



# FIGHT FOOD WASTE

## Cooperative Research Centre

REDUCE - TRANSFORM - ENGAGE



## ANNUAL REPORT 2018/2019



Australian Government  
Department of Industry,  
Innovation and Science

**Business**  
Cooperative Research  
Centres Program





Our vision is  
an Australia  
without food  
waste.

We will achieve this through  
uniting science and industry to



**REDUCE** food waste throughout  
the supply chain



**TRANSFORM** unavoidable waste  
into innovative products



**ENGAGE** with industry and consumers  
to deliver behavioural change

The Fight Food Waste Cooperative Research Centre will increase industry profitability, tackle food insecurity and enhance Australia's reputation as a sustainable food producer.

# Our Participants 2018/2019



# 2018/2019 Major Highlights

<b>8 February 2018</b>	Bid team interviewed by CRC Advisory Committee.
<b>12 April 2018</b>	Successful funding for the Fight Food Waste CRC announced.
<b>19 June 2018</b>	First Board meeting with all Directors.
<b>2 July 2018</b>	Fight Food Waste Ltd commenced operations with the Board appointing Dr Steven Lapidge as the Chief Executive Officer.
<b>8 August 2018</b>	Grant Agreement with the Australian Government Department of Industry, Innovation and Science signed.
<b>8 August 2018</b>	Launch on Twitter and LinkedIn.
<b>24 October 2018</b>	Board formally ratifies sub-committees: <ul style="list-style-type: none"><li>• Industry Impact Committee</li><li>• Audit, Risk Management and Compliance Committee</li><li>• Research and Commercialisation Committee</li><li>• Remuneration and Nominations Committee.</li></ul>
<b>24 October 2018</b>	Official launch of the Fight Food Waste CRC at the National Wine Centre, Adelaide.
<b>14 November 2018</b>	Core Participants Agreement signed with 30 industry participants, five state government agencies and eight universities.
<b>20 February 2019</b>	Headquarters staff commence; Ian Hardwick as Chief Financial Officer, Tanya Wilkins as Communication Manager, Carolyn Eggart as Office Manager.
<b>20 March 2019</b>	The National Food Waste Baseline (NFWB) was launched from the Fight Food Waste CRC's Adelaide Headquarters by the Australian Government Environment Minister, the Hon Melissa Price MP.
<b>16 April 2019</b>	First project proposals approved by the Research and Commercialisation Committee (RCC).
<b>2 May 2019</b>	Fight Food Waste CRC strategy day held with Board, Management Team and headquarters staff.
<b>7 May 2019</b>	Mark Barthel, international food waste expert, signs his employment contract with the Fight Food Waste CRC.
<b>25 May 2019</b>	Cooperative Research Centre Association (CRCA) Conference held in Adelaide, with presentations from Dr Steven Lapidge and Robbie Davis that detailed our first year's achievements.
<b>28 May 2019</b>	First research project commences.
<b>17 June 2019</b>	Inaugural Participants' Networking event held following Board meeting in Sydney.
<b>21 June 2019</b>	Half of the initial research portfolio now approved by RCC (14 projects), a key first year target.

# Our Year One **Impacts**

## Communication

- 150 online news articles
- 33 newsletters
- 69 presentations
- 827 social media mentions
- 20 radio interviews
- 1 television interview



## Research

14 total projects approved:

- 7 X **REDUCE**
- 3 X **TRANSFORM**
- 4 X **ENGAGE**



## Collaboration

- 29 projects initiated with collaboration between research and industry in development
- 14 collaborations between industry participants (two or more in a project).
- 11 projects with collaboration between research participants (two or more research partners)



## International connections

- 2 x international food waste expert presentations (Dr Richard Swannell and Toine Timmermans)
- 1 x employment of international food waste expert (Mark Barthel signed his contract)



## Education and Training

- 2 PhDs enrolled
- 6 placements allocated for PhD and Masters students



# 2018 – 2028 Strategy

In November 2019 the 2018-2028 Strategic Plan will be presented to participants at the Annual Participants Meeting. The below strategy on a page represents the proposed strategy.

## An Australia without food waste

The Fight Food Waste Cooperative Research Centre will increase industry profitability, address food insecurity and enhance Australia's reputation as a sustainable food producer

### By uniting science and industry we will



**REDUCE** food waste throughout the supply chain



**TRANSFORM** unavoidable waste into innovative products



**ENGAGE** with industry and consumers to deliver behavioural change

**2018**  
Baseline

**2028**

Grant Agreement targets

**1/3**  
of all food produced

**\$20 Bn p.a.**  
in Australia

**7.3 M T**  
food waste p.a.

**298kg**  
per Australian per year

**13.5 M T**  
of CO<sub>2</sub>-e

**4 M** people  
food insecure

#### Deliver the Grant Agreement

We will first establish our initial 30-project research, development and extension program based on the best science and expertise with our existing participants. We will then develop and deliver new projects with existing and new participants that ensures we effectively deliver on all Grant Agreement performance milestones.

#### Deliver Future Initiatives

We will identify and target additional food loss and waste opportunities based on the National Food Waste Baseline and other key reports that will deliver significant food waste reduction and industry benefits to help achieve SDG 12.3. Additionally, we will scope and potentially develop a 10-year national behaviour change program that targets the entire food system, particularly consumers, with the Australian and state and territory governments and industry that reduces and prevents food waste from entering landfill.

**30 M T**  
of reduced food waste

**\$2 B**  
Increase in industry profitability

**20 M Kg**  
of rescued food distributed

**5200**  
circular economy jobs

**40**  
Future Leaders graduated

**250** industry people trained p.a.

### Our Core Values



**Collaboration**  
We will be greater than the sum of our parts



**Innovation**  
Real impact on food waste reduction and commercial outcomes from the CRC activity



**Participant Value Creation**  
Our participants get more than they expected from being part of the FFW CRC



**Our People**  
To be a workplace of choice for our salaried and in-kind staff



**Excellence**  
To deliver the best that we can for our participants



**Accountability**  
We stand behind our people and our work



**FIGHT FOOD WASTE**  
Cooperative Research Centre

REDUCE - TRANSFORM - ENGAGE



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# Table of Contents

2018/2019 Major Highlights	5
Our Year One Impacts	6
2018-2028 Strategy	7
Chairman's Report	10
CEO Report/Executive Summary	12
The Food Waste Challenge	16
Research Director's Report	17
Research Performance	18
REDUCE	20
Overview	20
Projects	22
TRANSFORM	32
Overview	32
Projects	34
ENGAGE	38
Overview	38
Projects	40
Food Safety	47
Intellectual Property	48
Commercialisation	50
Education and Training	52
Collaboration	53
SME Engagement	54
Communication	56
Governance	58
Finance	62
Future Plans	63
Appendix A - Participants and Third Parties	64
Appendix B – Foundation Peer-Reviewed Publications	67
Appendix C – End-user Publications	68
Appendix D - Fight Food Waste CRC Students in Approved Projects (2018/2019)	73
Appendix E – 2018/2019 Financial Statements	73

# Chair's Report

On behalf of the Board, I am pleased to introduce the Fight Food Waste CRC Annual Report 2018/2019



Globally 32% of food produced for human consumption is lost in agriculture and the supply chain or wasted by consumers at an estimated cost of \$1.75 trillion per annum. Food waste in Australia has been estimated to cost \$20 billion per annum with 40% of all the food we produce going to waste. A thriving, efficient and sustainable food industry is central to Australia's economy and food waste creates a significant challenge that requires a dedicated commitment to achieve Australia's National Food Waste Strategy goal of halving Australia's food waste by 2030.

I was delighted to be appointed Chair, as part of the bid process, for this CRC which is well positioned to be a key Australian driver in addressing this fight food waste opportunity. Toine Timmermans, an international expert in addressing food waste reduction, was also appointed to the Board as part of the bid process, with our bid's success announced on April 12, 2018.

Sincere thanks are due to the Bid Advisory Team (comprising a subset

of industry participants) who were not only instrumental in the successful bid presentation but who also shortlisted the applicants for the election of the remainder of the Board in June 2018. The elected Directors, consisting of Robbie Davis, Christine Giuliano, Sandra Hook, Alain Pillay and Geoff Starr, bring with them a diverse range of skills from a variety of backgrounds well suited to the important task of providing oversight of the activities of the Fight Food Waste CRC.

## Your Board successfully addressed some unique challenges in its first year

As a 'start up' the Board focussed initially on establishing the CRC governance framework. In its first item of business the Board was delighted that Dr Steve Lapidge, who had led the bid process, applied for and accepted the position as the Company's inaugural CEO. The Board is confident that Steve's capability, passion and hard work will be valuable in delivering the CRC's objectives in making a real impact on food waste through our research and industry adoption.

In the first half year, where cash flow allowed for no permanent staff other than the CEO, the Board and CEO operated as a team, in conjunction with a number of

short-term consultants, to develop the CRC foundation arrangements – grant agreement with the Commonwealth, company constitution, participants agreement and project funding agreement.

Four Board sub-committees were then established to assist with the effective running of the Fight Food Waste CRC:

- Industry Impact Committee
- Audit, Risk Management and Compliance Committee
- Research and Commercialisation Committee
- Remuneration and Nominations Committee

Charters and membership for each Committee were developed as well as a Board charter.

The Industry Impact Committee is an innovation of this CRC to ensure that a focus on impact and ongoing measurement of impact is integral in all aspect of operations. As a result, all research projects are required to record their baseline measurement relating to food waste and continuously measure the impact of the project in terms of reduction in food waste (tonnage), increase in commercial returns and/or environmental benefits.

Finally, a complete set of company financial, risk management, HR and operational policies were developed and are now operational.

## **With the foundations in place, research projects were initiated**

Once the foundation governance arrangements were in place it was then possible to support the CEO in employing a small team of key staff and initiating the first research projects.

The Board commends the CEO and staff, together with industry and research participants, for the substantial progress that was achieved in the first year of operations.

## **The coming year will deliver even more**

Your Board looks forward to another productive year in 2019/2020 with the development of a strategic plan and continued focus on project initiation so that all industry partners have their key projects underway. Consistent with the Board's focus on measuring impact, there will be opportunities for all participants to provide feedback to the Board through a stakeholder engagement survey and forums prior to the Annual General Meeting (AGM) in November 2019.

You can have every confidence the Board and Management Team have the skills, knowledge and dedication needed to partner with you, our participants, to deliver real gains in the fight against food waste.

**John Webster**  
**Chairman, Board of Directors**

# CEO's Report /Executive Summary

Welcome to the inaugural Annual Report of the Fight Food Waste CRC.



The process to develop this CRC focussed on food industry sustainability, in particular food waste, started in 2013.

I would like to thank the participants, old and new, who have supported the bid for this CRC through this five-year journey and those who have helped establish the solid foundations of the Fight Food Waste CRC over its first 12 months. In particular, I would like to acknowledge Primary Industries and Regions South Australia (PIRSA), under the leadership of Scott Ashby, and the South Australian Research and Development Institute (SARDI, a division of PIRSA), under the former leadership of Professor Pauline Mooney and now Dr Peter Appleford, who afforded me the time and support to lead the bid to create the Fight Food Waste CRC. As one of the largest food waste research, development and extension (RD&E) public-private partnerships globally, we can be immensely proud of what we have created together.

Of course, none of this would have been possible without our hard-working

Management Team that was integral in bringing the bid together throughout 2017 and 2018. To Professor Andrew Lowe and now Professor Vincent Bulone (Research Director), Associate Professor Karli Verghese (REDUCE Program Leader), Associate Professor Bronwyn Laycock and now Dr Paul Luckman (TRANSFORM Program Leader), Professor David Pearson (ENGAGE Program Leader), Professor Garry Lee (formerly PROTECT Program Leader), and Dr Valeria Torok (Food Safety and Integrity Theme Leader) I thank you sincerely for your belief in the cause, dedication and tenacity. Unfortunately, as many would be aware, the PROTECT program was not funded. In addition, I would like to formally thank Steven Brown and Dr Paul Dalby, our bid consultants, for their hard work and assistance in producing the initial Fight Food Waste and Fraud CRC bid.

Integral to the success of the Fight Food Waste CRC bid was the industry Bid Advisory Committee of Adrian Cullen (Woolworths), Al Jawhari (formerly Beston Global Food Group), Brianna Casey (Foodbank Australia), Chris Deveney (FAVCO/Green Valley), Geoffrey Annison (Australian Food and Grocery Council), Kimon Taliadoros (formerly Empauer), Robbie Davis (Potatoes South Australia), and Simon Woolmer (formerly Swisse Wellness). In addition to John and I, committee members formed the eight-member interview team that presented our bid to the CRC Advisory Committee on 8 February 2018.

Throughout the process John Webster as the inaugural Chairman has provided unwavering direction and support

to myself, the bid team, the Board of Directors and the Management Team, for which I thank him sincerely. In June 2018, John and Toine Timmermans were joined by five elected Non-Executive Directors in Geoff Starr, Sandra Hook, Robbie Davis, Christine Giuliano and Alain Pillay. The nominations process for Directors was greatly assisted by the Bid Advisory Committee. I would like to thank the Fight Food Waste CRC Board for their support and dedication in our first year, which has involved not only nine Board meetings and ten sub-committee meetings but also numerous informal meetings to ensure that the Fight Food Waste CRC governance, financial, operational and risk processes were soundly developed and implemented.

## Our vision is an Australia without food waste.

The Fight Food Waste CRC was officially launched on the evening of 24 October 2018 at The University of Adelaide's National Wine Centre of Australia. I would like to thank the South Australian Minister for Primary Industries and Regional Development, the Hon Tim Whetstone MP, for officially opening the Fight Food Waste CRC. The launch was followed by our first participants meeting on 25 October 2018, whereby the Board and Management Team were formally introduced to participants. The launch prompted participants to complete the Core Participant Agreement execution process, with the Core Participant Agreement being formally approved on 14 November 2018, meaning the CRC could now get underway with its RD&E agenda.

## Achievements

Achievements in our first year of operation provide the platform for our fight to achieve our vision of an **Australia without food waste**.

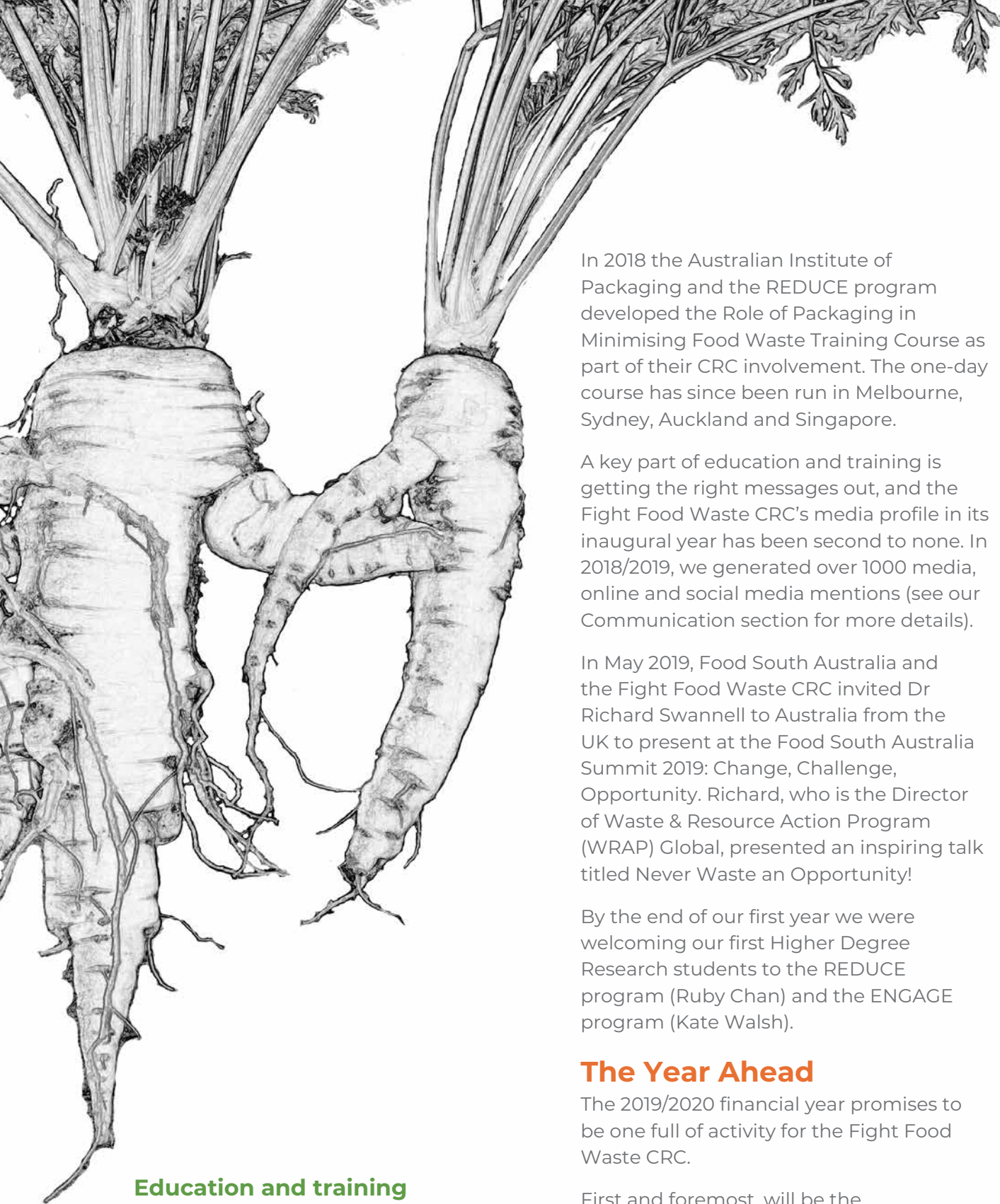
### Research and collaboration

The first half of 2018/2019 involved a series of collaborative workshops focussed on the key RD&E project areas within the Fight Food Waste CRC, including packaging innovation (REDUCE program), horticulture transformation (TRANSFORM program), and consumer behaviour change (ENGAGE program). These occurred during the contract negotiation period with the Australian Government CRC Program and participants. By mid-November 2018 the establishment contracting phase for the CRC had been completed and the focus shifted to project establishment.

Throughout the second half of 2018/2019, the Fight Food Waste CRC Management Team worked with industry participants and research providers to establish our initial research portfolio of 29 projects. During this time the CRC established detailed project guidelines through an iterative process to help participants prepare the strongest proposals possible. Simultaneously, the headquarters team was working to operationalise our project management software, Zume. By the end of 2018/2019, 14 of our first 29 projects had been approved, which was our commitment to participants. Details on each of the approved research projects in 2018/2019 are provided later in this report.

### Commercialisation and utilisation

Given the early stage of the Fight Food Waste CRC commercialisation and utilisation activity outputs have been minimal. Notwithstanding, each project application must clearly outline their commercialisation and utilisation plans and we look forward to these being delivered as projects progress.



### Education and training

A key platform for our industry education and training activities is the Industry Connection Hub, which commenced early with workshops in July and October 2018. The Hub involves leading food and packaging industry bodies, all of whom will have a role in ensuring that the Fight Food Waste CRC's RD&E findings are extended to and adopted by industry.

In 2018 the Australian Institute of Packaging and the REDUCE program developed the Role of Packaging in Minimising Food Waste Training Course as part of their CRC involvement. The one-day course has since been run in Melbourne, Sydney, Auckland and Singapore.

A key part of education and training is getting the right messages out, and the Fight Food Waste CRC's media profile in its inaugural year has been second to none. In 2018/2019, we generated over 1000 media, online and social media mentions (see our Communication section for more details).

In May 2019, Food South Australia and the Fight Food Waste CRC invited Dr Richard Swannell to Australia from the UK to present at the Food South Australia Summit 2019: Change, Challenge, Opportunity. Richard, who is the Director of Waste & Resource Action Program (WRAP) Global, presented an inspiring talk titled Never Waste an Opportunity!

By the end of our first year we were welcoming our first Higher Degree Research students to the REDUCE program (Ruby Chan) and the ENGAGE program (Kate Walsh).

### The Year Ahead

The 2019/2020 financial year promises to be one full of activity for the Fight Food Waste CRC.

First and foremost, will be the establishment of the remaining RD&E projects in our initial research portfolio. This will ensure that every participant, whether core or supporting, will be directly involved in a research or extension project, with many involved in multiple. It will also ensure that our Grant Agreement performance milestones for our first three years will be well progressed.

In August 2019 the Fight Food Waste CRC welcomed the commencement of global food waste expert Mark Barthel from the United Kingdom as our Special Advisor - Food Waste. Mark has worked in the food loss and waste field internationally for over 15 years, including 13 years with one of our supporting participants, WRAP in the UK. Mark will work closely with Food Innovation Australia Ltd, developing the National Food Waste Strategy (NFWS) Voluntary Commitment and delivering the NFWS, and with one of our key participants Woolworths in delivering a food waste reduction roadmap for the organisation.

The Fight Food Waste CRC has recently released its first annual participant survey and is finalising plans for our first annual conference including the Science Symposium on 20 November 2019, to be followed by the participant meeting and AGM on 21 November 2019. The series of events will be held at KPMG's Melbourne offices in the Docklands and will involve a number of launches, including a consultation draft of our 2018-2028 Fight Food Waste CRC Strategic Plan. The extensive plan details how we will meet the expectations of our participants and the requirements of the Grant Agreement with the Australian Government, as well as deliver new initiatives that can help Australia meet its NFWS commitments of halving food waste by 2030. The 2018-2028 Fight Food Waste CRC Strategic Plan also commits to addressing a number of the global Sustainable Development Goals, particularly SDG 12.3. The 2018-2028 Fight Food Waste CRC Strategic Plan will be followed by an investment plan and impact models that will ensure that the Fight Food Waste CRC delivers what it said it would in our full business case.

## Risks and Impediments

While the Fight Food Waste CRC is developing well, with all its governance and management systems in place and over half its initial RD&E portfolio established in year one, it is not without its risks. Principal amongst these is ensuring that we deliver what the participants signed up for. While half our RD&E projects may be approved and established, this does not represent half of our initial RD&E expenditure as some of our larger projects are yet to be presented. There will be a strong focus on the establishment of the TRANSFORM program in the first half of 2019/2020, and in particular the suite of horticulture transformation projects that underpin the success of this program. Other risks lie in the recruitment of high calibre postgraduate students which is a challenge for most CRC's. Such risks are articulated in the following pages.

I commend this inaugural 2018/2019 Fight Food Waste CRC Annual Report to the Australian Government CRC Program and our participants.

**Dr Steven Lapidge**  
Chief Executive Officer



# The Food Waste Challenge

Currently, an estimated \$1.75 trillion worth of food, or 1.3 billion tonnes, is lost or wasted globally, with about half being lost between farm and retail/food service and the rest being wasted by households and consumers. Yet one in nine people in the world are hungry.

Food waste is a leading cause of food insecurity and is increasingly being reported as a leading cause of climate change as outlined in the 2019 Intergovernmental Panel on Climate Change report on climate change and land.

In November 2017, just before the Fight Food Waste CRC submitted its full business case, the Australian Government launched the National Food Waste Strategy (NFWS). The Strategy committed Australia to reducing food waste right along the supply chain by 50% by 2030. The commitment goes above and beyond Sustainable Development Goal 12.3, which is 'By 2030, halve per capita food waste at the retail and consumer levels and reduce food losses along the production and supply chains, including post-harvest losses'. In June 2018, the Fight Food Waste CRC CEO was formally appointed to the NFWS Steering Committee that has been

tasked with delivering the Strategy as well as a voluntary commitment with industry.

In March 2019, the National Food Waste Baseline (NFWB) was launched from the Fight Food Waste CRC's Adelaide Headquarters by the Australian Government Environment Minister, the Hon Melissa Price, MP. The NFWB reported that, based on 2016/2017 figures, Australia produced 11.3 million tonnes of food waste across the supply and consumption chain of which 4 million tonnes was diverted to food rescue and animal feed. Of the remaining 7.3 million tonnes of food loss and waste, 2.3 million tonnes (31%) occurred in primary production, 1.8 million tonnes (25 %) in the manufacturing sector and 2.5 million (34 %) was created in our homes. The NFWB reported per capita food waste at 298 kg, which will need to be halved to 149 kg per person by 2030 for the NFWS to be achieved.

The challenge before us is to work together to reduce food waste right along the food supply chain. This is the premise under which the Fight Food Waste CRC has been funded: 10-years of industry-led research and development to find the solutions to reduce food waste in Australia.

# Research Director's Report

A commitment to the very best science led to the creation of the Research Director position within the Fight Food Waste CRC. This position focuses on ensuring that all projects address as many as possible of the key target impacts of the Fight Food Waste CRC as outlined in the grant agreement with the Australian Government, and that all projects include original, ground breaking research that will provide innovative solutions to our industry participants and result in real reductions in food waste volumes. Since commencing in the role in January 2019, Professor Bulone has contributed to the implementation of the project evaluation guidelines, been involved in the development of several projects and evaluated the 14 projects approved by the the Research and Commercialisation Committee and the Fight Food Waste CRC Board.

Many thanks must be extended to Professor Andrew Lowe, Food Innovation Director, University of Adelaide, who undertook the role of Research Director during the bid development process and until January 2019. He provided scientific oversight for the establishment of the initial research portfolio that was a key part of the successful bid. His contribution and guidance to the Fight Food Waste CRC continues as a member of the Research and Commercialisation Committee in an advisory capacity.

An important role of the Research Director is to encourage interdisciplinary research by stimulating discussions across the traditional barrier of different scientific disciplines. This requires ongoing engagement with the REDUCE, TRANSFORM and ENGAGE Program Leaders and, where relevant, project leaders and nominated participant representatives. In close collaboration with the CEO and Program Leaders, the Research Director has worked with participants to develop the projects that specifically include his area of expertise in complex carbohydrates, and,

as participant needs have changed, new projects have been solicited in addition to those in the initial research portfolio. It is rarely a simple task to consolidate project initiatives and convert ideas into concrete research activities, therefore face-to-face meetings and workshops have been organised at different stages to meet participant needs.

In his capacity as the Director of Adelaide Glycomics, Professor Bulone leads the team investigating the structural and functional properties of complex carbohydrates (or glycans) and their possible applications in biotechnology, medicine and industry. This is an important connection for the Fight Food Waste CRC given the possibilities that carbohydrate polymers and other glycans provide for bio-packaging of food and other products, as well as exploiting food waste for nutraceuticals and other high value products.

As is the case in his own research centre, insight and leadership must be provided into the quality and expected academic level of the Higher Degree Research (HDR) program to ensure that the PhD and Masters students are trained to the highest possible level. The Research Director has supported the ENGAGE Program Leader to ensure that the Fight Food Waste CRC develops a sought-after program that not only adds value to the individual projects that the students sit within, but that also develops future leaders in food waste reduction across the food supply chain.

The Research Director is an ongoing position for the duration of the Fight Food Waste CRC to ensure all projects are underpinned by the best science with innovative and interdisciplinary research teams to meet the needs of our participants and the broader food industry.

**Professor Vincent Bulone**  
Research Director

# Research Performance

The table below details the performance milestones that fell due during the 2018/2019 reporting period. The Fight Food Waste CRC requested an extension to the year one milestones due to the delayed start to projects. The extension was approved by the Australian Government CRC Program in August 2019. Relevant projects have since been approved and commenced so additional delays are not anticipated.

Milestone		Original due date	2018/19 Progress Comments (as of 30/6/19)	Strategies for completion	Revised due date
RP1.1	Key data sources identified. Data collection methodologies reviewed. Internal business data systems identified. Data collection system built.	30/06/2019	Project has been approved by RCC. Contracting underway with RMIT and Empauer.	Project commenced and accelerated due to its late start.	31/03/2020
RP1.8	Design guidelines and frameworks reviewed to consider role of packaging saving food, food safety, food quality, date labelling and shelf life and assemble packaging design features.	30/06/2019	AIP, RMIT with AFCCC, AFGC and AIFST project: Packaging Criteria and Framework (CRC 1.2.1) has been approved and is currently contracting. Sustainability Victoria, Woolworths and RMIT project: Consumers perception of the role of packaging in minimising food waste (CRC 1.2.2) has been approved and is currently contracting.	Project commenced and accelerated due to its late start.	31/03/2020
RP1.15	Supply chain mapped; issues and opportunities identified (e.g., packaging failures, processing, cold chain); Alternatives and/or modifications identified	30/06/2019	Abalone Retort proposal (SARDI, AAA, ACA and FRDC) has been approved (CRC 1.3.3) and is currently contracting. Prawn Onboard processing & packaging innovation (Curtin, APFC, FRDC, QDAF) has been approved (CRC 1.3.1) and is currently contracting.	Project commenced and accelerated due to its late start.	30/06/2020



The Australian Government Minister for the Environment, the Hon Melissa Price MP (left), launching the National Food Waste Baseline at the Fight Food Waste CRC headquarters on 20 March 2019.

Milestone		Original due date	2018/19 Progress Comments (as of 30/6/19)	Strategies for completion	Revised due date
RP2.1	Existing waste streams relevant to partner organisations surveyed, including SE Qld, South Australian and Victorian regional horticultural produce. Market opportunities and food safety hazards identified. Near-market opportunities reviewed.	30/06/2019	Two workshops (three days in total) have been held dedicated to scoping of waste transformation activities, with preliminary project plans for the first three years being framed. Multi-university/organisation networks have been established and initial commercial targets identified.	Delays due to the need for agreements to be signed will be addressed by clear project planning focussing on early wins, with relevant commercial targets being identified for immediate focus. A steering committee for horticultural transformation projects has now been established to provide advice and support the development of project proposals.	30/06/2020
RP2.7	Technology needs for different waste streams and products reviewed. Existing technologies surveyed. Market opportunities for technologies identified.	30/06/2019	Preliminary surveys of existing technologies have been undertaken during project scoping across multiple projects	As above - Delays due to the need for agreements to be signed will be addressed by clear project planning focussing on early wins, with immediate technology needs being identified for initial focus. Projects known to be reliant on commissioning of fully functional demonstration facilities developed.	31/03/2020
RP3.3	Industry dissemination and skills training – Needs analysis (Year one)	30/06/2019	Two Industry Connection Hub workshops completed.	Training Needs Analysis anticipated to be completed by Nov 2019	31/12/2019

None of the changes requested above will have a significant long-term impact on the ability of the Fight Food Waste CRC to deliver on its objectives and achieve its expected impact. No performance milestone changes have been requested or are anticipated other than the revised end dates for year one milestones described above.

# REDUCE



## Overview

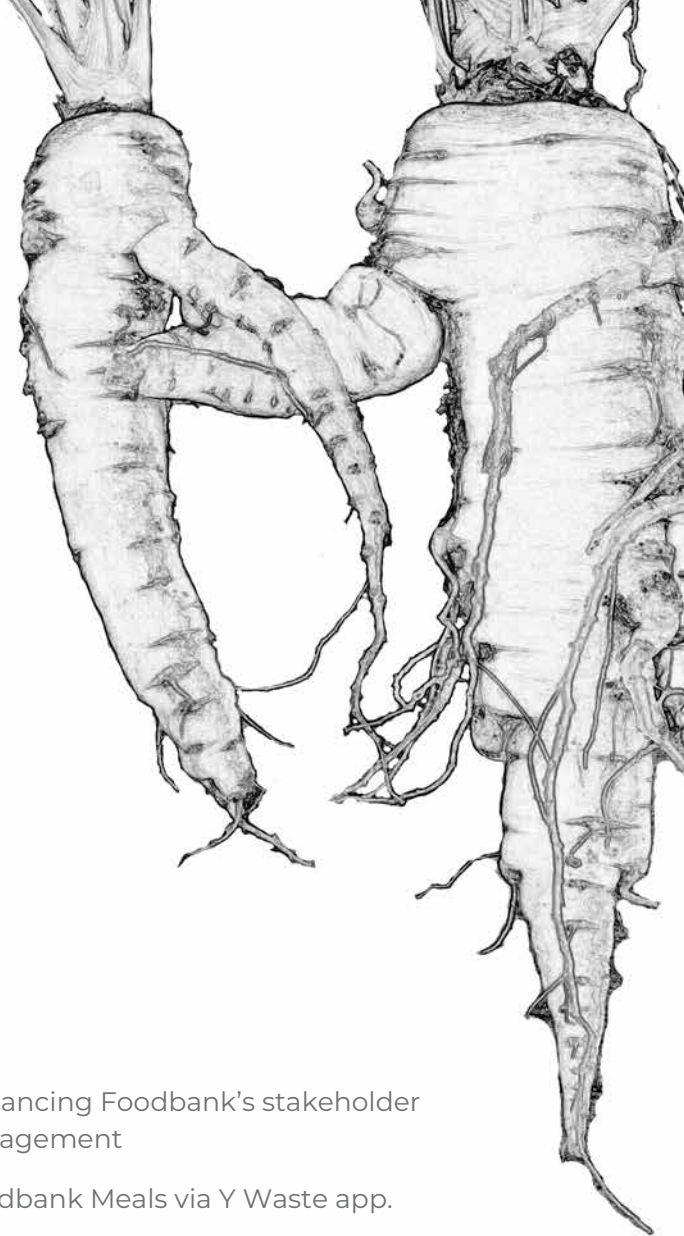
For the first year of the REDUCE program there has been a primary focus on partner engagement and raising awareness of the Fight Food Waste CRC in the broader community. REDUCE has worked to understand the food waste challenges faced by industry partners and has supported them to explore opportunities and new practices to meet their objectives. This year the initial research portfolio has come to life from evolving proposals, project approvals and finally the executed contracts.

At the core of the REDUCE program is the knowledge that the most efficient way to address food waste is to prevent it from occurring in the first place. To do this, a greater understanding of where food waste occurs, to quantify it, identify the reasons for the waste occurring and then work with suppliers and customers to enact ways to reduce it. With recent media coverage and attention by consumers regarding packaging and the environment, the initial research portfolio is also well positioned with projects that will bring together industry, government and researchers on the topic. The important role of packaging in protecting and containing food products from farm to fork, from a design and supply chain perspective through to consumer perceptions and understanding, are critical to ensure that appropriate considerations are made in material development and selection.

REDUCE had the opportunity to broaden the awareness of the program and promote the Fight Food Waste CRC

through industry seminars, workshops and conferences with industry association partners. These include the Australian Institute of Food Science and Technology National Conference (September 2018); the Australian Institute of Packaging National Technical Forum (April 2019); and the Australian Food and Grocery Council Inaugural Sustainability Seminar (June 2019). As well as contributing to the ongoing discourse of food waste more broadly, this activity has led to further conversations and a pipeline of possible projects under discussion.

Currently, seven REDUCE projects have been approved which span the key activities and impacts of the REDUCE program. There has been active engagement between industry partners and researchers, through workshops and discussions, in shaping these initial research projects. Once in progress some projects will see activity focused upon a co-design approach, with industry partners and the broader Fight Food Waste CRC community, to ensure that



they are business-ready and providing the information necessary to empower individuals and organisations to reduce food waste. There are projects that will engage with consumers, volunteers, and businesses, while others will investigate the role and use of technology, and operational efficiencies and processing to ensure maximum yields of product through to market. These projects include:

- Dynamic Industry Resource Efficiency Calculation Tool (DIRECT) Commercialisation
- Save food packaging criteria and framework
- Consumer perceptions of the role of packaging in reducing food waste
- On-board processing and packaging innovation in the Australian wild harvest prawn fishery
- Development and validation of reduced thermal processing requirements for canned abalone

- Enhancing Foodbank's stakeholder engagement
- Foodbank Meals via Y Waste app.

These first seven projects cover more than 60% of the initial research portfolio, with the remaining four initial project proposals currently under development.

In April 2019, Program Coordinator Leisha Ryding joined the REDUCE team with an initial focus on project operations.

The initial research portfolio is now underway however, new partners and projects are being actively encouraged to join. Future projects will look to engage with a broader representation of product sector supply chains and partners – the necessary elements to realise systematic changes to reduce food waste.

**Associate Professor Karli Vergheze**  
REDUCE Program Leader

## Projects

# DIRECT Commercialisation

### The challenge

Australia currently wastes \$20 billion of food each year and addressing food waste is now seen as a major environmental and economic opportunity for industry. To address the opportunity, businesses need to understand where food loss and waste occurs, such as at harvest, post-harvest, processing or distribution (food loss), or at retail, food service or by consumers (food waste). From such an understanding, better business decisions can be made.

The development of a business-ready, digital, cloud-based food waste tool can assist industry to reduce food loss and waste. The tool should integrate with their current data, systems, and processes, and operate at global standards/protocols of assessing food loss and waste.

### Our plan

Businesses will be able to self-assess their food waste practices through the development of the online Dynamic Industry Resource Efficiency Calculation Tool (DIRECT). They can use the data to identify opportunities to reduce food loss and waste and the costs associated with it. New income streams may eventuate, leading to a pivot from food waste costing industry to providing a revenue resource.

DIRECT will help businesses across the entire food supply chain understand the true cost of waste, including how to conduct resource efficiency assessments, identify and calculate resource efficiency, and understand the business value of improving resource efficiency. The initial version of DIRECT was developed by RMIT University in conjunction with the Plenty Food Group as

an Excel spreadsheet and accompanying website [www.directool.com.au](http://www.directool.com.au). It focused primarily on tracking material and energy inputs/outputs, waste streams, and associated business costs at the manufacturing/processing stage.

The next stage of the project will:

- take the excel version of DIRECT and develop it as an online version
- provide enhancements to data capture and reporting, eg link with global standards/protocols, extra financial data analysis and expanding DIRECT across all stages of the supply chain
- create an online portal so that DIRECT can be accessed as a cloud-based application that will interact with other business systems
- pilot the new DIRECT online tool with industry
- commercialise the DIRECT online version through Empauer.

More broadly, DIRECT will help inform the planned National Food Waste Baseline monitoring that intends to monitor waste and efficiency across the entire food supply chain. As new data is fed into DIRECT, this national database will be able to report on industry sectors, monitor state and national resources, and highlight national trends.

DIRECT will be available for similar benchmarking, action and reporting programs internationally. As industry and global standards/protocols change, ongoing enhancements will keep DIRECT up-to-date and ensure the tool is relevant in real-time for all businesses that use it.



# Save food packaging criteria and framework

## The challenge

Whilst the primary functions of packaging are to contain, protect and provide information about the product, the overall role of packaging in reducing food waste needs to be better understood by food producers, manufacturers, brand owners, retailers, government and consumers.

Finding the right balance between minimising the use of packaging without increasing food waste is the key challenge for this project. This is highlighted by the findings of a 2016 survey by Sealed Air reporting that 88% of respondents thought packaging material was more harmful to the environment than discarded food, even though 50-90% of the energy required to feed us goes into food production not the packaging.

Enhancing packaging's role in reducing food waste is the next challenge for packaging technologists, designers

and engineers. Industry needs access to guidelines and tools to assist it in its design, selection, and use of packaging materials for food.

## Our plan

The Australian Institute of Packaging (AIP) has established an extensive Save Food Packaging Consortium that comprises leaders in design and innovation to create packaging guidelines that are practical for the industries they serve.

This project will produce packaging design criteria and communication material that will lead to better packaging design, material selection and format selection using appropriate portioning, sealability and resealability features, date labelling, extend shelf life and provide the information required to assist retail, food service and consumers to minimise food waste.

## Save Food Packaging Consortium



**FIGHT FOOD WASTE**  
Cooperative Research Centre

REDUCE - TRANSFORM - ENGAGE

### Research Partner



### AIP Partners



The expected impacts of this project are that:

- the packaging criteria for reducing food waste meet the needs of, and are used by, packaging and food technologists/designers/marketers/sustainability managers
- communication, education and training programs are delivered to industry to demonstrate how to use the criteria and integrate within product-packaging development processes
- food producers, manufacturers, retailers, and packaging companies are designing innovative packaging and communicating this to customers and consumers

- companies are recognised for their packaging innovations through the Australian/New Zealand Packaging Innovation & Design Awards (PIDA) and the international WPO WorldStar Packaging Awards
- revision occurs, where required, of the criteria for the Australian/New Zealand PIDA Save Food Packaging Special Award
- contributions are made to consumer education and engagement projects to change the narrative around packaging's role in minimising food waste.

This project will work closely with the other REDUCE project looking at consumer perceptions of the role of packaging in reducing food waste (see next page for details).

### Project Contributors



**MULTIVAC**  
BETTER PACKAGING



**zipform**  
PACKAGING

### Extension Network Partners



AUSTRALIAN  
**FOOD &  
GROCERY**  
COUNCIL



the australian institute of  
**food science and technology**  
incorporated



# Consumer perceptions of the role of packaging in reducing food waste

## The challenge

Packaging is often viewed as having a negative impact on the environment as it remains once a product is consumed and requires disposal as rubbish or through recycling. However, in many cases, packaging protects food and prolongs its shelf-life, with an overall reduction in environmental impact by reducing food waste. Food packaging can contribute to household food waste reduction through designs that extend the shelf-life of food products, being available in numerous sizes for different sized households, communicating on-pack the best way to use and store a food item, assisting households to use date labels to better manage their food and slowing the degradation of perishable foods.

## Our plan

Understanding the perception and use of packaging by consumers and how this plays a role in household food waste generation is an important first step in this project. With a greater understanding of how people appreciate and use packaging,

along with the food waste they generate, we can design improved packaging and communications on food waste avoidance that will ultimately reduce food waste. This project aims to understand consumer perceptions of the role of packaging in reducing food waste by:

- discovering target areas that will help drive packaging design decisions
- discovering key consumer behaviours that may be adapted to reduce food waste
- determining potential consumer responses to labelling and packaging alternatives in relation to food packaging
- providing formative information for partners' new product development processes
- designing packaging solutions to reduce food waste
- designing more effective consumer education campaigns to reduce food waste.



# On-board processing and packaging innovation in the Australian wild harvest prawn industry

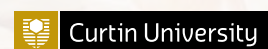
## The challenge

The wild prawn industry currently catches over 20,000 tonnes of wild prawns valued at over \$300 million per year. The industry has identified stages where product waste occurs during on-board processing of prawns and is keen to capitalise on the increased value that could be achieved through eliminating it. This project is a great example of how a collaborative approach can assist industry to reduce waste and add value to the Australian prawn industry.

## Our plan

This project will benchmark prawn loss volumes and identify intervention activities through targeted supply-chain analysis with stakeholders throughout the Australian prawn supply chain (on-board operators, transport and storage operators, food distributors/retailers). It will also generate solutions that provide:

- the ability to efficiently and optimally process larger volumes of prawns under periods of high-volume catch
- on-board processing automation (such as peeling) to enhance product value thus increasing profitability
- the ability to supply a premium grade product as a result of faster processing times
- the ability to reduce crew fatigue due to increased automation and adoption of new technology
- new on-board preservation techniques that will improve shelf-life, increase market access and reduce discard in supermarkets/retail
- a potential price premium for the frozen high-quality product if on-board freezing capacity is introduced to vessels currently supplying fresh only product
- the introduction of new on-board packaging formats and automation technologies that can reduce the waste associated with larger volume packaging, reduce on-board labour costs and worker risk, and reduce the need for land-based re-packaging.



# Development and validation of reduced thermal processing requirements for canned abalone

## The challenge

The Australian abalone sector is a low volume, high value industry. Australian abalone is generally sold in live, frozen or canned/pouch formats. Approximately 30% of Australia's abalone production volume is currently retorted (packed into cans/pouches and thermally processed), yielding 340 tonnes per annum of drained meat weight. Abalone lack a clotting mechanism and lose weight during thermal processes through the release of haemolymph from the tissue. This reduction in product yield during existing canning operations is typically between 12-30% (equivalent to a loss of 40-102 tonnes per annum).

## Our plan

This project will provide robust scientific evidence to allow the abalone industry to reduce the thermal process requirements for wild-caught and farmed abalone, and therefore reduce shrinkage food waste, whilst enabling the industry to continue to meet the regulatory requirements by providing a safe, commercially sterile and shelf-stable product.

Favourable results from this project will allow the industry to adopt reduced thermal processing requirements by identifying and targeting the site of microbiological concern. The abalone industry expects that the modified thermal process will reduce processing (haemolymph) losses by at least 1-2%. Less abalone will be required per can for the same drained weight. On current canning production levels, this would equate to an increased annual export tonnage of at least 3.4-6.8 tonnes, worth approximately AUD \$0.7-\$1.4M per annum.

The project will work with Australian regulators and stakeholders to help gain international acceptance and ensure that market access to key export destinations will not be adversely affected.



# Enhancing Foodbank's stakeholder engagement

## The challenge

Foodbank currently rescues over 37 million kilograms of food annually. However, it is estimated that current food rescue activities are meeting only 60% of the demand from people seeking food relief. Additionally, the amount of food available is three times more than current food rescue industry capacity. Hence there is a significant opportunity to increase the amount of food rescued with the associated benefit of reducing food waste. To achieve this Foodbank will need to work with its many food rescue stakeholders.

Improved engagement of Foodbank's stakeholders will develop better understanding of industry challenges and opportunities, and thereby assist in improving efficiency and effectiveness in its food rescue operations.

## Our plan

Enhancing stakeholder engagement is proven in research and practice to guide superior organisational performance. This project will improve Foodbank's understanding of two key stakeholder groups:

- charities which distribute the food and have contact with the recipients of the rescued food, and
- volunteers who provide a substantial contribution to the operations of Foodbank.

There is scope for Foodbank to expand its operations because:

- only 60% of the demand from people in need is met by existing food rescue organisations
- the amount of food available is as much as three times current food rescue industry capacity
- Foodbank is unable to meet high demand from volunteers, particularly from corporate volunteers.

This study will provide an accurate and up-to-date understanding of the food rescue and hunger situation in Australia. Enhanced understanding of motivations and expectations of volunteers may result in provision of a more satisfying volunteer experience and potentially an increase in donation of free labour, money and goods by volunteers. Overall, this project will assist in increasing the amount of food rescued and provided to those in need.





# Foodbank meals via Y Waste app

## The challenge

According to RMIT Watch My Waste, quick service restaurants waste up to 40% of their food. A large amount of this is end-of-day surplus food that is prepared and not sold. Due to its disbursed nature, this is food that traditional food rescue organisations are not easily able to collect or redistribute.

The Foodbank Hunger Report 2018 states that 4 million people in Australia are food insecure with up to 50% of those people not seeking assistance. Up to 30% of the people that do engage with charities are currently not having their full needs met and 7% of these vulnerable people are being turned away from charities empty-handed due to a lack of food, which equals 60,000 people per month.

## Our plan

The Foodbank Meals Via Y Waste App project will significantly reduce the amount of prepared food becoming waste and fundamentally improve the reach of Foodbank's services to the people that need it most.

Y Waste is an app that facilitates the discounted sale of end-of-day food from quick service restaurants to consumers, rather than the food going to landfill. Y Waste and Foodbank formed a collaboration which was piloted in July 2018 in Sydney where Foodbank clients have access to donated food at no charge.

Building upon this pilot phase, this Fight Food Waste CRC project will:

- review the completed pilot
- identify pressure points which would limit the uptake of the app and success of further roll out
- design solutions to these pressure points
- prototype and road test design solutions.

This project will ensure left-over food from quick service restaurants is diverted from landfill to those in need to reduce food insecurity in Australia. There are 80,000 food outlets in Australia. If 10% of these ultimately participate in this program offering four meals each day, then 20,000 meals will be provided per day to vulnerable Australians. In perspective, this would increase Foodbank's reach by 11%.



# TRANSFORM



## Overview

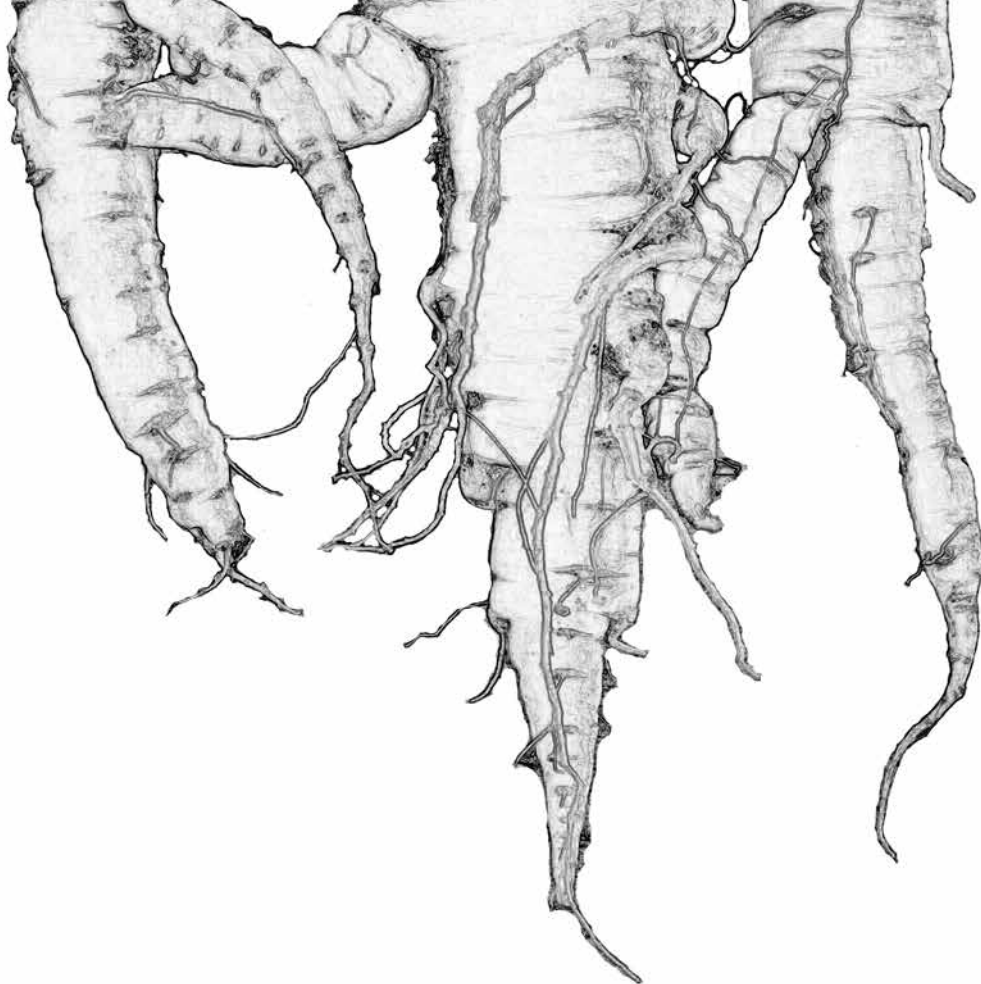
The TRANSFORM program's goal is to transform unavoidable food waste into valuable products. This will involve identifying the most valuable products possible from waste streams then developing processes and technology that can cost-effectively transform the waste materials. To complement this technology development, the TRANSFORM program will identify technology gaps and process limitations to waste transformation. Bringing together the learnings across projects, this program will work to deliver a tool kit for selecting feedstock combinations for different processing priorities.

Since January 2019 offices have been set up at the University of Queensland and the TRANSFORM project portfolio has been developed. Acknowledgments need to be made to the initial Program Leader, Associate Professor Bronwyn Laycock, University of Queensland, who is now a Project Leader within the TRANSFORM program. The pivotal role that she played through the development and establishment of the Fight Food Waste CRC cannot be understated. The TRANSFORM program would not exist in its current form without her years of dedication, and we look forward to continuing to work with her in the future.

Year one for the TRANSFORM program has seen collaboration of a wide range of participants working together to identify

key projects that will assist the program to achieve its goals. While a number of these projects continue to be refined beyond 2018/2019, projects unlocking value from waste and surplus horticulture produce received high levels of interest. These projects will look into the waste generated through a number of horticulture practices and links key participants to identify and enable research and development to achieve commercially valuable products from the identified waste.

A key success of TRANSFORM in 2018/2019 was the groundwork that led to the execution of a number of contracts. Project development, evaluation and approval in 2018/2019 occurred for the following projects:



- Converting potato waste into pre-biotics and other valuable products and chemicals. This project will assist in achieving output 2.1, commercially viable products from waste
- Making Australian Country Choice (ACC) circular. This project is aimed at increasing the circularity and sustainability of red meat processing, and will also assist to achieve output 2.1, commercially viable products from waste
- Fight Food Waste CRC SME Solutions Centre. This \$200k grant program was close to being launched in 2018/2019 with the funding round opening early in 2019/2020. The partnership with Food Innovation Australia Ltd and the Queensland Department of Agriculture

and Fisheries will invest in research to provide solutions to agri-food waste challenges for small-to-medium businesses.

As with any new CRC initiatives, there are often changes during the establishment of projects. During this year, two participants have withdrawn from the TRANSFORM program including the Costa Group and Eco Fuel Innovations. The net number of participants will increase however, with five new participants in the process of joining the Fight Food Waste CRC on projects within the TRANSFORM program in 2019/2020.

**Dr Paul Luckman**  
**TRANSFORM Program Leader**

## Projects

# Making Australian Country Choice (ACC) circular

## The challenge

The red meat processing sector is an important producer of food processing waste in Australia and offers unique opportunities for closed loop concepts to derive products from waste streams. A range of waste streams within the industry are already being utilised, but could have higher uses to increase the utilisation and value of those waste streams.

Waste generated from animal protein production presents numerous challenges when trying to adapt to a more circular economy, foremost among those challenges are biosafety and biosecurity. The high concentration of nitrogen and fat containing wastes post processing also presents challenges for traditional waste processing strategies.

The majority of the waste generated across the red meat supply chain is produced at the abattoir. Although practices are currently in place to manage this waste, it is unknown if this is the best utilisation of these resources. The industry would significantly benefit from prioritisation of which waste streams could be better managed and identification of technoeconomically feasible closed-loop concepts for products derived from the red meat processing waste streams.

## Our plan

ACC is dedicated to the best-practice supply of high-quality meat products to domestic and export markets. It is also committed to reducing the volumes of food waste sent to landfill and to increasing the effective use of by-products. This is important to its profitability, to the retailers supplied and to the industry more broadly.

This scoping project with ACC will identify and clarify economically feasible closed-loop concepts for ACC and their waste streams. It will explore secondary research on solutions that could be adopted across the red meat processing sector, model the flow of nutrients, energy and water across the supply chain, identify possible closed-loop solutions and identify research needs and gaps for future initiatives.

As ACC is a major red meat supplier to Woolworths the project will work in closely with the Woolworths Food Waste Reduction Roadmap project in the ENGAGE program. It will enable investigation into the broad range of options available to reducing waste in their operations and their supply chains.

It will contribute to current industry-wide work by Meat and Livestock Australia and the Australian Meat Processor Corporation and possibly identify future funding proposals in conjunction with these organisations. This work sets the scene for greater industry benefits through the identification and prioritisation of products from waste streams.



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# Converting potato waste into pre-biotics and other valuable products

## The challenge

Australia is the largest producer of potatoes in the southern hemisphere yet up to 40% of potatoes are rejected because they do not meet market specifications. This large waste volume is currently used for animal feed where it receives \$10/tonne or it is disposed in landfill at a cost. However, graded out potatoes could become products that already have a market such as functional foods, bioplastics, packaging materials, coatings and adhesives. The aim of this project is to explore options for the transformation of waste potatoes into higher value products so the industry can improve profitability as well as reduce food waste volumes.

## Our plan

This project aims in part to produce raw starch here in Australia to reduce the 20,000 tonnes per year that we import given we currently lack a potato starch industry. Given potato starch sells for \$500-800/tonne, if we consider an average potato waste stream of 100,000 tonnes per annum, this represents an annual value of \$50m for raw starch only.

The known starch component Amylose can also be extracted from graded out potatoes to engineer low GI foods, and other forms of starches can be converted into a whole range of innovative products such as edible films, bioplastics and packaging.

Another opportunity to convert potato waste into higher value is to refine the starch for high-end applications in the pre-biotic and functional food sectors. Research has shown that the less digestible starches make superior pre-biotics that can

help prevent pathogen infections and the development of colon cancer. These proven methodologies will be used to create pre-biotic products from potato waste.

The participating potato producers in this project will gain commercial benefit from the diversity of higher-value products developed from which new revenue can be generated.

Biochar will be an end-product of the research process undertaken in this project. This is an important carbon-rich product that has been linked with improvements to soil fertility and carbon sequestration. This opportunity will be explored in a future Fight Food Waste CRC R&D extension project following the completion of this research project.

On a broader level, this project will achieve:

- conversion of large volumes of current potato waste into commercial products including liquid chemicals and using potato starch for packaging or bioplastics
- increased income and profitability for the Australian potato producers
- enhance the reputation of Australian food products through exports of high-quality starches and starch-based functional foods
- fulfilment of national and international targets for reductions in carbon emissions in Australia
- job creation
- de-risking the sector against future carbon-pricing/carbon-trading regimes that are anticipated to emerge in national and/or international markets.

# Fight Food Waste SME Solutions Centre

## The challenge

Australia has over two million small to medium-sized enterprises (SME's) that contribute over 50% of Australia's Gross Domestic Product (GDP). SME's have many challenges given their size, one of which is tackling food waste. This program provides access to funding, skills and expertise to find the best food waste solutions for SME's to assist in their efficiency and sustainability.

## Our plan

The aim of the Fight Food Waste SME Solutions Centre is to provide dollar-for-dollar financial support to successful applicants to use researchers in the Fight Food Waste CRC to conduct short-term research that will find a solution to their agri-food waste problems.

The Fight Food Waste SME Solutions Centre will:

- test new and novel food processing, packaging and agricultural technologies to REDUCE food and agricultural waste
- identify valuable products in food and agricultural waste streams and TRANSFORM this waste into new commercial opportunities
- ENGAGE experts from the Fight Food Waste CRC industry and research participants to identify technology opportunities and processes to enhance food and agricultural waste reduction.







# ENGAGE



## Overview

The Fight Food Waste CRC ENGAGE program seeks to engage with industry and consumers to deliver behavioural change that results in real reductions in food waste. The ENGAGE program is fortunate to have a diverse range of participants who are already engaged in this issue and have provided significant financial and in-kind resources to contribute to the program objectives of developing industry leaders, providing a skilled workforce, and ensuring customers are informed.

Engaging with industry and consumers to deliver behavioural change is critical to the long-term success of the Fight Food Waste CRC. Such behaviour changes will contribute to changing social norms so that food waste minimisation behaviours are expected. Food waste must be made as unacceptable as littering. To drive behaviour change, research and dissemination will be undertaken to develop behavioural insights around causes of food waste, mapping hotspots, and providing a portfolio of communication materials to encourage reductions.

Behavioural change will include some challenges for businesses in developing and implementing solutions, and then encouraging individuals to accept, value and adopt these solution-oriented outputs. As is the premise of the CRC model, participants in the ENGAGE program, will address these challenges together with outcomes delivered that would not have been possible on their own.

A success of the ENGAGE program in 2018/2019 has been the development, approval and execution of four projects including:

- Industry Connection Hub
- Food SA summit sponsorship (detailed in the CEO Report)
- A food waste reduction roadmap for Woolworths
- Understanding consumer attitudes, behaviours and interventions.

The Fight Food Waste CRC intends to provide rapid dissemination of new knowledge, products and technologies generated in research projects to assist in timely implementation of profitable innovations in Australian businesses. The Industry Connection Hub has already established a strong distributed education model of national industry associations that will deliver information to their members and stakeholders, importantly providing feedback and

intelligence on emerging priorities for the ENGAGE program. Full Members include the Australian Food Cold Chain Council, Australian Food and Grocery Council, Australian Institute of Packaging, Australian Packaging and Processing Machinery Association, Central Coast Industry Connect, Food and Fibre Gippsland, Food South Australia, Food Innovation Australia Ltd and Regional Development Australia Murraylands and Riverland. Association Members are Enrich 360 and Skills Impact. The Hub is managed by supporting participant Honey and Fox.

Through the Hub, businesses will receive a direct and immediate benefit from providing products and services supporting customers to reduce food waste, and they also have the opportunity to promote their efforts in meeting escalating community expectations associated with environmentally responsible business practices.

It has been a fantastic result for the Fight Food Waste CRC to bring leading global food waste reduction expert, Mark Barthel, to Australia. In 2019/2020, he officially commenced work with Woolworths on their food waste reduction roadmap, and Mark will also be assisting FIAL and the Australian Government Department of Environment and Energy in the development of a voluntary commitment for industry.

Establishing a comprehensive evidence base from which to develop effective interventions to assist consumers to reduce food waste was the focus of our consumer project in 2018/2019. This project includes 12 leading players from industry, government and the food rescue sector to address this challenge. These

include governments in Victoria, South Australia, New South Wales, Australian Capital Territory, Western Australia and Queensland together with Woolworths, FIAL, Foodbank Australia, OzHarvest, and Waste Resources Action Program (UK).

There will be ongoing challenges for the ENGAGE program relating to the recruitment and retention of appropriately qualified and motivated students (see Education and Training for more details of this program), providing valued opportunities to participants in the Industry Connection Hub, and securing additional funding for the implementation of interventions that will assist households to reduce food waste. However, the initial research portfolio provides a solid foundation, and additional projects developed over the medium term will build on this new knowledge generated, including understanding Australian consumers' attitudes and behaviours towards food waste, as well as promoting support for businesses.

It is both a challenge and a privilege to work with the dynamic team associated with the Fight Food Waste CRC. Acknowledgement must be given to the support received from Central Queensland University (CQU), particularly Deputy Vice Chancellor Research (Grant Stanley), Dean School Business and Law (Lee Di Milia), and Deputy Dean Research (Julian Teicher) who have believed in the Fight Food Waste CRC from the start of the bid application process and continue to provide support to the ENGAGE Program.

**Professor David Pearson**  
**ENGAGE Program Leader**

## Projects

# Industry Connection Hub

## The challenge

An important component of all CRCs is ensuring research results are used by industry and that they have real impact on the way we do business. It is also important to measure this impact.

The Fight Food Waste CRC is committed to doing this for the Australian food industry in a way that does not only rely on annual conferences, final research reports and participant newsletters. Whilst these very important communication activities will still take place, the Fight Food Waste CRC intends to be innovative and inclusive when it comes to communication, industry engagement, research extension and training.

## Our plan

The Industry Connection Hub operates under the principle that we are fundamentally stronger together in extending research results to industry and developing relevant and coordinated education and training for industry. The principal benefits of belonging to the Hub are therefore focused around the enhanced opportunities for collaboration and the sharing of information from the Fight Food Waste CRC in a rapid and timely manner to benefit Hub members, industry sectors and businesses. The Hub will also provide a platform for researchers and research students to access industry for activities such as surveys, interviews, market research, advice and connections.

The Industry Connection Hub aims to:

- increase industry engagement in food waste reduction through promoting Fight Food Waste CRC research findings and identified training opportunities
- contribute to achieving the objectives of the Fight Food Waste CRC by providing the opportunities and knowledge for Hub members to train at least 125 industry representatives per year for the next 10 years (with the goal that those trained will implement at least one new piece of knowledge, technology, method or process into their business or place of employment)
- identify industry training program outputs that will be used by industry to ensure that their business and their workforce are better skilled, and that new knowledge created by CRC research is applied to industry and that industry has the necessary skills to take up R&D results from the Fight Food Waste CRC

**we are  
fundamentally  
stronger  
together**



South Australian Minister for Primary Industries and Regional Development, the Hon Tim Whetstone MP, launching the Fight Food Waste CRC at The National Wine Centre in Adelaide on 24 October 2018.

- be the vehicle in which to conduct the training needs analysis to identify skill and training gaps
- be the vehicle in which the CRC's portfolio of communication and extension materials are used by CRC organisations to adopt food waste innovations
- broaden industry networks for the Fight Food Waste CRC as an organisation
- tap into existing powerful networks and channels direct to industry
- establish a platform to support the implementation of the National Food Waste Strategy.

A key objective for the Hub is to be a key instigator for identifying new and fresh education and training opportunities, courses, master classes, micro-learning and e-learning that Hub members can develop for their industry members and sectors. This will be achieved through a training needs analysis with Fight Food Waste CRC participants that will identify what training opportunities are available in relation to food loss and waste and packaging in addition to any gaps.

The benefit to industry will be the establishment of online and offline learning channels and resources developed by Hub members and access to Fight Food Waste CRC research results in a timely manner and in a format that can be understood and applied directly within their business.



# Understanding consumer food waste attitudes, behaviours and interventions to reduce food waste

## The challenge

The Australian National Food Waste Baseline has identified that nearly 300 kg of food is wasted in Australia per person per year. This equates to a total of 7.3 million tonnes of food, of which households generate 34% of this total and approximately 92% of household food waste still goes directly to landfill, which has significant environmental consequences. Large amounts of household food waste could be avoided through better purchasing and storing of food, cooking the right portion size, eating leftovers, understanding food safety and date labels, and valuing food as done historically. Achieving these objectives will require large scale household behaviour change by consumers.

## Our plan

Critical to the future success of this project is that it now involves governments in Victoria, South Australia, New South Wales, Australian Capital Territory, Western Australia and Queensland together with Woolworths, FIAL, Foodbank Australia, OzHarvest, and Waste Resources Action Program (UK).

Through a large Australian-first national consumer survey, this project will provide empirical evidence on behaviours leading to food waste in households throughout Australia and will identify distinct audience groups based on their food waste attitudes, beliefs and practices. Understanding these diverse audience groups is vital for industry, government and community organisations which run household food waste campaigns. Associated participants will directly benefit from the survey results, and the evidence-based decision making will improve the effectiveness of their efforts and have a positive impact on reducing food waste.

However, simply having a better understanding the consumer is not sufficient. Guidelines will be developed for practitioners developing and running campaigns to reduce food waste. These guidelines will be based on behavioural insights and behaviour change theory to prioritise household food waste interventions for each of the identified audience groups around criteria such as potential impact, likely uptake, and ease of adoption. Evaluation guidelines will also be developed to assist in providing a common approach for evaluating the effect of interventions.



# Food waste reduction roadmap for Woolworths

## The challenge

Supermarkets in Australia play a critical role in the food supply chain and are the primary source of food for Australian households, with Woolworth's representing 38% of the market. They are also uniquely placed to reduce food waste from farm to retail shelf and in their customer's homes.

As up to half of supermarket waste is still food, reducing food waste will lower the direct and indirect costs involved for supermarkets and their supply chain partners, as well as improving product availability and quality instore. Tackling food waste can also increase the amount of surplus food donated to food rescue and relief organisations (providing significant social and nutritional benefits to communities in need); or to farmers for animal feed. Wasted food can be directed to commercial contractors for processing into renewable energy and natural fertilisers to improve soil health.

Keeping food waste out of landfill will reduce greenhouse gas emissions and the unnecessary use of natural resources.

## Our plan

Woolworths is Australia's largest supermarket chain with over 1,000 stores and nearly 200,000 team members. It has made a public commitment to reduce the amount of food waste it sends to landfill and now has a food waste diversion program in all of its stores. It also wants to work with key supply partners in three to four high wastage product categories each year to reduce food loss and waste across its food value chain.

In addition to distribution centre and store-level initiatives, to reduce food waste and increase the donation of surplus food in its own operations, over the next four years Woolworths will be working with its suppliers to reduce farm to fork food waste. This will include:

- focusing on opportunities to improve crop utilisation and quality in primary production
- reducing waste in packhouses, primary processing and manufacturing
- improving packaging systems to reduce product damage and extend shelf-life
- developing new and innovative waste-saving products, like its new Loafer beer brand, brewed using surplus bread
- helping their customers to get the most value from the food that they buy, so less food is wasted in Australian homes.

This project brings Woolworths together with global food waste reduction expert Mark Barthel, the Fight Food Waste CRC's Special Advisor - Food Waste. Mark will work with Woolworths to lead the development and implementation of a food waste reduction roadmap, which, in consultation with stakeholders and supply chain partners, will identify priority areas to address. A robust monitoring, evaluation and reporting process will measure the progress and impact of the project.







# Food Safety

Nutritious safe food is essential in maintaining good health, and it is often assumed that if it looks good it must be safe. However, with the production and consumption of food there are real risks of foodborne illness or even death, with most of these hazards being invisible and imparting no detrimental sensory qualities to our food. In 2010, the World Health Organisation (WHO) identified 31 global hazards (including bacterial, viral, parasitic, chemical and toxins) which caused 600 million foodborne illnesses, 420,000 death and 33 million disability-adjusted life years.

In addition to these societal impacts, there are also major economic ramifications for implicated food businesses and industries through lost earnings, lawsuits, damaged consumer confidence and potential loss of international market access.

To mitigate the risks of foodborne contaminants and illness, the Fight Food Waste CRC established the role of Theme Leader, Food Safety and Integrity. This role cuts across all three CRC programs (REDUCE, TRANSFORM and ENGAGE) and is essential in ensuring that projects deliver high quality research with consideration also given to food safety and quality outcomes. Dr Valeria Torok was appointed to this role given her experience with the South Australian Research and Development Institute (SARDI), a division of PIRSA. The role involves identifying potential food safety and biosecurity risks in the project proposals that include new food products and processes from food waste streams that may re-enter the human food or livestock feed chains. For example, ensuring that chemical residues used in agricultural production do not enter new products developed, modified food processing techniques to reduce waste address microbial deactivation criteria and food waste converted into

animal feed does not introduce food safety or new biosecurity risks, such as African swine fever, which could devastate the Australian pig industry.

Packaging has a significant role to play in food safety and shelf-life extension outcomes, but it is dependent on the packaging material, the condition under which it is packaged and the chemical nature of the food product, with specific product-hazard consideration needing to be taken into account. Further education into food safety and date labelling is also important in being able to better utilise food surplus back into food rescue. In Australia, foods implicated in foodborne and suspected foodborne gastrointestinal disease outbreaks are predominantly associated with restaurants, catering and institutional facilities. These outbreaks are often caused by bacterial (*Salmonella*, *Campylobacter*, *Listeria* and *E. coli*) or viral (Norovirus) pathogens and are largely associated with consumption of contaminated fresh and raw product, inappropriate food preparation and storage or contamination from sick food handlers.

In being able to meet our objectives in the 2018-2028 Fight Food Waste CRC Strategic Plan, there are two major avenues which will be counted towards success. Firstly, food rescue and secondly, by diversion of food waste into animal feed. Dr Torok will be working with Project Leaders and Program Leaders to ensure that the projects of the Fight Food Waste CRC address food safety/biosecurity and integrity challenges in different ways through research, education and extension.

**Dr Valeria Torok**  
**Theme Leader – Food Safety & Integrity**

# Intellectual Property (IP)

The treatment of IP and the closely related issue of commercialisation were carefully considered in this first year of operations for the Fight Food Waste CRC. In 2018/2019, no intellectual property (IP) was generated from research because the research activities had not progressed to an appropriate stage at the time of this annual report. However, trademark applications were filed for two versions of the Fight Food Waste CRC logo (application #'s 1967475 and 1967476) in November 2018 and were under examination at the end of the year (since granted).

In the development of the policies and processes, it was determined that industry participant(s) within projects will have the first right to submit utilisation plans for the IP developed. Project IP will be owned by the project parties in shares (based on their respective contributions to the project), and any income from the commercialisation of project IP will be split in accordance with these shares.

Utilisation plans are to be agreed by all project parties (including the Fight Food Waste CRC) prior to a project commencing and will be reviewed annually to determine ongoing appropriateness and varied if required. Key clauses related to IP and commercialisation from the Core Participants Agreement have been incorporated into the Fight Food Waste CRC project guidelines developed to assist participants in developing new projects.

Utilisation outcomes from the Fight Food Waste CRC will include a mixture of public and confidential information, new tools and techniques for identifying, reducing (including innovative packaging) and transforming food and industry waste and gaining access to highly skilled

postgraduates and industry professionals in the area from which to build their future workforce.

To ensure adherence to the National Principles of IP Management for publicly funded research, the Fight Food Waste CRC developed the following mechanisms:

## Identification and management of IP

Through quarterly reporting the Program and Project Leaders will identify any emerging IP and report to the FFW CRC management team.

## Protection of IP

The utilisation plan (agreed at commencement of a project) will outline which party is responsible for managing the protection of IP. Where the Fight Food Waste CRC is responsible, it will engage the services of professionals to put in place the appropriate IP protection. It should be noted that some Fight Food Waste CRC projects will have utilisation plans where IP protection is not appropriate such as those that involve the widespread promotion of reports.

## Ownership of IP

Upon its creation, project IP will be owned by the project parties in proportion to their respective contributions to the project and protected and used in accordance with the terms of the applicable project agreement.

## Assessment of existing IP and sharing of benefits

A project participant making its pre-existing material available to the project will do so on a non-exclusive, royalty-free basis for the term of the project. The contributing party will continue to own and control its pre-existing material



(including any improvements); it may also continue to use its pre-existing material freely provided the use is not inconsistent with the terms of the project agreement.

If the party utilising the project IP requires a licence to use pre-existing material, the contributing party will grant them a licence on reasonable commercial terms.

### **Transparency and reporting**

The Fight Food Waste CRC will keep a register of project IP and pre-existing material that specifies who owns the IP and the rights and obligations attached.

### **Potential conflict of interest**

The independent Fight Food Waste CRC Board is responsible for approving all utilisation plans. The Board has processes for dealing with any Directors' conflicts of interest, where if any real or perceived conflict exists then a Director will be excluded from the decision-making process.

### **Commercialisation of research findings**

The utilisation of the project IP will be as agreed and set out in the utilisation plan in the applicable project agreement. Notwithstanding the grant or loss of utilisation rights to a project participant,

each project party will be granted a non-exclusive, royalty-free and perpetual right to use the project IP solely for the purposes of internal research, education, awareness campaigns and teaching. The project party must maintain confidentiality and must not prejudice the protection or utilisation of the project IP.

Through the agreements and strategy outlined above, the arrangements will ensure that the IP is identified, protected and exploited to maximise the potential national benefits accruing to Australia.

### **Intellectual capital**

While protection of IP is important, it is the development of IC (intellectual capital) that will possibly be more important in this CRC with the unimpeded sharing of new knowledge a key factor in achieving the Fight Food Waste CRC's aspirations of reducing food waste in many outcome areas. The Industry Connection Hub is one avenue established to assist in this regard.

Whilst these principles guide the Fight Food Waste CRC's contracting framework, there is a recognition that these guiding principles can be amended to reflect the commercial and real-world requirements of the projects and as such can be adjusted through the contracting process prior to any project commencing.

# Commercialisation

To set the Fight Food Waste CRC up for success in its inaugural year key steps were taken in 2018/2019 to maximise our impact including:

- establishing an industry-based commercially focussed independent Board
- establishing a Research and Commercialisation Committee with the responsibility to ensure that all research activities include a utilisation plan that aims to maximise benefits to industry participants
- establishing an Industry Impact Committee with a remit to continuously review the the Fight Food Waste CRC's impact on industry and ensuring committed focus on improving that impact
- developing project proposal evaluation criteria with strong emphasis on impact and commercialisation
- developing project guidelines for new project proponents that provide clear guidance around IP requirements and utilisation within proposals
- making sure that all projects approved include an agreed utilisation plan
- mapping of expected project outputs against the performance milestones in the Grant Agreement (performance milestones derived from the original impact tool forming the CRC business case) in order to identify gaps in the research portfolio and determine an investment strategy
- appointing a CEO and CFO with highly relevant recent experience in the commercialisation of IP from CRC projects.

To ensure uptake by industry of the research outputs, all projects will include an industry participant and that industry participant will have the first right to submit a utilisation plan over the research outputs. In some cases, the outputs will be knowledge transfer while in others it will be commercialisable IP (e.g. software, method, design). Where possible, to ensure widespread uptake, research outputs will be publicly distributed. The Fight Food Waste CRC has also established the Industry Connection Hub to facilitate the transfer of research results, extension materials, and education and training tools for industry. The ENGAGE and Collaboration sections describe in more detail the Fight Food Waste CRC strategies for ensuring uptake of research outputs by industry.



In 2018/2019, the commercialisation and utilisation arrangements were established which included industry participants within project having the first right to submit utilisation plans. Each utilisation plan must satisfy the requirements set out below and be approved by the Fight Food Waste CRC's Board. Once a project agreement has been executed, utilisation rights may only be changed or otherwise determined with the written agreement of all project parties.

Each utilisation plan will include (as a minimum) with respect to the project IP to be utilised:

- (a) utilisation objectives and strategies
- (b) target markets
- (c) resources to be utilised
- (d) risks and risk management strategies
- (e) how the utilisation of the project IP will meet the Fight Food Waste CRC objectives
- (f) how the utilisation of the project IP will meet the obligations under the Grant Agreement.

The Fight Food Waste CRC Commercialisation Policy specifies that each party has the right to a share of the income from the utilisation of the project IP in proportion to its respective contributions to the project and in accordance with the terms of the applicable utilisation plan and/or project agreement, after deduction of reasonable utilisation expenses, on terms set out in the applicable project agreement. Notwithstanding, these principles that can be adjusted to reflect the project's needs and the method of maximising the impact on food waste by encouraging adoption.

SME's participate in the Fight Food Waste CRC as core or supporting participants. It is important to note that unlike many other CRC's, the Fight Food Waste CRC does not require any minimum contribution for participation. These SME's are participating in projects with equivalent rights to all other participants. Commercialisation and utilisation arrangements for SME's have been considered and details can be found in the SME Engagement section of this report.

# Education and Training

The Fight Food Waste CRC will recruit talented students into its postgraduate education program who will have the opportunity to develop into future leaders for the food and agribusiness sector. These emerging executives will undertake leading research on industry defined problems whilst embedded within an industry participant organisation participant's business and will subsequently be in a position to contribute to building capacity within businesses to drive on-going commercial innovation in the coming years. Over the 10-year life of the Fight Food Waste CRC it will enrol at least 30 PhD and 12 research-based Masters graduates, with most commencing during the first five years of operations. PhD students will have a base stipend provided by their host university and receive a top-up scholarship from the Fight Food Waste CRC of \$25,000 per year. Master students will receive a research contribution of \$25,000 per year. See Appendix D for 2018/2019 progress.

In addition to technical education provided by the host university at which the student enrolls, the Fight Food Waste CRC will provide opportunities for students to expand their horizons and learn from others through participating in the following three activities:

- The Fight Food Waste CRC Annual Conference where students share progress on their research whilst receiving mentoring and guidance from industry experts
- Future Leaders Program where students will receive intensive innovation, entrepreneurship and leadership training over a three-day student retreat in April of every second year.

The program will be led by Central Queensland University and will be supported with professional mentoring from a global professional services firm KPMG (led by Dr Tangerine Holt) including bespoke professional development activities at the Fight Food Waste CRC Annual Conference

- Completing a Graduate Certificate in a management-related topic provided by their host university.

This approach will increase the employability of Fight Food Waste CRC postgraduates by providing exposure to business culture, so they will not only have technical knowledge but also be proficient in effective teamwork, high level communication skills and gain the commercial acumen required to be successful in business.

PhD and Masters students will provide an integral contribution to research undertaken in specific research projects. Student recruitment will follow project approval and the Fight Food Waste CRC anticipates a significant increase in the number of students over the coming year.

In summary, the Fight Food Waste CRC is on target to achieve its education and training outputs. This includes graduating at least 25 PhD and up to 12 Masters students over the next 10 years and setting up an Industry Connection Hub to facilitate training and the dissemination of research outputs (see ENGAGE for further details of this project). Australia will benefit from having over 40 Fight Food Waste CRC graduates who will be industry-ready employees, having completed their qualifications whilst working in industry on industry problems and delivering solutions that are valuable and relevant to industry.

# Collaboration

Collaboration underpins everything that the Fight Food Waste CRC does. It was an essential part of the successful bid developed with 48 industry, five state government agencies and eight university participants.

The most significant collaboration has been the development of the Fight Food Waste CRC initial research portfolio. Building on the industry-led project ideas, the strength of collaboration resulted in 14 approved projects in 2018/2019 with the remaining 15 under development. Through workshops and engagement activities, the Fight Food Waste CRC Program Leaders have brought together the diverse range of needs and objectives to move these ideas forward.

Through the Industry Connection Hub, 50 participant representatives have taken the opportunity to work together to develop the scope and direction of the Hub. The Hub represents a new model for R&D engagement with member-driven organisations collaborating from the very beginning and establishing a model for direct education and extension of the Fight Food Waste CRC research findings.

The Fight Food Waste CRC also developed new participant admission guidelines in 2018/2019. Despite its strong focus now on delivering for its valued current participants, the Fight Food Waste CRC recognises the opportunity to further increase the value and impact for its current participants by extending its collaboration further across the food supply chain.

A strength of the Fight Food Waste CRC is its international collaborations and partnerships with non-participants. World-leading in the area of consumer food reduction, WRAP in the UK is a participant of the Fight Food Waste CRC and hence CRC participants have unprecedented access to these experts. An example being when Dr Richard Swannell from WRAP visited Australia in May for the Food South Australia summit. An afternoon was arranged for Fight Food Waste CRC participants including FIAL, Green Industries SA, RMIT, and CQU as well as representatives from the Australian Government Department of Environment and Energy to hear from and interact with Dr Swannell. Such opportunities will be regular occurrences for Fight Food Waste CRC participants and associated organisations.

In summary, 2018/2019 has seen a strong focus on developing our initial research portfolio, where there are:

- 29 projects initiated with collaboration between research and industry
- 14 collaborations between industry participants (two or more in a project)
- 11 projects with collaboration between research participants (two or more research partners).

With a strong focus on collaboration from the outset the Fight Food Waste CRC aims to ensure that we are stronger than the sum of our parts.

# SME Engagement

The Fight Food Waste CRC has many SME's directly involved including those for-profit and not-for-profit. Many of these are industry organisations who represent SME's across the entire food supply chain including primary producers, manufacturers, wholesalers, retailers, and hospitality and food services.

A significant part of the SME strategy is the Fight Food Waste CRC SME Solutions Centre. Established during the 2018/2019 year, this proposal was developed with funding from FIAL in partnership with the Queensland Department of Agriculture and Fisheries. This \$200k grant program will partner SME's with the appropriate Fight Food Waste CRC research institution to develop solutions to their agri-food waste challenges.

With an innovative approach to its research extension strategy, the Fight Food Waste CRC will engage with SME's to feed research results through the Industry Connection Hub. Members of this Hub are representative bodies of their industry/sector with members including SME's. For example, Hub member Food South Australia directly represents hundreds of SME members who manufacture food products and grow and produce high value commodities. The Hub channels the research findings of the Fight Food Waste CRC through to these SME's for their 'first

look' at the findings and a coordinated approach across Hub members is taken to maximise the reach and benefit of any findings.

A significant focus in 2018/2019 has been developing and commencing the initial research portfolio. In developing the project proposals, representatives of the SME participants have been able to collaboratively develop these proposals directly with research scientists and other participants to ensure the best proposal is developed to meet industry needs.

SME engagement opportunities are regularly identified and delivered by the Fight Food Waste CRC. In May 2019 Dr Richard Swannell, Director of WRAP Global, was brought to Australia from the UK to provide a keynote address at the Food South Australia Summit. The Summit is attended by several hundred food and beverage SME's and provided an ideal opportunity to discuss food waste and provide an international perspective on industry-focussed solutions.

SME's are also represented on the Fight Food Waste CRC Board by Robbie Davis who is associated with the national potato industry and is an SME food producer in her own right.



# Communication

Communication across a virtual research network like the Fight Food Waste CRC is essential in meeting participant expectations and delivering on the Grant Agreement with the Australian Government. During the bid development and the first half of 2018/2019 communication activities were delivered to meet the needs at that time. This included the development of our logo, an initial corporate flyer and business cards, launch of the website, and establishing a presence on Twitter and LinkedIn. The Fight Food Waste CRC would like to thank participant Honey and Fox for their expertise to deliver these initial communication requirements.

To deliver on the huge communication opportunities the Fight Food Waste CRC has in its 10-year journey, Tanya Wilkins commenced as full-time Communication Manager in February 2019. The Board approved the Fight Food Waste CRC Communication Strategy 2019-2022 in June 2019 with a broad focus including website, media, social media, marketing materials, infographics/animations, newsletters, and key events/sponsorships. The strategy is supported by a publications policy, communication and media policy, and sponsorship policy.

2018/2019 provided many communication and engagement opportunities across the Fight Food Waste CRC for the Board, staff, and participants, including the successful and well-attended launch event and first participants' meeting in October 2018. We have since developed a Participant Engagement Framework, which was approved by the Board in June 2019, and will guide actions to ensure participants are well-served and satisfied with their

investment. Formal communication occurs through regular CEO update emails. An inaugural participant's update meeting was held in Sydney in June 2019 following the Board meeting to provide an update to local participants as well as the opportunity to network.

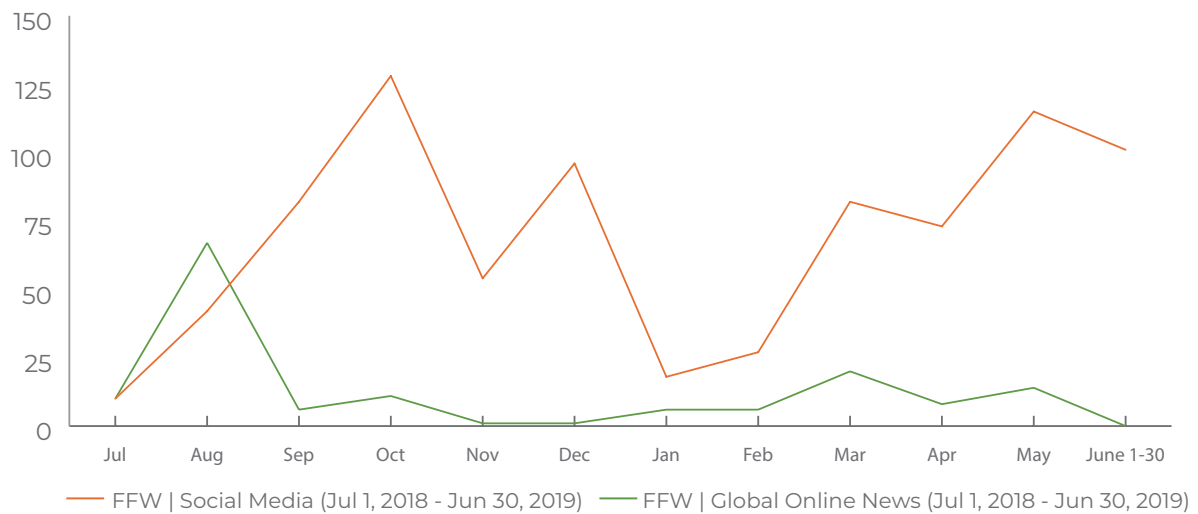
The Fight Food Waste CRC website is a foundation communication channel developed as part of the bid process. In the last half of 2018/2019 it was updated to include a members-only section for the Fight Food Waste CRC participants to access all governance material. Additional sections were added for the research themes: REDUCE, TRANSFORM and ENGAGE. All projects will have a page created on the site, as well as a project information sheet, and all are included in the socials schedule and newsletter.

The Fight Food Waste CRC brand organically developed as communication material was created throughout 2018/2019, including a new corporate flyer, project information sheets, icons, infographics and event-specific content. The majority of this was created in-house with engagement of specialist designers only as needed.

A real success of the communication program has been the fortnightly newsletter: Stories about the food we don't eat. It was a deliberate choice to have a conversational tone to the newsletter to connect with readers in a human way. The newsletter has gained a rapid increase in subscriptions and is achieving open rates and click rates well above industry standards as depicted below.



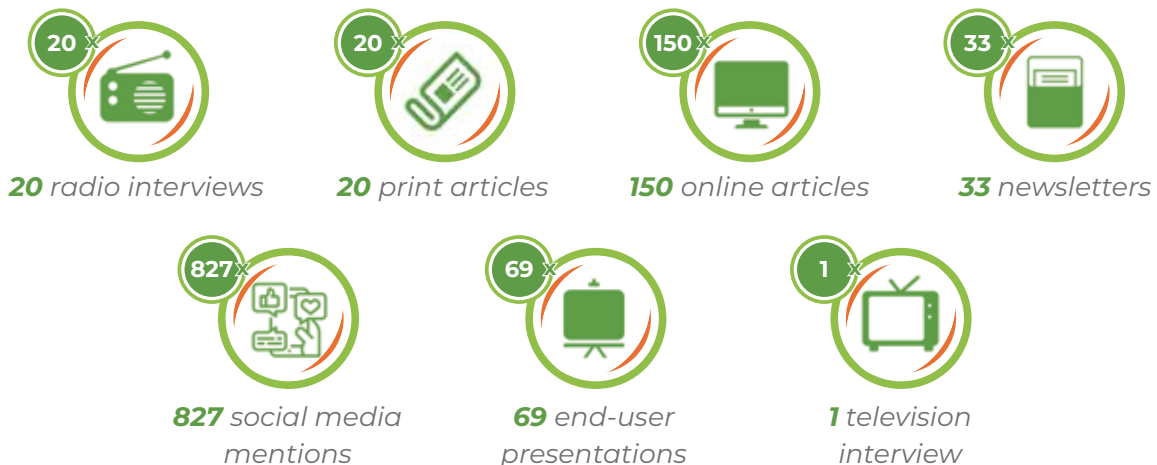
Media interest in the Fight Food Waste CRC has been strong with peaks occurring for the official commencement in July 2018 as well as the launch in October 2018. Both socials and media online mentions of the Fight Food Waste CRC totalled 972 for 2018-2019:



The spikes relate to:

- October 2018, official launch of the Fight Food Waste CRC
- December 2018, release of the PhD opportunities
- March 2019, Auspack2019 where we were an exhibitor with APPMA
- May 2019, media release from the University of Queensland and the CRCA conference.

### The Fight Food Waste CRC has achieved a high media public profile in the inaugural year, which included:



Many articles have related to the delivery of 69 conference and workshop presentations spread across the Management Team in our inaugural year, many of which were keynote addresses.



#### Twitter:

- 182 tweets
- 2401 engagements
- 147,489 impressions



#### LinkedIn

- 121 posts
- 2553 engagements
- 35,608 impressions

# Governance

Fight Food Waste Ltd (ABN 90 627 226 537) is an independent organisation that manages the Fight Food Waste CRC and is a company Limited by Guarantee with members being the Fight Food Waste CRC core participants that opted to become members. The company is a registered charity with the Australian Charities and Not-for-profits Commission and is tax exempt. The key legal agreements establishing both Fight Food Waste Ltd and Fight Food Waste CRC are:

- Fight Food Waste Ltd Constitution
- CRC Grant Agreement between the Australian Government CRC Program and Fight Food Waste Ltd
- Core Participants Agreement between all core (cash contributing) participants and Fight Food Waste Ltd
- Individual Supporting Participants Agreements between in-kind only contributing participants and Fight Food Waste Ltd.

There have been no changes to the incorporation structure since establishment.

The governance and management structure of the Fight Food Waste CRC has been designed to deliver commercially driven outputs that will solve industry identified challenges. At the same time, the structure will promote high levels of quality collaboration between the participants and achieve the highest standards of accountability. This will ensure that Fight Food Waste CRC can fully exploit the diversity of expertise and knowledge within the participant group and maximise the opportunity for the outputs to be industry-ready and fully utilised.

Fight Food Waste Ltd has a skills-based board elected by the members of the company. The Board is comprised of seven Directors, independent of the R&D providers, and selected by the members of the company against an agreed skills matrix. This ensures that the Fight Food Waste CRC Board operates to the benefit of all members and the objectives of the Fight Food Waste CRC.

The initial directors (as named in the Fight Food Waste Ltd Constitution) remained in office at the end of the reporting period. Directors elections (for two positions becoming vacant) will be held at the first AGM to be held in November 2019.

## ***Fight Food Waste CRC Directors***

### ***Board meetings held during the reporting period***

Date	Location
12 July 2018	Teleconference
20 July 2018	Teleconference
3 August 2018	Sydney
24 October 2018	Adelaide
7 November 2018	Teleconference
11 December 2018	Teleconference
30 January 2019	Teleconference
3 May 2019	Adelaide
17 June 2019	Sydney

## Board membership and skills

Name	Role	Key skills/domain knowledge*	Independent / organisation
John Webster	Chair	R&D, project management, supply chains	Independent
Toine Timmermans	Director	R&D, project management, international food waste initiatives	Independent
Geoff Starr	Director	Marketing, food production and manufacture, consumers/retail	Independent
Sandra Hook	Director	Marketing, communications, consumer behaviour, change management	Independent
Christine Giuliano	Director	Project management, food production and technology, value added products, retail	Independent
Robbie Davis	Director	R&D, project management, food production, value added products	Independent
Alain Pillay	Director	Financial and risk management, commercialisation, supply chains	Independent

\*All Directors list strategy and governance as key strengths

The Fight Food Waste CRC Board is aided by four Fight Food Waste CRC Board sub-committees, namely:

- Industry Impact Committee
- Audit, Risk Management and Compliance Committee
- Remuneration and Nominations Committee
- Research and Commercialisation Committee.

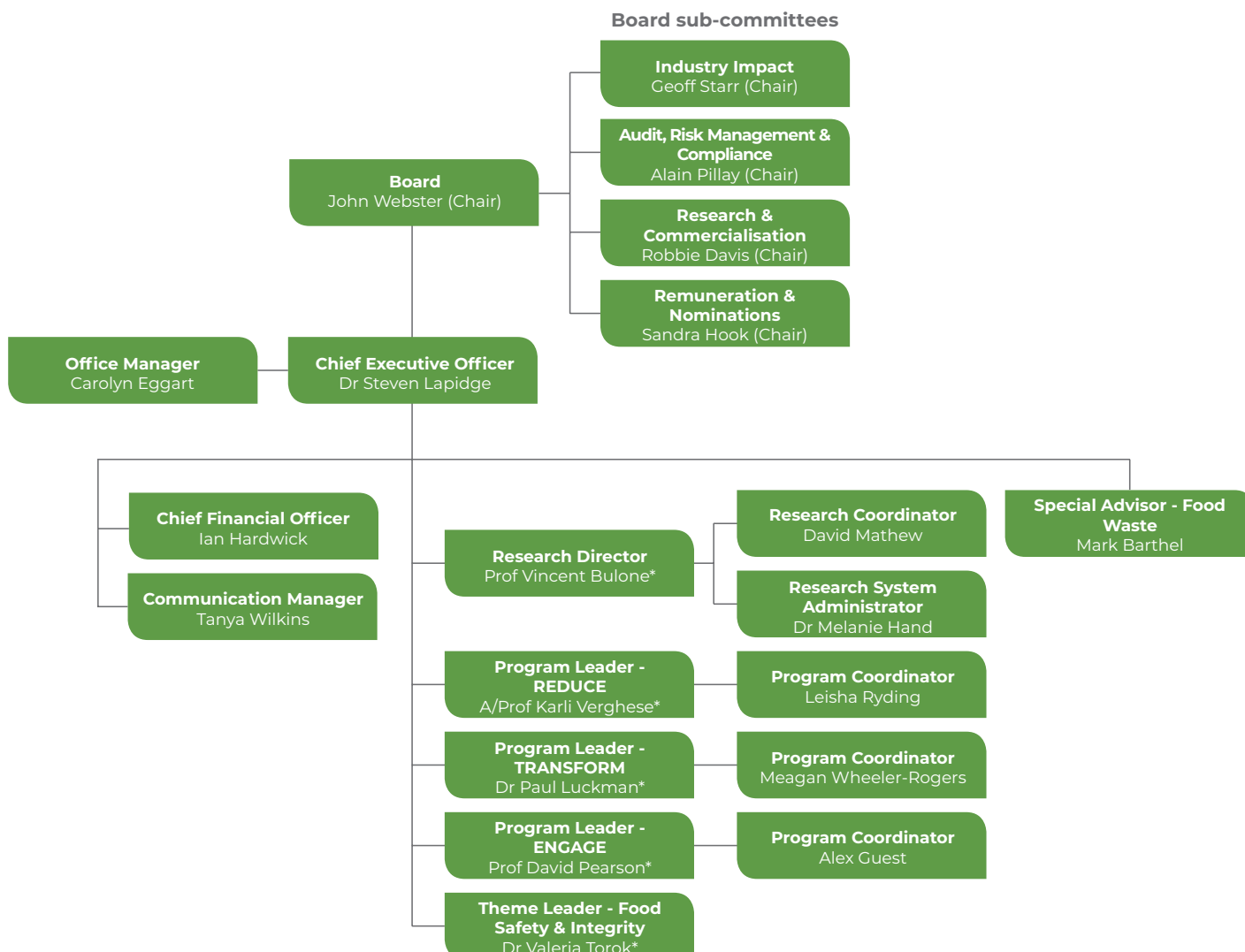
These sub-committees are each chaired by a Director member and established following ASX and AICD guidelines. They are constituted by the Board, including expertise from both the Fight Food Waste CRC Participants and outside if required. Their role is to provide expert advice and recommendations to the board. While most of these sub-committees are standard to CRCs in general, the Industry Impact Committee is unique to the CRC. It will have a remit to constantly review the CRC's impact on industry as a whole and ensure continual focus on improving that impact.

## Board meeting and sub-committee attendance

Name	Board	Industry Impact Committee	Audit, Risk Management and Compliance Committee	Remuneration and Nominations Committee	Research and Commercialisation Committee
John Webster*	9 / 9	1/1			3/3
Toine Timmermans	6 / 9	1/1		1/1	4/6
Geoff Starr	7 / 9	1/1	2/2		
Sandra Hook	8 / 9		1/2	1/1	
Christine Giuliano*	7 / 9		1/2	1/1	3/3
Robbie Davis	9 / 9	1/1			6/6
Alain Pillay	8 / 9		2/2		6/6

\*Change of Chair from Christine Giuliano to Robbie Davis and introduction of John Webster to the Research and Commercialisation Committee

The sub-committees typically meet four times a year, usually by teleconference. The Fight Food Waste CRC is structured as follows:



\* Denotes in-kind funded positions

## Management team

Name	Organisation	CRC position/role	Time
Dr Steve Lapidge	Fight Food Waste CRC	Chief Executive Officer	100%
Ian Hardwick	Fight Food Waste CRC	Chief Financial Officer	100%
Mark Barthel	Fight Food Waste CRC	Special Advisor Food Waste	100%*
Dr Valeria Torok	PIRSA (SARDI)	Theme Leader Food Safety	100%**
A/Prof Karli Verghese	Royal Melbourne Institute of Technology	REDUCE Program Leader	50%***
Dr Paul Luckman	University of Queensland	TRANSFORM Program Leader	50%***
Prof David Pearson	Central Queensland University	ENGAGE Program Leader	50%***
Prof Vincent Bulone	Adelaide University	Research Director	50%***

\* 50% funded from Woolworths roadmap project, 50% funded via sub-contract to FIAL

\*\* 50% of time provided in-kind by participant organisation, 50% funded by FFW CRC

\*\*\* time provided in-kind by participant organisation

## Head office staff

Name	Organisation	CRC position/role	Time
Dr Steve Lapidge	Fight Food Waste CRC	Chief Executive Officer	100%
Ian Hardwick	Fight Food Waste CRC	Chief Financial Officer	100%
Tanya Wilkins	Fight Food Waste CRC	Communication Manager	100%
Carolyn Eggart	Fight Food Waste CRC	Office Manager	100%

## Program/Research Coordinators

Name	Organisation	CRC position/role	Time
David Mathew	University of Adelaide	Research Coordinator	30%
Dr Melanie Hand	University of Adelaide	Research System Administrator	60%*
Leisha Ryding	Royal Melbourne Institute of Technology	REDUCE Program Coordinator	100%
Meagan Wheeler-Rogers	University of Queensland	TRANSFORM Program Coordinator	100%*
Alex Guest	Central Queensland University	ENGAGE Program Coordinator	50%*

\*Commenced shortly after end of reporting period



# Finance

The Fight Food Waste CRC is in a sound financial situation at the end of 2018/2019 including a cash carry forward at the end of the reporting period (\$2.41M). This carry forward is due to cash contributions having been received from the Commonwealth CRC Program and from many of the participants (in accordance with the Core Participants Agreement), but the research activities not yet commencing. Unspent contributions have been recorded as 'unearned revenue' liability in the financial statements rather than a current year surplus.

The major expenses that had been incurred to the end of the reporting period related to program coordination support positions, salary for Fight Food Waste CRC staff and professional fees including start-up costs. The Fight Food Waste CRC is committed to keeping central overheads to 20% or less of annual income over the life of the CRC, to ensure the maximum financial return to participants for RD&E purposes. In its establishment year, where income was lower than the expected long run average, central overheads were at 25% of income. This is still well below the average of around 30% reported by all CRC's over the last six years in CRC Association Benchmark Reports.

The cash balance is likely to increase in 2019/2020 as contributions continue to track ahead of expenditure whilst the initial research portfolio is being established. Over the medium-term (two-three years), with the research portfolio fully in place, the cash balance will reduce to its current level or below.

In-kind staff contributions for the reporting period related to the establishment of the Fight Food Waste CRC and the initial research portfolio and totalled 9.75 FTE across 42 participant organisations. Non-staff in-kind contributions will commence with the first projects from July 2019.

In regards of issues experienced during 2018/2019, three core participants withdrew; two due to a significant deterioration of their own financial circumstances, and the other cited the non-funding of the fraud program as the reason for withdrawal. In total, when combined with two organisations that withdrew prior to the signing of the Core Participants Agreement and two participants reducing their committed contributions, the financial impact is a reduction in funding of \$2.22M (3%) over the life of the CRC.

The Fight Food Waste CRC Management Team is working to attract new participants. Five new core participants contributing a total of \$190K have joined or are in the process of joining at the date of writing and discussions are active with numerous others. The withdrawal of the above mentioned participants provides an opportunity to attract new participants as it unties CRC grant funding which may now be offered as leverage to new participants (subject to new participant nomination process).

Another challenge experienced has been delays in collecting participant contributions. The timing of participant contributions is not directly tied to individual project timings, rather they are based on the schedule in the grant agreement with the Australian Government's CRC Program..

Notwithstanding the company has experienced delays collecting some participants' contributions due to the desire of those participants to see that project proposals, to which their contributions will be tied, are well evolved prior to making payment. This issue is being addressed with each new project proposal that is developed.

The audited financial statements for year ended 30 June 2019 are included at Appendix E.

# Future Plans

The 2018-2028 Fight Food Waste CRC Strategic Plan provides the roadmap for the strategic direction and investment priorities for the life of the Fight Food Waste CRC and sets the vision of an Australia without food waste. All research and development projects funded through the Fight Food Waste CRC must have a real impact on food waste reduction and in generating a commercial outcome from the Fight Food Waste CRC activity.

Success will not be limited to what was signed off in the full business case submitted to the Australian Government CRC Program in December 2017. The Fight Food Waste CRC will be an open CRC that seeks new opportunities, and new partners to over-deliver for participants and the Australian Government Department of Industry Innovation and Science CRC Program.

By using the National Food Waste Baseline and other key reports, additional food loss and waste opportunities will be identified. An important part of this will be attracting new participants with additional industry challenges across the food supply chain, particularly those not captured in the initial research portfolio. There is also the potential to develop a 10-year national behaviour change program that targets

the entire food system, particularly consumers, with state governments and the Australian Government, and industry, that reduces and prevents food waste from entering landfill.

In support of the 2018-2028 Fight Food Waste CRC Strategic Plan, a portion of untied funds will be utilised to attract new industry participants based on the Fight Food Waste CRC Investment Strategy that will be developed in 2019/2020. Key impacts will include:

- a transformation in the way Australian industry and consumers view food waste as well as contribute to food rescue
- a suite of new tools and technology for extracting the maximum value out of primary production, food manufacturing, supply chains and product sales, whether through waste transformation or supply chain innovation
- reduction in food waste entering landfill and associated greenhouse gases emitted
- future industry professionals skilled in capturing opportunities identified by industry.

We look forward to the challenge!

## Appendix A - Participants and Third Parties

Participant Name	Type	ABN/ACN	Org Type
Abalone Association of Australasia Incorporated	Core	93373883402	Industry Assoc
Abalone Council Australia Limited	Core	14108092271	Industry Assoc
Australian Council of Prawn Fisheries Limited	Core	31052207191	Industry Assoc
Australian Country Choice Production Pty Ltd	Supporting	32079436258	Large Industry
Australian Food and Grocery Council	Supporting	23068732883	Industry Assoc
Australian Institute of Food Science and Technology Limited	Supporting	15602767019	Industry Assoc
Australian Institute of Packaging Incorporated	Core	35092354071	Industry Assoc
Australian Organics Recycling Association Limited	Supporting	17158519736	Industry Assoc
Australian Packaging and Processing Machinery Association Limited	Core	62051388053	Industry Assoc
Australian Food Cold Chain Council Limited	Supporting	15621254448	Industry Assoc
Bowen Gumlu Growers Association Incorporated	Core	35729953455	Industry Assoc
Central Coast Industry Connect Limited	Supporting	51605544223	Industry Assoc
Central Queensland University	Core	39181103288	University
Central SEQ Distributor-Retailer Authority (Queensland Urban Utilities)	Core	86673835011	Other
Chameleon Innovations (CI) Pty Ltd	Core	68629148590	SME
Chemistry Centre (WA)	Core	40991885705	Other
Curtin University	Core	99143842569	University
State of Queensland through Department of Agriculture & Fisheries	Core	66934348189	State Gov't
Food and Fibre Gippsland Incorporated	Supporting	68491193041	Industry Assoc
Empauer Pty Ltd	Core	95614415146	SME
Entopia Biotechnologies Pty Ltd	Core	35168592103	SME
NSW Environmental Protection Authority	Core	43692285758	State Gov't
The Trustee for THE FAVCO TRUST t/a FAVCO QUEENSLAND PTY LTD	Core	22608312386	Large Industry
Fisheries Research and Development Corporation	Core	74311094913	Other
Food Innovation Australia Limited	Core	50164124609	Aust Gov't

Participant Name	Type	ABN/ACN	Org Type
Food South Australia Incorporated	Core	59149235570	Industry Assoc
Foodbank Australia Limited	Core	58073579254	Other
Green Industries SA (as a body corporate pursuant to the Green Industries SA Act 2004)	Core	76149388126	State Gov't
Gretals Australia Pty Ltd	Core	54605253441	SME
Honey and Fox Pty Ltd	Supporting	85606554947	SME
KPMG	Supporting	51194660183	Large Industry
Mitolo Developments Pty Ltd	Core	86123214068	Large Industry
OzHarvest Limited	Supporting	33107782196	Other
FADA Pty Ltd t/a Pacific Coast Produce	Core	84269588959	SME
Peats Soil & Garden Supplies Pty Ltd	Core	40099625555	SME
Planet Protector Packaging Pty Limited	Core	65614861791	SME
Potatoes South Australia Incorporated	Supporting	45568994361	Industry Assoc
Minister for Primary Industries and Regions South Australia (Acting through the South Australian Research and Development institute)	Core	53763159658	State Gov't
Queensland University of Technology	Core	83791724622	University
Regional Development Australia Murraylands and Riverland Incorporated	Core	32137252384	Other
Royal Melbourne Institute of Technology	Core	49781030034	University
S.M ADAMS & Others (Piper Alderman)	Supporting	42843327183	Large Industry
Sampano Pty Ltd	Supporting	56608519893	SME
Sustainability Victoria	Core	62019854067	State Gov't
Swinburne University of Technology	Core	13628586699	University
Swisse Wellness Pty Ltd	Core	62004926005	Large Industry
The South Australian Potato Company Pty Ltd	Core	48090103549	SME
The University of Adelaide	Core	61249878937	University
The University of Queensland	Core	63942912684	University
Thomas Foods International Fresh Produce Pty Ltd	Core	28164983591	Large Industry
University of Southern Queensland	Core	40234732081	University
Waste & Resource Action Program (UK)	Supporting	N/A	Other
Whitsunday Regional Council	Core	63291580128	Other
Woolworths Group Limited	Core	88000014675	Large Industry
Zerella Holdings Pty Ltd t/a Zerella Fresh	Core	18048361442	Large Industry

## Departed Participants

Participant Name	Type	ABN/ACN	Org Type
Clean Seas Seafood Limited	Core	61094380435	Large Industry
Costa Group Holdings Limited	Core	151363129	Large Industry
CDP Waste2Energy Pty Ltd (previously EcoFuel Innovation Pty Ltd)	Core	65625650106	SME
Euromonitor International (Australia) Pty Ltd	Supporting	97143761479	Large Industry
PACT Group Holdings Limited	Core	55145989644	Large Industry
T Provenance Pty Ltd	Core	41621088579	SME

## Joining Participants

Participant Name	Type	ABN/ACN	Org Type
Queensland Department of Environment and Science	Core	46640294485	State Gov't
Toowoomba and Surat Basin Enterprise Pty Ltd	Core	85155004523	Other
Transport Canberra City Services Directorate (ACT NoWaste)	Core	37307569373	State Gov't
Western Australia Department of Water and Environmental Regulation	Core	28428443065	State Gov't

## Appendix B – 2018/2019 Foundation Peer Reviewed Publications by Program Leaders

Author/s	Publication Title	Publication Date	Publication Name
Andrews, Kerr, Pearson and Miroso	The attributes of leftovers and higher-order personal values	September 2018	British Food Journal
Dilkes-Hoffman, Lane, Grant, Pratt, Lant and Laycock	Environmental impact of biodegradable food packaging when considering food waste	April 2018	Journal of Cleaner Production
Dilkes-Hoffman, Pratt, Lant and Laycock	The Role of Biodegradable Plastic in Solving Plastic Solid Waste Accumulation	January 2019	Book Chapter in Plastics to Energy. Elsevier Publishing
Pearson and Perera	Reducing Food Waste: A Practitioner Guide Identifying Requirements for an Integrated Social Marketing Communication Campaign	January 2018	Social Marketing Quarterly
Pratt, Vandi, Gapes, Werker, Oehmen and Laycock.	PHA bioplastics from organic waste	March 2018	Book Chapter in Biorefinery – Integrated Sustainable Processes for Biomass Conversion to Biomaterials, Biofuels, and Fertilizers. Springer Publishing.
Vergheze, Lockrey, Rio and Dwyer	DIRECT, a tool for change: Co-designing resource efficiency in the food supply chain	January 2018	Journal of Cleaner Production
Wikstrom, Vergheze, Auras, Olsson, Williams, Wever, Gronman, Pettersen and Moller	Packaging strategies that save food. A research agenda for 2030	June 2019	Journal of Industrial Ecology

## Appendix C – End-user Publications

Date	Type	Title	Channel
1/07/2018	Website	Fight Food Waste Cooperative Research Centre	Online
2/07/2018	Newsletter	Welcome to the Fight Food Waste CRC	FFW CRC Distribution List
15/07/2018	Newsletter	Fight Food Waste CRC Establishment Update 5	FFW CRC Distribution List
25/07/2018	Newsletter	FFW CRC Launch and Participants' Meeting	FFW CRC Distribution List
1/08/2018	Newsletter	Fight Food Waste CRC Update 6 and final chance to RSVP	FFW CRC Distribution List
13/08/2018	Newsletter	Fight Food Waste CRC Update 7 - Agreement process	FFW CRC Distribution List
28/08/2018	Newsletter	Fight Food Waste CRC Update 8 Stage 1 agreement feedback now due	FFW CRC Distribution List
6/09/2018	Newsletter	Invitation to the Fight Food Waste CRC Launch and Participants Meeting	Invitation List Launch and Participant's Meeting
10/09/2018	Newsletter	Invitation to the Fight Food Waste CRC Launch and Participant's Meeting	Launch and Participants Meeting Invitation List
12/09/2018	Newsletter	Invitation to the Fight Food Waste CRC Launch and Participant's Meeting	Launch and Participants Meeting Invitation List
13/09/2018	Newsletter	REMINDER: Register now for the Fight Food Waste CRC Launch and Participant's Meeting	Launch and Participants Meeting Invitation List
16/09/2018	Newsletter	Assistance with survey of Growth Centre performance	FFW CRC Distribution List
20/09/2018	Newsletter	If you are receiving this invite, you are not registered to attend the launch!	Launch and Participants Meeting Invitation List
27/09/2018	Newsletter	LAST CHANCE: Only one week left to register!	Launch and Participants Meeting Invitation List
9/10/2018	Newsletter	Fight Food Waste CRC Update 9	FFW CRC Distribution List
23/10/2018	Media Release	Launch of \$120m food waste research centre	Honey and Fox
24/10/2018	Radio Interview	Dr Steven Lapidge, CEO, National Fight Food Waste Centre, Adelaide University, says Australian households need to do their part to reduce waste.	ABC Radio Adelaide
24/10/2018	Radio Interview	Head of the Centre Steven Lapidge says SA is responsible for creating 10% of the country's food waste which can affect the environment.	ABC Radio Darwin
24/10/2018	Radio Interview	According to Dr Steven Lapidge, Australian households need to do their part to reduce food waste.	ABC Radio Darwin
24/10/2018	Radio Interview	A new \$132m centre at Adelaide University's Waite Campus.	ABC News
24/10/2018	Radio Interview	A new \$132m centre at Adelaide University's Waite Campus.	ABC News
24/10/2018	Radio Interview	Interview with Karli Verghese, Associate Professor, National Fight Food Waste Centre. and bringing different parties together to work together on these opportunities is crucial.	ABC News
24/10/2018	Radio Interview	Karli Verghese, Associate Professor, NFFWC, mentions that she's been at RMIT now for 15 years. She mentions that they are working with the industry, government, and different research institutes.	ABC Triple J
24/10/2018	Radio Interview	Fight Food Waste Centre CEO Dr Steve Lapidge says Australian households need to do their part to reduce food wastes.	ABC Radio Melbourne

Date	Type	Title	Channel
24/10/2018	Radio Interview	CEO Steven Lapidge says food waste pollutes the environment six times more than the aviation industry.	ABC News
24/10/2018	Radio Interview	CEO Steven Lapidge says food waste pollutes the environment six times more than the aviation industry.	ABC News
24/10/2018	Radio Interview	A new food waste centre in Adelaide is aiming to lead the world in finding innovative ways to turn unwanted food into a profitable resource.	ABC National News
25/10/2018	Newsletter	Thank you	Launch and Participants Meeting Invitation List
26/10/2018	Radio Interview	Interview with Dr Steven Lapidge, Peter Wadewitz and Toine Timmermans	ABC Radio Adelaide
26/10/2018	Radio Interview	Continuing Interview with Dr Steven Lapidge, Peter Wadewitz and Toine Timmermans	ABC Radio Adelaide
26/10/2018	Radio Interview	Continuing Interview with Dr Steven Lapidge, Peter Wadewitz and Toine Timmermans	ABC Radio Adelaide
26/10/2018	Radio Interview	Continuing Interview with Dr Steven Lapidge, Peter Wadewitz and Toine Timmermans	ABC Radio Adelaide
26/10/2018	Radio Interview	Continuing Interview with Dr Steven Lapidge, Peter Wadewitz and Toine Timmermans	Stock Journal
11/11/2018	Newsletter	Fight Food Waste CRC Update 10	FFW CRC Distribution List
19/11/2018	Newsletter	Fight Food Waste CRC Update 11 - Agreements submitted	FFW CRC Distribution List
4/12/2018	Newsletter	Fight Food Waste CRC Update 12 Agreement progress	FFW CRC Distribution List
6/12/2018	Newsletter	Fight Food Waste CRC Update 13 Agreement process finalisation	FFW CRC Distribution List
20/12/2018	Newsletter	Fight Food Waste CRC Update 14 no time to waste	FFW CRC Distribution List
26/12/2018	Radio Interview	Interview with Dr Simon Lockrey: Food waste and the Fight Food Waste CRC	ABC Radio – Adelaide with Narelle Graham
5/02/2019	Newsletter	Fight Food Waste CRC Update 15 early 2019 activities	FFW CRC Distribution List
17/02/2019	Newsletter	Fight Food Waste CRC Update 16 new arrivals	FFW CRC Distribution List
4/03/2019	Newsletter	Hello from Fight Food Waste Cooperative Research Centre	FFW CRC Distribution List
21/03/2019	Interview	Interview with Dr Steven Lapidge: Meet the chefs leading SA's food waste movement	Brand SA
21/03/2019	Newsletter	Stories about the food we don't eat ...	FFW CRC Distribution List
26/03/2019	Radio Interview	Interview with Dr Steven Lapidge: Fight Food Waste	5AA
5/04/2019	Interview	Interview with Dr Steven Lapidge: THERE'S GOLD IN THEM THERE HILLS OF FOOD WASTE	AuManufacturing
5/04/2019	Newsletter	FFW CRC at Auspack2019 and more ...	FFW CRC Distribution List
18/04/2019	Newsletter	First four projects approved!! And some 'Eggcellent' tips to reduce Easter waste	FFW CRC Distribution List
6/05/2019	Newsletter	Two more projects approved!!	FFW CRC Distribution List
6/05/2019	Project Information Sheet	Industry Connection Hub	Online

Date	Type	Title	Channel
7/05/2019	Interview	Interview with Dr Steven Lapidge: SA's food waste solutions set to drive a new economy	Brand SA news
9/05/2019	Media Release	Centre aims to find value in food waste	UQ Media Team
17/05/2019	Newsletter	UK 'Guardians of Grub' campaign and more ...	FFW CRC Distribution List
28/05/2019	Radio Interview	Interview with Dr Richard Swannell, WRAP: Food Waste	ABC Radio SA Regional and Broken Hill
28/05/2019	Booklet	Auspack2019 REDUCE	Hardcopy
28/05/2019	Booklet	Fight Food Waste CRC	Corporate Flyer
3/06/2019	Newsletter	Introducing our Industry Connection Hub	FFW CRC Distribution List
3/06/2019	Social Media	Introducing our Industry Connection Hub ... this will be the place where businesses can go to find out all they need to know about the research coming out of the @Fight Food Waste CRC	LinkedIn
5/06/2019	Radio Interview	Interview with Dr Steven Lapidge: World Environment Day	PowerFM
5/06/2019	Interview	Interview with Dr Steven Lapidge: What a waste!	The Weekly Times
17/06/2019	Newsletter	Congratulations to Woolworths! 100% of stores with a food waste program	FFW CRC Distribution List
18/06/2019	Newsletter	The Hub is alive and well!	Hub Communique
25/06/2019	Newsletter	Do you want to formally join the Hub	Hub Communique
27/06/2019	Newsletter	More projects approved and on their way!	FFW CRC Distribution List

## Appendix D – Fight Food Waste CRC Students in Approved Projects (2018/2019)

Project Title	Host Research Institution	Student Type	Name	Start date	Expected Completion Date	Country of Origin
<b>REDUCE</b>						
Dynamic Industry Resource Efficiency Calculation Tool (DIRECT) Commercialisation	RMIT	PhD	Roland Somlai	01/11/2019	31/10/23	TBC
Save Food Packaging Criteria and Framework	RMIT	PhD	Ruby Chan	02/09/2019	02/09/2023	Australia
Consumer Perceptions of the Role of Packaging in Reducing Food Waste						
On Board Processing and Packaging Innovation in the Australian Wild Harvest Prawn Fishery						
Development and Validation of Reduced Thermal Processing Requirements for Canned Abalone						
Enhancing Foodbank's stakeholder engagement	CQUniversity	PhD	TBC			
(Recruiting)	01/12/2019	01/12/2023	TBC			
Foodbank Meals Via Y Waste App						
<b>ENGAGE</b>						
Industry Connection Hub						
2019 Food Summit Sponsorship						
Understanding consumer food waste attitudes and behaviours and interventions to reduce food waste	CQUniversity	PhD	Kate Walsh	03/06/2019	03/06/2023	Australia
Food waste reduction roadmap for Woolworths	CQUniversity	MSc	TBC (Recruiting)	01/08/2019*	01/08/2023*	TBC
<b>TRANSFORM</b>						
Making ACC circular						
Converting potato waste into pre-biotics and other valuable products	University of Adelaide	MSc	TBC	01/11/2019*	01/11/2023*	TBC
Fight Food Waste SME Solutions Centre						

\* Indicative student commencement and completion dates based upon project commencement and finish dates.



# Appendix E – 2018/19 Financial Statements

## Fight Food Waste Limited

ABN: 90 627 226 537

## Financial Statements

For the Year Ended 30 June 2019

# Contents

**For the Year Ended 30 June 2019**

## **Financial Statements**

---

Directors' Report

---

Statement of Profit or Loss and Other Comprehensive Income

---

Statement of Financial Position

---

Statement of Changes in Equity

---

Statement of Cash Flows

---

Summary of Significant Accounting Policies

---

Notes to the Financial Statements

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Responsible Persons' Declaration

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Independent Audit Report

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# Directors' Report

**30 June 2019**

The Directors present their report on Fight Food Waste Limited (FFWL; ABN 90 627 226 537) for the financial year ended 30 June 2019. FFWL was established on the 2nd of July 2018 and is an independent organisation that manages the Fight Food Waste Cooperative Research Centre (CRC). FFWL is a company Limited by Guarantee with members being the CRC core participants that opted to become members. As a 'start up' the Board focussed initially on establishing the governance framework.

In the first half year, where cash flow allowed for no staff other than the CEO and some short-term contractors and in-kind staff, the Board and CEO operated as a team to urgently develop the CRC foundation arrangements – grant agreement with the Commonwealth, company constitution, participants agreement and project funding agreement. As grant and member contributions were received, the Company employed the core team and commenced formal operations from mid-February 2019.

Four Board Committees were then established to assist with the effective running of the CRC:

- Industry Impact Committee
- Audit, Risk Management and Compliance Committee
- Research & Commercialisation Committee
- Remuneration and Nominations Committee

Charters and membership for each Committee were developed as well as a Board charter setting out the governance framework and role for the Board.

Three of these committees are usual in any CRC. The Impact Committee though is an innovation of this CRC to ensure that an initial focus on impact and ongoing measurement of impact is integral in all aspect of operations. As a result, all research projects are required to clearly record the baseline position regarding food waste and then measure impact delivered in terms of tonnage reduction in food waste and increase in commercial returns together with environmental benefits where applicable.

Finally, a complete set of company financial, risk management, HR and operational policies was developed and are now operational.

As part of the Company financial performance reporting, we have adhered to the Australian Accounting Standards as set out in the notes to these accounts. The most critical policy impacting on the reported results was the matching of contributions to project obligations (see Note 1) which will result in a zero surplus until such time as any commercialisation gains are realised during the CRC.

# Directors' Report

30 June 2019

## 1. GENERAL INFORMATION

### Key management personnel

<b>Names</b>	<b>Position</b>	<b>Appointed</b>
John Webster	Non-Executive Director and Independent Chair	02/07/2018
Toine Timmermans	Non-Executive Director	02/07/2018
Geoff Starr	Non-Executive Director	02/07/2018
Sandra Hook	Non-Executive Director	02/07/2018
Christine Giuliano	Non-Executive Director	02/07/2018
Robbie Davis	Non-Executive Director	02/07/2018
Alain Pillay	Non-Executive Director	02/07/2018
Dr Steven Lapidge	Chief Executive Officer	02/07/2018
Ian Hardwick	Chief Financial Officer	18/02/2019

### Company secretary

The following person held the position of Company secretary at the end of the financial year: Ian Hardwick (BCOMM, CA, GAICD) has been the company secretary since February 2019.

<b>Board meeting attendance</b>	<b>Meetings Attended</b>	<b>Meetings Held</b>
John Webster	9	9
Toine Timmermans	6	9
Geoff Starr	7	9
Sandra Hook	8	9
Christine Giuliano	7	9
Robbie Davis	9	9
Alain Pillay	8	9

# Directors' Report

30 June 2019

## 1. GENERAL INFORMATION

### Information on key management personnel

#### John Webster

John Webster is the inaugural Independent Chair of the Fight Food Waste Cooperative Research Centre and was integral to the success of the bid. He has provided leadership throughout the bidding and FFW CRC establishment process and has kept a strong focus on industry impacts and good governance. John has extensive experience in issues surrounding both food waste and management of complex industry/research collaborations. His expertise includes strategy, governance, leadership, performance measurement, R&D project management, business and commercialisation in the food, agribusiness and food waste sectors.

John is a former CEO of Foodbank Australia, MD of Horticulture Australia, and GM of Meat & Livestock Australia. He is currently a Director of AgStrat Associates and Council Member of the International Meat Research 3G Foundation. His qualifications include a degree in Economics and he is a Graduate Member of the Australian Institute of Company Directors.

#### Toine Timmermans

Toine Timmermans is a global leader in food waste management and the FFW CRC's key connection to international food waste initiatives. He was an integral component of the successful bid, as remarked by the CRC Advisory Committee, and has since been indispensable to the establishment of the R&D portfolio. He is

active globally in creating impact on food waste prevention via research, innovation and establishing partnerships.

Toine is currently the Program Manager of Sustainable Food Chains at Wageningen University & Research in The Netherlands, the Coordinator of the European Union food waste project REFRESH, and the Managing Director of the Foundation United Against Food Waste. The overall aim of the REFRESH project is to halve food loss and food waste across the post-harvest supply chain. His qualifications include a MSc in Agricultural Engineering and post-graduate studies in Business Strategy.

#### Geoff Starr

Geoff Starr has a wealth of experience in international branded foods. Geoff has worked for Unilever, been CEO for Mars Inc. companies internationally and George Weston foods. He has run very large businesses and also enjoyed the involvement in smaller enterprises. Geoff was chair of the Australian Food and Grocery Council, Australia's first industry advocate to government, former director of Foodbank Australia and current director of Australian Pork Ltd, Food Innovation Australia Ltd, Birch & Waite foods and chair of Cannpal Therapeutics.

Geoff's qualifications include a Bachelor of Arts with Honours and he is Graduate Member of the Australian Institute of Company Directors (AICD).

# Directors' Report

**30 June 2019**

## **1. GENERAL INFORMATION**

### **Information on key management personnel**

#### **Sandra Hook**

Sandra has a track record in driving customer-centred business transformation and transitioning traditional organisations in rapidly evolving environments. She has extensive operational, digital, financial management and strategic experience built over 25 years as a CEO and in senior executive roles for some of Australia's largest media companies including News Limited, Foxtel, Federal Publishing Company, Murdoch Magazines and Fairfax.

Sandra's qualifications include courses from the Australian Graduate School of Management and she is Graduate Member of the Australian Institute of Company Directors (AICD).

Sandra holds directorships of other companies including: RXP Services (ASX:RXP), MedAdvisor Limited (ASX:MDR), IVE Group Limited (ASX:IGL), Sydney Fish Markets, WYZA Limited, Royal Botanic Gardens and Sydney Harbour Federation Trust.

#### **Christine Giuliano**

Christine is Chief Operating Officer at Nature's Care, Australia's third largest vitamins company. Christine was previously Managing Director of Naturex Australia, the world's largest processor of herbal and botanical extracts, and prior to that Managing Director of Kingfoods Australia. She has had over 20 years' experience in Australia's food technology and processing sectors.

Christine holds a Bachelor of Applied Science in food and nutrition and she is a Graduate Member of the Australian Institute of Company Directors (AICD). She is also a Professional Member of the Australian Institute of Food Science and Technology (AIFST), and a member of the Complimentary Medicines Australia.

#### **Robbie Davis**

Robbie has business experience in both the private and public sectors domestically and internationally as a CEO and Director. She is also a primary producer (beef cattle) in the upper south east of South Australia. She has an intimate understanding of agricultural production systems, particularly sustainable whole of industry value chains from the paddock to the end-consumer. Following almost ten years living and working in Southeast Asia (Singapore, Indonesia, Brunei), she was self-employed as an agribusiness consultant until her appointment as CEO of Potatoes South Australia in 2012. With food security, food safety and reduction of food waste among issues of predominant importance to her, Robbie aims to participate in the re-positioning of Australian agribusiness as the nation's most significant industry.

Robbie's qualifications include a Bachelor of Agricultural Science, a Master of Business Administration, and she is a Graduate Member of the Australian Institute of Company Directors (AICD). She was profiled under PIRSA's Women Influencing Agriculture and Regions in 2015 and is the RIRDC 2016 SA Rural Woman of the Year.

# Directors' Report

30 June 2019

## 1. GENERAL INFORMATION

### Information on key management personnel

#### **Alain Pillay**

Alain Pillay is the Managing Director of Nexus Strategem Pty Ltd, a boutique financial and economic advisory firm specialising in corporate strategy and M&A. Since 2011 Nexus has been involved in acquisitions across the sugar, beef, port and technology sectors. Prior to establishing Nexus, Alain was the Queensland state lead partner for Deloitte's economics and strategy unit and was responsible for establishing and building the practice into one of the largest economic groups in Queensland. A member of Deloitte's young leaders group and a member of Deloitte economics executive team, Alain worked extensively across Asia, Middle East and America

Alain has a strong investment network both domestically and internationally and has experience in corporate governance as a company secretary of a listed company. Alain is tertiary qualified in both accounting and economics and is a member of the Australian CPA's, Institute of Company Directors (AICD) and Chartered Secretaries of Australia.

#### **Dr Steven Lapidge**

Steven Lapidge is the inaugural CEO of the Fight Food Waste CRC. He has spent much of his 20-year career working for or with agribusiness CRC's, with a strong focus on New Product Development and commercialisation. Steven led the

development of the Fight Food Waste CRC bid and in recent years has represented Australia at G20, OECD and national food waste forums. He is a member of the NFWS Steering Committee and a Non-Executive Director of the Australian Institute of Food Science and Technology (AIFST).

Steven's qualifications include a BSc(Hons), PhD and an MBA. He is a Graduate of the Australian Institute of Company Directors (AICD) and a Professional Member of AIFST. Steven's previous research saw him awarded the Fulbright Professional Business/Industry (Coral Sea) Scholarship in 2010.

#### **Ian Hardwick**

Ian joined Fight Food Waste CRC in February 2019 after having spent nearly eight years as CFO of Deep Exploration Technologies CRC, which was wound up in late 2018 at the end of its funding life, having successfully licensed a number of new technologies to the mineral exploration services sector. Prior to that role, Ian worked within an accounting firm providing business advisory and compliance services across a range of industries. Ian is a Commerce graduate, Chartered Accountant and Graduate of the Australian Institute of Company Directors (AICD).

# Directors' Report

**30 June 2019**

## **1. GENERAL INFORMATION**

### **Principal activities**

Fight Food Waste Limited (FFWL; ABN 90 627 226 537) is an independent organisation that manages the Fight Food Waste Cooperative Research Centre (FFW CRC) and is a company Limited by Guarantee with members being the FFW CRC core participants that opted to become members. The company is a registered charity with the Australian Charities and Not-for-profits Commission. The key legal agreements establishing both FFWL and FFW CRC are:

- FFWL Constitution
- CRC Grant Agreement between the Commonwealth of Australia and Fight Food Waste Ltd
- Core Participants Agreement between all Core (cash contributing) participants and Fight Food Waste Ltd
- Individual Supporting Participants Agreements between in-kind only contributing participants and Fight Food Waste Ltd.

The FFW CRC aims to tackle the growing international problem of food waste, both here in Australia as well as to contribute to global knowledge and action.

The FFW CRC brings together industry, research and the community to capitalise on Australia's food waste opportunities. Winning this fight could save Australia \$20 billion per annum in food while increasing industry profitability and reducing food insecurity, as well as enhancing Australia's reputation as a sustainable producer of premium food products.

# Directors' Report

**30 June 2019**

## **1. GENERAL INFORMATION**

### **Objectives**

The overarching strategic objectives of the FFW CRC are to deliver:

- A transformation in the way Australian industry and consumers view food waste as well as contribute to food rescue.
- A suite of new tools and technologies for extracting the maximum value out of primary production, food manufacturing, supply chains and product sales, whether through supply chain innovation or waste transformation.
- Reduction in food waste entering landfill and associated greenhouse gas emissions.
- Future industry professionals skilled in capturing opportunities identified by industry.

### **Strategic plan**

The FFW CRC will achieve its purpose through three main research, development and extension programs. They are:

REDUCE food waste throughout the supply chain by:

- Delivering supply chain analysis tools
- Developing a framework for optimal packaging design
- Innovative supply chain and packaging solutions
- Identifying options to optimise food rescue.

TRANSFORM unavoidable waste into innovative products by:

- Identifying and prioritising commercially valuable products from waste streams
- Developing new technologies for waste transformation
- Decision support tools and identifying regulatory options to promote investment in waste transformation

ENGAGE with industry and consumers to deliver behavioural change by:

- Educating future industry professionals
- Industry dissemination and skills training
- Facilitating household and business behaviour change

# Directors' Report

**30 June 2019**

## **1. GENERAL INFORMATION**

### **Members' guarantee**

The Company is incorporated under the Australian Charities and Not-for-profits Commission Act 2012 and is a Company limited by guarantee. If the Company is wound up, the constitution states that each member is required to contribute a maximum of \$10 each towards meeting any outstandings and obligations of the Company. At 30 June 2019 the number of members was 22 and collective liability of members was \$220.

### **Operating results**

The Company received total contributions from the CRC Program and Participants of \$4,475,000. Such contributions are treated as unearned revenue until matched against expenditure in the course of the Company's activities. Direct expenditure totalled \$837,625 and operating expenditure (net of interest earned) totalled \$1,136,619. Unearned revenue treated as a current liability on the balance sheet was \$2,500,756.

The net surplus/deficit of the Company for the year therefore amounted to \$0.

The Company expects to fully establish its initial research portfolio of approximately 30 projects by the 30th of June 2020 by which point all of the current years unearned revenue will be spent or committed.

### **Directors fees**

The aggregate maximum amount available to be paid to all Directors will be the sum of the average payments to Chair/directors in the latest CRC Association benchmarking report and as ratified or otherwise determined by an ordinary resolution of Members.

The amount paid to all Directors for the reporting year was \$204,000, which is in accordance with the limits set out in the Company Constitution.

### **Employee performance based remuneration**

The Board approves annual company KPI's and approves potential bonus pool as part of annual budget. At years end the Board approves performance against these KPI's and approves the portion of bonus pool available to be distributed. The Board apportions CEO bonus (based on advice from the Remuneration & Nominations Committee) and the CEO apportions the remainder to employees (based on outcomes achieved against CEO approved individual KPI's).

The amount paid to employees by way of performance bonuses for the reporting year was \$56,906.

### **Review of operations**

The Company has performed in accordance with the expectations of the Directors.

### **Events after the reporting date**

No matters or circumstances have arisen since the end of the financial year which significantly affected or may significantly affect the operations of the Company, the results of those operations or the state of affairs of the Company in future financial years.

### **Environmental issues**

The Company's operations are not regulated by any significant environmental regulations under a law of the Commonwealth or of a state or territory of Australia.

# Directors' Report

**30 June 2019**

## **Share capital and options**

The Company is limited by guarantee and has no share capital.

## **Indemnification and insurance of officers and auditors**

During the reporting year, the Company paid a premium in respect of a contract insuring the Directors of the Company, the Company Secretary, and all executive officers of the Company against a liability incurred by such a Director, secretary or executive officer to the extent permitted by the Corporations Act 2001. The contract of insurance prohibits disclosure of the nature of the liability and the amount

of the premium. The Company has not otherwise, during or since the financial year, except to the extent permitted by law, indemnified or agreed to indemnify an officer of the Company or of any related body corporate against a liability incurred by such an officer.

To the extent permitted by law, the Company has agreed to indemnify its auditors, BDO, as part of the terms of its audit engagement agreement against claims by third parties arising from the audit (for an unspecified amount). No payment has been made to indemnify BDO during or since the financial year.

# Directors' Report

**30 June 2019**

**Sign off details**

This report is made in accordance with a resolution of directors, pursuant to section 60.15(2) of the Australian Charities and not-for-profit commission regulation 2013.

On behalf of the directors

Director:  .....  
John Webster - Chair of the board

Dated on the 28 October 2019.

# Declaration of Independence

30 June 2019

**BY PAUL GOSNOLD**

**TO THE DIRECTORS OF FIGHT FOOD WASTE LIMITED**

As lead auditor of Fight Food Waste Limited for the year ended 30 June 2019, I declare that, to the best of my knowledge and belief, there have been:

1. No contraventions of the auditor independence requirements of the *Australian Charities and Not-for-profits Commission Act 2012* in relation to the audit; and
2. No contraventions of any applicable code of professional conduct in relation to the audit.



Paul Gosnold  
Director

**BDO Audit (SA) Pty Ltd**  
Adelaide, 30 October 2019

# Statement of Profit or Loss and Other Comprehensive Income

**For the Year Ended 30 June 2019**

		<b>2019</b>
	<b>Note</b>	<b>\$</b>
Funding and program revenue	6.	1,974,244
Project expenditure		(61,400)
Program coordination support	5.	(677,092)
Interest expense - lease liability		(41,082)
Depreciation of right of use asset	1.6.	(58,051)
Gross surplus		<u>1,136,619</u>
Interest income		4,379
Director fees		(204,000)
Communication expenses		(60,599)
Employment expenses		(589,146)
Office expenses		(14,097)
Professional services and licenses		(196,682)
Travel expenses		(76,474)
<b>Total expenditure</b>		<u><u>1,140,998</u></u>
<b>Net surplus / (deficit) for the year</b>		<u><u>-</u></u>
Other comprehensive income		-
<b>Total comprehensive income</b>		<u><u>-</u></u>

# Statement of Financial Position

For the Year Ended 30 June 2019

	Note	2019 \$
<b>ASSETS</b>		
CURRENT ASSETS		
Cash and cash equivalents	7.	2,410,772
Trade and other receivables	8.	261,676
Other assets	9.	255,288
<b>TOTAL CURRENT ASSETS</b>		<b>2,927,736</b>
NON-CURRENT ASSETS		
Property, plant and equipment	10	546,034
<b>TOTAL NON-CURRENT ASSETS</b>		<b>546,034</b>
<b>TOTAL ASSETS</b>		<b>3,473,770</b>
<b>LIABILITIES</b>		
CURRENT LIABILITIES		
Trade and other payables	11	309,076
Borrowings	12	54,859
Current tax liabilities	13	26,611
Employee benefits	14	86,106
Unearned Revenue	15	2,500,756
<b>TOTAL CURRENT LIABILITIES</b>		<b>2,977,408</b>
NON-CURRENT LIABILITIES		
Borrowings	12	495,582
Employee benefits	14	780
<b>TOTAL NON-CURRENT LIABILITIES</b>		<b>496,362</b>
<b>TOTAL LIABILITIES</b>		<b>3,473,770</b>
<b>NET ASSETS</b>		
<b>EQUITY</b>		
<b>TOTAL EQUITY</b>		



# Statement of Changes in Equity

**For the Year Ended 30 June 2019**

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	<b>Retained Earnings</b>	<b>Total \$</b>
Balance at 1 July 2018	-	-
Net surplus for the year	-	-
Balance at 30 June 2019	-	-

The accompanying notes form part of these financial statements.

# Statement of Cash Flows

For the Year Ended 30 June 2019

	2019
	\$
Note	
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>	
CRC program funds	1,303,500
Participant contributions	3,008,500
Grant funding: SA Government	110,000
Interest received	4,379
Payments to suppliers and employees	(1,995,745)
Net cash provided by/(used in) operating activities	<u>2,430,634</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>	
Purchase of property, plant and equipment	(30,710)
Net cash provided by/(used in) investing activities	<u>(30,710)</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>	
Net cash provided by/(used in) financing activities	<u>                    </u>
Net increase/(decrease) in cash and cash equivalents held	<u>2,399,924</u>
Cash and cash equivalents at end of financial year	7 <u>2,399,924</u>

The figures shown above are inclusive of GST.

The accompanying notes form part of these financial statements.

# Summary of Significant Accounting Policies

For the Year Ended 30 June 2019

## 1. Summary of Significant Accounting Policies

### 1.1. Revenue recognition

Revenue is measured at the fair value of the consideration received or receivable. Amounts disclosed as revenue are net of goods and services tax (GST), returns, trade allowances, rebates and amounts collected on behalf of third parties. The Company recognises revenue when the amount of revenue can be reliably measured, it is probable that future economic benefits will flow to the entity and specific criteria have been met for each of the Company's activities as described below. The Company bases its estimates on historical results, taking into consideration the type of customer, the type of transaction and the specifics of each arrangement.

To the extent that revenue is unearned it is carried as a liability at reporting date.

#### **Grant Funding**

Recognised at fair value where there is a reasonable assurance that the grant will be received and the Company will comply with all attached conditions. Grants relating to costs which have not yet been incurred are included in unearned income in current liabilities and are credited to the statement of comprehensive income in the period necessary to match them with the costs that they are intended to compensate.

#### **Participants' contributions**

Contributions received from the Participants during the financial year are applied to expenditure incurred in carrying out the affairs of the Company under the terms of the Participants Agreement between the Company and the entities who have undertaken to provide contributions to the Company.

Unearned revenue arising from obligations to make contributions to the Company

and not allocated to program expenses at reporting date has been included as a current liability as it is anticipated that the relevant sum will be matched against expenditure during subsequent financial years.

#### **Interest**

Interest revenue is recognised as interest accrues.

#### **Other revenue**

Other revenue is recognised when it is received or when the right to receive payment is established. Revenue is recognised when the amount of the revenue can be measured reliably, it is probable that economic benefits associated with the transaction will flow to the Company and specific criteria relating to the type of revenue as noted below, has been satisfied.

### 1.2. Income Tax

The Company is exempt from income tax under Division 50 of the Income Tax Assessment Act 1997.

### 1.3. Goods and services tax (GST)

Revenue, expenses and assets are recognised net of the amount of goods and services tax (GST), except where the amount of GST incurred is not recoverable from the Australian Taxation Office (ATO).

Receivables and payable are stated inclusive of GST.

Cash flows in the statement of cash flows are included on a gross basis and the GST component of cash flows arising from investing and financing activities which is recoverable from, or payable to, the taxation authority is classified as operating cash flows.

# Summary of Significant Accounting Policies

For the Year Ended 30 June 2019

## 1. Summary of Significant Accounting Policies

### 1.4. Cash and cash equivalents

Cash and cash equivalents includes cash on hand, deposits held at call with financial institutions, other short-term, highly liquid investments with original maturities of three months or less that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

### 1.5. Trade and other receivables

Trade and other receivables arise principally through the provision of goods and services to customers. The carrying value is considered a reasonable approximation of fair value due to the short-term nature of the balances.

### 1.6. Property, plant and equipment

Plant and equipment is stated at historical cost less accumulated depreciation and impairment. Historical cost includes expenditure that is directly attributable to the acquisition of the items.

Depreciation is calculated on a straight-line basis to write off the net cost of each item of property, plant and equipment (excluding land) over their expected useful lives as follows:

Freehold improvements	10 years
Right of use asset	10 years
Office equipment	3-5 years

The residual values, useful lives and depreciation methods are reviewed, and adjusted if appropriate, at each reporting date.

An item of property, plant and equipment is derecognised upon disposal or when there is no future economic benefit to the company. Gains and losses between the carrying amount and the disposal proceeds are taken to profit or loss.

#### Right of use asset

This balance represents the company's right to lease its current premises. Per AASB 16, this amount is calculated using the present value of all future lease payments, assuming a remaining lease period of 9 years, discounted using the company's incremental borrowing rate.

### 1.7. Financial instruments

#### Financial assets

The financial assets of the Company comprise trade and other receivables.

#### Impairment of Financial Assets

At the end of the reporting period the Company recognises an allowance for expected credit losses for financial assets measured at amortised cost.

#### Receivables

As there has been no significant increase in credit risk the loss allowance is equal to the 12 month expected credit losses which is zero.

# Summary of Significant Accounting Policies

For the Year Ended 30 June 2019

## 1. Summary of Significant Accounting Policies

### Financial instruments

#### Financial liabilities

The Company measures all financial liabilities initially at fair value less transaction costs, subsequently financial liabilities are measured at amortised cost.

The financial liabilities of the Company comprise trade payables.

## 1.8. Employee benefits

### Short-term employee benefits

Liabilities for wages and salaries, including non-monetary benefits, annual leave and long service leave expected to be settled wholly within 12 months of the reporting date are measured at the amounts expected to be paid when the liabilities are settled.

### Other long-term employee benefits

The liability for annual leave and long service leave not expected to be settled within 12 months of the reporting date are measured at the present value of expected future payments to be made in respect of services provided by employees up to the reporting date using the projected unit credit method. Consideration is given to expected future wage and salary levels, experience of employee departures and periods of service. Expected future payments are discounted using market yields at the reporting date on corporate bonds with terms to maturity and currency that match, as closely as possible, the estimated future cash outflows.

### Defined contribution superannuation expense

Contributions to defined contribution superannuation plans are expensed in the period in which they are incurred.

## 1.9. Trade and other payables

These amounts represent liabilities for goods and services provided to the company prior to the end of the financial year and which are unpaid. Due to their short-term nature they are measured at amortised cost and are not discounted. The amounts are unsecured and are usually paid within 30 days of recognition.

## 1.10. Adoption of new and revised accounting standard

The Company has adopted all standards which became effective for the first time at 30 June 2019.

### AASB 16 Leases

The company has elected to apply early adoption of AASB 16 to all leases. As such, right-of-use assets are measured at cost and lease liabilities are measured at the present value of outstanding lease payments discounted using the lessee's incremental borrowing rate.

### AASB 1058 Income of Not-for-Profit Entities

The company has elected to apply early adoption of AASB 1058. This standard forms the basis of revenue recognition policies for the company as described in note 1.1.v

# Notes to the Financial Statements

**For the Year Ended 30 June 2019**

## 2. Introduction

The financial report for the year ending 30 June 2019 covers Fight Food Waste Limited as an individual entity. Fight Food Waste Limited is a not-for-profit Company, registered and domiciled in Australia.

The functional and presentation currency of Fight Food Waste Limited is Australian dollars.

The company commenced operations on 2 July 2018 and consequently there are no comparatives in this financial report.

The financial report was authorised for issue by those charged with governance on 28 October 2019.

## 3. Basis of Preparation

The financial statements are general purpose financial statements that have been prepared in accordance with the Australian Accounting Standards - Reduced Disclosure Requirements and the Australian Charities and Not-for-profits Commission Act 2012.

### Historical cost convention

The financial statements have been prepared under the historical cost convention.

## 4. Critical Accounting Estimates and Judgements

Those charged with governance make estimates and judgements during the preparation of these financial statements regarding assumptions about current and future events affecting transactions and balances.

These estimates and judgements are based on the best information available at the time of preparing the financial statements, however as additional information is known then the actual results may differ from the estimates. The significant estimates and judgements made have been described below.

### Key estimates

#### Employee benefits provision

As discussed in note 1, the liability for employee benefits is expected to be settled more than 12 months from the reporting date and recognised and measured at the present value of the estimated future cash flows to be made in respect of all employees at the reporting date. In determining the present value of the liability, estimates of attrition rates and pay increases through promotion and inflation have been taken into account.

#### Estimation of useful lives of assets

The company determines the estimated useful lives and related depreciation and amortisation charges for its property, plant and equipment and finite life intangible assets. The useful lives could change significantly as a result of technical innovations or some other event. The depreciation and amortisation charge will increase where the useful lives are less than previously estimated lives, or technically obsolete or non-strategic assets that have been abandoned or sold will be written off or written down.

# Notes to the Financial Statements

For the Year Ended 30 June 2019

## 5. Result for the Year

The result for the year includes the following specific expenses that are greater than \$30,000:

		<b>2019</b>
	<b>Note</b>	<b>\$</b>
REDUCE program coordinator position		150,000
TRANSFORM program coordinator position		150,000
ENGAGE program coordinator position		150,000
Research director support and system admin positions		150,000
Food safety & integrity theme leader position		77,092
<b>Program coordination support</b>		<b>677,092</b>
Salaries, wages & superannuation		405,988
Director fees		204,000
Contract labour		103,558
Travel expenses		76,461
Project expenditure		61,400
Depreciation of right of use asset		58,051
Project management software		47,300
Interest expense - lease liability		41,082
Staff recruitment		30,463
Accounting fees	7.	30,198

## 6. Revenue breakdown

		<b>2019</b>
	<b>Note</b>	<b>\$</b>
CRC program funds		1,420,000
Participant contributions		2,955,000
Grant funds: SA Government		100,000
		<b>4,475,000</b>
Unearned revenue	15.	<b>(2,500,756)</b>
		<b>1,974,244</b>

# Notes to the Financial Statements

For the Year Ended 30 June 2019

## 7. Cash and Cash Equivalents

### Reconciliation of cash

Cash and Cash equivalents reported in the statement of cash flows are reconciled to the equivalent items in the statement of financial position as follows:

		<b>2019</b>
	<b>Note</b>	<b>\$</b>
Cash and cash equivalents		2,410,772
Bank credit cards	12.	(10,848)
<b>Balance as per statement of cash flows</b>		<b>2,399,924</b>

## 8. Trade and Other Receivables

### Aged Receivables Summary

Current	Overdue < 30 days	Overdue 30 - 60 days	Overdue 60+ days	Total
74,676	81,950	-	105,050	261,676

The invoicing of participants for their committed contributions is based on a schedule agreed within the CRC Grant Agreement (to which participants are tied via the Participants Agreement). The timing of participant contributions is not directly tied to individual project timings, notwithstanding the Company has experienced delays collecting some participant's contributions due to the desire of those participants to see that project proposals, to which their contributions will be tied, are well evolved prior to making payment.

It is anticipated that all outstanding receivables at reporting date will be collected.

## 9. Other Assets

	<b>2019</b>
	<b>\$</b>
CURRENT	
Prepayments	20,288
CRC program funds Q4 2018-2019	235,000
	<b>255,288</b>



# Notes to the Financial Statements

For the Year Ended 30 June 2019

## 10. Property, plant and equipment

	Note	\$
Right of use asset - Lease		
Right of use asset	1.6	580,511
Accumulated depreciation		(58,051)
Total Right of use asset - Lease		<u>522,460</u>
Furniture, fixtures and fittings		
At cost		5,144
Accumulated depreciation		(372)
Total furniture, fixtures and fittings		<u>4,772</u>
Office equipment		
At cost		4,098
Accumulated depreciation		(440)
Total office equipment		<u>3,658</u>
Computer equipment		
At cost		17,767
Accumulated depreciation		(3,511)
Total computer equipment		<u>14,256</u>
Leasehold Improvements		
At cost \$		910
Accumulated depreciation		(22)
Total leasehold improvements		<u>888</u>
Total property, plant and equipment		<u><u>546,034</u></u>

The amounts recorded at cost represent additions and the accumulated depreciation represents depreciation charge for the year.

## 11. Trade and Other Payables

	<b>2019</b>
	\$
Current	
Trade payables	97,876
Program coordination support	150,000
Director fees	57,250
Other	3,950
	<u>309,076</u>

# Notes to the Financial Statements

For the Year Ended 30 June 2019

## 12. Borrowings

	<b>2019</b>
	\$
Note	
CURRENT	
Bank credit cards	10,848
Lease liability	44,011
Total current borrowings	<u>54,859</u>
NON-CURRENT	
Lease liability	495,582
<b>Total non-current borrowings</b>	<u>495,582</u>
<b>Total borrowings</b>	<u>550,441</u>

## 13. Current Tax Liabilities

	<b>2019</b>
	\$
Note	
GST	5,518
PAYG Withholding	14,772
FBT	17,357
	<u>26,611</u>

## 14. Employee Benefits

	<b>2019</b>
	\$
Current liabilities	
Provision for annual leave	9,406
Wages and bonus payable	62,988
Superannuation payable	14,266
Workcover	(554)
	<u>86,106</u>
Non-current liabilities	780
Long service leave	<u>780</u>



# Notes to the Financial Statements

For the Year Ended 30 June 2019

## 15. Unearned Revenue

		<b>2019</b>
Unspent components of the following:	Note	\$
CRC program funds		691,508
Participant contributions		1,809,248
<b>Total</b>		<b>2,500,756</b>

As per the accounting policy in note 1, contributions from the Commonwealth of Australia and Participants are treated as unearned revenue until matched against expenditure in the course of the Company's activities.

At the end of the grant period, any unearned CRC Grant revenue not matched against expenditure is required to be returned to the Commonwealth of Australia.

Unearned revenue arising from obligations to make contributions to the Company and not allocated to program expenses at reporting date has been included as a current liability as it is anticipated that the relevant sum will be matched against expenditure during subsequent financial years.

## 16. Key Management Personnel Disclosures

The total remuneration paid to key management personnel of the Company, as listed in item 1 of the directors' report, is \$584,074.

## 17. Contingencies

In the opinion of those charged with governance, the Company did not have any contingencies at 30 June 2019.

## 18. Statutory Information

The registered office and principal place of business of the company is:

L1, Wine Innovation Central Building, Cnr Hartley Rd & Paratoo Rd Urrbrae SA 5064



# Independent Auditor's Report

## Report on the Audit of the Financial Report

### Opinion

We have audited the financial report of Fight Food Waste Limited (the registered entity), which comprises the statement of financial position as at 30 June 2019, the statement of profit or loss and other comprehensive income, the statement of changes in equity and the statement of cash flows for the period then ended, and notes to the financial report, including a summary of significant accounting policies, and the responsible entities' declaration.

In our opinion the accompanying financial report of Fight Food Waste Limited, is in accordance with Division 60 of the Australian Charities and Not-for-profits Commission Act 2012, including:

- (i) Giving a true and fair view of the registered entity's financial position as at 30 June 2019 and of its financial performance for the period then ended; and
- (ii) Complying with Australian Accounting Standards – Reduced Disclosure Requirements and Division 60 of the Australian Charities and Not-for-profits Commission Regulation 2013.

### Basis for opinion

We conducted our audit in accordance with Australian Auditing Standards. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the Financial Report section of our report. We are independent of the registered entity in accordance with the auditor independence requirements of the Australian Charities and Not-for-profits Commission Act 2012 (ACNC Act) and the ethical requirements of the Accounting Professional and Ethical Standards Board's APES 110 Code of Ethics for Professional Accountants (the Code) that are relevant to our audit of the financial report in Australia. We have also fulfilled our other ethical responsibilities in accordance with the Code.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Other information

Those charged with governance are responsible for the other information. The other information obtained at the date of this auditor's report is the Directors' Report included in the Fight Food Waste Limited's annual report, but does not include the financial report and our auditor's report thereon.

Our opinion on the financial report does not cover the other information and accordingly we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial report, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial report or our knowledge obtained in the audit or otherwise appears to be materially misstated.

## Fight Food Waste Limited ABN: 90 627 226 537

If, based on the work we have performed on the other information obtained prior to the date of this auditor's report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

### Responsibilities of responsible entities for the Financial Report

The responsible entities of the registered entity are responsible for the preparation and fair presentation of the financial report in accordance with Australian Accounting Standards – Reduced Disclosure Requirements and the ACNC Act, and for such internal control as the responsible entities determine is necessary to enable the preparation of the financial report that is free from material misstatement, whether due to fraud or error.

In preparing the financial report, responsible entities are responsible for assessing the registered entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the responsible entities either intends to liquidate the registered entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the registered entity's financial reporting process.

### Auditor's responsibilities for the audit of the Financial Report

Our objectives are to obtain reasonable assurance about whether the financial report as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Australian Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of this financial report.

A further description of our responsibilities for the audit of the financial report is located at the Auditing and Assurance Standards Board website (<http://www.auasb.gov.au/Home.aspx>) at: [http://www.auasb.gov.au/auditors\\_responsibilities/ar4.pdf](http://www.auasb.gov.au/auditors_responsibilities/ar4.pdf)

This description forms part of our auditor's report.



**BDO Audit (SA) Pty Ltd**



Paul Gosnold  
Director

Adelaide, 30 October 2019







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