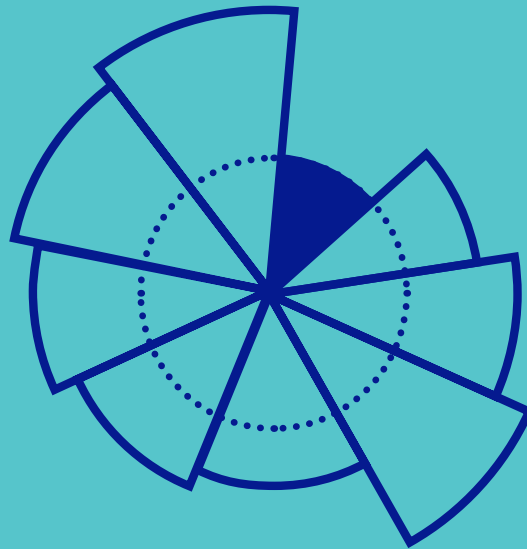


**DESIGN FOR GOVERNMENT,
AALTO UNIVERSITY, 2017**



**REGIONAL
CIRCULAR FOOD**
in Public
Procurement

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SUMMARY

Our project, A Model for Regional Sustainable Circular Food was commissioned by the Ministry of Agriculture and Forestry and the Ministry of Environment, with cooperation from Sitra and Motiva. The project sought to use designerly ways of working as a novel way to develop regional sustainable food systems as inspired by the Circular Economy Roadmap developed Sitra. The project was part of the Design for Government course at Aalto University which ran from February through May 2017.

The goals of the project were twofold: first, to investigate the obstacles, opportunities, best practices and potential innovations for sustainable circular food systems in Finland. And secondly, to propose a model for regional sustainable food systems which could support economic, social, ecological and cultural aspects of sustainable development. The project is motivated by the ambitious goal set by the Government of Finland to be a leader in the circular economy by the year 2025.

This report breaks down the 14 week-long project into four main sections: Research, Ideation, Main Findings and Proposal. Our research focused on identifying the problems, opportunities and obstacles in current food systems, using the Municipality of Forssa as a focus site to frame our investigation. The team conducted desktop research, interviews, fieldwork, and design-driven workshops to better understand existing regional food systems. Through analysis and synthesis of our data we used our insights to find leverage points in the existing systems. We also deepened our knowledge of sustainable food and the evolving circular economy both in Finland and globally. By better understanding the landscape of food circularity, the team identified problems and opportunities in the current system, applying design and systems thinking methods to explore how to influence its current and future states from a design perspective.

While our investigations identified a number of pertinent findings, this report will focus on the most relevant of those to our proposal. They are as follows:

Firstly, only 4% of local farming products is used in Forssa public procurement, and public procurers don't consider local food or farming produce in tendering processes. The tendering process for local food is considered burdensome; procurers lack knowledge of writing tenders that emphasise local products

locally available produce. The local procurement agency is dependent on an outsourced domestic procurement circle that buys 95% of the food from large, centralised distributors.

Secondly, farmers lack incentives to shift towards circular practices. They believe their practices are sustainable enough and their mental and physical resources are stretched thin. They lack incentives to shift towards circular practices because the impact and benefits of circular farming practices are not obvious. Yet, the circular economy is considered to be effective at promoting local food, incentivising sustainable farming, and increasing profitability and job creation.

Lastly, farmers are living in constant insecurity, their income has been decreasing. Local farmers balance sustainable farming with profitability, and promoting local food is essential in shifting towards circular economy. Balancing that gap could have significant importance in improving local livelihood, collaboration, farming entrepreneurship and innovation.

Our team developed a proposal for addressing the problems and opportunities identified by the key findings. The proposed concept is called *Regional Circular Food in Public Procurement*. It is a strategic vision for shifting the public procurement criteria for food away from best price to best overall value for a municipality and its citizens by the year 2030.

The implementation of *Regional Circular Food in Public Procurement* will be phased into first, a Municipality-led Strategy for increasing local food in public procurement followed by an Action Plan for achieving the goals. The Action Plan, called *Eat Local, Source Local* will be implemented in the following three phases spread over years 2017-2025: *The Art of Tendering Training*; *Joining Forces in Public Procurement*; and finally, *Innovation Lab*. The expected outcomes of the Action Plan are: more local food products in public kitchens leading to a stronger local economy and fewer greenhouse gas emissions; greater collaboration among multiple stakeholders in the food supply chain leading to stronger circular practices; and increased use of creative and lawful tendering by Procurement Specialists, thus making the results of their tenders more effective at targeting local products.

In closing, the benefits of *Regional Circular Food in Public Procurement* proposal are increased security and profitability for local farmers, easier local collaboration throughout the production chain, increased use of local products, increased knowledge in creative and lawful tendering, identified gaps for example in logistics and nutrient cycling. Ultimately, all actors would be in a strong position to respond to increasing food sustainability demands of governments as set by circular indicators currently in development, which will shift how food is valued in the procurement process and will incentivise stakeholders to change how they grow, process, distribute and re-purpose food.

RESEARCH

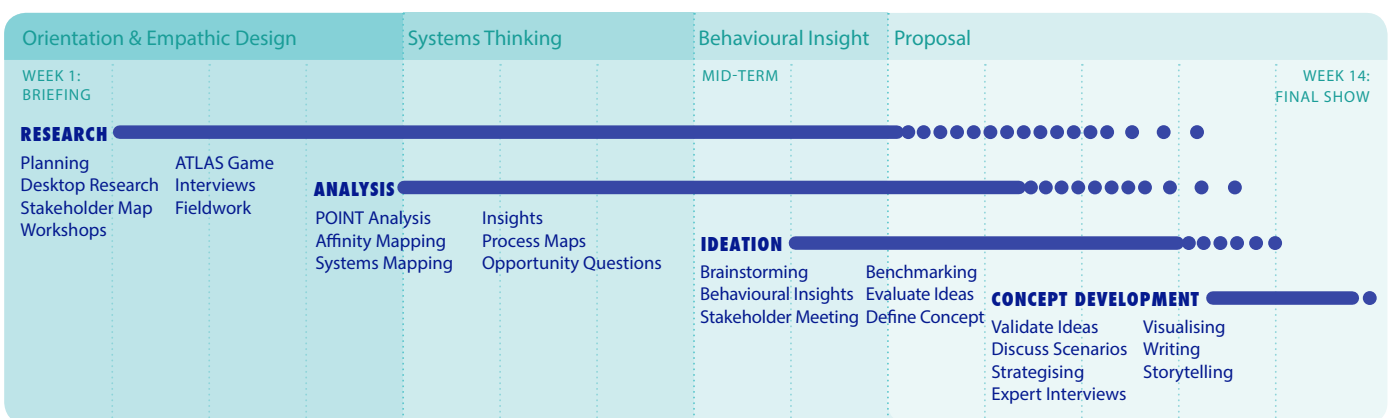
Introduction

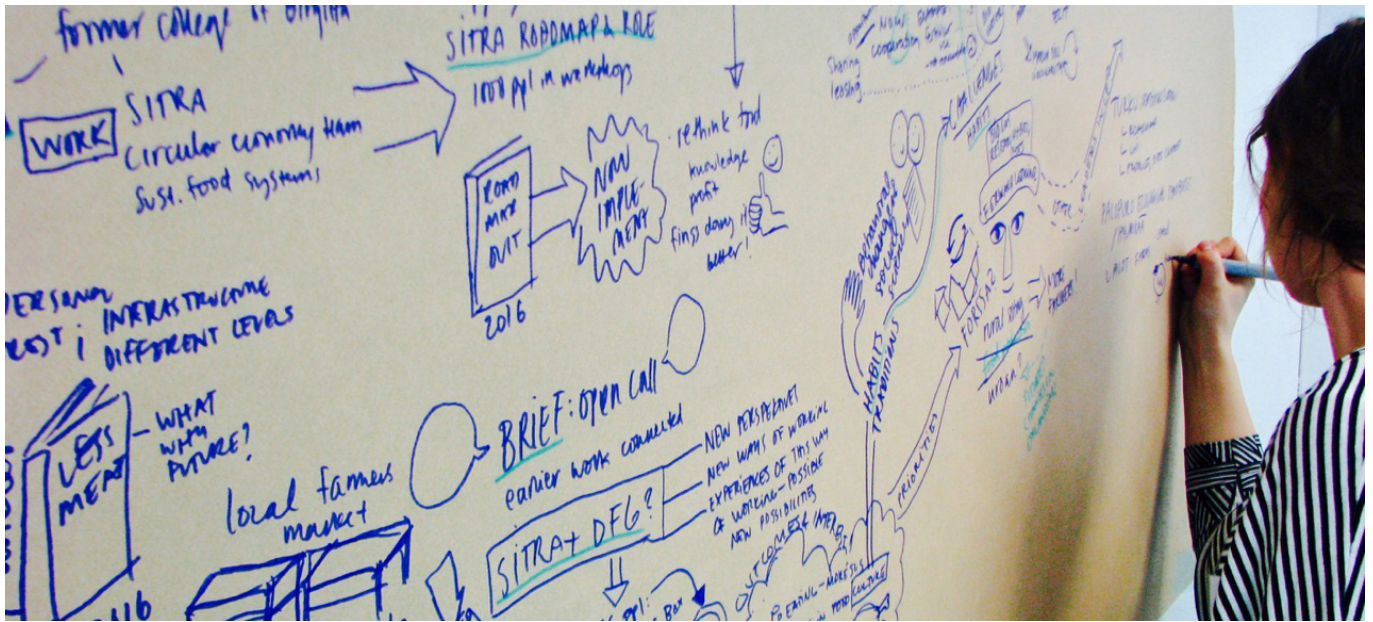
Over the course of 14 weeks many people were involved in the project, including stakeholders from MMM, YM, Sitra and Motiva, as well as civil servants and citizens from Forssa, farmers, local food distributors and industry representatives. All together we held three workshops involving up to five of our core stakeholders, interviewed 23 people during three fieldwork visits to Forssa, and additionally conducted interviews with five people who are engaged in food policy and circular economy development.

In addition to interviews and workshops we used various methods to collect and analyse our research data. We conducted desktop research, reading through dozens of reports, academic articles and guidebooks. We followed up on tips, sourced and benchmarked leading organisations, case studies, tools and emerging trends through online resources. To understand our findings and deepen insights we utilised Affinity

Mapping and Systems Mapping, two collaborative methods for analysing and synthesising qualitative data. Through our research and analysis we developed our understanding of the circular economy, the complexity of the food system in EU, Finland and Forssa in an effort to find out how a model for regional sustainable circular food could best be designed.

Project timeline





As the interviews unfolded, we captured them in a drawn form to document and validate our interpretation on the spot.

Workshops

Our team hosted a workshop with Birgitta Vainio-Mattila from the Ministry of Agriculture and Forestry and Hanna Mattila from Sitra to kick off our research in the second week of the course. The goal of the workshop was to gain a deeper understanding of the brief, our stakeholder’s roles, and their expectations of the project.

Our workshop involved individual interviews where we used a “sketchnoting” approach (in addition to textual documentation) for documentation. The sketchnotes acted both as evidence and a tangible format to share and clarify understanding and interpretation between participants.

In the second half of the workshop we used ‘design games’ as a fruitful and participatory way to engage our stakeholders. Design games introduce a structure and elicit a playful mindset that can result in a rich output as participants suspend disbelief and immerse themselves in play. In advance of the workshop, we developed a simple stakeholder mapping game that used cards of different actors in the food systems as prompts. Using a game format uncovered gems of information, for example we found out that in the scope of our brief, “regional” is a relative term, thereby we should consider the wider context surrounding Forssa Municipality.



The stakeholder mapping game resulted in rich discussion and a visual interpretation of actors, connections and flows in the Finnish food system.

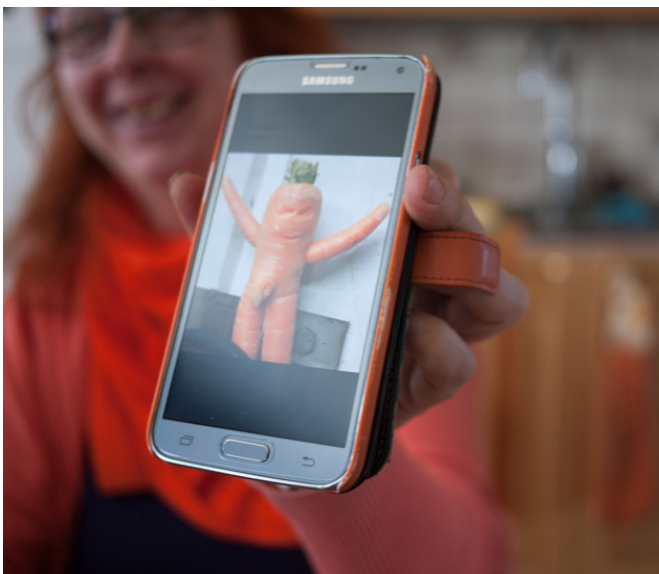


The ATLAS Game workshop brought together the research team and five key stakeholders for a discussion about the circular economy and sustainable food. The results of the discussion were made visual by a collection of question cards and discussion notes.

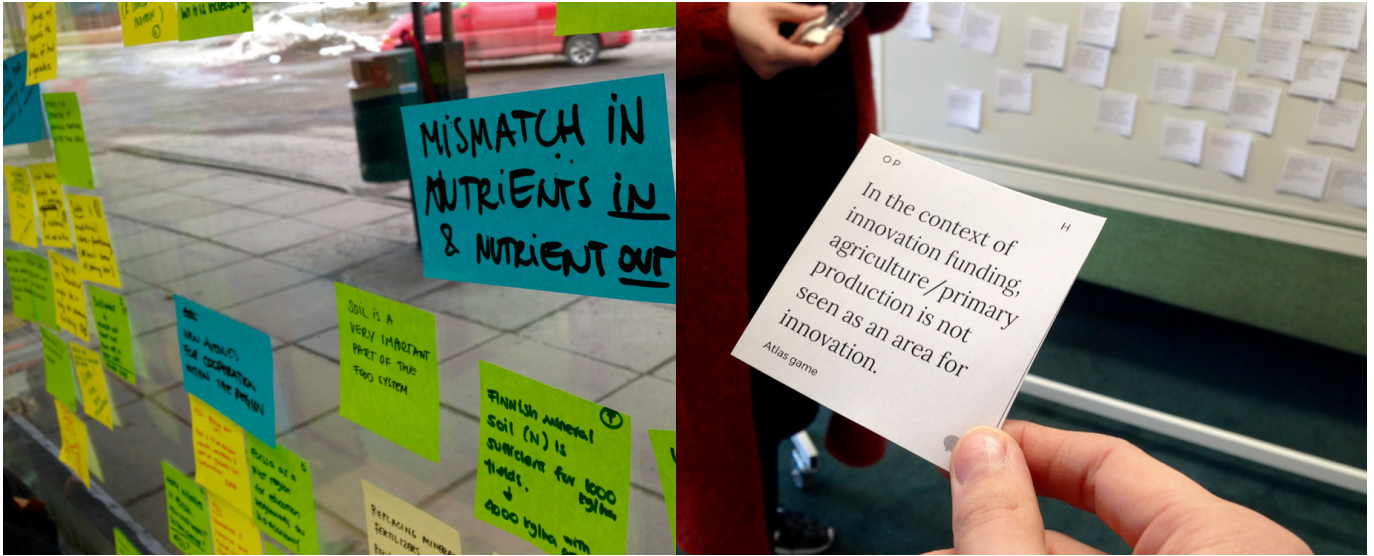
Two weeks later we held our second workshop using the ATLAS Design Game. The ATLAS Game was originally designed to facilitate cooperative and collaborative conversations about a design problem. We tailored the game cards with questions targeted to our problem area, which resulted in fruitful conversations that deepened our understanding of our stakeholders' positions and knowledge about the topic.

Interviews

Our main task in the early stages was to discover the problem space of sustainable food systems by venturing into the field and learning first hand from everyday Forssa citizens, circular economy experts and those with lived experience of the food system. Interviews were generally conducted in a semi-structured format with a teammate who also took notes, which were then transcribed (some translated from Finnish), summarised and shared to the team for analysis. As we progressed in the project, we built up a pool of valuable people we could go back to with follow-up questions. In general, we found most people were easy to contact and agreed to our request for interviews.



Fieldwork in Forssa included visits to several local farms where we conducted interviews with farmers and made observations of the farming context.



To process immense amounts of data, we evolved our affinity mapping technique from writing laborious notes on Post-its to creating them in a shared document which was then printed.

Affinity mapping

Our research generated immense amounts of mainly qualitative data. In order to share the data within the team and to begin to identify emerging themes, we used a collaborative analysis method called 'affinity mapping'. Affinity Mapping is a systematic way to collaboratively organise ideas and data into groups based on interpreted relationships.

All in all we held three affinity mapping sessions to analyse, synthesise and document our data. At the end of the mapping sessions, which took up to a full day or two to conclude, the clusters and resulting statements provided us with a way to make sense of our findings, define insights and identify emerging themes.



Participating in design games elicits a playful mindset that encourages dialogue and stimulates creativity.

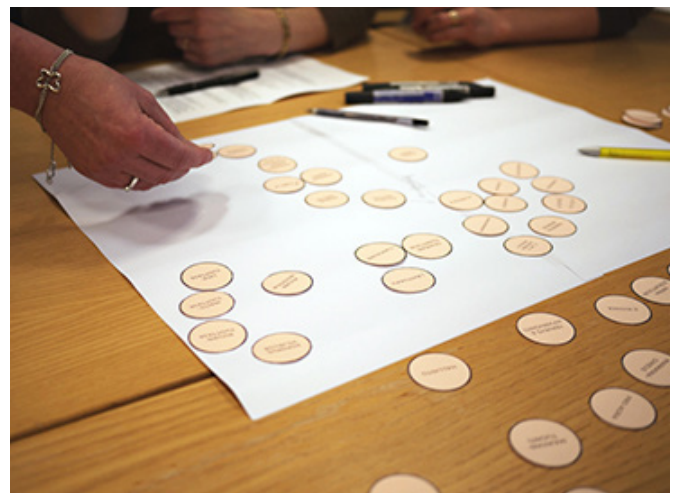


We began our system mapping with loose sketches and Post-it notes on a whiteboard to facilitate collaboration and revisions. Once digitised, we adapted the model several times as our knowledge of the system evolved and our focus sharpened.

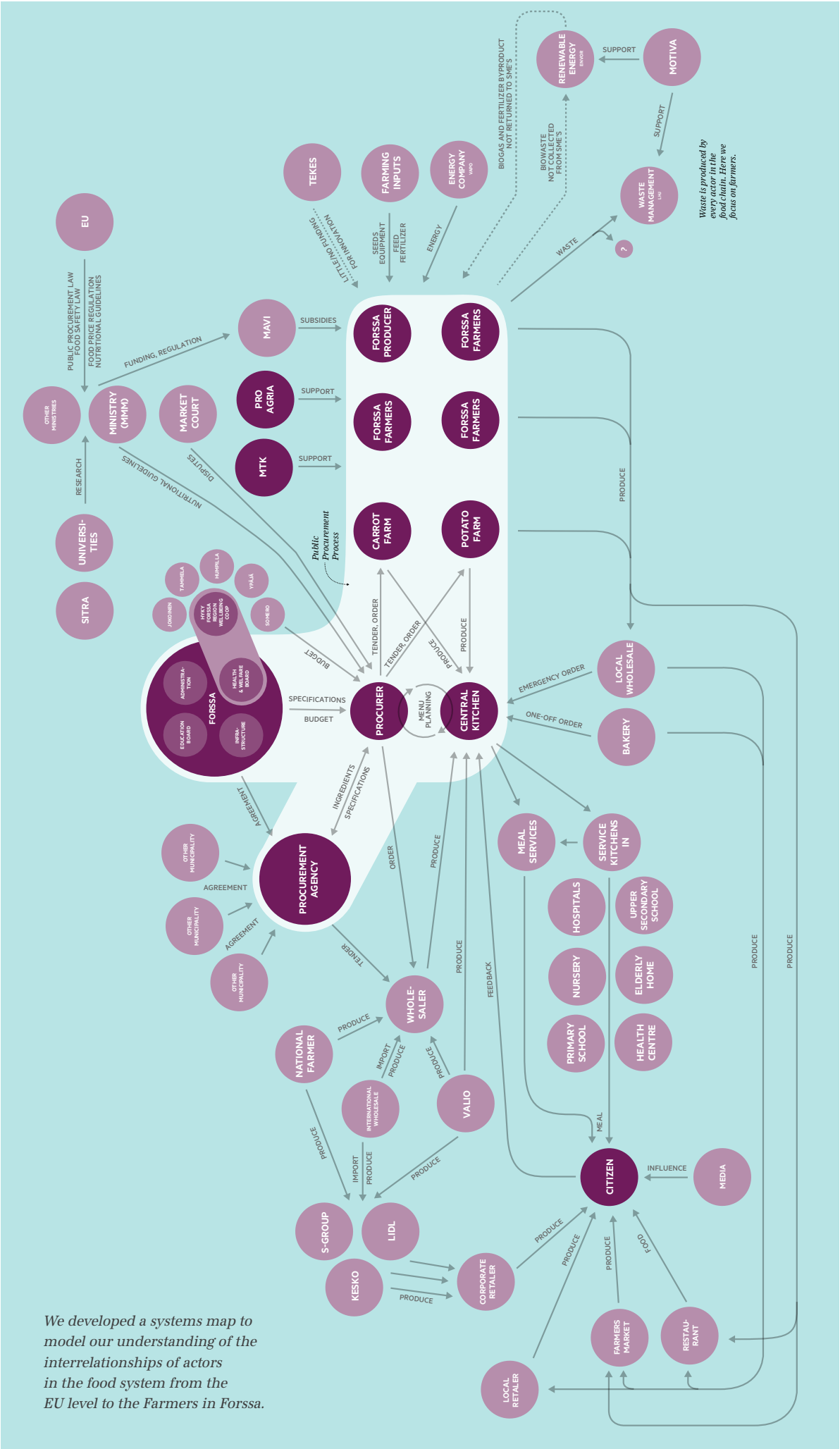
Systems mapping

Based on the data from the research we designed a systems map to model our understanding of the interrelationships of actors in the food system from the EU level to the Farmers in Forssa. The process of creating the model was useful for gaining a shared understanding of how we understood the food system. The modelling also helped us to identify problem areas and leverage points for making interventions. We adapted the model several times as our knowledge of the system evolved and our focus sharpened. Next, we

created a new detailed map to model interactions of our focus area, food procurement in the Forssa region. To validate our understanding we facilitated a system mapping exercise during interviews with procurement and kitchen staff from the city of Forssa. This activity helped us to refine our understanding of processes, actors and relationships in the public procurement of food. Through this evolution the model acted as a 'road map' that illustrated our problem at a systems level.



We facilitated a system mapping exercise with procurement and kitchen staff from the city of Forssa to validate our understanding of the procurement process.



We developed a systems map to model our understanding of the interrelationships of actors in the food system from the EU level to the Farmers in Forssa.

FINDINGS

The research phase provided us with valuable knowledge about the multiple stakeholders involved in the circular food sector, the gaps, tensions and synergies between them, the legislative constraints and also about governmental pressure to promote local food production, innovation and the circular economy.

Through analysis we were able to narrow down the research material into closely related topics which will be discussed in this section.

The Forssa region

The prerequisites of circularity including a high level of collaboration, integration, transparency, and physical proximity can be easily found on a local level. Locality increases food security, closes the distance between farmers, producers and consumers, which helps to reduce GHG emissions and maintain resources in close proximity to circular economy services and facilities as they develop.

Our research area Forssa, as so many other municipalities in Finland, must balance sustainability, economic and social pressures. As part of their strategy, Forssa has named themselves a “Resource Wise” city in their economic development plan, branded by their “BrightGreen” approach which focuses on self-sufficient energy, well-being, technology and green logistics. Forssa is also part of FISU, a network of municipalities aiming to build a common roadmap towards a future that views “waste” as a valuable resource. The regional education centers, HAMK and Mustiala Agricultural Institute, both maintain a strong focus on sustainability in their education program.

Agriculture has historic roots in the Forssa region; the area is known for grain, root vegetable and livestock farming. The soil quality in southwest Finland is in top condition, mainly because of thoughtful and responsible use of soil by farmers. This is exemplified by a local farmer who in an interview comment, “in some parts of Europe, farmers use twenty-seven times more fertilizers than their colleagues here in Finland”.

Sustainability issues have been a city priority for years. About ten years ago, Forssa developed Envitech, an industrial site aiming to build a fertile collaboration around environmental know-how in the region. Here, companies and organizations in the

area provide environmental services in recycling, raw-material production, research, planning, and expertise. Several types of recycling operation have been started in the Envitech area for the first time in Finland, Europe and even the whole world. One of the biggest food processors, HK, has already started recycling their factory waste into its own biogas production. Based on our findings, Forssa appears to have the knowledge and infrastructure to fulfill the needs of the circular economy.

Although Forssa is striving to identify itself as a city with a flourishing industrial innovation sector, farmers and public servants we met felt that farming and food production have been left out of the city's innovation and employment scope. Neither farming or food production has been mentioned in the city's economic development strategy. But there is hope, there have been many independent, although disjointed, projects relating to sustainability in Forssa. The impact of these projects is unclear, but Forssa's citizens are attempting to build sustainability practices into farming and food production. The end result is underutilised potential to fully exploit sustainable farming and local food industry as sources of food security, employment and innovation so crucial for the circular economy.

Circular food system and localisation of production

Working with *Leading the cycle - Finnish road map to a circular economy 2016-2025* (Sitra 2016) and *Growth Within: A Circular Economy Vision For A Competitive Europe* (Ellen MacArthur Foundation and the McKinsey Center for Business and Environment, 2015) among others (Sitra, 2015; Wijkman & Skånberg, 2015), we examined the principles of the circular economy that can be applied to food production processes and concluded on the three core principles. First, the guiding principle promotes the effective use of material and that the by-products should be reused in the production process, ideally treating materials as nutrients for the metabolisms. The second principle is

to make use of renewable energy, which would mean closer collaboration in agriculture, food production, distribution to make the food chain more sustainable. The third principle emphasizes local diversity aiming to highlight the effect that the circularity of materials could have on local diversity. It embraces locality on the basis of nutrient and resource flows, and thus supports the idea of localization of production.

In terms of Forssa, we found that many of the infrastructures that serve these principles are currently in development, and have not reached a scale that is accessible to all farmers and producers. However, one principal that offers an opportunity for improvement that could be addressed immediately is local diversity and locality.

Farmers and sustainable farming

Based on research and discussions with Forssa farmers, we found that farmers are struggling to fulfil their dual responsibility in society both in producing food and in protecting nature and safeguarding biodiversity. There are programs that incentivise them to do this. The European Union's farm policy, Common Agricultural Policy (CAP) aims to improve agricultural productivity to ensure a stable supply of affordable food. Following the 2013 reform, farmers receive their full entitlement of income support payments if they adopt environmentally-sustainable farming methods. Farmers may also receive additional support if they adopt more strict agro-environmental farming practices. However, we found that the incentives and clearly communicated benefits of circular economy related to farming practices are lacking. Incentives and easily implementable solutions would help the farms to act more sustainably and promote circularity.

Farmers we spoke to take sustainability as their normal act, and feel pressured by multiple terms and demands trying to affect their farming. ProAgria backed this up by stating in an interview with us:

“*In the discussion with the farmers, we don't use the word sustainability, nor resource-wise. Farmers think sustainability as their natural practices, it is part of principles how the farmer wants to farm. The basic farmer tries to avoid those words, they are afraid it requires more work. It is a burden.*”

Head of Services, ProAgria

We found that most importantly, farmers would benefit from closer involvement in the local food system. This would help them to balance profitability and sustainability, and over time, local collaboration could be engaged to support circular practices.

Sustainability assessment tools

Sustainability has gained increasing attention and development in the entire food supply chain. Various authorities are developing measurement and assessment tools to standardize and legitimize the complex topics of sustainability and circularity. The pioneer in circular economy research, The Ellen MacArthur Foundation, has developed a Circularity Indicators Tool that aims to assess how well a product or company performs in the circular economy (Ellen MacArthur Foundation & Granta Design, 2015). These indicators are mainly focusing on technical cycles and help on measuring a company's advance on their journey from linear to circular production, and states that they, “might also be used for other purposes including internal reporting, procurement decisions and the evaluation or rating of companies.” (ibid. p.3).

On the consumer side, the most visible actor promoting sustainability has been the Nordic Swan Ecolabel, Joutsenmerkki, which has been promoting and measuring sustainable products for almost 30 years. White Swan evaluates a product's environmental impact through the whole life cycle. Among other things, the label ensures that climate requirements and CO₂ emissions are taken into account.

In our investigations into assessment tools, we discovered in that currently Sitra is working to standardize circularity indicators for use in an assessment tool. Circularity assessment tools could remarkably add knowledge and guide the food industry toward circular practices, in turn, strengthening the circular economy.

The importance of local food

Because of the import surplus and high volumes of served meals by the public sector, Finnish Ministry of Agriculture and Forestry, along with several other authorities, has tried to increase the usage of local produce in public procurement. According to the MTK website, public sector kitchens serve two million servings per day in schools, daycare centers, hospitals and municipal and state agencies (MTK, 2015). As a result, the government spends about 350 million euros annually in food. According to Food 2030, serving more domestic food would effectively boost both the national and local economies. In addition, our research indicated that promoting local food would significantly increase municipality tax revenues, increase employment possibilities, establish fertile collaboration and increase trust, transparency and overall value of food, all benefits that would be imperative in building regional circular food system. As a result we conclude that public procurement presents many opportunities for increasing local sustainable products in food served in public institutions.

“*Procurements should be looked at not only from the perspective of economic indicators but also from the viewpoint of food quality, nutrition, freshness, seasonal availability, sustainable development and local foods.*”

Finnish food for Us and the World, p.39.

In our field research in Forssa, we discovered that the discussion between city executives and procurement of food has been focused on prices, while at the same time, the understanding about the value of food and impact of regional food system has suffered.

“ *Organising short supply chains between local farms and retailers or consumers in nearby cities reduces so-called food miles and related food transport waste. This is also a way to create local jobs and strengthen rural/urban links by bringing farmers and consumers closer.*”

Growth Within: A Circular Economy Vision For A Competitive Europe, P.74

A culture of centralization, meaning centralized purchase systems and volume food processing, has moved the public procurement management and food production far from the actual usage. Actually in Forssa, up to 95% of produce used in public kitchens is procured by Kuntapro, an outsourced procurement service based in another region, leaving only 4% for local producers. At the same time, the small producers in region are living in constant insecurity, and overall farming income has decreased. According to MTK statistics in 2016, the entrepreneurial farming income has decreased in Finland almost 40% from the previous year (Helsingin Sanomat, 2016). The decrease is the most intense in the whole EU. In our focus area Forssa, we found that the significant gap between local farming profitability and use of local food in procurement system are presented a strong opportunity for improvement.

Public procurement as practice

EU public procurement directives promote transparency, equal treatment, open competition, and sound procedural management, at the same time the Public Procurement Act hampers the possibilities for small-scale local producers to bid on tenders. The Finnish authorities have published grounds and guidelines for procurement to increase the offering of local food for the customers of public-sector kitchens. Our interviews with procurement and kitchen staff showcased that mainly due to the difficulties in the tendering process, the practices are still underutilized.

The team visited the Forssa local procurement agency, Loimijoki Kuntapalvelut, and with their help we analysed the procurement system within the area. The

complexity of the system was clear. We found out that the procurers hesitate and feel insecure to use more local food in their tendering processes, while the main tendering processes are outsourced to KuntaPro.

“ *Owners don't have strategy for procurement. For instance, in some municipalities they have decided a percentage for local food. If we knew there would be three locally available producers, we could run mini-tendering, but it requires a lot of work.*” Head of Meal Services, Forssa

“ *We are tied to KuntaPro as well, we only have the right to use local producers temporarily.*” Municipal Kitchen Executive, Forssa

We understood that the Public Procurement Act impedes specifying 'local' in the tendering process, in sake of discrimination law, which the Procurement Specialists we interviewed feel insecure about specifying local origin of food in tenders. We researched a blog by a Lawyer specialising in public procurement and learned that slicing tenders can have a substantial impact on the ability to buy from local farming producers. The tender can be divided into smaller parts to enable smaller local producers to bid in three ways: defining by regional areas, narrowing contents of the tender and setting minimums and multiples (Kronström, 2015). Doing so potentially leads to diversified business, local focus (which may be driven by political motivations) and minimises monopolies. Although there is initial work up front, it gets easier once systems are settled. We contacted the Lawyer's colleague who confirmed that there are established practices of writing tenders that both target sustainability criteria and are legally sound.

“ *A food system based on circular design principles would likely produce better consumer utility and environmental outcomes than the current development path could achieve.*”

Growth Within: A Circular Economy Vision For A Competitive Europe, P.77S

Conclusion

By the end of the research and analysis phase we developed many insights into the food system and identified numerous opportunities for design. As a main outcome of this work we developed opportunity questions that situated problem areas in “what if” queries that we could bring forth to the Ideation phase of our project. Three of opportunity questions most significant to our proposal were:

- **How could farmers become economically competitive while practicing environmentally sustainable farming?**
- **How could local, dispersed producers with smaller volumes better compete?**
- **How could values other than price be the driving force behind choices in the local food system?**

Main findings

1

Only 4% of local farming products is used in Forssa public procurement, and public procurers don't consider local food or farming produce in tendering processes. The tendering process for local food is considered burdensome; procurers lack knowledge of writing tenders that emphasise local products locally available produce. The local procurement agency is dependent on an outsourced domestic procurement circle that buys 95% of the food, and of this most of it is from large, centralised distributors.

2

Farmers believe their practices are sustainable enough and their mental and physical resources are stretched thin. They lack incentives to shift towards circular practices because the impact and benefits of circular farming practices are not obvious. Yet, the circular economy is considered to be effective at promoting local food, incentivising sustainable farming, and increasing profitability and job creation.

3

Farmers are living in constant insecurity, their income has been decreasing, and national import of food produce is enormous. Local farmers balance sustainable farming with profitability, promoting local food is essential in shifting towards circular economy. Balancing that gap could have significant importance in improving local livelihood, collaboration, farming entrepreneurship and innovation.

Ideation

Moving from the research phase, we began to generate ideas for solutions, interventions and processes that could address the opportunity questions we identified.

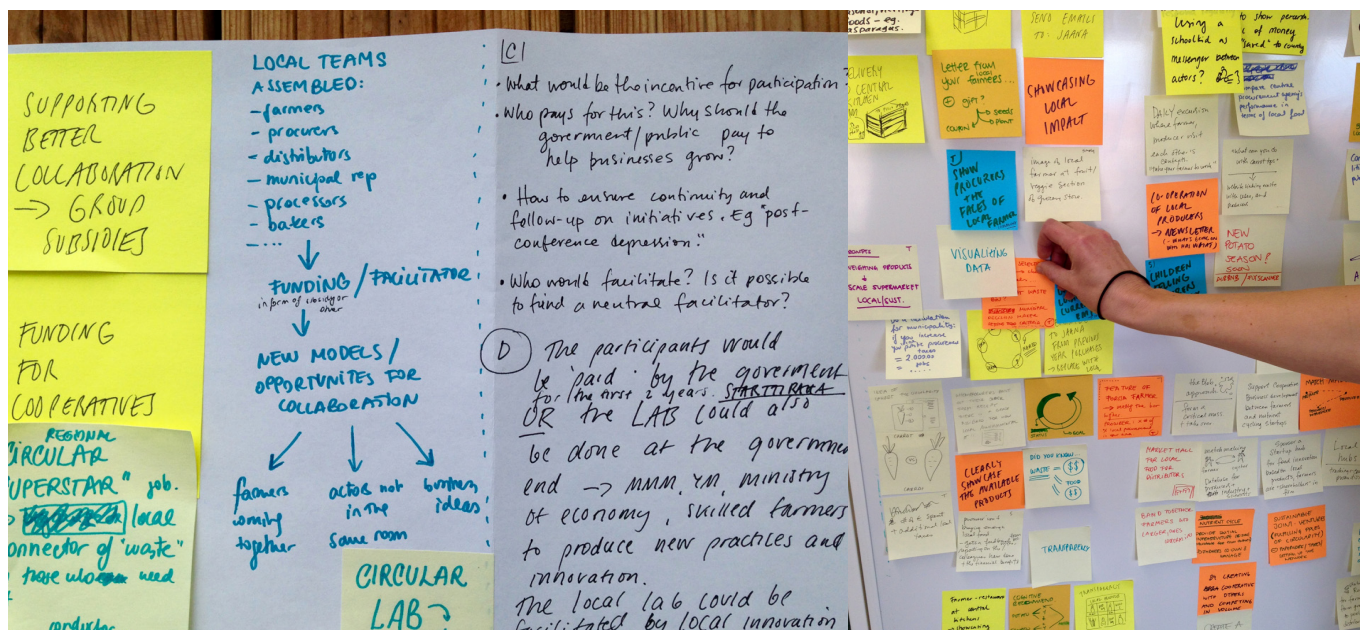
To begin, the team gathered for a creative brainstorming session with a goal to generate as many ideas as possible. We used several approaches to trigger new perspectives on the problems we identified. These approaches included Service Design Touchpoint Cards for framing our ideas in practical service interactions and EAST Behavioural Insights Cards to imagine how choice-making and behaviour could be influenced by making small interventions into existing routines. We used scenario discussions to identify the aspects of the idea that were relevant and viable, and to determine what follow-up research was needed in order to find missing pieces in our early-stage concepts.

During this phase we introduced Behavioural Insights theory into our process to ‘nudge’ some of the established behaviours of the stakeholders we

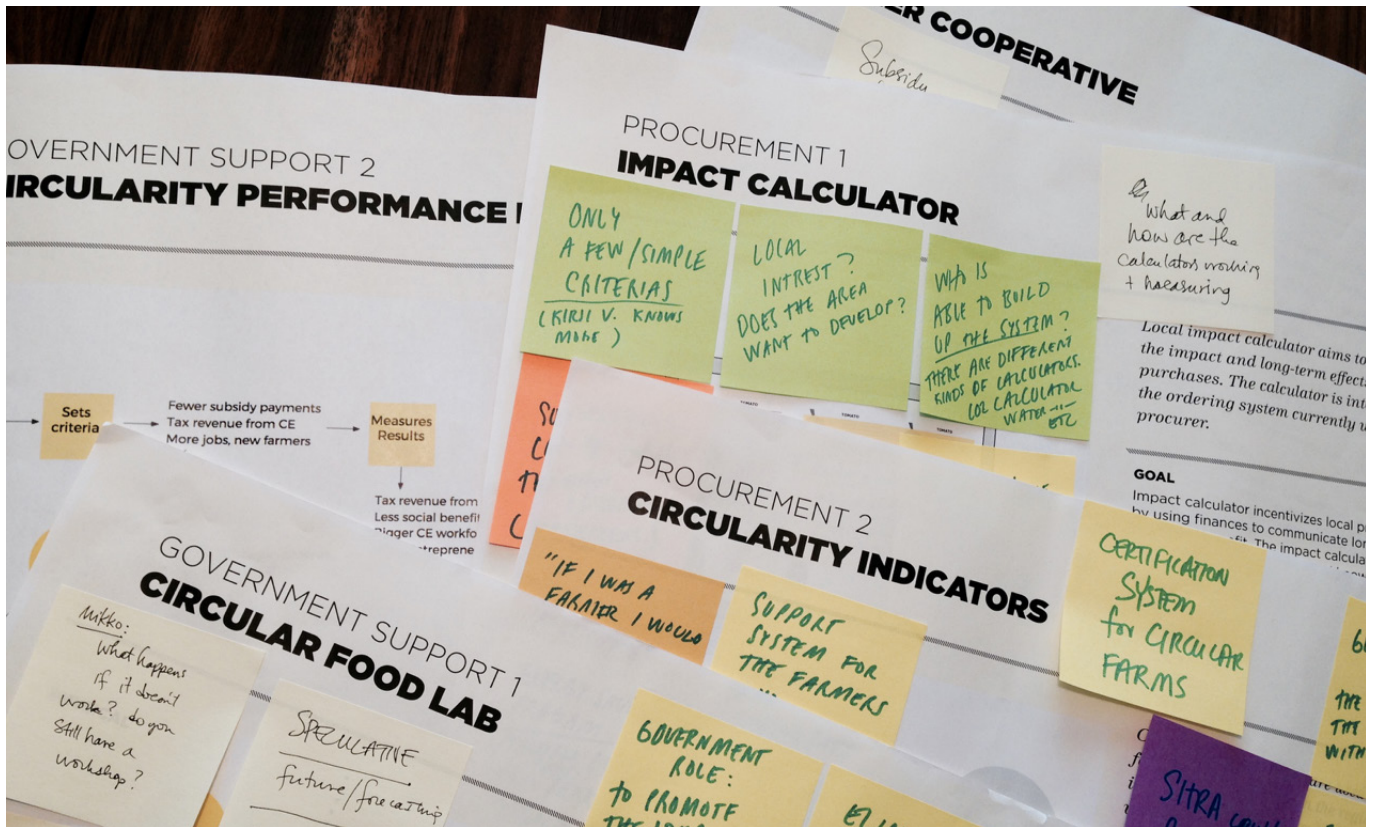
identified from the research. According to Sunstein and Thaler (2008) nudging is, “any aspect of the choice architecture that alters people’s behavior in a predictable way without forbidding any options or significantly changing their economic incentives.” We had insights that making choices to tender and buy local food were difficult for Procurement Specialists because of how bids are valued and lack of product/producer information.

In response we ideated several behaviour change devices. These included a commitment device by the Mayor to increase the percentage of local food in public kitchens, sustainable food information in screen pop-ups, and a monthly email performance report to a Procurement Specialist showing their local, sustainable food buying statistics compared to procurement norms of higher performing neighbouring municipalities.

In summary, introducing these small nudges into our ideas helped to strengthen our concepts.



We used affinity mapping to organise our ideas, written on Post-it notes, from the brainstorming sessions. We then took those ideas and played an ideation game called “Brainwriting Pool” where we elaborated our ideas through a process of recombining them into new concepts, then constructively criticising them followed by another round of elaboration.



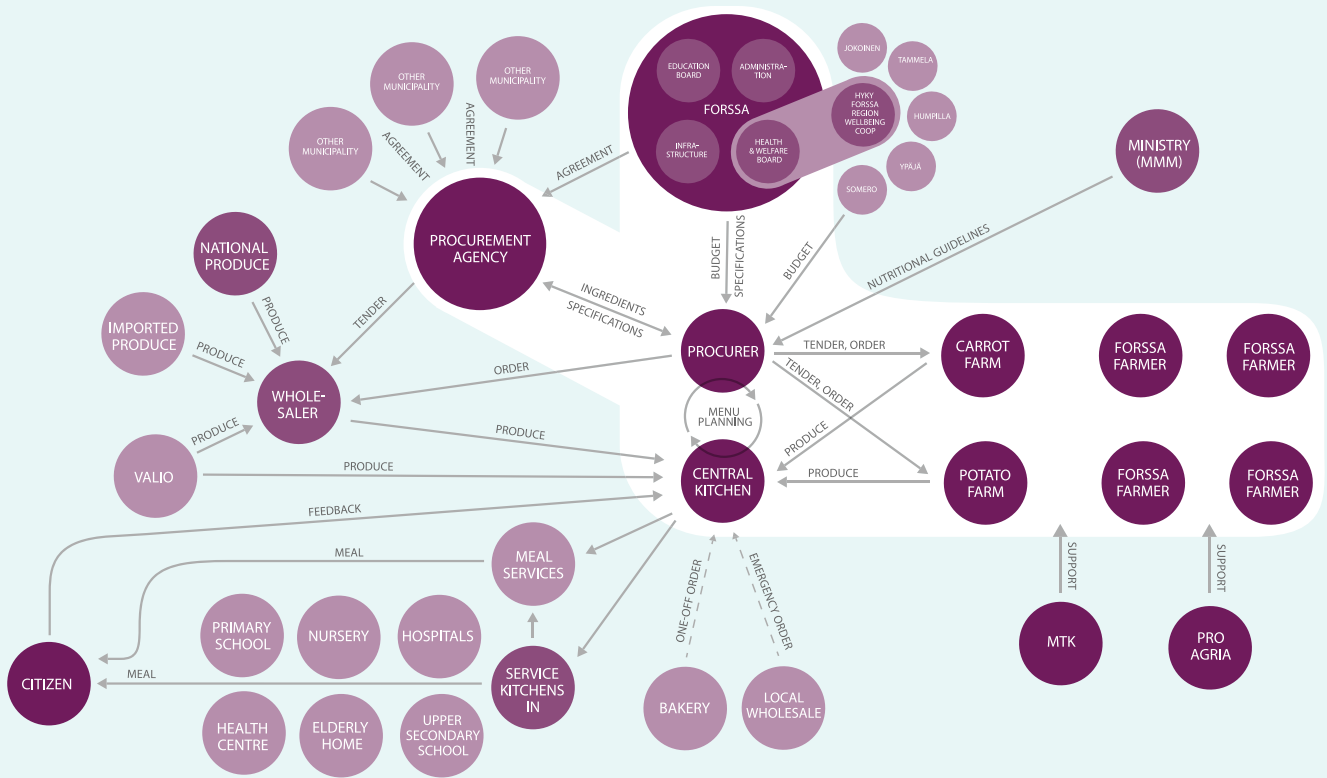
The ideation process culminated in a Stakeholder meeting at MMM. In the meeting we presented five concepts followed by a structured conversation to evaluate the ideas and prioritise next steps toward the proposal development. The concepts presented were, an *Impact Calculator* and *Circular Indicators for public procurement*, *Circularity Performance Bonds*, a *Local Food Lab Experiment*, and *Farmers Cooperatives*.

Based on feedback, and further investigation into viability and relevance of the concepts, we chose to develop the *Local Food Lab* and *Circular Indicators* concepts further. The result of this work is our final proposal, *Regional Circular Food in Public Procurement*, which will be introduced in the next section.



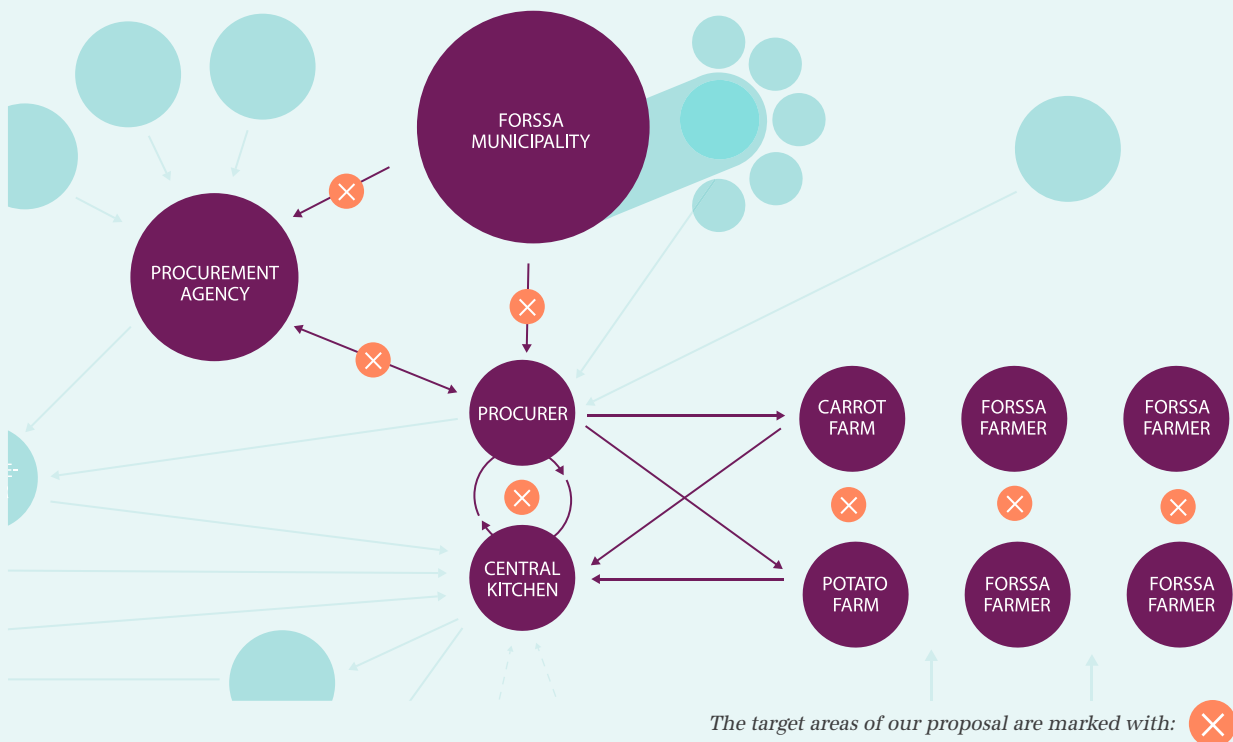
We presented five concepts at the Ministry, followed by a structured conversation to evaluate our ideas and prioritise next steps toward the proposal development.

Forssa procurement system



A systems map of regional public procurement helped us to identify the key leverage points.

The leverage points of our proposal



The target areas of our proposal are marked with:

PROPOSAL

REGIONAL CIRCULAR FOOD IN PUBLIC PROCUREMENT

Introduction

Public procurement of local food in Forssa is very low at 4%, and 95% of food is procured by an outsourced service that uses large, centralized distributors. In the current system, procurement decisions are made far from Forssa Municipality and its processes and budgets don't support or facilitate the extra work and budget required to buy local. Profitability and sustainability are a challenge for small and medium farmers and longer-term contracts can help with these challenges.

Public procurement of local food supports local farmers, the economy and food security. It closes the distance between farmers, producers and consumers which helps to reduce greenhouse gasses and maintain resources in close proximity to circular economy services and facilities as they develop. As many of the services and facilities around Forssa are in development, such as for biogas production and industrial symbiosis, sourcing food from local producers is an achievable goal today. It is one step Forssa government can take to show leadership and vision for a the future of circular economy.

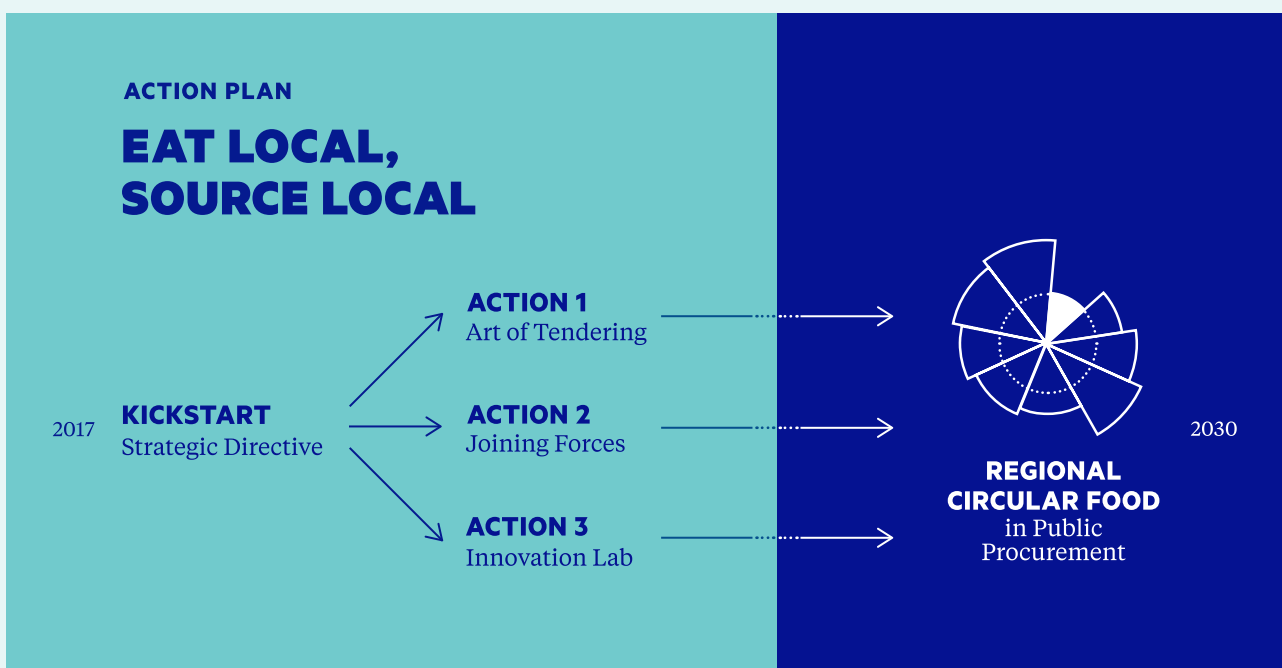
Project overview

Regional Circular Food in Public Procurement vision is realised by carrying out a Strategic phase and three Actions in a process called *Source Local, Eat Local*. It starts by priming stakeholders with concrete steps to increasing the amount of regional food served in meals in public kitchens and moves toward the ultimate goal of establishing circular criteria into Forssa's food tendering and bid evaluation process.

Actions introduce multi-stakeholder collaboration, training and innovation into the public procurement process in the following ways:

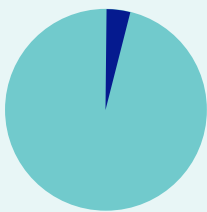
- **Training** Procurement Specialists teach them how to design and write tenders that are accessible for local producers.
- **Collaboration** is required to develop understanding about the needs of Procurement Specialists and the abilities and obstacles of local producers
- **Innovation processes** help local producers and Procurement Specialists to create new products and services that help them to compete against powerful centralised producers.

Between each step in the Action Plan, an evaluation of the process and outcomes measures success against the goals of the Action and Forssa's local food in procurement strategy.

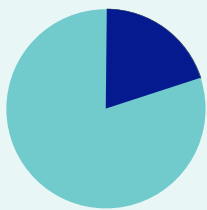


EAT LOCAL, SOURCE LOCAL

Kickstart: Forssa Local Food Strategy



4% local



20% local

Despite a desire to buy more sustainable and local food, Forssa does not have a strategy that sets out a vision with goals and objectives that formalises their commitment. Therefore, the first step is the development of a Strategy for increasing local Food in public procurement. This strategy would define goals and set out coordinated actions designed to achieve the overall objective of serving more local food in public dining rooms. This is a food-focused strategy for the Municipality building on Forssa's existing 'Resource Wise' economic development plan, which also includes introducing 'Resource Wisdom' in Public Procurement.

The strategy should focus on these key target achievements:

- defining roles and responsibilities of key players in food procurement
- establishing an increase of 20% more local food in public kitchens by 2020 and 50% by 2030
- identifying three local produce that are always bought locally
- allocating budgets for local food purchasing (food and human resources)
- redesigning procurement procedures
- assessing local producers' capacity and potential
- communicating a commitment to local food and its value to the local economy and local identity

How it happens:

The owners of the strategy would be Forssa Municipality, led by a local champion in the Municipality. One potential champion is the new Mayor of Forssa, Jari Kesäniemi, who has a progressive vision that Forssa should be developed together and in "new ways" (YLE, 2017).

Potential partners in the strategy process would be Association of Finnish Local and Regional Authorities (AFLRA) an organisation that is working together with municipalities and counties to build a sustainable future. And from MMM, Ilkka Mäkelä, a recently nominated officer, who is responsible for finding ways to increase value in food. AFLRA would act as the authorising body and benefit from new knowledge that would be passed on to other municipalities, and MMM would provide leadership, research and knowledge development support.

When:

The board of Forssa City would start to define the strategic goals and objectives to promote local food for the next accounting period.

Main goal:

The development of the strategy would involve identifying three local produce that are always bought locally. The Criteria for the products should be:

- **readily available (easy to fulfil demand)**
- **inexpensive**
- **easily grown (and known) in Forssa.**

Once these three products are established in procurement processes, new products would be added. More complex considerations may be introduced, for example crops that are good for the soil such as broad beans.

Key participants, include central kitchen staff, food producers, SMEs, distributors and citizens. EkoCentria would provide local food procurement expertise and producers and businesses bring perspective as main local actors in the supply chain. Members from other municipalities that are buying high volumes of local sustainable food, namely Joensuu and Sodankylä, would be invited to share their knowledge and experience. These collaborations would happen during two visioning workshops and include development and review of strategy drafts.

Expected outcomes

Expected outcomes of the three local vegetables process:

- **Clear commitment to sustainable food procurement**
- **Budget for local food and impact on tax income and local economy**
- **Workshops and gatherings develop shared values and goal setting**
- **Inspire and share knowledge with municipalities with similar goals**
- **Increase the number and types of products bought locally**
- **Emphasise the local identity as a rich, diverse agricultural area**
- **Contracts with farmers provide economic stability and local investment**

Considerations

The workload for Procurement Specialists and kitchen staff will be heavier, more knowledge and skills are required. Ideally, the transition would be ready to roll-out when the contract with KuntaPro, the outsourcing company Forssa currently uses, is renewed for 2019.

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**Once a strategy is in place
the following three Actions may begin >**

ACTION 1

THE ART OF TENDERING

Owners: EkoCentria, Forssa Municipality

Participants: Procurement Specialists and menu planners

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Writing tenders that are both legally sound and reflect the values of the Municipality's strategy will be challenging for procurement specialists. The new Finnish Public Procurement Act, which has been amended to permit tactics that allow the shaping of tenders to tighter criteria such as sustainability and locality, will require a shift of mindset. Procurers will need additional knowledge and skills for tendering and assessing bids from the cheapest price to the best overall value. Training Procurement Specialists how to write tenders that are attractive to local food producers and how to evaluate them based on local food strategy would strengthen their ability to meet the increased demands of their job in an efficient and rewarding manner.

How it happens:

The owners of the training program would be EkoCentria, who would oversee the curriculum, and the Municipality who would fund and evaluate the outcomes. The participants would be Procurers from Loimijoki and central kitchen staff (menu planners). The Trainers would be a third party training organisation such as KuntaPro.

The training would include:

- Slicing tenders into smaller parts to make bidding accessible to small-scale producers
- defining freshness requirements
- location/proximity requirements
- Setting additional requirements and values
- Determining evaluation criteria

Expected outcomes:

- New knowledge about how to write tenders for local food through understanding the Public Procurement Act
- Simplify and ease the burden of the local food procurement process in order to reduce workload and costs
- Accessible and tailored reference material, for example posters and monthly email tips
- Evaluation tool to measure change in local produce in menus, tenders and bids.

ACTION 2

JOINING FORCES

Owners: MTK, EkoCentria

Participants: ProAgria, food producers, farmers, Procurement Specialists, central kitchen menu planners, local food distributors

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Forssa's Procurers are not always aware of the local farmers' production possibilities and that farmers rarely meet procurement and kitchen staff. Forssa farmers have limited opportunity to sell to public kitchens due to the distant decision making by outsourced centralised services. Joining Forces is a workshop with local producers and Procurement Specialists that aims to match local capabilities of producers with the needs of public kitchens in order to fulfill three extra vegetables on the local procurement list.

Workshop goals:

- **Build on preliminary plans from the strategy to determine which farmers are ultimately interested and able to produce the increased local products as determined in the strategy.**
- **tighten the relationship between Procurement Specialists and producers**
- **increase mutual knowledge about all phases of production and delivery**
- **synchronize the farming and tendering schedules**

How it happens:

Well in advance before the next tendering period, the food producers and farmers would be invited to join a workshop together with local food procurers and central kitchen staff. The workshop participants would participate in mapping out how to grow the three local vegetables, to identify gaps, missing links in food distribution, storage and processing. Collaboration between farmers will be essential in order to pool resources to fulfill tenders that exceed a single farmer's capabilities.

The workshop would utilize service design methods to promote constructive discussion. The methods could include task analysis grid and motivation matrix to communicate the strategic decisions and understand the connections between the various actors in the system.

Expected outcomes:

- **Agreements of cooperation between farmers**
- **Mapping of local resources and capabilities**
- **A planned schedule to proceed with the produce farming and purchases**
- **Identified distribution and delivery logistics**
- **A schedule and action plan to address the gaps in co-operation (technical, logistics)**

ACTION 3

LOCAL FOOD INNOVATION LAB

Food Innovation builds on established local collaboration and adds diverse stakeholders to guide food production in the circular economy.

Owners: Sitra, ProAgria

Participants: Farmers, SME producers, Menu planners, Procurers, technology and economy professionals, start-ups, and investors

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Farmers require new equipment and knowledge to process their produce into a suitable product for the conditions of central kitchens. The main goal of the Innovation Lab would be to evolve local primary produce into new products for public kitchens, for example a swede and beet patty that can be frozen and easily heated in a serving kitchen.

In the circular economy, effective collaboration is one of the keys to success. While the goal of *Eat Local, Source Local* is to increase public procurement local food, more stakeholders will be needed to fully support a shift toward food produced in the circular economy. The Food Innovation Lab would support innovation of new products and seek new ways of processing and distributing. The Lab will involve expertise from creative and digital technologists, economists and systems thinkers.

How it happens:

Led by Sitra, ProAgria will be the main organizer of the Innovation Lab. ProAgria already consults both farmers and entrepreneurs in business modelling and strives to develop competitiveness in rural businesses.

The food innovation component of the Lab would be guided by a celebrity chef, for example Sami Tallberg, to inspire creativity and provide technical expertise.

Expected outcomes:

- **New local food products that meet the needs of public kitchens**
- **Identification of new local products for recipe ingredients**
- **Spin-off jobs and growth in farming and food services sector**
- **Knowledge of equipment, processes and sustainable shipping and packaging materials and methods**
- **Cross-pollination of stakeholders that are usually don't work together**

Kokeilun Paikka, Experimental Finland!

We recommend that Forssa city tests parts of the Action Plan in the form of experiments. Joining Forces and Innovation Lab would fulfill the purpose of Prime Minister Juha Sipilä's Government Programme promoting Experimental Finland with feasible pilot projects executed in the Forssa region.

By setting criteria and measurements Joining Forces and Innovation Lab could be designed as an experiment, setting an example for regions around Finland to turn ideas for local food collaboration into action with the goal to improve the farming profitability and sustainability in the region, to increase local livelihood and collaboration and to introduce innovation into local food system.

We recommend that the *Eat Local, Source Local* activities be documented and shared digitally. The methods, tools and results throughout the process should be open-source documents to provide inspiration and support for other municipalities in Finland and governments abroad. This is an important step for a smoother transition towards circular economy beyond the Forssa region.

This Action Plan presents a concrete to-do-list to support the transition towards a circular economy. As the process continues commitment and involvement from sectors outside the food industry should be further integrated.



The development of the strategy would involve identifying three local produce that are always bought locally.

VISION 2030

Introducing Circular Criteria into public procurement of food

The action plan would build a fertile ground to add circular criteria into public food procurement. As mentioned in the previous section, the criteria is currently being developed both at the Finnish and EU level. It is difficult to predict how rapidly and extensively the systems and infrastructure that supports a circular economy will develop in Forssa and nationally. However, with a commitment to the *Eat Local, Source Local* city strategy and Action Plan, improved sustainability performance could potentially meet the circular indicators by 2030.

“*The “Guidance and dissemination of best practice on the cascading use of biomass and support to innovation in the bioeconomy” through Horizon 2020 will start next year (2018 – 2019) and the “development of a monitoring framework for the circular economy” this year.* Closing the Loop, p.18 and p.21

Sustainability guidelines and standards already exist in Finland’s food procurement processes, and they are to be further elaborated with circular principles. Motiva’s guide, *Sustainable food in Public Procurement*, outlines in detail the evaluation criteria for sustainable purchases. The Guide includes two standards for sustainable procurement called *Basic* and *Forerunner*, with which are bids assessed and rated by a points system. While difficult to predict how circular indicators would be practically implemented in the Procurer’s future work processes and tools, we imagine building on the existing sustainable procurement recommendations by Motiva as a natural step, perhaps by way of adding a third *Circular* standard. This standard would then be implemented in food procurement tenders.

The goal of circular criteria in local food procurement is to improve the food value chain, raise quality and sustainability standards of local production. The *Eat Local, Source Local* strategy aims to increase the number of farmers and local products on the local procurement list and improve collaboration within region, which will contribute to a viable circular food system. As farmers can be part of procurement tendering processes, it will function as an incentive to shifting towards circular farming practices in Forssa region.

Implementing circular criteria requires integrated industrial and economic processes through collaboration and innovation. This is a basis for using “waste” as a resource for creating value-added products and services, increasing digitalisation for distribution, and increased job creation. The groundwork for this is proposed in *Eat Local, Source Local* strategy.

We believe that circularity will displace the linear economy, therefore the local actions should be urgently initiated. We suggest that the inception should begin from our lunch plate.



References

- Duncan, J. & Pascucci, S. (2016). *Circular Solutions for Linear Problems: Principles for Sustainable Food Futures*. Retrieved 11.04.2017 from: <https://www.thesolutionsjournal.com/article/circular-solutions-linear-problems-principles-sustainable-food-futures/>
- Ellen MacArthur Foundation & Granta Design. (2015). *Circularity Indicators, An Approach Measuring Circularity, Methodology*. Ellen MacArthur Foundation. https://www.ellenmacarthurfoundation.org/assets/downloads/insight/Circularity-Indicators_Project-Overview_May2015.pdf
- European Commission. (2016). *Buying green! A handbook on green public procurement*. Brussels: European Commission. <http://ec.europa.eu/environment/gpp/pdf/Buying-Green-Handbook-3rd-Edition.pdf>
- European Commission. (2015). *Closing the loop - An EU action plan for the Circular Economy*. Brussels: European Commission. <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52015DC0614>
- European Commission. (2016). *EU Public Procurement reform: Less bureaucracy, higher efficiency*. Brussels: European Commission. <http://ec.europa.eu/DocsRoom/documents/16412>
- Helsingin Sanomat. (2016). *Vaikka kotimainen ruoka on muodissa, maanviljelijöiden tulot romahtivat - miksi? [Although the domestic food is in vogue, farmers' incomes plummeted - why?]*. <http://www.hs.fi/talous/art-2000002910406.html>
- Kirkinen, J. (2013). *Resurssiviisas maatalous edistää tilojen kannattavuutta ja turvaa tulevien sukupolvien mahdollisuuksia*. Retrieved 02.04.2017 from: <https://www.sitra.fi/artikkelit/resurssiviisas-maatalous-edistaa-tilojen-kannattavuutta-ja-turvaa-tulevien/>
- Kronström, S. (2015). *Hankintaturisti: Paikallisuus julkisissa hankinnoissa [Tourist Contra: Locality in Public Procurement]* Retrieved 05.02.2017 from: <https://hankintaturisti.com/2015/12/10/paikallisuus-julkisissa-hankinnoissa/>
- McKinsey Center for Business and Environment, Ellen MacArthur Foundation & Sun Institute. (2015). *Growth Within: A Circular Economy Vision For A Competitive Europe*. McKinsey & Company. https://www.mckinsey.de/files/growth_within_report_circular_economy_in_europe.pdf
- MTK. (2015). *Maatalouden kannattavuus. [The viability of Farming]*. Retrieved 18.03.2017 from: https://www.mtk.fi/maatalous/maatalouden_kannattavuus/fi_FI/maatalouden_kannattavuus/
- MTK. (2015). *Julkiset ruokahankinnat syyniin ja Suomi nousuun. [The investigation of public food procurement and the arise of Finland]*. Retrieved 16.05.2017 from: https://www.mtk.fi/ajankohtaista/tiedotteet/tiedotteet_2015/syyskuu/fi_FI/julkiset_hankinnat/
- Orjala, A. MTK synkkänä: "Maatalouden yrittäjätulo laski 40 prosenttia - tilanne voi jopa huonontua" [MTK gloomy: "The agricultural entrepreneurial income fell 40 percent - the situation may even deteriorate"]. Retrieved 28.03.2017 from: <http://yle.fi/uutiset/3-9035281>
- Partanen, K. (2015). *Maatalous kestävän kehityksen tavoitteiden ytimessä. [Farming industry as one of the key objectives of sustainable development]*. Retrieved 11.05.2017 from: <http://www.maaseuduntulevaisuus.fi/mielipiteet/vieraskolumnit/maatalous-kest%C3%A4v%C3%A4n-kehityksen-tavoitteiden-ytimess%C3%A4-1.130723>
- Sitra. (2016). *Sitra Studies 121: Leading the cycle - Finnish road map to a circular economy 2016-2025*. Helsinki: Sitra. <https://media.sitra.fi/2017/02/28142644/Selvityksia121.pdf>

Sitra. (2015). Sitra Studies 104: *The Economic Value and Opportunities of Nutrient Cycling for Finland*. Helsinki: Sitra.

The Commission To The European Parliament, The Council, The European Economic And Social Committee And The Committee Of The Regions. (2017). *The Implementation Of The Circular Economy Action Plan*. Brussels: European Commission. http://ec.europa.eu/environment/circular-economy/implementation_report.pdf

The Ministry of Agriculture and Forestry. (2017). *Food 2030: Finnish food for us and the world*. Helsinki: The Ministry of Agriculture and Forestry. <http://mmm.fi/documents/1410837/2013189/selonteko+englanniksi.pdf/79b7ba77-9b0e-4ac4-8575-b08a258d9679>
<http://mmm.fi/documents/1410837/1923148/Ruokapoliittinen+selonteko+Ruoka2030/d576b315-41fe-4e9d-9d02-8462c5ae5895>

The Ministry of Agriculture and Forestry, EkoCentria. (2016). *Grounds and guidelines for procurement, More local food for the customers of public-sector kitchens*. Helsinki: The Ministry of Agriculture and Forestry. <http://www.ekocentria.fi/resources/public/Aineistot/LahiruokaopasENG.pdf>

The Ministry of Agriculture and Forestry. (2013). *Local Food – But of Course! Government Programme on Local Food and development objectives for the local food sector to 2020*. Helsinki: The Ministry of Agriculture and Forestry. http://mmm.fi/documents/1410837/1890227/LocalFood_ButOfCourse.pdf/ef43072b-6700-47ad-af7e-5972e7fe046f

Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving Decisions About Health, Wealth, and Happiness*. New Haven, Con: Yale University Press.

Tolonen, K. (2012). *Kierrätysmaataloudella kestäväälle pohjalle. [Sustainable basis with circular farming practices]*. Retrieved 04.05.2017 from: <https://www.sitra.fi/blogit/kierratysmaataloudella-kestavalle-pohjalle/>

Wijkman, A., & Skånberg, K. (2015). *The Circular Economy and Benefits for Society (Rep.)*. Zurich: Club of Rome. <https://www.clubofrome.org/wp-content/uploads/2016/03/The-Circular-Economy-and-Benefits-for-Society.pdf>



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