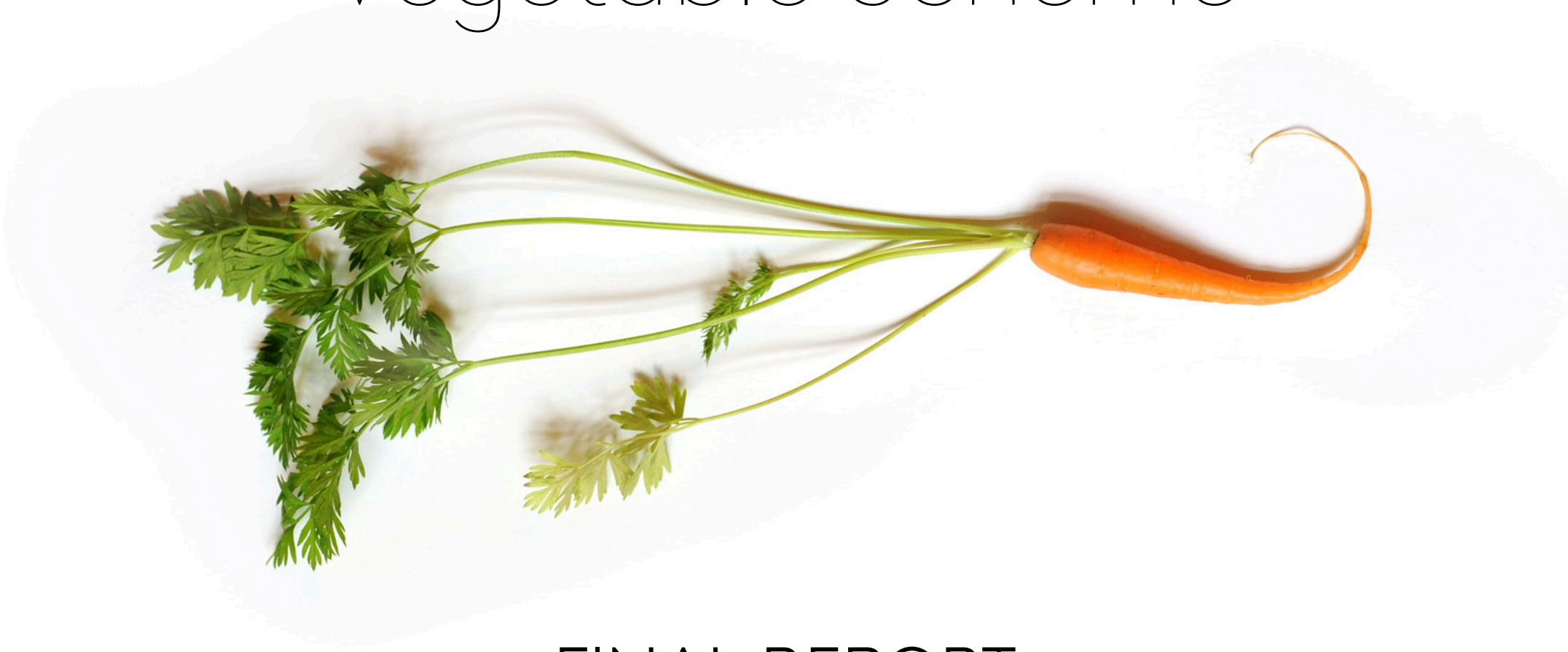
School Fruit and Vegetable Scheme



FINAL REPORT

Maria Jaatinen Maija Jantunen Jaakko Kalsi Paula Karlsson Anna-Kaisa Varjus

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Our design process was framed by the double diamond developed by the British Design Council.
This report goes through our design process and its results through these phases:

DISCOVERING DEFINING DEVELOPING DELIVERING

The Brief

We were commissioned a project relating to an EU-wide School Fruit and Vegetable Scheme by the Ministry of Agriculture and Forestry. The brief we got from our client was divided into two sections: a brief background on the current situation and the aims for the scheme, as follows.

Where are we now

Children's consumption of fruits and vegetables has declined in EU and remains below daily recommendations. The diet of children is shifting towards highly processed products, and overweight and obesity are increasing in EU. WHO estimated that every third children between 6 and 9 years old are overweight or obese in 2010, compared to every fourth in 2008.

School kids in Finland consumes less fruit and vegetable consumption than the other EU member states. The EU-wide voluntary School Fruit Scheme (SFVS) provides school children with fruits and vegetables for a sustained, healthy eating habits. Finland has a wellworking School Milk Scheme, but hasn't been participating in School Fruit Scheme so far. It has been speculated that the heavy administrative costs could be a one reason.

Where do we want to be

The brief was threefold. Ministry of Agriculture and Forestry wants:

- to understand why Finland has not been participating in SFVS previously.
- to create strategies how to boost the consumption of fruits and vegetables in the long term and thus promote healthy eating habits; to increase awareness and knowledge about fruits, vegetables and berries; to create stronger links between the the school children, farming, farmers and the various types of food they produce

and a long term objective,

- to promote Finnish agriculture and decrease obesity.

Ministry of Agriculture and Forestry looks for efficient strategies to achieve maximum impact and to distribute the subsidy co-effectively.

Research

The research phase was valuable in the government context in order to understand different stakeholders motivations and the structure of the problem. 2/3 of the 14 week course was dedicated to research. During this time we did around 40 interviews, three workshops, two school observations and sent nine probes.

Atlas Workshop

On 3rd of March, during the first week of the course, we had a workshop with the key stakeholders using the Atlas method (www.atlas-research.fi). The ATLAS game is a project planning game that helps cross-disciplinary teams to understand and solve challenges related to service co-creation.

We sent the workshop invitations to 15 stakeholders from which five attended. The participants were from The Ministry of Agriculture and Forestry, Agency of Rural Affairs (MaVi), The Central Union of Agricultural Producers and Forest Owners (MTK) and The Finnish National Board of Education.

The main insight gained from the workshop was our stakeholders expectations for the outcomes of Design for Government and how they saw the implementation of the scheme after the course. They hoped that DfG could create new ideas by creating a culture of co-operation and enthusiasm. By creating a system that enables co-operation the integration of the scheme could be done in an easy way. The workshop created a common ground between us students and the stakeholders to start creating a successful concept that could work in practice.

We kicked off the project by playing a project planning game called Atlas with a group of key stakeholders.

Desk Research

We started to do the desk research by studying existing practices to implement SFVS and other similar initiatives from formal research up to Jamie Oliver's TV show 'Food Ministry'. We went through many research papers and publications and got familiar with EU rules and regulations. Here we have listed the most interesting reference cases very briefly.

Implementation of SFVS varies from only distributing fruits and vegetables to wide range of accompanying measures (information loaded web pages, farm visits, integration into the curriculum). [1]

Ireland is an example of successful implementation of SFVS. 'Food Dudes' programme ran simultaneously with SFVS. It rewarded children for eating fruits and vegetables. Because Food Dudes proved to be of great importance in the overall success of SFVS, the two were integrated.

Slovakia on the other hand is a good example of cross-ministerial collaboration. The Ministry of Agriculture had the ownership over the scheme and campaigned for the scheme, whereas The Ministry of Health and Social Affairs were responsible for providing material on the nutritional aspects and healthy living habits.

Studies point out that already simply talking about nutrition e.g. in bedtime stories increases children's awareness and consumption of fruits and vegetables [2] and that the earlier the children are exposed to vegetables, the more they will eat them in the future. [3]

A study about responding to time incentives in the cafeteria shows that children who have recess before lunch are more likely to eat their fruits and vegetables than those who play after they eat. Kids tend to rush through their meals and skip the most nutritious parts when lunch is held before recess. Recess is a pretty big deal for most kids. [4] "If you have kids [choose] between playing and eating their veggies, the time spent playing is going to win most of the time." [5] The study took place in Utah, US, but this would be worth considering in Finland as well.

Interviews

We reached out to a wide range of stakeholders from government, municipalities, schools to NGO's and individual professionals and did around 40 interviews. We set out to find out what would implementing the scheme mean in practice for different stakeholders and how could they take part in it.

"If you have kids [choose] between playing and eating their veggies, the time spent playing is going to win most of the time."

- An American study

Through the interviews we gained insights from the user-perspective. We also received benchmark tips which gave us inspiration through the process, but which we have not included in this report. Generally most of the people we contacted were very keen on the scheme and willing to give information and contacts. The municipal sector was the most hard to get hold of.

The scheme was seen as a positive initiative that should be done. However, different interests were reflected on the program. Producers and producer associations were keen on making sure it impacts the Finnish agriculture without bringing added bureaucracy. Farmers were generally positive in engaging with the children, but saw that the pedagogical responsibility needs to remain with the teachers. Teachers understood the positive impact it could have on children's health by including the pedagogical aspect to eating. Municipalities saw it as a resource but were hesitant of the impacts of the program and the heavy monitoring it might bring.

Teachers would like to teach more to kids about origins of food and do farm visits, but they were so pressed with time that they simply do not have enough to look for possible farms. They would organize farm visits, if it would be easy for them. "We would do it (farm visits) more, if we only knew where the

farms were", teacher, Helsinki. "It's a phenomenon of our time that children no longer know the route of vegetables to the plate", teacher, Helsinki.

The teachers, headmasters, some farmers and also food professionals emphasized that the scheme's aim should be formulated in the core curriculum, which is the only way to ensure that teachers can reserve enough time for food-based learning. This is also the only way to ensure the municipalities and the catering services have to act on it. "It must be in the curriculum.", said eight headmasters we interviewed. They said that teachers can not be asked to do anything extra if old requirements are not broken down.

Teachers pointed out that school-kids generally don't have an attitude towards vegetables. They are happy to eat them if you provide them. However, the parents have a big impact on eating. "The family has a big impact on the kid's eating. If it's a family where the kid can decide what they are eating, then there is no hope at school either. Kids from those families won't eat anything or are really picky." Teacher, Salo.

Parents are important to involve in projects on school food. "Roach is a fish for the cats." is what a child repeated as his parents thoughts on Vesanka

"It's a phenomenon of our time that children no longer know the route of vegetables to the plate"

- Teacher, Helsinki

primary school's local food project which added roach to the school lunch. The parents' negative attitude turned out to be a challenge. After the initial shock of different tasting fish, the children liked it but their parents attitudes were still reflected on them The fisherman came to the school to tell about the idea of the experiment to the parents and changed their attitudes. The earlier the information is given and discussions started, the less resistance comes from the parents. In the end, the local producers managed to make new business out of roaches and are now selling roach products to other municipalities also.

Elo Foundation had an interesting idea on parents as an under-used resource.. They saw that parents need instructions on how to promote school food on the municipal level. The school cafeteria or the nutritional specialists are not the right places to leverage as they have very little power on influencing food choices. The parents should be empowered by channeling their energy in the right place. "The time is right for developing this. If the parents are willing to take action for a good cause, lets give them a surfboard and put them on waves." By giving right information and tools for the parents to influence school food, they could have a massive impact on the municipal level.

Home economics classes will be introduced to children from 7-12 years in the new curriculum. Elo Foundation commented on this as something that could be linked to the scheme: "Home economics classes are still not utilized and the topic is surrounded with a positive buzz. Now would be a good time to influence this field, as field has not yet been ploughed."

All stakeholders mentioned that the administration should be light and as less work as possible. A similar EU scheme done in Finland, only with milk, was criticized by it's heavy administration and weak impacts and measuring system. A person we interviewed at the Education Department of Helsinki

"If the vegetable scheme requires the same kind of accounting [as the milk scheme], you can forget about it, honestly, it spoils the good purpose."

- The Education Department of Helsinki

said: "If the vegetable scheme requires the same kind of accounting [as the milk scheme], you can forget about it, honestly, it spoils the good purpose"

Other comments on administration related to measures. Elo Foundation said: "Measures are a very important tool for several stakeholders, so they can further develop school food. The meters should be in relation to the amount of support/subsidies."

Both MTK and Elo Foundation emphasized the importance of giving the municipalities more information on how school food could be developed so that they understand long-term impacts of cuts and additions in the budget. Many municipalities might not also know the producers that are close-by, so that they could support their local economy. Elo Foundation also emphasized the need for accessable information and guidance for other stakeholders, for instance producers could have more instructions on how to make co-ops.

The Fruit and Berry Producers' Association said: "Our faith is running out weather our producers get to actually sell their produce. If it does not impact the growth of Finnish producer, then our interest is not to take part in the scheme. We can not compete with larger producers and countries." In tact, The Helsinki City's Education Department gave a tip on how to promote Finnish agriculture. If you mention in the municipal tendering rules that fruits and vegetables can only be a day old when served to the children, in practice this means that international producers are ruled out.

The Fruits and Berry Producers' Association "The school food is in the hands of the Board of Education. There is a criss-cross of several instances who effect the school food and what is given to the students." During our interview at the Board of Education, the counsellor of education, Marjaana Manninen was helpful in opening the history and current situation of planning school food.

Because of the long-term objectives of the scheme on tackling child-obesity and it being related to educating children, we saw it to be important to interview also other ministries on what their input could be. The Ministry of Education seemed to direct the power of starting new initiatives more towards the Board of Education. The Ministry of Health and Social Affairs were very positive towards the scheme and saw that adding any kind of vegetable and fruit to the school meal as only a positive thing. The only problem they saw was is in getting the program started and in the possible bureaucracy.

School Observations

We visited the Espoo Steiner School, Koskela School and Vesanka school. During the observations we got a main idea on how children acted in the school lunch environment and how they added vegetables on their plates.

We felt that we visited schools where kids actually are in a good position considering the eating of vegetables during lunch. In Steiner school the food has a strong relation to the pedagogy of the school and to the idea of healthy growth as a person. They serve clean, organic food and really invest in the

quality. In Koskela school, like in most schools in Helsinki, the catering is mass provided by Palmia but the kids learn early about food origins and seem pleased with most foods they are served. Vesanka school did a roach (särki) experiment with a local fisherman, they also do yearly berry pickings and farm visits.

In all of the schools there is either a model plate or a poster at the beginning of the lunch line giving an example of a healthy and nutritious lunch. Children pick their portions by themselves while their teacher supervises the situation. There were differences in the role of the school cooks: in one school they didn't have very active contact with the kids but in another the cook had clearly taken an educational role towards the children. In any case it seems that even their physical positioning behind the counter is stopping them from being more involved.

In the schools we visited younger children sit with their own class while older children can choose where they want to sit. Most of the teachers sat in the middle of the table to be able to guide the situation and acted as role models by choosing a balanced meal based on the plate model. Children mostly seem to eat the vegetables they have chosen on their plates. The amount of vegetables they chose varied quite a bit from child to another. Most of them did choose at least some vegetables. Favourite vegetables seemed to be freshly served pieces of tomato or cucumber and grated carrots. When they had a choice in salad options, that is what they chose.

In Steiner School, where there are also older children, it was more common among them not to pick any vegetables on their plates than among the younger children. Many of these children sat together in the same table. It seemed that children sometimes looked at each others plates while making decisions which side dishes to take. From high school aged students, girls clearly ate more salad than boys.

We visited three schools during the research process.

Kids Workshop

We organized a kids workshop at Koskela School for children aged 8-9. We had two 45 minute sessions with two groups of ten children. We organized three tasks.

The first task was identifying vegetables and fruit we had purchased before hand. They could pick a few each and think about how they could be cooked and what dishes came to mind. In general Koskela school's children had very good knowledge on fruit and vegetables. They even recognised one of the most exotic ones, Karambola, and would have wanted more exotic challenges. The Finnish vegetables they also recognised well. However some mix ups acquired, for instance between cauliflower and broccoli. Salad and selleri were the most unpopular vegetables. All senses were used, they noted how the vegetables and fruit smelled and felt. When they entered the room and saw the vegetables you could sense excitement and first questions that were asked were: "When can we eat these? Can we take these home?"

The second task was to make a plate out of paper vegetables. We wanted to see what kind of produce children would pick by themselves. In this task the different backgrounds and stories from home became evident. One had picked berries with her grandma in Maunula which is why she chose raspberries.Another was making the plate for his father, who eats a lot of salad. Muslim girls and boys chose more fruits than Finnish vegetables because they were more familiar from home.

The third task was to color in a ready made picture collection and make story out of them. This we did not have enough time for and it turned out to be more of a colouring task than something we got new information on.

After the workshop session we had a talk with the teacher and she told us that their class had had a producer co-operation project and plot of their own

"You can't say yuck to food unless it's cauliflower, scorpions, bear paws or dynamite"

- Boy, 8

We asked the children to compile a plate of vegetables they like eating and tell us about them.

where kids had planted produce, seen them grow and made food out of them. The school cafeteria then cooked and prepared the food. This you could recognise in how well they identified different vegetables and fruits. Some specialization was also noted as one boy said: ”Garden peas are nice because they are cryptogams” (itiökasvi). He had read about the subject and gone to cultivation school during summer.

It seemed that the kids were very open to new tasks and quickly put ideas into action. The open attitude was well reflected in this quote: “You can’t say yuck to food unless it’s cauliflower, scorpions, bear paws or dynamite”.

We sent out design probes in the form of a food diary.

In Koskela primary school all the kids knew well the most common Finnish vegetables because the class had done a vegetable related project. ”We have a plot in Kumpula, we study vegetables, we sprout the seeds at school and plant them in the spring. Afterwards we make food by chopping the vegetables. The school cafeteria cooks and prepares it.” In this school kids are so excited about eating their veggies that Palmia considers their amount of salad consumption a problem.

Probes

To find out about the attitudes towards fruit and vegetables that children are surrounded by, we sent out a batch of probes. Probes are a tool that designers sometimes use to gather information about the way people live and see the world. We chose them as a method because we wanted to observe people’s behavior over a longer period of time than what would have been possible in person.

The probes were targeted not for the children themselves, but their role models. We sent the probes to 3 teachers, 3 parents of young children and 3 children aged 10-14. Children learn their habits and attitudes largely from these people around them, and we were suspecting there might be some interesting information available.

The probe was in the form of a food diary. Every day for a week we asked people to take a photo of everything they eat, and record the time, place and social situation in the food diary. In addition there was a short 5 minutes reflective task for each day. After the participants finished filling in their food diary, we went through it together with them, interviewing them about the reasons behind their answers. We broke down the results of the probes and made four user profiles based on them.

Interpretation and Synthesis of the Problem

In this chapter we open up our interpretations and the elements based our concept on. We used different methods in order to map different parts of the problem. These methods were good sense making tools that gave us detailed insights about our problem and were helpful in clarifying our concept.

Affinity Diagram and Design Drivers

The affinity diagram is one of the most used tools in the design process. It allows large numbers of ideas stemming from brainstorming to be sorted into groups, based on their natural relationships, for review and analysis. It is also frequently used in contextual inquiry as a way to organize notes and insights from field interviews.

We did two affinity diagram sessions during the 14 weeks of our project. In the first affinity diagram session we analyzed data from the Atlas workshop, our first interviews with teachers and government organizations, and desk research. We gathered all this data together and clustered it to find relationships and commonalities between the findings from different sources.

Part of an affinity diagram

While we were still at such an early stage of our research that we were not quite able to pin down the meaning behind different clusters, they helped us to find directions for further research. Based on the clusters we brainstormed opportunity questions, such as "What if the ones who eat would decide?" and "What if schools were not involved?". The opportunity questions helped us explore the range of possible problem and solution spaces, and significantly enriched our following research.

In the second affinity diagram we had a much bigger set of data, gathered mainly through interviews and observations. The range of stakeholders represented in the interviews was very comprehensive at this stage of our research process, which is why we were able to find their problems, needs and requirements through the affinity diagram quite clearly.

In order to be able to use these findings effectively, we articulated them into design drivers. They are requirements that are based on user insights and guide the creation of design solutions.

Based on insights from stakeholder workshop we divided the design drivers under three main topics. To make it easier to find the most relevant design drivers to concentrate on, we also divided them based on their relevance to different levels around the project; policy, administration and implementation (school) level.

1. CREATING A NETWORK

Implementation level:

- Include parents in the local implementation.
- Create a stronger educational role for kitchen staff.
- Encourage children to share their learnings at home.

Administration level:

- Create a network between schools and producers.
- Use public media as a promotion channel.

Policy level:

- Collaborate with existing communities and associations to implement the program.
- Create links to other similar programs.

2. MEANINGFUL IMPLEMENTATION

Implementation level:

- Take advantage of the growing and harvest season.
- Distribute responsibility of hygiene issues.

Administration level:

- Try things out and make changes based on what you learned.
- Centralize logistics without discriminating small producers.
- Minimize workload by limiting options and bundling functions.
- Make use of the existing documentation.

- Make the reporting automatic.

Policy level:

- Use the phenomenon based learning as a combining factor.
- Offer schools ready materials that are easy to take into practice.
- Emphasize educational aspects in the vegetable purchases.

3. MOTIVATING COMMUNICATION

Implementation level:

- Support children's own activity and interests.

Administration level:

- Communicate to the right target audience and only about what is useful to them.

Policy level:

- Create visible incentives for all stakeholders participating in the program.
- Make the contents and results of the program visible in schools.
- Create meters that measure both quantitative and qualitative goals of the program.

User Profiles

User profiles are archetypes built after an exhaustive observation of the potential users. Each user profile is based on a fictional character whose profile gathers up the features of an existing social group. In this way the user profiles assume the attributes of the groups they represent: from their social and demographic characteristics, to their own needs, desires, habits and cultural backgrounds.

Based on the probes – that gave us insight about the role model attitudes towards fruit and vegetables – we summed up a list of attributes that showed attitudes and opinions towards food and cooking in general. Based on our findings we created four different user profiles.

The first user profile is a **Rational Pragmatic** who emphasizes the easiness and efficiency in food-making. The Rational Pragmatic prefers to cook large amounts of food and store it for later. Food itself is generally healthy basic food, but organic food is not so common in this personas table. Other interests in life are more important than food and that has an effect also on the balance of different ingredients – shopping is done based on easiness not on nutrients.

Next user is a **Low Interest Refueller** who seeks even easier ways to eat and sees food just as fuel. Prepared foods and quick semi-finished products are common in this personas kitchen. Eating together is not seen as an important factor and the family members are eating when it happens to be most suitable for them. Snacks are also common in the Low Interest Refuellers life.

Food Respecter is keen about healthy aspects and also the quality of food. This user profile has a little or not at all meat on their plate. He also has an adventurous interest in trying new ingredients, recipes and ways of making food. He buys both local and more exotic foods, so the origins aren't so important to this user. Food plays a somewhat significant role in Food Respecters life. The family sees shared

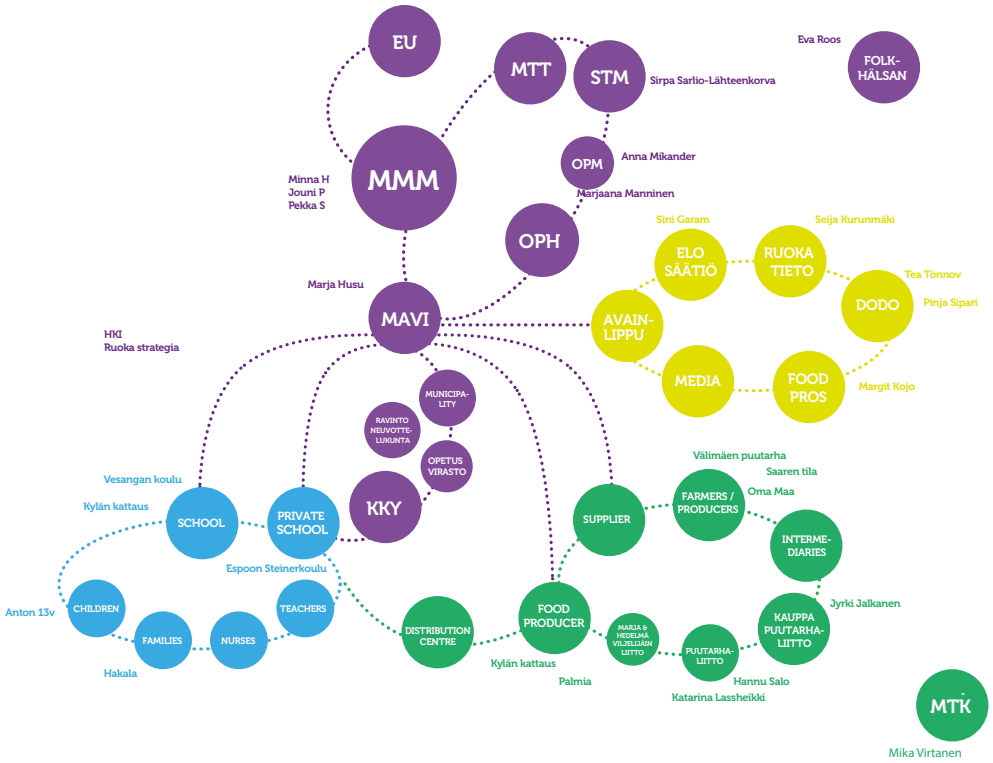
dining moments as an important social event that gathers everyone together.

The fourth user profile really values food, especially organic and locally produced quality ingredients. **LOHAS (lifestyle of health and sustainability)** is the Health enthusiastics frame of reference. Ethical, ecological and cultural aspects are important. Superfoods, co-op shops, markets and organic restaurants are also key elements to his persona.

Based on these four user profiles we got extreme user groups that are helpful when planning the realization of our concept.

Stakeholder Map

We mapped our stakeholders to better understand the school lunch and catering system as a whole. We started with five different categories that included the administrative level from ministry to municipality level. In the picture you can see experts in pink, media and nonprofit organizations related to food in yellow, suppliers and producers in green, central kitchen or catering company in blue and finally the user level: teachers and school kitchen workers, families and children in violet. The map presented here is still simplified but it enables to start thinking what kind of common or divergent interests and ways of functioning different groups might have.



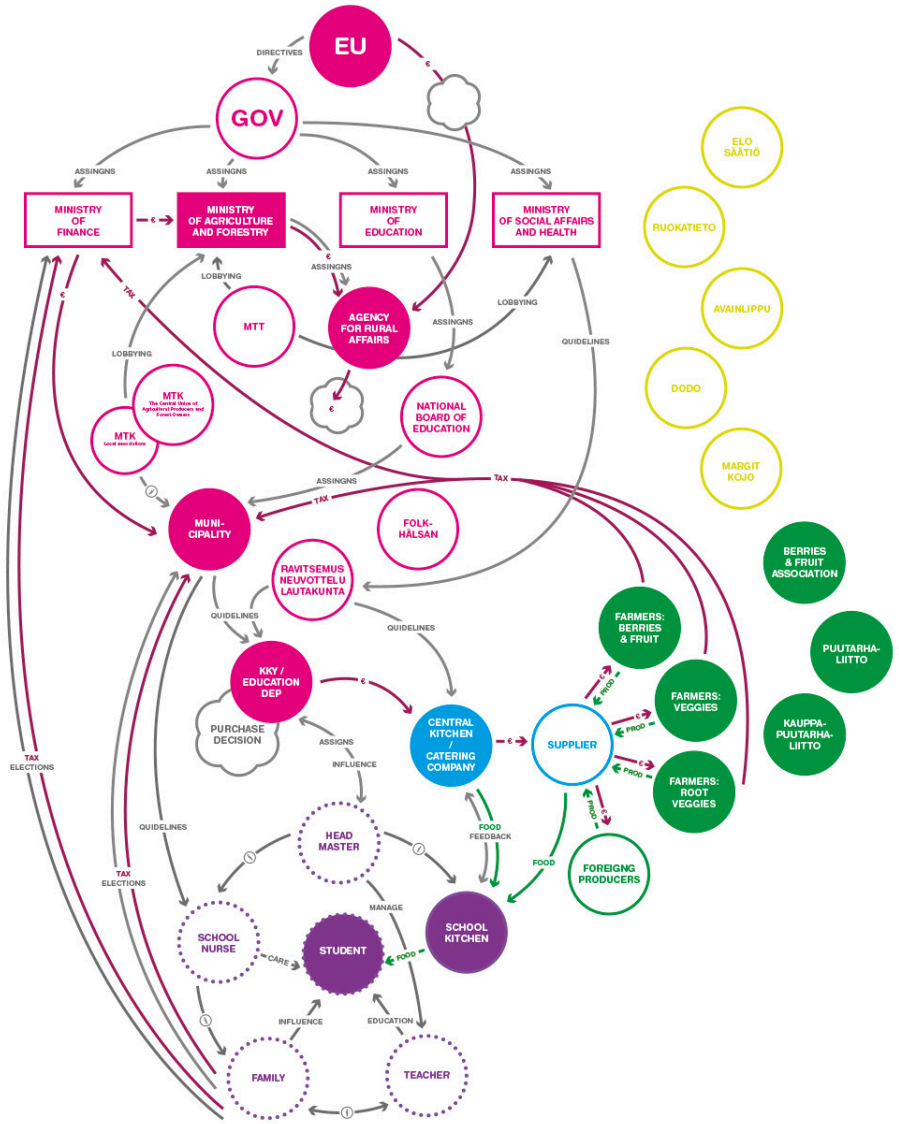
A map of the stakeholders related to SFVS.

System Mapping and Finding Leverage Points

A system is a set of things – people, cells, molecules, or whatever – interconnected in such a way that they produce their own pattern of behavior over time (Meadows, 2008). It is a useful way of understanding how complex systems, such as governments, work and what kind of problem cycles and leverage points can be seen. Another important thing to understand about systems thinking maps is that they are only representations and in that sense are not real. We all also understand systems differently.

To truly understand a system behavior you should observe it over time. Systems do not act linearly and feedback loops, for instance from the end-user back to the decision-maker, often have long delays, which is why the true nature of the system and problem cycles might not be immediately obvious. This is of course a challenge for decision-makers with limited resources available. Systems thinking helps to understand how a system currently functions and make an action plan through leverage points, the potential intervention points in a system.

Our project is defined by a wide range of stakeholders from different levels, from municipal decision makers to kitchen staff, kids, parents and producers – this is where the systems approach and mapping becomes very useful. We started drafting our systems model by drawing a stakeholder map with the flows of money, information and material. Then we marked intervention points based on twelve leverage points. We found systems thinking very useful in making sense of the context of SFVS. The number of stakeholders involved in the scheme is enormous, and how they are connected with different goals, incentives, and values becomes complex. Mapping out their communication, collaboration and power relations was essential in understanding potential points of intervention. We learned that the amount money in SFVS is not



A Systems Map where the key stakeholders are highlighted.

very big relative to the price of vegetables, which is why it was important for us to find the most effective way to use it.

In systems thinking a leverage point is a place in a system's structure where a solution element can be applied. In other words leverage points are places to intervene in a system. It's a low leverage point if a small amount of change force causes a small change in system behavior. It's a high leverage point if a small amount of change force causes a large change in system behavior.

A Root Cause Diagram

As we interviewed different stakeholders it became clear that the poor consumption of fruits and vegetables in Finland is a result of a number of factors, some of which cause a vicious circle. In the following diagram you can see an exercise we did on finding the root cause of problems: what causes what cases what.

The lack of resources leads to the centralization of purchases and the preference of ready processed foods. This causes unfamiliarity with the origin of food and avoidance of real fruits and vegetables.

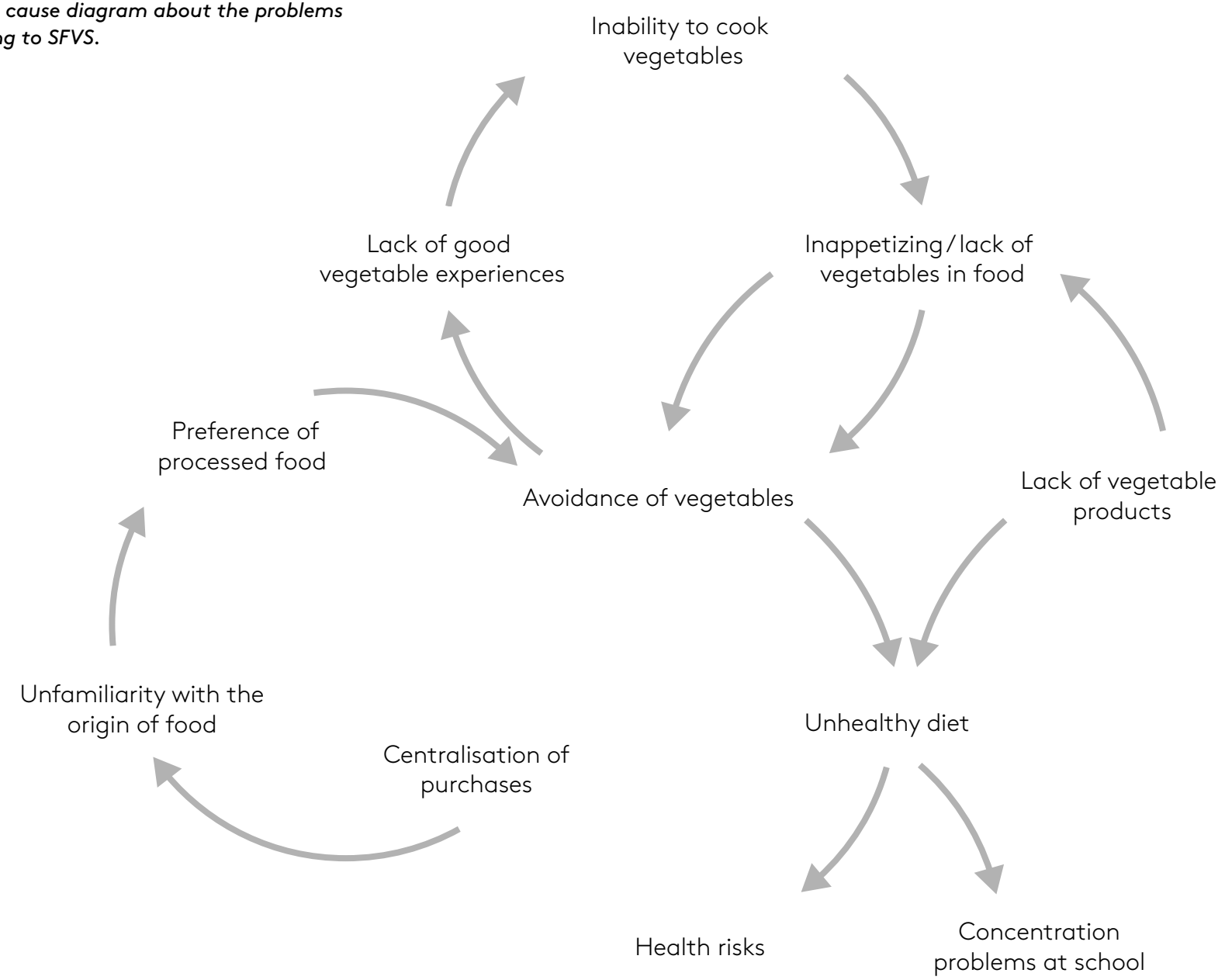
The avoidance of fruits and vegetables leads to the lack of good vegetable experiences and furthermore to the inability to cook vegetables and the unappetizing food or food that lacks vegetables altogether. This furthermore promotes avoidance of vegetables and causes a vicious circle.

The avoidance of vegetables and the lack of vegetables in this environment (among others) lead to unhealthy diets that cause health risks and learning problems at school.

THE MOST IMPORTANT LEVERAGE POINTS THAT WE FOUND THROUGH THE SYSTEMS MAPPING:

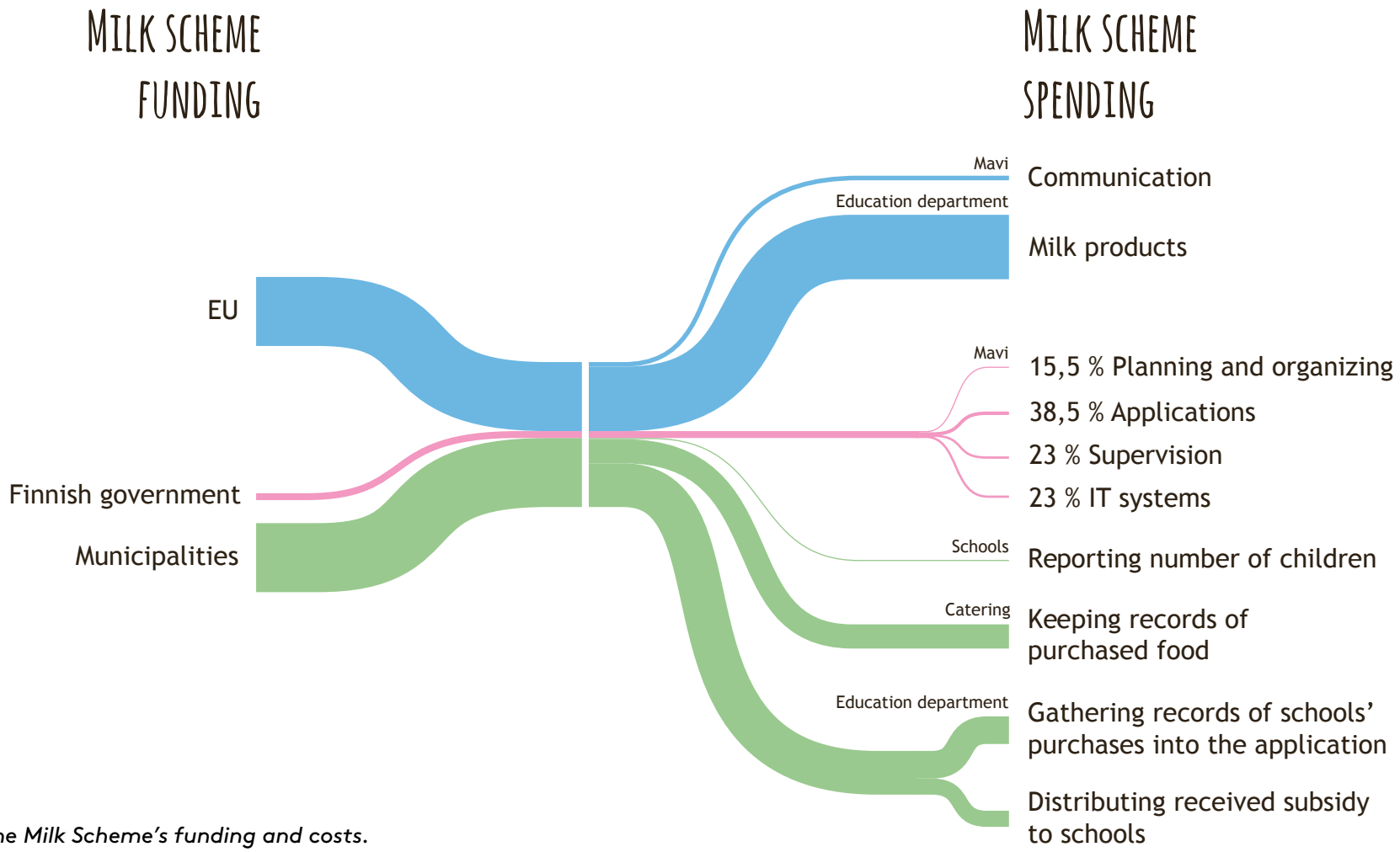
- Change in culture and attitudes both at school and family level
- Economic and long term effects of purchase decisions and also the balance in quality & price
- Finding unified goals of the ministries and cost vs benefit inside those organizations
- Nutrition guidelines that are set by the Ministry of Social Affairs and Health and Ruokatieto
- Procurement guidelines, offering and food planning at the municipal level
- Delays in decision-making process at the administrative level
- School's nutrition responsibility and students' attitudes towards vegetables
- The school kitchen's / catering company's capability to prepare vegetables. The balance between profit-making and responsibility of those companies.
- The question on implementing monitoring also for qualitative measures which must be regularized and supervised
- Buffers in vegetable production capacity: big foreign production amounts and smaller Finnish production amounts

A root cause diagram about the problems relating to SFVS.



Milk Scheme Analysis

The Milk Scheme is already a running program in EU that gives funding to distribute milk to school children during school lunches. In Finland, The Milk Scheme is owned by the Ministry of Agriculture and Forestry and run by The Agency of Rural Affairs. The message of combining these two programs tightly came very clear through our interviews. However, while studying the structure of Milk scheme we found three reasons why the SFVS will not work like the Milk scheme. EU has also done a survey about these two programs. [6] Besides that all the joining countries have done their own surveys about the effectiveness of these two schemes.



A model about The Milk Scheme's funding and costs.

The first of our findings was that the administrative burden is simply too heavy. It requires approximately the same amount of money that comes from EU also from Finnish government and municipalities.

The application process itself is so heavy for municipalities that for example Espoo has decided to not join the scheme. “If the vegetable scheme requires the same kind of accounting, you can forget about it, honestly, it spoils the good purpose”, said one of our interviewee from Educational Department.

The second finding was that The Milk Scheme does not bring the intended benefits in any of the possible beneficiary models. A glass of milk per meal is included in the official school lunch recommendations, and because of this, would probably be included in the meal anyway. So in some schools the end result is 2 - 3 extra milk desserts a year per student and the workload for the schools is huge. This seems to be a good model mainly for milk producers as they get strong visibility at the school level.

The third fact was that there is simply no way to know if it is working. The funding is distributed based on the amount of children and not based on the milk consumption. So there are no indicators between how much money is distributed within the scheme and how much milk children actually drink. The long-term results are also not measured but they are based on the indicators, so it would not currently even be possible to measure the true impacts.

Key Insights

Based on our research and and systems mapping activities we found key insights that guided the creation of our concept.

1. The amount of vegetables that could be bought with the EU-support is in itself not enough to make an impact on the eating habits of kids.

2. Kids can be encouraged to eat more vegetables by giving them hands-on experiences.

3. There is a lot of good work already done, but it tends to be limited to individual projects that lack continuity.

4. Teachers would be more active on food education if they had the right connections.

5. To ensure the schools’ participation, the accompanying measures have to be connected to the curriculum

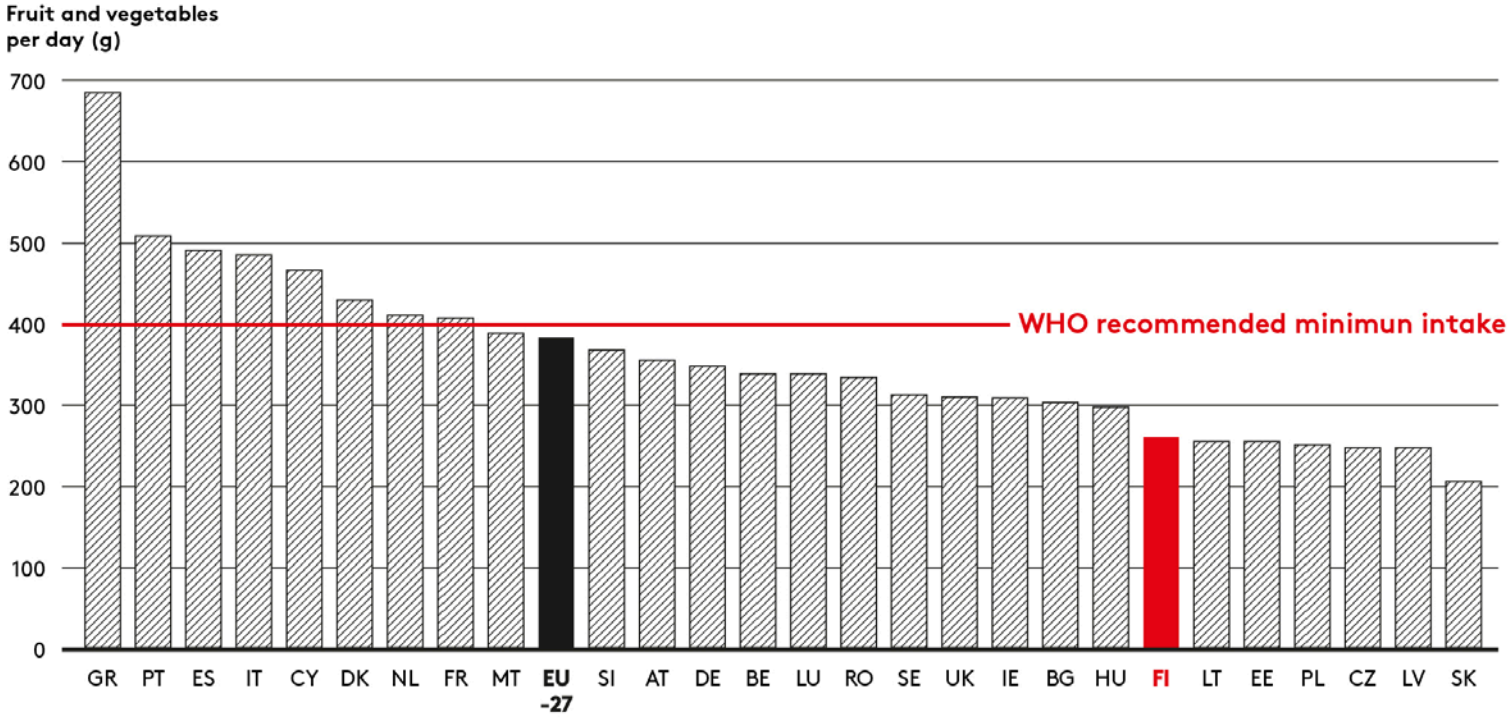
Re-brief

Reframing of the problem

Our original brief asked us to find out how the EU money for School Fruit and Vegetable Scheme could be used in Finland. While that was something we needed to consider, it could not act as the driving vision towards a solution. The more significant baseline was the context from which the Scheme originates.

Every fifth Finnish school-aged child is overweight, and without intervention, obese infants and young children will likely continue to be obese during childhood, adolescence and adulthood. [7, 8] The costs of obesity in Finland are around 330 million a year. [9]

Diet plays a significant role in addressing the problem, as World Health Organisation Commission [8] has listed increasing the consumption of fruit and vegetables as one of the main acts to prevent childhood obesity. The World Health Organisation recommends a daily intake of 400g of fruit and vegetables per person. [10] As most other EU countries, Finland falls short



Projected overall daily fruit and vegetable consumption in the EU-27.

Source: An indicative estimate by the Directorate-General for Agriculture and Rural Development based on WHO data, as shown in School Fruit Scheme Strategy For The 2014–2017 School Years by the Ministry of Agriculture of the Republic of Lithuania. [10]

of this recommendation with a daily intake of only approximately 260 g per person.

Eating fruits and vegetables during the school day has also a significant impact on learning and concentration. An American study published in the Journal of School Health in 20085 shows that students reporting an increased intake of fruit and vegetables were up to 41% less likely to fail in a literary assessment. In other words, when provided healthy food, the students will perform better.

We are dealing with a national problem, which is about health and learning, not the EU money. The solution to the problem is not to give out fruit and vegetables. In order to achieve a lasting impact, we need to emphasize education.

The problem touches a wide variety of stakeholders, and we need collaboration between agricultural, health and education authorities in order to reach a solution. The EU money can only act as a catalyst towards a solution. In order to get different stakeholders involved in making the change happen, we need a vision that drives action.

Vision

After the mid-term review and discussions with the client, we generated the following vision for the next five years:

After primary school, kids have gained own "field-to-fork" experience about fruits, vegetables and berries.

This is included in the next renewal of the core curriculum.

By field-to-fork we mean how and why the food ends up from the farm through the production to the tables

Ideation and Concept Creation

Many ideas emerged during the research process both from the people we met as well as from ourselves. In addition to this we had two ideation workshops with our team and one with a range of stakeholders. In our own ideation we used the driving vision, user profiles and design drivers as a base on which to build ideas. A comprehensive list of all the ideas we documented can be found in the attachments.

Stakeholder Workshop

To find out which design requirements we should prioritize and to create concrete ideas on what they could mean, we organized an ideation workshop. Our aim was to get a wide range of stakeholders into the workshop in order to have a rich mix of viewpoints. In the end we had nine participants: teachers, parents, a school nurse, producers, food education experts and a member of a municipal council.

The workshop consisted of two tasks in smaller groups and a discussion of the results. The first task was to prioritize the design drivers we had created, and pick one that the group found the most important. In the second task we asked them to create ideas on how the School Fruit and Vegetable Scheme would be like if it was designed according to the driver they picked. Each group documented their ideas into a storyboard that described the activities at school.

Ideation at the stakeholder workshop.

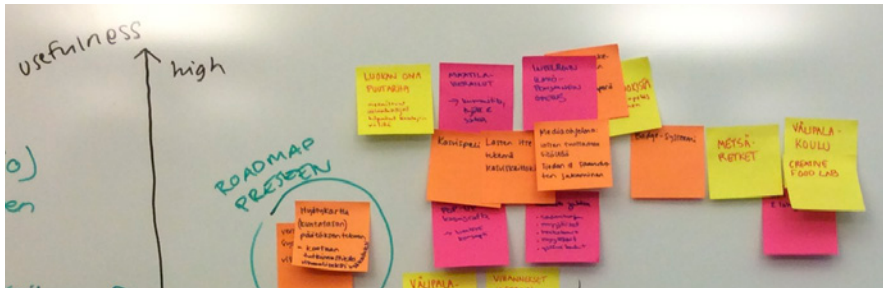
In the discussion each group presented their storyboard, and the others were free to comment. The results of different groups were complimentary, and together with the discussion they gave us a rather clear direction to pursue.

The stakeholder workshop gave us both concrete ideas on how the Scheme should be implemented, and deeper understanding on the everyday realities of schools and producers. Some elements of the stories our participants wrote made it all the way to the final concept. An equally important outcome was that we got important confirmations to our research findings, which gave us confidence to evaluate our own ideas.

Our Own Evaluation of Ideas

In order to determine which ideas we should develop further and which ones to drop, we gathered them all together for evaluation. As an evaluation tool we used a simple diagram with usefulness towards our vision on one axis, and ease of implementation on the other. Some ideas were merged together, and some weak ones were set aside to be reconsidered as part of a stronger idea.

We evaluated majority of the ideas to be useful towards our vision, but many of them seemed to be difficult to implement as well. Based on the most promising ideas we made four draft concept proposals, which we presented to our client for feedback.



MOST PROMISING IDEAS

- Creative food lab where kids can prepare and play with food.
- Making the benefits and health aspects visible, e.g. labeling carrots being super energy boosters.
- Education: making food origin maps, showing the path from “field to fork”, DIT-gardening kits.
- Straight relationship and regular connection between farm and school e.g. farm visits, workshops around the topic, messages from the farm, video stream between farm and school, incentives for kids to learn more about vegetables.
- Web based map about farmers and schools in order them to find each other.
- Gamification e.g. badge-system that’s familiar from scout mark system.
- Making use of all senses when displaying food at school.
- Role of kitchen staff: could be a part of food education and not just “behind the the counter”.
- Automatization of the participation process for schools.
- Light metering done e.g. but kids using instagram photos of their consumption.
- Involving parents and creating an action movement together with media in order to make school food healthier.

Majority of the ideas were evaluated highly useful.

1. Phenomenon-based Learning

IDEA
Offer schools theme options, ideas and material to arrange a fruit and vegetables themed phenomenon.

USE OF EU SUPPORT
For example to buy snacks for a final event of the phenomenon

OTHER COSTS
Idea materials, regular teaching costs

INVOLVED STAKEHOLDERS
Board of education, headmasters, teachers, places to visit, parents

MOST IMPORTANT RESOURCES
Core curriculum, schools' own curriculums, web page for the materials, schools' own education resources

In August when school starts Osku's teacher tells that the class will participate in a project together with the rest of the school. Osku is excited, when the whole school gathers together to vote on the theme of the project. The options are Garden, Forest and Restaurant.

Forest is chosen as the theme of the project. Osku's class goes to pick mushrooms with older students, and he learns how to recognize different kinds of mushrooms. After the trip they make mushroom soup together. Together with his class Osku makes a report of the trip using stories, drawings and photographs. It's published in the local newspaper.

Over the course of the autumn different classes do research around different topics related to forests, and the results are gathered into an exhibition in the school hall. On a Saturday school day all the families are invited to see the exhibition. The forest project finishes with a final event, where food that grows in the forest is served.

2. Fruit & Vegetable Game

IDEA
Kids learn about vegetables through a fun game. They are rewarded with badges when they do different tasks. Some tasks are compulsory to get forward, some optional.

USE OF EU SUPPORT
Tasting tasks as part of school snacks

OTHER COSTS
Game design costs - possibility to collaborate with an existing platform?

INVOLVED STAKEHOLDERS
Parents, teachers, game company, supervising authority

MOST IMPORTANT RESOURCES
Game, kids' own phones

Osku's class receives a challenge from the neighboring school to participate in a fruit & vegetable game. In the game he collects information, skills and experiments on fruit and vegetables. For each new achievement Osku gets a badge, which he can share to his friends. Some tasks are compulsory in order to get forward in the game. Compulsory tasks are done also together during classes. In addition to the compulsory ones, Osku decides to help his father in making jam and drying mushrooms, in order to get the PickleMaster badge.

Achievements are awarded also for eating fruit and vegetables, and Osku gets on a new level when he eats root vegetables on the school snack time.

3. Tutor Farm

IDEA
A partner farm for the schools, where kids can visit and try out things themselves. Continuous contact between the school and farm around the year.

USE OF EU SUPPORT
Vegetables are bought during farm visits

OTHER COSTS
Recompensation for the farm, costs of creating the farm&school network, transportation costs

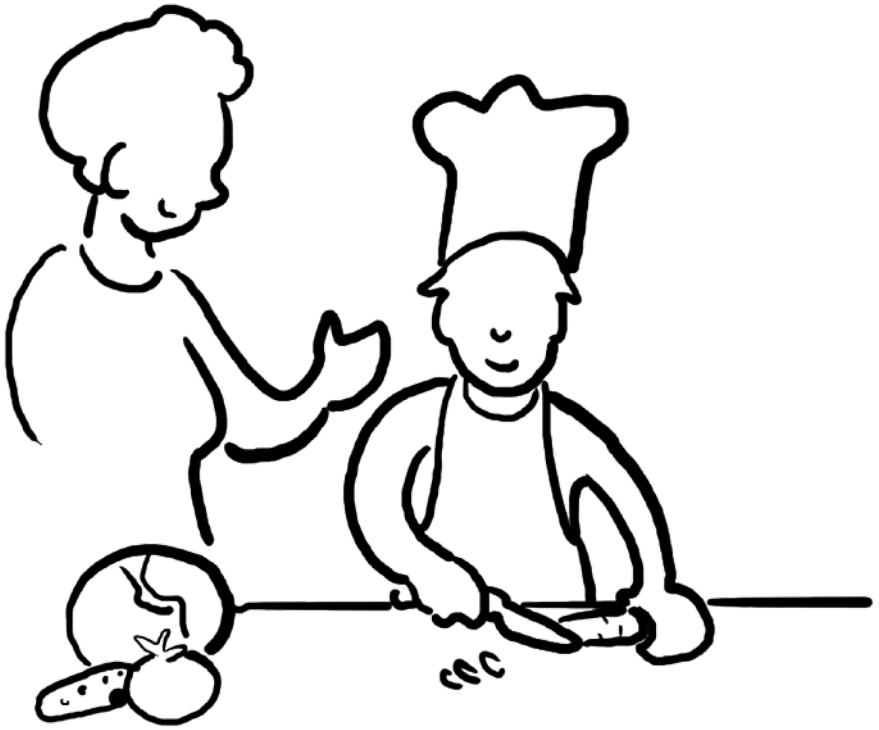
INVOLVED STAKEHOLDERS
Farmer, teachers, matchmaker

MOST IMPORTANT RESOURCES
Farm & farmer, plants, transportation

Osku's class receives an invitation postcard to the Heinola farm. His techer tells them that Heinola will be their new tutor farm. After a couple of weeks the class goes to visit the farm. Heinola farmer shows how carrots are sown, and Osku and his classmates get to try planting the seeds on a small piece of land. During the farm visit the kids get a snack of Heinola's own swedes and apples, and they also bring some with them back to the school.

Along the year Osku's class keeps regular contact with Heinola farm, and once he gets to do a video interview with the farmer for a school project. Whenever some class visits the farm, they put up photos on the wall in the school hallway. The pictures and their descriptions make up a long timeline that shows the yearly cycle at the farm.

4. Creative Food Lab



IDEA
A course with preplanned content. Kids learn to make snacks out of vegetables and do wild experiments.

USE OF EU SUPPORT
Predefined food package for the course

OTHER COSTS
Training the teachers, planning course content and teaching materials, kitchen equipment

INVOLVED STAKEHOLDERS
Teachers, catering, kick-off team

MOST IMPORTANT RESOURCES
Food, instructions, equipment, space, teacher

It's Osku's first home economics class. Together with the class he watches an online video, where the Junior Master Chef winner makes snacks out of swede and lingonberries, and challenges the kids to send their own snack recipes on the website.

During the following weeks Osku learns to make different kinds of vegetable snacks on the home economics classes. Sometimes they have wild days, when they can make own experiments with the ingredients available. Osku is also asked to make snacks at home with his parents as a homework, following a recipe he got. In the end of the course Osku gets a Snack Master diploma!

Concept Evaluation

We presented our four draft concept proposals to our clients from the Ministry of Agriculture and Forestry, and asked them to evaluate them for us. Each person was asked to choose the best concept in four different categories. The evaluation criteria and results are presented below.

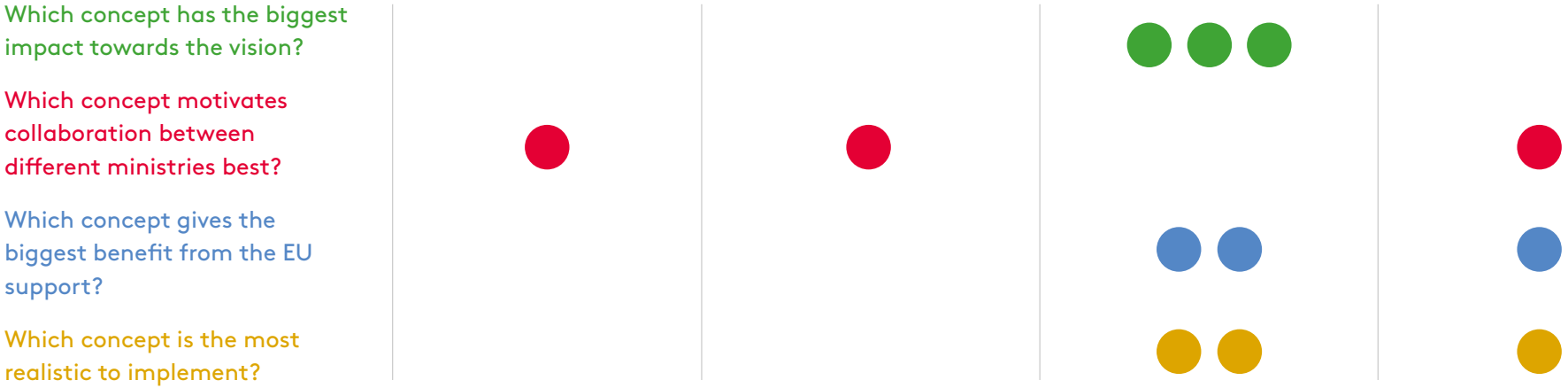
The Tutor Farm concept was the clear favorite of our clients, even though it was not seen as a concept that encourages collaboration between different ministries. Phenomenon-based learning did not get many points because the mushroom example we chose was too far from the focus of the Scheme. Overall our clients liked all of the concept proposals.

PHENOMENON-BASED LEARNING

FRUIT & VEGETABLE GAME

TUTOR FARM

CREATIVE FOOD LAB



After the evaluation meeting with our client we decided that it was best to not stick to only one of our draft concept proposals. Instead, we took the elements from each of them that we saw were the most critical in making the Scheme successful.

1. Buying Vegetables During Farm Visits

In order to maximize impact of the Scheme, we wanted to get as much educational benefit as we can from the amount of vegetables that the EU support can buy. Seeing the origin of the vegetables and being able to participate in growing and picking them up is an invaluable part of the child's experience. As discovered during our research, it directly contributes to the eating habits of the children.

Buying vegetables directly from the farm also ensures that the Scheme supports Finnish agriculture. If the vegetables were purchased seperately from the farm visits, EU legislation concerning public purchases would not allow favoring Finnish products over other EU countries.

Having the farmer apply for the EU support directly is also the most efficient use of the EU support. It cuts extra steps in the reporting process, compared to a model where municipalities would do the application.

2. Phenomenon-based Learning

Phenomenon-based learning provides the essential link between the Scheme and the curriculum. It ensures that schools will be able to use their regular teaching resources on the Scheme. This way teachers will have time and supporting materials to plan and realize the educational part of the Scheme.

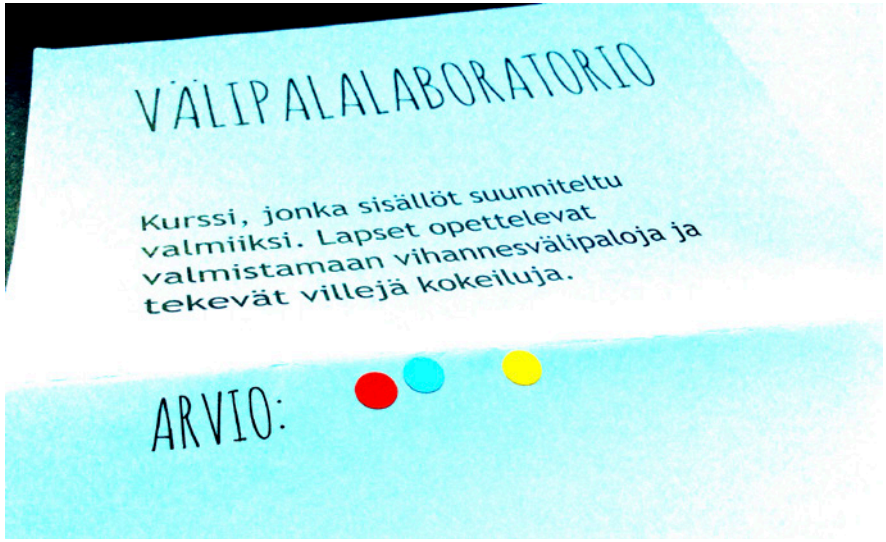
Phenomenon-based learning also ensures continuity. When fruit & vegetable education is done by schools themselves instead of outside organizations, it is possible to tie it more closely to the yearly cycle at schools and be made a permanent part of primary education.

3. A Badge System

In order to motivate participation and funding for the Scheme, it is important to be able to measure its impact. That is why we decided to include the badge system from our fruit & vegetables game concept draft. The badges can be used directly to monitor children's learning within the Scheme.

Another important role for the badges is to make the results of the Scheme visible at schools and homes. Our research showed that to motivate long-term action, small steps along the way need to be made visible in an engaging way.

The clients evaluated our concepts with colorful stickers.



Field2Fork

In order to understand Field2Fork (F2F) concept, we need to take a step back from the original brief. First, we have to understand that the brief should not be about EU subsidy, but about health and learning (as discussed in page x). Similarly our concept F2F is not – and SFVS should not be – about giving out money or vegetables, but about educating. F2F aligns different motivations and thus calls for cross-ministerial collaboration in order to tackle school food related challenges as a whole. It does this by integrating SVFS into phenomenon-based learning emphasised in the newly renewed core curriculum.

We created the concept for the Ministry of Agriculture and Forestry with the children and their benefits in mind. In brief, our concept is a set of materials and tools for teachers in order is easy to teach phenomenon-based learning related to food and especially fruit and vegetables. This is a way to make sure that all school children learn and gain their own experiences on fruits, vegetables and berries. While children get new fun experiences and learn new food related skills, their attitudes towards vegetables change and they will be empowered to make their own food choices.

We have involved many stakeholders; Ministry of Agriculture and Forestry, Ministry of Health and Social Affairs, The Board of Education, The Central Union of Agricultural Producers and The Forest Owners (MTK), The Agency of Rural Affairs (Mavi), schools, producers and municipalities; and made sure that all of them benefit from the concept in their own way. This is our way of making sure there is good motivation and willingness to implement the concept.

Field2Fork in Action

Here is how Field2Fork looks like from the perspective of a schoolchild.

In January Mari's teacher tells the class that they will participate in a project with the rest of the school. Later the same week, the whole school gathers together to vote on the theme of the project and Mari starts to get quite excited. The options are organic food, greenhouse and restaurant. And organic food it is! That will be the theme of the project.

The school receives a video call from Heinola farm. The farmer introduces their farm as the school's the new partner 'Kummitila', and challenges the kids to help them grow 500 organic swedes. The school gets to action and sets up a project wall where everyone can see the progress they are making with the challenge and what is currently happening at the farm.

During the spring, Mari also learns what organic food means thtough different subjects. Learning really becomes exciting when she gets to help the farmer by calculating how much land is needed for the swedes to grow and by drawing a map that shows the area on the farm. Mari gets a Master Planner badge for this. She gets one for each new achievement. She compares the badges with her friends. Tim has made an effort of getting a Champion of Champignons badge and Mari also decides to do some expert level badges to impress others!

In mid-spring the class makes a visit to the farm, where the farmer shows them how to sow the swedes. Finally they can take all their plans into action and plant the seeds!

Just before summer holiday's Mari visits the farm with her class to see any progress. She sees the first new potatoes and salads being picked up for sales. However, the swedes were still firmly in the ground. Mari can't wait to come back to school and the farm, and see how they've grown during the summer holidays.

And oh boy they've grown! In the autumn, the harvest season, Mari's class gets to pick up the swedes by hand. Mari's beaming with pride! This was super fun! They take the vegetables back to the school and share them with the rest of the school. Mari learns how to wash, peel and cut the vegetables for a snack in the afternoon class and finally even understands why mum's Christmas swede casserole looks they way it does. Mari is so proud to show off her new cooking skills at home, to her parents, and even manages to get one final badge of the year, the Pickling Princess badge.

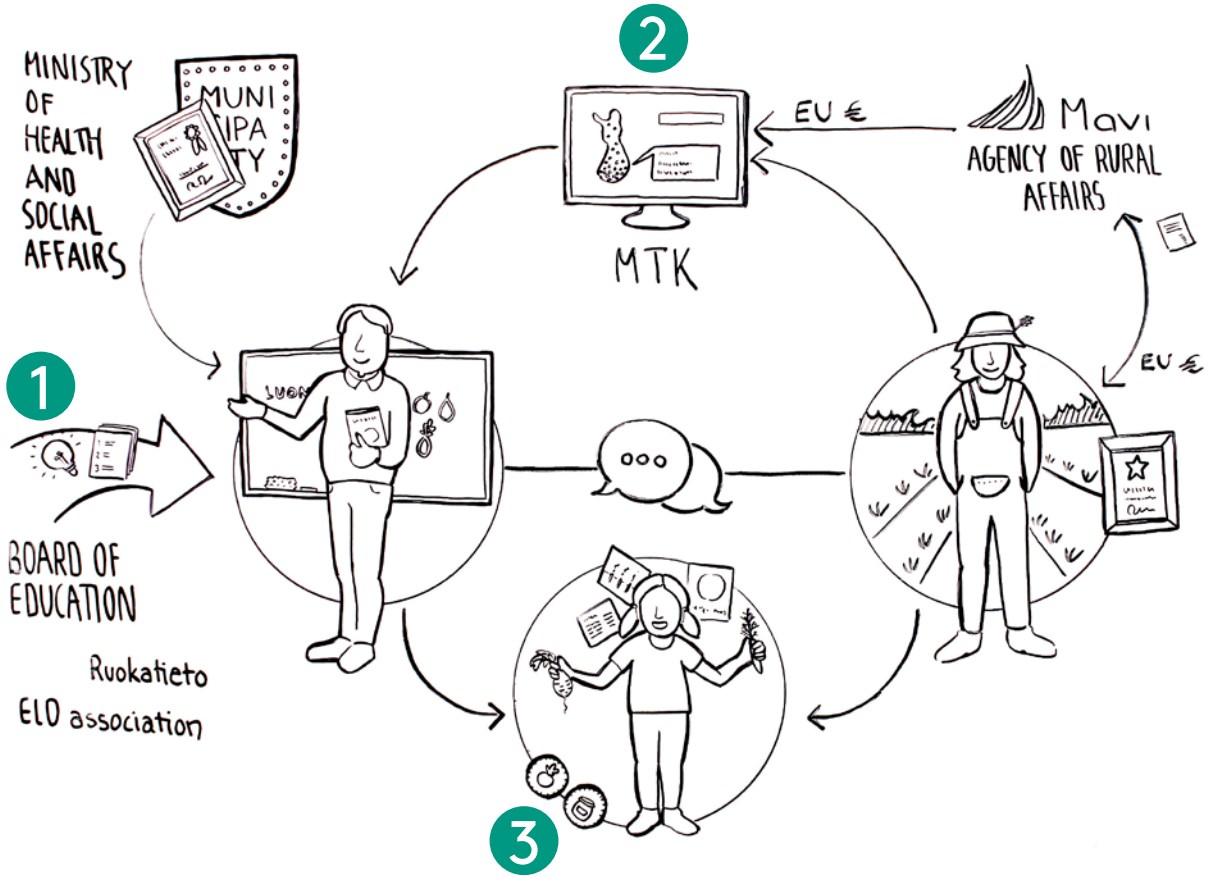
How Field2Fork Works Between the Stakeholders

Realizing the Field2Fork experience for schoolchildren requires collaboration from teachers and farmers. The administration responsibilities are also shared among a range of stakeholders. Here is a brief overview of how Field2Fork works between the different actors. More detailed description of the building blocks of the concept can be found on the following pages.

Teachers start teaching subjects through a food related phenomenon. Educational material (1) is provided to the teachers. Related to the phenomenon teachers arrange farm visits to partner farms which they find from a ready platform – 'Farm Map' (2). This is set up as an *accompanying measure*.

During the farm visit the children pick up fruits, vegetables and berries whose purchase is funded from the SFVS subsidy. This promotes directly Finnish agriculture. The farmer reports the amount of vegetables picked to the Agency of Rural Affairs, who subsidises the purchases to the farmer.

The children receive motivational badges (3) from every new achievement related to the phenomenon. These badges are also used to measure the success of the concept. Municipalities that participate in the programme are awarded with a silver certificate. Municipalities that invest more resources into education on growing food, the food chain and cooking, are awarded with a gold certificate. The certificates are used to promote municipalities' contributions to children's wellbeing. The partner farmers are awarded a tutor farm – 'Kummitila' certificate.



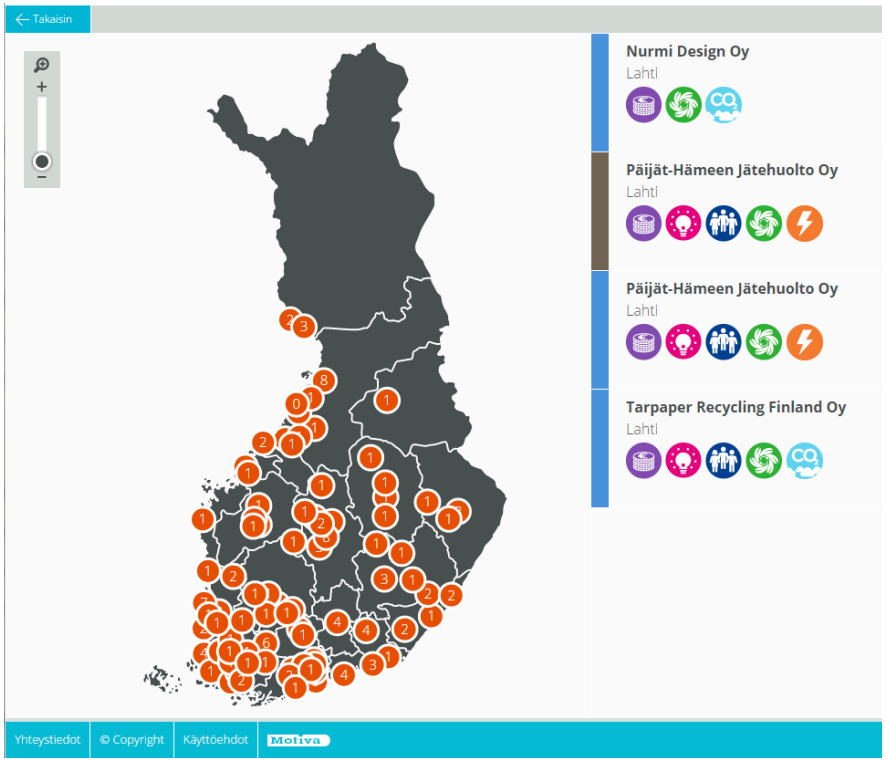
Building Blocks of the Concept

1. 'Farm Map'

'Farm Map' is a farm network of Finnish farmers willing to arrange farm visits for children. The Central Union of Agricultural Producers and Forest Owners, MTK, develops 'Farm Map', a platform which connects teachers with farms. MTK utilizes their existing network and channels to reach other unions and individual farmers. The design of the platform is funded from SFVS subsidy allocated to accompanying measures. Farmers willing to tutor schools, and schools willing to visit farms sign up to the platform. As a result, both can proactively start arranging farm visits.

MTK has been actively collaborating in schools' farm visit related matters in North-Karelia and lately in "Maaseutu maistuu nuorille" -project in 2012-14. In this project goal was to encourage young people's interest to professional farming but the means used, farm visit, "kummitilat" and farms as learning environments, were similar.

Sitra has developed the teollisetsymbioosit.fi website, a map platform that promotes cross-sectoral collaboration by visualising opportunities for industrial symbiosis. 'Farm Map' requires the same functionalities as teollisetsymbioosit.fi and therefore uses the same source code.



A screen capture from teollisetsymbioosit.fi.

MAASEUTU MAISTUU NUORILLE -PROJECT

http://www.mtk.fi/liitot/pohjoiskarjala/manu_hanke/fi_FI/manu_hanke/_files/93012391870741166/default/MANUhanke_31.12.2014_lopputiedotus.pdf

2. The Educational Material

Educational material is provided for teachers as a tool for phenomenon-based teaching periods related to food. The Board of Education creates educational material for the schools in collaboration with The Elo Foundation and Ruokatieto (and other organizations dealing with food education) and universities' departments of teacher education. Involvement of these organizations makes sure that the existing ideas and content can be made available nationally.

Ready material lowers the threshold to plan phenomenon based learning as required in the renewal of the core curriculum. The biggest challenge that keeps the teachers from doing phenomenon-based learning is the lack of resources. When the teachers are provided with ready educational material, they are attracted to pick a food-related phenomenon to be one of the first phenomena required in the curriculum.

Farm visits are one of the significant parts of the phenomenon-based learning. The children understand how and why the food ends up from farms to the dinner tables.

3. The Badge System

The badge system is a motivational tool. Children are motivated to try different vegetables and fruits, study their characteristics (nutrition and growing) and to take part in the actual process of growing, harvesting and processing (cooking) them, through a badge system. The children receive badges for their progress: new knowledge and skills.

The badges are named in a funny way, i.e. Master Planner / Mestarisuunnittelija (for calculating the area required for the vegetables to grow) and Pickling Princess / Pikkelsi-prinsessa (for preserving food by traditional methods). The badge system directly promotes healthier eating habits and thus national health. The Ministry of Health and Social Affairs funds the development of the system and passes ownership over to a related organization.

The system can be integrated to i.e. to Muuvit. Muuvit is a browser based application developed and maintained by Valo, Finnish Sports Confederation. It invites children to a sports adventure to move, learn, travel – and have fun. The class collects sports points collectively. These points help the class to travel on a world map and address new challenges. The points are collected by doing sports – the more they move, the more they progress. The application already mentions diet as an important factor of healthy life.

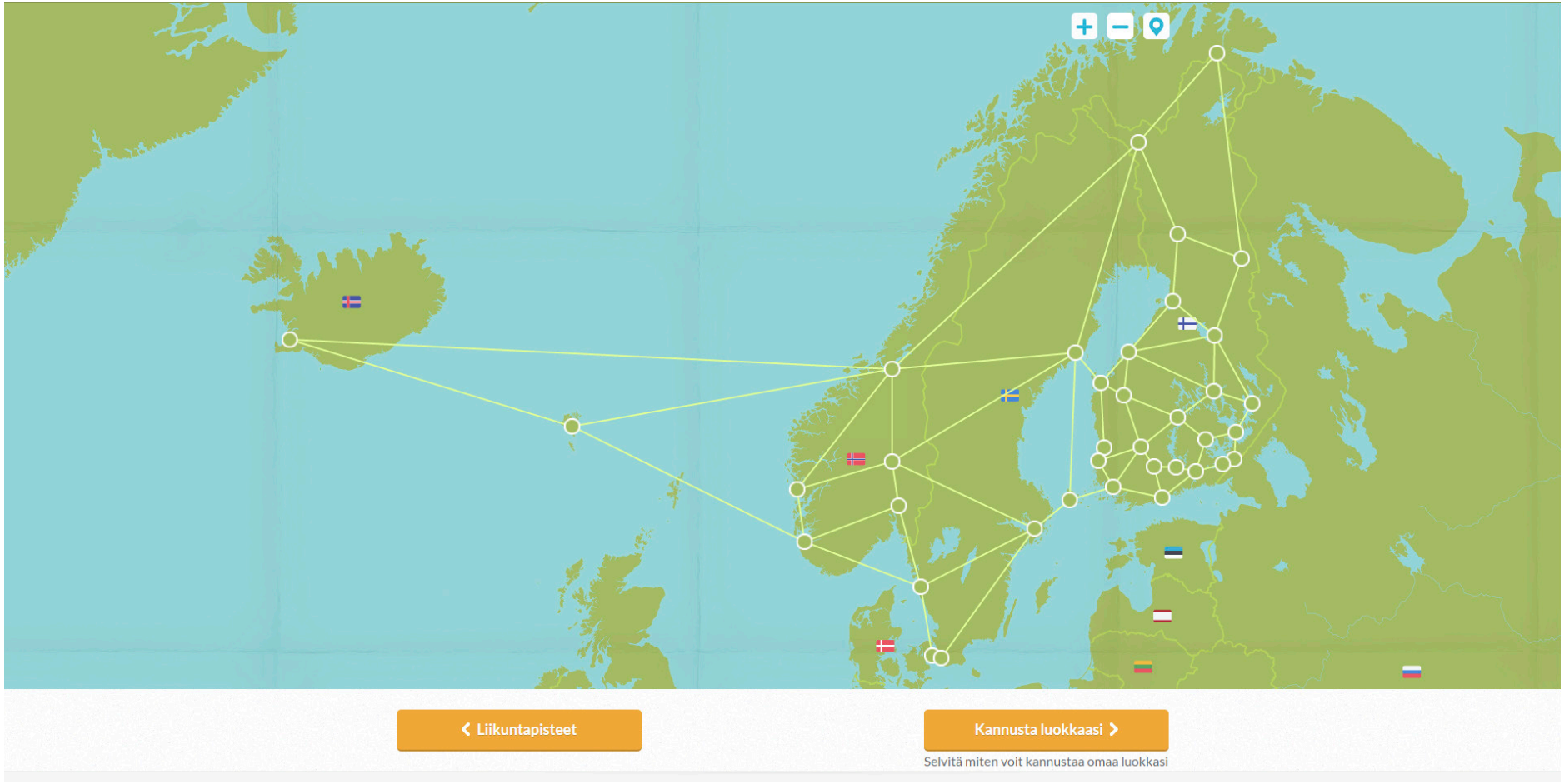
The development of the badge system is divided into three phases:
1) Experimentation and Validation
2) Browser-ased Application, and
3) Mobile Application.

The badge system is first experimented and validated with stickers and empty sticker albums. The teacher collaborates with parents, and both the teacher and the parents take responsibility for giving out stickers for new achievements.

After validation the badge system is developed into a browser-based application or integrated into Muuvit. The teacher and the parents accept 'badge requests' by the student.

Eventually this system is developed into a mobile application and a profile that the student can update during or right after the new achievement. The student can provide evidence of the achievements by sending photos or video to the teacher or the parents.

Screen capture from Muuvit.com.



Meters

As mentioned earlier (in The Milk Scheme Analysis), The Milk Scheme is measured only through the number of subsidised glasses of milk. We want to avoid measuring the number or the amount of distributed fruits, vegetables and berries, as this does not support our vision. Instead we want to measure the impacts of SFVS and F2F on kids' learning and on obesity.

Impact on kids' learning we can measure through the badge system, and the data that the application collects. The type of badges shows how much different fruits, vegetables and berries children try out, the motivation of the children to participate in activities (such as farming or cooking) and the progress in learning (move from easy to complicated challenges).

We want to measure the overall impact of F2F on kids' health (and later on national health at large). The National Institute for Health and Welfare (THL) already carries out the School Health Promotion study that covers 200 000 students. The measurements about the change in the diet and the weight are integrated in this study.

The popularity of the farm visits can be measured through the Farm Map and the number of subscribed farms and schools. Similarly the number of educational material downloads is tracked and the popularity of the ready materials and phenomenon-based learning thus measured.

Road map

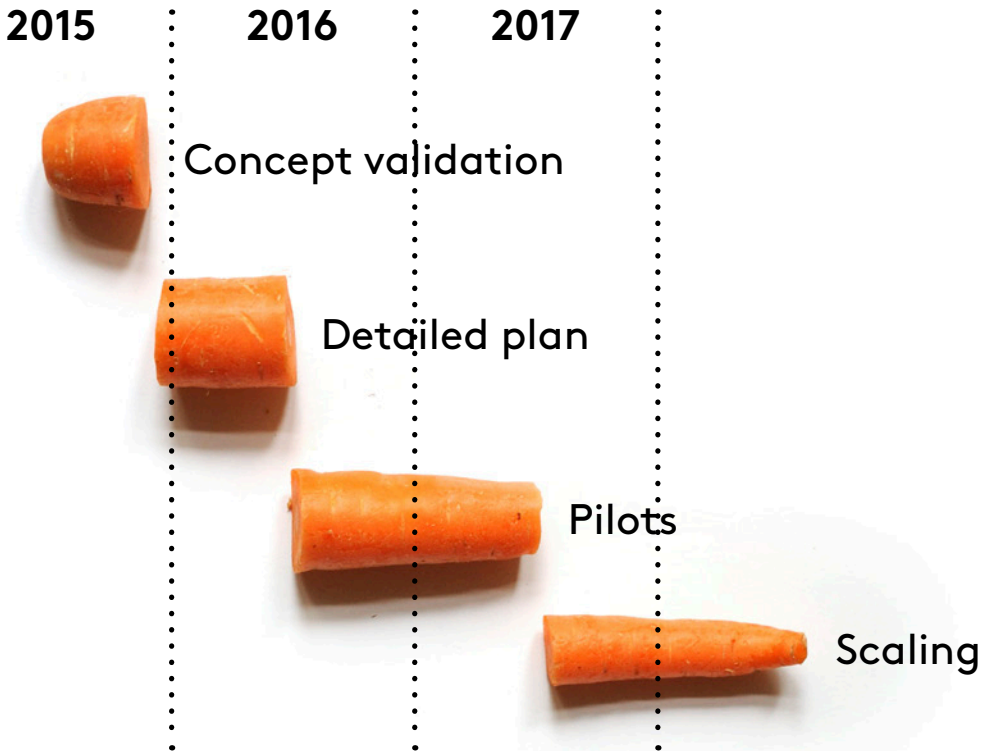
As most of the building blocks for F2F already exist, it is possible to start realizing it in a fast pace. Experimentation, learning on the way and gradual implementation should be emphasized.

2015

- A favourable decision on the implementation of SFVS
- National Budget (25%)
- Validation of the concept
- Validation of money flows (Will Agency for Rural Affairs manage the subsidy? What is the least bureaucratic way for the farmers to report the schools' purchases and apply for the subsidy?
- Validation of content with the stakeholders

2016/1–7

- Application to SFVS
- Recruitment of partners for production of educational material
- Limited application of pilot schools to SFVS
- Recruitment of pilot farms
- Design of educational material in collaboration with schools and nutritional consults



Implementation road map.

2016/8–12

- Launch of the pilot programme (Take aways from the
- Efforts to get media attention to the pilot programme (Yle broadcast, YouTube channel, home page etc.)
- Platform for the educational material ready
- 'Farm Map' launch
- Marketing towards the farms through MTK

2017

- Launch of SFVS full scale
- Browser version of the Badge system (or integration to Muuvit)

2018

- Vision into the core curriculum
- Mobile Application version of The Badge System

Why Should We Do This?

According to calculations done by The Agency of Rural Affairs MaVi, if we used the 1.6 million subsidy to distribute fruits, we could only get ten apples a year per student which would not be a very impactful way to go about the scheme. So instead, we can use the EU money to scale-up good practices. Farm2Fork means aligning different stakeholders' interests to get maximum impact and using this as an opportunity to educate kids.

Instead of distributing ten apples to each school child, what we can do is:

- Use the money to buy straight from farmers. Our concepts make sure that it benefits the Finnish agriculture because the purchases are done during the farm visits after the kids have picked the produce.
- Provide the network and the ready material to lower the threshold for schools to participate and start doing phenomenon-based learning.
- And most importantly – give children fun experiences that will help them learn the best way possible. They will have a good time, learn through hands-on experiences and get to apply the knowledge right away.

Discussion

Even though we had an experienced team of designers, the project was a great learning opportunity for all of us. We hope that our clients and some of the other stakeholders we worked with learned as much about design as we learned about working in the government context.

The Suitability of Modes of Inquiery

We used a wide range of methods for gathering insights of the users and the context. Interviews worked well in our case as it was important to find out each stakeholders' motivations for the project and also map out the stakeholder network.In each interview we also got good suggestions and benchmarks for the next step of the project. In order to align different interests and to find inspirations for the design, it was important to meet face to face, hear the interviewees thoughts and sense underlying issues involved in the scheme. The municipal actors were the most difficult to reach for an interview. Later on when testing the implementation of the project or by mapping out detailed challenges, a questionnaire might work also. By sending a questionnaire enables getting hold of a larger group of people and the probability of getting answers increases.

The kids workshop was useful in our case as none of us had children of our own and would have been hard to imagine what everyday school life is today. We got first-hand experience on how kids reacted and what the atmosphere was like in the school environment. In this sense, it was kind of an early experiment of how a vegetable and fruit project might work in the school and enhanced our empathetic approach.

The stakeholder workshop was useful in getting ideas for the solutionizing phase and also in sensing the motivation and possible ownership for the scheme. Even though the workshop was organized in a very short timeframe, we sensed the importance of the scheme as we got so many people attending and also asking curious questions on how the project will continue.

Probes were the most challenging mode of inquiry in our case. Getting the probes back to us quickly enough to act as design inspiration was challenging. We did not necessarily find any new information in the probes, but then again they did act as a confirmation on the diversity of attitudes you can find involved around food in families. We also managed to create personas based on the probe material. However, when we decided to use probes, we did not know we were going to end-up with such a strategic high-level concept and not for instance a detailed website project. The personas might still come of use later on in the implementation phase when there is a need to see what kind of different user types there exists for applications.

The school observations as such did not provide us with new information, but it confirmed what we already knew and acted as a good intro for interviews to come, as many of the staff members approached us while we were doing the observations. Because we spent a day at the school, it was possible for the staff to come and talk to us in an informal way. They could approach us with issues they found important. During the observations we also began to understand the diversity of different opinions related to school food.

The Competences Required for SFVS

Involving farmers, schools and parents in early stages of the scheme is important in order to get the people influencing the implementation of the program on board. Workshops and open discussion for instance are a good way engaging people and getting their views and ideas on board. However, there is also a risk of meaningless workshopping where ideas are gathered, but results of the workshops are not properly analyzed and the ideas stay on post-it's rather than are refined and communicated further. Another risk is abusing people's input without a suitable reward for their time. The reward does not have to mean money, but can be acknowledgment or for instance information and follow-ups. Therefore we feel that the main competences required are participatory design and project management skills in order to make the process participatory and still keep the entity together.

Good analyzing skills are important in order to be able to find the most relevant information from the mass of data and communicate them to others consisly. Because this is a cross-disciplinary and cross-ministerial scheme, good communication and people skills are also required.

In order for the scheme to work from the user point of view, the administration level might need to bend more. This could mean changes on the organisational levels and ways of working. Getting change resistant people on board requires an understanding on how to enhance development in particular surroundings. Therefore transformation design skills are needed both from the client and the designers. However, the motivation for continuous development and a "can do" attitude can also carry the project a long way.

The Biggest Challenges During Design for Government

The biggest challenges were faced in the beginning of the project where we had to take in a lot information on the course and the scheme while organizing the Atlas Workshop as well as getting to know each other as a team. Gradually when the rhythm and culture of working was defined and first interviews set-up, it started to get easier.

Tight schedules also burdened our group and for us it seemed to be a challenge to keep all our group members on board throughout the spring. But as people have different schedules and also have lives outside of the course, this might have been hard to avoid with the tight schedule.

The course schedule was hard to match with the municipal schedules. The municipal level is crucial when it comes to decisions on school food and getting them involved in such a late phase was a challenge for us. We were working on a fast phase and were able to concentrate on this one project, but our stakeholders were tied up in several projects at the same time and could not dedicate time as generously. This is a common challenge in school projects. Then again it might also be motivating and refreshing for stakeholders to see quick results and see the school project acts as a catalysator.

A challenge was solutionizing in such a short time period. We did so many interviews where we got valuable information, it would have been good to refine the solutions with the research even further. More time would also be needed to test out ideas. Then again this hopefully leaves a possibility to continue working with the client later on.

Changing the stakeholders mindset was a challenge and trying to shift the conversation from what has been done to what could be done. It is common to hear, what cannot be done rather than what can be done as the areas of agriculture, food and education have so many regulations, it is easy to focus on restrictions rather than lead with a good concept where implementation is figured out one way or another.

ATTACHMENTS

A. SFVS National Strategy for Implementation

B. List of Ideas

C. List of Involved Stakeholders

D. Concept Video

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Aalto University