

Block 1

Welcome to this survey about waste minimisation, resource recovery and the creation of a circular economy for Composites Materials.

The present survey is conducted by Circular Innovation (CIRCUIT) Research Centre from the University of Auckland Faculty of Engineering, the project is initiated by the Composites Association of New Zealand (CANZ) with co-funding support from Circular Connect.

This survey is intended to last about 1hr, but you can take as long as you need. If you are unable to complete the survey in one session the software will retain your answers until you reach the final page.

Please ensure you reach the end of the survey before you submit your answers completed.

CANZ understand your time is valuable, and we appreciate your effort. To ensure the most accurate data is collected, please submit the data you have, or make reasonable estimations based on your team's knowledge. The survey will be open to collect your data up to end of November 2023. We're aiming to present you with preliminary data at our next conference mid-October ! Get started early helping 'CANZ at work'.

The purpose of this survey is to capture enough data to provide a robust representation of the Composites Industry Sector, to lobby for support, investment, and government assistance in setting up a national recycling solution and/or circular economy synergies between composites suppliers, manufacturers & users in New Zealand.

By collaborating with CIRCUIT, your data will remain confidential to other industrial members, and combined answers will provide a national picture of the circulation of composite materials, including mapping of waste generation and opportunities to capture value for circular solutions.

Thank you - Your participation in this survey is essential to enabling strategic insight that will allow the whole network to implement more sustainable industrial practices.

Before to start the present survey;

Please ensure the CEO or General Manager (GM), is informed, and provides their consent to take part in the present survey, by downloading reading and signing the documents and the consent form down below.

By signing the following Consent Form for Organisation, CIRCUIT's Research team is ensuring that you know your rights to withdraw both participation and/or data without giving reasons until December 2023.

Consent Form for Organisation: to be signed by the CEO or General Manager

Project title: Mapping composite materials waste, survey, and data analysis

Research team: Principal Investigator: A/Prof. Saeid Baroutian

Researcher: Dr. Marie-Salomé Duval-Chanéac

Please download the Survey - Participant Information Sheet (PIS) : [Survey participant information sheet ceo](#) & [Survey participant information sheet employee](#)

Please download the Survey - Consent Form (CF): [Survey consent form for organisation](#)

I have read the Participant Information Sheet for the Survey. I understand the nature of the research and why I have been invited to participate.

- I agree for my organisation to take part in this survey.
- I understand the participation from myself and/or my employees is voluntary.
- I give my assurance that employees participation, or non-participation, will not affect their relationship with the organisation, their employment status, or access to its services.
- I agree to recruit one or more employee to complete this survey on the behalf of my organisation, and that their participation/non-participation in this survey will not jeopardise their employment status.
- I understand that my participation is confidential and that no material which could identify my organisation, or of commercial sensitivity, will be ever used in any outputs of this study.
- I understand that a single staff from CANZ can sign a third-party confidentiality

agreement to access the raw data set, if necessary, and will be restrained from publishing identifiable information from this raw data set (Glenn Campbell).

- I understand that data collected in this survey will be kept in a safe storage at the University of Auckland for 6 years along with the Consent Forms, after which they will be permanently deleted.
- I understand that the outcome of this study will be used by CANZ to lobby for governmental support, and to map the volume of composites materials and waste generated across New Zealand.
- I understand I can withdraw the Organisation's participation up to end of December 2023, but I cannot withdraw data already provided by employees.

Approved by the University of Auckland Human Participants Ethics Committee on 29/09/23 for three years, Reference Number 26436

Signature of the CEO / General Manager :



Section 1 to 4

Section 1: General

The following questions will cover information related to the business in general, i.e. number of employee, gender, your location, annual generated income etc...

Company name:

Where is you main site located?

Do you have more than 1 industrial site?

Please provide us with the location of all of your company's sites:

What type of activities does your business covers?

- Importer / Retailer / Supplier or Primary materials for composite manufacturing
- Manufacturer of Composite Products
- Importer/Retailer/Supplier of finished Composite Product
- Refurbishment of Composite products
- Consultancy, Research
- Other

Please describe your *other* activities :

Please give us with the total number of your staff-members following these demographics:

Total number of employees	<input type="text"/>
Male	<input type="text"/>
Female	<input type="text"/>
Between 15 to 35 y/o	<input type="text"/>
Between 35 to 55 y/o	<input type="text"/>
Above 55 y/o	<input type="text"/>
Employees on the shop-floor	<input type="text"/>

Please give us some details about your business ownership:

	Yes	No	Not Applicable
Maori owned	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
NZ owned	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internationally owned	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please give us some details about your business over the course of one financial year (2022-2023)

Total annual turn over figure (No-GST)

How much of your products are exported ? (yearly cumulated values over the whole range of your products, and the total must reach 100%)

% for the New Zealand Market

% for the Australian Market

% to other foreign exports

What type of skills does your company hold:

- Design of components
- Design of systems of components
- Retail and sale
- Automated Fabrication
- Manual hand-layup
- Tailored design for unique projects
- On-site installation
- Pre-preg handling
- Refurbishment activities, such as paint or visual restoration
- Repair (structural)
- R&D
- Maintenance
- Solvent recycling
- Other

Please provide us with more information about the other skill set your company hold:

Total volumes of products imported (or bought) over the course of 1 financial year (2022-2023):

The total volume represents the cumulated sum of all the products from the same category expressed in kg (or in tonne or in unit please specify the metrics).

Glass mat	<input type="text"/>
Carbon fibre	<input type="text"/>
Natural fibres	<input type="text"/>
Epoxy resins	<input type="text"/>
Polyester resins	<input type="text"/>
Thermoplastic resins	<input type="text"/>
Resins from recycled materials such as PET	<input type="text"/>
Bio resins	<input type="text"/>
Basalt	<input type="text"/>
Kevlar	<input type="text"/>
Inert fillers	<input type="text"/>
Paste Wax release agent	<input type="text"/>
Semi-permanent release agent	<input type="text"/>
PVA release agent	<input type="text"/>
Brushes and other ancillary products	<input type="text"/>
Disposeable Vacuum bags	<input type="text"/>
Reuseable Vacuum bags	<input type="text"/>
Other (explain)	<input type="text"/>

Please provide us with more details about the *other types and volumes of materials consumed* over a year of business as usual activities:



Section 2: Products

This sections aims at understanding what type of composite products are currently in use in New Zealand, what type of multi-material combination or site-specific fitting arrangement are currently standard industrial practice.

Capturing this understanding will support the organisation of a circular economy aiming at maintaining value through reuse, repair, recovery or life-time extension of the products.

Questions below are intended to map these values.

Provide us with a more accurate picture of the application field where the composite products are used:

(Be careful a complementary question will drop-down to each category-box you tick, please fill-in the drop down box with as much accuracy as possible)

- Transport, Trucks and Rails
- Boats or marine equipment
- Defense
- Kitchen ware and bathroom appliances or furnitures
- Pool and waterslides
- Car, motor-bikes and accessoires
- Aeronautic
- Architecture and buildings
- Rebar and other Load bearing structural applications
- Silo, domes, tanks and pipes
- Roofing
- Infrastructure
- Industrial equipments
- Coatings and linings

Other

Please provide us with the *total cumulated sales* for the category of products: "Transport, trucks and rails";

over the course of one financial year (March 2022 - April 2023):

This category of product represents% of total annual sales

.... % is sold in NZ

Total cumulated profit (NZD/year)

Profit Margin (%)

Total number of units sold

Total sales value for that category

Please provide us with the *total cumulated sales* for the category of products: "Boats or Marine equipment";

over the course of one financial year (March 2022 - April 2023):

This category of product represents% of total annual sales

.... % is sold in NZ

Profit Margin (%)

Total number of units sold

Total sales value

Please provide us with the *total cumulated sales* for the category of products: "Defense";

over the course of one financial year (March 2022 - April 2023):

This category of product represents% of total annual sales

.... % is sold in NZ

Total cumulated profit (NZD/year)

Profit Margin (%)

Total number of units sold

Total sales value

Please provide us with the *total cumulated sales* for the category of products: "Kitchen ware";

over the course of one financial year (March 2022 - April 2023):

This category of product represents% of total annual sales

.... % is sold in NZ

Total cumulated profit (NZD/year)

Total number of units sold

Total sales value

Please provide us with the *total cumulated sales* for the category of products: "Pools and waterslides";

over the course of one financial year (March 2022 - April 2023):

This category of product represents% of total annual sales

.... % is sold in NZ

Total cumulated profit (NZD/year)

Total number of units sold

Profit Margin (%)

Total sales value for the category

Please provide us with the *total cumulated sales* for the category of products: "Car, motor-bikes and accessoires";

over the course of one financial year (March 2022 - April 2023):

This category of product represents% of total annual sales

.... % is sold in NZ

Total cumulated profit (NZD/year)

Profit Margin (%)

Total number of units sold

Total sales value for the category

Please provide us with the *total cumulated sales* for the category of products: "Aeronautic";

over the course of one financial year (March 2022 - April 2023):

This category of product represents% of total annual sales

.... % is sold in NZ

Total cumulated profit (NZD/year)

Profit Margin (%)

Total number of units sold

Total sales value

Please provide us with the *total cumulated sales* for the category of products: "Architecture and buildings";
 over the course of one financial year (March 2022 - April 2023):

This category of product represents% of total annual sales

.... % is sold in NZ

Total cumulated profit (NZD/year)

Profit Margin (%)

Total number of units sold

Total sales value

Please provide us with the *total cumulated sales* for the category of products: "Rebar and other loadbearing applications";
 over the course of one financial year (March 2022 - April 2023):

This category of product represents% of total annual sales

.... % is sold in NZ

Total cumulated profit (NZD/year)

Profit Margin (%)

Total number of units sold

Total sales value

Please provide us with the *total cumulated sales* for the category of products: "Rebar and other loadbearing applications";
 over the course of one financial year (March 2022 - April 2023):

This category of product represents% of total annual sales

.... % is sold in NZ

Total cumulated profit (NZD/year)

Profit Margin (%)

Total units sold

Total sales value

Please provide us with the *total cumulated sales* for the category of products: "Silo, domes, tanks and pipes";
 over the course of one financial year (March 2022 - April 2023):

This category of product represents% of total annual sales

.... % is sold in NZ

Total cumulated profit (NZD/year)

Profit Margin (%)

Total units sold

Total sales value

Please provide us with the *total cumulated sales* for the category of products: "Roofing";
 over the course of one financial year (March 2022 - April 2023):

This category of product represents% of total annual sales

.... % is sold in NZ

Total cumulated profit (NZD/year)

Profit Margin (%)

Total number of units sold

Total sales value for the category

Please provide us with the *total cumulated sales* for the category of products: "Infrastructure";
 over the course of one financial year (March 2022 - April 2023):

This category of product represents% of total annual sales

.... % is sold in NZ

Total cumulated profit (NZD/year)	<input type="text"/>
Profit Margin (%)	<input type="text"/>
Total number of units sold	<input type="text"/>
Total sales value for the category	<input type="text"/>

Please provide us with the *total cumulated sales* for the category of products:
 "Industrial equipment";
 over the course of one financial year (March 2022 - April 2023):

This category of product represents% of total annual sales	<input type="text"/>
.... % is sold in NZ	<input type="text"/>
Total cumulated profit (NZD/year)	<input type="text"/>
Profit Margin (%)	<input type="text"/>
Total number of units sold	<input type="text"/>
Total sales value	<input type="text"/>

Please provide us with the *total cumulated sales* for the category of products:
 "Coatings and linings";
 over the course of one financial year (March 2022 - April 2023):

This category of product represents% of total annual sales	<input type="text"/>
.... % is sold in NZ	<input type="text"/>
Total cumulated profit (NZD/year)	<input type="text"/>
Profit Margin (%)	<input type="text"/>
Total units sold	<input type="text"/>
Total sales value	<input type="text"/>

Please provide us with the total cumulated sale for any other products or category of products over the course of one financial year (March 2022 - April 2023);

Type of Product	<input type="text"/>
Total % sales	<input type="text"/>
Total cumulated profit (NZD/year)	<input type="text"/>
In this product category, % sold in NZ	<input type="text"/>
Total number of units sold	<input type="text"/>

Profit margin (%)	<input type="text"/>
Total sales value for that category	<input type="text"/>
another type of product?	<input type="text"/>

Please provide us with the *total cumulated sale for any other product or category of products* over the course of one financial year (March 2022 - April 2023);

Type of Product	<input type="text"/>
Total % sales	<input type="text"/>
Total cumulated profit (NZD/year)	<input type="text"/>
In this product category, % sold in NZ	<input type="text"/>
Total number of units sold	<input type="text"/>
Profit Margin (%)	<input type="text"/>
Total sales value	<input type="text"/>

What type of imbedded fixture, and/or core strengthening can be found in your products ?

- Embedded Metal fixture
- Embedded Wood products
- Ply wood or wood derivatives
- PVC/PET Cores
- Core Mate (expanded polyester)
- Chemical sealant, bonding, glue (such as MMA)
- Other forms of fixture or strengtheners

Please detail what joining method and external materials you composites may be attached to:

Are you selling products with a potential for reuse?

Cabins

- Domes
- Silo/tanks
- Pools
- Boat spare parts
- Other

Please detail potential for reuse of your product and/or limitations:

The following questions are related to the products and services your business is currently providing:

	Yes	No	Not Applicable
Do you provide maintenance and repair services to your clients?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you have installation methods/protocols allowing for dis-assembly and recovery for further reuse?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are the products you are selling designed with modularity and repairability in mind? (i.e. accessible for repair and/or refurbishment or reuse?)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is the material type and specification clearly identified to your client, either in the technical documentation or directly engraved on the final product?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you sell structural/load bearing components, not suited for reuse after a certain time without testing for degradation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you sell very large and uniquely customised products? (decorative or architecture...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you provide natural fiber/ matrix options to your clients?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you provide "plastic wood" or decking products to your clients ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are you interested in investigating ways to use waste composites as a co-processing fuel in other industrial processes (i.e. cement kilns for example)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please give us more details about the volumes and value, of the cumulated structural/load bearing products you have sold over the course of a whole financial

year (March 2022- April 2023) and how much was sold in New Zealand:

Product type or category	<input type="text"/>
Annual volume/quantity sold	<input type="text"/>
% sold in NZ	<input type="text"/>
Market value of 1 product (if applicable) in NZD	<input type="text"/>

Please give us more details about the volumes and value, of the cumulated very large and customised products you have sold over the course of a whole financial year (March 2022- April 2023) and how much was sold in New Zealand:

Product type or category	<input type="text"/>
Annual volume/quantity sold	<input type="text"/>
% sold in NZ	<input type="text"/>
Market value of 1 product (if applicable) in NZD	<input type="text"/>

Section 3 : Waste & Maintenance

In this section we are going to review the current standard practices about waste management in your company and try to localise waste 'hotspots' and/or optimal collection points for the logistics of recycling.

By understanding what are the current needs and practices, we can arrange a coordinated effort to address these waste minimisation issues collaboratively.

What type of waste are you generating?

- Off-Cuts
- Over spray trimmings
- Trimming dust
- Trimming from vacuum infusion
- Defective items
- Resin containers, and gel coats
- Release agent
- Obsolete moulds
- Cardboard and plastic packagings

- Chemicals (such as Acetone etc..)
- Catalyst bottles
- Core Materials (foam eg....)
- Other

Please provide us with more details about *the monthly volume* of Off-cuts generated and what current recycling system is in place;

Please give an answer in kg/ m3/ ton ? (or specify the metrics)

Volume of waste (for 1 month)	<input type="text"/>
Geographical location	<input type="text"/>
Current disposal method	<input type="text"/>

Please provide us with more details about *the monthly volume* of Over-spray trimmings generated and what current recycling system is in place;

Please give an answer in kg/ m3/ ton ? (or specify the metrics)

Volume of waste (for 1 month)	<input type="text"/>
Geographical location	<input type="text"/>
Current disposal method	<input type="text"/>

Please provide us with more details about *the monthly volume* of Trimming dust generated and what current recycling system is in place;

Please give an answer in kg/ m3/ ton ? (or specify the metrics)

Volume of waste (for 1 month)	<input type="text"/>
Geographical location	<input type="text"/>
Current disposal method	<input type="text"/>

Please provide us with more details about *the monthly volume* of Trimming from vacuum infusion generated and what current recycling system is in place;

Please give an answer in kg/ m3/ ton ? (or specify the metrics)

Volume of waste (for 1 month)	<input type="text"/>
Geographical location	<input type="text"/>

Current disposal method

Please provide us with more details about *the monthly volume of defective items* generated and what current recycling system is in place;

Please give an answer in kg/ m3/ ton ? (or specify the metrics)

Volume of waste (for 1 month)

Geographical location

Current disposal method

Please provide us with more details about *the monthly volume of resin containers* generated and what current recycling system is in place;

Please give an answer in kg/ m3/ ton ? (or specify the metrics)

Volume of waste (for 1 month)

Geographical location

Current disposal method

Please provide us with more details about *the monthly volume of release agent* generated and what current recycling system is in place;

Please give an answer in kg/ m3/ ton ? (or specify the metrics)

Volume of waste (for 1 month)

Geographical location

Current disposal method

Please provide us with more details about *the monthly volume of release agent* generated and what current recycling system is in place;

Please give an answer in kg/ m3/ ton ? (or specify the metrics)

Volume of waste (for 1 month)

Geographical location

Current disposal method

Please provide us with more details about *the monthly volume of obsolete moulds* generated and what current recycling system is in place;

Please give an answer in kg/ m3/ ton ? (or specify the metrics)

Volume of waste (for 1 month)

Geographical location

Current disposal method

Please provide us with more details about *the monthly volume* of cardboard and plastic generated and what current recycling system is in place;

Please give an answer in kg/ m3/ ton ? (or specify the metrics)

Volume of waste (for 1 month)

Geographical location

Current disposal method

Please provide us with more details about *the monthly volume* of chemicals generated and what current recycling system is in place;

Please give an answer in kg/ m3/ ton ? (or specify the metrics)

Volume of waste (for 1 month)

Geographical location

Current disposal method

Please provide us with more details about *the monthly volume* of catalyst bottles generated and what current recycling system is in place;

Please give an answer in kg/ m3/ ton ? (or specify the metrics)

Volume of waste (for 1 month)

Geographical location

Current disposal method

Please provide us with more details about the *monthly volume of any type of other waste* generated and what current recycling system is in place (if applicable)

What type of production equipment do you own?

(Maintenance, safety checks, repair, or communal use can be used as a lever to alleviate some waste generation in the Composites industry sector)

- Autoclave
- Spray equipment
- Mould production
- CNC equipment
- 3D pinter
- Coating for composites
- A fleet of commercial vehicles (Cars, trucks)
- Lifting vehicles; such as forklifts, cranes, lifting equipment..)
- Equipment for the production of profiles (pultrusion, extrusion, else..)
- Large surface of storage (retail of stock...)
- A heating area (Energy bench)
- A dedicated storage for catalytis
- Non-destructive testing equipment
- Presses
- Electric tools (sanders, cutting...etc)
- Other

Please provide us with more details about the current maintenance frequency and disposal method at the end of life for the "Autoclave":

How many do you own (if applicable)

How long can you use it for? (total life span of the equipment)

Current waste disposal method?

Please provide us with more details about the current maintenance frequency and disposal method at the end of life for the "Spray equipment":

How many do you own (if applicable)

How long can you use it for? (total life span of the equipment)

Current waste disposal method?

Please provide us with more details about the current maintenance frequency and disposal method at the end of life for the "Mould Production":

How many do you own (if applicable)	<input type="text"/>
How long can you use it for? (total life span of the equipment)	<input type="text"/>
Current waste disposal method?	<input type="text"/>

Please provide us with more details about the current maintenance frequency and disposal method at the end of life for the "CNC equipment":

How many do you own (if applicable)	<input type="text"/>
How long can you use it for? (total life span of the equipment)	<input type="text"/>
Current waste disposal method?	<input type="text"/>

Please provide us with more details about the current maintenance frequency and disposal method at the end of life for the "3D printer":

How many do you own (if applicable)	<input type="text"/>
How long can you use it for? (total life span of the equipment)	<input type="text"/>
Current waste disposal method?	<input type="text"/>

Please provide us with more details about the current maintenance frequency and disposal method at the end of life for the "Coating for composites":

How many do you own (if applicable)	<input type="text"/>
How long can you use it for? (total life span of the equipment)	<input type="text"/>
Current waste disposal method?	<input type="text"/>

Please provide us with more details about the current maintenance frequency and disposal method at the end of life for the "Commercial vehicle fleet":

How many do you own (if applicable)	<input type="text"/>
How long can you use it for? (total life span of the equipment)	<input type="text"/>
Current waste disposal method?	<input type="text"/>

Please provide us with more details about the current maintenance frequency and disposal method at the end of life for the "Lifting vehicles":

How many do you own (if applicable)	<input type="text"/>
How long can you use it for? (total life span of the equipment)	<input type="text"/>
Current waste disposal method?	<input type="text"/>

Please provide us with more details about the current maintenance frequency and disposal method at the end of life for the "Pultrusion":

How many do you own (if applicable)	<input type="text"/>
How long can you use it for? (total life span of the equipment)	<input type="text"/>
Current waste disposal method?	<input type="text"/>

Please provide us with more details about the current maintenance frequency and disposal method at the end of life for the "Heating Equipment":

How many do you own (if applicable)	<input type="text"/>
How long can you use it for? (total life span of the equipment)	<input type="text"/>
Current waste disposal method?	<input type="text"/>

Please provide us with more details about the current maintenance frequency and disposal method at the end of life for the "NDT equipment":

How many do you own (if applicable)	<input type="text"/>
How long can you use it for? (total life span of the equipment)	<input type="text"/>
Current waste disposal method?	<input type="text"/>

Please provide us with more details about the current maintenance frequency and disposal method at the end of life for the "Presses":

How many do you own (if applicable)	<input type="text"/>
How long can you use it for? (total life span of the equipment)	<input type="text"/>
Current waste disposal method?	<input type="text"/>

Please provide us with more details about the current maintenance frequency and disposal method at the end of life for the "Electric tools":

How many do you own (if applicable)

How long can you use it for? (total life span of the equipment)

Current waste disposal method?

Please provide us with more information on the other equipment you are currently using:

Section 4: Implementing a Circular Economy

The circular economy model implies recovery and reuse of resources to decrease both the carbon footprint and resources consumption of an industrial model.

The aim of this section is to find optimal synergies between local industries to secure market and partnerships, and address the future collaboratively.

In this section you will be given multiple lists of prompts that you will have to rank. There is not right or wrong answers, these questions are both a tool to assess the level of understanding of the stakes, and a tool to stimulate imagination and spark some discussions for the next workshops organised by CANZ.

However, this section intends to stimulate thinking, thus it should be filled by the CEO/GM to be representative of the organisation's perspectives on the future.

Please tick all the boxes that could align with your ability to contribute to the network:

	I can provide	I will need support	I can work towards that goal in a near future	Not Applicable
Decarbonised logistic fleet (electric Trucks or forklifts..)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Refurbishment skills (painting for composites)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Repair skills (for composites)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regular maintenance of industrial equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quality control, Non-destructive testing equipment, and skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conception and Design skills, for dis-assembly, functionality, modularity and repairability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A large storage area	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A large existing database covering all the references and technical data of products related to the manufacturing of composites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Existing partnership with waste management companies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Existing partnership with other industries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please slide the pointer from left to right to the level of agreement you share with the following statements:

Most certainly false Comme-ci, comme-ca, it is probably more nuanced Entirely true

The peak of fossil fuel extraction has been passed in 2008

Composite materials are made from fossil fuel

It is more urgent to decrease carbon emission rather than

	Comme-ci, comme-ca, it is probably more nuanced	
Most certainly false		Entirely true

resources
consumptions

NZ will face other
disruptive weather
events, heavy rain,
floods, landslide,
etc...

We can increase the
GDP with using less
energy and emit less
carbon

A reduction in
consumption will
reduce the overall
volume of waste

There will be no
reduction of
consumption, thus
we should maximise
collection recycling
and reuse

Most composite
materials can be
recycled in closed-
loop

Global supply-chain
disruptions will never
ever happen again

I have time and
knowledge to
transition my
industrial practice to
a more sustainable
model all on my own

Congratulations ! You have almost reached the end of the Survey!

Please continue until you reach the end page, the ensure your data is collected.

But before, we would like to thank you for your participation, and show that we value

your time and effort,

If you wish to get more information, or further engage with the research team for any enquiry regarding the survey or in relation to topics of sustainable industrial practices, circular economy, and waste minimisation see you on the next page!

Block 2

Would you like to continue this discussion with our research team, and schedule an online interview?

Online Interview: on the topic of sustainable industrial practices, circular economy, and waste minimisation,

You are welcome to schedule an online appointment with the research team to discuss a more specific issue that was not captured by the survey, or if you wish to give, or get, more information about the survey's questions.

Please download and read the following documents, and return the Consent form signed by your organisation's CEO or GM

- "Interview Participant Information Sheet" (PIS-interview): [Interview participant information sheet ceo](#) & [Interview participant information sheet employee](#)
- "Consent form for Interview"(CF-interview): [Interview consent form for ceo gm](#) & [Interview consent form for employee as participant](#)

Online interviews are held on Zoom last 40 min are transcribed and recorded. (Details about data are included in the PIS)

Discussions will cover the following points:

- First, a review of the survey's answers, more details can be given and reviewed to ensure accuracy.

Additionally, if major points have been left out by the survey, it will give the opportunity to get accounted for during this stage of the interview.

- Second, provide an opportunity for the participant to share some issues/ ask

questions/provide nuance regarding their business, sustainability and resource recovery.

- Third, a discussion about the principles of a Circular Economy and how to ease the preparation work that will be proposed during the following CANZ workshops.

Please provide us with a contact email in the question below, and we will send you a link to schedule an appointment.

You will be asked to provide a copy of the Consent Form for Interview signed by your organisation CEO or General Manager.

Your participation is valuable,
Thank you again for your time,

We hope that you had a good experience and to see you again soon,
All the Best
Nga Mihi

CANZ - CIRCUIT

Provide us with the contact details of the interested interview participant:

Provide a valid email address

Ok, Now you've reach the end of the survey.

Thank you for your participation,
Click on next to exit

CANZ

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