



Sustainable Future Enterprises

Recycling denim for a healthier environment

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EXECUTIVE SUMMARY

There are two major problems that lurk beneath the surface in New Zealand, causing mayhem out of the public eye. The first is a lack of proper insulation in homes, which has led to the death of almost 1,600 people and health issues for thousands more. The second is old clothing being disposed of at alarming rates. In New Zealand, around 100 million kilos of textile waste are thrown into rubbish dumps yearly (Sustainable Business Network, 2016). With clothing that gets donated to charities, a very small proportion make it to their shop floors, with the vast majority being exported to second-hand markets in developing countries. The ever-growing amount of supply has led to 42 countries in Asia, Africa and South America restricting or banning second-hand clothing imports to protect their local markets (Greenpeace, 2016).



Yet, there is a solution that can address both problems. Sustainable Future Enterprises will bring health and environmental benefits by providing high quality housing insulation made from recycled denim jeans. This will ensure better insulation in homes whilst reducing the amount of clothing waste.

Sustainable Future Enterprises will work in partnership with Insulpro Manufacturing Ltd, which will manufacture the insulation products, as well as local charities (e.g. Salvation Army) and clothing retailers to source quality clothing inputs. Sustainable Future Enterprises will be responsible for distributing the insulation product to reputable insulation installers.

BUSINESS OVERVIEW

Each winter in New Zealand, almost 1,600 people die due to their houses being too cold. Many others experience significant drops in their health and wellbeing (The Spinoff, 2017). A major contributor to this is the lack of proper or any insulation – this affects around 750,000 homes in New Zealand (BRANZ Report, 2017). At the same time, high electricity prices make it expensive to heat up homes.

The New Zealand government has recognised this as a national issue, rolling out the Warm Up New Zealand: Healthy Homes initiative in 2009, but the scheme has drastically reduced its funding over the years. It was found that there was a major issue with installers linked to the scheme charging prices that were too high.



There is a proven method to create high-quality insulation from recycled denim material. Bonded Logic in the USA has pioneered the UltraTouch™ Denim Insulation product which has multiple benefits over traditional insulation products. It has maximum thermal performance and does not contain any chemical irritants, nor any harmful airborne particulates (Bonded Logic, 2018). The product may need to be adapted to meet the legal requirements in New Zealand, but otherwise the manufacturing technology has been proven to produce a competitive insulation product.



Sustainable Future Enterprises will enter into a licensing agreement with Bonded Logic to utilise this technology.

BUSINESS OBJECTIVES



**Old denim
diverted from
landfill**



**High quality
insulation
installed in homes**



**Healthcare and energy
costs savings - money
can be spent elsewhere**



Sustainable Future Enterprises aims to divert waste from landfill by recycling old denim into a high-quality insulation product. The benefits are twofold when homeowners install this insulation: it enables them to reduce their energy bills and healthcare costs. The business also generates employment for people in manufacturing, distributing and installing the insulation product.

MARKET ANALYSIS

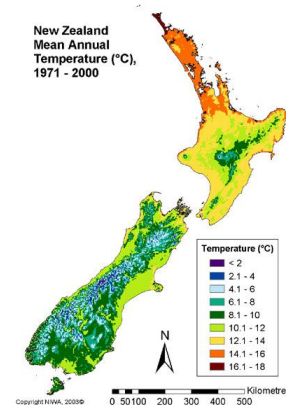
COMPETITORS



There are two main competitors within the New Zealand market. One is Autex's Greenstuf Residential Insulation, which is non-flammable, does not diminish in service over time, and is manufactured with 45% recycled plastic (Autex, 2018). Another is Earthwool's Glasswool Insulation, which is made up of up to 80% recycled glass and no added formaldehyde to encourage healthier living presence and improve indoor air quality (Earthwool, 2018). Whilst these competitors are using substantial amounts of recycled material, they have not considered recycling denim fibres.

MARKET OPPORTUNITY

There is a huge market opportunity in New Zealand, where it will become compulsory to have insulation in all rental homes from 1 July 2019, and landlords that fail to comply may face a fine of up to \$4,000 (Tenancy Services New Zealand). There are approximately 621,400 rental homes across New Zealand (Stats NZ). Furthermore, ANZ has announced that it will provide \$100 million in interest-free loans to help New Zealand homeowners insulate their homes (ANZ, 2018).



In terms of regional statistics, Wellington has around 80,523 dwellings (.id Community, 2013) and it is assumed that over 40% of these homes are not insulated given Wellington Council's efforts to fix this issue (Wellington Council, 2018). Christchurch has 174,000 dwellings, but due to several earthquakes over 17,000 had to be demolished (Green Blog, 2012), which enables Sustainable Future Enterprises to capitalise on the substantial growth of new housing development within the region. Auckland has over 472,044 dwellings (Census, 2013).

Beyond New Zealand, there is a need for insulation in Australia, where it is estimated that 1 in 15 Australians die from cold exposure and cold-related illnesses (The Lancet, 2015). In addition, proper insulation could result in nationwide savings of \$312 million over 30 years (Sydney Morning Herald, 2016) from lower electricity bills.

BUSINESS ACTIVITIES

MANUFACTURING

The denim insulation product will be locally manufactured by Insulpro Manufacturing Ltd, which has extensive expertise in the insulation market in New Zealand. Insulpro has similar values and objectives to Sustainable Future Enterprises as they seek to create healthier environments and living conditions for their customers.



OPERATIONS

Sustainable Future Enterprises will be incorporated in New Zealand, with the main operational activity being the sales and distribution of the denim insulation. There will be a small marketing team to drive campaigns and social media ads and promotions. In addition, product developers will work alongside our manufacturing partner Insulpro to constantly improve the product design. With a vision to expand internationally in the future, we will

continuously seek to improve our workforce with plenty of employment opportunities for highly skilled individuals.

MARKET OVERVIEW

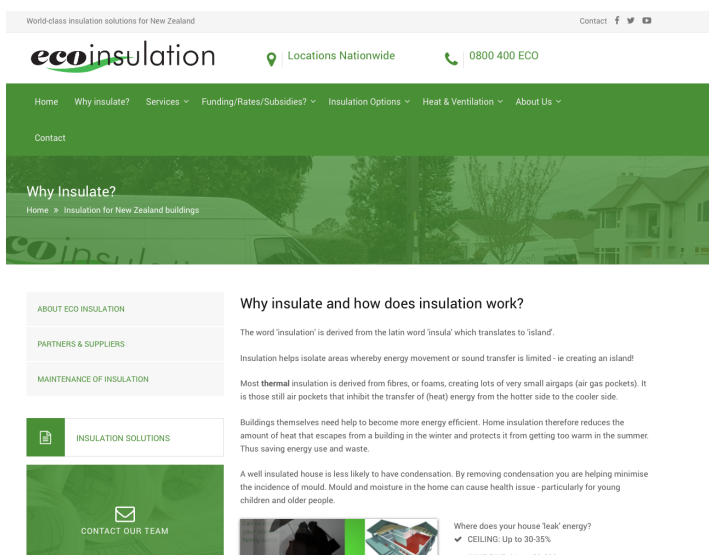
TARGET MARKET

Sustainable Future Enterprises will target reputable insulation installers in New Zealand that charge reasonable rates. Initially, distribution will be focused on the Wellington, Christchurch and Auckland regions due to their annual low temperatures and relatively larger populations. This will be achieved through a partnership with Eco Insulation, which is known for providing high-quality world-class insulation and has a nationwide installation service catering to rental properties, new buildings and commercial projects. Eco Insulation has been operating since 2000 and won awards such as the Westpac Enterprise North Shore Business Excellence Awards (Eco Insulation). As we expand, we will establish partnerships with other reputable insulation installers.

MARKETING STRATEGY

There are three elements to our marketing strategy.

Firstly, old denim jeans will need to be sourced from consumers to constitute the raw materials in the manufacturing process. We will work with charities and retailers to craft a targeted campaign to ensure the most efficient collection process. It will be inspired by the Blue Jeans Go Green initiative in the US, where consumers are encouraged to bring their old denim to participating retailers or mail it straight to a dedicated collection address. We will need to be careful, however, to ensure that our messaging is not encouraging consumers to discard their jeans for the sake of it and unnecessarily purchase new ones. The goal of waste reduction must be clearly conveyed.



Secondly, the installers must be able to convey the benefits of utilising our insulation over other products in the market to customers. Hence, we will partner with installers that share our values to promote the health and wellbeing benefits of our products having no chemicals and the ease with which the insulation can be installed without much protective gear. In addition, the reduction of clothing waste in landfill may be a major selling point. The main channels utilised will be the installers' websites and word of mouth when they are talking to clients.

Finally, given that many homeowners may not be aware of their home's current insulation status, or the benefits of installing insulation, there will need to be an educative element in marketing the installation of insulation to the public. Sustainable Future Enterprises will work with our installation partners and the New Zealand Government's Energy Efficiency and Conservation Authority to build upon their existing campaigns and ensure that the message effectively reaches the households in our target regions. Methods such as media releases, social media advertising and mailbox flyers will be utilised.



With regards to establishing partnerships with more insulation installers as our customer base, Sustainable Future Enterprises will utilise phone and face-to-face sales techniques to negotiate agreements with installers, as well as a website to facilitate sales whilst also communicating the benefits of our product to the public.

FINANCIAL OVERVIEW					
<i>Amounts in USD</i>	2018	2019	2020	2021	2022
Revenue					
Forecast sales (units)	1,500.00	3,000.00	4,000.00	5,000.00	8,000.00
Gross revenue	\$192,000.00	\$384,000.00	\$512,000.00	\$640,000.00	\$1,024,000.00
Cost of goods sold	\$76,372.50	\$152,745.00	\$203,660.00	\$254,575.00	\$407,320.00
Gross profit	\$115,627.50	\$231,255.00	\$308,340.00	\$385,425.00	\$616,680.00
Expenses					
Shipping	\$7,875.00	\$15,750.00	\$21,000.00	\$26,250.00	\$42,000.00
Storage	\$3,595.00	\$4,314.00	\$5,176.80	\$6,212.16	\$8,697.02
Rent	\$9,000.00	\$18,000.00	\$18,000.00	\$24,000.00	\$30,000.00
Salaries	\$103,725.00	\$207,450.00	\$207,450.00	\$276,600.00	\$345,750.00
Marketing	\$3,000.00	\$3,300.00	\$3,300.00	\$3,630.00	\$3,993.00
Loan repayment	\$19,200.00	\$19,200.00	\$19,200.00	\$19,200.00	\$19,200.00
Total expenses	\$146,395.00	\$268,014.00	\$274,126.80	\$355,892.16	\$449,640.02
Net profit	-\$30,767.50	-\$36,759.00	\$34,213.20	\$29,532.84	\$167,039.98
Taxes (28%)	\$0.00	\$0.00	\$9,579.70	\$8,269.20	\$46,771.19
Net income	-\$30,767.50	-\$36,759.00	\$24,633.50	\$21,263.64	\$120,268.78

SALES FORECASTS

It costs an estimated \$51 USD per unit to acquire a bag of insulation from our manufacturing partner. Sustainable Future Enterprises will sell each bag at a mark-up of 250% for \$127 USD per bag. We anticipate modest sales volumes in the first year as we are getting established in the market, but growing sales from 2019 onwards as insulation will become mandatory in all rental homes in New Zealand from 1 July 2019, thus increasing demand (Tenancy Services New Zealand). We anticipate expansion to the Australian market in 2022.

INITIAL CAPITAL REQUIREMENTS

We will take out a loan of \$160,000 USD to fund the initial setup of the business. It will be repaid at an interest rate of 12% over 5 years.

FUTURE OUTLOOK

These two challenges are not unique to New Zealand. Globally, a vast amount of textile waste is generated each year. In 2018, H&M was found to be sitting on \$4.3 billion worth of unsold clothing (MSN, 2018).

Beyond the initial markets of New Zealand and Australia, countries like China are also suffering from a lack of proper insulation in housing. Residential buildings in China have been found to use twice as much energy to heat as equally cold places in Europe or the US (World Bank, 2011). Despite temperatures going to -30 degrees Celsius in some areas, an arbitrary dividing line (the 'Qin-Huai' line) sees many households going without adequate heating in the winter. Hence, the business has the potential to scale across different countries worldwide.

Once new technologies have been developed to allow for the recycling of other clothing materials into useful products, Sustainable Future Enterprises may consider expanding operations into those areas.

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