A group of vegetables and meat on a wood surface

Description automatically generated

**Workbook Brainstorming Balanced Bite**

# Index

1. Introduction
2. Intermediate results
3. Further input
4. Appendix 1
5. Appendix 2

# Introduction

The ministry of health is concerned about the decreasing levels of health among the population and the increase of health costs. The problem statement includes various reasons for the decreasing health levels among the population. Due to a change in dietary behaviour due to an increased awareness of sustainability, which is thought to come with a decrease in the intake of essential nutrients. Another reason could be that the population is becoming less physically active. Finally, the rise of mental health issues as a consequence of the covid-19 pandemic potentially also plays a role. This problem is a messy problem and is therefore entangled with multiple sub-problems. To extract as much information as possible and to stimulate creativity amongst stakeholders, The problem is divided in in five core questions that were used during the intervention session. These five questions are:

1. Why do citizens lack nutritional value in their diet?
2. How could we increase the nutritional value of citizens’ diet?
3. How could we motivate people to eat more nutritious food?
4. How do we make the lifestyle change sustainable/a long term change?
5. What role could you (the stakeholders) play in decreasing health costs?

Due to the complexity of this problem, it is essential to include all stakeholders in the problem-solving process. Luckily, the consultants form Balanced Bite are experts on facilitating a group-decision process, especially brainstorming. Brainstorming, and more specifically, the nominal group technique is the intervention method chosen for this problem. The nominal group technique, similar to brainwriting, is a written form of brainstorming that consists of stakeholders generating their own ideas in the first phase, then each idea is gathered and presented, and stakeholders are given the opportunity to reflect and ask for clarification. This allows for a unique combination of simultaneously generating and reflecting which enables increased cognitive ability (Paulus & Kenworthy, 2019). Furthermore, this written form decreases the fear of evaluation amongst stakeholders which is essential for the generation of as many ideas as possible. This is also the aim of the selected method, since a higher number of ideas will in turn lead to good ideas in terms of novelty and utility (Paulus & Kenworthy, 2019). Finally, the protocol devised by Balanced Bite consisted of minor details such as small breaks and the alternation between individual and collective brainstorming since that is proven to boost the number of ideas, idea categories and thus the overall problem-solving potential (Paulus & Kenworthy, 2019).

The stakeholders invited to the intervention session are:

|  |  |
| --- | --- |
| Ministry of Health | Luka Vlek, Jet van Alst |
| Nutritional Experts | Milicin Radu, Daan Berendsen |
| Hospitals | Nikola Beerkens, Filip Pavlovic |
| R&D Department focussed on nutritious food and/or sustainability | Dries Cremers, Lisa Aalbrecht |
| Consumers | Dylan Elens, Max Streuff |
| Food retailers | Jake den Bieman, Anna Lorenz |

The actual intervention session took place at the Elinor Ostrom building at 10:30 – 12:15 on 26-9-2023. The next section of the report will go into the intermediate results achieved at this session.

# Intermediate Results

After conducting our intervention session employing the brainstorming technique, we found first results for 5 major questions relating to our messy problems. These are:

## 1. Why do citizens lack nutritional value in their diet?

The most important answers given to this point was that there is 1st, no sustainable replacement of food, 2nd, a lack of education regarding diets and nutrition, 3rd, a lack of discipline while eating healthy, and 4th, that healthy food is expensive. Interestingly, most stakeholders stated reasons 2 and 3, which indicates their relative importance. On the other hand, the lack of a sustainable replacement for certain foods was mentioned by consumers alone. This point is interesting, as consumers should actually be the ones that are informed best since they are active in the market. Also, the mentioning of an educational lack by nutritional experts as well as by the R&D department must be considered in the light of a potential conflict of interest, as those parties would benefit from an investment in dietary education. The main reasons are also reflected in the answers to question number 2:

## 2. How could we increase the nutritional value of citizens’ diet?

As a consequence of the main answers to question 1, the stakeholders mainly stated that an increased and improved marketing regarding healthy food would be an appropriate measure to the above-stated question. Further stated answers were the development of sustainable alternatives to meat and other animal-based products, the education of people on the importance of a healthy diet and a change in taxes on healthy and unhealthy foods. As already indicated earlier, the focus on educational measures was mainly driven by stakeholders with nutritional expertise. Another point of interest here is that the tax cut was proposed by food resellers and consumers and not by governmental agencies. Again, one must keep in mind other interests that potentially might play into this. Next to the measures on the diet itself, another way to address our messy problem is to change people’s attitude towards their diet. Therefore, our third question was:

## 3. How could we motivate people to eat more nutritious food?

Since this question aims a bit in the same direction as the second question, the results were somewhat comparable. For example, one answer stated by almost all stakeholders was that an increase in education and spreading information about nutritious food is an important measure. For instance, the development of an app was proposed, as well the introduction of an extra class in high school about nutrition. Mostly put forward by food resellers, a strong marketing strategy for healthy food was proposed, that would only allow sales initiatives with healthy foods. Contrary to that, a “anti-marketing” campaign against unhealthy food was proposed by nutritional experts, with anticipated effects similar to those of the campaign that shows the consequences of smoking on packages of cigarettes. Another important measure proposed was again cutting taxes for healthy food, to make them more appealing to customers, which is congruent with the findings to question number 2.

## 4. How do we make the Change to a healthier lifestyle Sustainable?

This question focused on a long-term solution to the given problem and overall sustainable living. The answers to the question were highly diverse. Two stakeholders (the foods seller and the hospital) raised the idea that recipes can influence healthy eating, the hospital suggests that a cookbook with healthy foods can be created, and the food seller states that the number of vegetarian/healthy recipes in supermarket folders can be increased. A few other stakeholders raise points concerning meat replacements and sustainable food, the R&D department suggests that more sustainable food can be developed in all food categories, not just the meat category, the foods seller says that a higher variety of meat replacements could be sold, the nutritional expert gives the idea of promoting meat alternatives and the consumer proposes that buying sustainable food could be made cheaper to buy. Another idea raised by the consumer is that supplements could be made cheaper, this idea ties together with an idea of the hospital to create supplement bundles to fix the nutrition deficit. The nutritional expert raised an idea to make healthy foods more available at highway restaurants and fast-food joints and the hospital suggest creating and promoting ready-to-go meals that contain all the necessary nutrition. Another idea raised by the nutritional expert was showing pictures of people with unhealthy diets on unhealthy food packaging to make buyers more cautious of what they eat. On the other hand, the R&D department had the idea to show consumers what more sustainable food does for the earth. Finally, two stakeholders proposed to promote physical activity, either promoting physical activity or making a schedule for unhealthy people to achieve healthy goals.

## 5. What role could you (the stakeholders) play in decreasing health costs?

The final question had a more proactive theme regarding the stakeholders, directly asking them what they themselves could do to decrease the healthy costs. The R&D department wants to do more research on how to make healthy sustainable food, so with that food people become healthier and have to go to the hospital less. The next stakeholder, food seller, has a few propositions. Namely, that supermarkets could adjust food packaging and add a more accurate and informative nutri-score to all products, since not all products currently have nutri-score and the score system could also be improved, additionally, they suggest only including healthy and high protein recipes in their folder and they could also make people more conscious about healthy food choices in supermarkets. The consumer stakeholder says they could eat healthier and exercise more, but also support companies that create healthy food and vote for politicians that promote a healthy lifestyle. Hospitals could actively encourage people to eat healthy by putting up posters in the hospital and have doctors also focus on a healthy diet. The Minister of Health could spread a campaign on tv or on radio about healthy living. Finally, the nutritional expert suggests creating diet plans for citizens and explore less expensive and more nutritious food.

## Further input:

In order to create an improved overview of the brainstorming ideas generated, a summary of overlapping themes was presented to the stakeholders. By coding the answers of the stakeholders during the intervention, three distinguished themes emerged from the data. These themes were: development of new products, marketing of a healthy diet, and subsidising healthy foods. Answers regarding these themes re-occurred constantly within the brainstorming session. In order to gain a more in-debt understanding of the stakeholders’ positions within these themes, some clarification questions were proposed. All stakeholders were asked to provide their thoughts and ideas regarding the three overlapping teams. As a result of this, their main objectives and deliverables became clear. The last question of the brainstorming session was used to guide the stakeholders in providing more conclusive answers about their own abilities to conduct change. The question was: ‘’What role could you (the stakeholders) play in decreasing health costs?’’. By focussing the question on the stakeholders personally, they were guided towards reflecting on their personal opportunities and obligation towards the problem. During the intervention, all stakeholders’ ideas resulted adjustment of the current diet of citizens. In order to come to a more concrete solution regarding this, an extent brainstorming session is recommended. Within this session, the focus will specifically lay on the improvement of health through diet. The three main themes resulting from this intervention will be utilized to guide this intervention and generate ideas specifically focused on the improvement of diet. By brainstorming about the increasing hospital costs through this point of view, stakeholders are able to express their ideas, and discuss or adjust them when necessary.

## Appendix 1 - coded notes made by the stakeholders during the intervention

1. Why do citizens lack nutritional value in their diet?

* **Minister of health**
  + Food like meat, fruit, and vegetables are too expensive right now
  + People lack knowledge on how to maintain a health and nutritious diet
* **Hospitals**
  + People do not know how to compose their diets
  + People do not know what is in their food
  + There is little education about healthy food and a healthy diet
* **R&D department**
  + People are not aware that they lack nutritional value
  + It is hard for people to change their diets  lack of discipline
* **Nutritional experts**
  + People eat a lot of processed food that contains a lot of additives, which causes lack of nutritional value
  + People feel like ‘bad’ food taste better than healthy foods
* **Food resellers**
  + Less nutritional food is cheaper to purchase
  + Less nutritional food is often more addictive, like sugar and sweets
* **Consumers**
  + We want sustainable food, but this contains fewer valuable nutrients than non-sustainable foods
  + There is no good replacement for a food that is nutritional and sustainable
* No sustainable replacement for food
* Lack of education regarding diets
* Lack of discipline while eating healthy
* Healthy food is expensive

1. How could we increase the nutritional value of citizens’ diet?

* **Minister of health**
  + Developing foods with a higher nutritional value
  + Creating campaigns to increase nutritional value
* **Hospitals**
  + Bigger disclaimers on foods so people are aware of what they are consuming
  + Promote and campaign eating more vegetables
  + Promote diverse options for vegetarians
  + Educate people regarding a healthy diet
* **R&D department**
  + Educating vegetarians on eating food with more nutritional value
  + Better advertisement for healthy food
* **Nutritional experts**
  + Tax the people who eat unhealthy more, by adding taxes to unhealthy items
  + Have a more balanced diet, by measuring what you eat. Consumers should measure their diets more carefully
  + Teach the importance of tracking food and calories
* **Food resellers**
  + Adjust packaging to make healthy food more appealing
  + Increase taxes on unhealthy food, reduce taxes on healthy food
* **Consumers**
  + Subsidise healthy food, so it is easier for consumers to buy healthy food
  + Invest more in meat replacements
  + Invest in cultured meat, and eating insects

* Increase and improve marketing regarding healthy food
* Develop sustainable alternative to meat and animal-based products
* Educate people on the importance of a healthy diet
* Change in taxes on healthy and unhealthy foods

1. How could we motivate people to eat more nutritious food?

* **Minister of health**
  + Support or subsides small businesses to start creating healthy food
  + Develop app where healthy food ideas can be shared, to inspire people
* **Hospitals**
  + Create a reward system in supermarket when buying healthy food options
  + Show alerting pictures of unhealthy people on healthy food
  + Reduce prices of healthy food
* **R&D department**
  + Point reward system when buying healthy food
  + Educating people on what unhealthy food does to your body
* **Nutritional experts**
  + Make healthy foods more tasteful, so people are more motivated to eat it
  + Show pictures of people that have unhealthy diets so that they become cautious and alert about the problem
  + Generally, teach about the value of a nutritious diet
* **Food resellers**
  + Change sales in supermarkets for healthy foods. So only healthy foods can be on sale in supermarkets
  + Make more advertisements on tv regarding healthy eating
* **Consumers**
  + Subsidise equipment that helps cook healthy food cheaper (air fryer)
  + Add extra class in high school regarding healthy eating, to increase education
  + Reduce prices of healthy food, decreasing taxes
  + Subsidise healthy dishes in restaurants

* Educate and spread information about nutritious food
* Subsidise/reduce costs of healthy food
* Invest in marketing of healthy food
* Use marketing to prevent eating unhealthy

1. How do we make the lifestyle change sustainable/a long term change?

* **Minister of health**
  + Providing benefits to employees if they cycle to work for example
  + Decreasing plastic packaging to be more sustainable
* **Hospitals**
  + Developing research on what people lack in their diets
  + Show what non-sustainable does to the earth as well
* **R&D department**
  + Develop more healthy and sustainable food. Market this clearer so people can clearly see the difference
  + Create a recipe book or diet book that will be a guideline to people
  + Promote take-away meal that contain all the right nutrients, so meals are quick and easy
* **Nutritional experts**
  + Invest in changing diets to insects, bugs, etc.
  + Develop a schedule for everybody and goals they want to achieve, this will make it easier to do so
  + Create workout plans so people are more eager to move
  + Make healthy foods more available near highways so people can access them better
* **Food resellers**
  + Sell a higher variety of meat replacements, high protein vegetarian foods
  + Create flyers and magazines with healthy recipes so people are more aware of what they can cook
* **Consumers**
  + Make supplements more available. Decrease prices on them so people are more likely to buy them
  + Subsidise companies that provide more nutritious and healthy foods

* Sustainability regarding healthy food
* Schedules/recipes/marketing to promote healthy food
* Developing sustainable alternatives, create variety within this
* Subsidise organizations that contribute to their employees’ health

1. What role could you (the stakeholders) play in decreasing health costs?

* **Minister of health**
  + Campaign healthy eating and exercise
* **Hospital**
  + Encourage people to eat healthy while visiting the hospital. Also put on marketing posters
  + Increase the medical costs who are eating unhealthily
* **R&D department**
  + Do more research on creating healthy and sustainable foods
* **Nutritional experts**
  + Create diet plan for citizens with healthy and sustainable foods
  + Explore less expensive but more nutritious food alternatives
* **Food resellers**
  + Supermarkets can adjust packaging, adding nutritious score on products
  + Magazines and flyers of supermarkets only include healthy foods
  + Make people more conscious about healthy food in the supermarket, so make it more clear
* **Consumers**
  + Eat healthier, and exercise more
  + Support companies that produce healthier foods

* Support and campaign for healthier food
* Create disadvantages for people who do not eat healthy
* Develop new and more sustainable alternatives to unhealthy foods
* Encourage people to exercise more, and be more conscious regarding their diet

Main reoccurring themes during the brainstorming session:

* Development of new products
* Marketing of healthy diet
* Subsidising of healthy foods

## Appendix 2 – notes made during the intervention, for personal purposes

Pieter introduces everyone, we’re consultants from balanced bite. (10:45)

Discussing the problem of decreasing health in the Neth. The problem faced by the client (ministry of health), increased no. people sick, number of reasons, higher costs, higher pressure on social security. Our task is to find out how to decrease these costs.  
Problem statement multiple reasons for decreasing health: diet (sustainable eating, too little protein/iron/calcium), lack of physical activity, rise of mental health issues due to Covid. We will use nominal group technique, everyone gets a sticky not and writes down as many ideas as possible, then discuss the ideas and move on to the next question.

Start with first question. (10:50) (last people arrive)  
Brainstorming... (5 min.), people work in mostly silence.  
Jo-Anne notifies people the time is over, Pieter explains that we will collect the ideas, then everyone reads one aloud and the idea is stuck to the wall.  
Question 1: Why do citizens lack nutritional value in their diet?

* R&D:
  + Most people are not aware they do not eat enough nutrition.
  + People find it hard to change their diet. (Pieter, explain) Hard to change their diet because they lack discipline
* Food seller:
  + Less nutritional food is often cheaper to buy.
  + Less nutritional food is more addictive.
* Consumer:
  + People want sustainable food, but it generally contains less calories.
  + There is no good replacement that is also healthy.
* Hospital:
  + People don’t know how to compose their diet.
  + A lot of people on a vegetarian diet and don’t know they need to supplement B12
  + They don’t know what’s in their food.
  + Not enough teaching on healthy food.
* Minister of Health:
  + Healthy food is too expensive right now.
  + People lack knowledge on how to have a balanced diet.
* Nutritional Expert:
  + People eat a lot of processed food, that have a lot of additives.
  + People want to eat unhealthy food.
  + People are unaware of the things they eat.
  + Healthy food is more expensive.

Pieter: Is something unclear, does anyone want to add something? Is everyone satisfied with their answers? (No-one has any additions), now we will move on to a short break.

People talk with each other about how the intervention session works and ask the consultants what their specific roles are today.

Pieter moves on to the next question, everyone listens. Someone asks for a repetition of the question. Everyone writes down their answers to the question, The stakeholders that work in duos discuss with each other. Hospital asks for repetition of the question again. People discuss about the topic, but most are done in the time, with a minute left, so they talk about some other things and joke around. After the time one stakeholder still has an idea to write down.  
Jo-Anne and Pieter collect the ideas and stick them to the board.

(Having short breaks after each session seems get people out of their focus, everyone wants to continue slightly longer than one brainstorming session.)

Question 2: How could we increase the nutritional value of citizens’ diet?

* R&D:
  + Educating vegetarians on eating nutritious meat replacements.
  + Better advertisement for healthy food.
* Food seller:
  + Make healthy food cheaper by increasing tax on junk food.
  + Adjust packaging to make healthy food more appealing.
* Consumer:
  + Subsidize healthy food, if governments subsidize it makes it easier to buy for consumers.
  + Invest more in meat replacements.
  + Eat insects to be sustainable and eat lab grown meat.
* Hospital:
  + Put markers on food, so people know what they are buying.
  + Promote eating more vegetables.
  + Promote other sources of protein.
  + Promote eating healthy food.
* Minister of Health:
  + Develop new nutritious food.
  + Create a campaign to educate on nutritional value.
* Nutritional Expert:
  + Tax bad eaters more.
  + Have a more balanced nutrition, consumers should look more at what they eat. (Pieter asks how this can be achieved): is more personal. We should stimulate people to track calories and nutrients.

Pieter states that the break is over, we move on to the next question.  
Everyone gets 5 minutes to write down answers. The hospital stakeholders like the question.  
The teacher joins this session (11:25).   
Stakeholders think in silence for a while and then discuss with their partners.  
11:30 Collecting ideas, Pieter asks R\&D for their ideas. Pieter and Jo-Anne switch asking for each of the stakeholders ideas.

Question 3: How could we motivate people to eat more nutritious food?

* R&D:
  + Point system, for better food more points. (Pieter asks if like airmiles system, but with food, R&D answers yes.)
  + Show people what unhealthy food does to your body (Pieter, clarification: like the cigarette package pictures, but also more general).
* Food seller:
  + Sales reduction on unhealthy foods (no unhealthy foods on sale), more on healthy foods.
  + Make more advertisements on tv for healthy eating.
* Consumer:
  + Subsidize healthy restaurants.
  + Make cooking equipment that could be used for preparing healthy food.
  + Class in high school on healthy eating.
  + Make healthy eating cheaper by subsidizing it.
* Hospital:
  + Put alerting pictures on unhealthy food (like cigarettes).
  + Make point system for healthy food.
  + Decrease taxes on healthy food.
* Minister of Health:
  + Develop an app where meal ideas containing high nutritional values can be shared.
  + Help businesses that help with healthy eating start up.
* Nutritional Expert:
  + Make healthy food more tasteful.
  + Show pictures of people with unhealthy diets, to make buyers more cautious.
  + Teach people the benefits of eating healthy, like in a campaign (Pieter asked for clarification).

Pieter announces another 3 min. break.  
New brainstorming session.

Question 4: How do we make the lifestyle change sustainable/a long term change?

* R&D:
  + Show what more sustainable food does to the earth.
  + Develop more sustainable food in all food categories, not just meat.
* Food seller:
  + Increase the no. vegetarian recipes in supermarket papers.
  + Sell more variety of meat replacements (/high protein food).
* Consumer:
  + Make it cheaper to buy sustainable food.
  + Make supplements more available, make them cheaper (Jo-Anne asked for clarification).
* Hospital:
  + Do research on what people lack in their diet. Make a supplement bundle people can take.
  + Promote ready-to-go meals that have all the nutrition.
  + Make a recipe book about healthy/nutritional/sustainable food.
* Minister of Health:
  + Promote citizens to live healthy, create a cycling plan.
  + Get rid of all plastic -> sustainable options.
* Nutritional Expert:
  + Promote meat alternatives.
  + Show pictures of people with unhealthy diets, to make buyers more cautious.
  + Make a schedule/program and goals they want to achieve. (What they must do to get all the nutrition \& be sustainable).
  + Make workout plans so a calory deficit is ensured by burning more calories from healthy food.
  + Make healthy foods more available by highways and fast-food joints.

11:56 not much time left, so the break is only 1 min.

Question 5: What role could you (the stakeholders) play in decreasing health costs?

* R&D:
  + Do more research on how to make healthy sustainable food.
  + With that food people become healthier and have to go to the hospital less.
* Food seller:
  + Supermarkets can adjust packaging, add nutri-score to all products (not all products have it now).
  + Only include healthy and high protein recipes.
  + Make people more conscious on healthy food choices in supermarkets (packaging, clearer nutri-score)
* Consumer:
  + We could eat healthier and exercise more.
  + Choose to support companies that eat healthy food.
  + We will vote for politicians that promote healthy living.
* Hospital:
  + Actively encourage people to eat healthy (put up posters in the hospital, let doctors tell people to eat healthy).
* Minister of Health:
  + Spreading a campaign on tv/radio etc. about healthy living.
* Nutritional Expert:
  + Make a diet plan for citizens. This way they will get healthier and future health costs are decreased.
  + Explore less expensive more nutritious foods

Does anyone want to comment? No.

Ieve gives the summary, there is an agreement on marketing and subsidies. Lastly, marketing, more development on healthy alternatives and market more on healthy foods than unhealthy foods. Those are the main reoccurring themes in the intervention.

Does anyone feel an idea is left out? (No additions)

Balanced bite thanks everyone for their participation, round of applause for everybody.

## Appendix 3 – photos taken during the brainstorming session



