

# **KPMG**

# Ideation Challenge

TEAM RSG





10%  
CANADA's  
TOTAL

...

# 73 Megatonnes

=73 billion kilograms

Overview

Program Description

System Detail

Analysis

Program Benefit



# OUR TEAM



Wenhui Xu



Sin Yee  
Summer Lim



Jonathan



Enia

Overview

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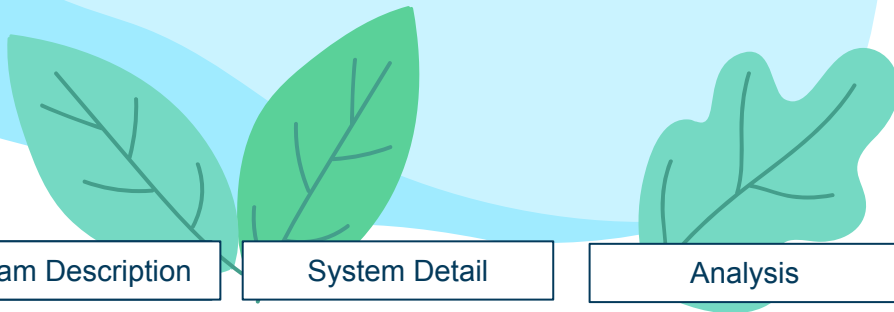
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Verdex is an organization aiming to build a strong connection between proactive companies in the apparel industry to achieve net zero emission goals, through certified program.



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PROGRAM  
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PROGRAM BENEFITS

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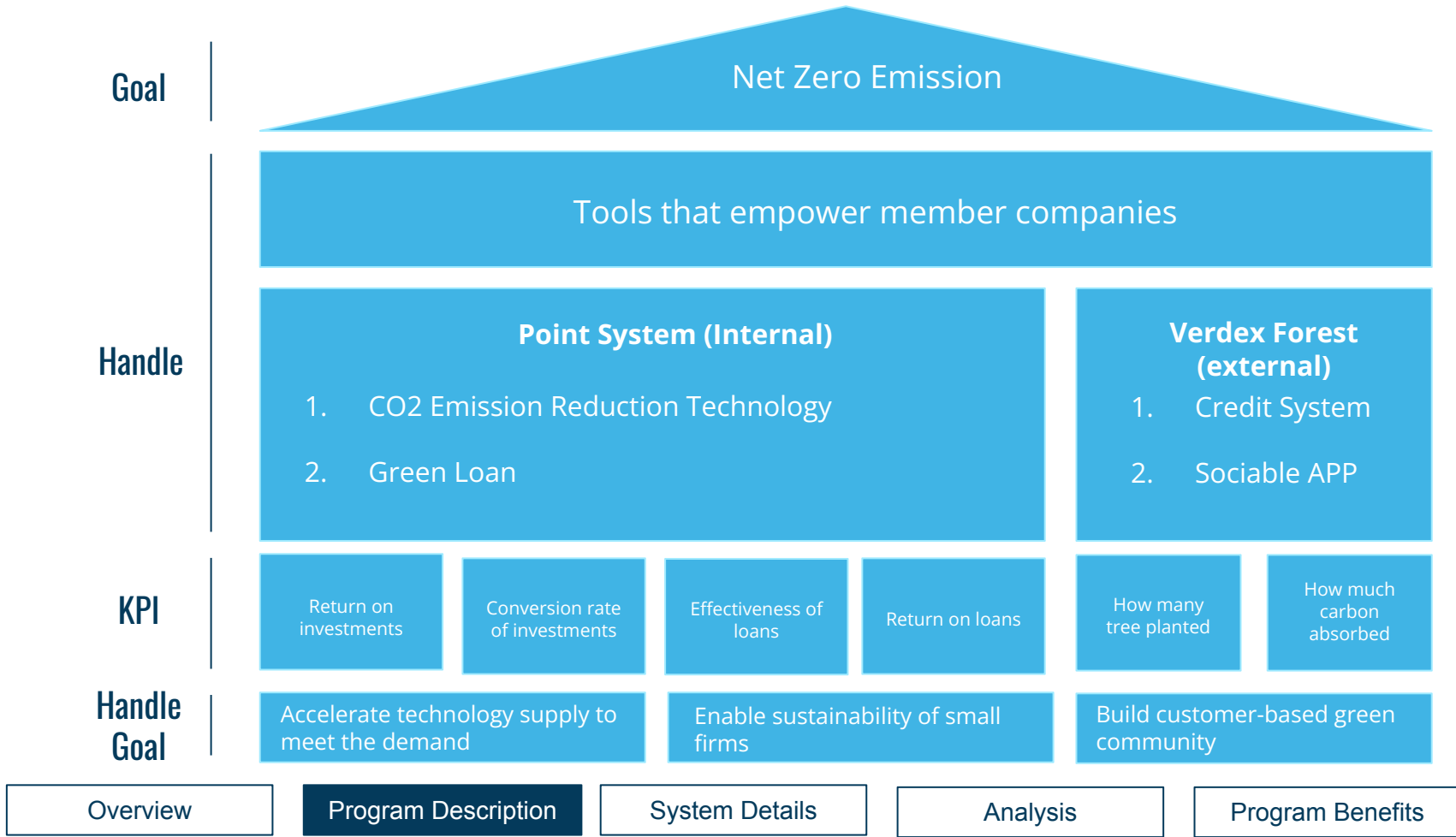


# 01

...

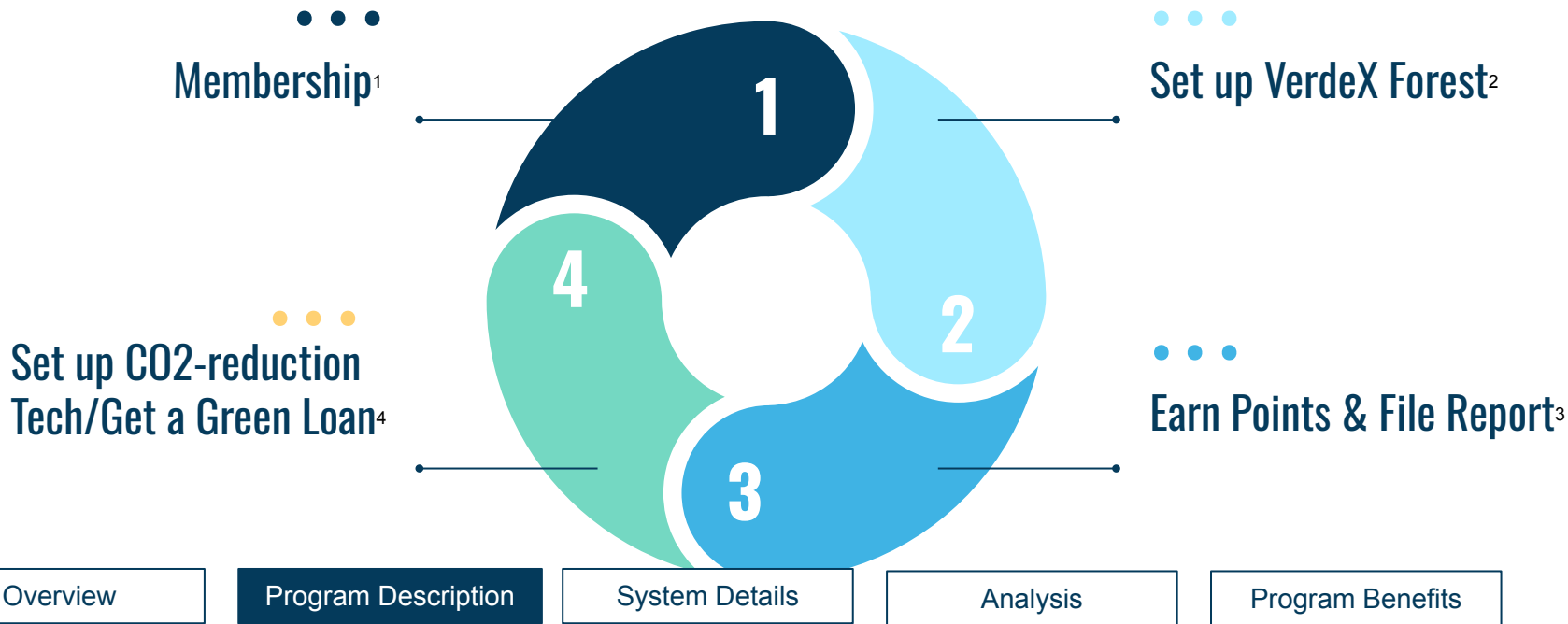
## PROGRAM DESCRIPTION







# Program Flow



1. Companies pay a sign up fee to be registered

2. Once registered we will set up VerdeX Forest terminal. T

3. Then you will earn your point either from your customers green activity or your production activity. What has it to do with customers and the forest? we will get into that soon. At the end of year you need to file a report to help further measure your effort.

4. Then at the checking out stage you can either apply to access technology or green loan depending on how many points you have.



# 02

...

## SYSTEM DETAILS



...

# The Verdex Forest



# Market Size in Current Year

Product	Waste per person	Portion of the waste	Population	Recycle rate	Average carbon emission	Total carbon emission
wearable	37 kilograms	1/2	38.01millions	15%	18.735 CO2 <sup>5</sup>	1975.98 millions kg
Non-wearable	37 kilograms	1/2	38.01millions	1%	6.22 CO2 <sup>6</sup>	43.54 millions kg

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5.Wearable Average carbon footprint is calculated from taking an average of carbon footprint of t-shirt(33.4 kg) and jeans(4.07 kg,) most common products in everyone's wardrobe

6. Non-wearable average carbon footprint is calculated from taking an average of carbon footprint of polyesters(9.52 kg), cotton(5.09 kg) and hemp(4.05 kg), most common ingredients used.

# Market Size in 5 Year

Product	Waste per person	Portion of the waste	Population	Recycle rate	Average carbon emission	Total carbon emission
wearable	37 kilograms	1/2	38.01millions	100% <sup>8</sup>	18.735 CO2	13170.705 millions kg
Non-wearable	37 kilograms	1/2	38.01millions	100%	6.22 CO2	4372 millions kg

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7. The market was not at its full potential since 88% of the time people just throw clothes away. The market will grow into maturity in 5 years

8. We can calculate the true potential of the economy by replacing recycle rate by 100%.

# VerdeX Forest Flow<sup>9</sup>



The APP

...



Earn Credits

...



Redeem a Tree

...



Visualization

...



Social Norm

...

Overview

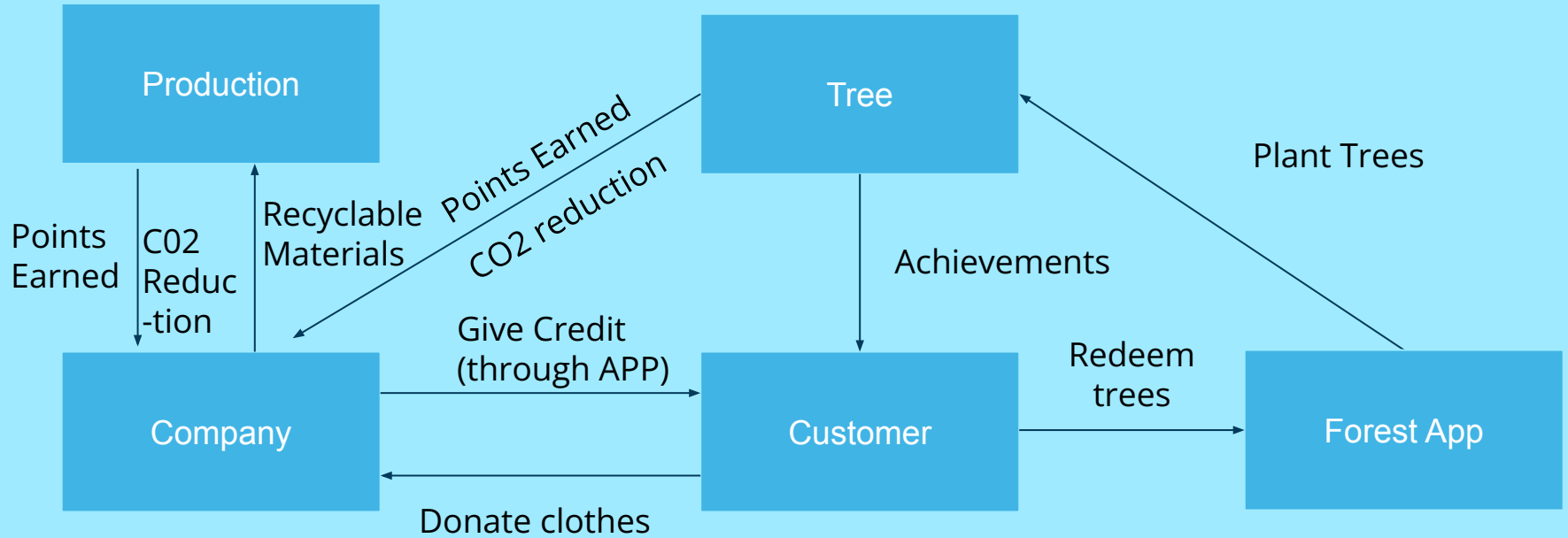
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9. For mechanism behind the flow design, please see appendix: [theory of planned behaviour](#)



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# The Point System





# SYSTEM OF DESIGN

POINT SYSTEM	DURATION	VERDICT
Companies earn points based on the actions they take to achieve net zero goals.	Every 2 years	Companies are asked to submit a report based on the key indicators in the point system for the program to decide whether they get the point.

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# POINT SYSTEM

- Companies are ranked based on the following criteria.
- Points are given based on the actions taken in each criteria.



## 1. PRODUCTION

How many carbon emissions are produced during the process of manufacturing



## 2. CUSTOMER CREDITS

How many of the customers in the company are practising green behaviors



## 3. WASTE RECYCLE

How many of the waste are converted into recycled products.



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# 1. Production

How many carbon emissions are produced during the process of manufacturing

## KPI

- # Partnership with Clean Technology
- Weight of Carbon Emissions
- # Eco-friendly Product Produced
- # Total Products

## Manufacturing Process

- Partnership with companies that support clean technology\* within the manufacturing process
- Every 5% of reduction of GHG emission to the previous year from the manufacturer

## Choice of products

- Every 100 of eco-friendly product produced
- Every 5 % of increase eco-friendly product produced
- Every 5% of decrease of total product produced



1 point will be given if company meets of the every sub-actions.

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## 2. Customer Credits

How many of the customers in the company are practising green behaviors



### The Verdex Forest Program

- Every 20 sign ups
- Every 10% increase in sign up compared to the previous year
- Every 100 of carbon credits per customers
- Every 10% increase in carbon credits per customers compared to the previous year

### Customer Behaviors

- Every 5% increase in sales in eco friendly productions
- Every 5% decrease in sales of product per customer (encourage a buy less culture)

1 point will be given if company meets of the every sub-actions.

### KPI

- # Sign up
- # Carbon Credits per Customer
- # Sales of Products
- # Sales of Eco- friendly Products

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# 3. Waste Recycle

How many of the waste are converted into recycled products

## KPI

- Weight of Waste Produced
- Conversion Rate from Waste to Recycle Products
- # Partnership with Companies that Support Clean Technology

## Waste Reduction

- Less than 30% of the cloths turn into waste
- Every 5% of reduction of waste compared to the previous year

## Conversion from waste to recycle

- Every 5% of waste turning into recycling product
- Every 5 % of improvement of conversion rate from waste to recycled product
- Partnership with companies that support clean technology\* within the recycling process

1 point will be given if company meets of the every sub-actions.



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# HOW TO EXAMINE THE POINT EARNED.



## Reports

Companies are asked to submit a sustainable develop report to the program to examine the points earned for the past 2 years

These are the things that should be included in the report



- Data of the KPI in each criteria during the two year time
- Data of the KPI in each criteria during the previous two year time
- Credentials of companies partnership with clean technology
- Participation data of the customers registered under company in the carbon credit program
- Short term and long term goals of the company in achieving the net zero goal

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# TIMELINE



**SEP-DEC 2022**

...

Membership  
open to join the  
program

**JAN 2022**

...

Start of  
program

**JAN 2024**

...

End of the  
program

**MAY 2024**

...

Report  
Submission

**AUG 2024**

...

Communities  
work toward  
the same green  
goal

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# WHAT DOES COMPANY GET FROM THIS PROGRAM?

- Opportunity to purchase clean technology or technological inventions in the textile industry & green loans to support their own innovative projects

## Current Situation

1. Lack of resource in the research on new clean technology
2. Existing clean technology are limited and expensive in the market

## Through our program...

1. Verdex would be investing on potential innovative clean technologies
2. Members of Verdex would be able to ask for the technologies

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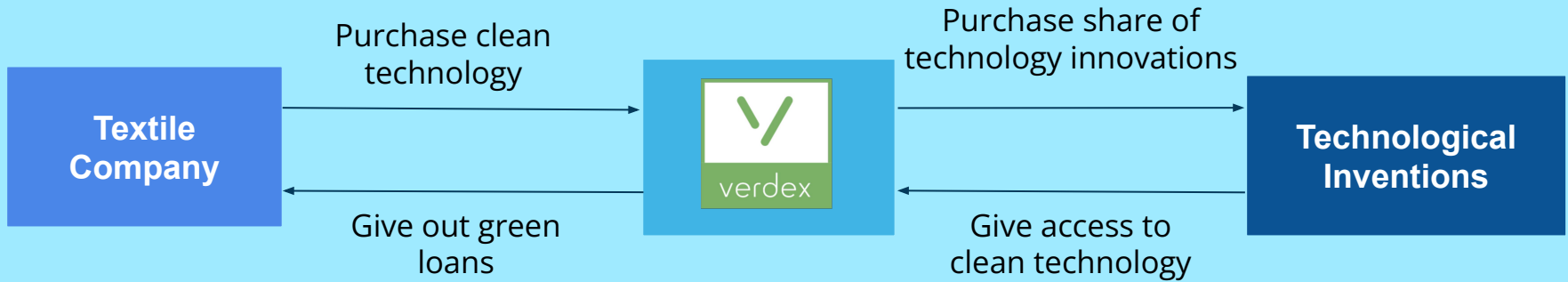
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# Capital and Service Flow



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# Potential Technological Projects

## Alternative Materials

### Amadou Leather

They are a vegan leather solution for the fashion, automotive and transportation industries. Materials are biodegradable and cruelty free.



## Renewable Fibers

### Evrnu

The technology uses repolymerization to convert the original fiber molecules into new high performing renewable fibers - NuCycl.



## Textile Resource Recovery

### BlockTexx

It is a clean technology company that recover polyester and cellulose from clothing. This foster to better recycling.

## Wastewater Treatments

### Indra Water

They developed fully automated wastewater management treatment and packaged recycling solutions. This can cut down cost and energy consumption.



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# Rewards from the Pointing System



PLATINUM (Top 5%)	GOLD (Top 15%)	SILVER (Top 30%)	BRONZE(50%)
Access to all the technology projects available	Access to 75% the technology projects available	Access to 50% the technology projects available	Access to 20% the technology projects available
✓ GREEN LOAN	✓ GREEN LOAN	✓ GREEN LOAN	
Right to put VerdeX logos on products as a proof of certification for the green behaviors			

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# 03

## Analysis: Fund Allocations & Risk



# Business Model

## Target Market *Canadian Apparel Retailers*

### Top 10

- Average Net Profit:  
\$4 Billion
- **Membership fee:**  
0.2% of Net Profit

### Medium

- Employee: 100 - 499
- **Membership fee:**  
\$200,000

### Small

- Employee: 1 - 99
- **Membership fee:**  
\$20,000

REMARK: Membership fee is payable each term (i.e. each 2 years)

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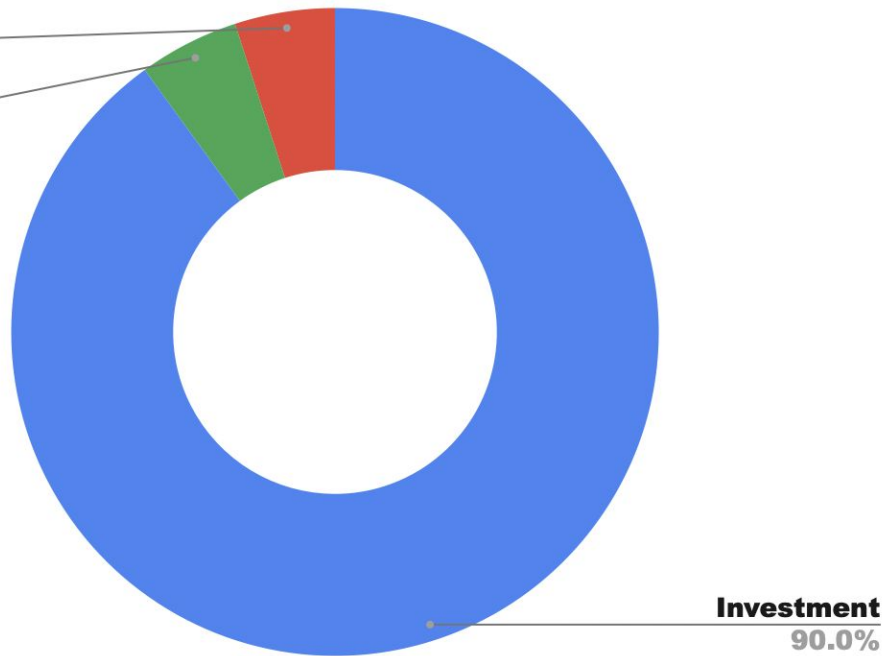
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# Fund Allocations

**Operations**  
5.0%  
**Green Loans**  
5.0%



## Investment - 90%

Investment on innovative green technology and provide the service to the members

## Green Loans - 5%

Lending out loans to small businesses for green measures for a small interest rate

## Operations - 5%

VerdeX Forest App maintenance , MD&A, labours etc

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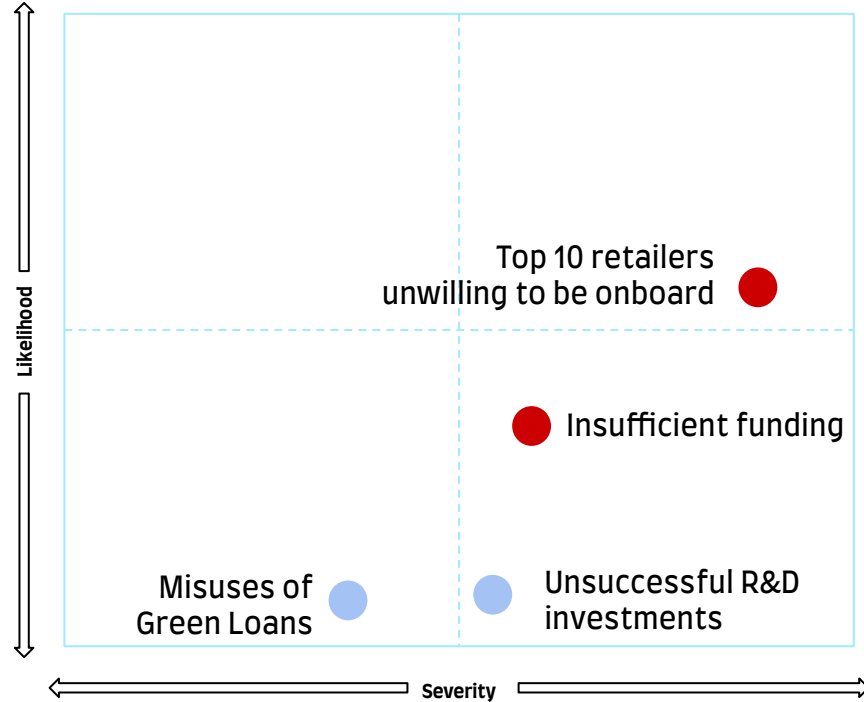
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# Risk & Mitigations

● Low Risk    ● High Risk



## 1 Top 10 retailers reluctant to invest

1. Emphasize that assisting other SMEs in the industry to go green is an act of bearing more CSR, cultivating better brand reputation and achieving zero emission collectively
2. Continue campaigning the benefit of economies of scale and pooling resources for R&D, lower patent fees available

## 2 Insufficient funding

1. Request for additional subsidies from the government as well as other external organizations

## 3 Unsuccessful R&D investments

1. Conduct thorough screening and selection process for choosing the technologies to invest in
2. Hire prominent experts in the field, such as university professor

## 4 Green Loans misused

1. Sign contracts with the borrowers legally stating the sole purpose of the fund and penalties for violations
2. Require financial report submissions to monitor and review

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# 04

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## PROGRAM BENEFITS



# THE TRIPLE BOTTOM LINE

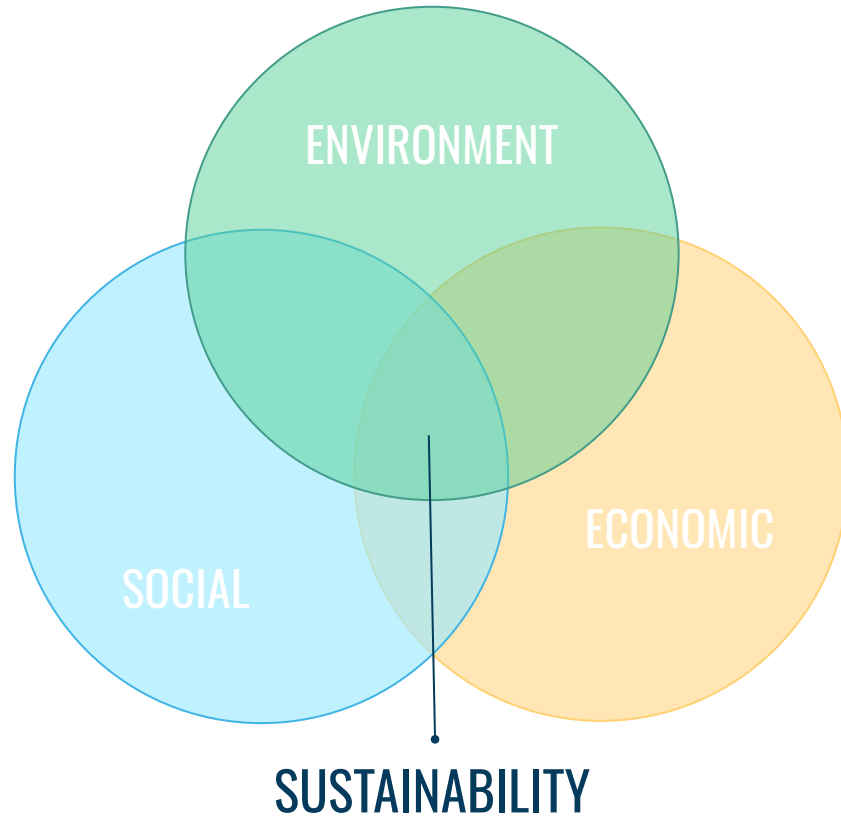
Our Priorities:



**1** PLANET

**2** PEOPLE

**3** PROFITS



Overview

Program Description

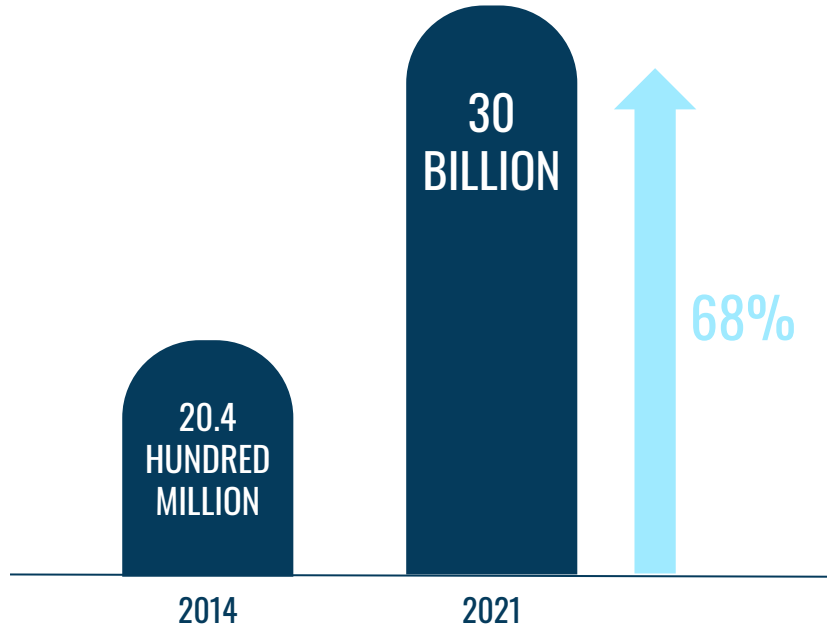
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# SHAREHOLDERS & INVESTORS



## INVESTMENT INCREASES . . .

CSR efforts and increased focus on sustainability makes companies more appealing to investors and shareholders.

## SUSTAINABILITY . . .

Global sustainable investment has grown to over \$30 trillion worldwide currently, increasing by 68% since 2014 (Alaya, 2022).

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# EMPLOYEE SATISFACTION

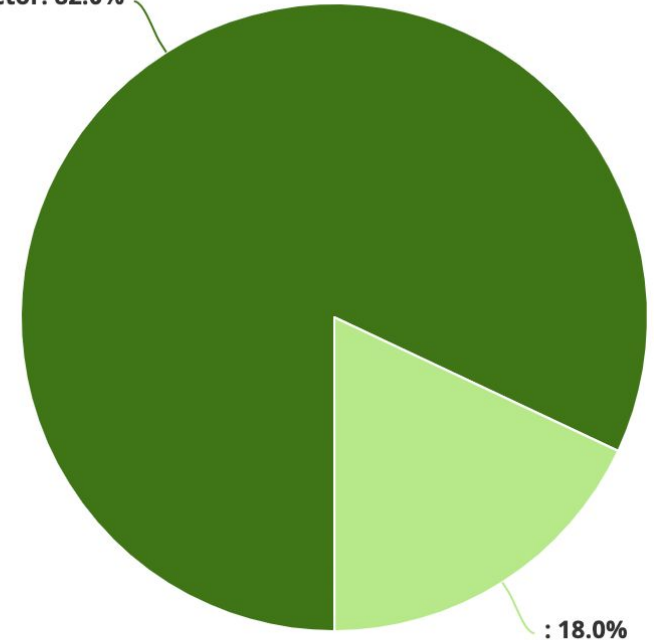
## MANAGEMENT . . .

Research has shown that when companies take part in CSR initiatives, it can impact workplace attitudes, trust in top management, organization pride, job satisfaction, and even performance.

## EMPLOYEE PREFERENCE . . .

82% of Gen Z workers consider CSR a significant factor when choosing to work for an employer. 66% would even take a pay decrease if it meant working for companies which value CSR.(Alaya, 2022).

CSR Significant Hiring Factor: 82.0%



● CSR Significant Hiring Factor ●

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# CONSUMER SATISFACTION

87%

“87% of Americans are more likely to buy a product from a company that they can align their values with” (Alaya, 2022).

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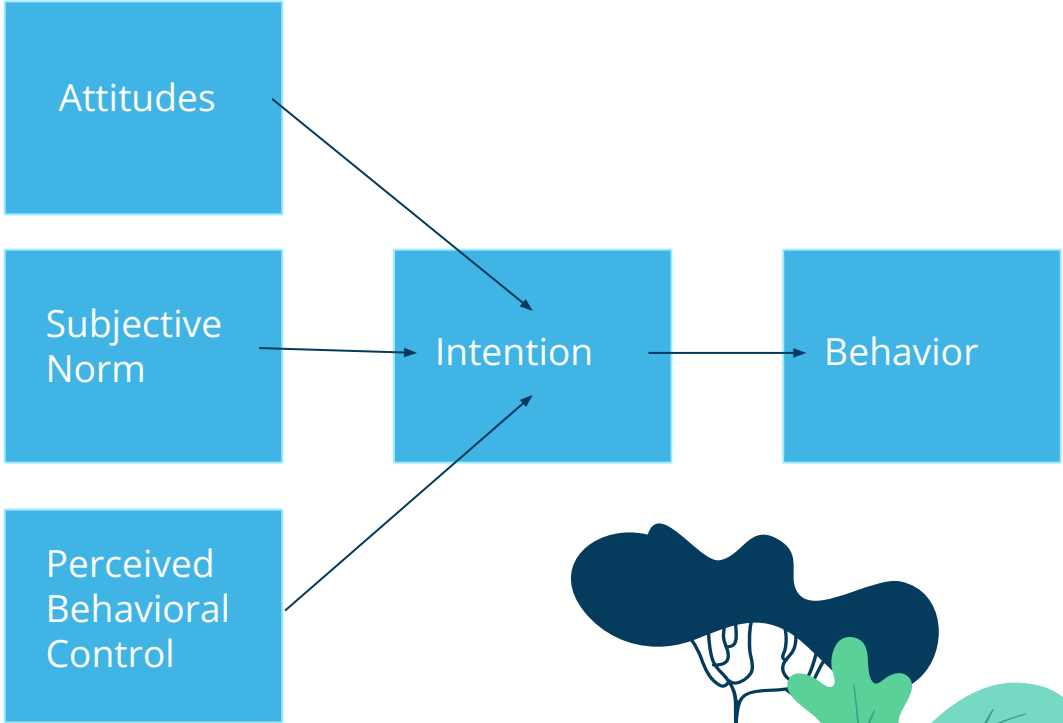


**THANK YOU!**



# Appendix: System Details

## Theory of Planned Behaviour



# Appendix: System Details

if you believe that the behavior will make a positive difference in your life, then it's more likely that you will perform the behavior.

## Attitude



whether you believe you have the tools or the means required to exhibit the behavior.

## Perceived Behaviour Control

Subjective norms look at what others in your social circle, the people that you interact with, think about the behavior.

## Subjective Norms



Behaviour is also a function of your intentions, which you can think of as being your desire to perform the behavior.

## Intention

# Appendix: Analysis (Financial Projection)

CAD \$	Details	2022	2023	2024	2025	2026
<b>Revenues</b>						
Annual Membership Fee						
Canada Top 10 Apparel Companies		\$20,000,000	\$20,000,000	\$24,000,000	\$24,000,000	\$28,000,000
Medium Size Apparel Companies	99-499 employees	\$5,000,000	\$5,000,000	\$7,000,000	\$7,000,000	\$9,000,000
Small Size Apparel Companies	1-99 employees	\$300,000	\$300,000	\$600,000	\$600,000	\$900,000
Deduct: Loyalty discount	5% discount starting at the 3rd term	-	-	-	-	-\$1,265,000
Investment Return		-	-	\$1,000,000	\$2,000,000	\$3,000,000
Government Grant	Net Zero Accelerator Initiative	\$16,000,000	\$16,000,000	\$16,000,000	\$16,000,000	\$16,000,000
<b>Total Revenues</b>		\$41,300,000	\$41,300,000	\$48,600,000	\$49,600,000	\$55,635,000
<b>Costs</b>						
Operating, Administrative & Legal Fee		\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Rent & Utilities		\$78,000	\$78,000	\$78,000	\$78,000	\$78,000
Salary	Team of 25 staff	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000
Consultation Fee	University Professor(s) consultation	\$30,000	\$20,000	\$20,000	\$20,000	\$20,000
Advertising		\$50,000	\$30,000	\$30,000	\$30,000	\$30,000
R&D Investment		\$38,000,000	\$38,000,000	\$45,000,000	\$45,000,000	\$50,000,000
<b>Total Costs</b>		\$39,758,000	\$39,728,000	\$46,728,000	\$46,728,000	\$51,728,000
<b>Net Income (Loss)</b>		\$1,542,000	\$1,572,000	\$1,872,000	\$2,872,000	\$3,907,000

<b>Assumptions:</b>	
Rent for 3500 sq feet (Utilities included):	\$6,500
Per employee (25 total) office space	150
Average 0.2% of Net Profit5, Canada's Top 10 apparel retailers	\$8,000,000
Medium Apparel Retailers' flat fee	\$200,000
Small Apparel Retailers' flat fee	\$20,000



# Appendix: Analysis (Cost Component)

Cost component % to Total Revenue						Average %
Investment	92.01%	92.01%	92.59%	90.73%	89.87%	91.44%
Green Loan Fund (Retained Earnings)	3.73%	3.81%	3.85%	5.79%	7.02%	4.84%
Operating expenses	4.26%	4.18%	3.56%	3.48%	3.11%	3.72%





# Appendix: Overall Emission Reduction

## Forest Program

Product	Waste per Person	Portion of the Waste	Population	Recycle Rate	Average Carbon Emission	Total Carbon Emission
Wearable	37 kilograms	1/2	38.01millions	100%	18.735 CO2	13170.705 millions kg
Non-wearable	37 kilograms	1/2	38.01millions	100%	6.22 CO2	4372 millions kg

Recycle	17.54 b	28.38 b
Tech	10.93 b	

## Technological Projects

Company Class	Total Annual Carbon Emission	Access to Projects	Ideal Carbon Emission Reduction due to projects	Total Carbon Emission Reduction	Average Reduction Per Carbon Emission
Platinum(5%)	2.65 billion	100%	20%	1.32 billion	50.0%
Gold(15%)	7.95 billion	75%	20%	2.98 billion	37.5%
Silver(30%)	15.9 billion	50%	20%	3.98 billion	25.5%
Bronze(50%)	26.5 billion	20%	20%	2.65 billion	10%

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