

Business Report



IMPACT

2024

SCHOOL : ST NINIANS HIGH SCHOOL

MENTOR : JAMES COLLIER

PRODUCT : BEE BOX

**“THE SMALLEST CHANGES BRING
THE BIGGEST IMPACT.”**

Executive Summary



Mission Statement

*The smallest changes,
bring the biggest impact.*

Our Business Idea

The business idea is a hexagonal shaped planter that is constructed from recycled wood, which aims to reduce the amount of raw materials we need (cutting down on deforestation). Plus the scrap wood will make the product cheaper, allowing a wider range of people access it. In addition, the hexagon shape relates to bees when putting the planters together to create honeycomb, and to make it as easy as possible to set up. The product includes soil, seeds (to attract bees) and instructions, all encased in a paper bag, reducing single use plastic.

Our Goals

The goals that we have as a company, we believe will enable us to convey our environmental concerns and the specific issues regarding bee populations.

Our goals as a company consist of a greater understanding of bees importance in our everyday life and not to take them for granted. We want to bring not just the adults and elderly, but also the new generations together to combat this issue in the hope of changing the future of our planet.

However, above all is to bring an educational yet interactive and satisfying experience of caring for your local bees, and nature in general, bringing along with it the community spirit.

This business is all about getting the small things right. So we as a community can tackle the bigger things.

Financial Summary

Income: £352.89

Production Costs: £91.77

Gross Profit : £261.12

Business Performance

We spent the first 4 months developing our product. This took many prototypes and designs and ultimately led us to our final design in mid January. The next month was spent finalising other parts of our product such as packaging and soil. Finally at the start of February we were in a position to start selling our product as we had 17 units made. We are currently in discussion with Kirby Garden Centre about selling our product and are working to develop an online ordering system via our website and our Social Media pages. In addition to this we are working on a side project of selling our product internationally

Contents

- 01 Executive Summary**
- 02 Our Company**
- 03 Our Product**
- 04 Operations**
- 05 Specification / Development**
- 06 Marketing**
- 07 Competitors /Sales**
- 08 Finance**
- 09 The process**
- 10 Summary**

Our Company.



We chose IMPACT as our team name as it is a simple yet effective way of describing us as a company. We want to make a big change in attitudes, awareness and contributions towards preventing the loss of bees and the environment they live in.

Impact

noun
/'impact'/

The noun impact
can refer to (model
or a hero), or a
strong effect`



Our Team

Initially, when entering the Junior Achievement program, our intention was not to form a team with our friends; rather, we aimed to experience collaboration with individuals from varying backgrounds. Nevertheless, our group ended up being a mix of individuals from various friend groups.

Our group's strength lies in the diverse skills each member has, and when combined, these skills had a significant *impact* on the overall performance of our team.

Jack



Operations and Customer Service Manager- Jack played a vital role for our team as he led and developed our prototype due to his strong point being in Design and Technology. Constantly pushing for innovation within the company.

Co-Operations Manager

With the running of our operations being such a crucial part to our production, Matthew greatly supported Jack with constructing our product. This again, due to knowledge and interest in Design and Technology.

Farrah



Managing Director and Secretary - Farrah led and organised the group due to her strong leadership skills as well as using clear communication, this was a crucial aspect of our team working together and being successful in many aspects.

Matthew Grace

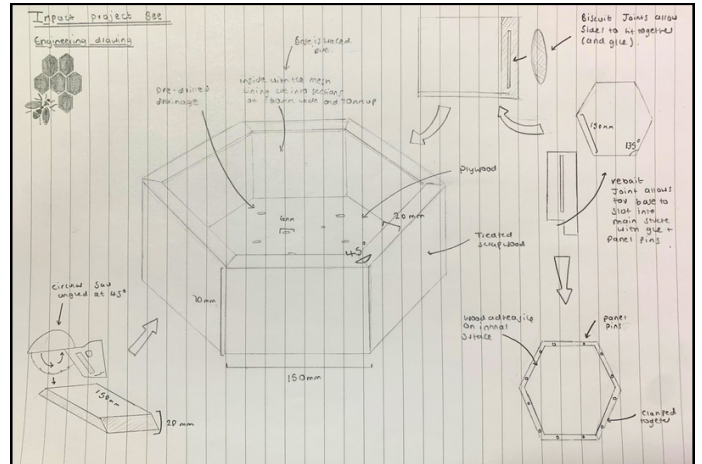


Aine



Finance and Sales Manager - Aine brought valuable expertise in Mathematics to our team. She gave us useful advice when deciding on pricing strategies. This is evident in our accurate and in depth finance summary.

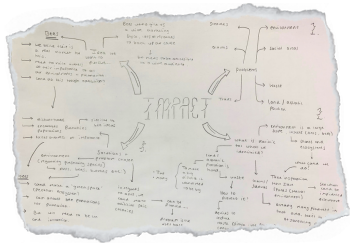
IT and Visuals - Being an Art and Media student, Grace used her knowledge to contribute ideas to how we should go about design and Marketing, this is an important role for any successful company.



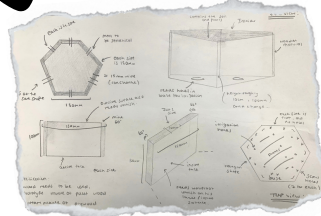
Operations



This process encouraged the whole team to be active in areas out of their comfort zones in building and packaging, also enabling ideas, and problem solving and adapting the design.



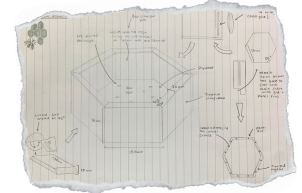
This was the first **brainstorm** to create the basis foundations for the design using a problem and our team ideas.



The first **sketches** allowed for a visual representation of a possible solution that can be modified to suit the need.



We then moved onto finalising the **materials** sizes and details for the product mini models.



Then a real engineering drawing allowed for a **plan** to follow in terms of making the first prototype.



The components came back in bulk allowing our team to **assemble** them using glue and panel pins, while layering the internal mesh.



Then we **critiqued** the design and gave the joiner a final design to produce.



The first **prototype** that was put together used a jig and circular saw plus a drill for dowels. Using scraps.



The **final** planters are added in the bags with soil and seeds, plus logo placement.

The final design that we have

The design is a hexagonal, recycled wooden planter that comes with blank sides for customisation, plus, soils for the included seeds (for different bee species) while all being contained in a paper bag with included instructions on it's function and other information. To finish it all off we package it in a biodegradable paper bag, continuing our goal to promote eco friendliness.

Challenges and perseverance

The process has had many ups and downs, including the idea of Jack and Matthew both producing the product but due to it taking 5 hours for 3 prototypes this was not a viable option.

- First failures were on the first experimental prototypes where the dowel joints and base failed to fit securely questioning the overall strength. We had to recut sizes for better fitment, this was a waste of material, but valuable evidence and learning.
- Another issue we had was a way to easily build them ourselves without too much experience, we tested a range of joints but many didn't meet the standard of usability.



The Product Specification / Future Development



Specification + Key features

- The product is made of recycled wood, that is treated for protection and longevity.
- The product has a rebait joint for the base allowing for easy instillation, adhesive and fixing in place.
- The product contains the black mesh lining for added protection.
- There are biscuit joints to hold the sides together, further strengthening the product.
- There are drilled holes to allow for water drainage, so water can't collect.
- However all this with soil, seeds bags and instructions, for less than £30 which is much cheaper than the competition to increase user base. (Inexpensive product to feel you are making a difference).



Our product is a quality product as it is made using traditional joinery methods. This is because we used biscuit joints that have been made by a top carpenter called William McCluskey who used all his experience to create a strong quality and robust planter. Also to ensure our product stands up to the harsh outdoor conditions of every season we have used specialist wood glue to hold it together. This is continued in our operations section.

The Future Product Development

We could also add in paint pens for the customisable aspect instead of having to buy them themselves, encourage creativity and a fun activity, encourages parents to buy them for their kids.

We could make different sizes that allow for a more single purchase solution if they wanted a larger area to fill. Saves money.

Another idea is that you can buy these as a kit, to encourage STEM subjects and further creativity. Adds to our ideas of interschool competitions.

The planter could even be tried on some different materials, maybe use recycled or biodegradable materials.



What we need to continue

The next steps in terms of the product

We have negotiated with Kirby Garden Centre about selling our products to which they agreed. Conversations over prices are still ongoing, but a local brand selling local products is good for them as it also fits in with the theme of the centre, however what makes it stand out is there isn't a like version anywhere.



Sustainability



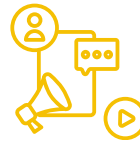
Innovation



Inclusion



Marketing



Social Media

The use of social media was a vital part in spreading awareness about our product. We regularly posted on Instagram to share our journey and challenges, and to educate what our product solves. We also used Facebook due to it being mainly an adult platform, therefore we were able to reach parents and a wider audience. With these platforms combined, we were able to reach our target audience.



@impactionm

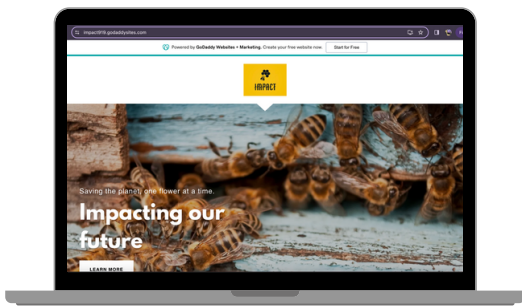


Impact lom

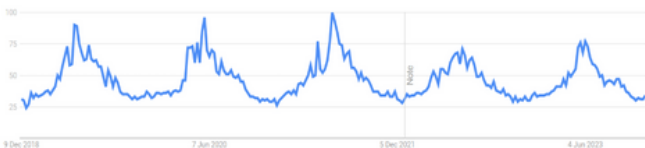
Website

We created a website to provide greater detail on why we chose to focus on bees, and create a product focusing on supporting their way of life. The website relays the significant impact bees have on our planet.

<https://impact919.godaddysites.com>



Interest over time



The graph on the top shows the general trend of google searches towards bees. The big peaks are in the summer and the one on the right are about different gardening interests. These show target season times for optimum sales.

Events

A key event we used for spreading brand awareness was the St Ninians Sixth form open evening. This enabled pre orders to be taken from teachers, parents and students as we had a stall with our product, plus our brands vision.

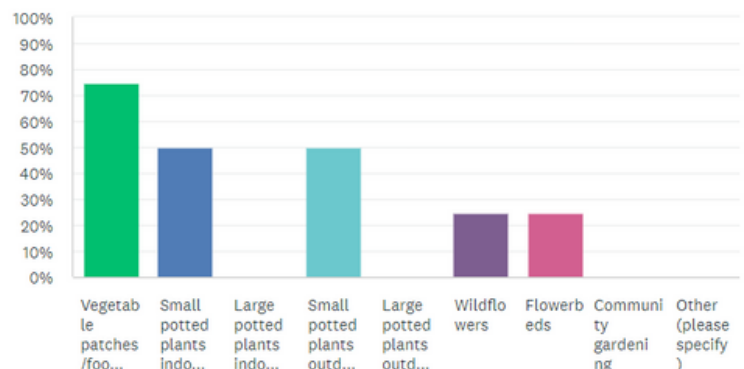
Branding

As a company we wanted to ensure that we had unified branding across all our platforms and products. Our branding is bold, strong and vivid. A key aspect of our brand is a sharp shade of yellow which we made sure to constantly use throughout the business for association of yellow to Impact.

Market Research

Conducting market research was critical for the design and planning of our product. It was important to understand how people garden and what they use, in order to develop a clear understanding of how to make our product effective and useful. We distributed a survey asking about people's gardening habits and preferences. This was sent to individuals we know, and also to strangers on a range of online forums, giving us helpful information from a variety of individuals.

What type of gardening do you engage in ?



Competitors



Features	Bee Box	Premierwood denplanters. co.uk	Grow Honey Bee Habitat	Ags Carpentry Etsy
Hexagon Shape / modern styling	✓	✓	✗	✓
Recycled Wood	✓	✗	✗	✓
Soils	✓	✗	✓	✗
Seeds	✓	✗	✓	✗
Price	£22.99	£45	£20.65	£19.99

Competition is the basis for innovation, constantly striving for a more refined business. Taking the “Best Bits” for each competitor and morphing them into an “all round” product.

Research into the competition is essential to also get an idea of what the overall market trends and what market needs are, in terms of peak times of sale and overall market interest.

The table displays what some of the competitors we researched offered online. We wanted to show the comparison in price and individual features

Sales



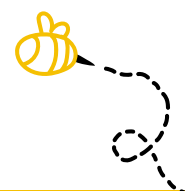
When developing our sales strategy, we knew we wanted to spread the message of the issues our product focuses on, saving bees and educating people on the importance of doing so as according to our research, a vast majority of people worldwide are unaware of the impact bees have on our planet.

Target Market

Our target market is quite wide as we didn't want to limit ourselves by focusing on one particular group. However, our main focus is directed towards young children as we feel it is important they are educated on this subject as they are the future. Our product offers a fun and creative way for children to expand their knowledge on bees, while keeping them engaged and alert. Overall, our product is for anyone who is looking to brighten up their garden and play their part in saving the environment.

Where to buy

Our product is available to be bought via contacting us on our company email, or potentially at Kirby Garden Centre who we are currently in contact with. Once we have confirmed and organised the sale of our product with Kirby Garden Centre, our product would be on display, along with similar products, available to customers to purchase.





Finances

Pricing Structure

We decided to sell our product for £22.99. We believe this is a suitable price as we are offering a premium product with soil and seeds included which can get fairly expensive when bought individually. We also saw through competitor analysis that many similar products cost a similar amount or much more. The total cost of making the box is £11.11.

Component	Cost per box
Wooden box	£3.43
Label	50p
Soil	72p
Packaging	£1.71
Seed	40p
Lining	35p
Labour charges	£4
Total	£11.11

Labour Costs

As a team we are able to put together 15 boxes in 1 hour. Therefore as we would expect to pay an employee £12 per hour we had to add £4 to the price to make a box. This timeframe is reduced by the fact that the wood has been pre cut for us. We also made sure that we had included labour costs in our payment to the joiner however this was not necessary as the wood was cut during his working hours which he is already being paid for.

Income

We received £80 of Share Capital and a further £100 from our success at 'Pitch It'. We have also sold £252.89 worth of our product, 'Bee Box'

Profit and Loss

Impact		
PROFIT AND LOSS ACCOUNT		
For the period from 5/12/23 to 14/02/24		
Income	£	£
Sales		252.89
Fundraising Income		0.00
Other Income		100.00
Total Income		352.89
Purchases	150.11	
Production wages (to make the stock)	44.00	
Total production costs	194.11	
Cost of leftover stock at purchase price		
Total cost of sales		194.11
Gross profit		158.78

Gross profit margin of 62.8%

In the process...



Worldwide challenge:

As a team, we wanted to push even further and take risks, one piece of advice that stuck out to us was “Think global and not just local! – It is important to try and sell your product locally but don’t just think local.” from Callum Staley, a previous JA winner.

We undertook extensive research to educate ourselves on countries struggling tackling the issue of declining bees and have masses of research to show on the competition day.



We are currently working on getting our product to Dubai, United Arab Emirates.

We have recently had a **successful** shipping to New Delhi, India and are waiting for our product to arrive in Bengalru - our chosen area of focus in India due to the alarming rates of habitat loss. We call this mini challenge ‘IMPACT in INDIA’, saving the Bees of Bengalru’.

“Our main focus is to educate the young generations about the importance of bees and their survival and how we can sustain them”

“If they disappear from Earth, life will follow and disappear after four years. That means it is a big impact on our life, our sustainability, our culture, our health, our food system, our security.”

Sheikh Salem bin Sultan

we strongly believe we share the same values, interests and aims when it comes to Bees, so were making our Impact.

“they are critical to the ecosystem, and they’re protected by the Indian Wildlife Protection Act of 1972, mindlessly killing the bees with toxic chemicals is not an option.”

Primary Schools:



One of aims from the very start of this project has been to have some influence on primary schools across the island. We want to balance this with a fun, yet educational and engaging activities from younger generations. Currently, we are communicating and organising a way to do this with Cronk Y Berry Primary school, and potentially Onchan Primary School. This will not only achieve our target market of younger generations but also covers a huge goal of ours being to educate.

Summary.



Future plans

Our future plans as a business are to continue on our path of producing our product and perhaps developing the idea further into different shapes and possible shelving designs (from market interest) or developing hooks so they can be a part of an apartment block, using inspiration from hanging baskets.

Another future plan and investment is to possibly spread the company into other regions of wildlife, referring back to the initial brainstorm with insects such as butterflies. Another possibility is to continue to expand to other countries, not just going for the island change but more of a global change.

What we have learnt

Throughout this programme, we have all developed skills that will help us in the future. These include:

- Teamwork - the ability to work with others productively.
- How behind the scenes of a business' work. Learning skills in STEM subjects, building and designing.
- Time management - completing tasks on time. Gaining valuable experience on balancing tasks.
- Communication - This is the biggest takeaway from our group, with our effective communication in meetings and on late calls when completing tasks, we all talk to each other in a respectful manner enabling cohesive teamwork.

Acknowledgements

- We believe that our mentor James has been a fun, and insightful mentor while constantly helping and providing guidance on our next step.
- Kirby Garden Centre, taking on our ideas and business model and product in negotiation for possible sales.
- William McCluskey, is the joiner who we met with regularly to enable us to develop our product further using his knowledge and skills. He crafted the components for us by using the base prototype, to allow for the team to construct them easily and not being time consuming.

Our Journey

Kick start day: **4th October 2023**

Came up with our product: **4th October 2023**

First team meeting: **12th October 2023**

Prototype created: **25th November 2023**

Pitch it: **9th January 2024**

First meeting with joiner: **23rd January 2024**

Receiving products from joiner: **3rd February 2024**

Sixth from open evening: **8th February 2024**

First batch of planters enter the production stage: **10th February 2024**



Douglas, Isle of Man



Impact Iom



@impactionm



impact919.godaddysites.com



impactionmcustomerservice@gmail.com

Life without bees
is a global
disaster, so why
not start by
making an impact?

