeholders'** and '**verify the results',** to gain confidence in whether the outcome has occurred and to what degree.

Recommendations for future valuation of outcomes identified in this SROI analysis include:

- Consider including a combination of objective and subjective indicators when measuring the occurrence and scale of an outcome. Examples of other objective indicators could include:
    - Counting and quantifying any new practices food donors undertake through involvement in food rescue
    - Quantifying the difference in waste removal costs for food donors before and after becoming involved in food rescue
    - Counting and quantifying the number of additional people food recipient organisations can reach through access to rescued food (i.e., before and after measure)
    - Counting and quantifying the number of additional people food recipient organisations can connect to social support services through access to rescued food (i.e., before and after measure).
- Consider including non-monetary valuation approaches to understand and represent the value of outcomes. The most common method for non-monetary valuation is

'weighting', which includes two options: 'equal weighting' and 'unequal weighting'. Appendix F-I includes questions where it asks the stakeholder to rank in order of importance the changes they have experienced (equal weighting) and to state how important each outcome is in relation to one another (unequal weighting).

The best time to implement the following recommendation would be between the qualitative stage (stakeholder interviews) and the quantitative stage (stakeholder questionnaires). Additionally, engaging with stakeholders would establish objective indicators and confirm subjective indicators, aligning with the SROI principles '**involve stakeholders'** and '**verify the results'** to gain confidence in whether the outcome has occurred and to what degree.

7.3 Establishing Impact

To accurately estimate the three cases study's value created through food rescue activities, it is important to establish how much value created can be attributed to the organisation's activities. Following the principle 'not-to-over-claim', valuation filters or adjustments (SROI filters) were applied to the financial proxies for each stakeholder outcome. The SROI filters are as follows:

- **Deadweight** – the extent to which an outcome would have happened regardless of the organisation's activities
- **Attribution** – the assessment of how much of the outcome was caused by the contribution of other organisations or people
- **Displacement** – the measure of how much of the activity displaced outcomes that would have happened elsewhere
- **Duration –** how long an outcome will last after the intervention
- **Drop off** – the deterioration of an outcome's value over time.

Deadweight

Deadweight, measured as a percentage, estimates the value that could happen regardless of a particular programme or organisation's activities. That percentage is then deducted from the total quantity of the outcome to establish a particular programme or organisation's contribution to the outcome. Deadweight assessments can help inform strategic decisions in determining whether an organisation is pursuing objectives that add value to society. At an operational level, deadweight assessments can also help identify areas that could be unique 'selling points' for an organisation. To better understand what might have occurred even if food rescue activities had not occurred, participants were asked during interviews, "What would happen if food rescue didn't exist?". Based on stakeholder responses and conservative estimates from the research team, the following deadweight percentages were established for each stakeholder outcome, presented in Table 7.

Table 7. Deadweight proportions and rationale

Outcome	Deadweight (%)	Rationale
Food donors		
Outcome 1: Increased awareness of food waste and changing in-store practices	30%	Feedback from respondents indicates that many staff would experience increased awareness of food waste in their workplace. Nevertheless, interested staff members could also seek information outside the workplace, particularly given the increasing focus on climate change.
Outcome 2: Reduced waste removal costs	5%	Interviews indicated that reduced waste removal costs strongly correlate with food rescue activities. The deadweight figure of 5% is close to the SecondBite SROI report, 2013 (0%).
Outcome 3: Reduced environmental impact	15%	Interviews with food donors indicated that the overwhelming majority of 'surplus food' would end up in landfill if food rescue activities did not happen. Deadweight is calculated at 15% to allow for food that is not fit for human consumption that may go to animal stock feed. This is a conservative estimate when compared with other SROI reports: Council for the Homeless Northern Island (CHNI) FareShare SROI report (2014), 10%, SecondBite SROI report (2013), 0%.
Outcome 4: Increased reputation for doing social good	60%	Food rescue plays a vital part in food donors' sustainability practices, influencing brand and reputation. If food rescue did not exist, food donors may find alternative approaches to achieve their sustainability goals. However, there are a few examples of community initiatives that food donors could undertake that would help reduce food waste on a sizeable scale while simultaneously addressing food security issues.
Food rescue volunteers		
Outcome 1: Increased social connection and community participation	20%	The figure, calculated as 20%, is based on feedback from food rescue volunteers acknowledging that volunteers may seek social connections through social or volunteering activities other than food rescue. This figure considers a similar outcome deadweight in the CHNI FareShare SROI report (2014), 20%, and the Incredible Years Parenting (IYP) SROI report (2019), 33%.

Outcome 2: Increased sense of satisfaction through helping others	15%	While volunteering, in general, can enhance well-being and feelings of satisfaction. Comments from volunteers suggest that the context of volunteering in food rescue is especially significant, e.g., the tangible ways in which help is provided; the sense of solidarity working closely with others; the sense of satisfaction from tackling both waste and food poverty. This figure considers a similar outcome deadweight in the CHNI FareShare SROI report (2014), 25%.
Recipient organisations		
Outcome 1: Increased organisational capacity through access to food	5%	All recipient organisations rely heavily on food rescue organisations as a food source. However, if food rescue did not happen, some community organisations might source alternative funding through government grants to purchase food. This figure considers a similar outcome deadweight, in the SecondBite SROI report (2013), 0% and CHNI FareShare SROI report (2018), 35%.
Food recipients		
Outcome 1: Increased free access to a variety of food	20%	Many community organisations rely heavily on food rescue organisations to meet their clients' needs for fresh, nutritious food. Nevertheless, some food recipients could seek food from family, friends or community meal-providing organisations that do not receive rescued food. This figure considers a similar outcome deadweight in the CHNI FareShare SROI report (2014), 30%.
Outcome 2: Increased connection to social support services	10%	Some recipients may become more aware of social support services through their own efforts or connections to central government support agencies – the Ministry of Social Development. This figure considers a similar outcome deadweight, in the FareShare report (2018), 5%, and IYP SROI report (2019), 27%

Attribution

Attribution involves assessing how much of an outcome was caused by the contribution of other organisations or individuals (e.g., family members), or it could be something about an individual's circumstances, such as their health or financial resources. This leaves the portion of outcomes for which a programme or organisation's activities can take credit. Understanding attribution helps to identify and understand other (internal and external) stakeholders that contribute to any outcome change and can highlight areas for potential collaboration with other stakeholders.

During the engagement process, the stakeholders discussed other agencies and individuals that had played a role in the changes they experienced. When establishing attribution, these different contributors were considered in the research teams' final decision to discount the value of their contribution. Table 8 presents the attribution proportions for each stakeholder outcome.

Table 8. Attribution proportions and rationale

Outcome	Attribution (%)	Rationale
Food donors		
Outcome 1: Increased awareness of food waste and changing in-store practices	10%	This attribution figure includes the influence of individual staff members' previous knowledge of food waste, the influence of growing customer expectations regarding food waste and central Government expectations of climate change.
Outcome 2: Reduced waste removal costs	5%	Based on interviews with food donors, attribution is estimated as 5%, which relates to Government interventions to reduce waste to landfill reflected in increasing waste levy fee up to $60 per tonne from 1 July 2024; financial pressure on food donors to reduce costs in an unsettling economic environment. This figure is close to the SecondBite SROI report (2013), 0%.
Outcome 3: Reduced environmental impact	10%	Based on interviews with food donors, attribution is estimated at 10%, which relates to other organisations or people that could have contributed to this outcome. E.g., individual staff championing waste reduction measures; government expectations regarding the need for action on climate change; increased customer expectations regarding food waste. 10% is in line with other SROI food rescue reports: CHNI FareShare (2014), 10%; SecondBite (2013), 0%.
Outcome 4: Increased reputation for doing social good	60%	Food rescue plays a crucial role in many food donors' sustainability programmes. A range of factors can be attributed to an organisation's reputation for doing 'social good'. Attribution is estimated as 60% recognising the likely influence of factors such as other organisational initiatives undertaken to promote business sustainability.
Food rescue volunteers		
Outcome 1: Increased social connection and community participation	15%	Attribution is estimated as 15%, which relates to support from family or friends and involvement in other social and volunteer activities.
Outcome 2: Increased sense of satisfaction through helping others	15%	Attribution is estimated as 15%, which relates to involvement in other social and volunteer activities, work and influence of family and friends.
Recipient organisations		

Outcome 1: Increased organisational capacity through access to food	5%	Interviews indicated that most recipient organisations relied on food from food rescue organisations, with few other sources providing access to large amounts of free food. This figure is similar to other SROI food rescue reports, embodying similar outcomes: SecondBite SROI report (2013), 0%. CHNI FareShare SROI report (2018), 10%.
Food recipients		
Outcome 1: Increased free access to a variety of food	15%	The attribution figure was based on interviews and secondary research. This figure relates to food recipients accessing food banks or other meal-providing organisations, although many of these organisations have a limit of uses per person. This estimate is in line with the CHNI FareShare SROI report (2014), 15%.
Outcome 2: Increased connection to social support services	20%	The attribution figure, estimated at 20%, relates to food recipients' involvement with social services (e.g., Work and Income, Oranga Tamariki, Ministry for Children). Nevertheless, many respondents acknowledged the vital role rescued food plays in fostering connection and resilience. Without the food, the connection is unlikely to occur to the same extent. This estimate is in line with a similar outcome reported in the FareShare report, 2018 (20%), and the IYP SROI report, 2019 (30%).

Displacement

Displacement is the transference of value from elsewhere due to its creation for a stakeholder. Based on stakeholder engagement, it is reasonable to state that the targeted activities of the studied food rescue organisations did not displace outcomes for any other stakeholders. In addition, food rescue addresses a unique gap in the food supply chain, providing confidence that for this SROI analysis, no displacement occurred (0%).

Duration and drop-off

Duration refers to how long an outcome will continue to generate value after the activity has stopped. Generally, the value of an outcome exceeds the length of the activity. In this case, most of the change's stakeholders experienced were directly related to the amount of rescued food distributed. Drop-off recognises that outcomes may continue to last for several years but in the future may be less. Drop-off indicates by what percentage the value of the outcome declines each year over time. For example, an outcome of 100 that lasts for three years but drops off by 10% per annum would be 100, 90 and 80 in years 1, 2 and 3, respectively.

As this is a 1-year forecast SROI, outcomes intertwined with the value of food are assumed to only last during the activities. Therefore, the duration of these outcomes is estimated to last one year (0%) is applied as the duration, and then immediately drop-off of (100%). The

SecondBite SROI report (2013) applied the same duration and drop-off weights to their three identified outcomes with the rationale that 'outcomes were immediate and would not extend beyond the activity'.

As with duration, accurate measurement of drop-off would require systematic surveys over more extended periods to establish a benchmark for comparability. For the four outcomes deemed to last longer than a year, it was, therefore, necessary to build an estimate of drop-off, drawing on material gathered from comparable SROI reports. Table 9 presents the estimated drop-off percentage and rationale for the remaining outcomes.

Table 9. Estimated drop-off and duration values and rationale

Outcome	Drop-off	Duration	Rationale
Food donors			
Outcome 1: Increased awareness of food waste and changing in-store practices	25%	4 years	These figures are an estimate, considering the drop-off percentage in the CHNI FareShare SROI report (2014) of 20% for food donor outcomes, related to staff viewing their engagement with CHNI FareShare as positive and increased staff volunteering.
Outcome 4: Increased reputation for doing social good	33%	3 years	Considering the time lag between what an organisation does and people's memory and sense of their actions, we estimate that a food donor would have approximately three years of reputational benefits from working with food rescue.
Food rescue volunteers			
Outcome 1: Increased social connection and community participation	25%	4 years	These figures are an estimate, considering the drop-off percentage in the CHNI FareShare SROI report (2014) of 20% for the volunteer outcome, 'increased opportunity to engage with colleagues and new friends resulting in improved friendships.'
Outcome 2: Increased sense of satisfaction through helping others	75%	< 1 year	Considering the unique context of a food rescue volunteer, we estimate that the increased sense of satisfaction would last less than a year once the activity stops.
Food recipients			
Outcome 2: Increased connection to social support services	25%	4 years	These figures are an estimate, considering the IYP SROI report (2019) drop-off estimate of 20% for the parent or caregiver outcome, 'feeling supported with access to other services.'

7.4 Considerations and Limitations of the Study

This study is not without limitations, to further verify and validate the mapped outcomes and establish the impact, separate questionnaires have been developed for each stakeholder group. The questionnaires could be administered to our wider stakeholders identified in the

stakeholder mapping process. The questionnaires were designed to verify and validate the mapped outcomes and establish the impact. The following questions should be asked for each outcome to further understand the value of change that is a result of the studied food rescue organisations activities:

- How much change would have happened regardless? (deadweight)
- Have the activities displaced outcomes that would have happened elsewhere? (displacement)
- How long do you think the outcome will last? (duration)
- Who or what else contributed to this change? (attribution).

For example, with assessing deadweight, for each material outcome, the stakeholders would be asked, *'How would X (e.g., your organisation's waste removal costs) have changed if you HAD NOT supported food rescue?'.* A five-point Likert scale - made it worse to much better - would be used to measure the deadweight.

To assess the expected length of time each material outcome lasts, stakeholders would be asked, '*How long do you expect the change (e.g., in waste removal costs) to last?'.*

For attribution, all stakeholders were asked to consider, 'Who or what else contributed to this change?' to discount the value of their contribution to bring about the material change. Some options will be provided through previous stakeholder. A five-point Likert scale - 'no impact' to 'major impact' - would be used to measure attribution.

Furthermore, the questionnaire contains questions designed to assess the relevance and significance of the changes experienced. For example, for each material outcome, the stakeholders would be asked, '*How has X (e.g., waste removal costs) changed because of your involvement in food rescue?'.* A five-point Likert scale - made it worse to much better - would be used to measure the extent of the change experienced.

In keeping with the SROI principle to 'value the things that matter', stakeholders are also asked to prioritise the importance of each primary and secondary outcome identified.
Applying these four measures, in the form of a questionnaire, will create a deeper understanding of the total net value of the outcomes and help to further abide by the principle – '**do not over-claim'.** The questionnaire asks all participants to select or rate the response they feel best characterises each outcome. To compare the four measures over time, conducting the survey at two different points in time is recommended, establishing a benchmark for comparability. For example, administer the survey to stakeholders in year one and then again in year 3.

The complete questionnaire for each stakeholder group is in Appendix F to I.

8. CALCULATING THE SOCIAL RETURN ON INVESTMENT

8.1 SROI Ratio

All the information set out in the previous sections was then brought together to calculate the impact and produce the SROI ratio for three food rescue organisations in Aotearoa New Zealand, representing the key AFRA food rescue models. The ratio is calculated by dividing the net value of outcomes by the net value of inputs or investment, of the three AFRA case studies.

The report was commissioned by AFRA. It focuses on three case study organisations representing the key food rescue models presently operating in Aotearoa New Zealand.

SROI ratio = Present value per value of investment

To ensure the impact of the three AFRA case studies is not overestimated, as explained in the previous sections the following components are all considered in the calculation of the final SROI ratio:

- **Quantity -** the number of stakeholders experiencing an outcome
- **Financial proxy -** the value of the outcome
- **SROI filters -** accounting for the proportions of whether the outcome happened anyway (deadweight), who else contributed to the change (attribution), whether the outcome displaced other activities or outcomes (displacement), and how long the outcome lasts for after the activity stops (duration and drop-off).

Table 10 presents the calculated SROI for the three AFRA food rescue organisations.

Table 10. Calculated SROI ratio

Total investment	$2,182,381
Total present value of benefits	$9,791, 890
Ratio of benefits-to-investment	**4.5:1**

The result of 4.5:1, therefore, indicates that for every **$1** invested in AFRA food rescue members (as evidenced by the three case studies combined), **$4.5** of social value is created in return.

8.2 Sensitivity Analysis

The SROI calculation is based on assumptions, and with assumptions come uncertainties. Thus, conducting a sensitivity analysis challenges the robustness of the assumptions, enabling the identification of any issues that significantly impact the result and how sensitive the SROI ratio is to changes in different variables. The sensitivity analysis allows for a confidence range to be calculated.

The sensitivity analysis explores the impact on the SROI ratio of changing some of the study's key assumptions. The variables tested included financial proxy values, number of stakeholders, and impact filters: deadweight and attribution.

The most crucial or sensitive areas of this SROI analysis encompass:

- **Food recipients** - increased access to a variety of free food (75%)
- **Food recipients** - increased connection to social support services (5%)
- **Recipient organisations** - increased organisational capacity through access to free food (16%).

Together the three outcomes outlined above account for 96% of the indicated value of social impact. Table 11 demonstrates the change in the current SROI ratio (4.5:1) when there is an overall change in the assumptions of the financial proxy values, the number of stakeholders and deadweight and attribution of the outcomes. Each variable was halved and doubled to test the SROI ratio change.

Table 11. Sensitivity analysis and confidence range for three outcomes

Stakeholder	Outcome	Factor chosen	Ratio when halved	Ratio when doubled
Food recipients	**Outcome 1:** Increased access to a variety of free food	Financial proxy	$4.1	$5.2
		Number of stakeholders	$2.8	$7.9
		Deadweight	$4.9	$3.6
		Attribution	$4.8	$3.9
Confidence range			**$2.8**	**$7.9**

Stakeholder	Outcome	Factor chosen	Ratio when halved	Ratio when doubled
Food recipients	**Outcome 2:** Increased connection to social support services	Financial proxy	$4.4	$4.7
		Number of stakeholders	$4.4	$4.7
		Deadweight	$4.5	$4.5
		Attribution	$4.5	$4.4
Confidence range			**$4.4**	**$4.7**

Stakeholder	Outcome	Factor chosen	Ratio when halved	Ratio when doubled
Recipient organisations	**Outcome 1:** Increased organisational capacity through access to free food	Financial proxy	$4.1	$5.2
		Number of stakeholders	$4.1	$5.2
		Deadweight	$4.5	$4.4
		Attribution	$4.5	$4.4
Confidence range			**$4.1**	**$5.2**

Overall confidence range	**$2.8:1**	**$7.9:1**

The sensitivity analysis produces a range of ratios from **$2.8:1 to $7.9:1.** Food recipient outcome one shows the most sensitivity when tested against the number of stakeholders who experience the outcome, signifying the outcome, 'increased access to a variety of free food' is strongly correlated to the number of stakeholders. The other variables, when tested against the three outcomes, produce ratios that mostly range from **$3.6:1 to $4.9:1.** This short range illustrates that the outcomes are not overly sensitive to change, deeming that the three food rescue organisations are responsible for much of the change—providing confidence in the financial proxies chosen and robustness of the SROI analysis.

9. CONCLUSION AND RECOMMENDATIONS

9.1 Summary

From the SROI ratio, based on access to available data, our best estimate shows that for every $1 invested into the three food rescue organisations, they generate $4.5 social return to their surrounding communities, positively impacting the twin issues of food waste and food insecurity in Aotearoa New Zealand. This ratio (evidenced by the three case studies) can be used by AFRA to generate reports to explain the value of food rescue to funders, investors, and boards.

It is important to note that an SROI analysis is a combination of the quantitative and qualitative data. While the SROI ratio is important, many stakeholder outcomes cannot be monetised. Therefore, when reporting on the findings it is essential to highlight the ratio and the results of the non-monetised outcomes. Stakeholder quotes provide a detailed description of the impact and value created for stakeholders. This SROI analysis suggests that food rescue organisations act as community connectors, enhancing collaboration by linking and supporting food donors, local community organisations, and people who use their services. Food rescue activities enable recipient organisations to increase their organisational capacity and extend their community outreach by freeing up resources spent on buying, sourcing, storing, and preparing suitable food. In essence, recipient organisations would not be able to achieve the impacts they do without the support of food rescue organisations. Having access to food at no cost also increases food recipients' access to a wider variety of food and helps foster connections to social support services. Food rescue activities reduce the volume of food sent to landfills and increase awareness of both food waste and food rescue, resulting in changes to waste management practices and positive reputation benefits for some food donors.

9.2 Using the Findings

This SROI report supports other research and evidence that shows the crucial role food rescue plays in reducing food poverty and reducing the environmental impacts of food waste. This SROI provides an initial benchmark for further analysis and refinement going forward. It will inform discussion and decisions for AFRA's strategic direction moving forward and, ultimately, the food rescue across Aotearoa New Zealand. The final and most critical stage of an SROI analysis is **reporting, using, and embedding** the research findings. In this section, we state key results from the SROI analysis through engagement with our key stakeholders and pose thought-provoking questions as discussion starters (Table 12). This activity aims to facilitate discussion and consolidate ideas to inform strategic planning and better decisions that best serve the food rescue sector and its members. The following questions focus on capacity building, stakeholder engagement, collaboration and technology and valuing food rescue.

Table 12. Questions for thought-provoking discussions

Capacity building
Through our research, we identified that different food rescue models had different strengths, e.g., ● Just Zilch – showcased success in rescuing perishable food from cafes and restaurants and distributing it in a retail fashion, empowering customers through the act of choice ● Satisfy Food Rescue – showcased successful coordination of a large geographical area to ensure those in the wider Canterbury region had access to food ● Good Neighbour – displayed great community engagement through the use of their community kitchen, bringing together, for example, volunteers, school children, and young parents around food. Question: *How can AFRA support local food rescue organisations to become diverse community enterprises that bring together food rescue, transparent food distribution, community kitchens, social cafes, education initiatives and partnerships, composting and other initiatives?*
Stakeholder engagement
Our research found that appreciated and well-cared-for volunteers are happy volunteers. Question 1: *How can food rescue organisations further add value, recognise and motivate their volunteers?* Question 2: *What are some volunteer initiatives that demonstrate this well, and what can we learn and adopt from these initiatives?* Additionally, we found that volunteers value doing something practical and 'good' in their community. Question 3: *How can AFRA support telling these volunteers' stories?* Our research found that many food companies are willing to engage in food rescue activities. However, these stakeholders are often time poor or do not have the know-how to connect with their local food rescue organisation. **Question 1:** *How can food rescue organisations work more closely with food donor staff to increase awareness and understanding?* **Question 2:** *How can food rescue organisations make the process as seamless as possible to incentivise food donors to donate to their local food rescue organisation?*
Collaboration and technology
Through our research, we found that all food rescue organisations embody their unique ethos, operating within their capabilities, which are in tune and tailored to their community needs. In contrast, international examples showcase standardisation across their country's food rescue models and are adopting technological interventions for a more centralised, dynamic and efficient system. Question 1: *How can AFRA support individual food rescue organisations to collaborate with national organisations or initiatives in a more standardised, efficient, sustainable, and economical way while preserving the unique features of place-based food rescue organisations?* Question 2: *How can technology be introduced to co-exist and support alternative, more cooperative models without adversely impacting the core values and ethos of existing food rescue organisations?*
Valuing food rescue
Through our research, we found that food donors, funders, investors, and other financial supporters are more likely to donate and support food rescue organisations when they understand the value of their donation.

Question 1: *How can we show the value of the relationships and connections that food rescue organisations foster?*
Our research also identified the critical role food rescue organisations play in shifting the perceptions around rescued food as 'waste' and the stigma towards those who receive this food.
Question 2: *How can AFRA support these shifts in perceptions around rescued food as 'waste', reframing the outlook to value surplus food?*

9.3 Final Future Considerations

Throughout the report, Sections 3.5, and 7.5 address study considerations and limitations. This section asks you to consider the former two sections and provides final recommendations on future study considerations for the integrity and credibility of the SROI analysis.

This forecasting SROI was undertaken during a national COVID-19 (delta variant) outbreak. Most of the stakeholders we spoke to were stretched and under pressure during the research timeframe. While we asked stakeholders to identify the most important outcomes of food rescue during interviews, we did not consider it appropriate to ask them to complete follow-up focus groups or surveys (ranking the scale and significance of identified outcomes) for quantitative materiality judgements associated with evaluative SROIs. Consequently, to pursue an evaluative SROI, we have identified future recommendations.

This forecast SROI creates a framework and benchmark ratio for future evaluation. This analysis could be repeated to measure the changes in outcomes over time due to food rescue activities and the new ratio compared to this forecast ratio. Two future developments could help address the limitations encountered in this SROI research.

Firstly, obtain more accurate and consistent data for food collected and distributed by food rescue organisations. Data consistency is a known issue throughout the NZ food rescue sector. AFRA has been working to remedy the inconsistency of metrics across the sector through the AFRA Impact and Data Project[17] by developing a shared Data Platform. The goal is to create a streamlined and consistent data measurement tool that AFRA food rescue organisations can use to measure the total amount of food rescued by food category. The volume of rescued food unsuitable for human consumption, the number of food donors, recipient organisations, volunteers, and operation costs. Future SROI calculations will better account for outcomes and impact due to this timely and vital work undertaken by AFRA.

Secondly, engage - with more food recipients to better understand the social value created by food rescue activities. Although engagement with food recipient organisations and some food recipients provided insight into the value food rescue activities create for this stakeholder group, as secondary outcomes, we cannot claim many of these outcomes as 'material'. We anticipate that further engagement with food recipients using qualitative and quantitative methods would shift the secondary outcomes we identified to primary outcomes. Thereby increasing the SROI ratio and, ultimately, our understanding of the value of food rescue organisations in Aotearoa New Zealand.

[17] Tong, D. (2021). Data and Impact: Phase One. Measuring impact of the Food Rescue Sector in Aotearoa. Aotearoa Food Rescue Alliance (AFRA)

APPENDICES

Appendix A. Stakeholder map – summary of identified stakeholder groups per case study in numbers

Stakeholder group	Donors			Food rescue personnel		Recipients	
	Financial	**In-kind**	**Food**	**Staff**	**Volunteers**	**Recipient organisation**	**Food recipients**
Potential sub-groups	Government grants Philanthropic Personal	Products Services	Supermarkets Hospitality Corporate	Managers Coordinators Administrators Specialists	Trustees Drivers Supervisors General (collecting & sorting)	Community Māori Food banks Meal providers Religious School Healthcare Social services	Anyone in long term or temporary need of food
SFR	9	10	11	5	35	35	1,100 per week
JZ	133	13	59	5	130	128	1,763 per week
GN	54	4	23	2	122	68	1,639 per week

Appendix B. Stakeholder inclusion and exclusion rationale

Stakeholder group	Rationale for inclusion
Food donors	Food donors provide food distributed by food rescue organisations directly to food recipients or indirectly through recipient organisations. The food these donors provide is critical to the function and operation of food rescue organisations. Food donors include supermarkets, cafes and restaurants, growers and farmers, and manufacturers, producers, and distributors.
Volunteers	Volunteers are responsible for collecting, sorting, and distributing food directly to the food recipients or indirectly through the recipient organisations. Other volunteer roles include Board of Trustees activities and supervisor roles.
Recipient organisations	Recipient organisations receive food through food rescue distribution activities and use this food to support people in need. Recipient organisations include community and social services, food banks, community meal providers, Māori, religious, schools, and healthcare.
Stakeholder group	**Rationale for indirect inclusion**
Food recipients	Food recipients receive food either directly from the food rescue organisation or indirectly from the recipient organisation. This analysis partially includes food recipients. Sufficient engagement would have required a high level of sensitivity and was beyond the resource availabilities of this analysis. Additionally, most AFRA members do not work directly with food recipients and providing the food by recipient organisations often takes place alongside other support. Recipient organisations also have complete control over how they use the food received. We engaged with a few food recipients, yet the majority were indirectly involved through the feedback and testimonials provided by the recipient organisations.
Stakeholder group	**Rationale for exclusion**
Staff	Staff are responsible for the food rescue organisation's ongoing operation, management, and maintenance. Staff roles include managers, coordinates, specialists, and administrators. Staff were interviewed as they have specialist knowledge about food rescue operations and often know about the impacts of food rescue experienced by other stakeholders. In this way, staff were treated as important conduits of information rather than a stakeholder who experienced material outcomes themselves from food rescue.
Financial donors	Financial donors financially support food rescue organisations, including corporate bodies, government, philanthropic foundations, and the public. Financial donors can vary in the length of time and amount they choose to support food rescue organisations financially; some are ongoing, and others are one-off. Financial donations and fundraisers are essential for the operation of food rescue organisations; we did not directly engage with financial donors for this analysis, but they are indirectly involved as a key input.
In-kind donors	In-kind donors provide goods and services to food rescue organisations, ranging from infrastructure (chillers, food storage facilities, vehicles and transport) to legal advice, marketing, and communication. In-kind donations are fundamental for the operation of food rescue

	organisations; for this analysis, we did not directly engage with in-kind donors, but they are indirectly involved as a key input.

Appendix C. Stakeholder interview guide

Date:	
Interviewee:	
Consent to record?	Yes or no
Background – personal or with [org]	• Would you like to tell me your story? • What do you do? • What is your relationship to [org]? • How did the relationship begin?
Inputs	• What do you invest or contribute into [org]? How much?
Outputs	• How many people do you serve? At what cost? • How often do you receive food from [org]?
Understanding what changes	• What changes do you see or experience in your life as a result of [org] activities? • Are they all positive? If not, what don't you like? • Has anything surprised you from your experience or work in food rescue?
Establishing impact	• What would happen if food rescue didn't exist? Would you or other people still experience these changes? (Deadweight) • Besides food rescue, does anyone else (organisation or people) contribute to these changes or outcomes you have described? (Attribution)
Valuing what matters	• How important are these changes or outcomes to you? Why? • What do you consider to be the most important change or outcome experienced because of food rescue? Why? • How much more important is [*outcome A*] in comparison to [*lowest ranked outcome*]? (ranking)
Other	• What do you get out of your involvement(personally) with [org] or what motivates you? • What do you think about the concept of food rescue? • Where do you see food rescue in the future?

Appendix D. Secondary outcomes **–** stakeholder quotes

Introduction

The research underpinning this SROI evaluation highlighted several secondary outcomes that emerged through stakeholders' experiences and stories. These secondary outcomes reflect the often-indirect flow-on effects of food rescue. We have not included these as primary outcomes with associated financial proxies in the SROI because.

- All stakeholders did not identify them for each sub-group
- There was not adequate information or evidence to identify 'chains of change' for each sub-group
- It was too difficult to allocate a financial proxy due to a lack of more comprehensive data or the holistic nature of the outcome.

However, these secondary outcomes are still important and provide valuable insights for the wider food rescue sector and associated stakeholders. In what follows, we illustrate these secondary outcomes using quotes from each group of stakeholders, food donors, food rescue volunteers, recipient organisations, and food recipients.

Stakeholder secondary outcomes

Food donors

- Increased community participation
- Improved staff morale
- Reaching (or fulfilling) organisational commitments to community engagement and sustainability goals.

1. Increased community participation
"What food rescue allows us to do is not only reduce the amount of waste that we're sending to landfill, which is obviously a very important thing not to do given the environment impact, but it also gives us a real tangible way to support those communities. We know that New Zealand has a bad food insecurity problem, and it is something that doesn't sit right with us" – food donor, GN "We have something called Make a Difference Day here at Zespri and it's a paid day of volunteering and a lot of staff like to choose Good Neighbour because they know that they're a partner of ours and they also know it is an easy way to give back. So, staff will often choose Good Neighbour for their Make a Difference Day and help in the food rescue area or their community projects" – food donor, GN
2. Improved staff morale
"A lot of it is about doing the right thing, it's helping people that aren't in a fortunate situation like us. I think that if you're able to help them, why wouldn't you? I guess the value is knowing that you are helping someone who are less fortunate" – food donor, SFR "I think it's the diversity of the people that I get to work with. It's cool to work for a company where you can create some meaningful support and change for communities, I love that part. And our store teams are awesome to work with. It's tough work, but it's also very rewarding" - food donor, GN

"It's great to help people that I know could probably see the produce go to a good home and be used rather than stay in the paddock or in some cases if it doesn't stay in the paddock, we used to throw the product out if it stayed in the chiller for a couple days. That is no longer the case, so it works well for us" - food donor, SFR)

"Volunteering honestly changes things, the feeling you get from doing that really inspires change" - food donor, GN

3. Reaching (or fulfilling) organisational commitments to community engagement and sustainability goals

"I feel like in general, now more than ever... corporate social responsibility is so important. I think Zespri unique, and that it does feel genuine. I know, I'm genuine about it and I'm the one executing it. But from the top down, our purpose is to help people, communities, and the environment, thrive through the goodness of kiwifruit, so, essentially that's our purpose and community investment directly links into that. And we back that, it's not just a token purpose, we do care about it. I think we are unique in that we do like to support local and support the Bay where we can, as well as the rest of the country... I think the genuine, authentic interest in it, and the care for our communities is important, and it does feel special to be a part of" - food donor, GN

"It ties in with social licence to operate, people don't just take making money anymore, you really have to be making money but if you're doing that you need to care about the environment and you need to care about people. I think that without social licence to operate, particularly like with the cancel culture and Gen Z is coming through, as well as everyone else, you get called out for behaviour like that now. A lot of people do it to tick the box and that's maybe where I see the difference is, I don't think Zespri is just ticking a box. Maybe when it was established, like. "We need to do corporate social investment, what are we going to do?"... Last year COVID obviously hit, no one knew it was going to happen, no one knew if our fruit was going to sell. The board, down to executive, they all had budget cuts across the company, we ended up having our best season, but everyone still had budget cuts and they gave us 50% increase in the community investment budget, specifically to help people impacted by COVID. It shows that's a genuine commitment" - food donor, GN

"We do have a decent project going of reducing waste to landfill, over the last couple of years. It is becoming more of a factor than it was before." - food donor, JZ

Food rescue volunteers

- Increased awareness of food insecurity and food waste.

1. Increased awareness of food insecurity and food waste
"I thought, wow, there is a huge number of needs in my community. And he's only the tip of the iceberg. And that kind of opened my eyes to the fact" - food rescue volunteer, GN "The need. I never realised how big the need is and how big it is growing. It has shocked me" - food rescue volunteer, SFR "The amount of food that is wasted, I wasn't aware of that, at all, prior to being [involved in food rescue]. People not wanting to make any effort to try, they've got all this excess food and they can't do a little phone call. The lethargy of those people, I suppose" - food rescue volunteer, GN "There would be so much waste, our landfills could be choker. I couldn't believe when I came here, it wasn't just the supermarkets that were [generating] the waste, it was factories, and people who are producing food because if the labels wrong they have got throw it out. It is just endless amounts of waste, and it was all going to the dump. Thank God we are saving that now" - food rescue volunteer, GN "The first time I ever heard the UN figures that a third of the food that is produced either goes to waste or is wasted, basically doesn't make it to human consumption. I was just floored by that, it's shocking and criminal really. It really resonated with me. I've always had a passion for food, I've always had a passion for sustainability and reducing waste." - food rescue volunteer, SFR "I'm surprised by the ridiculous amount of food waste that there is, estimates are about half to a third, globally" - food rescue volunteer, JZ

Recipient organisation

- Increased ability to provide suitable and nutritious food that models healthy eating to food recipients
- Increased ability to build trust with food recipients and alleviate the stigma associated with food insecurity
- Increased ability to meet food recipients' immediate food needs and provide other services that enhance their wellbeing.

1. Increased ability to provide suitable and nutritious food that models healthy eating to food recipients
"You look at the cost of good healthy kai these days, so I'm selective when I go through to Good Neighbour, I will opt out from having too many boxes or bread, cakes and biscuits and I've started to ask specifically for produce. So, making sure that there is support or a stream of kai boxes, but making sure that those are healthier options [with] more fruit and vegetables. As you know with the Māori population and obesity, cardiovascular and gout statistics... we know those statistics and we are trying to do our best to mitigate those by providing the freshest produce that we can pick from Good Neighbour, and not so much the processed kai, like packaged food" - recipient organisation, GN

"What we can give our guests now that we couldn't before is grocery items, fruit, veggies, bread, cereal, tinned food, and stuff. One of the guys said to me one night... "Tania I just love shopping here. I don't shop anywhere else for fruit and veggies, and I just shop at soup kitchen", so that's his groceries for the week"- recipient organisation, SFR

"About once every three weeks or a month we give out meat packs... meat is very expensive. We often give them fresh eggs from Satisfy, we will boil big pots of eggs and keep them hot and give them a couple of boiled eggs to take home, which is a great source of protein" - recipient organisation, SFR

"If you're at the point where you really need a food parcel, and your gluten intolerant, and you eat bread with gluten anyway because that's all that's there and now, as well as the problems you have that got you there, you've now been 'glutened'. It's nice to be able to provide food for people that enables them to make their lives better instead of being part of the problem that they're trying to solve" - recipient organisation, SFR

"Some kids go to school with chips, it is rubbish, they live on cheap not nutritious food. Some of the food that Just Zilch has is good nutritious food, like yogurt, in season apples and eggs. You get the seasonal stuff. They're getting good nutritious food that otherwise would be going down the drain" - recipient organisation, JZ

"It is nice to give them something that they appreciate, and they appreciate it like it's a gift. Last week, Just Zilch called and said that they had heaps of yoghurts, we got like 600 yoghurts, and we were able to give it to each kid, so each kid had about two or three yoghurts. If it is something like that, we can go take them into class, give them a spoon, and they sit and eat" - recipient organisation, JZ

2. Increased ability to build trust with food recipients and alleviate the stigma associated with food insecurity

"At the beginning, it was a pride thing, a lot of whānau didn't want to take the kai boxes because it gave them the feeling that they were down and out, and that wasn't our intention. Now, we are noticing that those whānau that have been receiving boxes don't necessarily ask us for boxes, but they're starting to keep an eye on other whānau's that might need support in that space" - recipient organisation, GN

"In [Covid response] level four we were dropping food off at people's houses, some of these people were very isolated because they live by themselves. To not be able to come to soup kitchen for weeks on end in levels three and four, and some of them may have compromised health and don't feel great to go out to the supermarket to buy food. In some ways, we were probably their one contact in a week where they would open the door to us and we'd stay back two metres, put the food on their doorstep and have a chat to them five or 10 minutes. They loved that because they didn't have to go out to the supermarket where they felt unsafe and just that human interaction with them" - recipient organisation, SFR

"We have a real kaha/strength around any doors, the right door. For some whānau they'll come to Just Zilch and for some they won't. That will be for a whole range of reasons, they might be too whakamā/shy, they may not have transport, they just may not do it. Through a partnership with Just Zilch, we're able to support whānau to access food in a way that we will do the outreach and while we're visiting whānau**,** we can understand the need. We work with the likes of Rebecca to get access to food and then get it out to find whānau and capture those numbers and what we're doing" - recipient organisation, JZ

"I think for the most part, they do feel comfortable coming to collect the food. I think they find comfort in that group mentality because it's quite an organised system, the students will typically line up, and they'll take turns coming through to get something. From a psychological point of view, I think there is that comfort in knowing that there's people who are in a similar situation and you can all kind of hide in amongst each other. Also, without us putting up more barriers by not asking them, "What's going on - Why do you need this food?" That's the whole point of our job is to try get rid of those barriers for them to access the food or access the help that they need, to carry on studying with us" - recipient organisation, GN

"I think it also teaches the children that there's no stigma attached to it, and that the people that give it to you are smiling and happy and it's important. On a Thursday, during the holidays, one of the ladies who comes and picks up, brings a couple of her grandchildren. They are quite young, like seven, and they just love it. She'll give them tasks to do, she will give them apples and say, "Put three apples in that box - that box is for a family that has two children what do you think the children will like?" She's teaching them" - recipient organisation, SFR

"They're all a bit embarrassed. I will ask "Does mum want some eggs with the bread", and they will run over to the car and ask. The other thing we see at the pop ups is that the more senior primary school students will take food home for their family, they're being providers, which is a healthy thing for a child to learn, that it's okay that there isn't a lot of food at home, but I can take home what we need to make dinner" - recipient organisation, SFR

"The other day, I took food to a house [where] the members of the household have affiliations with one of the gangs here. But it strips everything back when you turn up, I don't have to be anyone but myself where else would they meet a white woman, I said to them, "When I was driving around, I was thinking of you, can you take some milk?". I had little bottles of milk and so many packets of sausages, who's going to turn down somebody who's coming in with kindness, it blows people's minds, it brings the guards down. How do we reach needy people, it's through generosity" - recipient organisation, JZ

"Sometimes people are embarrassed having to take food, so if you do not say anything it is much better. They feel like they're beggars but they're not they're just ordinary people who are going through life" - recipient organisation, JZ

"Like I said earlier some are a bit whakamā/shy. Just Zilch is opposite Boys High if kids are there with their whānau there can be some stigma about being there. Across the spectrum you have very wealthy whānau and then whānau that are struggling, I know that Rebecca is working on it all the time, how to keep the lines down and open earlier and looking at more strategies for how we can do it in a way that doesn't discourage whānau. Some whānau may struggle to line up for a whole range of reasons. Sometimes you hear comments from whānau that don't need to access about it, the stereotypes. You're working around that, you're trying to navigate that to support whānau to understand that, at times, whānau will have some challenges and supporting them to have access to those essential resources, supports the wellbeing/mauri ora of them and their babies" - recipient organisation, JZ

"I know that Just Zilch works hard to close that gap, but it is in the mindset of what free food is all about. That needs to change because have we all stood up as a society and said no, we're going to have zero tolerance to food waste, just imagine our society, how much healthier we would be, how much more connection we would have. Where on earth could you bring all different parts of society together making the most of food that would be wasted otherwise? How many more

people could we help with our resources, if we had our basic needs met. It boggles my mind" - recipient organisation, JZ

3. Increased ability to meet food recipients' immediate food needs and provide other services that enhance their wellbeing

"Over the last three years, we've helped three, four people from living in a camp, get into social housing, just through connecting them with the right connections and saying, "Listen, this person needs help". So that's what we try and do, but it's all about building trust. You know, we go down there, and it's not just a handout of food, we become friends, and we become part of a bubble of that community. I use my networking skills of all the contacts that I've got, whether it be through Waimakariri Council, the Hope Community Trust, the Baptist Church, Satisfy Food Rescue, to think "Okay, when this person opens up to me, and I hear their story what I can do to empower them to improve their situation?" - recipient organisation, SFR

"What I love about this [using rescued food] is that it is wraparound so we can offer people budgeting advice or refer them to a counsellor. If you can deal with some of those things their life is going to be so much better, instead of carrying whatever burden around with them" - recipient organisation, SFR

"A family that we've known on and off for probably five years, who will try and get whatever they can from wherever they can. We got to the point where we were constantly declining help, because they would not choose to connect with the financial mentor and service, even though it is all free and they are amazing people. So, we had to keep declining, WINZ kept declining them food grants, they didn't want to connect, that means that we can't "hand on our heart" continue to support when the community are funding us and giving us food and the money, to continue to give it to people who don't want to engage. So, this has gone on for years, and they would go to every single charity, everybody knew them. We were never saying they didn't need help; we're not saying you don't deserve help, but we need you to do a few things in return. The budget advisor phoned me yesterday and now they're connected, and she said she is stoked, they have such a good plan for the family to get on top and make a change. Today we've given them a top up parcel, a whole week's groceries, and we're going to restock their pantry so that food is not an issue for the next few weeks, while they start making changes to how they live" - recipient organisation, GN

"So, I guess it's just creating awareness around what supports are there, also something that's changed, is there were a lot of people that weren't on our radar, that are now on our radar, fully registered, accessing services. Also breaking down those barriers to want to ask for support. I don't think there's a measurable, like back in 2019, we had this whānau that received their first kai box and now two years down the line they are financially stable, there's no measurable [statistic] to get that. All I'm saying is that the measurable that we are noticing is that whānau are now aware of the support that is there, and if it's not needed for them, they are passing that information on to the next whānau. That's all about accessibility, and more whānau reaching out for support. That would probably be one of the biggest changes I have noticed" - recipient organisation, GN

"Good Neighbour came across our radar as soon as we went into lockdown 2019. We knew that we needed to find avenues of support for whānau because most of our cliental are Māori, a lot of that percentage are low income. What happened was whānau weren't working during those lockdowns and we thought if we establish a relationship with GN we would not only have hygiene packs for our vulnerable whānau, like our elderly, we would be able to check in on whānau by

delivering kai. We were able to check in and what we would call that kanohi ki te kanohi, that show of face, to let whānau know that we were still fully operational, and we were still here as an arm of support for whatever those needs were. So that's the nature of the relationship, it started with a need and what has happened is that it has evolved into this beautiful working relationship, which gave us awareness of all the other services that they provide, naturally, we linked into all of those services. We've also got a two-way relationship, when Good Neighbour's network needs anything from us, we're marae-based so we help them with wananga and providing a venue to learn Te aka Māori, Te Tiriti o Waitangi, and give them a taste of our realm, too. It's a give-give relationship here" - recipient organisation, GN

"We use our Breakfast Club and our Thursday days when we give out Good Neighbour food as another way to connect and to make sure and reassure the students that it's okay to come here, it's okay to use this, please do it, please spread the word. We always have our antennas up to see what's going on with the students. First, we look at body language, what's going on there and then we tune into the students that we know of, and we get to know them through, one, that they're struggling with their studies because we heard from the tutor or from other students. So, we tune into those students, and we get to know who they are, and to know them better. These are times our Breakfast Club and our Good Neighbour Thursday, we tune in and we use that as a tool to connect more" - recipient organisation, GN

Food recipients

- Reduced financial burden and greater ability to allocate finances towards costs other than food
- Reduced stress and anxiety
- Increased community participation (including job prospects).

1. Reduced financial burden and greater ability to allocate finances towards costs other than food

"I would come to Just Zilch as a customer when I first moved to Palmerston North, we used all our money moving and we didn't have much money left over. Both my husband and I aren't fit for work, I have mental health issues, and he has back issues. [Just Zilch] helped us out a lot, because it saved us buying bread because we were on the borderline here. It wasn't long that we had moved into our house that I lost my job, and we were struggling trying to buy the bread. If it wasn't for Just Zilch, it would have meant struggling trying to find bread" - food recipient, JZ

"A lot of people would be worse off, maybe not starving but I know there was a lady that used to walk here every day and she did that for a year until she saved enough money from coming here that she could buy a car, once she had a car, she could get a job because she lived out of the way" - food recipient, JZ

"My daughter goes to gymnastics; I've got five kids and my two youngest kids do sports now. If we want to go to the beach and wanted to catch the train which is $3 a person but we've got five people in our family so it adds up, but we can because of Just Zilch. It's hard to put a quantity on these things but not having criteria and helping people determine their own need means that, I've got car insurance now, if my windscreen gets chipped, I can just get it fixed. I can tell you from having no car insurance and having my windscreen get chipped now I owe WINZ a whole lot of money but it's not like that for me anymore" - food recipient, JZ

"The biggest thing for us is trying to help supplement that income that [food recipients] are getting, recognising that they are not getting enough to meet the accommodation costs, food, for a lot of our students who are parents, so food for themselves and their kids. You also must consider the cost of travel to even get in here, it's about trying to supplement that, so they have got a little bit extra to play with every week" - recipient organisation, GN

"Tauranga is one of the most expensive places to live in this country, for a lot of the people they can't afford rent, so how can they afford food. It helps alleviate pressure on people, it allows them to spend money on other things that they wouldn't be able to otherwise. I think it's incredibly valuable" - recipient organisation, GN

"With rent being so high, I wonder how people can survive. In Palmerston [North] places have gone up to $400-500 a week, what sort of wages have you got to make to buy food, run your car, send your kids to school, that is a fortune these days too. To be able to have some free food might just be that little bit that helps them over the edge" - recipient organisation, JZ

"All it takes is one car bill or spend too much on power over the winter and the only place that money can come from is food budget, so they end up with no food that week. We have a delivery option, I've been with Jackie when she's delivered to a young mum who had no food, the pantry was completely empty. It's good to be able to help people when they're at that point and you know that they are going to have food for the next at least three to four days and it gives them that little opportunity to apply for WINZ or to find other solutions" - recipient organisation, SFR

"This [food recipient] said to me today, I think he's been [coming] over two years, "Since you guys have been coming, I have been able to put money aside that I haven't spent on food and now my cars legal. I've got a warrant and a registration". He said, "It feels like my life is coming on track". He wouldn't be able to get his car registration and warrant if it wasn't for the food that we had given him because he wouldn't have been able to put money aside that he would normally spend on food" - recipient organisation, SFR

"The comments we've been having are like, we get a bit of bread, and it means we can buy Johnny a birthday presents this year" - recipient organisation, SFR

"We had a grandma pick up a banana box full of surplus and said, "Can I tuck this under the table, I can afford to go and pay the school fees now". She came back afterwards and took her groceries home" - recipient organisation, SFR

"It could be the difference between, being able to heat the house a bit better that week in winter, which means that one of the children or the parents don't get a cold, which means that there's no time of work or school. There are those impacts as well" - recipient organisation, SFR

2. Reduced stress and anxiety

"I don't have to worry about [food insecurity], it was like an unconscious kind of anxiety, it is low level all the time. I know that if it was that way for me, I'm not special or different or [more] challenged than anybody else, then more than likely it's like that for a lot of people out there. These needs don't get addressed by your average food bank, your traditional food security organisation. I think it would be very sad place if Just Zilch stopped working" - food recipient, JZ

"Stress levels go right down. What we see every single day are people arriving here quite anxious, and they're leaving with a huge sense of relief, that's priceless. It doesn't solve all the

problems in the lives, but it's one big problem that's right there in your face, especially if you've got children, that is immediately solved. We're aware that we can't change everything, but we can certainly change that fact" - recipient organisation, GN

"It's not just the help that we're giving the children, it's the knock-on effect that it has to the extended whānau. Mum and/or dad are less stressed because the children have eaten so that [they're] are not playing up. They can go to school knowing that the kids have had breakfast, and it's now meant they have been able to pay the electric bill. It's made life easier and more stable for families" - recipient organisation, SFR

"What I say there, is for example, during school holidays and lockdowns, we know that there are single mamas in our community who may have three or four children, we know that they're doing okay with these kai boxes because when your kids are home, that's all they do is consume food. I will tell you that the financial strain, that mental health relief, because with financial struggles comes mental health issues, that feeling of not being able to provide enough kai for your whānau at these times, really impacts your wairua, your spirit" - recipient organisation, GN

"I think when people have got food, when they haven't had food, it can lift your spirits, it's not worrying about having food at home, perhaps their demeanour with their families and children is improved. Maybe less opportunity for grumpy mums to be telling off the children or grumpy dads coming home from work knowing that money's tight, and they are not able to have what they need. But that food parcel is there, that it just gives them a moment of light relief, to not have to worry and then hopefully connect to the family. They get a moment where they don't have to worry about that right now" - recipient organisation, SFR

"To remove that one issue and be able to support whānau to have access to kai, that's going to enable their children to eat or their whānau to have food. The ripple effect of that means you don't have those same stresses sitting in that space" - recipient organisation, JZ

"I think food is probably the highest need. My job is to make sure kids have their basic needs meet. Without food, a lot of my family's stress levels are high, and food seems to always help bring that down a bit. I would say it's my highest need. Food, grief, and loss and obviously trauma as well. I think, for my parents in the communities that I work their biggest worry is food and feeding their kids" - recipient organisation, JZ

"[Food recipients are] incredibly grateful. From my perspective, it's such a small thing to do, but they are incredibly grateful, especially when they see treats like, banana milk, or biscuits, or apples, chocolate, oh my gosh, chocolate for them is the best thing ever. I will get comments like, "This has made my day, I have had the shittest week, thank you so much" - recipient organisation, GN

"A lot of the feedback [from food recipients] is - "this is more than expected", "we can't believe it", "you won't believe what this meant to this family", and they've got all sorts of different scenarios. For the end user, for the people it goes to, it's huge for them. The worry, the stress, it's taking that away from them. Those are typically what we hear back around the generosity, around the unexpected, I often say the generosity breaks people open" - recipient organisation, GN

3. Increased community participation (including job prospects)

"If they could see how many of our students graduated, and who have been recipients of the food that they're given last us, it would be massive. It would be an overwhelming number of

students who I would argue make it through their course because of the food that's provided" - recipient organisation, GN

"And from there the gratitude that you receive and the awareness of where that kai is coming from, they are starting to come forth and volunteer for different projects at GN. There are the firewood deliveries, or accessing firewood, that is another service of GN. You'll see a lot of whānau that don't even have fireplaces or haven't got a referral, wanting to jump on board and help there. That's a nice change too" - recipient organisation, GN

"It is a reciprocal relationship; we recognise that we take food from Good Neighbour, and it is nothing but benefit to us and our students. So, once a year we go back to Good Neighbour and volunteer there, recognising that their work is invaluable for us. Then that comes back around, and you see it when our students go back and help there or going to similar organisations, it always comes around in a circle" - recipient organisation, GN

"Our students volunteer there now too. There's probably about half a dozen that volunteer there because they have used it heavily and now volunteer back there. Also, some of our courses go there and help as well. They've got another part of Good Neighbour in the food area, which is more of a social area, to get them talking with other outside clients, not from here. There are barbers that go there and cut hair, that's another way they give back as well" - recipient organisation, GN

"Some of them [food recipients] have been encouraged to seek employment and try to either study or get a job whereas they weren't that motivated to do something like that before" - recipient organisation, SFR

"There's a gentleman that's been coming for a long time, I've known this person for years. He's always been a bit of a victim... Last week, I saw walking up the driveway, and he had a bunch of flowers behind his back. The day before he had bought Sandra, who's in charge of the garden, a cup of coffee and a biscuit from the coffee cart. She said this lockdown, he's realised how important that garden is and is starting to give back, it's his way of expressing it. It's taken 10 years of people welcoming and investing. Sometimes we want results quickly but that is not going to happen. I see that as a win" - recipient organisation, SFR

"We've actually had people coming into our shop, big businesses that we work with, come in and hired some of our volunteers. Not very often, but it has happened. And for people for whom employment is not possible - due to a myriad of reasons - we find out a way for them to contribute to community and to feel satisfaction. There's a lot of valuable emotional, mental things that come from being engaged in work, which are not that accessible for people who, for instance, might have physical, mental disabilities or trauma" – food rescue volunteer, JZ

"I remember one guy was referred to us by Work Bridge which is like a work brokerage, helping people to get work. He has never officially been diagnosed as on the spectrum, but he has tendencies that would indicate he is on the spectrum. And that he's apparently too old to be diagnosed because he has so many coping mechanisms. So, it's kind of dumb, because that means he doesn't get the funding [that] he could otherwise get. He had never at age 40, never had a full-time job. So, coming to Just Zilch was amazing for him, was the first kind of permanent thing... because we're a place that has no judgement, and no criteria and all that stuff that doesn't just apply to our customers, it applies to our volunteers as well. And that's been an important thing. And so, seeing the change in him, seeing his confidence lift, he wasn't confident in talking to people at all. So now he's confident. He got his first job at 40. And just

seeing the change in him has been phenomenal. Like, for a lot of people [working in food rescue] will cause change, but I guess you don't always see them as starkly. For him it's been a complete life change. And a large part of it has been because of Just Zilch. There are other people who you see gaining confidence but they're younger, they're growing up. And so, you know, Just Zilch is part of it but there are a lot of other influences. Whereas at one point Just Zilch was the only he was involved in, outside of home" - food rescue volunteer, JZ

"There was the opportunity for me to give back and that's another lovely thing that Just Zilch offers... they also give you the opportunity to give back, so you don't feel like you're a beneficiary of handouts" - food recipient, JZ

Appendix E. Outcome indicators, financial proxies, sources, and calculations

Stakeholder outcome	Indicator and source	Financial proxy and source	Value
Food donors			
Outcome 1: Increased awareness of food waste and changing in-store practices	Participants reporting an increase is awareness around food waste leading to changes in in-store practices through interviews and questionnaires	Cost of a WasteMINZ individual membership - $200 per year. Assuming 1 individual from each business becomes a representative. Membership costs obtained from the WasteMINZ website.	$11,718
Outcome 2: Reduced waste removal costs	Participants reporting a reduction in waste disposal costs through interviews and questionnaires	Avoided waste disposal levy fee. Valued at $10 per tonne of waste under the Ministry for the Environment (July 2020-21).	$11,310
Outcome 3: Reduced environmental impact	Participants reporting a reduction in environmental impact through interviews and questionnaires	Cost of offset carbon emissions - 1kg of food rescued = 2.65kg of CO2e prevented as reported by WRAP UK. Valued at $35 per tonne CO2e as per the NZ Emissions Trading Scheme (2021).	$104,904
Outcome 4: Increased reputation of doing social good	Participants reporting an increase in their reputation of doing 'social good' through interviews and questionnaires	Cost of one large social media and radio campaign per year - $100,000 per appeal. Based on consultation with the two NZ supermarket duopolies.	$3,130
Food rescue volunteers			
Outcome 1: Increased social connection and community participation	Participants reporting an increase in social connection and community participation through interviews and questionnaires	Cost of gaining a friend ($589). Assuming each volunteer gains 2 new friends ($1178). Value obtained from the Wellbeing Valuation of Housing Provision report (2017).	$229,898
Outcome 2: Increased sense of satisfaction through helping others	Participants reporting an increased sense of satisfaction through helping others through interviews and questionnaires	Equivalent cost of civic engagement and participation per volunteer through weekly volunteering - $581 per year. Value obtained from the Sport NZ - Wellbeing Valuation Method report (2018).	$120,475
Recipient organisations			
Outcome 1: Increased organisational capacity through	Participants reporting an increase in organisational capacity through access to	Equivalent cost of recipient organisations having to collect and store the food themselves. Based on the	$1,601,977

access to free food	free food through interviews and questionnaires	value of the food rescue organisation's operating expenses obtained from the NZ Charities Services Register (for the financial year 2020-2021) and volunteer labour ($20 per hour as per adult minimum wage NZ (2021).	
Food recipient			
Outcome 1: Increased free access to a variety of food	Participants reporting an increase in free access to a variety of food through interviews and questionnaires	Cost savings of one meal equivalent (350g) per food recipient at $2.57 per meal. Adopting the common metrics used across the NZ food rescue sector for a meal. Value based on the meal calculation taken from the University of Otago Food Cost Survey report (2019) and the cost of a basic meal for a family of 4 living in Auckland (2019).	$6,948,044
Outcome 2: Increased connection to social support services	Participants reporting an increased connection to social support services through interviews and questionnaires	Cost savings to government not having to employ an Integrated Services Case Manager (ISCM) for 2 hours ($68) per food recipient. Based on the average annual salary ($71,231) of an ISCM (2021) + overheads ($136). Value obtained through consultation with a Ministry of Social Development employee.	$440,836
Total			**$9,791,890**

Appendix F. Food donor questionnaire

QUESTIONNAIRE FOR FOOD DONORS

As a result of the conversations we've had with food donors, the following four primary outcomes have been highlighted as significant for food donor organisations being part of a food rescue programme. The purpose of the following questions is to give us a better understanding of the relevance and significance of each primary outcome.

Outcome 1. Awareness of food waste and changing in-store practices

What does this mean?

- Food donors noted that involvement in identifying and storing surplus edible food highlighted food waste issues to staff
- Involvement in food rescue helped educate staff and change in-store practices to reduce food waste.

1. **How has staff awareness of food waste changed because of your involvement in food rescue?**

Circle the response that best describes how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

2. **How would staff awareness of food waste have changed if you HAD NOT supported food rescue?**

Circle the response that best describes how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

3. **How long do you think the change in staff awareness created by donating to food rescue will last?**

Please select one option

< 3 months 6 months At least 1 year 2 years

Other (please specify)

4. **Who or what else contributed to this change (other than food rescue)?**

Below are some items that may also have contributed to the change in staff awareness of food waste, other than food rescue.

Please rate the items based on what you think their contribution to the change in staff awareness of food waste might have been.

	No impact	Minor impact	Neutral	Moderate impact	Major impact	N/A
Individual staff personal beliefs and values	1	2	3	4	5	
Business sustainability goals and targets	1	2	3	4	5	
Increased customer expectations	1	2	3	4	5	
Government expectations re - climate change	1	2	3	4	5	
Other (please specify)						

5. **How have in-store practices regarding food waste changed because of your involvement in food rescue?**

Circle the response that best characterises how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

6. **How would in-store practices regarding food waste have changed if you HAD NOT supported food rescue?**

Circle the response on the scale below that best characterises how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

7. **How long do you think the change in in-store practices created by donating to food rescue will last?**

Please select one option

< 3 months 6 months At least 1 year 2 years

Other (please specify)

8. **Who or what else contributed to this change in (other than food rescue)?**

Below are some items that may also have contributed to the change in in-store practices regarding food waste (other than food rescue).

Please rate the items based on what you think their contribution to the change in in-store practices regarding food waste might have been.

	No impact	Minor impact	Neutral	Moderate impact	Major impact	N/A
Individual staff personal beliefs and values	1	2	3	4	5	
Business sustainability goals and targets	1	2	3	4	5	
Increased customer expectations re-environmental awareness	1	2	3	4	5	
Government expectations re-climate change	1	2	3	4	5	
Increased competitive pressures	1	2	3	4	5	
Other (please specify)						

Outcome 2. Change in waste removal costs

What does this mean?

- Food donors reported reduced waste removal costs.

1. **How has your organisation's waste removal costs changed because of your involvement in food rescue?**

Circle the response that best describes how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

2. **How would your organisation's waste removal costs have changed if you HAD NOT supported food rescue?**

Circle the response that best describes how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

3. **How long do you think the change in waste removal costs created by donating to food rescue will last?**

Please select one option

< 3 months 6 months At least 1 year 2 years

Other (please specify)

4. **Who or what else contributed to this change (other than food rescue)?**

Below is a list of items that may also have contributed to the change in waste removal costs (other than food rescue).

Please rate the items below based on what you think their contribution to the change in waste removal costs regarding food waste might have been.

	No impact	Minor impact	Neutral	Moderate impact	Major impact	N/A
Business sustainability goals and targets	1	2	3	4	5	
Changes in costs for waste removal industry	1	2	3	4	5	
Business pressure to reduce costs	1	2	3	4	5	
Government expectations to reduce waste to landfill	1	2	3	4	5	
Other (please specify)						

Outcome 3. Environmental impact

What does this mean?

- Diverting food from landfill helps offset carbon emissions.

1. **How has your organisation's environmental impact changed because of your involvement in food rescue?**

Circle the response that best describes how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

2. **How would your organisation's environmental impact have changed if you HAD NOT supported food rescue?**

Circle the response that best characterises how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

3. **How long do you think the changes created by donating to food rescue will last?**

Please select one option

< 3 months 6 months At least 1 year 2 years

Other (please specify)

4. **Who or what else contributed to this change (other than food rescue)?**

Below is a list of items that may also have contributed to the change in environmental impact (other than food rescue).

Please rate the items below based on what you think their contribution to the change in environmental impact regarding food waste might have been.

	No impact	Minor impact	Neutral	Moderate impact	Major impact	N/A
Business sustainability goals and targets	1	2	3	4	5	
Increased customer expectations re-environmental awareness	1	2	3	4	5	
Increased competitive pressures	1	2	3	4	5	
Government expectations re-climate change	1	2	3	4	5	
Other (please specify)						

Outcome 4. Reputation for doing 'social good'

What does this mean?

- Food donors noted the tangible community benefits of food rescue and enhanced reputation from supporting food rescue
- Food rescue was seen as a practical way to express genuine care for the wider community
- Food rescue is part of broader shift to more sustainable business practices.

1. **How has your organisation's reputation for doing social good changed because of your involvement in food rescue?**

Circle the response on the scale below that best describes how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

2. **How would your organisation's reputation for doing social good have changed if you HAD NOT supported food rescue?**

Circle the response on the scale below that best describes how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

3. **How long do you think the change in organisational reputation created by donating to food rescue will last?**

Please select one option

< 3 months 6 months At least 1 year 2 years

Other (please specify)

4. **Who or what else contributed to this change (other than food rescue)?**

Below is a list of items that may also have contributed to the change in organisational reputation impact (other than food rescue).

Please rate the items below based on what you think their contribution to the change in organisational reputation might have been.

	No impact	Minor impact	Neutral	Moderate impact	Major impact	N/A
Initiatives undertaken to promote business sustainability (other than food rescue)	1	2	3	4	5	
Changing customer expectations	1	2	3	4	5	
Improvements in quality of products or services and customer services	1	2	3	4	5	
Other (please specify)						

IMPORTANCE OF OUTCOMES

The following table lists the four primary outcomes identified by food donors. Please rate the outcomes based on how important these changes are for your organisation.

Food donor - primary outcomes

	Not important	Slightly important	Moderately important	Important	Very important	N/A
Change in awareness of food waste and changing in-store practices	1	2	3	4	5	
Change in waste removal costs	1	2	3	4	5	
Change in environmental impact	1	2	3	4	5	
Change in reputation for doing 'social good'	1	2	3	4	5	

Food donor - secondary outcomes

The following table lists three secondary outcomes, or flow on effects from the food donor primary outcomes.

To understand the level of relative importance please rate these secondary outcomes based on how important these changes are for your organisation.

	Not important	Slightly important	Moderately important	Important	Very important	N/A
Increased community participation	1	2	3	4	5	
Improved staff morale	1	2	3	4	5	
Fulfilling organisational commitments to community engagement and sustainability goals	1	2	3	4	5	

Appendix G. Food rescue volunteer questionnaire

QUESTIONNAIRE FOR FOOD RESCUE VOLUNTEERS

As a result of the conversations we've had with food rescue volunteers, the following outcomes have been highlighted as significant for people involved in food rescue. The purpose of the following questions is to give us a better understanding of the relevance and significance of each outcome

Outcome 1. Social connection and community participation

What does this mean?

- Food rescue volunteers described increased social connection as an important outcome of working in food rescue
- Some volunteers highlighted the importance of teamwork and positive working environment, while others valued developing connections with their wider community through food rescue.

1. **How have your feelings of social connection and community participation changed because of your involvement in food rescue?**

Circle the response that best characterises how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

2. **How would your feelings of social connection and community participation have changed if you HAD NOT supported food rescue?**

Circle the response that best characterises how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

3. **How long do you think the change in feelings of social connection and community participation created by food rescue will last?**

Please select one option

< 3 months 6 months At least 1 year 2 years

Other (please specify)

4. **Who or what else contributed to this change (other than food rescue)?**

Below is a list of people or organisations that may also have contributed to the change in feelings of social connection and community participation, other than food rescue.

Please rate the items below based on their contribution to this change.

	No impact	Minor impact	Neutral	Moderate impact	Major impact	N/A
Engaging in social and volunteer activities other than food rescue	1	2	3	4	5	
Family and friends						
Other (please specify)						

Outcome 2. Sense of satisfaction through helping others

What does this mean?

- Food rescue volunteers described improved feelings of satisfaction and general wellbeing from the opportunities that food rescue provide to help others.

1. **How has your sense of satisfaction through helping others changed because of your involvement in food rescue?**

Circle the response that best characterises how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

2. **How would your sense of satisfaction through helping others have changed if you HAD NOT supported food rescue?**

Circle the response that best characterises how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

3. **How long do you think the change in your sense of satisfaction through helping others created by food rescue will last?**

Please select one option

< 3 months | 6 months | At least 1 year | 2 years

Other (please specify)

4. **Who or what else contributed to this change (other than food rescue)?**

Below is a list of people/organisations that may also have contributed to the change in your sense of satisfaction through helping others, other than food rescue.

Please rate the items below based on their contribution to this change.

	No impact	Minor impact	Neutral	Moderate impact	Major impact	N/A
Engaging in social and volunteer activities other than food rescue	1	2	3	4	5	
Friends and family						
Other (please specify)						

IMPORTANCE OF OUTCOMES

Please rate on the scale below how important these changes are for you personally. After rating the importance of the outcomes, please rank the importance of each outcome relative to each other

Food rescue volunteer – primary outcomes

	Not important	Slightly important	Moderately important	Important	Very important	RANK
Increased social connection and community participation						
Sense of satisfaction through helping others						

Food rescue volunteers - secondary outcome

The following table lists a secondary outcome, or flow on effect from the primary outcomes for food rescue volunteers.

To understand the level of relative importance of this secondary outcome please rate it based on how important this change is for you personally.

	Not important	Slightly important	Moderately important	Important	Very important	N/A
Increased awareness of food insecurity and food waste						

Appendix H. Recipient organisation questionnaire

QUESTIONNAIRE FOR RECIPIENT ORGANISATIONS

As a result of the conversations, we have had with recipient organisations, the following primary outcome has been highlighted as significant for organisations that receive and redistribute rescued food. The purpose of the following questions is to give us a better understanding of the relevance and significance of this primary outcome.

Outcome 1 Increased organisational capacity through access to free food

What does this mean?

- Recipient organisations described increased volume and consistency of healthy food received from food rescue activities to provide to clients
- Food received from food rescue activities enabled recipient organisations to trial new programmes and initiatives that would not have otherwise been possible.

1. **How has your organisation's ability to access free food changed because of your involvement in food rescue?**

Circle the response that best characterises how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

2. **How would your organisation's ability to access free food have changed if you HAD NOT supported food rescue?**

Circle the response that best characterises how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

3. **How long do you think the changes created by your organisation's ability access to free food through food rescue will last?**

Please select one option

< 3 months 6 months At least 1 year 2 years

Other (please specify)

4. **Who or what else contributed to this change (other than food rescue)?**

Below are some items that may also have contributed to the change in your access to a variety of free food, other than food rescue.

Please rate the items based on what you think contribution to the change in your access to a variety of free food might have been.

	No impact	Minor impact	Neutral	Moderate impact	Major impact	N/A
Food donors working directly with community agencies	1	2	3	4	5	
Increased funding to purchase food e.g., local and central govt; funding bodies						
Other (please specify)						

IMPORTANCE OF OUTCOMES

Please rate the primary outcome based on how important this change is for your organisation.

Recipient organisations - primary outcome

	Not important	Slightly important	Moderately important	Important	Very important	N/A
Change in organisational capacity through access to free food	1	2	3	4	5	

Recipient organisations - secondary outcomes

The following table lists three secondary outcomes, or flow on effects from the primary outcome for recipient organisations.

To understand the level of relative importance of these secondary outcomes please rate them based on how important these changes are for your organisation.

	Not important	Slightly important	Moderately important	Important	Very important	N/A
Increased ability to provide suitable and nutritious food that models healthy eating to food recipients	1	2	3	4	5	
Increased ability to build trust with food recipients and alleviate the stigma associated with food insecurity	1	2	3	4	5	
Increased ability to meet food recipients' immediate food needs and provide other services that enhance their wellbeing	1	2	3	4	5	

Appendix I. Food recipient questionnaire

QUESTIONNAIRE FOR FOOD RECIPIENTS

As a result of the conversations, we have had with food recipients, the following primary outcomes has been highlighted as significant for people receiving food. The purpose of the following questions is to give us a better understanding of the relevance and significance of these primary outcomes.

Outcome 1. Access to a variety of free food

What does this mean?

- Food rescue increases food variety for improved health and well-being (including dietary needs and dignity).

1. **How has your ability to access a variety of free food changed because of food rescue?**

Circle the response that best characterises how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

2. **How would your ability to access a variety of free food have changed if you HAD NOT received food through food rescue?**

Circle the response that best characterises how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

3. **How long do you think the changes created by your ability to access a variety of free food through food rescue will last?**

Please select one option

< 3 months 6 months At least 1 year 2 years

Other (please specify)

4. **Who or what else contributed to this change (other than food rescue)?**

	No impact	Minor impact	Neutral	Moderate impact	Major impact	N/A
Other community agencies that provide food	1	2	3	4	5	
Family and friends						
Other (please specify)						

Outcome 2. Connection to social support services

What does this mean?

- Greater awareness amongst food recipients of social support services offered e.g. health services, social services etc.

1. **How has your ability to connect to social support services changed because of food rescue?**

Circle the response that best characterises how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

2. **How would your ability to connect to social support services have changed if you HAD NOT received food through food rescue?**

Circle the response that best characterises how you feel about the question.

Made it worse	Somewhat worse	Stayed the same	Somewhat better	Much better	N/A
1	2	3	4	5	

3. **How long do you think the changes created by connecting to social support services will last?**

Please select one option

< 3 months 6 months At least 1 year 2 years

Other (please specify)

4. Who or what else contributed to this change (other than food rescue)?

Below are some items that may also have contributed to the change in your access to a variety of free food, other than food rescue.

Please rate the items based on what you think contribution to the change in your access to a variety of free food might have been.

	No impact	Minor impact	Neutral	Moderate impact	Major impact	N/A
Family and friends	1	2	3	4	5	
Being involved with social services (Work and Income, Community, Youth and Family)	1	2	3	4	5	
Other (please specify)						

IMPORTANCE OF OUTCOMES

Please rate the two primary outcomes based on how important these changes are for you personally.

Food recipients - primary outcomes

	Not important	Slightly important	Moderately important	Important	Very important	N/A
Increased access to a variety of free food	1	2	3	4	5	
Increased connection to social support services	1	2	3	4	5	

Food recipients - secondary outcomes

The following table lists three secondary outcomes, or flow on effects from the primary outcomes for food recipients.

To understand the level of relative importance of these secondary outcomes please rate them based on how important these changes are for you personally.

	Not important	Slightly important	Moderately important	Important	Very important	N/A
Reduced financial burden and ability to allocate finances towards costs other than food	1	2	3	4	5	
Reduced stress and anxiety	1	2	3	4	5	
Increased community participation (including job prospects)	1	2	3	4	5	