

**Louvain School of Management**

# Appendix

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M-GEST CEMS

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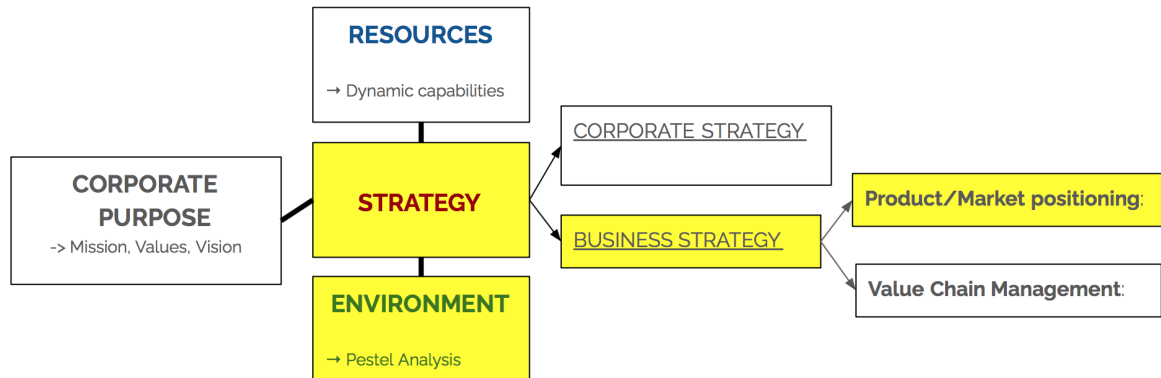
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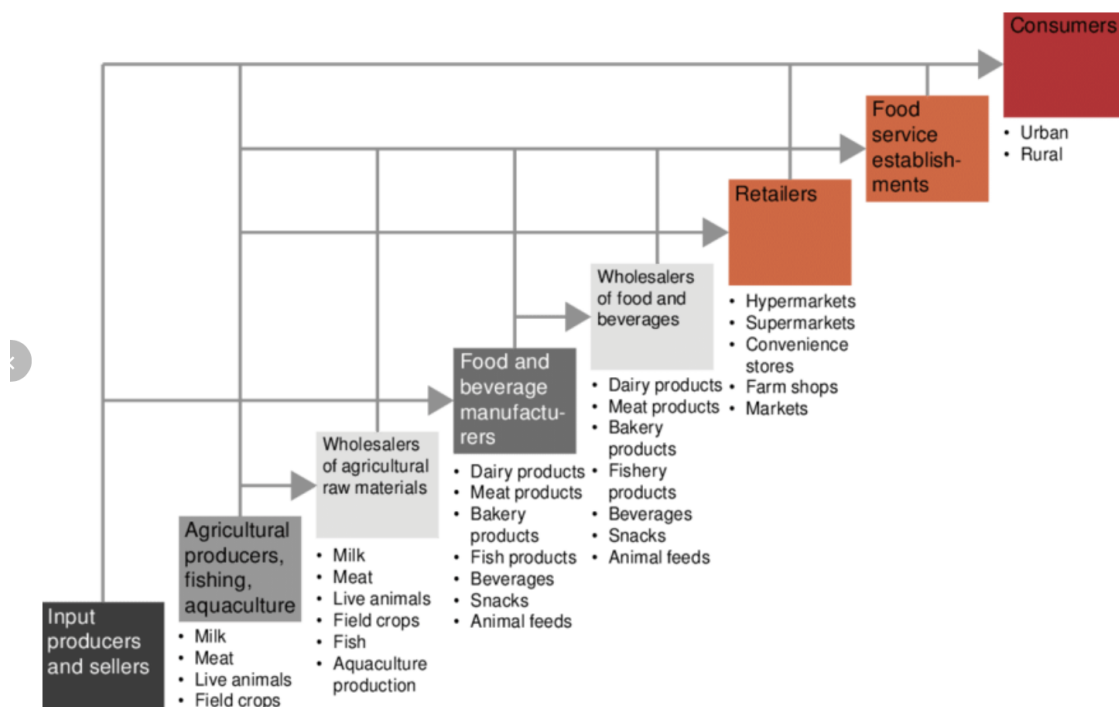
## Appendix 1 : Strategy framework.

Source : (Gailly, 2020).



## Appendix 2 : Agri-Food Supply Chain.

Source: (Viira, 2017)



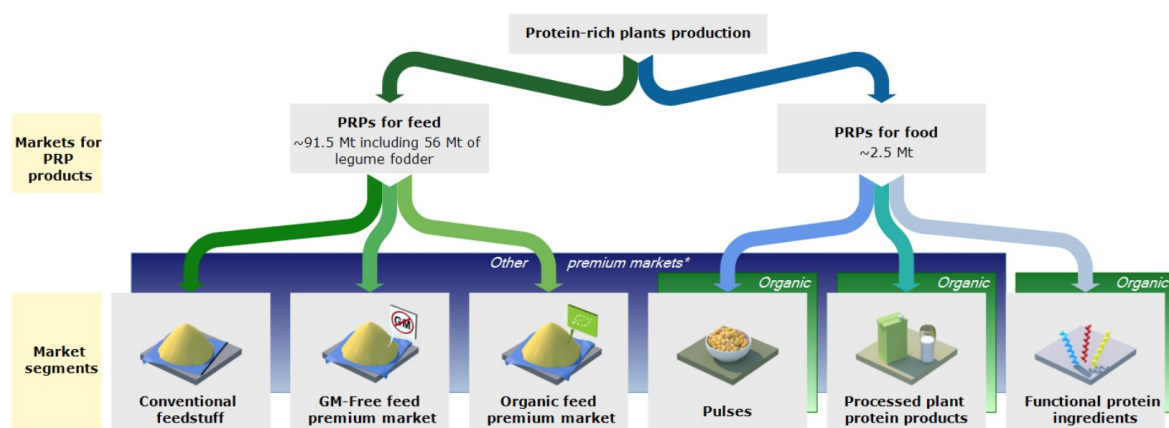
### Appendix 3: Plant-based proteins by category.

Source: (Kyriakopoulou et al., 2019)

Oilseed proteins	Soybeans, rapeseed/canola, cottonseed, peanut/groundnut, sunflower seed, sesame, safflower, flaxseed and linseed
Cereal protein	Wheat, corn, rice, barley, oats, sorghum and grain amaranth
Legume and pulse protein	Beans, chickpeas, guar, lentils, lupines, and peas
Leaf proteins	Alfalfa, lucerne, tobacco, mulberry bush, grass, sugar cane, sugar beet and clovers

### Appendix 4: Food, feed, and market segments in the protein-rich plants production.

Source: (Agrosynergie, 2018).

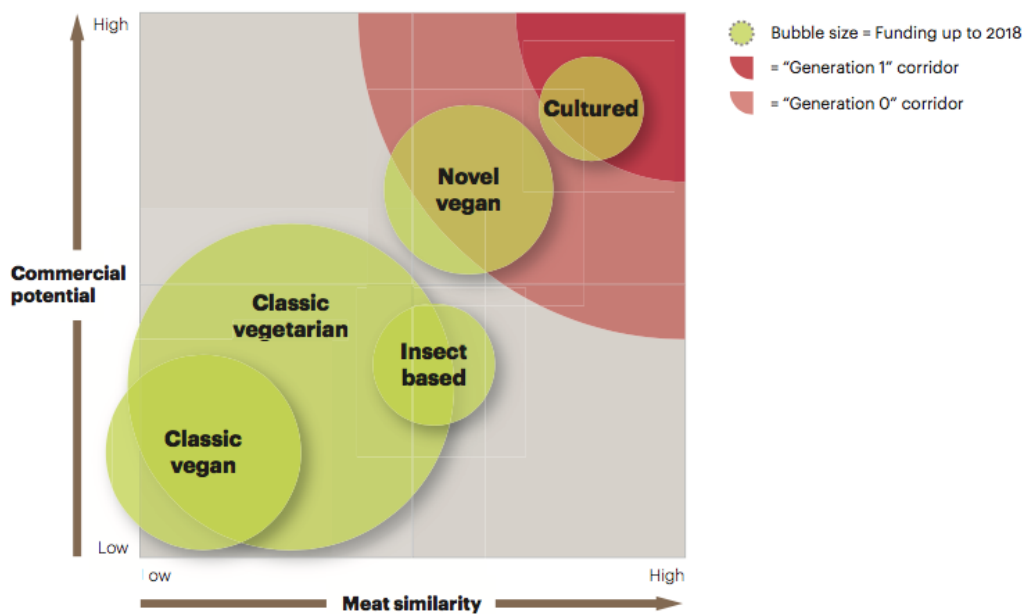


Appendix 5: Example of Quorn Products introduced in the 1980s.



Appendix 6: Meat substitutes categorized by similarity, commercial potential & funding.

Source: (Carsten et al, 2018)



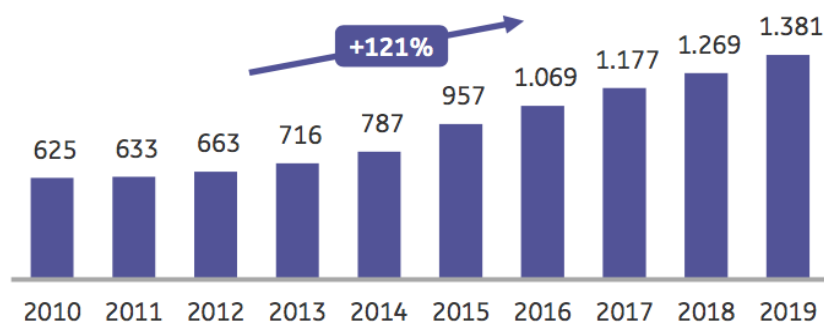
## Appendix 7: Examples of plant-based meat substitutes.

Source: (Beyond Meat, n.d; Impossible Foods, n.d; Vivera, n.d).



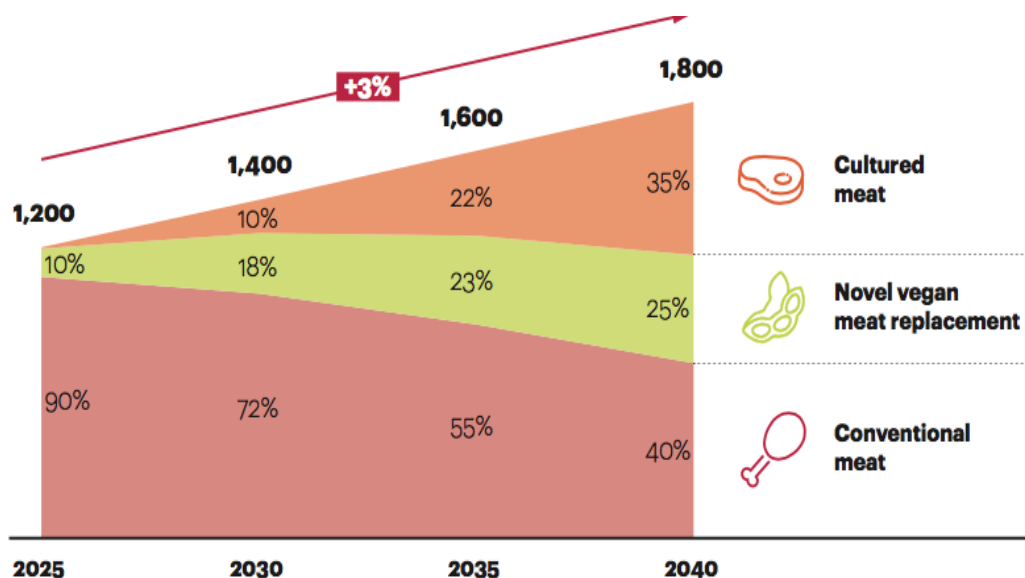
## Appendix 8: Value of retail sales meat substitutes in EU and in the UK, in million EUR between Market growth rate between 2010 and 2019.

Source: (Euromonitor in Geijer & Gammoudy, 2020).



Appendix 9: Forecast (in \$bn, global) of the global meat consumption: conventional meat, plant-based meat (novel vegan meat), and cultured meat.

Source: (Carsten et al., 2018)



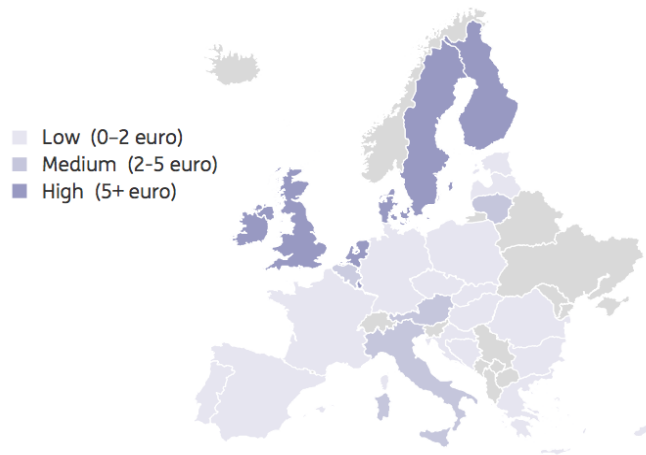
Appendix 10: Summarized overview of the PESTEL analysis, based on the literature.

<p><b>Political &amp; Legal</b></p>	<p><b>Drivers:</b></p> <ul style="list-style-type: none"> <li>- Education - Food Based Dietary Guidelines (FBDG) in Belgium (CSS, 2019)</li> <li>- Education - Increased influence of associations (Deloitte, 2019).</li> <li>- Financial incentives - EU &amp; BE strategic plan for local plant-based protein production: funding for agricultural shift (Agrosynergie, 2018; Hope, 2021; SoCoPro et al., 2018).</li> <li>- Financial incentives - Enhanced academic research (SoCoPro et al., 2018).</li> </ul> <p><b>Barriers:</b></p> <ul style="list-style-type: none"> <li>- Regulatory mechanism - EU Food Legislation on food labelling (Leialohilani &amp; de Boer, 2020)</li> <li>- Regulatory mechanism - Subsidies to livestock production (Kateman, 2021; Stoll-Kleemann &amp; Schmidt, 2017).</li> </ul>
<p><b>Economic</b></p>	<p><b>Drivers:</b></p>

	<ul style="list-style-type: none"> <li>- High purchasing power (European Commission, 2018 ; Geijier &amp; Gammoudy, 2020).</li> <li>- Increasing level of competition (Geijier &amp; Gammoudy, 2020).</li> <li>- Mergers &amp; acquisitions (Deloitte, 2019).</li> <li>- Increasing presence of retailers (Deloitte, 2019; European Commission, 2018).</li> </ul> <p><b>Barriers:</b></p> <ul style="list-style-type: none"> <li>- Low purchasing power (European Commission, 2018).</li> </ul>
<b>Socio-cultural</b>	<p><b>Drivers:</b></p> <ul style="list-style-type: none"> <li>- Decreased meat consumption in Belgium (Statbel, n.d.).</li> <li>- The flexitarian trend (European Commission, 2018 ; Deloitte, 2019; Geijier &amp; Gammoudy, 2020).</li> <li>- Growing social concerns (health, environment, moral, ethical) (Derbyshire, 2017; De Backer &amp; Hudders,2014)</li> </ul> <p><b>Barriers:</b></p> <ul style="list-style-type: none"> <li>- Changing consumer needs - Clean product (Kateman, 2021).</li> <li>- Changing consumer needs - Local product (Lazzarini et al., 2017)</li> </ul>
<b>Technological</b>	<p><b>Drivers:</b></p> <ul style="list-style-type: none"> <li>- Level of existing technology (Deloitte, 2019 ; Slade, 2018)</li> <li>- Emergence of cultured and insect-based meat (He et al., 2020).</li> </ul> <p><b>Barriers:</b></p> <ul style="list-style-type: none"> <li>- Level of existing technology (Geijer &amp; Gammoudy, 2020).</li> <li>- Technology's cost (Kateman, 2021)</li> <li>- Emergence of cultured and insect-based meat (Carsten et al., 2018; He et al., 2020)</li> </ul>
<b>Environmental</b>	<p><b>Drivers:</b></p> <ul style="list-style-type: none"> <li>- Impact of the livestock production on the environment (Carlsson-Kanyama &amp; Gonzalez, 2009; Carrington, 2018b ; Salonen &amp; Helne, 2012).</li> </ul> <p><b>Barriers:</b></p> <ul style="list-style-type: none"> <li>- Impact of climate change on plant-based proteins' availability in Europe (European Commission, 2018b).</li> <li>- Low diversity of plant-based proteins in EU northern countries (European Commission, 2018b).</li> </ul>

## Appendix 11: Consumer spending per capita/per year on plant-based meat substitutes in EU and in the UK.

Source: (Geijjier & Gammoudy, 2020).



## Appendix 12: Plant-based nuggets of Boni (Colruyt), Carrefour Veggie, and Delhaize Veggie.

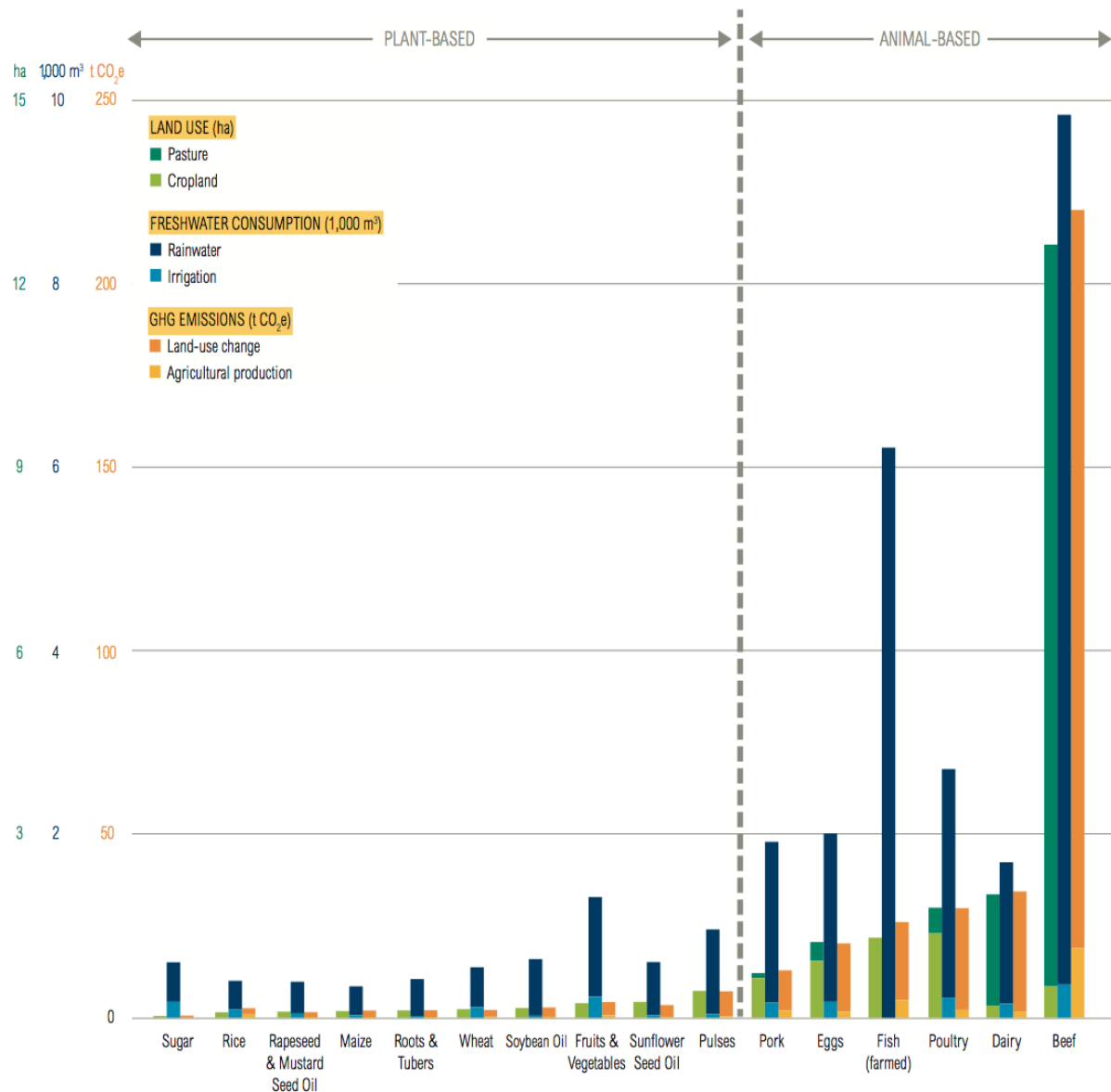
Source: internet.



## Appendix 13: Impact of different consumption choices on the environment: land use, freshwater, greenhouse gas emissions.

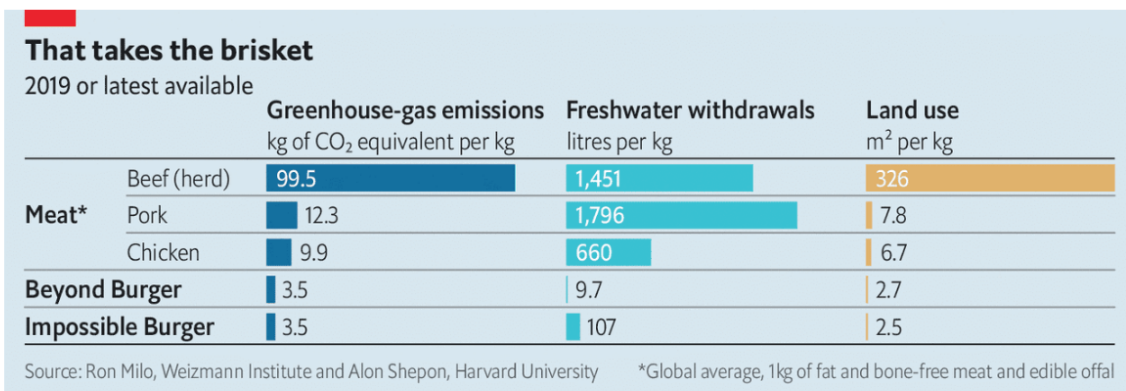
Source: (World Resources Institute, 2016).

### PER MILLION KILOCALORIES CONSUMED



## Appendix 14: Comparison between the environmental impact of meat and plant-based meat substitutes.

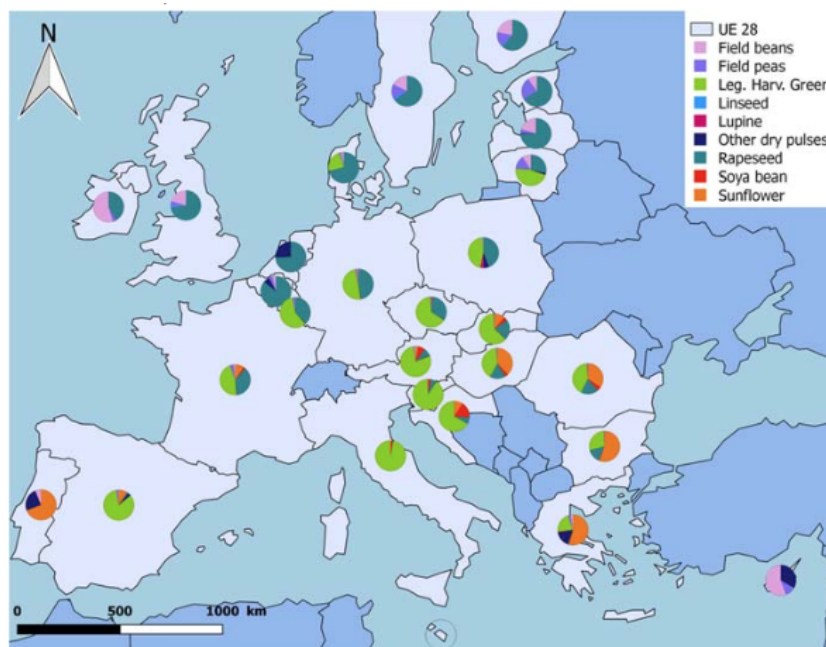
Source: (Harvard University in The Economist, n.d)



The Economist

## Appendix 15: EU Member states share of average production of protein-rich plants between 2014 and 2016.

Source: (Eurostat via European Commission, 2018b).



Map 2: Member States' share of average production of PRPs between 2014 and 2016 (Eurostat)<sup>39</sup>

## Appendix 16: Choice of diets in Belgium: 2018 vs 2020.

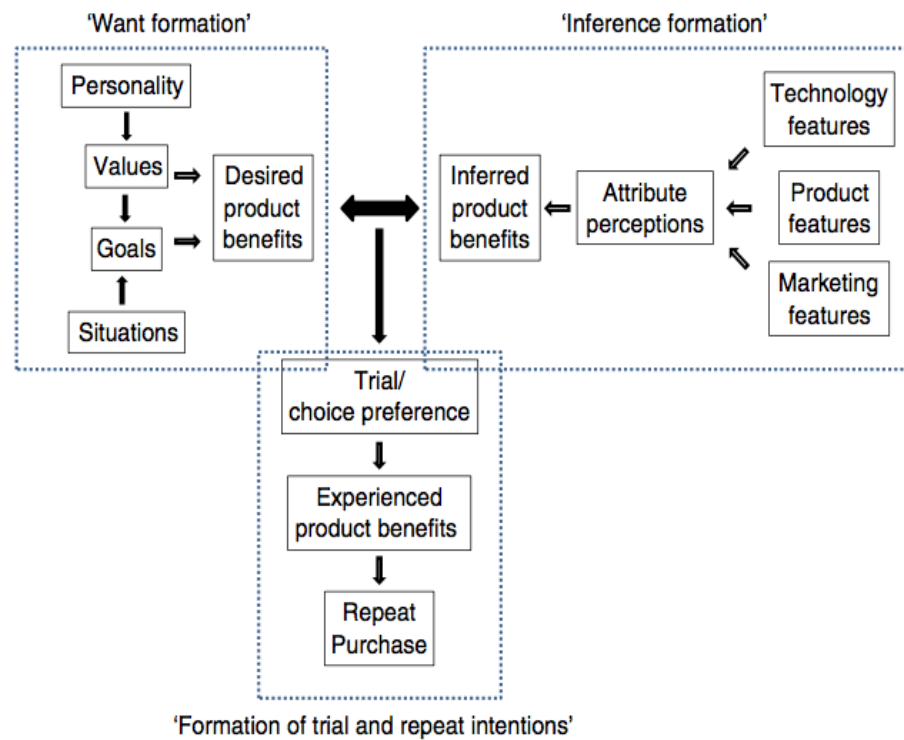
Source: (iVox, 2020).

<b>Choice of diets in 2020.</b>	<b>Proportion in 2020 (%) n=2000</b>
<b>Vegan</b> (eating/drinking animal-based products maximum 2 days/month)	1,7%
<b>Vegetarian</b> (eating meat or fish maximum 2 days/month)	3,6%
<b>Pescitarian</b> (eating only fish)	1,3%
<b>Flexitarian</b> (eating meat or fish maximum 4 days/week)	11%
<b>Vegetarian 1 day/week</b>	10,8%
<b>Omnivore</b> (eating meat or fish almost everyday)	71,6%

	<b>2020</b>
<b>Non-omnivore</b>	28,4%
<b>Omnivore</b>	71,6%

## Appendix 17: Consumer decision-making process.

Source: (Grunert & van Trijp, 2014).



## Appendix 18: An overview of the Schwartz Theory of Basic Values.

Source: Schwartz (2012).

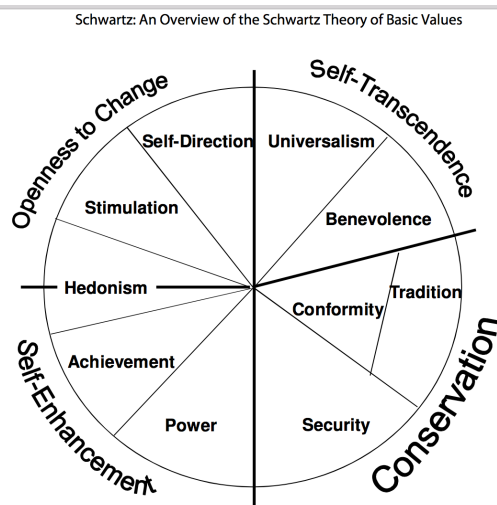
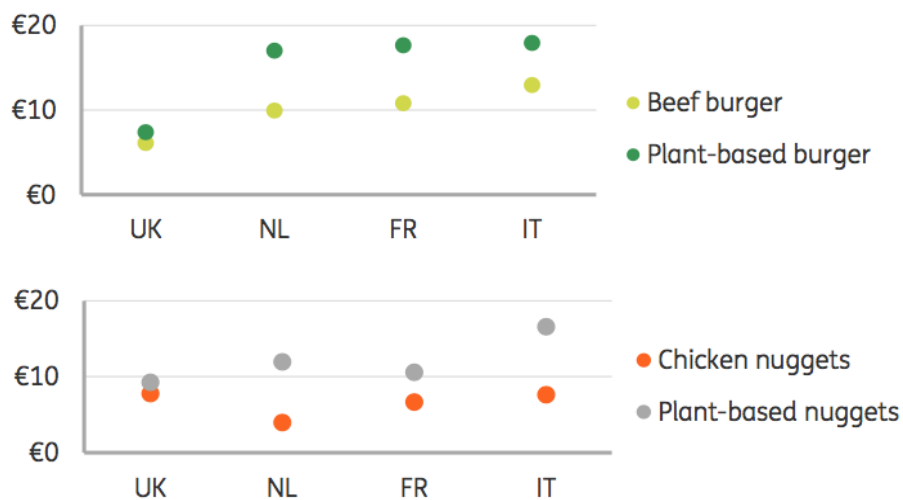


Figure 1. Theoretical model of relations among ten motivational types of value

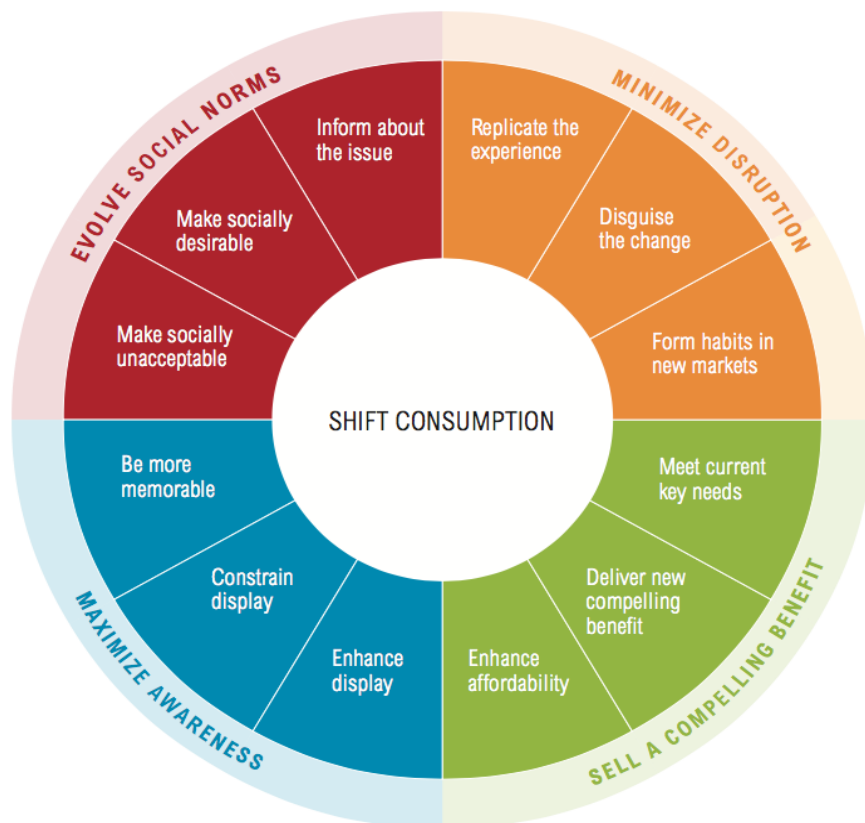
## Appendix 19: Retail price of popular meat products and plant-based alternatives per kilogram in a selection of countries.

Source: (Geijer & Gammoudy, 2020).



## Appendix 20: World Resources Institute' framework to shift diets.

Source: (World Resources Institute, 2016)



## Appendix 24: List of companies offering plant-based meat substitutes in Belgium.

Sources: Author (2021).

COMPANIES - NAME	Brands	Website
<b>NATIONAL RETAILERS</b>		
Carrefour (FR)	Carrefour Veggie, Carrefour Bio	<a href="https://www.carrefour.eu/fr/mieux-manger/actualites/jeudi-veggie-la-cuisine-vegetarienne-a-l-honneur/la-gamme-veggie-de-carrefour.html">https://www.carrefour.eu/fr/mieux-manger/actualites/jeudi-veggie-la-cuisine-vegetarienne-a-l-honneur/la-gamme-veggie-de-carrefour.html</a>
Delhaize (BE-NL)	Delhaize Veggie Delhaize Own Brand Delhaize Bio	<a href="https://www.delhaize.be/fr-be/shop/Viande-poisson-et-produits-vegetariens/Vegetarien/c/v2MEAVEG?pageNumber=0">https://www.delhaize.be/fr-be/shop/Viande-poisson-et-produits-vegetariens/Vegetarien/c/v2MEAVEG?pageNumber=0</a>
Colruyt (BE)	Boni, Bio, Everyday	<a href="https://colruyt.collectandgo.be/cogo/fr/branch/1454/veggie">https://colruyt.collectandgo.be/cogo/fr/branch/1454/veggie</a>
Aldi (DE)	Soy Pro, My Veggie Day	<a href="https://www.aldi.be/fr/nos-offres/Zoekresultaten.html?q=soy%20pro&amp;ctx=promotions&amp;category=">https://www.aldi.be/fr/nos-offres/Zoekresultaten.html?q=soy%20pro&amp;ctx=promotions&amp;category=</a>
Lidl (DE)	Next Level Meat, My Best Veggie	<a href="https://www.lidl.be/fr/assortiment/vegetarien-et-vegan">https://www.lidl.be/fr/assortiment/vegetarien-et-vegan</a>
<b>LARGE FOOD COMPANIES (FMCG)</b>		
Nestlé (SW)	Garden Gourmet	<a href="https://www.gardengourmet.be/fr">https://www.gardengourmet.be/fr</a>
Unilever (NL)	The Vegetarian Butcher	<a href="https://www.thevegetarianbutcher.com/">https://www.thevegetarianbutcher.com/</a>
Aoste (FR)	Le Végétarien	<a href="https://www.aoste.be/fr/vegetarisch/">https://www.aoste.be/fr/vegetarisch/</a>
Céréal (FR)	/	<a href="https://www.cereal.fr">https://www.cereal.fr</a>
Nutrition et Santé (FR)	Céréal Bio Grill Vegetal	<a href="https://www.nutritionetsante.com/nos-marques/nutrition-vegetale/">https://www.nutritionetsante.com/nos-marques/nutrition-vegetale/</a> <a href="https://www.cereal.be/fr/bio-vegan">https://www.cereal.be/fr/bio-vegan</a>
<b>START-UPS/SCALE-UPS/SMALL &amp; MEDIUM ENTERPRISES</b>		
Beyond Meat (US)	/	<a href="https://www.beyondmeat.com">https://www.beyondmeat.com</a>
Vivera (NL)	/	<a href="https://vivera.com">https://vivera.com</a>
Quorn (UK)	/	<a href="https://fr.quorn.be/a-propos">https://fr.quorn.be/a-propos</a>
GreenWay (BE)	/	<a href="https://greenway.be/fr/">https://greenway.be/fr/</a>
Bonrill (BE)	/	<a href="https://www.bonrill.be">https://www.bonrill.be</a>
Bioline (BE)	/	<a href="https://www.bioline.be/fr/">https://www.bioline.be/fr/</a>

The Bio Veggie Company (BE)	/	<a href="https://thebioveggiecompany.com/fr/burgers-etc/">https://thebioveggiecompany.com/fr/burgers-etc/</a>
The Blue Butcher (NL)	/	<a href="https://www.thebluebutcher.com">https://www.thebluebutcher.com</a>
Linck (FR)	/	<a href="https://www.linck.mc/our-products/">https://www.linck.mc/our-products/</a>
So Fine (NL)	/	<a href="https://www.sofine.eu/fr/">https://www.sofine.eu/fr/</a>

## Appendix 25: List of major global brands of PBMS, not present in Belgium yet.

Sources: Author (2021).

COMPANIES - NAME	COUNTRY	WEBSITE
Les Nouveaux Fermiers	France	<a href="https://lesnouveauxfermiers.com">https://lesnouveauxfermiers.com</a>
Meatless Farm	United Kingdom	<a href="https://www.meatlessfarm.com">https://www.meatlessfarm.com</a>
Tofurky	United Kingdom	<a href="https://tofurky.com/#contact">https://tofurky.com/#contact</a>
Impossible Foods	USA	<a href="https://www.impossiblefoods.com">https://www.impossiblefoods.com</a>
Hari&Co	France	<a href="https://www.hari-co.com">https://www.hari-co.com</a>
Heura-Foods of tomorrow	Spain	<a href="https://www.heurafoods.com">https://www.heurafoods.com</a>
Veganz	Germany	<a href="https://veganz.com">https://veganz.com</a>
Moving Mountains	United Kingdom	<a href="https://movingmountainsfoods.com/mission/">https://movingmountainsfoods.com/mission/</a>
Ojah	Netherlands	<a href="https://www.ojah.eu">https://www.ojah.eu</a>
Field Roast	USA	<a href="https://fieldroast.com">https://fieldroast.com</a>
Sunfed	Australia/New-Zealand	<a href="https://sunfed.world">https://sunfed.world</a>
Like Meat	Germany	<a href="https://likemeat.com/de/">https://likemeat.com/de/</a>
OmniPork	Hong-Kong	<a href="https://omnipork.co">https://omnipork.co</a>
No Evil Foods	USA	<a href="https://www.noevilfoods.com">https://www.noevilfoods.com</a>

## Appendix 26. Interview guide for consumers.

### A. INTRODUCTION

#### *Information to provide at the beginning*

- This interview will be recorded in order for me to avoid taking notes.
- Quick introduction of myself.
- Quick introduction of my thesis: presenting the general context and thesis' objective in regards to consumers' perceptions.
- Explanation on why I want to interview this specific consumer.
- 3 sections: one short on you as a consumer, one longer on your opinion about PBMS, and the last one on your opinion about meat reduction.  
→ Answer the questions with your opinion, let me know if it is not clear enough.

### B. QUESTIONS ON THE CONSUMER

**Themes: Consumer profile & diet; Purchasing criteria for food products; Motivations towards meat consumption.**

1. Could you please introduce yourself?  
→ Name, Age, Gender, Profession-Studies, Region/city
2. How would you describe your general diet in terms of meat consumption?
3. How often do you eat meat? What type of meat?
4. How often do you eat a 100% vegetarian diet?
5. Why do you consume meat?
6. Is your diet important for you? Why?
7. Do you spend time thinking about what you are going to eat during your day?
8. When purchasing food, what is the most important for you? (in other words: what is essential for you while consuming food and will drive your food purchases).

### C. QUESTIONS ON CONSUMER PERCEPTION OF PLANT-BASED MEAT SUBSTITUTES

**Themes: Experience with PBMS, Consumer Perceptions of PBMS**

9. Can you give your own definition of plant-based meat substitute?

**Explain our scope:** the thesis focuses on plant-based meat substitutes with meat-like aspects (example: plant-based burger) and not on other substitutes such as leguminous plants (lentils), or tofu.

→ Make sure they understand the scope + show pictures if not.

10. Have you ever seen this kind of product?
11. Have you ever tried this kind of product?  
→ If yes, in which context? Did you like it?  
→ If no, why not?

→ Make them visualise plant-based burgers & nuggets: 'these products will be used to answer the next questions'.

→ Make sure they can visualise them + show pictures if not.

12. Do you have a positive or negative opinion on these products?

→ We will now go over the different product characteristics & features.

13. What is your opinion on the **sensorial attributes** of this product (taste, smell, texture, appearance, for instance when I see a muffin I will think it has the perfect soft texture)?

→ What do you think of the potential taste? Why?

→ What do you think of the texture? Why?

→ What do you think of the appearance (colour, shape)? Why?

→ What do you think of the smell?

14. Would you consider PBMS as **healthy**?

→ Yes, no, why?

→ What do you think of the composition of this product? Why?

→ What do you think of the protein sources or quantity of this product? Why?

15. Do you consider this product as **convenient**?

→ Do you think this product is available everywhere? Where? Easy to find? Why?

→ Do you think this product is easy to prepare? Why?

→ Do you think it would take you more-less-same time to prepare a meal with it than if you had to do it with meat? Why?

→ Do you have ideas about how to consume this product as part of a meal? Give examples.

16. What do you think of the level of **naturalness** (natural or artificial?) of these products? (linked to the production method)

17. What is your opinion on the **environmental and more globally social impact** of these products? (i.e good for the environment, good for the animal welfare)

→ Do you consider this product as environmentally friendly? Why?

→ Do you consider this product as moral/ethical friendly? Why?

→ Is your opinion based on a comparison with meat? Have you ever thought about comparing it to any other products?

18. What is your opinion on the **price** of this product even if you are not aware of it?  
→ To which product do you compare it? Why?

#### **D. QUESTIONS ON TRIAL & REPEAT INTENTIONS**

**Themes: Consumer Attitudes, Purchase Intentions**

19. Before being aware of the range of available plant-based meat substitutes, what is your opinion on the diversity of options you have in this range? Why?

→ Introduce other plant-based meat substitutes: sausages, cold-cuts, mince.

20. Do you consider all the plant-based meat substitutes as the same products in one similar range? Or do you think there are any differences between these products?

→ If yes, which ones?

21. Do you have the intention to buy these kinds of products in the future?  
Why, why not?

**If the interlocutor has a positive attitude towards PBMS:**

22. Imagine you have a plant-based meat counterpart for each animal-based product, which type of plant-based meat substitutes would you buy?

23. Which plant-based meat products will you never buy?

24. In which type of situations do you think this product is appropriate to be consumed? ☑

25. Sensorial aspects: do they have to look alike?

26. How could the companies improve their products?

**You have a negative attitude towards these products.**

27. What do you think could make you change your opinion?

#### **E. QUESTIONS ON OMNIVORES VALUES, FOOD CONSUMPTION MOTIVES & WILLINGNESS TO REDUCE MEAT CONSUMPTION**

**Themes: Values; Vegetarianism; Flexitarianism; Motives & Barriers towards meat reduction**

→ Provide definitions of vegetarianism, flexitarianism, and omnivores.

28. What is your opinion about *your diet* (definition: eating meat and fish almost every day)?
  - Do you consider it good-bad? Why?
  - For society, for themselves (health for instance)?
  
29. Why is it important for you to consume meat almost everyday?
30. What are the benefits of this product?
31. What are the disadvantages of consuming meat for you?
32. Do you have knowledge on how to replace meat?
  
33. Do you consider that your diet reflects any particular value?
34. What do you value in your diet?
  
35. What is your opinion about **vegetarianism** and vegetarians (definition: not eating meat or fish, still eating animal products such as eggs or cheese)?
  - Do you consider it good-bad? Why?
  - For society, for themselves (health for instance)?
  
36. What is your opinion about **flexitarianism** (definition: eating meat and fish only 3 days/week)?
  - Do you consider it good-bad? Why?
  - For society, for themselves (health for instance)?
  
37. Have you ever thought about reducing your meat consumption?
  - Yes, no, why?
  
38. Do you consider that reducing your meat intake will lead you to consuming more plant-based meat substitutes?

## Appendix 27. Interview guide for professionals.

### A. INTRODUCTION

#### ***Information to provide at the beginning:***

- Remind that the interview will be recorded in order for me to avoid taking notes.
- Introduction myself: studies, interest in the subject.
- Introduce the thesis: presenting the general context and thesis' objectives.
- Provide an explanation on the purpose of the interview of this specific company (important to show the interlocutor that I have done some research on the company -knowledge about the products & location).
- Present the 3 sections: introduction, external environment, consumers analysis, & future outlook of the market
- Remind him/her to give his/her opinion: If you don't want to answer certain questions, there is no problem. Keep in mind that I am analysing the market for plant-based meat substitutes in Europe & Belgium, and it is not a specific analysis of your company.

1. Could you please introduce yourself and your company?
2. What is your exact position in this company?  
→ Since when did you occupy this position?

### B. QUESTIONS ON THE COMPANY

#### **Themes: Motives, Value Proposition of PBMS, Growth**

Present quick research on the PBMS offered by the company.

→ range of PBMS: number of products, flavours, evolution in time.

3. Since when do you sell PBMS?
4. Why have you decided to sell PBMS?  
→ Motives

5. What is the value proposition of your PBMS? (*Definition value proposition*: simple statement that summarizes why a customer would choose your product or service, for instance: Uber – The Smartest Way to Get Around)

6. Do you experience growth for PBMS?  
→ How do you explain it? (transition to external factors).

### **C. QUESTIONS ON THE EXTERNAL ENVIRONMENT**

**Themes: Policies, Laws, Economy, Social trends, Environment, Technology.**

#### **Explain my approach with the PESTEL framework:**

'During the literature review, I was able to identify several opportunities and challenges or threats emerging from several external factors. These factors are beyond the control of the company, but still have an impact on companies' activities. I follow the PESTEL framework to identify these opportunities and threats, being the consequences of several external factors: political, economic, socio-cultural, technological, environmental, and legal.'

→ The purpose of this section is to have your opinion on these factors and their impact on the market for PBMS. In other words what are the external drivers and barriers of the market for PBMS.

**Political & Legal factors.** Political factors cover various forms of government interventions and political lobbying activities in an economy (example: government providing subsidies). Legal factors cover what is allowed within the territories the companies operate in (examples: consumer law-safety, employment legislation, international regulations).

7. Do you think of any political and legal factors impacting your business and more globally the market for plant-based meat substitutes in Europe (and in Belgium)?

→ Specific to Belgium or to the EU? Or to another country?

→ Driver or barrier? Why?

→ Provide some examples if needed: EU Food Legislation, Subsidies, Production of protein-rich plants in Europe, Dietary guidelines

**Economic factors** cover the industry environment and the macro-economic environment.

8. Do you think of any economic factors impacting your business and more globally the market for plant-based meat substitutes in Europe (and in Belgium)?

→ Specific to Belgium or to the EU? Or to another country?

→ Driver or barrier?

→ Provide some examples if needed: Level of competition, Stage of the market, Role of retailers

**Social-cultural factors** cover the emerging social, cultural and demographic trends (examples: education standards, consumer needs, living standards, gender roles, lifestyle & attitude changes).

9. Do you think of any social and cultural factors impacting your business and more globally the market for plant-based meat substitutes in Europe (and in Belgium)?

- Specific to Belgium or to the EU? Or to another country?
- Driver or barrier? Why?
- Provide some examples if needed: Flexitarian trend, Growing social concerns, Consumer trends towards innovative, transparent, local products, Media coverage & influence

**Technological factors** cover the rate of technological innovation and development affecting a market or an industry (example: a new method of distribution or manufacturing).

10. In your opinion, which technological factors are impacting your business and more globally the market for plant-based meat substitutes (in Belgium)?

- Specific to Belgium or to the EU? Or to another country?
- Driver or barrier? Why?
- Provide some examples if needed: Current level of technology, Scalability, Future level of tech, Cultured and insect-based meat

**Environmental factors** cover the influence of the surrounding environment and the impact of ecological aspects. (examples: recycling procedures, carbon footprint, waste disposal and sustainability).

11. In your opinion, which environmental factors are impacting your business and more globally the market for plant-based meat substitutes in Europe (and in Belgium)?

- Specific to Belgium or to the EU? Or to another country?
- Driver or barrier? Why?
- Provide some examples if needed: Impact of the meat industry on the environment, Impact of climate change on the availability of raw materials

12. Before moving to the next section, do you think of any other external factors (not mentioned before) influencing your business positively or negatively?

#### **D. QUESTIONS ON CONSUMERS**

**Themes: Target group, Evolution**

13. Who do you think is the target of PBMS?  
→ Age, Diet, Location, Education.
14. Who is your target? Why?

15. Do you think this target group will evolve in the future?  
→ Towards which type of consumers?

**E. QUESTIONS ON GROWTH STRATEGIES & PRODUCT DEVELOPMENT**

**Themes: Price, Promotion, Place, Product,**

→ **Present the 4Ps marketing mix:** Product, Price, Place, Promotion.

16. Which P is the most important to grow the market for PBMS?  
→ Why?

17. What should be done in terms of price strategy to grow the market?  
→ Below meat products?  
→ Why?

18. What should be done in terms of promotion to grow the market?  
→ Tastings? Discounts?  
→ Why?

19. What should be done in terms of distribution channels?  
→ Are you selling PBMS in other places than in retailers?  
→ Why?

→ **Remind the focus on Product development.**

20. Would you say the current products available on the market meet perfectly consumer needs & expectations? Yes, no, why?

21. How important is it for you to reproduce meat-like aspects on your plant-based meat alternatives (□ texture, taste, appearance, smell)?

22. Do you believe that companies should develop new plant-based meat substitutes in order to increase their sales?  
→ If yes, which ones?  
→ If yes, why?

23. Should current products be improved?

24. What kind of benefits can still be offered by developing new products in the market?  
→ Price, Convenience, Sensorial aspects, Health, Sustainability, Transparency

25. What are the barriers and risks of a product-development strategy?

→ **As a conclusion**, mention the Ansoff Matrix and define the different possibilities in terms of growth strategies:

- Market development strategy: entering new market- new geographies and/or customer segment
- Penetration strategy: increasing market share of existing products in current markets
- Product development: consists of developing new products for existing markets
- Diversification strategies where the company will develop new products to enter new markets

26. Do you consider product development as the best strategy for your company?

And, for the sector in general?

If no, which one would suit better? And, why?

## Appendix 28. Interview guide for experts.

### A.INTRODUCTION

#### ***Information to provide at the beginning:***

- Remind that the interview will be recorded in order for me to avoid taking notes.
  - Introduction myself: studies, interest in the subject.
  - Introduce the thesis: presenting the general context and thesis' objectives.
  - Provide an explanation on the purpose of the interview of this specific company.
  - Present the 3 sections: introduction, external environment, consumers analysis, & future outlook of the market
  - Remind him/her to give his/her opinion: If you don't want to answer certain questions, there is no problem.
3. Could you please introduce yourself and your organisation?
4. What is your exact position in this organisation?  
→ Since when did you occupy this position?

### **B. QUESTIONS ON THE EXTERNAL ENVIRONMENT**

**Themes: Policies, Laws, Economy, Social trends, Environment, Technology.**

**Explain my approach with the PESTEL framework:**

‘During the literature review, I was able to identify several opportunities and challenges or threats emerging from several external factors. These factors are beyond the control of the company, but still have an impact on companies’ activities. I follow the PESTEL framework to identify these opportunities and threats, being the consequences of several external factors: political, economic, socio-cultural, technological, environmental, and legal.’

→ The purpose of this section is to have your opinion on these factors and their impact on the market for PBMS. In other words what are the external drivers and barriers of the market for PBMS.

**Political & Legal factors.** Political factors cover various forms of government interventions and political lobbying activities in an economy (example: government providing subsidies). Legal factors cover what is allowed within the territories the companies operate in (examples: consumer law-safety, employment legislation, international regulations).

8. Do you think of any political and legal factors impacting the market for plant-based meat substitutes in Europe (and in Belgium)?

→ Specific to Belgium or to the EU? Or to another country?

→ Driver or barrier? Why?

→ Provide some examples if needed: EU Food Legislation, Subsidies, Production of protein-rich plants in Europe, Dietary guidelines

**Economic factors** cover the industry environment and the macro-economic environment.

9. Do you think of any economic factors impacting the market for plant-based meat substitutes in Europe (and in Belgium)?

→ Specific to Belgium or to the EU? Or to another country?

→ Driver or barrier?

→ Provide some examples if needed: Level of competition, Stage of the market, Role of retailers

**Social-cultural factors** cover the emerging social, cultural and demographic trends (examples: education standards, consumer needs, living standards, gender roles, lifestyle & attitude changes).

10. Do you think of any social and cultural factors impacting the market for plant-based meat substitutes in Europe (and in Belgium)?

→ Specific to Belgium or to the EU? Or to another country?

→ Driver or barrier? Why?

→ Provide some examples if needed: Flexitarian trend, Growing social concerns, Consumer trends towards innovative, transparent, local products, Media coverage & influence

**Technological factors** cover the rate of technological innovation and development affecting a market or an industry (example: a new method of distribution or manufacturing).

11. In your opinion, which technological factors are impacting the market for plant-based meat substitutes (in Belgium)?

→ Specific to Belgium or to the EU? Or to another country?

→ Driver or barrier? Why?

→ Provide some examples if needed: Current level of technology, Scalability, Future level of tech, Cultured and insect-based meat

**Environmental factors** cover the influence of the surrounding environment and the impact of ecological aspects. (examples: recycling procedures, carbon footprint, waste disposal and sustainability).

12. In your opinion, which environmental factors are impacting the market for plant-based meat substitutes in Europe (and in Belgium)?

→ Specific to Belgium or to the EU? Or to another country?

→ Driver or barrier? Why?

→ Provide some examples if needed: Impact of the meat industry on the environment, Impact of climate change on the availability of raw materials

13. Before moving to the next section, do you think of any other external factors (not mentioned before)?

## **F. QUESTIONS ON PRODUCT DEVELOPMENT (optional)**

### **Themes: Product Development**

→ **Remind the focus on Product development.**

14. Do you believe that companies should develop new plant-based meat substitutes in order to increase their sales?

→ If yes, which ones?

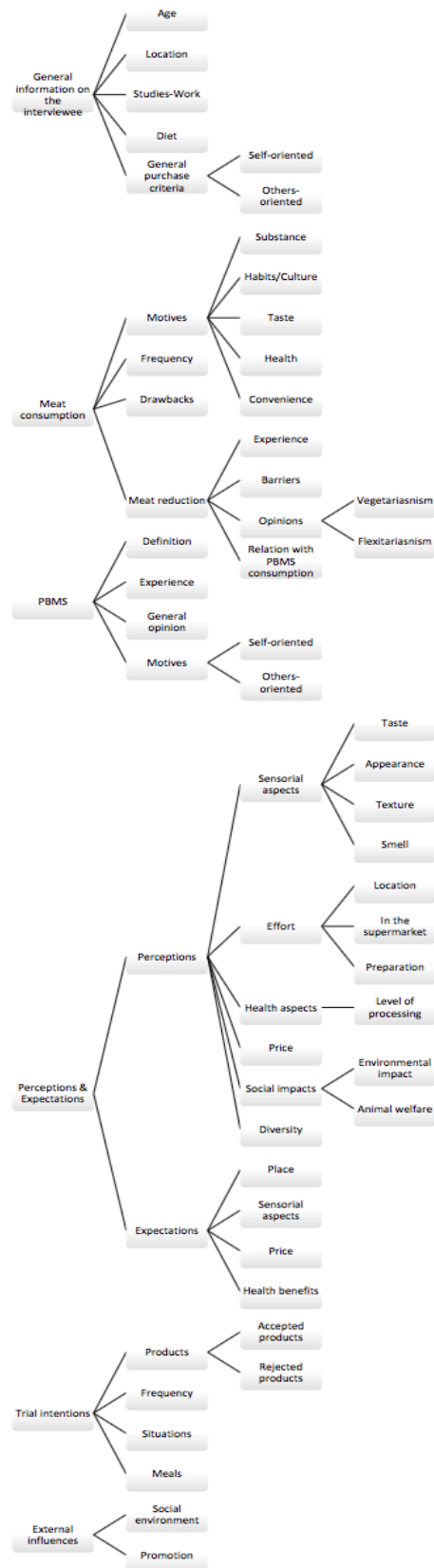
→ If yes, why?

15. Should current products be improved?

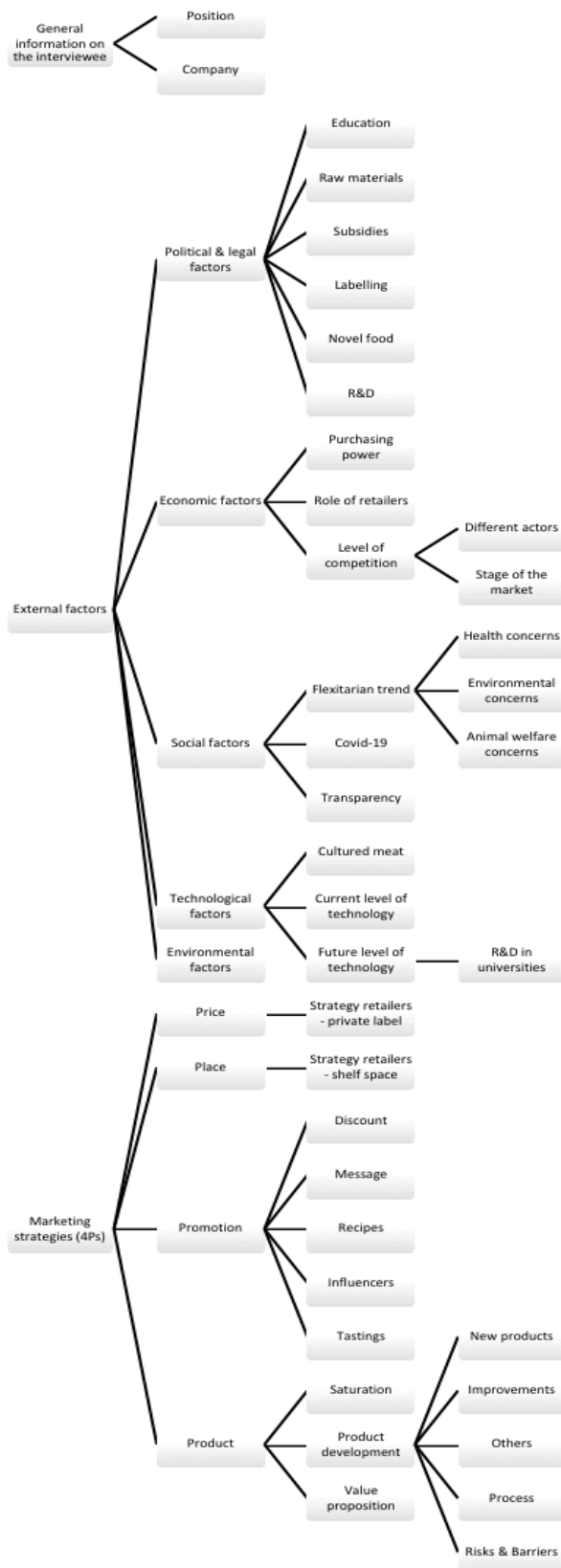
16. What kind of benefits can still be offered by developing new products in the market?

→ Price, Convenience, Sensorial aspects, Health, Sustainability, Transparency

## Appendix 29. Coding grid – consumers' interviews.



## Appendix 30. Coding grid – professionals and experts’ interviews.



Appendix 30. Summary of the most frequent product-related perceptions collected during the interviews with consumers.

Aspect	Summary of the most frequent perceptions	Inferred product benefit or barrier?	Comparison with the literature review (LR)
			Same findings Provide more details Contradictory findings
<b>Sensoriel aspects</b>	Pbms look like meat (appearance)	Benefit	Not covered by the LR
	Pbms are not tasty	Barrier	Not covered by the LR
	Pbms look like meat (appearance)	Barrier	Not covered by the LR
	Pbms seem to be substantial (shape)	Benefit	Not covered by the LR
	Pbms does not like meat (appearance)	Barrier	Not covered by the LR
<b>Health &amp; natural aspects</b>	Pbms are healthy	Benefit	(Elzerman et al.,2013)
	Pbms are healthier than an overconsumption of meat	Benefit	(Michel et al., 2021)
	Pbms are processed but still healthy and natural	Benefit	Michel et al. (2021)
	Pbms are processed and unhealthy	Barrier	(Hoek et al., 2011) (Good Food Institute, 2020)
<b>Convenience (effort)</b>	Pbms are easy to find	Benefit	Not covered by the LR
	Pbms are not easy to find	Barrier	Not covered by the LR
	Pbms are easy to prepare	Benefit	(Michel et al.,2021)

	Pbms could be complicated to integrate in a meal	Barrier	(Elzerman et al., 2013)
	Pbms are easy to find in the supermarket	Benefit	Not covered by the LR
	Pbms are not easy to find in the supermarket	Barrier	Not covered by the LR
<b>Environmental and social impact</b>	Pbms are better for the environment than meat	Benefit	Michel et al. (2021)
	Pbms are good for animal welfare	Benefit	Hoek et al. (2011)
	Pbms are bad for the environment	Barrier	Not covered by the LR
	No opinion	Neutral	
<b>Price</b>	Pbms are expensive	Barrier	Elzerman et al. (2013) Michel et al. (2021)
	Pbms are more expensive than cheap meat	Barrier	Michel et al. (2021)
	Pbms are less expensive than qualitative meat	Neutral	Michel et al. (2021)
	Price is ok	Neutral	Not covered by the LR
<b>Diversity</b>	There is choice but no variety	Benefit/Barrier	(Deloitte, 2019)
	There is not a lot of choice, nor variety	Barrier	(Deloitte, 2019)
	There is more and more choice	Benefit	Not covered by the LR

Appendix 31. Summary of the impact of external factors on the marketing strategies of companies selling plant-based meat substitutes.

External factors	Description	Impact on the strategies of companies selling PBMS	Driver or Barrier?
<b>Political</b>	EU & BE food products labelling legislation	Positioning of PBMS	Barrier
	EU subsidies to the meat industry	Price of meat	Barrier
	EU Novel Food legislation	Product development	Barrier
	EU subsidies to R&D	Product development	Driver
	EU subsidies to PRPs production	Price of PBMS	Driver
	Communication & education towards plant-based diets	Consumer interest in meat reduction	Driver
	NGOs & associations actions	Consumer interest in meat reduction	Driver
<b>Economic</b>	Level of purchasing power	Consumer willingness to pay	Driver & Barrier
	Increased level of competition	- Level of technology - Consumer awareness	Driver
<b>Socio-cultural</b>	Flexitarian trend (drived by growing social concerns & by the covid)	Consumer interest in meat reduction	Driver
	Needs for more transparency (origin, composition, processing)	Product development	Barrier
	Cultural differences in Belgium	Product development	Barrier
<b>Technology</b>	Current level of technology	Product development	Driver
	Current level of technology	Product development	Barrier
	Future level of technology	Product development	Future driver

	Cultured meat	Consumers awareness	Driver
<b>Environment</b>	Environmental impact of the meat industry	Consumers interest in meat reduction	Driver