



LocalFresh

Unfolding sustainability through innovative green digital solutions

Author: Iris de Wit
24/07/2023

Executive summary	1
Problem and solution	2
Business modeling and planning	5
Business modeling	5
Local seller as customer	5
Consumer as user	7
Business planning	8
Business development process	11
Self-evaluation	15
References	16

Executive summary

LocalFresh is an innovative and transformative platform that addresses the growing challenge faced by small sellers in the grocery industry due to the increasing dominance of big supermarkets. Our platform empowers local grocery stores, farmers, and artisans by connecting them in a cohesive network and offering a wide range of benefits to both sellers and consumers. Through LocalFresh, we aim to create a thriving ecosystem where consumers can access better quality, fresh, and sustainable products while supporting local businesses and fostering community engagement. Our focus lays on the grocery and fruit grocery stores, starting from Florence in Italy.

The problem we observed is that small sellers are at risk of extinction as big supermarkets and corporations offer lower prices and a vast array of products, drawing consumers away from local establishments. Many consumers are driven by convenience and are unaware of the benefits of supporting local sellers. Moreover, the lack of transparent information about products and their origins often hinders consumers from making informed choices. Importing food, and thus selling non-local food, also takes part of the high CO2-emission that comes from transport.

With LocalFresh, we provide a comprehensive solution to address the problem of small sellers risking extinction due to the dominance of big supermarkets. Our platform empowers local grocery stores by connecting them in a cohesive network, offering a range of benefits that solve the challenges they face. Firstly, we tackle the issue of consumers' inclination towards big supermarkets by promoting the value of buying better quality, fresh, and sustainable products, by providing information on the product's origin and greenness, as well as their availability. Furthermore, there will be a click & collect service where consumers can order online and pick it up the next day to increase their convenience.

The following points are the key features of LocalFresh:

- Online shopping: LocalFresh offers an intuitive and easy-to-use online shopping experience, where consumers can browse a wide selection of products from local grocery stores, farmers, and artisans.
- Transparent information: We provide comprehensive and trustworthy information about each product, including its origin, certifications, and sustainability practices, fostering transparency and consumer trust.
- Product availability: Consumers can check product availability at local grocery stores, allowing them to plan their shopping trips with confidence.
- Local support: By supporting local sellers, consumers contribute to a thriving community economy, preserving traditions and empowering small businesses.
- Click & Collect: LocalFresh's service ensures that consumers can order their groceries and pick it up the next day, saving time and effort.

We see a great opportunity in the market, as we observed a growing trend towards sustainable and locally sourced products. As consumers become more conscious of their choices, they seek platforms like LocalFresh to align with their values and support the local economy.

By connecting local sellers in a cohesive network and offering a convenient, transparent, and reliable platform, LocalFresh creates a win-win situation. Consumers have access to better quality, fresh, and sustainable products, while local sellers gain increased visibility, customer reach, and profitability. LocalFresh transforms the local grocery shopping experience, fostering a thriving ecosystem where everyone benefits - consumers eat healthier, sellers thrive, and local communities flourish.

Problem and solution

The origin of LocalFresh can be tackled down to two different problems and some opportunities. The first and foremost problem is the observation that small shops are closing due to the big supermarket competition. The second one is regarding sustainability: big supermarkets, in contrast to local sellers, import products from all over the world throughout the year, contributing to a higher CO2-emission.

Already from the mid-1990s it was observed that small shops have a hard time fighting against the rising competition from the big players, as researched by Reardons and Hopkins (2006), and Igami (2010). As mentioned before, we focus on the region around Florence, Italy. In Italy alone, we found that in the last 10 years, there was a 20% growth of big supermarkets, and 208.000 shops had to close down (Istituto Nazionale di Statistica, 2021; Pirovano, 2022). One of the reasons for this is that in the bigger shops, food can be bought in higher quantities and can be sold for a lower price and consumers tend to put this convenience above. Large supermarkets have changed the retail business landscape in many countries through larger store formats, more shelf space, an increased variety of goods and services and extensive marketing strategies (Borraz, Dubra, Ferrés & Zipitriá, 2014). In big shops, consumers know the products will be available, contrary to the smaller shops that mostly sell better-quality products in lower quantities and thus are more expensive generally spoken. In this report we focus on small vegetable and fruit grocery stores with local products, although this big-drives-out-small effect can be found in multiple fields.

Concerning the second problem of sustainability, we found that products we have in the supermarkets are imported from all over the world. From an article of the European Commission it was found that global food miles generate nearly 20% of all CO2 emissions from food (Directorate-General for Environment, 2023). Not only will local products contribute to a lower CO2 emission, it has health benefits for consumers too. Biological and local products make less use of pesticides and contribute to a healthy lifestyle. Michigan State University suggests local food has more flavor, has more nutrients, promotes a safer food supply, apart from the social benefits it has for the environment and the local economy (MSU Extension, 2013). Although consumers see the benefits, there are barriers to really buy local (Klaus). He concludes that consumers' barriers to sustainable choices of buying local are the availability, cost and information. The information should be available and trustworthy, and easy to understand.

Combining these problems, we see an opportunity in the market, where on one side we see small shops closing due to high big-shop competition, and on the other side there is a rising

awareness of buying local for both the consumer's own health and the environment. It was shown that the support of consumers for organic and local food as sustainable alternative in food choices even if occasional buying behaviour of these products still predominates. In addition, our results show that an egoistic approach prevails among consumers, who seem to attach more value to attributes related to quality and health than to environmental, social and economic sustainability (Annunziata & Angela, 2018). Another observation we had was the upcoming of the so-called "locavorism", where more and more people try to eat food that is produced within a 100 kilometer radius (Schulp, 2015). In Italy, we have found that relatively they are more focused and willing to buy local and fresh products. From a profound research of Deloitte, it was shown that in Italy 80%+ rank health considerations as more important than affordability, and 74% of consumers are willing to pay at least 5% more for food that is produced locally (Deloitte, 2021) (Fig. 1). The challenge here is to give the same convenience and ease that people get from the big supermarkets, to the small local grocery shops.

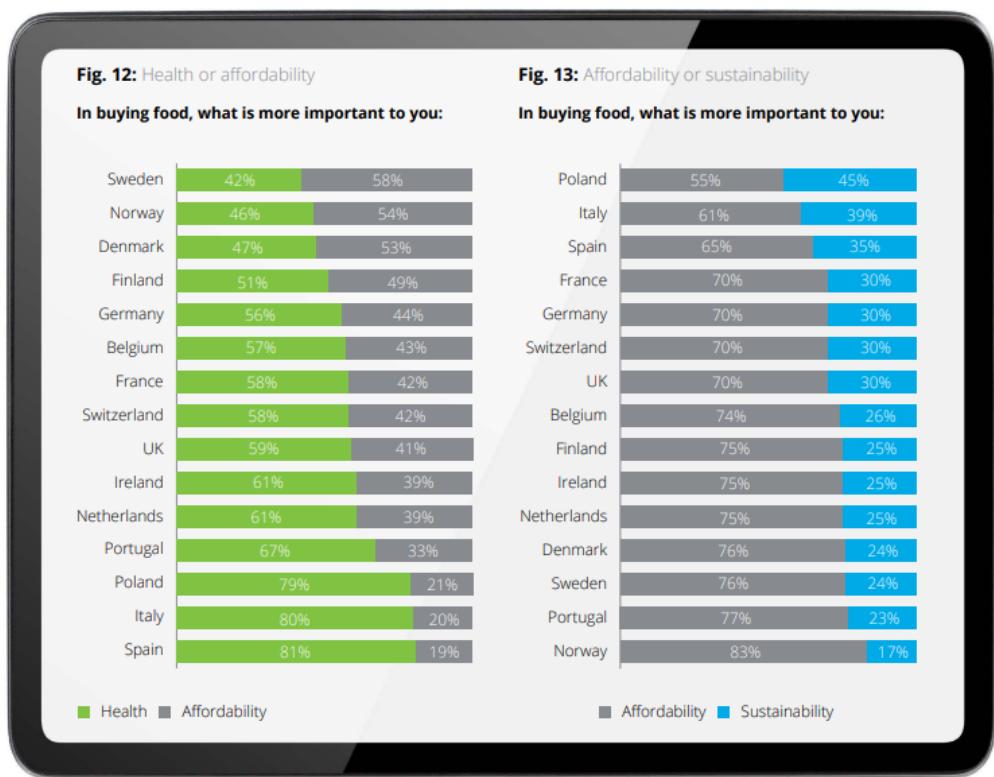


Fig. 1: research from Deloitte showing that Italy prefers Health over Affordability and Sustainability over Affordability.

With LocalFresh, we provide a comprehensive solution to address the problem of small sellers risking extinction due to the dominance of big supermarkets. Our platform empowers local grocery stores by connecting them in a cohesive network, offering a range of benefits that solve the challenges they face. Firstly, we tackle the issue of consumers' inclination towards big supermarkets by promoting the value of buying better quality, fresh, and sustainable products. Through LocalFresh, we educate consumers about the benefits of supporting local sellers and encourage them to prioritize quality food, grown organically and sustainably. By highlighting the advantages of local products, we shift consumer preferences towards healthier and more sustainable choices. On the one hand we have the platform for

the customers (local sellers) where they upload their products with some product information, as shown in our first prototype in Fig. 2. On the other hand the platform provides information on the shops and their products (Fig. 3).

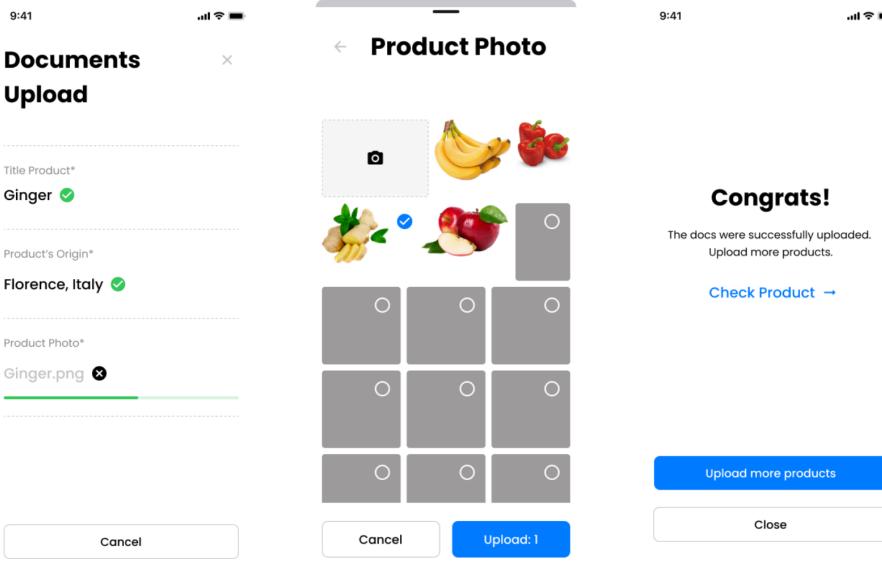


Fig. 2: prototype of platform for the local seller (customer)

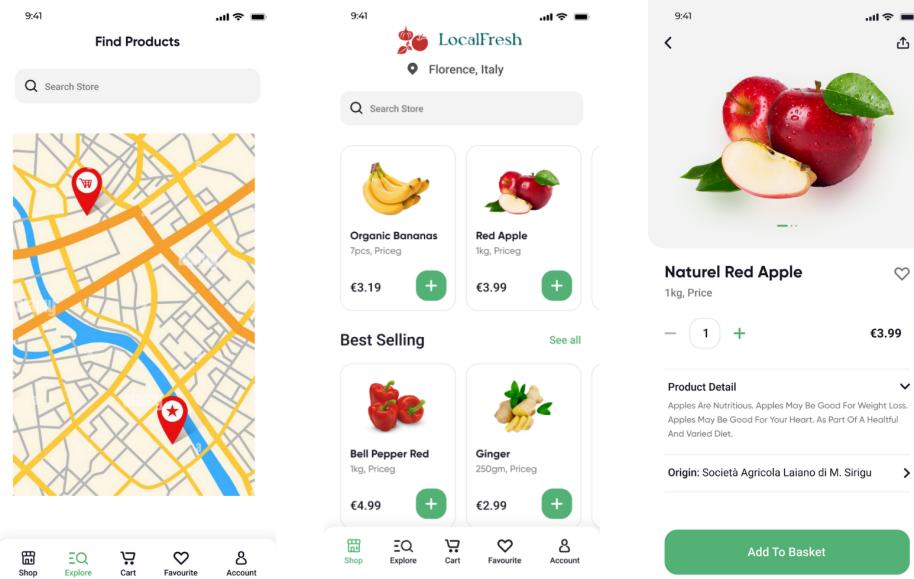


Fig. 3: prototype of platform for the consumer (user)

We ensure transparency and trust by providing consumers with comprehensive information about the products available through our platform. From detailed origin and sourcing information to certifications and sustainability practices, consumers can make informed decisions based on accurate and reliable product data. By bridging the information gap, we empower consumers to choose products that align with their values and support local businesses. To address the barrier of convenience, LocalFresh offers a convenient click & collect service. Consumers can enjoy the ease of having their preferred local products

already gathered. This convenient service saves consumers time and effort while supporting local sellers. This is the starting point of our product, however after some time and experience we will explore if we can extend this service to a delivery service to increase the convenience even more. For this scope of the report, we will keep the focus on click & collect.

Through our platform, we also address the issue of product availability. Consumers can easily check the availability of specific products in local grocery stores before making their purchases. This feature ensures that consumers can plan their shopping trips with confidence, knowing that their desired products will be available when they visit a local shop. By connecting local sellers in a cohesive network and offering a convenient, transparent, and reliable platform, LocalFresh creates a win-win situation. Consumers have access to better quality, fresh, and sustainable products, while local sellers gain increased visibility, customer reach, and profitability. LocalFresh transforms the local grocery shopping experience, fostering a thriving ecosystem where everyone benefits - consumers eat healthier, sellers thrive, and local communities flourish.

Business modeling and planning

As explained before there is a two-sided problem and opportunity for LocalFresh. In this report, the **customers** will be the local sellers who have a risk of closing down. On the other hand we have the consumers as **users**, which are the customers of the local seller. The users have a need to buy fresh and local food, keeping the convenience of buying from the supermarket, whilst supporting the local community. As mentioned before we will have our starting point in Florence, Italy, as we saw a decrease of small shops (customers) and an increased willingness and awareness of buying local (users). Florence is a central city in Italy with young families. From there it can be beneficial to spread out to other cities and cities in neighboring countries.

Business modeling

To explain our business model, we have created a lean canvas for both the customer (local seller, Fig. 4) and the user (consumer, Fig. 5).

Local seller as customer

Problem: losing customers to competition.

Solution: joining the platform for attracting customers by providing local products with transparent information, and information on shop and product availability.

Value proposition: LocalFresh offers a comprehensive platform that connects local grocery stores, farmers, and artisans, empowering them to reach a broader customer base and showcase their unique products. Through LocalFresh, consumers gain access to better quality, fresh, and sustainable fruits and vegetables, promoting healthy eating choices while supporting the local economy and community.

Customer segment: local sellers of fresh fruits and vegetables, who are in need of more customers, starting from Florence (Italy). We expect our early adopters to be sellers who are open for innovation and diversify their business.

Revenue streams: LocalFresh generates revenue through various channels, including a percentage-based commission on each sale facilitated through the platform. We start with a free trial for the shops and after six months they can decide to be still part of the platform and pay monthly.

Channels: LocalFresh operates through a user-friendly web platform and a mobile application, providing consumers with seamless access to local produce. We collaborate with local grocery stores and farmers' markets, creating partnerships that enable a diverse range of fruits and vegetables to be available on the platform. We will be in close contact with the municipality and will do in-person proposing and sharing the word of our platform.

Key Activities: Key activities for LocalFresh encompass platform development and maintenance, marketing and brand awareness initiatives, and customer support services. We also focus on establishing and nurturing relationships with local sellers and farmers, ensuring a consistent supply of fresh and sustainable products. In terms of key metrics, we focus first on the number of small sellers that want to make use of the free trial. Once they notice their customer pool increases and we measure the number of orders achieved, we focus on selling our product to them.

Cost structure: LocalFresh incurs costs in platform development and maintenance, marketing and promotion, customer support, and operational expenses. Additionally, expenses related to logistics and click & collect services contribute to the overall cost structure.

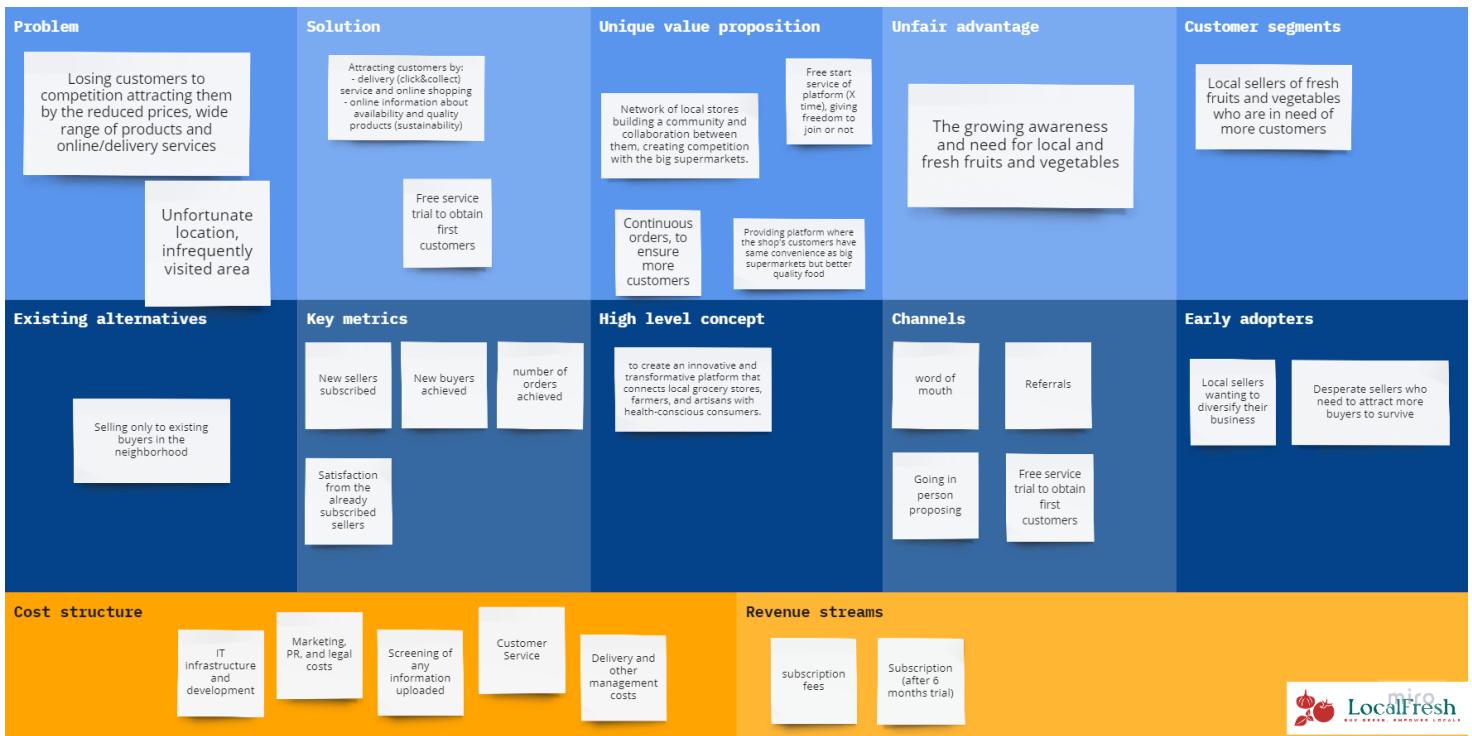


Fig. 4: lean canvas for the local seller (customer)

Consumer as user

Problem: wanting to buy local and fresh food, that's sustainable, with knowledge of what they buy, but nevertheless with time limitation for groceries.

Solution: platform has an online shop where consumers can see where the shops are located and the platform for attracting customers by providing local products with transparent information, and information on shop and product availability.

Value proposition: through LocalFresh, consumers gain access to better quality, fresh, and sustainable fruits and vegetables, promoting healthy eating choices while supporting the local economy and community.

Customer segment: young adults, also with young families in need of fresh and good quality products. They live in an urban area, starting from Florence, Italy. They are tech-savvy and open to innovative ideas.

Revenue streams: LocalFresh generates revenue through various channels, including a percentage-based commission on each sale facilitated through the platform. We also make use of advertisement on the app for other green products, like cosmetics.

Channels: LocalFresh operates through a user-friendly web platform and a mobile application, providing consumers with seamless access to local produce. We can communicate our platform through the municipality associations existing in cities, so consumers will have knowledge about us. Furthermore, we will first build a community

before we start the fundraising of our project. This will be achieved by advertisement through sustainable start-up events.

Key Activities: Key activities for LocalFresh encompass platform development and maintenance, marketing and brand awareness initiatives, and customer support services also from the user's side. In terms of key metrics, we focus on the number of accounts created, and the monetary value on orders that users place. We also focus on satisfaction from the already subscribed users.

Cost structure: LocalFresh incurs costs in platform development and maintenance, marketing and promotion, customer support, and operational expenses. Additionally, expenses related to logistics and click & collect services contribute to the overall cost structure.

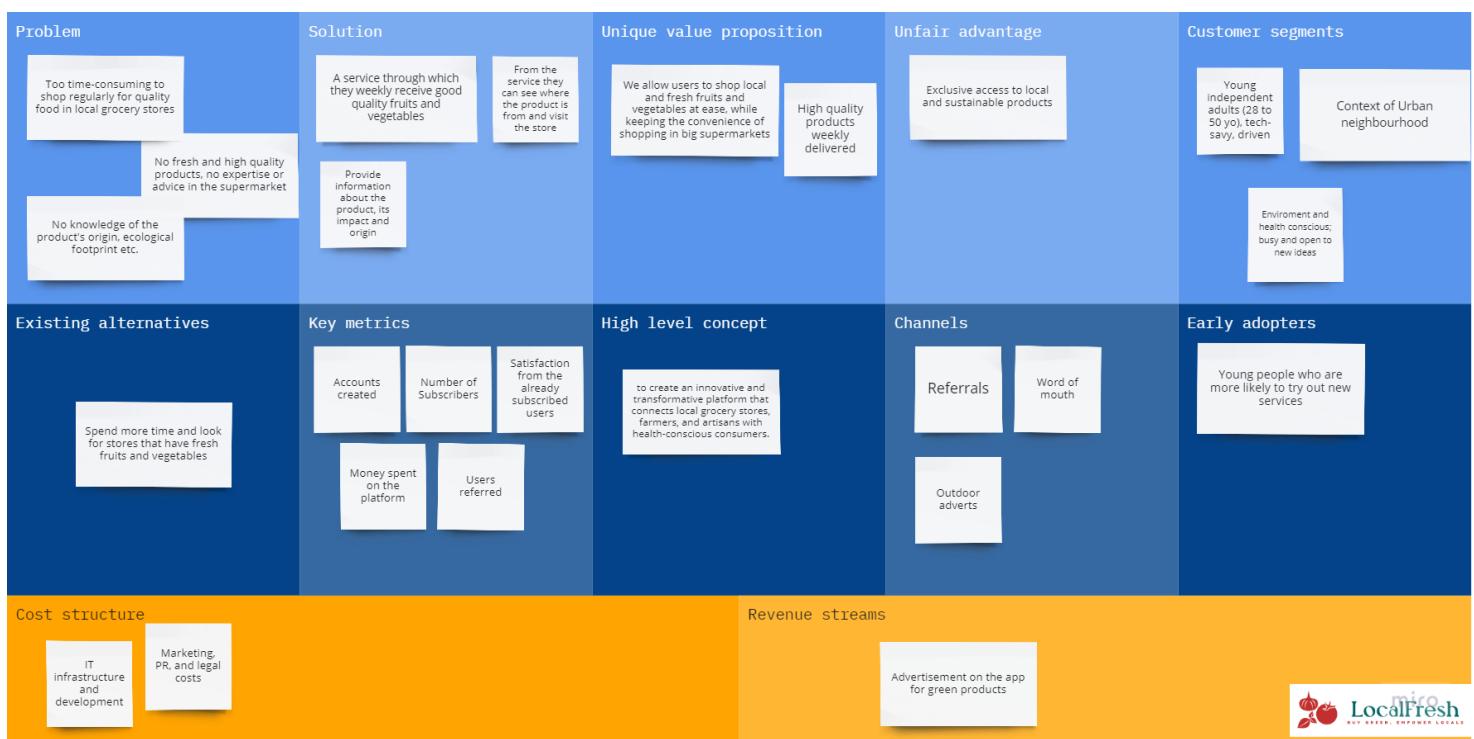


Fig. 5: lean canvas for the consumer (user)

Business planning

For the business planning we used different canvases to bring the different ideas and perspectives of the team together. The first step was to create an opportunity canvas (Fig. 6).

OPPORTUNITY CANVAS		TEAM #
		 LocalFresh BUY GREEN, EMPOWER LOCAL
PROBLEM TO SOLVE		
Local green sellers face the risk of extinction due to competition with the big supermarkets, offering more and lower priced products, compared to the local and fresher products in small shops.		
SOLUTION	WHO IT CONCERNED : WHO USES / PAYS / RECOMMENDS	
Provide a platform where small sellers find a network to cohesively sell their products. Consumers can see where the shops are and are provided with information on the product. Delivery service would be provided to maximize the amount of potential users	USER: the consumer who wants to buy fresh, local and sustainable fruits and vegetables at local stores. The user is willing to pay a bit more than in the supermarket for ecological and anti-greenwashing reasons. Some users are not willing to take more time and effort than shopping in the supermarket. PRESCRIPTOR: local shop supporters CUSTOMER: local fruits and vegetable stores, and users who want to make use of the delivery service	
WHAT IT DOES	WHAT IT CHANGES : VALUE PROPOSITION	
Gather local sellers in one platform that is easily accessible to the identified customer segment to sell their products. For users it provides accessibility, location and availability of products and local shops. Also, there is a delivery service such that users do not have to visit physical shops.	FROM USER: <ul style="list-style-type: none">We provide guarantee to the users that products are fresh, local and sustainable.We offer more transparency in the "green" product.We focus on local green shops.People will know what they receive for their subscription. FROM CUSTOMER: <ul style="list-style-type: none">Creating a network that helps gain visibility for new customers, thus empowering small businesses.	

Fig. 6: opportunity canvas for LocalFresh

The next step was to make clear who were our keyplayers: the customer and the user. For this, we created an empathy map and persona for both sides, starting with the customer (Fig. 7 and 8) followed up by the user (Fig. 9 and 10).

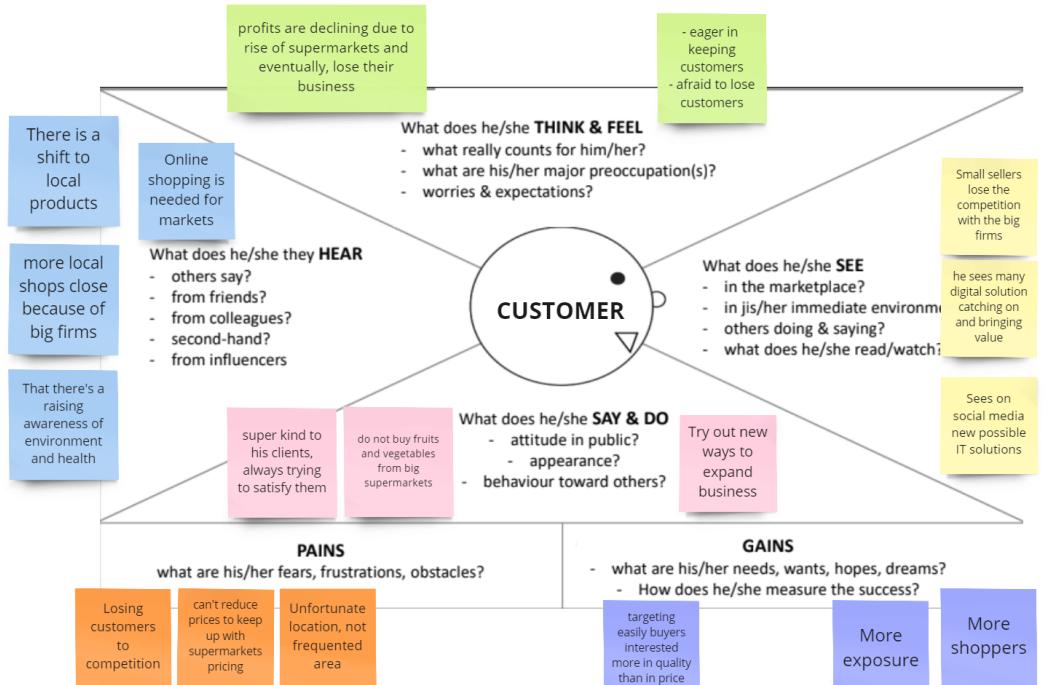


Fig. 7: empathy map for the local seller (customer)



Matteo

Occupation: **Grocery shop owner**
 Education: **Agriculture professional**
 Location: **Italy**
 Tech Skill Level: **6/10**
 Age: **44**

Personality traits
 Practical
 Explorative
 Driven

“I want to continue selling fresh and good products in my shop. However, I see my customers leaving due to competition with the big sellers.”

Bio

Matteo owns his family grocery store La Bancarella for over 20 years now. He has found a shift of customers from the small stores to big supermarkets over the last years, and not only for his store this is the case. The competition of supermarkets is high as they provide cheaper products in high variety of products and delivery services. However, he gets his products from local farmers around and believes in what he sells. He has tried multiple activities to attract

Goals

- Keep growing customers to keep the shop open
- Sell good and fresh products
- Maintain good relationships with loyal customers

Motivations

- Manage to profit
- Keep the store alive

Frustrations

- High competition with big supermarkets
- Can not lower the price because of size shop and quality food
- Small shops are closing so there is less availability of products in the neighborhood



Fig. 8: persona of the local seller (customer)



Fig. 9: empathy map of the consumer (user)

Francesca

Occupation: **CSR manager**
 Education: **Master organisations**
 Location: **Italy**
 Tech Skill Level: **8/10**
 Age: **30**

Personality traits
 Conscious
 Social
 Progressive

Bio

Francesca works as a CSR manager and has a busy life. As a millennial, she often uses social media and online information channels that formed her conscience towards sustainability. She wants to have quality food and support her local town, where she saw many small sellers close over the years. Francesca wants to have fresh food at home to take care of her family. As she works during the day, she does not have too much time to do groceries. She prefers local shops and food over big firms, but it takes her too much time and effort as she doesn't know which products are available and usually local shops don't provide home-delivery.

Goals

- Find products that are healthy, fresh and local
- Doing groceries that does not take too much effort and time
- Fresh food delivered at home

Motivations

- To maintain a healthy lifestyle
- Help local sellers in her community
- Convenience by delivery
- Better food taste

Frustrations

- Struggling to find fresh and healthy fruits and vegetables in the supermarkets within the neighborhood
- Too busy to spend more time shopping
- The vegetables she buys often don't taste good

LocalFresh
BUY GREEN. EMPOWER LOCALS

Fig. 10: persona for the consumer (user)

Business development process

The development started off with a problem brainstorm, which was energizing and inspirational. We found a topic in green washing and focused on that. We classified our topics for Green IT and IT for Green. The idea started with the observation that small shops were closing, and that consumers in supermarkets want to buy the sustainable and green products, but don't have the trust in what is mentioned on the packages.

First we had to study how the value chain goes for normal products and our contribution in this. In the following figure you can see the complete value chain of fruits and vegetables, and the bold parts are the parts concerning our value chain. The dotted line shows where we change the value chain.

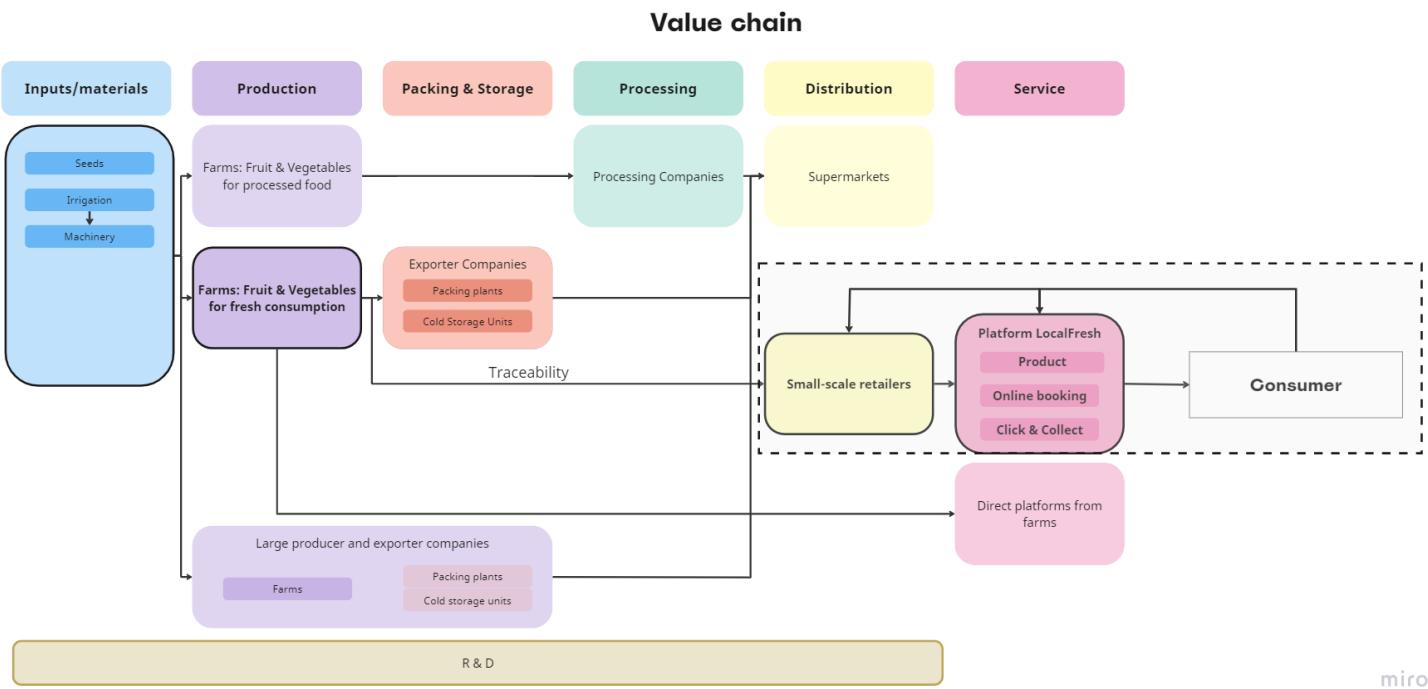


Fig. 11: value chain of fruits and vegetables. The dotted square is where LocalFresh comes in.

Now we have our first concrete ideas collected together in some of the practical canvases, it was time to do some more market research and see our position. As explained before we start in Florence, Italy. For this, we also conducted a competitive analysis in order to see our position in the market. Nowadays, people do groceries in different manners: the most traditional one is people going to the supermarket and we see these shops definitely as our direct competition. Another online option in Italy is Open Food Network and Cortilia, where the platform also connects consumers with local sellers. The first creates an option where consumers can pick their products up at the farms where the food is produced. The latter works closely together with farms and does delivery at people's homes. As can be seen in Fig. 12 LocalFresh (blue) scores more or less equal on many aspects compared to these companies, but stands out in the urban environment.

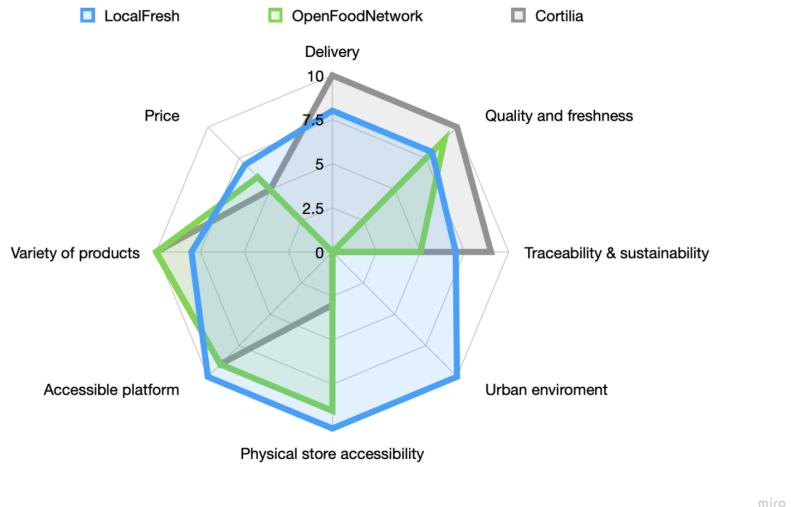


Fig. 12: competitive analysis comparing different aspects. LocalFresh (blue), OpenFoodNetwork (green) and Cortilia (grey)

Following, we find our position in the top right with high quality products in an urban environment, in the following matrix (Fig. 13). The supermarkets are placed together down right, with products of lower quality in an urban environment, and the online services are placed top left with products of high quality, but only placed in a rural environment.



Fig. 13: positioning of LocalFresh in the market

For the customer segment we looked into four different aspects: geographic, demographic, psychographic and behavioural as can be seen in Fig. 14 below.

SEGMENTATION

customer

Geographic:

Urban neighborhood
in Italy.

Demographic:

- Age: storeowners
younger than elderly

Psychographic:

- driven for their business
 - adaptable
- technology understanding and enthusiast
 - early adapter

Behavioural:

- open to new
ways

SEGMENTATION

users

Geographic:

Urban neighborhood in
Italy.

Demographic:

- Age: young adult until elderly (no use of phone)
- income: medium (not people going to discounts)

Psychographic:

- conscious consumers
- health & environment aware
- adaptable/explorers open to new experiences
- busy people
- tech savvy

Behavioural:

- high brand loyalty
- online shoppers
- willing to pay more for fresh and high-quality
- Healthy eating (fruits and vegetables)

Fig. 14: segmentation of the customer and user

Self-evaluation

The whole process was enjoyable, interesting and renewing. My teammates and I worked on it cohesively and in a constructive, cooperative manner. It is amazing to see how much can be achieved in less than two weeks. Starting the summer school, I did not have many ideas on what Green IT or IT for Green embodied. Throughout the summer school it became clear thanks to the professional talks we listened to and the research conducted together with my group.

The first step in the process was to align our expectations and wishes from the summer school. We all agreed to enjoy our team process and we all wanted to learn from the topic that was new for us. With my team Nina, Abdou, Filippo, Cheng-Yu and me, Iris we had a good connection from the beginning. We are all from different countries and backgrounds, and a range of age, which made the process even more interesting.

Starting from the brainstorm, it was easier than expected to come up with our problems. We created an open space where everyone could freely speak. Although some members included “No, but...” this was quickly transformed into “Yes, and...”. It was good to notice that we can also give feedback to each other. Concerning the topic: I was already interested in fighting against greenwashing, but as it is such a complex problem, it is even more important to narrow it down more precisely. It was not a specific goal of mine to work on it, but it does usually motivate me. After a group discussion we created a mix of two problems: small sellers are closing down because of competition, and consumers suffer from green washing. This was the starting point.

Then we learned about the different canvases in the first week. We received coaching from Erik and Maud who guided us throughout the process. Once we found a problem that all matched our interest, we quickly started thinking in the direction of solutions, but that was not the goal. So, thanks to them we were guided step by step to what is now called LocalFresh and I am very proud and happy with our results. Without the coaching, I might have thought it was too big or impossible to even continue with the idea. However, now it was possible because we handled the idea step by step, as explained here.

We started with the **problem** canvas, where we thought of the problem, customers, context, goal, gap and barriers, and alternatives to understand our problem better. Then, we continued with the **opportunity** canvas where we also focused on what the contribution of our product could be. Furthermore we went into the **market segmentation targeting and positioning** to see where we could start and for whom we are actually creating the platform. To profoundly understand who our customer and user is we created an **empathy map** and a **persona**. Towards the end we could put all this information together in a **lean canvas** to also focus on our revenue streams, key metrics and how we could spread and grow our product. To find our position in the market we researched our **competition**. Then it was time for the mid-term pitch to receive feedback and how we could adjust and sharpen our idea as feedback from others can always shed a different light. The feedback was mainly positive, and an improvement point was to focus on the delivery, or the online shop. We decided to focus on the online shop with a click & collect service. Contentwise we only still had to cover

our **value chain** and as the final touch we did a pitch training, which was very interesting and useful.

All in all I am content about the experience I gained with the summer school in Rennes. If I look back to the beginning of my EIT year in Madrid, I see a younger version of myself that had a harder time in sharing ideas and working together with such a variety of people than how I work together now. It was satisfying to notice how much I have learned already, now that we worked on a new concept with new people. Another aspect I enjoyed of the summer school is that it was intense in contrast to other university subjects: within two weeks we got to know each other, started a brainstorm and in the end we were able to do a pitch in front of our coaches and other professionals. I am grateful for the experience and I am looking forward to other experiences to come.

References

Reardon, T., & Hopkins, R. (2006). The supermarket revolution in developing countries: Policies to address emerging tensions among supermarkets, suppliers and traditional retailers. *The European Journal of Development Research*, 18(4), 522–545.

Igami, M. (2011). Does big drive out small? Entry, exit, and differentiation in the supermarket industry. *Review of Industrial Organization*, 38(1), 1-21.

Coelho, F. C., Coelho, E. M., & Egerer, M. (2018). Local food: Benefits and failings due to modern agriculture. *Scientia Agricola*, 75, 84-94.

Directorate-General for Environment. (2023). Field to fork: global food miles generate nearly 20% of all CO2 emissions from food.

https://environment.ec.europa.eu/news/field-fork-global-food-miles-generate-nearly-20-all-co2-emissions-food-2023-01-25_en#:~:text=General%20for%20Environment-,Field%20to%20fork%3A%20global%20food%20miles%20generate%20nearly%2020%25%20of,environmental%20impact%20of%20this%20trade%3E

Istituto Nazionale di Statistica (2021). Food trade: GDO is growing, small shops from bad to worse. <https://www.fippa.it/commercio-alimentare-cresce-la-gdo-di-male-in-peggio-per-i-piccoli-negozi/>

Ten thousand shops and small shops risk closing within 3 years (2022).

<https://www.italiaatavola.net/tendenze-mercato/economia-istituzioni/diecmila-negozi-piccole-botteghe-rischiano-di-chiudere-nel-giro-di-tre-anni/83443/>

MSU Extension (2013). 7 benefits of eating local foods.

https://www.canr.msu.edu/news/7_benefits_of_eating_local_foods

Schulp, J. A. (2015). Locavorism and seasonal eating (pp. 120-121). New York: Routledge.

Klaus G. Grunert, MAPP Centre, Aarhus University. Consumer attitudes and views on sustainable food systems. https://food.ec.europa.eu/system/files/2020-11/f2f_conf_20201016_pres-01.pdf

Deloitte (2022).Conscious consumer - Connecting with health and sustainability priorities.

<https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/consumer-business/deloitte-uk-the-conscious-consumer.pdf>