Front Cover

EcoBean

Year of Operation: 2025-26

School: Singapore American School

Mentor, Teacher: Marc Michelmann, Darlene Poluan

Officers: Aanya Ghosh, Hongjun Kim, Jiayi Chen, Mia Bohra, Rishabh Modi

Report

Executive Summary

Teachers and parents around the world have told their kids that they have the power to make change today. Yet, words remain words until they lead to action. Students need to see real initiative taken by others their age, in their communities before they can truly understand the power they have to make change. EcoBean is a company that not only creates sustainable plant growing kits, but it also spreads the message that everyone can take small steps to make big differences. These differences are pertinent to protecting our planet because studies have shown that once global temperatures reach 1.5°C, there will be lasting impacts; despite this, our planet has warmed by almost 1.2°C already.

EcoBean recycles cans, coffee grounds, and newspapers that would normally find their way to trash dumps or the ocean. In more detail, EcoBean is a plant-growing kit made from recycled materials and paired with a natural fertilizer created from spent coffee grounds. The kit includes everything needed to grow a plant, making it especially suitable for beginners and children with little to no prior gardening experience. EcoBean's target market includes environmentally conscious families, schools, and individuals who want an easy, hands-on way to learn about planting and sustainability. What makes EcoBean unique is how it repurposes everyday waste, such as coffee grounds, into a useful growing kit while teaching users about sustainable living, healthy habits, and plant care in an engaging and accessible way.

In our first cycle of operation, we generated $539.73 in revenue by selling 27 EcoBean kits, successfully selling out all available inventory. By prioritizing recycled inputs, donated materials, and in-house production, we kept our total cost of goods sold to $152.82, resulting in a net profit of $295.91. This validated that our pricing and production model was both viable and efficient at a small scale. In alignment with our mission, we donated 30% of profits ($88.77) to our partner service club, SEED. This resulted in return earnings of $207.14.

While EcoBean has seen strong financial success in the first few months of operation, there have been a few challenges along the way. When our company first started operation, we faced the issue of getting a full prototype and proof of concept. Our team was very focused on finding ways to sell the product and marketing that time slowly slipped away and we still didn't have a full product. Because we were trying to sell a homemade fertilizer, we had to try different combinations and wait for the plants to grow which took at least 5 days before we could confirm that the fertilizer worked. Since we waited so long to start experimenting, the date of our main selling event quickly approached without a critical component of the product. Apart from this, the design team was only able to have a complete design of the can holder (see appendix 1) a week before the event which made the production of 30 units before the selling date a major issue. Fortunately, we were able to resolve these obstacles and prepare 27 goods that were all sold on the day of Friday Night Lights (FNL).

In order to show proof of growth, the team prepared two pots with the same seeds, soil, and position while one had access to just water and the other had access to the fertilizer on the fourth day of growing. Research suggested that when growing microgreens they should only be given fertilizer on the fourth day after germination. It was found that the plant that was given the fertilizer on the fourth day

showed exponential growth the day after as compared to the plant that was only given water (see appendix 2).

To overcome the challenge of large scale production, the officers used their free periods in the week leading up to FNL to work on laser cutting and assembling the boxes at the school's robotics lab. We were also able to partner with a service club called SEED and this collaboration allowed us to gain the help of their members the day before FNL when putting all the product components together (see appendix 3).

In conclusion, EcoBean has had a very strong start and we have started to spread our message with many students in our school. FNL allowed us to not only begin sharing our product, but also allowed us to make many new connections with elementary school teachers, girl scouts, and the middle school science department. We hope to continue providing our products for kids beyond SAS and keep spreading the message that everyone can make a difference.

Company Overview

Company Summary

Ecobean isn't just a company that makes sustainable plant growing kits, it also sends a message to students who get the product that they can make a change to save our planet one can, coffee, or newspaper at a time. As the future advocates of a major issue, students need to not only learn about the impacts of global warming, but also learn about ways that they can make changes now. The expectation cannot be that only when they grow up then they can make change, by then it might be too late. Our kits repurpose old newspapers, metal cans, and used coffee grounds; all of these are everyday items that many people see but don't realise they can recycle. Our vision is to one day spread these kits all through Singapore and even host workshops that we can use to teach kids about the issues we advocate for through hands-on experiences.

Mission, Vision, Values

The mission of EcoBean is to spread awareness about the issue of global warming as well as give students a real example of their peers taking initiative and making a difference for our planet. EcoBean also aims to make a difference in every community we operate in by taking the initiative to collect different types of trash that would normally be thrown in the trash or recycling bins and actually give it a new life for others to see. We believe that everyone can make a difference for our planet and the only thing people need is an example to follow. These skills and lessons that we aim to spread to students today will not only encourage them to take action now, but will also empower them to advocate for change for the rest of their lives.

Our vision is to expand our current business and sell our plant growing kits all across Singapore. As one of the fastest growing countries in the world, Singapore burns a huge amount of fossil fuels and

natural gases for energy, this has major implications for our environment and therefore makes reaching the younger generation extremely important because they are major characters in this issue. We aim to not only reach international students, but also connect with as many local students as possible. Besides this, we aim to start hosting in person workshops and giving talks to students using hands-on activities in order to further spread our message.

We tribute EcoBean's success to the core values that our members embody at every meeting. Throughout the year, our officers and members have emphasised the importance of creative thinking and finding new ways to solve problems. As we designed our product, we constantly needed to pivot our approach and fix our designs: one example of this was when our team was building the laser cut plant growing box. The team in charge had to take measurements and figure out ways to fit the can, create an appealing design, explore the best materials to use, and build a kid-friendly design. Incorporating all of these factors into the box design required constant adjustment and problem solving because sometimes adding new elements resulted in new problems and issues with the old elements.

In addition to problem solving, our team also stresses the importance of collaboration and communication. Building our plant growing kits required considering numerous perspectives such as what would students enjoy using, how could we get parents to purchase the product for their kids, and how do we make it as environmentally friendly as possible. These skills proved to be invaluable because every member was able to bring a new perspective to the conversation and find new ways to solve problems. This has allowed us to build EcoBean as seen today and as we move into new phases, we will continue working with these values as the core of our company.

Presidents Letter

Dear Shareholders,

Thank you for your vital investment in our Junior Achievement company, EcoBean. Starting this company and building it to what you see now would not be possible without your initial trust and funding.

After finalizing what EcoBean would be and how our company would be structured, our team started working on prototyping and building an MVP. After tirelessly working on building an MVP, the team was finally able to start full scale production where we also started using the capital raised from the first round of funding.

I am pleased to say that all the work put in by the team not only led to a product that was well received by our customers, but also led to a large amount of sales and profits. During our first selling event, the team prepared 27 units of EcoBean and within 3 hours we were able to completely clear out stock. So far we have made $539.73 in revenue with $295.91 worth of profit. We will be donating 30% ($88.77) of our profits to the service club SEED, a service club at Singapore American School that has been an invaluable partner during our journey. The rest of the profits will be split between shareholders with your initial investment achieving a 55.20% ROI upon company liquidation.

During the development of our product, the team faced multiple challenges that were overcome with hard work, problem solving, and communication. The most notable challenge was starting mass production before our first selling event, FNL. As the design team worked on developing the final model of our plant growing can holder, we realised that we only had a week to produce 30 units of the box in order to sell. Since the robotics lab that we used to build these boxes was a shared space used by students across the school, finding a way to send jobs proved to be a huge issue. Fortunately, the officer team took time to learn how to use the laser cutting machines and spent the next week completely devoted their time to laser cutting these boxes and putting them together during their free periods. This was a major commitment but proved fruitful when our team was able to have 27 boxes ready by FNL.

Another issue that presented itself before FNL was gathering the manpower needed to assemble all the components to make the final product. This issue was resolved through our partnership with SEED. The club was scheduled to have a meeting day before FNL and because we had all of the product components ready, we were able to find time in their schedule for their members to help us assemble the boxes. This was a major success and allowed us to prepare all the boxes possible; this was also our first official meeting in collaboration that greatly boosted morale and helped encourage members before FNL.

In closing, I would like to extend my sincere gratitude to everyone who has contributed to the growth and success of EcoBean. To the members of the EcoBean team, thank you for your dedication, time, and unwavering commitment to the company. I would also like to thank SEED for providing the soil that enabled us to reduce costs and scale efficiently, as well as for the exceptional support offered on short notice for FNL. To our Vice Presidents Aanya, Hongjun, Jiayi, and Mia, your hard work and leadership have been crucial in shaping EcoBean into what it is today. Finally, to our mentor, Marc Michelmann, and our teacher, Darlene Poluan, thank you for your guidance, encouragement, and continued support in pushing us to achieve our best.

Rishabh Modi
CEO of EcoBean

The Product

Problem the Product Solves

Every day, approximately 2.25 billion cups of coffee are consumed, 61 million aluminum cans are discarded, and 24 million newspapers are delivered in the United States. Where do all these materials go? The difference that students around the world can make begins with the simple cup of coffee that their parents hold in the morning, the paper they read while sipping coffee, or even the millions of coke cans that people around the world use. EcoBeans is a student-led initiative that seeks not only to address these issues, but also to raise awareness that everyone has the capacity to make a difference.

Product Description

EcoBean is a sustainable microgreens growing kit that consists of handmade laser-cut boxes, recycled newspaper, coffee ground filter, and an aluminum can. The laser cut boxes are reusable, sturdy,

and adds an element of creativity that has worked in marketing our product to students. The aluminum cans are cut and taped up before being filled with soil that is provided for free through our partnership with a service club in our school called SEED. Once covering the can with newspaper and assuring the quality of components, we transfer our homemade coffee ground fertilizer into a spray bottle and package the product with seeds.

We chose microgreens because they are packed with nutrients, grow quickly, and are easy to care for, making them a good choice for beginners, students, and anyone interested in healthy eating.

Pricing Strategy

When searching for beginner friendly plant growing kits online, we realised that many products have prices that are too high and inaccessible for consumers. Due to our ability to recycle materials and forge strategic partnerships with SEED, we were able to keep low production costs and offer competitive prices with strong margins. Each EcoBean kit costs $19.99 and not only came with the basics needed for growing a plant, but also had fertilizer that could be used for many plants beyond the first. Pricing it at $19.99 instead of $20 was also a marketing strategy that would further boost sales.

Competitive Analysis

Compared to store-bought microgreens, EcoBean offers a greater advantage by lowering plastic packaging and providing a reusable planter. Our position in the market as a student-led sustainability focused company has not only allowed for a high volume of interest in school, but will also allow us to expand quicker in the future. Its unique selling point advantage lies in combining sustainability, affordability, and education, particularly through addressing food waste such as discarded coffee grounds.

Departments Overview

Operations/Production

The Operations and Production department is responsible for designing, developing, and assembling EcoBean kits. This includes selecting sustainable materials, creating prototypes, testing plant viability, and finalizing product specifications. The department efficiently manages in-house production using school resources such as the robotics lab for laser cutting and assembly. By the week leading up to FNL, the department successfully produced 27 complete kits using school fabrication resources.

The production department was where most of the members' time and effort was spent. While creativity was strong, the department initially struggled with execution, as bringing ideas to life proved difficult due to technical constraints, limited time, and limited experience. We addressed this challenge by setting strict deadlines to promote urgent action and implementing enhanced team communication, allowing us to rapidly accelerate production and assemble working products efficiently.

In the early stages of development, the team explored several product concepts, including mushroom-growing kits, strawberries and tomatoes, and a fully 3D-printed can holder (See appendix 5). While these ideas aligned with EcoBean's sustainability goals, they proved to be either too complex,

time-intensive, or impractical. As a result, our team narrowed the concept to a microgreens growing kit which offered faster growth cycles, ease of care, and stronger educational value rooted in sustainability. Early prototypes aimed for a highly aesthetic design, but production testing revealed that achieving this consistently would be difficult under existing constraints. Therefore the team collectively adopted a minimalist wooden design, allowing the kit to serve as a blank canvas to foster children's creativity through a DIY component; students who bought the product at FNL were given pens and other materials to decorate their box however they saw fit.

Challenges still emerged during prototyping. We struggled with plant growth because when we integrated the coffee grounds in soil directly, no matter what precautions were taken (including baking the coffee grounds and keeping the plant in a dry environment), it would always end up growing mold. This challenge, due to the time required for plants to grow and demonstrate measurable results, set back the creation of the final prototype and MVP by several weeks. After further exchanges of communication and ideation, we decided to pivot towards making a coffee ground fertilizer which yielded no mold to the plant and was proven effective in subsequent tests in enhancing the plant's growth.

Designing the "rest" of the product after having proof of a concept proved difficult due to the complexity of finding the right materials and exact design dimensions. We went through multiple iterations of 3d printing and laser cutting before finally deciding on laser cutting wood and then manually assembling the boxed kits ourselves. We utilized resources in school such as the robotics lab, art classrooms, and the insights of our teachers to give us feedback and support; we wanted the kit to balance interactiveness with simplicity so there was no room for user error/complaints—when putting the whole kit together, we prevented soil leakages in the can by using newspaper; we taped the edges of the cans that were cut to ensure child safety, and gave plentiful amounts of fertilizer and seeds.

Due to the unforeseen delays in previous ideations, we ended up ordering all materials that we needed and manually putting together the kits, fertilizer, cans, etc ourselves to ensure quality and so that we could deliver what we had promised at maximum speed. For FNL, we were able to prepare 27 kits within 1 week of tedious production. Although there was a lot of focus on ideas and less on execution initially, by the deadlines that we had, we were able to produce a satisfying, tangible and proper kit that was ready to be used.

Sales/Marketing

The sales/marketing department specializes in how to best advertise the EcoBean product to the general public. This included creating advertisements, a social media page, an online platform and constantly revising these strategies to best appeal to the target audience. After discussions amongst the group after market research, the consensus was that the target audience was those under the following demographics: young children and people interested in learning more about sustainability (including, but not limited to parents, teachers).

The idea centered around EcoBean's product was to teach children that caring for the earth through recycling didn't just have to be through passive, conventional, repetitive actions like throwing recyclables into the blue bins and buying metal straws but that it could be interactive, fun and beautiful!

For kids, seeing daily items like Coke cans, newspapers, and seeds which usually aren't associated with eco-friendly ideas, the packaging and presentation was able to create a new association for them. The best way that we discovered to spread word of EcoBean's product and idea was through word-of-mouth marketing and cold emails.

The marketing department maintained a website and instagram account, but primarily focused on building brand awareness through direct outreach at school events, classroom presentations, and collaborations with organizations such as the Girl Scouts. During FNL, the marketing department played a pivotal role in coordinating with the School Activities Office to secure a spot for showcasing EcoBean. School clubs are typically not permitted to host activities during FNL, and EcoBean, part of SAS's Entrepreneurship Club, was the first.

At FNL, the Marketing team also gathered valuable market research by engaging in meaningful conversations with elementary school students, who were excited about growing plants in a "cool container," and with middle school science teachers interested in incorporating EcoBean into their classrooms. The department further connected with the Girl Scouts at SAS and the Shiok (local school cafe) administration to explore future collaborations. These in-person interactions proved far more effective than online outreach, with digital platforms serving as supporting resources for further engagement.

Notably, word-of-mouth and direct sales at FNL minimized the need for extensive online advertising. Moving forward, the Marketing department plans to continue engaging directly with the target audience through classroom presentations, school store sales, and product line expansion, including refills and new offerings. Overall, the Marketing department has been essential in generating sales, increasing brand awareness, and bringing the EcoBean company to life.

Human Resources and Public Relations

The human resources department worked on keeping harmony within the group and ensuring that everyone was content with the way things were being handled. By creating bylaws, following up with attendance, and facilitating lots of VP/CEO discussions, this department ensured that everyone was being held by the same standards. This department handled communication between officers and the rest of the members by making sure everyone's voices were heard and that ideas were clearly communicated so everyone understood. Weekly meeting reports would be sent to all members which included information on what happened during that day, tasks for individuals and goals for the future. They also handled discourse between members/officers when consensus wasn't reached or there was tension. We also played a pivotal role in trying to move things forward by creating small deadlines, following up in between meetings to ensure continuity and ensuring everyone was on the same path to continue our progress; this was especially important during the ideation phase before the minimum viable product was created.

The public relations department worked on creating and maintaining a strong brand reputation through online media and external communication. The public relations department worked closely with the marketing department when designing the logo and website and with the production department when creating variations of designs to ensure proper presentation that looked appealing to younger audiences

while still being semi-formal. This department also handled most communication with external groups such as the SAS Administration, the girl scouts group, reaching out to sponsors, and following up with everyone who made a sale at FNL to ensure proper communication.

Finance

The finance department worked on logistically managing costs and ensuring that profits would be made sufficiently after sales and reinvested at a high rate of return. This was done through calculating financial values for stocks, materials, employee salaries, etc., while maintaining proper financial records in digital spreadsheets. The financial department worked with the production department to ascertain the most cost effective materials when ordering from external suppliers and when using school supplies. They also worked hand in hand with the marketing department to optimize the most profitable selling price and the advertising strategy to sell the company stock and gather investors. This critically contributed to a high quantity of sales due to a wider audience and the assurance that profits were made. Some challenges were keeping a comprehensive list of all costs which were troubled by the overwhelming quantity of purchased materials, along with new employees joining late—but all challenges presented were able to be overcome with teamwork, collaboration, and careful planning. The financial department also created a preordering system on the website and in our in person sales during FNL to continue a steady streamline of sales, generating free cash flow to finance future operations and potentially reinvest earnings to increase return on investments and benefit shareholders.

Financial Summary

Income Statement

Revenue	Quantity Sold	Amount	Notes
Gross sales	27	$539.73	All units sold during Friday Night Lights (FNL), a schoolwide event
Total Revenue		**$539.73**	
Cost of Goods Sold	**Total cost (27)**	**Cost per unit**	**Notes**
Laser Cut Box	$28.62	$1.06	
Cardboard Box (Packaging)	$24.30	$0.90	
3D Printed Tray	$12.15	$0.45	
Cost of Seeds	$60.21	$2.23	
Spray Bottles	$18.9	$0.70	
Zip Lock Bags	$0.81	$0.03	
Stickers	$7.83	$0.29	
Aluminum Cans, Soil, and Coffee Grounds	$0	$0	Recycled Material

Total Cost	**$152.82**	**$5.66**	
Operating Expenses		Amount	
Wages		$30.50	A total of 18 active members
Employee of the Day		$35.50	We award high performing employees with 'Employee of the Day' to encourage focus, engagement, and efficiency
Marketing		$5.00	
Startup Expenses		$20	This is total prototyping costs
Total operating costs		**$91.00**	
Net Costs		Amount	
Operating + Goods		**$243.82**	
Profit			
Net Profit		**$295.91**	

Balance Sheet

Assets	Amount	**Liabilities**	Amount	**Equity**	Amount
Cash (Seed money + Sales revenue)	$914.73	Cost of Goods Purchased (Unpaid)	$353.79	Common Stock (75 shares @ $5)	$375.00
Inventory (32 units @ $5.66)	$181.12	Operating & Startup Expenses Payable	$91.00	Retained Earnings (after donation)	$207.137
		Charitable Donation Payable (30% of profit)	$88.77		
Total	$1095.85		$533.56		$562.29

Liquidation Report

Criteria	Actual	Notes
Wages / Incentives / Benefits Paid	$71.00	All employee-related obligations settled
Charitable Donation	$88.77	30% of net profit donated prior to liquidation
Cash Distributed to Shareholders	$207.14	Remaining profits split equally among 75 shares
Dividend per Share	$2.76	207.14 ÷ 75 shares
Return on Investment (ROI)	55.20%	($2.76 ÷ $5.00) × 100

Initial Share Price	$5.00	Share issue price
Final Realized Value per Share	$7.76	$5.00 + $2.76
Average Attendance	85.71%	Operational metric

SEED Partnership

Our strategic partnership with SEED allowed us to amplify production efficiency and cut costs to generate higher profits and enhance margins. Through hands-on work in the Eagle's Canopy garden, long term research projects, and collaborations with both local and international organizations, SEED (Sustainable Efforts for Eco-Development) aims to generate a common appreciation and understanding of uniquely beautiful ecosystems in the context of our quickly developing nation. We aim to donate 30% of our profits to SEED because of their help with obtaining soil, a major component of our product, and their support when we were producing units to sell at FNL; in fact, the day before FNL, they helped us replace the covers on all the cans from cardboard to newspaper and put everything in boxes.

Earnings & Cash Reinvestment

We believe that a successful business requires earnings and cash to be reinvested into core operations at a high rate of return. After our sale during FNL, we reinvested significant cash into materials and assembly, seeking to scale and compound our sales over time. The total reinvested amount reached $181.12 for 32 units. We are also in talks with Shiok, our school-cafe, for an extended brand collaboration to sell our products in their physical store and potentially offload some units in the coming week. We also plan to sell more units at Nexus during the competition. Apart from this, we are currently in contact with the elementary and middle school science departments to use sustainability-based education initiatives to drive further sales.

Future Potential

Our success in the last few months through sales as well as customer feedback has shown strong promise for future expansion. Our plans can be broken up into 3 phases.

In the short term (phase 1) we intend on increasing production capabilities and refining our product. In order to refine our product, we will purchase more stickers to go on our packaging, add more graphics to the can holder, and purchase higher quality spray bottles. While all of these changes will increase production time and cost, the benefits outweigh the drawbacks; these changes will not only make our product more appealing to consumers when they browse through shelves, but also will increase customer retention and word of mouth advertisement. Our current production systems heavily rely on our school's robotics lab machine and wood availability. To optimize production, we will try to establish a long term partnership with the robotics lab where we would purchase more wood ourselves and have set times that we can use the laser cutters; if this approach does not work, we can also look at approaching 3rd party manufacturers.

Phase 2 is about building our brand and investing more in marketing. Firstly, we will try to establish an ecommerce platform where customers even outside our school can purchase EcoBean products. Our current website has the capabilities of accepting orders, but we also need to establish a reliable delivery platform; the best way to lower cost and ensure quality delivery would be through a partnership with Singapore Post where we would approach them as a student-led startup that aligns with the "Singapore Green Plan 2030." Our target market is the parents of students so in order to increase sales we will look to spend more on social media marketing. This approach will not only allow us to reach parents, but will also allow us to reach students through reposts and the growing number of users. Social media marketing will also allow us to connect with content creators who are sympathetic with our mission and from there reach an even bigger audience.

Phase 3 is about expanding our product to more physical locations in Singapore and expanding our product line. In order to expand to more locations, we will first connect with the Singapore Science Center: as a major attraction and a place that is known to take many sustainability initiatives, the Science Center provides the best place for initial expansion. The Science Center has hundreds of visitors everyday with all of them being the perfect customers for our product and also has many programs in place to support students. We will only approach them after we have clear progress and proof of concept in phase 1 and 2 so that our partnership can be as fruitful as possible. Lastly, we will also try to host in person workshops and make new sustainable products so that we can stay relevant and reengage past customers to make a bigger difference.

In conclusion, this three phase expansion plan will allow us to build the brand of EcoBean, but also allow us to share our message with the wider community in Singapore.

Learning Journey

One of the biggest challenges we faced in EcoBean's development was establishing a clear proof of concept and solid prototype. At the beginning, our team was confident that our initial idea of integrating coffee grounds into the soil to create a nutrient-rich mixture would benefit plant growth as it seemed logical and supported by common assumptions about composting. However, through advice from our mentor and trial testing, we discovered that this approach led to mold growth and harmed plant health rather than improving it. This unexpected outcome forced us to reconsider our assumptions and rethink our product design in a more practical way.

This unexpected failure became a pivotal turning point for our team. Instead of abandoning the idea altogether, we explored alternative ways to reuse coffee grounds effectively. After researching and testing multiple methods, we came to our final solution of converting used coffee grounds into a coffee tea fertilizer. This approach successfully avoided the mold issue and allowed nutrients to be delivered to plants in a more controlled manner. After testing, this idea proved to consistently and measurably improve plant growth.

Validating the effectiveness of our different concepts proved to be an issue as well as it was highly time-consuming. Testing our initial idea of integrating coffee grounds into solid and our new solution of using a coffee tea fertilizer required several days, and in some cases weeks, of experimentation

to see measurable results. During this period, our team devoted substantial time to marketing and sales strategy, which also delayed experimentation and slowed progress toward a fully validated prototype. As a result, valuable time passed without a confirmed proof of concept while the date of our main selling event, Friday Night Lights (FNL), approached quickly.

We also faced several operational and product quality challenges along the way. EcoBean relied on many different suppliers for sourcing components such as packaging boxes and spray bottles. Coordinating the sourcing and delivery of these components along with producing our wooden can holders in house proved to be more difficult than we expected. In particular, managing lead times for the can holder became a major challenge, as the design was only finalized two weeks before FNL. This left us with very little time to produce enough units and added pressure on the entire team as the event approached.

Production constraints made this even more challenging. We depended on the school's laser cutter to produce the wooden can holders, meaning manufacturing could only take place during school operating hours. This significantly reduced our production capacity and made scaling for FNL much more difficult. Although we explored the option of outsourcing to manufacturers, team members ultimately had to work around class schedules to overcome the limited access times and keep production on track.

Despite these obstacles, our team stayed flexible and worked together to find solutions. In the week leading up to FNL, team members used their free periods to laser-cut and assemble boxes in the school's robotics lab. We also received valuable support from members of the SEED club, whose members helped assemble product components the day before FNL. Thanks to these combined efforts, we were able to prepare 27 complete EcoBean kits, all of which were sold successfully on the day of FNL.

Overall, EcoBean has had a strong start. FNL allowed us not only to validate our product and generate revenue, but also to spread our sustainability message throughout the school community. We formed new connections with elementary school teachers, Girl Scouts, and the middle school science department, opening opportunities for future outreach and collaboration. This journey taught us the importance of early testing, realistic timelines, effective teamwork, and balancing creativity with execution. Moving forward, we hope to continue expanding our reach beyond SAS and reinforce the idea that small actions, such as reusing coffee waste, can make a meaningful environmental impact.

Appendix

Appendices

Appendix 1 - Full Product

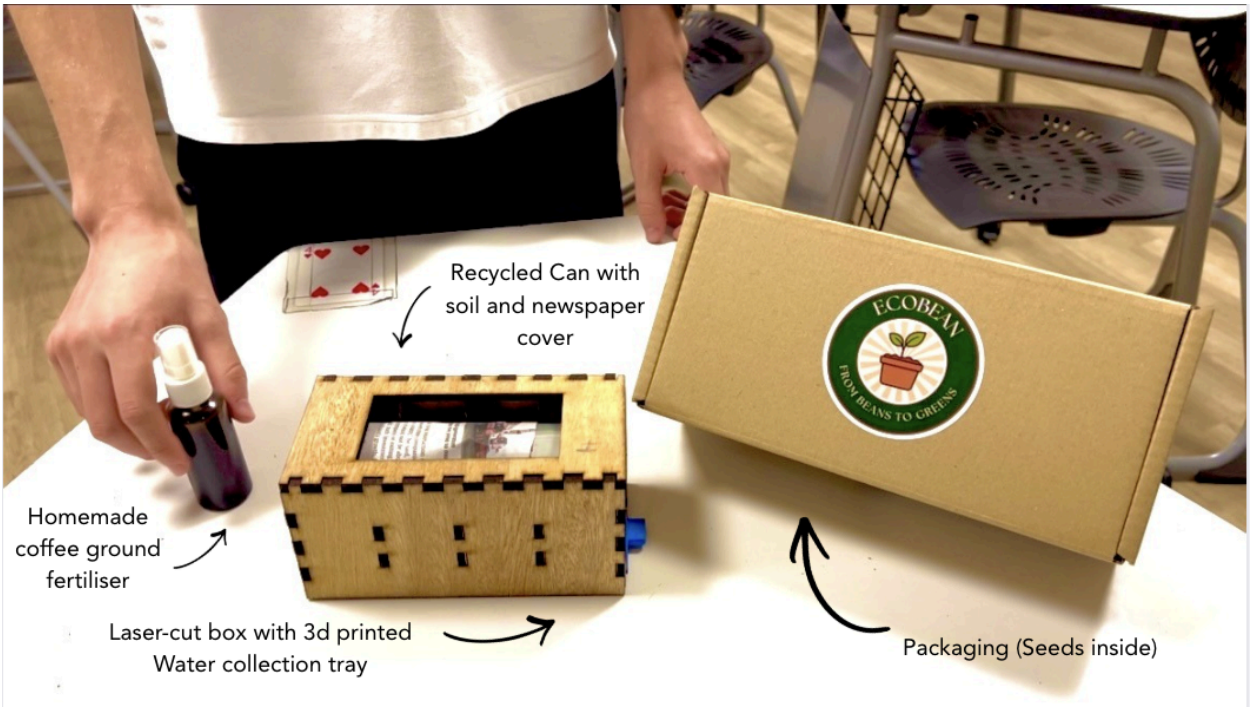
Appendix 2 - Fertiliser Proof of Growth

Appendix 3 - Friday Night Lights (Main Selling Event)

Appendix 4 - Collaboration With SEED

Appendix 5 - Prototypes

Appendix 1 - Full Product



Appendix 2 - Fertilizer Proof of Growth



Plant growth on Day 5 after being fertilized on Day 4.



Plant growth on Day 5 after receiving only water on Day 4.

Appendix 3 - Friday Night Lights (Main Selling Event)

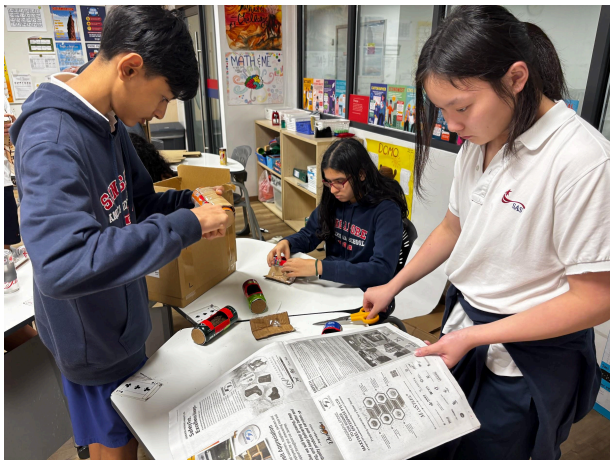






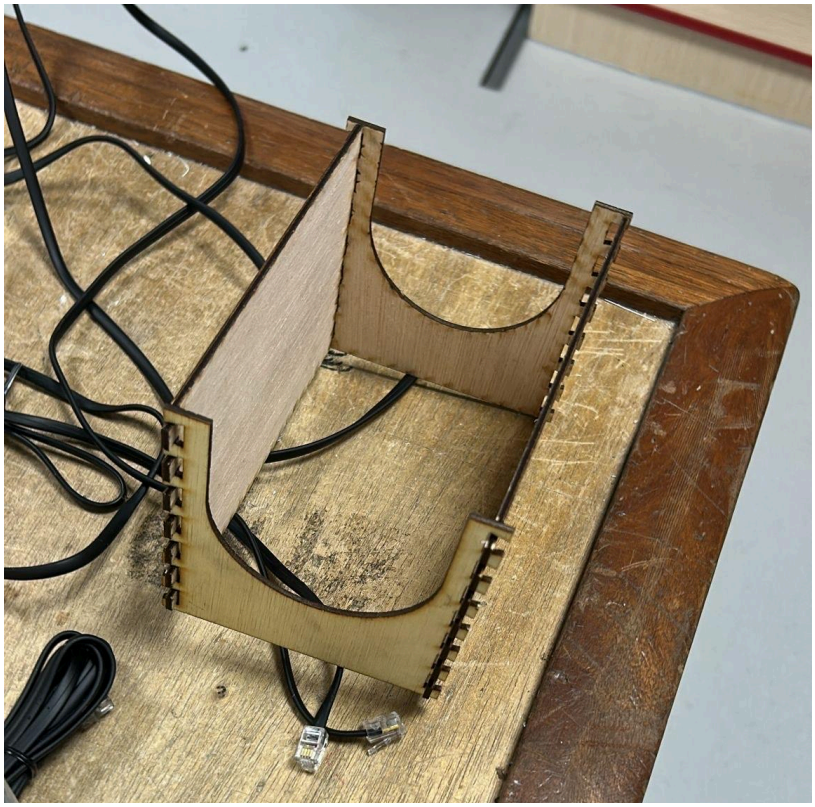
Appendix 4 - Collaboration With SEED







Appendix 5 - Prototypes





Liquidation