Sapere

Assessment of outcomes and recent performance of investment of the waste levy
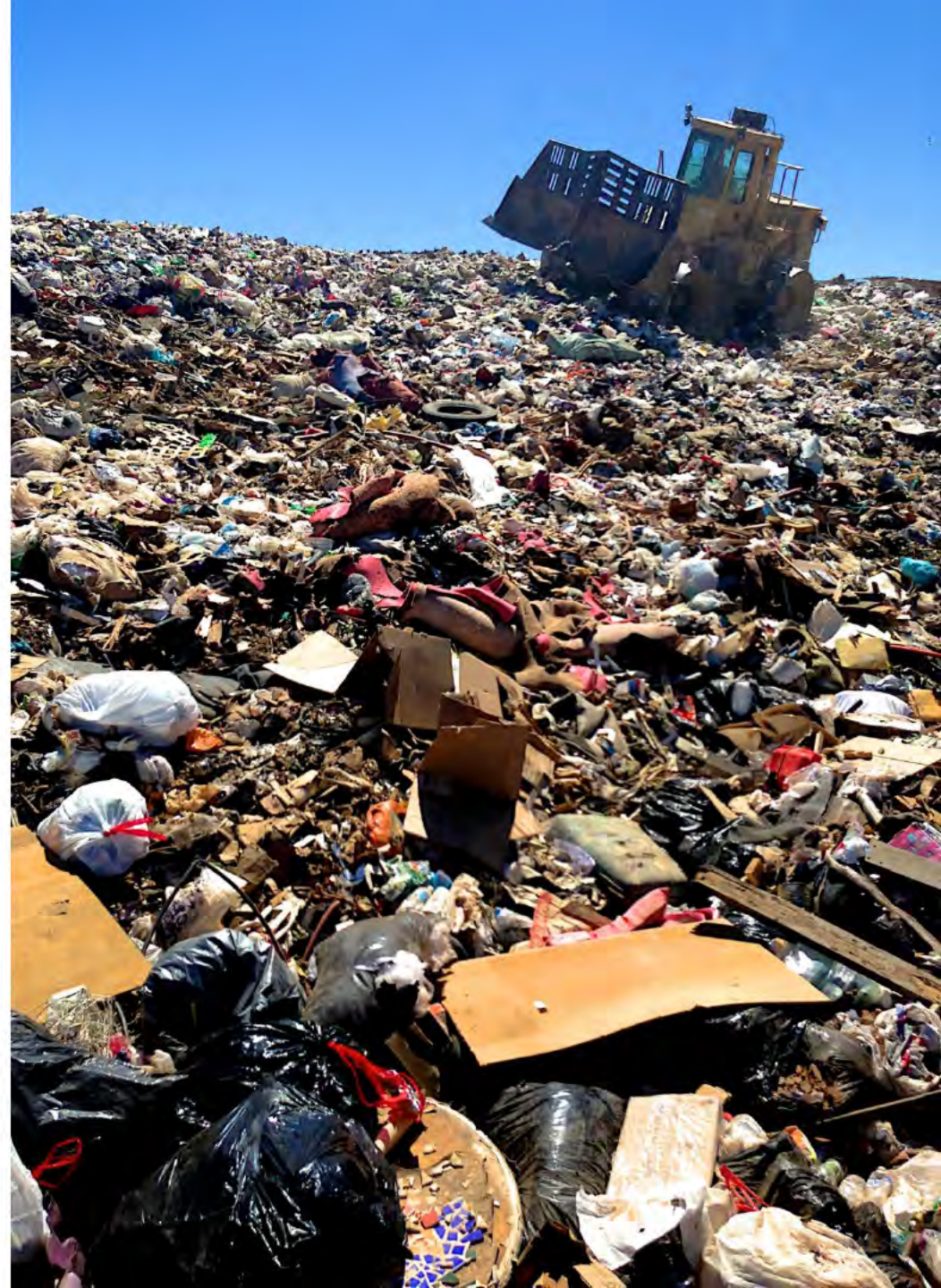
Proposal for the Ministry
for the Environment

25 July 2024

Contents

Provider details

Information requested	Sapere response
Provider name	9(2)(a)
Trading Name	
Nominated personnel	
Position	
Contact phone	
Email Address	

![Sapere logo]

sapere

Independence, integrity and objectivity

Sapere Research Group is an expert consulting firm that has been providing independent analysis and advice on strategic issues across government and industry since 1997.

Our core values are *independence*, *integrity* and *objectivity*.

Strategic insights + **Tailored methodologies** + **Collaborative working style**

... help us give reliable, robust and practical analysis, advice and support.

We specialise in impartial, evidence-based analysis and recommendations with real-world application, informed by strong understanding of policy, industry and organisational context.

Our expertise spans:

Policy   **Economics**   **Finance**   **Public management**   **Deep sector/ industry knowledge**

Our understanding
of your needs

———

Programme background and your requirements

From 1 July 2021, the government began the process of progressively increasing and expanding the national wase disposal levy. The purpose of the expansion was to enable the waste levy to:

1. raise further revenue for investment that would be used to promote waste minimisation;

2. increase the cost of waste disposal to recognise that disposal imposes externalities; and

3. provide an economic signal and incentive to divert materials to benefit end use, and/or to further reprocessing into products with market value, by increasing the cost of disposal.

The Waste Minimisation Fund (WMF) is the primary fund for investing the Government portion of the waste disposal levy along with the Plastics Innovation Fund (PIF). Monies for both funds have come from the same appropriation, but the PIF is currently closed and there is no expectation that it will be re-opened. Instead, the PIF will be condensed into a single fund with multiple signals, as part of the WMF.

The coalition Government has been establishing their priorities for the waste work programme and for the waste levy investment alongside Budget 24 savings exercises. As such, the Cabinet has agreed to a substantial amendment to the WMA (2008) to allow for broader use of levy funds for a wider range of environmental outcomes. The amendment, which came into effect on 1 July 2024, includes a further step increase to the levy over a three year period, which will provide additional revenue for central and local government investment, while also enabling fiscal savings.

Objective 1

The provision of independent advice on how well central government is performing in terms of outcomes, giving consideration to:

- value for money from use/investment of the Central government portion of the levy through the waste funds
- output and outcomes being achieved through the above, both quantitative and qualitative benefits
- potential for outcomes to be achieved in the near future arising from recent investment decisions.

Objective 2

Examine whether there are situations in which investment of the levy by central and local government may have the effect of crowding out or having a negative impact on capital investment, by:

- considering how this potential risk is managed and mitigated by the waste investment funds using information obtained during the delivery of objective one.

- examine four or five case studies across a representative sample of Territorial Authorities.

Objective 3

- Provide any practicable recommendations on how the performance of government investment of the levy could be improved.

Our suggested
approach
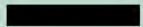
Proposed methodology overview

Our methodology is designed to deliver high-quality, comprehensive analysis tailored to required timeframes

Scoping and planning	Discovery	Analysis	Interpretation and review	Reporting
Planning and initiation • Hold inception meeting • Meet the team • Obtain relevant documents and applications • Confirm stakeholder list and general approach • Confirm responsibilities, scope, and timelines • Define project management and ongoing communication • Discuss any methodology issues • Set up a secure site for any commercially sensitive material	**Search and review** • Review relevant documentation (provided by MfE). • Review sample of applications. • Conduct literature search. • Review any other relevant materials identified. • Begin stakeholder engagement.	**Data collection and analysis** • Continue and conclude stakeholder engagements • Data collection • Analyse qualitative insights from stakeholder interviews and document reviews • Conduct modelling for CBA and any other relevant data analysis.	**Collation and interpretation** • Synthesis of findings • Interpretation • Development of recommendations • Write-up and present key findings	**Finalisation** • Development of a detailed report, which incorporates feedback on earlier drafts • Refine results and presentation • Finalise and deliver report
By 16th August 2024 • Inception meeting • Agreed stakeholder plan • Agreed modelling parameters and scope	**By 23rd August 2024** • Completed document and literature review	**By 6th September 2024** • Completion of stakeholder engagement • Draft CBA model • Draft findings and insights	**By 20th September 2024** • Draft report for review and feedback	**By 30th September 2024** • Final report, which incorporates feedback from MfE.

Data collection

The sources of data we have identified are drawn from what you have indicated you can provide, coupled with other data sources we believe will be relevant for our analysis. We note, however, that the precise content of data and documentation you will supply us is not known to us as this time. As such, the sources of data we draw from will likely evolve as we begin conducting the analysis.

Sources of data	Treatment of data
Literature search and review	Academic and grey literature will can support our contextual understanding and support the development of assumptions for CBA modelling
Documentation provided by MfE and other relevant agencies	Our treatment of this data is dependent on the exact nature of its content. However, we imagine this information will support our understanding of outputs, outcomes, and results from projects.
Sample of applications	We will review a sample (6 to 10) funding recipients. The sample will include recently closed, closing, and recently funded projects. We will also consider a small sample of declined applications. These applications will help us understand the decision-making process, assessment criteria, and project outcomes.
Key stakeholders	Collect views, information, and relevant data to confirm understanding of market structure and dynamics in waste services. Additionally, these stakeholder insights will help to verify information on VfM and outcomes from funded projects. Key stakeholders will also provide insight into the case study jurisdictions.
Ngā tatauranga para | Waste statistics	As a consistent source of historical waste data, this data can assist us with develop scenarios and provide a wider contextual understanding of the status quo waste environment in New Zealand.
Ngā tukunga rāngai para| Waste sector greenhouse gas emissions	This data will assist us in making determinations as to offset greenhouse gas emissions arising from offset waste volumes, which are a central consideration assessing VfM, via our CBA.

Data analysis

Objective one

Value for money

We evaluate the value for money (VfM) of the WMF from a national perspective, **defining VfM as the optimal use of public resources to maximise public value.** Public value encompasses the overall well-being of the NZ public, including economic, social, and environmental impacts, extending beyond the local vicinity of individual proposals. We would use economic efficiency as the underpinning of our expression of VfM, as follows:

- *Productive efficiency* – are costs minimized?
- *Allocative efficiency* – to what extent are resources directed towards areas of highest value?
- *Dynamic efficiency* – how well are future opportunities accounted for given changes in technology, preferences and priorities?

You have stated that our determination of VfM shall be made via a cost-benefit analysis (CBA), which allows for a comparison of the direct proposal costs to the monetised and total public value, encompassing economic, social, and environmental impacts, rather than focusing on a singular outcome and its effect.

Given the condensed timeframe for this project, we acknowledge the need to conduct a streamlined, or rapid CBA. This means we follow Treasury's CBA guidelines in more condensed way. Practically this may involve a focus on the most significant benefits, and a truncated sensitivity and scenario analysis process.

Our goal is to provide a concise analysis that is also robust and meets expected standards. As such, we will agree any condensed elements of the CBA with you during the scoping and planning phase of the project.

Proposed measures of VfM

Our proposed measures focus on what we see as the most direct and measurable.

Quantitative

- **Tonnes of waste diverted:** from landfill to recycling and other economic uses

- **Tonnes of CO2 equivalent emissions reduced:** from decreased waste decomposition and transportation

- **Revenue from recyclables:** amount of revenue from selling recycled materials

- **Number of jobs created:** directly and indirectly through the waste minimisation investments

- **Cost savings:** from a potential reduction in waste disposal fees and resource efficiency

- **Public health metrics:** reduction in the incidence of pollution-related health issues

- **Resource conservation:** value of raw materials 'saved' through waste minimisation and recycling programmes.

Qualitative

- **Cultural benefits:**

  - **Promotion of kaitiakitanga:** enhancing the role of stewardship and guardianship (kaitiakitanga) of the environment, which is a key principle in Māori culture. This aligns with the respect and care for the land, water, and natural resources.

  - **Strengthening Community Connections:** Fostering stronger ties within communities through collective efforts in waste minimisation initiatives, promoting a sense of shared responsibility and pride.

- **Education and awareness benefits:**

  - **Environmental Awareness:** Increasing public awareness and understanding of environmental issues and the importance of waste minimisation, leading to more environmentally conscious behaviors and lifestyles.

- **Community and social benefits:**

  - **Improved Quality of Life:** Enhancing the overall quality of life in communities through cleaner and more pleasant environments, contributing to a sense of well-being and community pride.

Data analysis

Objective two

Assessing potential crowding out of private investment

Estimating the extent of crowding out is difficult because it involves understanding the absence of private investment that might have occurred in the absence of public funding.

As indicated earlier, we would set up a secure site for storage of commercially sensitive information and data. Access to the site would be restricted to those within the firm who are working on the project, and all data would be erased upon completion. We have standard non-disclosure agreements which we are happy to agree with stakeholders as part of the data gathering stage.

Within the parameters of this project, we suggest a collection of approaches to making an assessment of crowding out effects.

- **Stakeholder interviews:** by interviewing key stakeholders, such as private investors, industry experts, and policymakers, we will obtain varying perspectives as to if, why, and how private sector investment in the waste reduction has been crowded out.

- **Case studies:** we will examine four or five case studies across a sample of Territorial Authorities, reviewing relevant materials and speaking with key stakeholders, to assess of private sector investments have been crowded out.

- **Cross-jurisdiction analysis:** we will conduct a search for similar public funding initiatives across different jurisdictions to determine if crowding out effects are observed elsewhere, to infer is a similar effect may be evident in New Zealand.

Our consideration of potential of crowding out will focus on the questions of if, how, and why private investment is being crowded out. As part of the stakeholder engagement phase, we would also look to determine the extent to which 'crowding in' exists (i.e. whether government investment stimulates private investment which might not otherwise have occurred).

Data analysis

Objective three

Recommendations as to how the levy could be improved

Recommendations as to how the levy could be improved will be an exercise in triangulation, synthesis, and discussion.

As a team, we will draw on findings from each stage of analysis to consider potential recommendations. Once findings from all stages of analysis are completed, we will collate our findings, and begin developing a long-list of recommendations. Collation will take two forms:

1) **Collation of findings:** which will involve examining all findings, looking for areas of convergence, divergence, nuanced differences, and areas where inferences can be made about the future of the levy.

2) **Internal workshopping:** As a research team, we will internally workshop our findings and consider recommendations. This ensures that recommendations are not developed in 'isolation' by one or two researchers, but instead a result of inputs from the whole team and the respective domains of the project for which they have had responsibility.

3) **Feedback:** We will provide you with a draft report which will outline our findings and recommendations. Feedback on this draft will allow us to refine our recommendations to a more targeted and precise short-list.

Our team
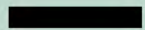
Our team

Preston Davies
Director
Project lead

Angus White
Director
Project oversight

Corina Comendant
Principal
Emissions expertise

Dr Julius Ohrnberger
Managing Consultant
Value for money analyst

Dr Jamie O'Hare
Managing Economist
Waste analyst

Dr Lisa Hack
Principal Advisor | InSight
Waste expert

George Fietje
Principal Advisor | InSight
Waste expert

Qualifications and skills of key personnel

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Preston Davies
Director

Preston is an economist with over 20 years' experience ranging from public policy, strategy, economic development and transport. Key areas where Preston has provided advice include Māori economic development, land transport, regional development, competition in the banking industry, regulatory reform, economic performance, economic impact assessment and cost-benefit analysis, electricity demand, biofuels policy, education, and health labour markets.

Preston has led projects in the waste sector covering product stewardship (for beverage containers and synthetic refrigerants), community recycling centres, food waste, textile waste, organic kerbside collections, and plastic products. Over the last decade Preston has established a specialty in the application of orthodox economic assessment tools and techniques to non-standard situations, including analysis of markets in electricity, transport (land and aviation), housing and education.

Prior to joining Sapere, Preston was as an economist with the New Zealand Institute of Economic Research working on a diverse range of projects for his clients. He was part of the teaching team for the Graduate Diploma in Economic Development offered for the first time in 2003 by the Auckland University of Technology.

Preston previously worked as an economic and financial analyst at the New Zealand Treasury, focusing on immigration, industry training and other labour market policy issues.

Preston holds a Bachelor of Commerce (Hons) in economics from the University of Auckland.

Angus White
Director

Angus specialises in policy, regulatory, and competition analysis and often assists in entity and activity performance monitoring. He has expertise in economics and finance. Angus has a deep understanding of government processes, having previously worked at the Treasury, including as a private secretary to the Minister for State-Owned Enterprises, and at the Ministry for the Environment (MfE).

Key relevant experience includes:

- Developing a rapid CBA for MBIE on Waste Management Plans and Energy Performance Ratings under the proposed Building for Climate Change Amendments to the Building Act.
- Advising the Climate Change Commission on its monitoring and evaluation functions.
- Developing tools to assess and monitor the distributional impacts of emissions reductions policies – that is, how different sub-groups would be impacted by policies.
- Reviewing the weather forecasting system in NZ, the current contractual, market and institutional dynamics, issues that exist and the potential options in the context of anticipated future demands.
- Advising the Independent Panel reviewing the regulation of Lawyers in New Zealand on approaches taken in other jurisdictions, regulatory functions, governance arrangements, and the potential funding implications of alternative regulatory models. This included analysing the costs of different models
- A strategic baseline review of the Electricity Authority, looking at areas for improvement and future. funding needs.
- Advising MfE on potential mechanisms to support managed retreat as a tool in adapting to the effects of Climate Change.
- Advising on key information that should be provided by Crown Financial Institutes (CFIs) and monitored and assessed by the Treasury, including reporting on emissions and emissions reductions performance.

At MfE, Angus managed the Regulatory Impact Analysis of reforming the RM system as well as advice on funding and allocation matters.

Among roles at the Treasury, Angus worked with Crown entities as relationship manager to ensure their activities fit with their enabling legislation, that legislative requirements were being met, and represented shareholding Ministers interests in engaging on entity business plans. He was also a Vote analyst and assisted with Budget coordination.

Angus has a Masters in Economics from the University of Cambridge, and a joint honours Bachelor of Commerce (Economics and Finance) from the University of Otago.

Qualifications and skills of key personnel

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Corina Comendant
Principal

Corina is an environmental economist working on issues relating to climate change and the low-carbon transition.

Her interest areas are wide-ranging, recognising the transformational impacts that climate change will have on all aspects of our lives.

She has advised on EU and NZ carbon markets design and reform, developed scenarios to achieve low-emissions energy use in New Zealand, assessed the infrastructure needs for fast-tracking biogenic emissions reductions in NZ, evaluated the impact of the NZ consenting system on low-carbon infrastructure, and developed a tool to monitor the distributional impacts of New Zealand's climate change policies.

Before Sapere, Corina conducted research for the Grantham Institute on Climate Change and the Environment at the London School of Economics (LSE GRI), where she focused on environmental and energy policies, EU ETS reform, and the impact of the low-carbon transition on financial markets.

Corina has a BA in Economics from Harvard University, and an MSc in Environmental Technology (specializing in Environmental Economics and Policy) from Imperial College London.

Dr Jamie O'Hare
Managing Consultant

Jamie is an experienced mixed-methods researcher working on a range of topics including the Māori economy, waste, innovation, SMEs, and agriculture.

In 2023, Jamie led and completed two studies which informed Auckland Council's waste minimization plan:

- Mapping Auckland's food consumption and waste system
- Mapping Auckland's fashion textile consumption and waste system.

Jamie has demonstrated his versatility, working on a range of projects while at Sapere including, a series of strategies aimed at improving Māori economic outcomes across the economy, a review of hydrogen cyanamide usage in the kiwifruit sector, studies examining the economic impacts of emissions-intensive, trade-exposed businesses across New Zealand, and studies of waste volumes.

Prior to Sapere, Jamie was working on his PhD which sought to understand the roles of geographic proximity on collaboration and innovation in New Zealand's craft brewing industry. Jamie has also conducted research in the domain of Māori enterprise collaboration and has experience conducting data analysis through the lens of Kaupapa Māori.

In addition to his PhD, Jamie holds a MSc by Research in management and innovation, and an undergraduate degree in economics.

Qualifications and skills of key personnel

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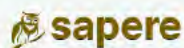
Dr Julius Ohrnberger
Managing Consultant

Julius has extensive expertise in designing and leading research in economics, programme evaluation and value for money assessments . He has partnered with world-leading researchers on research grants and delivered evidence-driven policy advice to healthcare providers, various UK government departments, the Environmental Protection Agency (EPA) and Te Whatu Ora in New Zealand, as well as NGOs and the global life science industry.

Julius' recent relevant projects include:
- Designing the impact and cost evaluation of a complex ~GBP200m programme for drug and alcohol treatment of homeless populations in England for the UK Office of Health Improvement and Disparities.
- Conceptualising a cost-consequence calculator of cost and resource needs for the country-wide roll-out of targeted lung cancer screening in England for the National Health Service England
- Designing a prioritisation framework for the assessments of hazardous substances for release into New Zealand for the EPA.

Julius holds a PhD in Health Economics from the University of Manchester (UK), a Master of Science in Development Economics from Free University Amsterdam (Netherlands).

Qualifications and skills of key personnel

InSight Waste & Resources Advisory

Dr Lisa Hack
Principal advisor

Lisa has over 15 years' professional experience working on and managing large scale and multi-disciplinary projects in New Zealand, Australia and abroad in local and central government roles as well as industry roles. Lisa's broad local and central government (e.g., Wellington City Council, Queenstown Lakes District Council, Auckland Council, Tauranga City Council, Ministry for the Environment) and industry-based (e.g., VISY, Oceanco) experience means Lisa has a thorough understanding of the complex and often challenging relationships and communications presented by these organisation groups as well as experience in negotiating and mediating complex situations, including procurements. This means Lisa brings a thorough working knowledge of the waste industry (both nationally and internationally) as well as a breadth and depth of project experience to all projects.

InSight Waste & Resources Advisory

George Fietje
Principal advisor

I am an experienced, energetic and ambitious person with a desire to make things happen. During 2019/2020 I had the privilege of project managing and leading the co-design of a beverage container return scheme for New Zealand, a Ministry for the Environment funded project and in 2021 took up the role of Senior Project Manager leading several government funded infrastructural and recycling projects. As a people person I enjoy working with diversity, building strong working relationships and achieving win-win outcomes.

Relevant experience
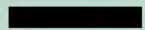
Relevant project experience

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Economic and market analysis work

- **Provided support for assessing the market competition analysis**, assessing the problem definition, conclusions, and recommendations on the Electricity Authority's Wholesale Market Competition Review consultation paper.

- **Research and analysis on competition-related issues in the media system in NZ**, with a particular focus on the market for news and public interest journalism.

- **Expert report assessing competition** and other effects of WEL Networks building and operating solar farm.

- **Addressed the question:** is competition in the markets for wholesale and retail electricity lessened or enhanced by allowing vertical integration compared to requiring ownership separation of firms in the two markets?

- **Examined** the likely impacts of introducing competition into the building consent system

- **Estimated** the likely market reaction to changes in regulation in specific gas and electricity markets

Understanding of outcome evaluation frameworks, risk assessment methodologies and assurance

- Provided both the Ministry for Primary Industries' (MPI) Sustainable Food and Fibre Futures (SFFF) and RMPP with a **final evaluation** of the outcomes and benefits from the RMPP Primary Growth Partnerships (PGP) Programme.

- To provide the Programme Governance Group (PGG), Dairy Goat Co-operative (DGC) and Ministry for Primary Industries' (MPI) Sustainable Food and Fibre Futures (SFFF) team with **a progress review** on the achievements and expected outcomes from the CAPRINZ PGP programme.

- **A Process and outcomes evaluation of a SafeKids Program** for preventing avoidable injuries and deaths in children under age 10 years, with a focus on under age 5 years, and Māori.

- **Evaluation of the achievements and expected outcomes** from the Transforming the Dairy Value Chain Primary Growth Partnerships Programme.

- **Process and impact evaluations** of Business Link Pacific for MFAT, with a focus on value for money outcomes, and the possibility of extending the programme

Relevant project experience

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Knowledge of the waste sector

- **A material flow analysis** of textile products within the Auckland region, including the quantification of waste streams, and associated emissions.

- **Quantifying the flows of food** generated in Auckland and consumed by Aucklanders. The analysis explores the direct inputs in Auckland's food system and the food loss and waste generated at each stage along the food and beverage supply chain within the city.

- **Advice to MfE** on the analysis of an Enhanced Producer Responsibility alternative to a Container Return Scheme to increase container recycling

- Sapere and a partner firm were commissioned by the NZ Treasury to **identify initial low-carbon opportunities that NZ GIF could pursue within its mandate.** The work covered opportunities in several sectors, including the waste sector, and particularly in relation to municipal solid waste and wastewater treatment.

- We were commissioned by the Ministry for the Environment to help with **preparing two consultation documents** and two regulatory impact assessments for the introduction of ETS auctioning.

- **A review** of the Waste Minimisation Fund and policy recommendations

- **Developed understanding** of Auckland consumption and waste flows for the construction and demolition sector.

Experience with stakeholder engagement

Stakeholder engagements are commonplace in our projects. We are highly adept at conducting stakeholder interviews and extracting valuable data and insights from key stakeholders. Below is a sample of recent projects which have involved extensive stakeholder engagement:

- A **social impact assessment of a potential HC phase-out** on behalf of the EPA, which involved interviewing kiwifruit growers and other stakeholders across Northland and the Bay of Plenty.

- Sapere was commissioned to **assess the value of data-driven innovation** in New Zealand. We interviewed 40-50 stakeholders across a spectrum of business types.

- **An independent review of access to New Zealand's innovation facilities** in the food and beverage, forestry and wood processing, and advanced manufacturing sectors. Sapere interviewed over 70 stakeholders across the three sectors.

- **Research into the decarbonisation journeys** of emissions-intensive, trade-exposed (EITE) businesses in New Zealand. We interviewed 11 EITE businesses leaders and catalogued their insights.

Prior project examples

Mapping Auckland's Food System: Towards a quantification of flows of food, waste, loss, and greenhouse gas emissions

Case study: Auckland food consumption, waste, and loss

This case study demonstrates Sapere's experience and expertise estimating, measuring, food production, processing, manufacturing, consumption, loss, and waste in Auckland. This study was a first-of-its-kind material flow analysis of a food system in New Zealand. It involved dealing with uncertain and missing data and navigating considerable levels of ambiguity. Jamie led this project, with oversight and input from Preston, and emission expertise from Corina.

We were asked by Auckland Council to quantify the follows of food generated in Auckland and consumed by Aucklanders/ Our analysis examined, as much as possible, the direct inputs into Auckland's food system and the food waste generated within the system, confined to Auckland Council's geographical jurisdiction. The goals of the research were to:

- generate baseline data on material flows of Auckland's food system and associated greenhouse gas (GHG) emissions, and

- assist in the identification of intervention points to support Auckland's transition towards a circular and low-carbon food system.

This research was a key component of Auckland Council's statutory obligations under the Waste Minimisation Act (2008) to produce a Waste Assessment and associated Waste Management and Waste Minimisation Plan (WMMP). In addition, the outputs of this research are relevant to the Council's commitments under Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan to be carbon neutral by 2050.

Our research estimated food and waste volumes across the food system, and based on those findings identified a number of intervention options for reducing food waste volumes across the food system.

Prior project examples

A Container Return Scheme for New Zealand: Cost-benefit Analysis

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Case study: Container return scheme (CRS) CBA

This case study demonstrates Sapere's experience in the domain of waste and waste management, as well as conducting CBAs in waste management. This work involved estimating the net benefit to New Zealand society from investing in a waste minimising, container return, scheme. Preston was the lead analyst on this work.

We worked with MfE to update the economic cost-benefit analysis of a container return scheme in New Zealand. The CBA relied on work completed by a Scheme Design Working Group, including financial modelling commissioned by the Working Group from PwC.

This CBA essentially refreshed a previous CBA completed in 2016/17 for Auckland Council, which found benefits exceeded costs by a factor of around three and society would be better off by $184 million in present value terms, across a ten-year study period. Relative to the previous work, our analysis extended the study period to 30 years, models two scenarios (i.e. a CRS with and without glass containers) and includes additional effects (e.g. emissions and machine-based return facilities).

Compared to a 'business as usual' situation of no CRS, a CRS that includes glass containers would result in society being better off to the tune of $1,089 million, in present value terms. In that scenario, benefits exceed costs by 49 per cent.

Prior project examples

Case study: Single-use and hard-to-recycle plastics phase out

This case study demonstrates Sapere's experience in the domain of waste and waste management, as well as conducting economic and market analysis in waste management. This work primarily involved drafting a Regulatory Impact Statement (RIS) in support of proposals to phase out certain plastic products in order to reduce waste. Preston was the project lead for this work.

We worked with MfE to develop a RIS to support a Cabinet paper recommending phase-outs of a range of plastic products. Assessing the costs and benefits of such proposals was a key feature of the RIS. The main evidence base for the RIS came from market players. We interviewed industry parties around their pricing, substitutes currently available and the possibility of substitutes to be developed, possible market entry and exist and product costings.

In addition to the RIS work, we assisted in providing text for the Cabinet paper, and a review of parts of the paper itself, which were drafted by others.

A novel inclusion in this work was the preparation and delivery of training materials to assist MfE in undertaking economic and market analysis, so that the Ministry is less reliant on consultants, as well as being upskilled. The training material considered, amongst other things, how to garner and include market insights into policy analysis, ways to measure effectiveness and efficiency, and how to use analysis to improve policy and regulatory settings in the future.

Prior project examples

Case study: NZ green Investment Fund

This case study demonstrates Sapere's ability to assess investment opportunities, and identify where market failures may exist, prohibiting private investment and, therefore, opportunities for public investment.

Working with Treasury, we evaluated and considered various green investment opportunities in five target sectors:

- Transport
- Energy efficiency
- Process heat
- Waste
- Agriculture

We also evaluated and considered market failures where the GIF could add significant value, those were: missing markets, imperfect information, unpriced and underprices externalities, and instances of regulatory failure.

Our analysis of the five sectors reviewed demonstrated that joint ventures by the GIF and private capital can make an important contribution to reducing GHG emissions in New Zealand. We concluded that in order for the GIF to be successful, it will need to be flexible. It also needs to be able to invest for a patient basis, for the long-term. It also needs to be able to invest across the capital structure, depending on what best suits investment opportunities.

The most promising sector we identified is the transport sector where technology is evolving, costs are coming down and the available yield in terms of GHG emissions reductions is high.

Our delivery plan
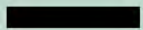
Timetable

We ensure timely delivery of the final report via careful planning and conducting various tasks simultaneously

Stage	Activites	August				September			
Month / Week		1	2	3	4	5	6	7	8
1	**Scoping and planning**								
1.1	Inception meeting	■							
1.2	Discuss and identify any key documents, examples or data	■							
1.3	Develop and agree project plan	■	■						
2	**Discovery**								
2.1	Literature search	■	■	■					
2.2	Document review	■	■	■					
2.3	Review of applications (sample)	■	■	■					
3	**Analysis**								
3.1	Stakeholder engagement		■	■	■				
3.2	Data collection		■	■	■				
3.3	Modelling and data analysis			■	■	■			
4	**Interpretation and review**								
4.1	Interpretation of findings				■	■	■		
4.2	Synthesis				■	■	■		
4.3	Write up and presentation of key findings					■	■	■	
5	**Reporting**								
5.1	Development of detailed report						■	■	■
5.2	Refine results and presentation						■	■	■
5.3	Finalise report								■

Risk management strategy

We have analysed the key sources of risk to completing this project within the projected timeframe

Risk	Risk rating before mitigation	Mitigation	Risk rating after mitigation
Project scope/time creep • The scope and areas of consideration expands over time • Stakeholder consultation is slower than excepted, and inputs received attempt to widen the scope.	Medium	The project will have an assigned Sapere case manager who is responsible for day-to-day management of the project. This person would be responsible for discussing any emerging issues with the MfE. This would include, for example, any concerns about clarity of scope, budgeting questions, invoicing expectations and so on. Managing the impact of the degree and timeliness of stakeholder feedback and input is a key role for the project manager. Incorporating the views of stakeholders while ensuring their inclusion does not result in scope creep is a key role for our staff.	Low
Data availability • Key data as inputs into analysis has not been collected, is not easily available, or is available later than expected creating pressure on timelines.	High	Our planning stage involves gaining a detailed, early understanding of the level of input data available from the wider business case team so any gaps can be identified early, providing sufficient scope for data collection, a review of the literature, and analysis. Where key data is not available or does not exist, Sapere can use qualitative evaluation techniques to ensure full coverage.	Low
Disruption by unforeseen factors • Activities may be disrupted by unforeseen factors, impacting timelines or our team	Medium	Sapere operates according to an effective, 'no surprises' project management methodology. We would work with you to identify any specific risks up-front. This includes contingency planning: should any one of our team be unable to fulfil their role in the project, there is internal team redundancy and we can draw on the wider 60+ Sapere team.	Low
Stakeholder availability • Key stakeholders unavailable for interviews during the target period	Medium	A stakeholder engagement plan will be developed as part of stage one, which would include emails to key stakeholders about the analysis to assist with awareness of the business case process and help encourage participation in interviews. The allocated time for stakeholder consultation is sufficient to allow for short term stakeholder unavailability. Stakeholders are likely to make an effort to have their say during this process.	Low

Our price

Pricing

Deliverable	Name & Role (& Level if applicable)	Item/Unit	Unit price excluding GST	Qty (rounded hours)	Sub-total excluding GST
1. Draft report - provided for feedback.	9(2)(b)(ii)				
2. Final report - A clearly written, well analysed and evidenced report, anticipated in at least three parts, which presents findings in relation to the Objectives 1 - 3					

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Our core values are independence, integrity and objectivity
Sapere aude – dare to be wise