



Feasibility Study

December 2023

Cover Page

Module: New Enterprise Development (EF317)

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Group Name and Number: Grá Bia – Group Number – 34

Submission Date: 8th of December 1pm

Description: Are product helps people store and keep track of thier meats.

We hereby certify that this material which we now submit for assessment on the programme of study leading to the award of Bachelor of Business Studies/ European Business is entirely our own work and has not been taken from the work of others, save, and to the extent that, such work has been cited and acknowledged within the text of our work.

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Executive Summary

As we begin the mapping out a course for our smart container, we're driven by a vision not just meeting the industry standards but exceeding them. We're a forward-thinking team,

ensuring strategic decisions are made with the correct execution. The competitive advantage of our smart container is in the technology. By offering a product that has never been offered to customers before combined with cutting edge technology, simple interface, and a strict compliance with international food standards gives us a major advantage over our competitors. Our financial projections not only reflect a strong market penetration, but it also shows that there is room for sustained growth and ability to scale.

As we try to navigate our way through this dynamic landscape, our commitment is to provide quality products that can help improve food safety for our customers.

Company & Business Description

Mission/Vision Statement

"Empowering Healthy Living Through Innovative Solutions: At Grá Bia, our objective is to revolutionise food storage with smart Tupperware, committed to keeping raw meat safe and assuring the well-being of every home. Committed to the highest safety and convenience standards, we seek to improve our clients' everyday lives by offering cutting-edge technology that keeps freshness, avoids cross-contamination, and promotes a better, more sustainable living. At Grá Bia, we imagine a future in which every meal is not only tasty but also carefully prepared and kept, building a community of knowledgeable and health-conscious individuals. Let us all work together to find a better method to protect the quality of our food and the vitality of the people we serve".

Core Values

- Safety First- We prioritise the safety of our customers by implementing cutting-edge technologies to ensure the freshness and safety of stored raw meat.
- Innovation- We are committed to continuous innovation, exploring new technologies and design concepts to create smart Tupperware solutions that exceed customer expectations.
- Customer Trust- We contribute to the health and wellness of our customers by providing solutions that promote safe and hygienic food storage, particularly for raw meat.

Product Feasibility

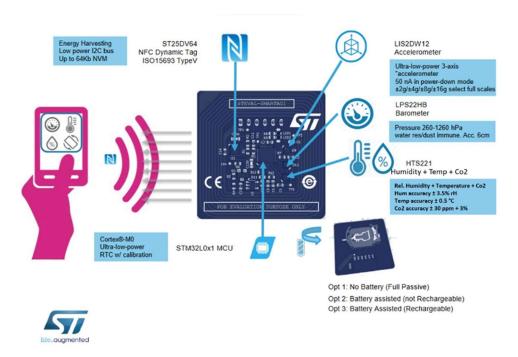
Product Feasibility:

Our smart storage container is a very innovative product made to help businesses and consumers safely store meat products by integrating advanced technology like temperature, humidity, and CO2 levels. This product aims to try and reduce food waste by providing real-time data and information through a mobile app using NFC technology.

This product feasibility report will explore the technical, market, and practical considerations involved in developing such a product, we conducted focus group discussions to help understand how we can improve our offering.

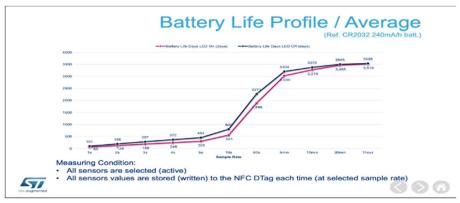
Technical Feasibility:

The temperature, moisture, and Co2 sensor will be highly precise and will be installed in the middle of the container lid, meaning that it can monitor all the elements in the container. The sensor will be industry-standard so consumers can be assured their food is being monitored by the best in the industry. The sensor will be equipped with an NFC dynamic tag that consumers will be able to scan using a mobile app to access the real-time data of their food.



A detailed view of the sensor our company would be using will be provided by a semiconductor company (STMicroelectrics, 2020).

Through our focus group discussions, we identified a degree of uncertainty regarding the readings of our sensors and whether they would be correct. However, it is important to note that from the above image, we can see that all three factors used in the sensor are extremely accurate resulting in a 99.9% accuracy level ensuring that any uncertainties will be effectively alleviated - (STMicroelectrics, 2020). Another challenge we discovered when conducting our focus groups, was that people prefer a product that has a battery life which doesn't need charging or replacing for a long period. Therefore, we decided that this sensor will be powered by a CR2032 240mAh battery that can last for nine years. This is due to the factor of its ultralow connectivity and its computing and sensing technology. Our product also embodies a passive radio frequency tag which helps contribute to the long battery life and ensures implementation. By doing this we hope that customers will now be more attracted to a product that they no longer need to think about maintaining.



(STMicroelectrics, 2020)

App Interface:

Life Augmented offers us a usable app interface for the mobile app. This app is automatically included in the sensor's pricing when our firm purchases it. The app will provide the user with up-to-date information on the state of the meat, along with details on how long it can be stored and the overall condition of the items, alerting them when it's time to stop eating the produce. The information that the sensors have collected will be used to make this recommendation. The sensors would be keeping an eve on the interior environment of the container all the time. If these thresholds are breached, the consumer will then receive a push notification to their phone, where they will be informed on what to do with their produce. The smart food storage container utilises sensors and modern technology to help consumers be more aware of how they consume and cook raw meat. The current food storage solutions lack specific features and cater to meat storage. We believe that with our product, we can help people reduce food waste while simultaneously allowing our customers to consume food at a safer level. Once more, it was clear from the focus group talks that users prefer a straightforward user interface and that they would want to get reminders when their items are about to expire. We performed the necessary modifications before our focus groups since we genuinely feel that our application provides these needed features and functions.



Process of how you would scan your phone to connect with the app - (STMicroelectrics, 2020) Additionally, the app will have the ability to establish several thresholds based on the various quantities that a user may own. For instance, the threshold for spoilage of one chicken breast will change somewhat from that of ten chicken breasts. This implies that the user may modify the thresholds to their requirements, and the application will adjust accordingly. This will guarantee that our product's primary goal is met because the user will still be able to tell when their food is about to expire. Since it appeals to both individual consumers handling small quantities of meat and a different consumer base dealing with larger quantities of meat, such as butchers and restaurants, we view the app's threshold-setting feature as a clever and crucial

innovation.

Maintenance:

A predominant concern raised in our focus group discussions pertained to the perceived difficulty of cleaning the product. Participants expressed apprehension about the potential risk of damaging the sensor technology during the washing process. Using this information, we decided that this product needs to be simple and easy to clean and maintain. We have designed the product so that the lid is easily removed from the container for easy cleaning and maintenance. This will help prevent bacterial buildup, ensuring our product remains safe for each use. We have also strategically placed and installed the sensor in the lid so that it can be easily removed for a thorough cleaning which ensures the container can be cleaned without damaging the sensitive electronics. Also, one of our main aims for our product is to receive an IPX4 rating on the sensors which would mean that it is resistant to splashes of water, this would ensure our product is safe and remains functional as a kitchen utensil. For the sensors to be efficient the container will need to be fitted with robust gaskets that would seal the container at critical points. This would ensure that our technology is operating at an efficient level and our results are conclusive within the application, ensuring that false information is not given to the consumer.

Design:

From our research and focus groups, we witnessed a desire for a simple design. Customers do not want a complicated design as this can contribute to difficulty figuring out how to use the product. Therefore, we decided to make a simple container design with two sizes, one size for the individual consumer and another larger container for businesses that would handle meat on a significantly larger scale.

The body of the container which holds the meat products would be made from food-grade plastic. The type of food-grade plastic we have decided to use is polypropylene. This is an excellent material to use as it ensures safety and durability. The main reason we have decided to use polypropylene is because it has an antimicrobial coating which inhibits bacterial growth (Somaye Allahvaisi, 2012). This is a very important factor for this type of plastic as our consumers will be using our product for raw meat therefore the prevention of bacterial growth is one of the most crucial factors our company must be aware of.



Safety & Liability:

Ensuring safety and adhering to international food safety standards are paramount in the development of our smart container. We're committed to reaching ISO - 2200 standards which are internationally recognised. By doing this, we can give our customers peace of mind knowing that the product they are using is of the highest standards in both quality and safety. Another major issue that came up in tutorials and focus group discussions was the legal concerns, particularly concerning incorrect readings. To mitigate these issues, we are going to proactively incorporate comprehensive disclaimers in our product's documentation and terms of use. These disclaimers will provide transparent information on the limitations of the sensor technology and offer guidelines on appropriate usage. Additionally, we are exploring the inclusion of educational materials and user tutorials to enhance user understanding and minimise the risk of misinterpretations, thereby addressing legal considerations associated with the accuracy of readings. We believe that implementing these measures, will solidify our position and provide legal protection in the rare chance our sensor readings may be inaccurate.

Industry Attractiveness

The attractiveness of the Tupperware industry may be assessed from a variety of perspectives, taking into consideration customer preferences, market trends, the competitive climate, and other factors. The primary activity of the Tupperware industry is the production and distribution of plastic cookware and storage containers. The name of the product was inspired by the well-known brand "Tupperware," which is connected with reusable, airtight containers. The items' purpose is to store, organise, and preserve food conveniently and sustainably. A vast array of cookware and storage choices are included in the package. The "Tupperware" brand is not immune to the industry's current challenges. The company's major marketing approach, which included engaging independent contractors to make house visits, is no longer in operation (BBC News, 2023). The company's sales increased during the COVID-19 outbreak, but this was only temporary, and the company is presently suffering challenges due to a lack of innovation. The company's outmoded business strategy and lack of innovation have made it difficult for it to adapt to shifting consumer tastes and market trends. As a result, Tupperware is struggling to compete in the food storage sector with more sophisticated and convenient options. The brand may only encounter issues in retaining its relevance and profitability if its strategy and product offerings are significantly overhauled. This illustrates the market's demand for a new Tupperware product. Before entering the market, our company must consider numerous factors to avoid making the same mistakes that "Tupperware" did. The major trend to be aware of is a movement in client preferences towards the use of sustainable products. Consumer demand for eco-friendly, sustainable products has lately shifted, with a greater emphasis on wellness and health. Customers of all ages are increasingly willing to spend more money on environmentally friendly items, according to (Petro, no date). This is an astounding result given that only two years ago, only 58% of customers of all generations were willing to pay extra for environmentally friendly items. This figure is positive for our business because the product we are selling is more expensive than standard Tupperware, and it also helps address the issue of being eco-friendly and sustainable because it is a Tupperware that can last up to nine years given the battery length mentioned above in the product feasibility. In addition, the longer lifespan of our product reduces the need for frequent replacements, resulting in cost savings for our customers. Furthermore, the eco-friendly aspect of our Tupperware aligns with the growing consumer demand for sustainable and environmentally conscious products. Customers' perceptions of and trust in a brand may also influence the sector. Bad publicity, quality issues, or product safety concerns may have a significant influence on a company's reputation and sales, thus keeping a positive brand image and consumer confidence is critical. The pandemic has also had an impact on the Tupperware industry, as it has changed customer behaviour and increased the importance of home cooking and storage. Although there are positives, there have also been challenges owing to supply chain disruptions and alterations in client purchasing patterns.

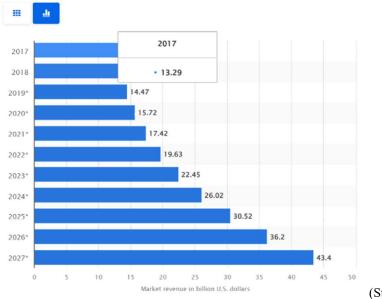
We opted to give an imaginative solution to the Tupperware industry while simultaneously expanding into a different field, namely the food safety technology sector, after researching the Tupperware industry and the possible hurdles that our product may face while entering this market. As a consequence, our product will join the market of smart kitchen equipment combined with food storage. It is critical to examine the smart kitchen appliance business, as we did before for the food storage sector.

The market for smart kitchen appliances is growing and has significant development potential in the next few years. Smart appliances, while more expensive than traditional kitchen equipment, are faster and more efficient. There are various advantages to using smart kitchen equipment, including less waste, more effective food preparation, enhanced safety, faster notifications, remote access, and energy and cost savings. According to (Smart Kitchen Appliances Market Demand, Size and Share, 2031, no date), the residential category is

expected to hold the majority of the smart kitchen market share during the forecast period due to an increase in the purchasing of smart kitchen equipment in this sector.

Smart kitchen market revenue worldwide from 2017 to 2027

(in billion U.S. dollars)



(Statista, 2023)

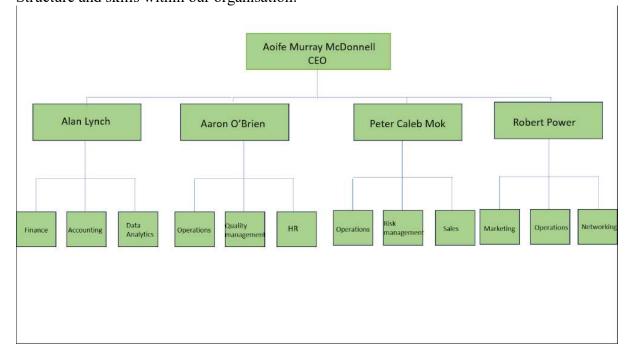
Based on our analysis of both sectors, our product has an opportunity to prosper at the crossroads of both businesses. Our solution will bring more innovation to the food storage business and position itself in a specialised market, while also benefiting the smart kitchen appliance sector. Our smart Tupperware, which includes features like temperature monitoring, freshness indicators, and airtight closures, can help with food preservation. This can assist in improving the efficacy of smart refrigerators and overall food storage systems in the kitchen, making our product a significant addition to the smart kitchen appliance market and leading to collaborations with other organisations.

The key issue we wish to solve is the assurance of health and safety. Grá Bia can help to ensure the health and safety of stored food by monitoring elements that affect food safety, including temperature and storage length. This is consistent with the larger trend in the smart kitchen market to promote healthier and safer cooking practices. We believe that producing smart food safety Tupperware may be a unique selling factor that distinguishes a company. By incorporating smart Tupperware into the smart kitchen appliance industry, there is a possibility to build a more connected, intelligent, and user-friendly kitchen environment that tackles important food safety, preservation, and sustainability problems.

Organisation Feasibility

As original members, we all possess unique abilities that may improve how the company runs. Our skill sets are rather limited because we are only university students, and since we are all doing the same business course, our skill sets frequently seem to overlap. Since three of the group's members specialise in operations management, they are responsible for handling our company's distribution and operations. A member of the group specialises in finance. This team member is handling the accounting and financial aspects of our feasibility study. By doing so, they will guarantee that we have sufficient information to determine the amount of funding we require from investors and that our business will succeed. In addition, we have one team member who specialises in marketing. This individual is responsible for conducting market research and developing our marketing strategy to ensure that our product reaches the right target audience. With their expertise, we can effectively promote our business and attract potential customers. Overall, our diverse skill sets within the group allow us to cover various aspects of our business and increase our chances of success in the competitive market. Below you will find our skills and the structure of our organisation laid out.

However, it is also important to identify the gap in our skills as a unit. Since none of us is an engineer, we are all deficient in knowledge of the technological components of the product and have been primarily depending on information from third parties. Because of this, we will need to recruit graduating master's students who have specialised in this field; they will be able to apply their knowledge and talents to help our firm achieve its goals. By hiring these specialised master's students, we can bridge the knowledge gap and ensure that our team is equipped with the necessary expertise to understand and develop the technological components of our product. Their fresh perspectives and up-to-date knowledge will bring innovative ideas and solutions to our firm, helping us stay competitive in the market. Structure and skills within our organisation:



Legal Practices:

• Regarding adherence to food safety regulations:

Respecting national and international food safety laws to guarantee that smart Tupperware products fulfil all specifications needed to store food, particularly raw meat. This adherence ensures that the materials used in smart Tupperware products are of high quality and do not pose any health risks when in contact with food. Additionally, it also instils consumer confidence in our brand, as they can trust that the products have undergone rigorous testing and meet the necessary standards for food safety.

• Protection of Consumers:

Observing consumer protection laws to guarantee honest and open company dealings, truthful product disclosures, and prompt handling of client concerns. By prioritising consumer protection, our company aims to establish a strong relationship with its customers based on trust and transparency. This commitment not only ensures that customers are well-informed about the products they purchase but also provides them with peace of mind knowing that their concerns will be addressed promptly and effectively.

• Environmental Regulations

Minimising the influence on the environment by adhering to environmental standards for the usage of resources, manufacturing techniques, and waste disposal. This commitment not only demonstrates our brand's dedication to sustainability but also helps to build a positive reputation among environmentally conscious consumers. By actively reducing our environmental impact, we can attract and retain customers who prioritise eco-friendly practices. Additionally, adhering to environmental regulations can also lead to cost savings and operational efficiencies in the long run.

Ethical Practices:

Openness

Preserve openness in all aspects of company operations, such as terms and conditions, price, and product characteristics, to win over clients. By being transparent and open about ethical procedures, we can establish trust with customers and differentiate ourselves from competitors. This can also help to build long-term relationships with clients who value honesty and integrity in their business dealings. Additionally, maintaining openness can contribute to a positive corporate culture and attract top talent who align with our brand's values.

Social Responsibility

Actively participating in social responsibility initiatives, contributing to community welfare, and minimising negative social impacts. These actions can enhance the brand's reputation and appeal to socially conscious consumers who prioritise supporting companies that give back to society. Furthermore, engaging in social responsibility initiatives can also lead to increased brand loyalty and customer satisfaction, as customers appreciate brands that actively contribute to making a positive impact on society.

• Ethical Marketing

Conducting marketing and advertising campaigns that are truthful, not misleading, and do not exploit or deceive consumers. Ethical marketing conduct also involves respecting consumer privacy and safeguarding their personal information.

• Customer Data Protection

Implementing robust data protection measures to safeguard customer information collected through smart Tupperware products, respecting user privacy. This includes implementing strong encryption protocols, regularly updating security systems, and obtaining explicit consent from customers before collecting and using their data. By prioritising customer data protection, our organisation can assure consumers that their information is safe and build a reputation for being trustworthy and reliable in the market.

• HR Procedures:

Our organization heavily relies on human resource management to manage people, create a positive work atmosphere, and enforce rules. We plan to create an employee handbook outlining company expectations, code of behaviour, and rules, along with workplace regulations. HR practices will be implemented to maintain employee morale and reduce staff turnover, including training and development for current market trends and technological advancements. We will also launch a wellness program to promote physical and emotional health, implementing stress management, counselling, and exercise courses. Our company prioritizes health and safety, conducting regular safety training sessions and communicating workplace safety protocols. These measures ensure employee well-being and create a positive work environment, while also regularly reviewing and updating safety protocols to stay in line with industry standards and regulations.

Financial Feasibility

Profit and Loss

We're projecting just over €1 million in annual revenue by the end of December 2024, assuming consistent month-over-month growth.

			Pr	ofit ar	nd Los	ss Fo	recas	st					
(All Figures in €1,000)	Jan	Jan	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Sales													
Sales (invoiced)	4.0	6.0	8.0	12.0	20.0	28.0	40.0	80.0	140.0	240.0	400.0	800.0	1,778.0
Cost of goods sold	1.7	2.6	3.4	5.1	8.5	11.9	17.0	34.0	59.5	102.0	170.0	340.0	755.7
Gross profit	2.3	3.5	4.6	6.9	11.5	16.1	23.0	46.0	80.5	138.0	230.0	460.0	1,022.4
Expenses													
Accounting fees	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	120.0
Advertising	2.5	3.0	3.6	4.3	5.2	6.2	7.5	9.0	10.7	12.9	15.5	18.6	99.0
Bank charges	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	126.0
Bank interest	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	7.8
Depreciation	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	24.0
Insurance	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	12.0
Legal fees	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	12.0
Rent	-	-	-	-	-	20.0	20.0	20.0	20.0	20.0	20.0	20.0	140.0

Taxes	0.5	0.8	1.0	1.5	2.5	3.5	5.0	10.0	17.5	30.0	50.0	100.0	222.3
Transport/courier costs	0.2	0.3	0.5	0.7	1.2	1.6	2.3	4.6	8.1	13.8	23.0	46.0	102.2
Total	22.3	24.3	26.4	28.9	32.3	55.9	60.5	70.4	84.2	105.7	138.6	215.8	865.2
Result													
Net profit	-20.0	-20.8	-21.8	-22.0	-20.8	-39.8	-37.5	-24.4	-3.7	32.3	91.4	244.2	157.1
Gross profit margin	58%	58%	58%	58%	58%	58%	58%	58%	58%	58%	58%	58%	58%
Net profit margin	-501%	-347%	-272%	-183%	-104%	-142%	-94%	-30%	-3%	13%	23%	31%	9%

Cash Flow Forecast

With our initial cash budget of €300,000, we expect cash balances to fall in the initial 7 months, before starting to grow again towards the end of the year.

Cash flow forecast													
(All Figures in €1,000)	Jan	Jan	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Starting cash position	300.0	282.7	265.0	246.8	229.1	213.8	200.6	191.6	200.8	238.4	324.7	490.3	
Incoming													
Cash sales	4.0	6.0	8.0	12.0	20.0	28.0	40.0	80.0	140.0	240.0	400.0	800.0	1778.0
Other cash receipts	0.1	0.2	0.3	0.4	0.5	0.6	0.7	8.0	0.9	1.0	1.1	1.2	7.8
Total	4.1	6.2	8.3	12.4	20.5	28.6	40.7	80.8	140.9	241.0	401.1	801.2	1785.8
Outgoing													
Administration	17.0	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	
Marketing	2.5	3.0	3.6	4.3	5.2	6.2	7.5	9.0	10.7	12.9	15.5	18.6	
Operations	1.9	2.9	3.9	5.8	9.7	13.5	19.3	38.6	67.6	115.8	193.0	386.0	
Total	21.4	23.9	26.5	30.1	35.8	41.7	49.8	71.6	103.3	154.7	235.5	432.6	1,226.8
Result													
Change during month	-17.3	-17.7	-18.2	-17.7	-15.3	-13.1	-9.1	9.2	37.6	86.3	165.6	368.6	
Closing cash position	282.7	265.0	246.8	229.1	213.8	200.6	191.6	200.8	238.4	324.7	490.3	859.0	

Balance Sheet Forecast:

Below is what we forecast our balance sheet would look like as at November 2024, with retained earnings of around €207,000.

Balance sheet forecast As at December 2024	
Assets	
Current assets	€490,339
Cash	€490,339
Fixed assets	€330,000
Buildings	€300,000
Equipment	€30,000
	,
Total assets	€820,339
Liabilities	
Current liabilities	€456,000
Accounts payable	€340,000
Interest payable	€16,000

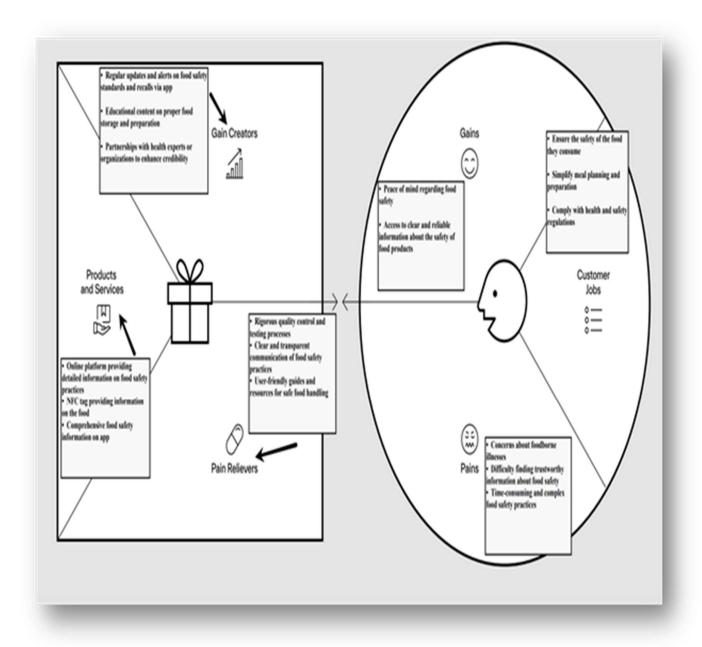
Taxes payable	€100,000
Total liabilities	€456,000
Net assets	€364,339
ivet assets	0304,337
	(304,337
Owner's equity	,
	€207,225 €157,114

Break-Even Analysis

Based on our unit cost price of €17 and our unit sell price of €40, based on our market research, our break-even analysis looks as follows.

Break-even analysis	
Average selling price per unit	€40
Average cost of each unit	€17
Gross profit margin	57%
Costs	€865,236
Dollar sales to break even	€1,516,628
Number of unit sales to break even	37,916

Value Proposition Design



Business Model Canvas

Key Partnerships

- Regulatory bodies for compliance purposes and sharing information.
- Distribution to grocery stores and supermarkets

- Credibility and endorsement through health experts or organisations
- Tupperware company and chip producer for creation of product

Key Activities

- Continuous improvement through research and development in food safety practices
- Staying updated on safety standards through collaboration with regulatory bodies
- Making any staff or partners aware of food safety protocol training programs **Key Resources**
 - Quality control and testing
 - Mobile app for information technology
 - Gaining partnerships with food producers
 - Train staff for the purpose of customer service or product education

Value Propositions

- Assuring rigorous testing and quality control is in place for assurance of food safety
- Access to clear and reliable information regarding the safety of the product
- Providing peace of mind with assurance of safe ingrediencies to allow for time-saving

Customer Relationships

- Fast and responsive customer service for enquiries or concerns
- Educational services for food safety
- Social media presence and engagement

Channels

- Providing an app for updates via push notifications
- Selling direct to butchers, stores and supermarkets
- Having direct partnerships with food service providers or restaurants

Customer Segments

- Families with young children
- Consumers that are health-conscious
- Any food-service provider/restaurants

Cost Structure

- Research and development costs of the product and its improvement/maintenance
- Marketing and promotion
- IT infrastructure and updates of app
- Partnerships with tupperware and chip companies

Revenue Streams

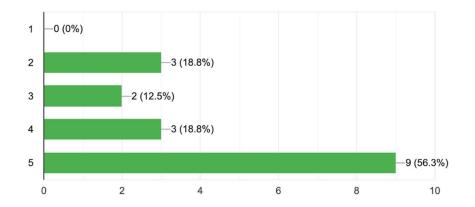
- Product sales
- Licensing partnerships via endorsements etc.
- Consultation services for businesses looking for how to use the product to improve their food safety.

Our customer:

Upon creating this product, we had two target audiences in mind. Households that value convenience without compromising food safety and businesses such as butchers and restaurants who also deal with food safety and engage in these protocols regularly. Our customers' jobs are keeping meat fresh and safe, having peace of mind when storing meat and when they are preparing to cook, they know that the meat is still of good consumable quality. Our product is tailored to their need for easy, modern and safe solutions to food safety at

home and in their businesses. The smart food technology used in our product allows for users to get information on meats stored in the tupperware by way of temperature, humidity, and CO2 levels. This alleviates the pains our target customers experience by offering a quick and easy way of ensuring the meat you are going to consume is safe. The smart tupperware allows busy families on time constraints to prepare their meals before it goes to waste. Customers may not have the prior knowledge to know when meat is safe to eat or not. So by using the smart tupperware it foregoes the need for prior knowledge on food safety specifics and what spoiled meat may look like. Improper storage may lead to meat rotting therefore loss for customers and increase of food waste at home. Temperature fluctuations can have negative impacts on meat and customers do not know how long the meat has been stored at the incorrect temperature. This would be a huge pain for our business customers as they are dealing with large quantities of meat therefore a huge loss if not properly handled. Based on a survey conducted we see the importance and value of food safety for customers:

How important is Food Safety to you? 1= Not important 2= Slightly important 3= Important 4= Fairly important 5= Very important 16 responses



Based on the responses from our survey we also got an insight into the problems our customers face on a daily basis in relation to food safety. Some examples we received were, handling raw meat, storing leftover food, hygiene, and cross contamination. These responses indicated to us that our product would be a perfect tool to alleviate some of the pains our customers face mentioned above.

We also conducted a focus group to gather more information on people's attitudes towards food safety. Through this we asked the question of, how often do you find yourself wasting food due to spoilage or forgetfulness and responses to this were centred around usually forgetting weekly and raw food would be the main thing forgotten. The main reason is due to eating out, forgetting what they bought, which happens mainly at the end of the week.

Product Value Analysis:

Our product sets us apart from our competitors who for the most part have only kept tupperware to a very basic level. The unique element of our product is that we have modern technology implemented. This is explained above in more detail through our technology feasibility section. Our product gives the ability to have the temperature, humidity and CO2 level of your stored meat at the touch of a button. As stated above our main competitor is the brand "Tupperware" who have faced many challenges in the industry and are finding it difficult to compete in the market due to their lack of innovation. Our product makes up for their lack of innovation with the implementation of technology. The smart tupperware

technology we have used is something that will be relevant in today's market as people search for innovation in things they use every day. The design we have developed is sleek, modern and is the perfect approach for our target market who as you can see below value presentation in a food safety product.

As part of our focus group we also asked, how would you like the container to communicate with you. The responses to that were mainly based around a reminder push notification that would be received when the tupperware senses the meat is going off.

The gains our customers receive by using our product are,

1. Reduced Food Wastage:

Our product assists customers in cutting down on waste by properly preserving meat. They can keep meat in storage for extended periods of time without having to worry about it going bad, which reduces food waste and helps the customer save money.

This is in line with sustainability goals people are now geared towards.

2. Peace of Mind:

Customers can be confident when storing meat that our product will help maintain optimal freshness by way of our temperature monitoring, freshness indicators and airtight closures.

3. NFC Insights:

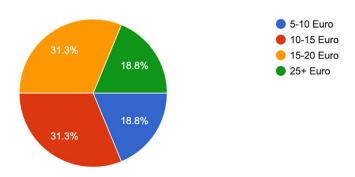
The addition of NFC technology offers a further degree of information and convenience. Consumers can use their smartphones or other compatible devices to get information about temperature variations inside the fridge. With the help of this feature, they can keep an eye on and track the storage conditions of their meat, making sure it stays at the ideal temperature for safety and freshness.

4. Ease of Purchase:

Our product will be available to purchase through the small kitchen appliance market and also the food storage market. This gives customers ample opportunity to purchase our product through either of these channels.

We have set the price point of our product to be at €40 which would set us apart from competitors in price although, this price difference accommodates an implementation of technology in which our competitors lack.

How much would you be willing to pay for a product that enhances food safety? 16 responses



Based on our focus group we gathered that $\in 10$ - $\in 30$ was the ideal price for our customer. Therefore, we are not far off in our pricing strategies in relation to the ideologies of our customers.

We also asked our focus group how likely they would be to recommend our product to others, and we got mixed responses on a scale of 1-5, 5 being very likely. The responses we got were 3.5, 1, 2 and 3 showing that they would be generally likely to recommend our product, but the biggest concern was trust in our sensors but explained to us that if they were to use the product over time and gain trust in it they would be much more likely to recommend the product to others.

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