

First Luxembourgish 100% ecological chewing-gum!

Company Report



Citygum



Year of operation: 2021/2022

Country: Luxembourg

School: Lycée Aline Mayrisch

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1. Executive summary

Have you ever chewed a chewing gum? Then you probably don't want to know what ingredients a conventional chewing gum contains.

We are 5 ambitious and motivated students from the Lycée Aline Mayrisch in Luxembourg, and we are the founders of the mini company Citygum. When we found out that the chewing gum we chew on every day consists only of chemical components and, for the most part, even of petroleum-based plastic, we knew that we had to take action against this grievance! This is how the idea for our Citygum was born.

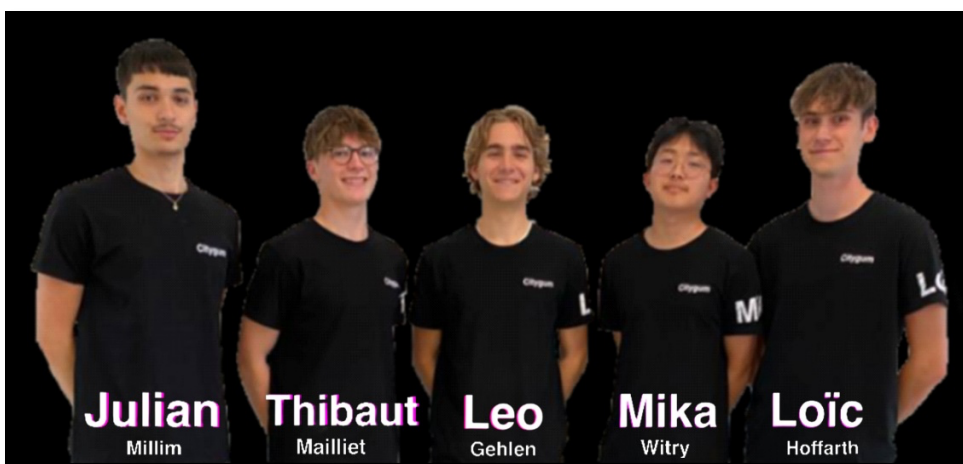
With a lot of enthusiasm, energy, and motivation we produced the first Luxembourgish chewing gum, "Citygum". Our goal was to create a company that has not yet existed in Luxembourg and that offers a product that many people use. Being aware of environmental issues, it was clear to us that our chewing gum has to be ecological. We are proud to say that we have created the first Luxembourgish chewing gum made from natural, ecological, vegan and biodegradable ingredients. With our company we want to show people how important it is to support local companies and to protect the environment.

Citygum exists in two different flavors: "Lime Mint" and "Watermelon" flavor. We sell both flavors at the same price. A pack containing 10 pieces costs 2€.

At the beginning, we distributed our chewing gum solely via social media and through mouth-to-mouth publicity. The direct contact with our customers and their feedback have helped us improve our product more and more. However, after our enormous success at the joint sale organized in the best-known shopping center in Luxembourg, the Belle-Etoile, where we won the prize for the best stand, the demand was so high that we decided to outsource part of our sales to a third-party seller. So, we started looking for a shop which is popular with teenagers and willing to sell our chewing gum. "Stitch", which lies at the heart of Luxembourg city, was the first shop to become our partner. Today, there are many more! So far, we made over 15.000 chewing gums by hand, and sold over 1 300 boxes, which makes a net profit of €1 816,81.

Our goal is to enlighten our customers about the ingredients and environmental impact of the commercial chewing-gum and offer them an alternative: our natural, plastic-free, and biodegradable Citygum. Through our mini company, we were not only able to have an unbelievably great first

experience as entrepreneurs, but we were also able to educate people and hope that we could help protect our environment. A mission that we strive to pursue in the future. After all, the end of the success story of Citygum is nowhere in sight!



2. Company overview

When collecting ideas, we thought of a product that is consumed by all age groups, in order to aim at the largest possible target audience. In addition, we wanted to focus on a key category: young people. Moreover, we had the idea of creating a product that has not been produced yet in Luxembourg. That is how the first Luxembourgish chewing gum was created.

After doing some research, we discovered that the chewing gums available on the market are made of plastic, which is unhealthy and very bad for the environment. Shocked by our discovery, we were convinced to go for the solution of an ecological chewing gum, based on chicle, a sap produced by trees.

As we aimed to implement a good marketing strategy, we used a maximum of creativity (e.g. in the videos, ...) in order to inform young people about the problem of the destruction of nature and to make them understand that they are the ones who must react. While following this philosophy, we developed a secondary objective that was very important to us, namely the use of local products.

Finally, we put all our ideas together and created "Citygum" - the first Luxembourgish chewing gum. Our brand is represented by the "Gëlle Fra", a Luxemburgish monument, which is very well known in the area. The chewing gum is made of natural ingredients, with biodegradable components, and packed in an ecological package.

After implementing this concrete idea, we put all our efforts into realizing our product, which was not easy. Being a pioneer in a sector means not having a model to follow. That's why we put a lot of time and

resources into creating a perfect prototype. The first recipes we found on the Internet and used as a model were, unfortunately, of bad quality. We had to adjust the recipe to produce a product that met our quality expectations.

On the 4th of March the first Citygums were ready to be sold for 2€ a box. By now, we have sold over 1,300 packs of our Citygum, representing a profit of over 1.800€. This shows how receptive the market was for our product! By continuing and expanding our marketing strategy, we are convinced that we will be able to attract an even larger customer base in the future. Furthermore, expanding our production volume will certainly improve our profit margin in the future.

By growing the sales of our Citygum, we are also trying to improve our positive impact on the environment. We have committed ourselves to help solve this problem: chewing gum should become less unhealthy and its heavy negative impact on the environment should be reduced. Did you know that chewing gum is the second most common form of litter in the world and generates around 100 000 tons of global waste a year? The microplastics from waste gum can reach the oceans, where sea life may consume it. As a result, it finds its way into our food chain. The plastic polymers in common chewing gums are the same as those found in car tires and plastic bottles. That means the gum can't biodegrade, so it sticks to our streets forever. To clean the streets, the government must pay 1€ per chewing gum they remove from our streets. For all those reasons the time is long overdue to switch to our biodegradable chewing gum!



3. Solution

Our Citygum is a natural, healthier, and biodegradable alternative to conventional chewing gum, which is based on plastic. In addition, our chewing gum is naturally flavored, 100% plastic-free, locally produced and handcrafted!

The main ingredient of our chewing gum is chicle, which is a natural alternative to plastic. Regular harvesting of the sapodilla tree, which is not felled, is where our valuable base comes from. The Mayans already used chicle to create the first chewing gum in 2000 BC. Our first taste, "lime-mint", is a mixture of lime and mint. The taste is delicious and rare on the market. The other ingredients such as sugar, glucose syrup, citric acid and aromas are also natural and therefore biodegradable. Not only the composition of our product distinguishes us from other chewing gum producers, but also our boxes, which are made of cardboard.



The €2 package contains 10 chewing gums. We decided to sell it at a price that is not too high, so that it would be accessible to everyone. The price of 2€ allows many people, who want to support a mini company, discover our tastes, and help protect the environment, to buy our healthy chewing gum. We fixed the price a bit higher than that for traditional chewing gums to emphasize the handicraft and ecological aspect.

We have received overwhelmingly positive feedback from our customers. They have reported that the taste and consistency are great. However, we want to improve the visual of our chewing gum, so that it will be more attractive.

Chewing our Citygum and creating bubbles is a pleasure!

In addition, chewing has many other advantages:

- Stimulates saliva, which neutralizes the acidic pH in the mouth. Saliva also serves to clean teeth, kill bacteria in the mouth and balance mineral loss from the enamel
- Relieves stress
- Reduces hunger
- Equalizes pressure during a flight
- Awakens and increases concentration
- Helps for smoking cessation

4. Market and marketing strategy

Description of the market

Our market is substantial. A very large number of people chew chewing gum. In addition to selling our chewing gums in Luxembourg, there is an opportunity to market it worldwide, which makes our business scalable. Even an international grocery store could sell our Citygum.

Currently, we mainly target teenagers and young adults, who want to protect our planet and live more ecologically. That is why we have aligned our current marketing strategy with this target group. We run most of our advertising via social media and through our cooperation with well-known influencers we reach a constantly growing community. Our modern logo also reflects the age of our target group, which lies between 15 to 30 years.

To expand our business, we want to enlarge our target group in the coming months and become more visible to older people. That's why we are currently planning to use more traditional sale channels and launch special editions, which also appeal to a more adult audience.



Competitive analyses

The direct competitors of our product are plastic-free chewing-gums like True Gum or Forest Gum. They also produce environmentally friendly chewing gum, but they are large companies that cannot offer handmade production. Moreover, they only sell their products abroad and not in Luxembourg. Their products are slightly cheaper than our Citygum because they can benefit from economies of scale. Conversely, we sell our special lemon-mint flavor that our competitors do not offer, and we can react faster and thus adapt better to the taste wishes of our customers.

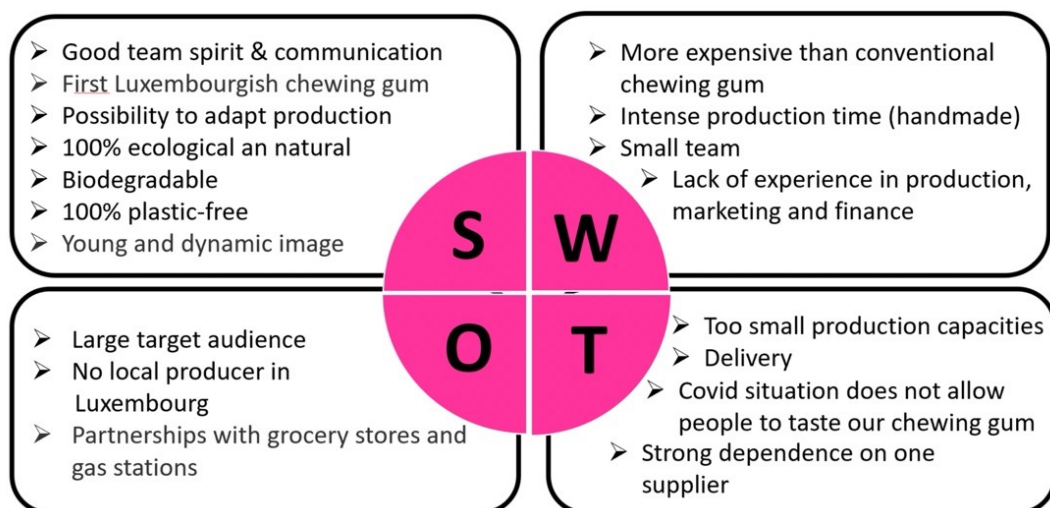
Indirect competitors of our product are big and well-known companies like Extra or Airwaves. In fact, there are a lot of gum producers on the market, but companies like Extra and Airwaves do not produce ecological chewing gums. Nevertheless, their production is very similar to ours and even cheaper, so we must not underestimate these serious competitors. Our advantage still lies in our local production of plastic-free chewing gum that stand out from conventional chewing gum due to their special ingredients. Our job is to bring these benefits to our customers so that their next purchase of chewing gum will be more sustainable and healthier.

Marketing strategy

PRODUCT: We offer our product in 2 different flavors: the fruity taste of watermelon and the combined fresh taste of lime and mint. The added flavors are natural, which give the chewing gum a very pure taste. The main ingredient we use is biodegradable chicle gum which is harvested from trees and replaces plastic used in traditional chewing gum. We are working on highlighting these advantages of our product and to raise awareness of the ecological aspect of our chewing gum to increase our sales.

PLACE: In a first step, we sold our Citygum directly to our customers via word-of-mouth advertising and via our social media channels (Facebook/Instagram/TikTok) as well as our website. We took the decision to have direct contact with the customer in order to be able to receive direct feedback from them and improve our product.

Customers were also able to purchase our products at different events. During the first joint sale, we were able to sell over 300 packs on 2 sales days. But we also took the opportunity to sell our chewing gum in pop-up stores and supermarkets.



In a second phase, to increase our sales, we have contacted retailers to increase our reach. We have started cooperations with various partners, which is why our Citygum is now available not only in small drugstores and one of the most famous fashion shops of the capital, “Stitch”, but also in one of the largest shopping centers in Luxembourg, the Cloche d'Or. In cooperation with the national artist Jacques Schneider, we are going to organize an awareness campaign about chewing gum and sustainability in this shopping center.

Our sales of over 1 300 boxes, the growing size of our community and the overwhelmingly positive feedback show that our chewing gum and our brand Citygum have been largely accepted by the market. The more we make a name for ourselves in this market segment, the less we can imagine this market without Citygum and the greater our chances are of being able to expand and improve our production in the long term.

Unique capabilities

Citygum products are unique in their type: our product is completely biodegradable!

Any chewing gum, no matter how responsibly it is disposed of, takes more than 5 years before it starts to rot and continues to damage the environment due to its ingredients. Therefore, it's time to switch to our completely biodegradable chewing gum!

5. Operations

The main ingredient of our plastic-free chewing gum is the chicle, harvested in South America, which we order from our German supplier “Chicle Kaugummi”. All other ingredients, such as sugar, glucose syrup and citric acid, are purchased from the largest Luxembourg food wholesaler, La Provençale. In addition, our flavorful aromas, mint-lime, and watermelon, come from Germany from the producer ESN. The flavorings are free of preservatives and 100% vegan. We use the most local, natural, vegan, healthy, plastic-free and therefore biodegradable ingredients possible.

To produce our cardboard boxes, we cooperated with the internationally active company Heintz van Landewyck. Based in Luxembourg, this company will become a strong partner when we start to conquer the international market!

Due to the high quality, sustainability and local production of our raw and packaging materials, our production costs of €0.87 per pack are currently still relatively high. To keep the production costs as low as possible, we even glue the boxes ourselves. But by increasing the quantity of our production, we will, in the future, be able to reduce this cost significantly.

We sell our product, a box containing 10 chewing gums, at a price of 2€. Therefore, the margin is about 1,13€ per box sold. This margin could increase by enlarging the volume of production and reducing costs.

During the entire innovation process, we have encountered some problems in the production of our chewing gum. The biggest challenge was to determine the right recipe to produce our Citygum, in order to meet all our quality requirements. Since we had to try many recipes and had to endure a lot of



setbacks before we found our recipe, our production costs were initially much higher than they are now.

The portioning of our chewing gum also presented us with a great challenge, as it is not easy to hand-produce identically sized pieces from the chewing mass. Therefore, to improve our production and to make it less time-consuming, we invented our own machine which helps us cut the perfect size for each chewing gums. Of course, this solution is not yet perfect, but so far, we have always found a solution to all obstacles that have stood in the way of the success of our business idea!

6. Sales / Promotion

For a product like ours, it is essential to have as successful marketing strategy to become known in Luxembourg, and later on even beyond.

Most of our advertising is done through our Instagram site where we are very active. Our first aim is to give people as much information as possible about our chewing gum and our brand, so that they can make an environmentally conscious and healthier purchase decision. In addition, we want to be more transparent and show our customers how our mini company works behind the scenes, how we produce, who we are and what we have in store for the future, to keep their attention and spark their curiosity.

Our first social media post appeared on December 7th, since then we have posted regularly and that will not change in the coming months!

We learned how important it is to build and sustain our network consistently! We have come to understand that networking both with existing partners and potential new

partners is essential for the success of our business venture. That is why we have sought cooperation with influencers who advertise our product via social media. In this way, we were able to greatly increase our reach.



To become even more visible and to further establish our brand Citygum, we have also created merchandise and, among other things, sold individual t-shirts with our logo. This allows us to increase our profit and have free publicity through every person who wears our brand logo.

There is also a marketing strategy behind our logo! It represents the "Gëlle Fra". This is one of the most famous and iconic symbols/monuments in Luxembourg and has a historical background: after the end of the First World War, it became a symbol of remembrance, resistance, and freedom in Luxembourg. It stands like no other landmark for the identity of Luxembourg and perfectly embodies the local idea behind our product. The design itself especially appeals to a younger clientele,



which corresponds to our target group. From this train of thought our name Citygum was born. The "City" in Citygum stands for our capital, as it is common in Luxembourg to designate our capital as "The City". That's why our company name refers to a modern city with a vibrant night life and thus consolidates our target group.



To develop our prominence even more, we participated in radio interviews on various well-known stations (EldoRadio, Radio Ara) that were broadcast all over Luxembourg! After winning the national final, even RTL Luxembourg reported on Citygum, which is the most used radio station in Luxembourg (29.9% market share). In addition, there are numerous newspaper articles that have reported on us and our innovative idea. These were published both in national daily newspapers (Le Quotidien, ...) and online newspapers (RTL.lu) as well as in business newspapers Paperjam).



To increase our sales figures, we used some special sales strategies, for example, to make the purchase of multiple boxes more attractive and to promote our chewing gum. Therefore, we launched special

promotions where people could get a 10% discount or a free box of chewing gum after the tenth purchase. To promote our new second flavor, watermelon, we offered every person who bought one of the lime mint Citygum boxes, one box of the watermelon flavor for free. We implemented this campaign during two days as part of a pop-up store event.

Finally, we have also looked for partners outside the digital world to make our business better known. That's why we have regularly participated in sales at various locations, took part in events and exhibited in pop-up stores. We sell our chewing gum to various partners, such as shopping centers and retail stores, and have even participated in open days to attract the interest of an even larger audience. In this sense, we have also worked with other mini companies, not only to organize joint competitions (Alex and Tim's), but we have also been able to acquire them as professional customers (Must Snack).

Together with a Luxembourgish artist, we are going to organize an awareness-raising event in the upcoming month at the Cloche d'Or shopping center, one of the biggest malls in Luxembourg. The goal is to raise awareness of the use of chemical ingredients and plastics in traditional chewing gum and the environmental impact this entails. This will allow us to further improve our notability among Luxembourgish people and maybe even beyond.



7. Management & Team

Our team consists of 5 students divided into 4 different departments. At the beginning of the project, we appointed a person in charge of each department. Each student was assigned to the department which their individual abilities were best suited for. Our internal organisation is rather flexible. For instance, all employees work in the technical department apart from their primary department. According to the season and the needs, we temporarily reinforced various services with members of other departments. Just as our logo, the "Gëlle Fra", our company stands for cohesion!

To ensure that everyone has access to all important documents of the enterprise and all the information needed at all times, we digitalized all our documents and worked with google drive. During the project, we learned that it is of utmost importance to communicate clearly to avoid misunderstandings! Regular team meetings help us to strengthen the team spirit and to stay informed. Each meeting starts with a discussion between the entrepreneurs and the teachers about the headway of the project and the definition of the tasks to be carried out. **– Be organized!**

When it comes to difficult decisions, the point of view of every member of the team is very important to us. However, if the team cannot find a common point of view, our managing director has to take the best decision for the company. We know the strengths and thus also the weaknesses of our team. Therefore, we stay in close contact with our external coach, Douglass Welch, who works in the credit management firm Pemberton and helps us to push our marketing. Our teacher Sandra Thibeau, an economics professor, also helps and gives us advice. We try to get feedback

Department	Responsibility
Chief Executive Officer - Gehlen Leo -	Overview, support & motivation, representation
Administration - Hoffarth Loïc -	Planning/organization/communication (customers & suppliers & external partners)
Commercial department - Millim Julian -	Marketing (designs, posts, videos, ...)
Financial department - Witry Mika & Mailliet Thibaut -	Accountancy, shareholder registration
Technical & Sales Department - The whole team! -	Production & Sales

of as many people as possible to continuously improve our marketing and our product. **– Be a team!**

We have also learned that it is important to be reactive and reschedule different tasks since partners and customers sometimes do not react as quickly as we expect them to, and we lose precious time as a result. Moreover, we quickly realized that events need to be carefully planned. It is crucial that we are well prepared before meeting both our partners and our customers. In the end, success is dependent on rigorous planning and preparation. **- Be prepared!**

The contact with our partners, such as Heintz van Landewyck for example, has been very positive since we have been in touch with them on a regular basis and have received a lot of information and valuable advice. As a result, we have learned that it is very helpful for us to turn to experts when we encounter a problem, whether it is about our packaging, or about the production. In preparation for our stage shows and our jury interviews, we have also sought advice from external coaches. It is important for us to do research about other companies such as True Gum, which also make and sell chewing gum, and talk to them to get to know their experiences. We have also fixed an appointment in the house of entrepreneurship, to be enlightened about the various steps needed to turn our mini company into a real one.

– Listen to experts – become an expert!



However, we have also encountered problems with our partners, for example with our suppliers as they didn't deliver on time. This put our production behind schedule, and we almost had to cancel an event at which we were supposed to sell our Citygum. This way, we have learnt that, to avoid similar complications, it is essential to fix realistic delivery and production deadlines. – **Expect the unexpected!**

During our project, we have also learned to think big. At the beginning, we limited ourselves to selling the products directly on the national market. After our initial success and following advice from experts, we realized that we would be able to sell our product on a much larger scale.

– **Think big!**

8. Business Performance and Profitability

Financial management is essential to ensure the smooth running of our company. We are already pleased with our current profit (1 816,81 after tax), but it doesn't stop there as Citygum is working on several projects, such as special editions, until the end of summer.

We were able to launch our business thanks to a share capital of 1 500 € which represents a total of 300 shares. Since we have no fixed costs, as we did not pay out our salaries regularly, we used this capital to purchase our first raw materials and cover our additional expenses (marketing and enrollment costs).

Our initial capital was relatively high, as we initially assumed smaller production volumes and thus higher production costs. In addition, our initial production costs were higher because we needed several attempts to find the perfect consistency

and taste for our chewing gum. Meanwhile, our production costs have fallen sharply compared to our forecasts. However, to expand our production in the future and to be able to invest in machines, it will probably be necessary to invest and increase this capital in the future.

9. Financials

Break-even point
269,03€ - 135 boxes

Production Costs

Since we only use sustainable and high-quality raw materials to produce our chewing gum, our production costs are still relatively high. The main part of our chewing gum and thus the highest cost factor for our production is the chicle (0.312€ per box). In addition, we use sugar, glucose, citric acid and flavorings (0.26 € per box).

To keep our production costs as low as possible, we have tried to find a reliable partner for the packaging of our chewing gum, who meets our quality requirements, but still supplies us at a fair price. After lengthy negotiations, we were able to set the purchase price of our boxes at 0.3€ per box. Although this price seems to be high in comparison to our remaining production costs, we have attached great importance to using sustainable and locally produced packaging. Finally, the entire production cost for 1 box is about 0,87€.

Since we had the opportunity to carry out most of our production in our school, we had no fixed costs. This is how our competitive selling price of 2€ was achieved. Accordingly, our profit margin per box sold is 1.13€.

Sales and revenue

We have mainly earned our profit of 1 816,81€ through the sale of our regular chewing gum boxes. We not only sold these directly to the consumer via our social



media channels and our sales stands (joint sales, pop-up stores, ...) but also to various companies. Thus, we were able to sell 1 304 boxes which have generated a turnover of 2 610 €. In addition, we have produced chewing gum as promotional gifts for outstanding partners and thus achieved an additional turnover of 135,28 €.

Profit and appropriations of profit

After deducting our marketing costs and taxes, we have generated a total profit of 1 816,81€. Our company will distribute one part of our profit to our shareholders (1,00€ per share, 20% ROI), another part will be donated to the foundation WWF (200€). The rest will be reinvested into our company (better equipment, promotions, freelancers, ...) and paid to ourselves.

Scalability

Because our market still offers many sales opportunities, we could significantly increase the volume of our sales using better production equipment and targeted marketing. Due to the higher production volumes, the purchase prices of our raw materials, especially the chicle, would fall and we would have the opportunity to renegotiate the prices for our packaging due to the higher purchase quantities. This would probably lead our margin to increase exponentially. Therefore, we are planning to invest in machines, so that the production can be more efficient.

10. Future Potential

Our team sees great potential in this company and is sure that this is not the end of Citygum. As we live in a time where healthy eating and environmental awareness are at the forefront, we are convinced that we will gain more and more customers in the coming weeks and months.

PROFIT AND LOSS ACCOUNT (EUR) (14/06/2022)		
A	Sales	2 665,05
B	Purchases	604,54
C	Production Wages	0,00
D	Closing Stock	110,00
E	Cost of Sales (B + C - D)	494,54
	Gross Profit (A - E)	2 170,51
F	Salaries, Commissions and Bonuses (1)	0,00
G	Stationery	0,00
H	Rent & Hire	0,00
I	Miscellaneous Expenditure	258,08
J	Registration Fee	0,00
	Total Expenses (F + G + H + I + J)	258,08
K	Operation Profit	1 912,43
L	Miscellaneous Income	0,00
M	Net Profit (K + L)	1 912,43
N	Corporation Tax Payable (5 %)	95,62
O	Profit after Tax (M - N)	1 816,81
P	Appropriations of Profit (Q + R + S):	1 816,81
Q	Dividends	300,00
R	Donations	200,00
S	Profit for further investments	1 316,81
	Balance (O - P)	0

I have examined the accounts of the company and agree that the above figures are an accurate representation of company position.

June 15th, 2022, Thibaud Sandra, Economic Teacher and Company Coach



There is a lot of positive feedback on our idea, our implementation, and our product. Our suppliers and partners, such as Heintz van Landewyck and Stitch, are also very motivated to see our company grow. We have already received various demands to sell our product, for example to Cactus, which is the most popular supermarket chain in Luxembourg. The demand in the shops, where we already sell our products, is constantly increasing.

To meet the demand, we need an investor to buy machines which would allow us to produce even faster and in larger quantities. That investment would allow us to buy 2 different types of machines, one mixing machine (Kemper Spiralkneter SP 15) and one portioning machine. Therefore, we would need an investment of €7.000. The time we would win by using machines, we could invest in trying new flavors or improving our marketing strategy.

If successful on a national scale, we could also consider an international strategy and introduce the product in neighboring countries, such as Belgium, Germany and France. We could expand our product range and launch ecological sweets.



Citygum

The Citygum Team

Gehlen Leo
Hoffarth Loïc
Mailliet Thibaut
Millim Julian
Witry Mika



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Lèt'z Knätsch ! 