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Navigating the transformation to sustainable public meals: The case of Södertälje municipality, Sweden.

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“I believe the children are our future.
Teach them well and let them lead the way.”

(Whitney Houston)

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Photo 1 (front page): Photographer Fredrik Sederholm for project MatLust, Södertälje municipality

ABSTRACT

Food production and consumption is causing environmental harm such as climate change and a decline in ecosystem services. Hence, a transformation of the food system is necessary for humanity's future well-being. The public meal can be used as a tool for establishing healthy and sustainable eating habits at an early age and contribute to changed dietary choices in the future, yet few municipalities are prioritizing this opportunity. This study uses Södertälje municipality as a case to look at the change process of implementing a sustainable diet concept in preschools, schools, and gymnasiums, with the hope of acquiring knowledge and understanding useful for similar cases of transformation. Using a framework for deliberate social-ecological transformations and data primarily from qualitative interviews, I map the phases of transformation to better understand how agency and opportunity context have been used in navigating the process and identify possible opportunities going forward. Findings show the importance of political support, an integrated organization, and rooting new practices amongst the officials. The motivation and persistence of a key leader was crucial in navigating forward, and the process has been driven by several opportunities such as a political window of opportunity for change and the collaboration with a bridging organization in developing a food concept. It also shows how municipalities can have an important role in changing eating habits and how food-related norms and values can potentially shift and contribute to long-term food system change.

CHAPTER 1 – INTRODUCTION

1.1 Background

The unsustainable human activity led by industrialization and the great acceleration has forced the Earth into a new geological epoch, the Anthropocene, where humanity is the dominating force, and the Earth system structure and functioning are under great pressure (Steffen et al. 2007). Activities such as land-use change, excessive resource use through production and consumption, and the use of fossil fuels are causing biodiversity loss and climate change (Foley et al. 2005). The global food system, including pre-and post-production activities, accounts for 21–37 percent of total global greenhouse gas emissions (IPCC 2019), requiring a transformation that acknowledges social and ecological factors (Folke 2015).

Sustainable food consumption demands a dietary change, considering health and sustainability aspects, and should include less or no meat and more vegetables, fruits, legumes, and whole grains (Willett et al. 2019). Further environmental benefits, such as less emitting of greenhouse gases during transportation and greenhouse heating, are gained when produce is locally produced in its natural growing season (Röös and Karlsson 2013). A food system transformation also needs to tackle individual food choices and requires a behavior change. Eating habits are established at a young age, hence the importance of teaching young people about healthy and sustainable food early, as it will affect food choices throughout life (Röös et al. 2020). In Sweden, all public preschools and schools are serving lunch financed by the municipalities, in total, around two million meals per day (Livsmedelsverket 2021), making the public meal an opportunity to establish healthy and sustainable eating habits (Colombo et al. 2020). A municipality that has seized this opportunity is Södertälje municipality who has transformed its public meals by implementing a food concept promoting a healthy and sustainable diet. Swedish municipalities such as Södertälje have the potential to spread sustainable practices on a broader scale (Sellberg et al. 2020). Therefore, it is interesting to analyze the case of Södertälje and learn what actions and opportunities have played a role when navigating forward. As the global problems we face are urgent, and transformations could span over many years, increased understanding of how to initiate and navigate them could help speed up the change process (Olsson et al. 2010). The need for more empirical evidence for understanding the process of transformations in different contexts has been highlighted by

previous studies (Chapin et al. 2010, Pereira et al. 2018). Also, regarding how individual actors influence that process (Westley et al. 2013, Olsson et al. 2014). This study aims to contribute to this growing knowledge and specifically investigate how actors have utilized their agency and seized opportunities when navigating the transformation in Södertälje and whether it can contribute to the bigger food system change needed in society (Willett et al. 2019).

1.2 Objectives of the thesis

Research has identified and framed three phases undergone during a transformation to define and study social-ecological transformations in different contexts and identify how actors navigate this process (Olsson et al. 2004, Moore et al. 2014). This thesis will look at the change process of the public meal in Södertälje municipality as a food system transformation and describe it using the three phases of transformation: Preparing for change, Navigating the transition, and Institutionalizing the new trajectory (Moore et al. 2014). I will do this by investigating the following questions:

1. How have key actors navigated through the phases of transformation using different opportunities for change in the case of Södertälje municipality public meals? (RQ1)
2. Where is Södertälje now in the process of transformation, and what are potential opportunities going forward? (RQ2)

The study focuses on meals in public preschools and schools (including elementary schools and gymnasiums) in Södertälje municipality. I aim to contribute to research on transformation in food systems. My hope is to inspire other municipalities that are undertaking a deliberate transformation into sustainable public meals.

CHAPTER 2 – THEORY

2.1 Food systems as social-ecological systems

The term social-ecological system (SES) was first used by Berkes and Folke and emphasizes the linkage between social systems (human activities related to resources management) and ecological systems (the natural environment) as an “integrated concept of humans-in-nature” (Berkes and Folke 2000:4). This conceptualization of humans interacting with the environment can also be used when studying food systems (Ericksen 2008). Food systems can be defined as “all the elements (environment, people, inputs, processes, infrastructures, institutions, etc.) and activities that relate to the production, processing, distribution, preparation and consumption of food, and the outputs of these activities” (HLPE 2017:11). All the food system elements interact, creating feedbacks that affect other parts of the same system (Wood et al. 2019). Food production is an ecosystem service that humanity depends on for food and health. However, because of our unsustainable human activity (through food systems), we are now causing ecosystem service decline and environmental degradation (Folke et al. 2002, Gordon et al. 20017). I will apply a social-ecological lens when studying the transformation of public meals in Södertälje municipality and I define the public meal as a subsystem of the larger food system and seek to analyze the transformation of the public meal in Södertälje.

2.2 Social-ecological transformations

A transformation “recombines existing elements of a system in fundamentally novel ways” (Moore et al. 2014:2). It leads to changes at multiple scales and changes parts of the system, such as beliefs, rules, behavior, values, power relations, and practices (Folke et al. 2010, O’Brien 2012). Transformations in social-ecological systems must address and affect both the ecological and social aspects if the change is to be sustainable (Olsson et al. 2010). Depending on the system’s degree of transformability, actors can deliberately trigger transformations to disrupt an unsustainable system state, or a transformation can be forced upon the system through, e.g., ecological crises. (Folke et al. 2010, Herrfahrdt-Pähle et al. 2020). Transformability is defined by Walker et al. (2004) as “the capacity to create a fundamentally new system when ecological, economic, or social conditions make the existing system untenable” (Walker et al. 2004:3). This capacity implies that human action is present in all true

transformations (Chaffin et al. 2016) when actors are purposely “breaking down the resilience of the old and building the resilience of the new” (Folke et al. 2010:7). In this study, I will focus on a transformation that has been deliberately navigated by actors in the system into a more desirable state and investigate how it has affected the parts of this local food system.

2.3 A Framework for analyzing social-ecological transformations

Transformations can be understood as occurring in three phases (figure 1), induced by a pre-transformation triggering the change process. The three phases are (1) Preparing for change, (2) Navigating the transition, and (3) Institutionalizing the new trajectory and building resilience (Olsson et al. 2004, 2010, Folke et al. 2009, Chapin et al. 2010, Moore et al. 2014). These phases also consist of multiple subprocesses that are critical to each phase (Moore et al. 2014). During pre-transformation, a crisis or perturbation triggers the transformation to set off, or it might be deliberately triggered by actors (Moore et al. 2014). In the phase *Preparing for change*, collective and individual actors use sense-making to identify the structures or elements that are most problematic for the current trajectory of the system. They envision alternative pathways and then move the system in the desired direction by gathering momentum (Moore et al. 2014, Pereira 2018). Leadership is important when preparing the system for change and seizing a critical window of opportunity that helps move the system into the next phase, *Navigating the transition* (Olsson et al. 2006). In the navigation phase, actors select which ideas to implement. They evaluate and learn from previous experiences and finally adopt these new practices (Moore et al. 2014). The establishment of new social and governance structures and processes is possible in this phase, as is the development of new policies (Olsson et al. 2006, 2010). In the last phase, *Building resilience of the new direction* (Olsson et al. 2004), or *Institutionalizing the new trajectory* (Moore et al. 2014), which is the term I use in this study, adopted practices become standard through the dedication of funds, assigning personnel and changes to law and organizational structure as actors try to scale up new ideas or practices, creating change across multiple scales. Finally, the new trajectory is stabilized, both socially and ecologically, as ecosystem services and natural capital are also sustained through ecological feedbacks caused by this new trajectory (Moore et al., 2014), meaning the social-ecological resilience of the new desired state has been built (Olsson et al. 2004). When studying the phases and subprocesses, it is evident how the agency of individual and collective actors plays an important role in SES transformation (Olsson et al. 2004, Westley et al. 2013).

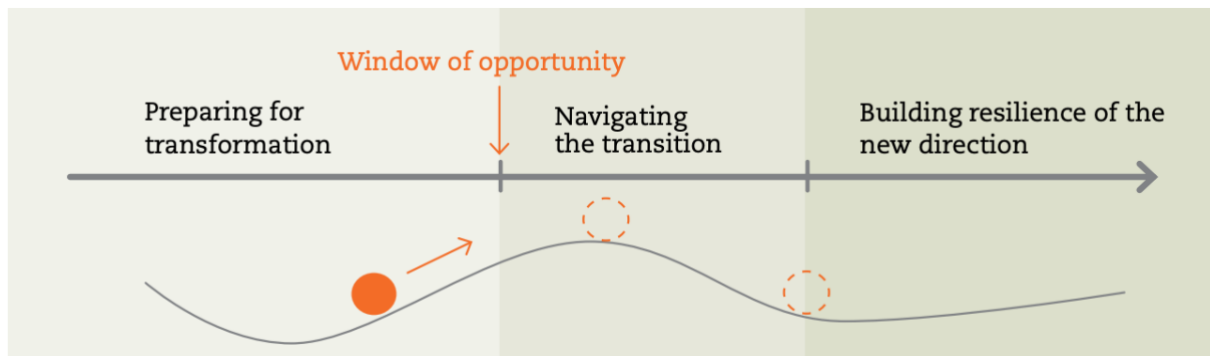


Figure 1: The three phases of social-ecological transformation as presented by Olsson et al. 2004 and Folke et al. 2009. The first two phases are connected by a window of opportunity that moves the transformation from the preparing phase into the navigating phase.

Social innovation literature argues that change needs to occur on multiple scales and involve the processes of scaling out, scaling up, and scaling deep (figure 2) to accomplish large systemic impact (Westley et al. 2014, Moore et al. 2015). Scaling out means spreading programs or principles to impact more people and places. Scaling up entails the development of new policies and changing laws. Scaling deep aims at changing cultural roots, beliefs, and norms (Moore et al. 2015, Lam et al. 2020).

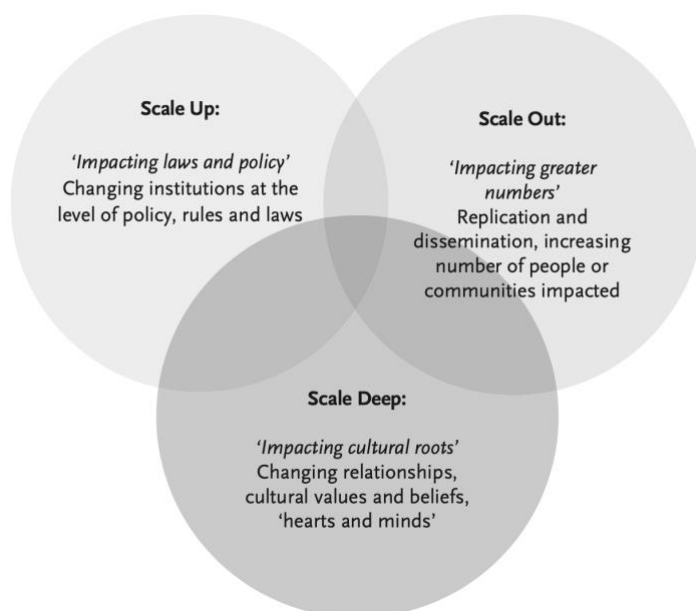


Figure 2: Scaling up, scaling out and scaling deep according to Moore et al. 2015.

2.4 The role of agency in transformations

I define agency as “the deliberate exercise of individual or collective will” (Scoones et al. 2020:3). The collective is dependent on its individuals and their drives and motivations. Individual actors in an organization are, for example, motivated by their own norms, values, and interests based on factors such as their culture or political and ideological beliefs. Hence, they are not just representing their organization but also their individualities (Pesch 2014).

In a transformation process, individual actors from different parts of the system or organization create networks that foster transformative agency and adjust their actions to match the specific context of the system in which they operate (Westley et al. 2013). By strengthening human relation to nature, new values and beliefs could develop to ground action towards biosphere stewardship and change individual behavior connected to food production and consumption (Chapin et al. 2010, Abson et al. 2017, Gordon et al. 2017).

2.5 Opportunity context

“Institutional change responds to actors’ will and creativity (agency), requires resources and depends on the availability of opportunities” (Dorado 2005:388). These opportunities will allow actors to identify and introduce novelty into the system (Dorado 2005). Deliberate transformations are generally set off by a perturbation that acts as a window of opportunity for change (Olsson et al. 2006, Geels 2011, Moore et al. 2014). This destabilization of the system could help actors within the system to see opportunities more clearly that were not obvious before the event (Dorado 2005). Actors that are deliberately trying to change a system will act following these opportunities. They must be able to adjust their actions to seize them if the transformation is to be successful. (Westley et al. 2013).

CHAPTER 3 – CASE STUDY DESCRIPTION

Södertälje municipality, founded in 1971, is part of Stockholm County and situated south of the capital, bordering Lake Mälaren in the north and the Baltic Sea in the South (figure 3). The municipality consists of five districts: the city of Södertälje, Järna, Hölö-Mörkö, Enhörna and Vårdinge-Mölnbo with a total area of 694 km² (Södertälje municipality 2020) and about 100 760 habitants (SCB 2021), making it the 20th largest municipality in Sweden demographically. More than 54% of the inhabitants have foreign backgrounds resulting in over 80 languages being spoken throughout the municipality (Södertälje municipality 2021).



Figure 3: Map of Södertälje municipality and its surroundings (Södertälje municipality 2021).

Södertälje municipality has a long tradition of agriculture practices, especially connected to Järna; an anthroposophical center and cluster for organic and biodynamic farming (Larsson 2012). The Biodynamic Research Institute Foundation in Järna has since the late 50s focused on comparing organic, biodynamic and conventional farming methods. The research institute engaged in two transnational EU-financed projects focusing on research related to ecological generative agriculture to reduce eutrophication in the Baltic Sea. The second project, BERAS

International (2010–2013) (MatLust 2021a), resulted in the food concept Diet for a green planet (DGP) that Södertälje municipality implemented into their public meals in 2010 (MatLust 2021b). The DGP is based on five criteria presented in table 1, e.g., healthy, and tasty food, organic and locally produced ingredients, and minimizing food waste (MatLust 2021c). There are 76 public preschools, 33 public elementary schools, and six public gymnasiums in Södertälje municipality (Södertälje municipality 2019).

Table 1: The diet for a green planet food concept is based on these five criteria (MatLust 2021c).

Nr.	Criteria	Description
1	Healthy and tasty	The food must be well prepared and composed and align with national nutritional recommendations.
2	Organic, preferably ecological recycling agriculture	Ecological Regenerative Agriculture is a kind of circular farming in which the number of animals and the land area are in balance. But because there is no labeling for Ecological Regenerative Agriculture, one can focus on KRAV or EU-organic
3	Less meat and more vegetables, legumes, and whole grain.	A rough benchmark is about 10% meat, fish, or eggs of the total ingredients and dairy products. The animals must have been reared under good conditions, and the fish must come from sustainable fishing or sustainable aquaculture. Legumes and other protein-rich seeds are good substitutes when using small amounts of animal products. Choose whole-grain cereal-based products instead of refined. This approach provides a better feeling of satisfaction, higher nutritional value, and less wastage.
4	Locally produced in season	Primarily fresh produce from local, regional, and national suppliers. Conserved and frozen products, i.e., semi-manufactured foods may be needed as a complement during the part of the year when the supply of local produce is low.
5	Reduce waste	Minimize wastage both in production, processing, distribution, cooking, and from the plate.

In 2015, Södertälje municipality launched the EU project MatLust that is based on the municipality's successful work with sustainable meals and its history of sustainable food production. The purpose of MatLust is to “develop a sustainable food industry in the Stockholm region and establish Södertälje as a regional food node” and to spread the DGP concept (MatLust 2021d). MatLust is also offering support to small and medium-sized businesses in the food sector to help them grow in a sustainable way (MatLust 2020).

My interest in Södertälje municipality's work for sustainable public meals started during an internship at MatLust in May 2020, where I visited some of the schools and preschools in the municipality to observe their work and taste the food.

CHAPTER 4 – METHODS

4.1 Research design and epistemological background

This study takes a case study approach without strictly following the research method. Through in-depth investigation, I have studied a real-world context of the case and traced events over time to retain a holistic perspective of a change process and gain knowledge and understanding about the case (Yin 2014). Case studies are especially suitable for answering questions of a ‘why?’ and ‘how?’ character and hence appropriate for my research focus (Yin 2018). The study builds on a relativist perspective, assuming that one reality exists independent of the observing researcher (Moon and Blackman 2014). However, by gathering qualitative data from interviews, I am taking a constructivist approach to collect the participants different perspectives of their reality (Yin 2018).

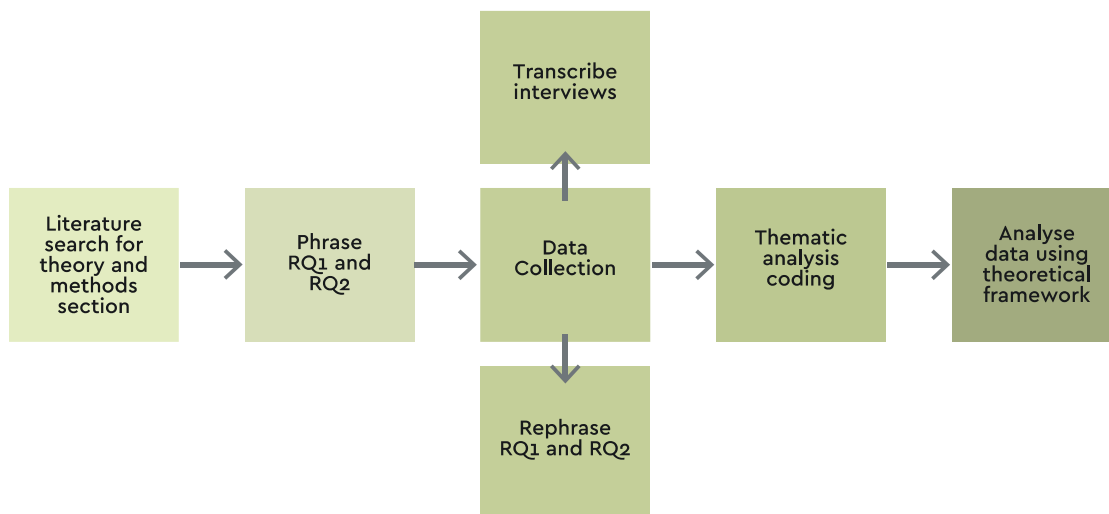


Figure 4: Summary of the research process. A literature search was first conducted to find relevant theory and methods and resulted two research questions. Data was then collected, interviews transcribed, and the research questions were rephrased. Thematic analysis coding was used to identify, organize, and understand themes emerging across the data set. Finally, the themes were analyzed against the theoretical framework.

4.2 Methods of data collection

I have primarily conducted interviews with key informants to collect my data (Bogner et al. 2009). I have also reviewed municipal steering documents and done participant observations during meetings and events at MatLust, to complement findings from the interviews.

4.2.1 Semi-structured interviews

I have conducted eleven semi-structured qualitative interviews in Swedish with municipality employees, two former employees, and one politician who have all been involved in the process of implementing the new food policy in the municipality sometime between the years 2000-2020. I chose to conduct qualitative interviews because they “attempt to understand the world from the subject’s point of view, to unfold the meaning of their experience, to uncover their lived world prior to scientific explanations” (Kvale and Brinkmann 2019:1). I chose the semi-structured interview because of its similarities with an everyday conversation, although more structured and following an interview guide, but without a closed questionnaire and to understand themes related to my questions (Kvale and Brinkmann 2019). The guide (Appendix 1) constituted one main question, supported by themes and suggested questions to use for follow-up if the interviewee did not bring up the topics (Wagenaar 2011). The main question was: ‘Tell me about the change process of sustainable public meals in Södertälje from when you started until today.’ All interviews followed the same schedule except for the one with the politician, which was slightly adapted (Appendix 2). Interviewees were asked to account for the events that led to the transformation, the change process itself, challenges, success factors, and key individuals.

During my internship, I created a list of possible interviewees, and the Head of the diet unit sent me an additional list together with the organizational chart. I chose interviewees from these people who represent preschools, schools, and gymnasiums with a geographical spread throughout the municipality. I interviewed 11 people (P1-P11), which was a manageable number for the scope of my thesis (Kvale and Brinkmann 2019). The interviews were about 1 hour long and conducted between November 2020 and February 2021. Because of the ongoing COVID-19 pandemic, most of the interviews were done through the online video meeting

service Zoom or via telephone. Only one interview was conducted face-to-face. The interviews were recorded and later transcribed.

4.2.2 Document review

A review of relevant steering documents related to school meals and municipality work with sustainability was conducted. These provided me with background data for the case description and complemented my interview findings in portraying the story (Tracy 2013).

4.2.3 Observations

Through my internship before this study, I established a connection with MatLust where I have conducted direct and participatory observations throughout this study. I have been attending MatLust project meetings and events hosted by MatLust and its partners. I have done direct observations to understand issues related to my study (Yin 2018). I have also done participant observations where I have been more active at meetings and events and have taken the role of a staff member (Yin 2018). During these observations I have taken notes.

4.3 Data analysis

To analyze my data, I have used thematic analysis to identify, organize and understand themes emerging across my data set and to find shared meanings and experiences useful for answering my research questions (Braun and Clarke 2012). Inspired by grounded theory, I have used memo-writing during and after data collection to catch initial thoughts on paper, develop ideas and start analyzing at an early stage (Charmaz 2006). In the first step of the analysis, I segmented the text in my transcripts, an important mapping tool in applied thematic analysis to determine data quality and explore themes that describe the interview content and the connections between these themes (Guest et al. 2012). In the second step, I imported my data into the qualitative data analysis software NVivo and created codes representing the identified themes (Guest et al. 2012). I went through the data again while coding it, linking data to the specific themes, and merged overlapping themes, resulting in 13 themes. Thus far, my analysis was foremost inductive, making it very much rooted in the data. Once the themes were established, the process took more of a deductive bend as I coded the documents and my

observation notes using the 13 themes. I then used my theoretical framework to sort and refine the themes and codes and analyze my data against theory (Patton 2002, Tracy 2013). I then used the phases of transformation to tell the story that emerged from the data to answer my research questions (Braun and Clarke 2012).

4.4 Critical reflections on methods and data sources

I am basing my findings on one case study that could be argued is not enough to generalize. However, when studying human activity that is often connected to a local context, making context-dependent knowledge more useful than a universal theory that might not apply in the specific case (Kvale and Brinkmann 2009). It could also be argued that my number of interview subjects is too small. However, it is a common number for an interview study. It is based on a combination of the time and resources available and because of saturation. After a certain point, I felt the knowledge was being repeated when adding more respondents (Kvale and Brinkmann 2009). Finally, the last critical reflection concerns the effects of my close connection with MatLust and their involvement in the sampling strategies by presenting me with possible interviewees. This issue raises two potential concerns that could create bias: how it affects my ability to observe as a researcher from the outside and the possibility of becoming a supporter of the organization (Yin 2018). I have avoided biases by deliberately distancing myself as a researcher from my perception of Södertälje as a case and the head of diet unit (HDU) in particular. Even though I was presented with potential interviewees, I researched whom to interview and determined how to choose them. I also made sure to add previously employed interviewees and have taken an outsider standpoint when analyzing my data. I initially consulted the HDU about my ideas before choosing the focus of the study. However, the decision was my own, and I had no expectations from Södertälje related to the results.

CHAPTER 5 – RESULTS

In this section, I present findings from the data analysis to answer my research questions. I do so by using the phases of transformation presented in the theory: Preparing, Navigating, and Institutionalizing to tell the story that emerged from the data, focusing especially on the last two phases. Results presented here are kept close to the data. Results are summarized in table 2 and in figure 5.

Table 2: Results table. The first column signalizes in which section of chapter 5 the theme is presented. The second column presents the final themes found during the coding process. The third column indicates what research question the theme refers to. The fourth column presents the phase of transformation (according to Moore et al. 2014) corresponding to the specific theme. The last column presents key findings from the data connected to the specific theme.

Section	Theme	Research question	Phase of transformation	Key findings
5.1.1	Triggers for change	RQ1	Pre-transformation	Political election Interest in organic food practices
5.2.1	Political will	RQ1	Preparing	A local politician is building momentum for change by seizing a political window of opportunity.
5.3.1	Acting on the political decision and appointing leadership		Navigating	A key leader is appointed as a link between politics and practice.
5.3.2	Creating the right organizational conditions	RQ1	Navigating	Key leader envisioning new organizational structures.
5.3.3	Involving and educating kitchen personnel	RQ1	Navigating	Engaging personnel, building knowledge, and enhancing quality.
5.3.4	Changes in local policy	RQ1	Navigating	Establishing a politically anchored diet policy.
5.3.5	Developing a food concept	RQ1	Navigating	Opportunity to collaborate with a bridging organization.
5.3.6	Implementing Diet for a green planet	RQ1	Navigating	A healthy and sustainable diet is implemented at all units with various results.
5.4.1	The new diet	RQ2	Institutionalizing	Promoting local and seasonal food production.
5.4.2	Changing eating habits	RQ2	Institutionalizing	Young children are easily adapting to new food types.
5.4.3	Bridging food and education	RQ2	Institutionalizing	Incorporating knowledge around sustainable diets into school subjects.
5.4.4	Cooperation between the kitchens and the teachers	RQ2	Institutionalizing	A mutual understanding of the food concept could lead to the cooperation needed for a fully institutionalized transformation.
5.4.5	Spreading the diet concept	RQ2	Institutionalizing	MatLust is an ambassador for spreading sustainable practices.

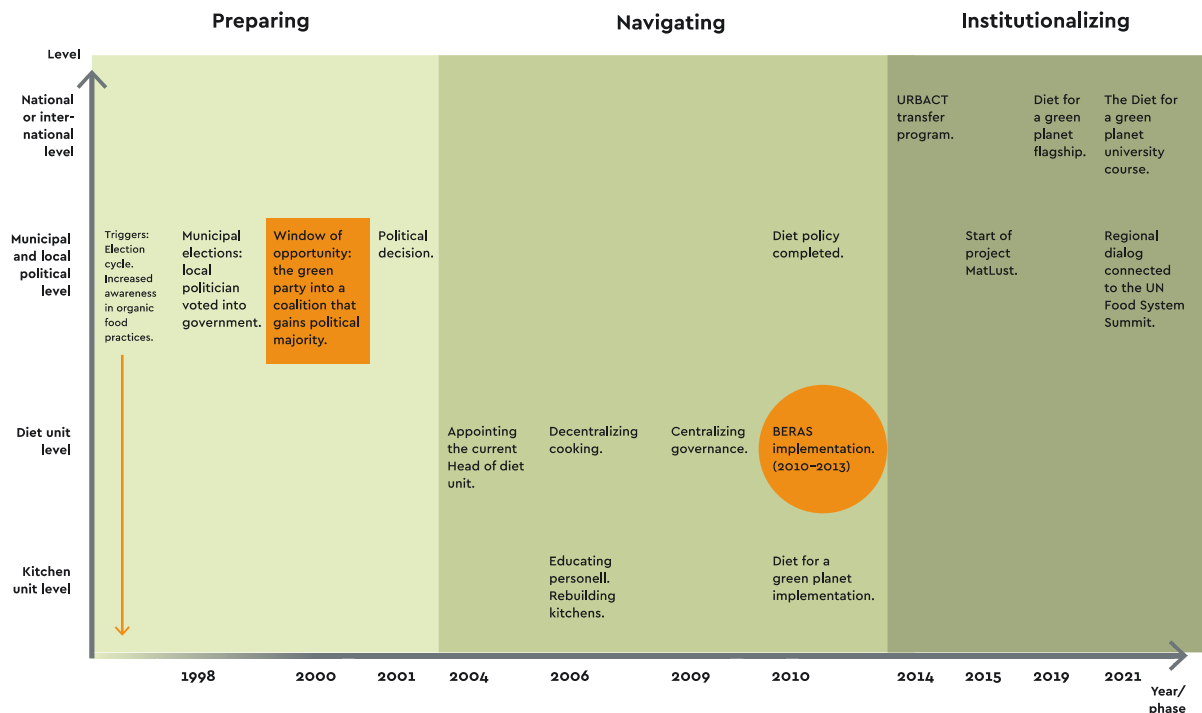


Figure 5: A timeline showing the events presented in the results connected to the phases of transformation. The X-axis shows the year of the event, and the Y-axis indicates on what level the event took place. The orange arrow represents the triggering events, the orange square represents the window of opportunity, and the orange circle highlight an important opportunity that was crucial for navigating the transformation.

5.1 Pre-transformation

5.1.1 Triggers for change

Parts of Södertälje municipality such as Järna, outer Järna and Mölnbo, has since the mid-20th century been advocating organic and biodynamic farming. Research around sustainable food production has also been of focus in the area, partly due to the municipality's closeness to the Baltic Sea that in the 1980s underwent ecological regime shifts somewhat driven by eutrophication through agricultural practices (Österblom et al. 2010). In 1982, when the Green party was founded in Södertälje, environmental issues were even further highlighted. All these factors triggered an interest in organic food practices amongst parts of the population. The election cycle acted as an additional trigger prior to the election in 1998.

5.2 Preparing for change

5.2.1 Political will

During the Swedish election in 1998, an engaged member of the Green party who was working as a coordinator during the election was voted in as secretary at the city council. Her interest in joining the party was connected to the engagement in organic farming and food that the Green party had advocated since its establishment and she pushed those issues. In 2000, the Green party entered a coalition with the social democrats and the left party and gained political majority. The event opened a window of opportunity for the local politician and the green party to suggest using organic foods in schools for health and sustainability reasons. The other coalition parties did not fully understand the importance of the suggestion. However, through negotiations, a political decision was made in 2001 to start using public meals as part of the municipal work with sustainability. The local politician emphasizes the importance of patience and persistence and further explains:

“As long as you do not ask for that much money, you can get proposals through. But it was not easy. It was a question that we, the Green Party, had to pursue ourselves.” (P10)

5.3 Navigating

5.3.1 Acting on the political decision and appointing leadership

The political decision entailed introducing organic products in public meals, appointing the Head of Diet Unit, and educating personnel about organic food. Initially, the focus was on organic milk, sour milk, and egg that were products that all kitchens bought. At the time, the idea of buying organic products was not widespread, and according to kitchen personnel, the decision came as a surprise. The packaging of organic products was not adapted for commercial kitchens. The local politician explains how she personally called the milk supplier to urge for organic milk to be delivered in the same type of packaging customized for large food servings in which conventional milk was delivered.

According to the local politician, the initially appointed Head of Diet Unit did not operate in a way that pleased the politicians, to function as a link between decisions and implementation. But when she resigned in 2004, a new Head of diet unit (HDU) was appointed that became a key leader in navigating the transition. The local politician says: *“To us politicians, it is very important to have officials who understand our wants and who has both the drive and patience to fulfill them”* (P10), referring to the HDU. Both the HDU and the local politician emphasize the importance of co-operation between the politicians and the diet unit, creating motivation and confidence among officials that decisions are anchored from the top, something that is also highlighted by an interviewee *“I think that is a big success factor, that we can push issues and that we have political mandate to do so”* (P2).

5.3.2 Creating the right organizational conditions

Decentralizing kitchens

In 2006, new stricter rules on food handling were introduced within the EU. The new legislation meant higher demands on all meal operations related to quality and food safety. The method HACCP (Hazard analysis and critical control points) was introduced and mandatory for securing food quality. According to the new legislation, all operations had to be adjusted and seek renewed approval to continue their business. Based on that, the diet unit initiated an inquiry overlocking premises and equipment to evaluate possible changes in operations to achieve these new demands. This approach led to an evaluation of the whole organization and a realization that cooking needed to be decentralized (figure 6) and many kitchens rebuilt. According to interviewees, most kitchens were not built for cooking food, only to receive pre-cooked and pre-heated food from five central kitchens, which were also not big enough and suited for the task. Hence, a decision was made to start decentralizing the kitchens, as explained by an interviewee: *“We invested a lot in the kitchens to develop them [...] expand, rebuild and purchase new equipment to make it possible to cook food from scratch”* (P10). According to the local politician, this was the one time when the politicians added to the budget to invest in kitchen equipment and education. A process followed to transfer assignments from the five central kitchens to 88 local kitchens, involving new tasks and the possibility for the kitchen chefs to influence the meal in a way that did not exist before this change in responsibility. The decentralization was also a way of preparing the food closer to the guests as part of the aspiration to deliver more healthy, tasty, and sustainable meals.

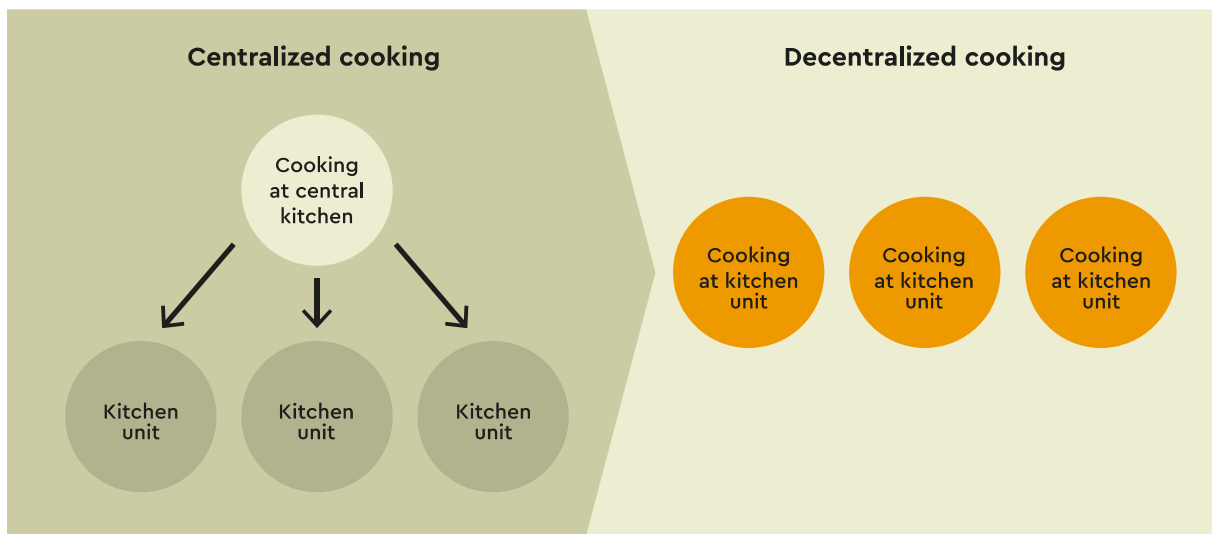


Figure 6: The process of going from centralized cooking when one central kitchen prepared the food for all kitchens, to decentralized cooking when the kitchen units now cook their own food. The arrows signal how the central kitchen sent out pre-cooked food to all kitchen units.

Decentralizing governance

The management of the five central kitchens was placed under the diet unit, but the responsibility of the kitchen units, in most cases lied with the principals at each school. The HDU felt it was hard to get insight into the organization and the kitchens units and initiated a process to centralize governance, shifting responsibility from the principals to the diet unit (figure 7). With the implementation of the new HACCP rules mentioned, many principals did not feel they had the competence needed to take that responsibility and thereby “*gladly handed it over to the diet unit*” (P2). In 2009, a politically grounded decision was made that all schools should be placed under the diet unit, and later, in 2011, all preschools. A shift that was described as vital by an interviewee:

“The big success factor is that we are a decision-making, central unit, that all kitchens are under the diet unit who makes the decisions. We are not consultative as they are in many other municipalities [...], and I do not think we would have come as far if that would have been the case.” (P2)

This meant the diet unit now had direct responsibility for all units in the municipality and greater insight into all meals. The HDU describes the re-organization as a tough period because of the difficulties of getting all the personnel on board.

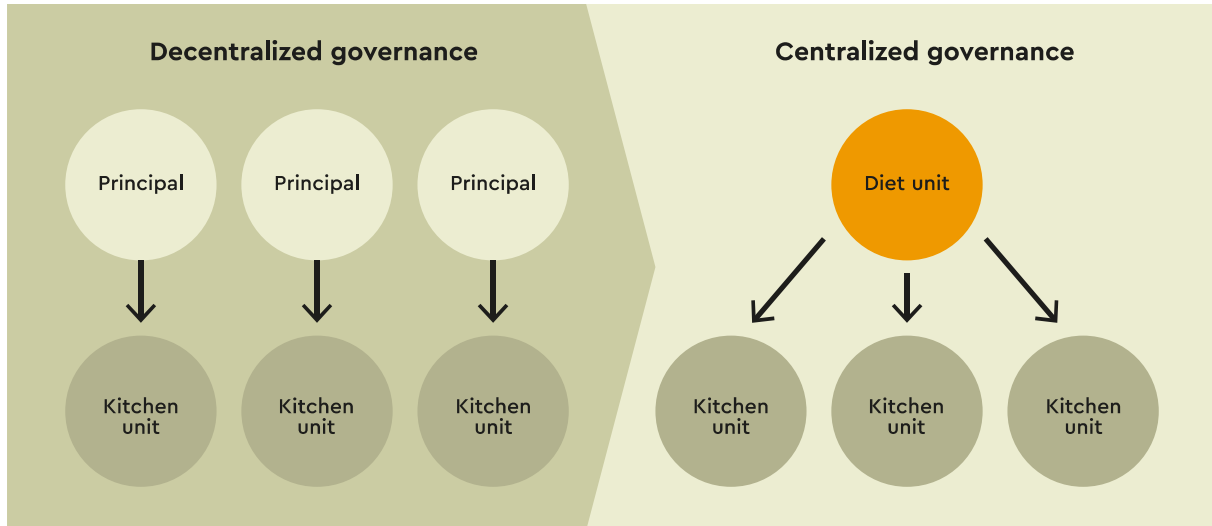


Figure 7: The process of going from decentralized governance when the principal at each school was responsible for the school kitchen, to centralized governance when the diet unit now manages all kitchen units. The arrows signal how the upper circles governs the lower circles.

5.3.3 Involving and educating kitchen personnel

The management team at the time, consisting of kitchen managers, lacked education in cooking and leadership according to the HDU and was trapped in old patterns giving little room for flexibility. With the change in responsibility came a need for education and competence building which the HDU initiated, combined with relocating and recruiting personnel to build a higher competence amongst the chefs and kitchen staff. She was also involved in generating control documents to help uneducated personnel get the right prerequisites. According to an interviewee, working with public meals was considered low status, and it was hard to find suitable people for the jobs. Another interviewee says:

“At the time when I started working with public meals the role had low status, every kitchen did as they wished, and we had no goals or anything like that [...], everyone did as they felt like at the time.” (P11)

The HDU explains that when she started, the uniforms of the kitchen staff were that of cleaners or janitors. They did not see themselves as chefs. So, according to her and four other interviewees in chef positions, an important part was strengthening the profession's status, including wearing proper uniforms and changing titles, which created a sense of higher quality throughout the kitchen. A kitchen chef explains how the staff also gained a sense of pride when taking over the responsibility of the kitchen preparations and cooking. Another chef highlights

“It is not just the kitchen; it is also the personnel themselves that has the responsibility [...]. It has been very stimulating to learn yourself, but also to enthuse and strengthen people that has been free from liability.” (P3)

Another interviewee points out that this was also a difficult task, coming from a kitchen where you only open boxes to suddenly having to cook proper meals for a hundred children. The HDU also initiated recruitment of educated chefs intending to have at least one educated chef in each school kitchen to get a higher level of cooking in these kitchens. With this strengthened status of the profession and new way of working, when cooking food from scratch, it became easier to attract more skilled chefs from reputable restaurants who were tired of working evenings and weekends.

5.3.4 Changes in local policy

To assure the quality of the meal, the HDU got the politically grounded assignment in 2006 to formulate a diet policy. The politicians had rejected the idea at an earlier occasion with the motivation that it should be up to each principal or kitchen manager to decide on what food to serve. But, according to HDU, a dissatisfied parent sent in a citizen proposal requesting policy instruments that would promote healthier public meals of consistent quality. The proposal resulted in an evaluation of the possibilities of a diet policy, which was produced by the HDU and completed in 2010. According to the HDU, the policy *“constitutes a framework, but also concrete tools for how to work” (P1)*. According to another interviewee, the diet policy is a success factor in the Södertälje case, a framework for kitchen expectations based on a political decision. According to the local politician, the policy became very important in Södertälje's work forward. It has been shared throughout the country, resulting in many other municipalities now having formulated diet policies.

5.3.5 Developing a food concept

The initial political goal that focused on replacing specific products with organic alternatives was later converted into a percentage to give the kitchens more flexibility. In 2010, Södertälje got the opportunity to be part of the research project BERAS Implementation. The diet unit was involved in formulating the criteria for the sustainable food concept ‘Diet for a clean Baltic’ (table 1), built on research around ecological generative agriculture by the Biodynamic Research Institute Foundation in Järna, and considering the Nordic nutritional recommendations. The concept that internationally is called ‘Diet for a green planet’ (DGP) was implemented as a diet concept in Södertälje public meals between 2010-2013. In 2014 Södertälje municipality was the lead partner in a pilot transfer network to spread the concept to three other cities outside of Sweden. According to HDU, it has been crucial for Södertälje to have had the opportunity to participate in such development projects. According to one interviewee, Södertälje also invested in education through the BERAS projects.

5.3.6 Implementing Diet for a green planet

The diet unit did not receive any additional money from the politicians to change the food concept. Instead, they had to make smart purchasing decisions such as less but better-quality meat and more raw, seasonal produce and decrease food waste. The HDU and the rest of the management team planned the implementation together. One of the managers emphasize the advantage of having a political mandate and a centralized organization in that situation: *“I remember us sitting down one Friday and simply deciding on implementing one vegetarian day a week”* (P2). Something she says, when tried in other municipalities, has resulted in protests. They introduced one vegetarian day every week and for schools to serve two optional dishes every day. One should be vegetarian – a big difference from before, says an interviewee, when the vegetarian options were stored in heating containers, people had to ask for them. On soup days, there is also the possibility to ‘sneak in’ an additional vegetarian day. Serving two optional dishes every day also results in less food waste since, according to an interviewee, students, when having more options to choose from, to a greater extent find something they like and leave less food on the plate. Leftover food from the serving gets stored and used in other dishes: *“We do not throw away food, we convert it”* (P7). Food waste from plates is weighted and documented. The salad table is placed first to ensure the guests start by filling up their plates with vegetables. Second, comes to the vegetarian option and lastly, the meat or fish option.

After piloting DGP at one unit, Södertälje implemented it at all units simultaneously, something that was especially pointed out by one interviewee as challenging:

“It went a little fast there in the beginning, and we experienced a little setback, the staff may not have had the skills needed. So, we have also worked with that in parallel, education” (P2).

Another interviewee explains: that managers with the right background and self-confidence found cooking according to the new food concept less challenging. The diet unit presents recommendations on how to work with the diet policy to cover the criteria of DGP. However, the responsibility to cook according to the concept lies in the kitchens:

“The responsibility has always been placed very far out, in the kitchens. So, it is the kitchens themselves who order the products and make menus, free reins. But based on set goals and of course the diet policy, and other guidelines that they have to relate to” (P4).

Two chefs describe how the information on how to work with the concept did not reach the kitchen floor properly in the beginning. Another chef explains why kitchens develop differently: *“some kitchens have come very far, but others might not have as motivated personnel or as a competent manager who wants to develop” (P6).* Several interviewees also mention language and culture as barriers since many of the kitchen personnel have foreign backgrounds.

5.4 Institutionalizing

5.4.1 The new diet

Since implementing DGP, the kitchens have evolved and introduced many new products and dishes (see photos 2-5 for examples). One of them is hen, a product that is usually thrown away after having fitted its purpose in egg farms, or Swedish grains and legumes to replace products like rice and chickpeas. Chefs are encouraged to cook classic dishes that the children recognize but that are adapted to fit the concept, e.g., lasagna with part of the meat being replaced by lentils and vegetables, and vegetarian options like a taco made from local minced legumes. According to an interviewee, the high focus has been on organic products that are locally produced. Kitchens are now purchasing 90 percent organic products, and the average meat consumption is 45–50g per child per day, a decline with 30–35 percent since 2010. The old salad table is replaced with vegetables in season, resulting in less water-rich vegetables like cucumber and tomatoes and more nutrient-dense ones like cabbage, legumes, and root vegetables served in a buffet style. According to the HDU, some kitchens cooperate with local farmers to get local and in-season vegetables. But the Swedish public procurement act complicates buying directly from local initiatives according to another interviewee, since it states that procurement should go through a wholesaler. In 2020, one of the kitchen chefs was recruited as a meal developer to support the kitchen managers and chefs in operationally working according to DGP, which has given great results. She emphasizes the importance of children appreciating the food and explains that contrary to what many people think, it is not the children that are the hardest to convince. It is hardest to involve and engage the staff.



Photo 2: Photographer Fredrik Sederholm for project MatLust, Södertälje municipality.



Photo 3: Photographer Fredrik Sederholm for project MatLust, Södertälje municipality.



Photo 4: Photographer Fredrik Sederholm for project MatLust, Södertälje municipality.



Photo 5: Project MatLust, Södertälje municipality

5.4.2 Changing eating habits

Interviewees agree that the implementation of the food concept DGP has been particularly successful with the youngest children in preschool since they have had less established eating habits. A chef at one school explains:

“Some of the preschool chefs expressed a bit of worry in the beginning; ‘Will the children eat this?’. But that’s where we have really noticed that they eat it. Unlike when you give it to a 9th grade who says, ‘No, I refuse because I have never eaten it before’ But that is when we teach them when they are in preschool [...] if they learn in preschool, then they will take it with them when they move on to start school.” (P5)

He further says that since Södertälje started with the DGP food concept, they have already seen the effects of the younger children coming from preschool and being much more used and open to new food than students in higher classes. Another interviewee says, *“It will take a few more years before this (the food concept) gets established and become the new ‘normal’” (P6)*. Not only the children but also interviewees mention a change in eating habits: *“You learn for your own household too, reflect more when grocery shopping” (P8)*.

5.4.3 Bridging food and education

Several interviews highlight the importance of knowledge around sustainable food amongst the children and suggest incorporating food into school subjects to create awareness around sustainable diet choices. Some examples raised are counting waste in math and learning about working conditions at rice plantations in civics. A few teachers have already started to include food in their education. One chef gives an example of when a domestic science teacher educated her students about sustainable and healthy foods: *“It was so fun when the children came (to the school restaurant) and said, ‘now I understand what you have been talking about’” (P5)*. Efforts have already been made to get kitchen personnel out of the kitchens and into the restaurants to talk with the students. However, he emphasizes the need to teach the children about food in school *“because when they come to the school restaurant, they are hungry and want to eat, not listen to the chefs talking about why the food is good” (P5)*. Another chef says she is engaging in different ways; inviting children in preschool and the younger grades into

the kitchen, allowing the older students to get practical work experience in the kitchen, and talking to teachers about introducing food in school subjects, etc.

“But my wish is to get this part down on paper, how to act to get greater mandate when working this way. Because this has been on my own initiative, and I am usually very driven and can push this through, but everyone might not be able to do that” (P9).

She explains that it is dependent on people – some teachers are very interested but others less so. *“If they (the children) eat, they will also learn better, so there is a connection” (P9).*

5.4.4 Co-operation between the kitchens and the teachers

Connected to the process of bridging food and education is another issue raised by several interviewees, namely the co-operation between the kitchen side and the teacher side (figure 8). Interviewees express a lack of acceptance of the food concept and understanding of its purpose amongst principals and teachers: *“To get the teachers on board and to cooperate around our concept, that has been a big challenge [...] They do not have insight, we are working at different units in a way, even though it is the same school” (P7).* One example given is when teachers openly complain about the food in front of the children *“then how are we supposed to convince the children?” (P5).* Initially, when implementing the food concept, teachers and principals were invited by the HDU to learn about how and why the new diet concept would be implemented. But, according to an interviewee, few came, and many of them no longer work in Södertälje today. On other occasions, there has been no interest from the principal’s side in joining. This reluctance has made it harder for the kitchens to promote the food, interviewees explain. Especially one chef emphasizes the importance of grounding the concept with every employee at all stages and continuously maintaining close contact. Another explains: *“When the teachers have been on the same level as us, that is when it has proven to work well. When they know our diet policy” (P5).*

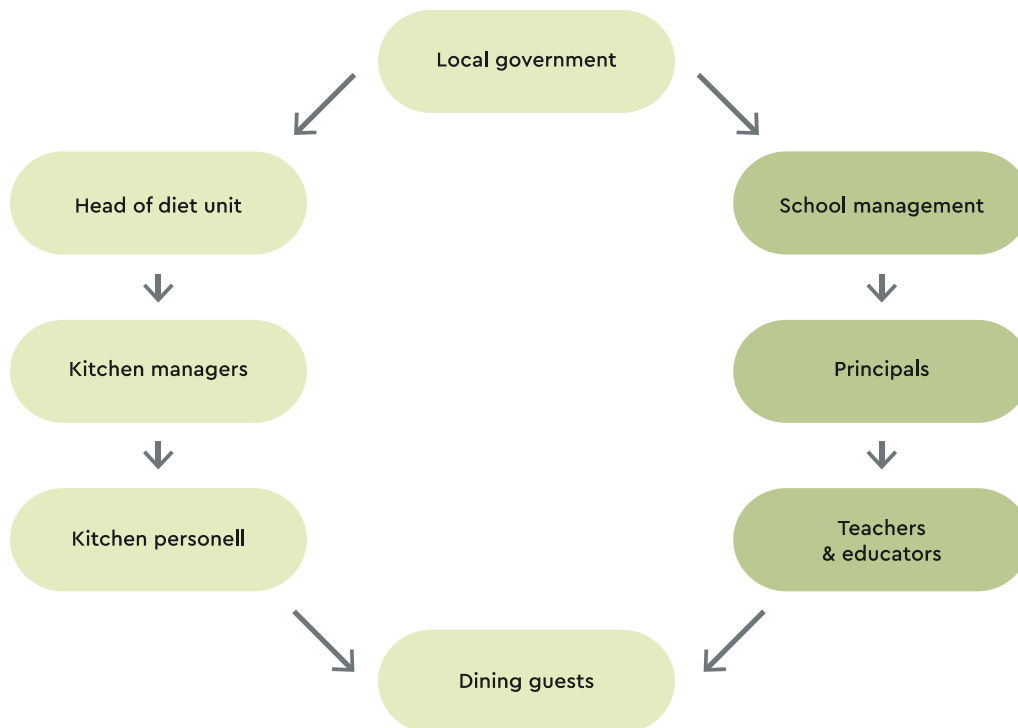


Figure 8: Main actors in the system. Actors in light green colored circles are the focus of this study. The arrows show the order of decision making and how the Diet Unit is separated from the school management. Collaboration between the different actors could result in a more united approach to the dining guest.

5.4.5 Spreading the diet concept

The diet unit in Södertälje has been involved in scaling the diet concept DGP for many years, starting with the URBACT pilot transfer 2014–2015, in which the diet unit had a key role in transferring DGP to three other European cities. Since implementing DGP, Södertälje has received several awards for its food, and the municipality is often cited as a good example and receives visitors from other municipalities. They are also involved in dialogs about food in many different contexts, both as a municipality and via the MatLust, most recently as organizers of a national discussion in preparation for the UN food system summit 2021. Since the start of MatLust in 2015, the HDU has taken on the role of project manager and now only holds the overall operational responsibility for the diet unit. Through MatLust, the HDU acts as an ambassador for the municipality, presenting the DGP concept at events and conferences at the regional, national, and international levels. She explains that MatLust is also involved in projects not related to public meals where they support small businesses in developing their products. In these projects, the school restaurants contribute as test kitchens for new products, some of which are served as part of the public meal. Another interviewee explains how testing

products through MatLust has made the implementation of the new food into public meals more rational. However, she emphasizes that the diet unit and MatLust are not working together daily. MatLust rather has the focus to spread the DGP. Other municipalities have been inspired by Södertälje and the DGP when establishing food concepts in their public meals, and a former employee also says she has brought with her ideas from Södertälje to the municipality for which she is currently working. Södertälje has also received funding from the Swedish Institute to establish a network to spread the DGP concept in the Baltic region together with other actors in Finland, Lithuania, and Poland. One of the outcomes is an international course in DGP and food system transformations at the University of applied sciences in Finland. MatLust started as an EU project but wants to establish itself as a permanent function at the municipality to become a regional food node.

CHAPTER 6 – DISCUSSION

In this chapter, I discuss the results I presented in the previous chapter. The findings point out three main themes; (1) leadership and opportunities, (2) scaling deep to foster stewardship, and (3) the importance of collective will (agency). I am also connecting the case of Södertälje to the larger food system transformation in society and present some reflections around the theoretical framework.

6.1 Leadership making use of political opportunities and strategic partnerships when preparing for change and navigating the transition.

Leadership

Previous studies on SES transformation highlight leadership as a key factor in all three phases of transformation, especially when initiating and preparing for change (Olsson et al. 2004, 2006). The importance of leadership is evident also in this case; however, the results show how leadership changes in the different phases. The process in Södertälje was first enabled by the local politician who had a leading role in preparing for change. She utilized her agency by seizing an important window of opportunity. With the support of her party, she moved the system into the second phase. Networks have previously been pointed out as having an important role in initiating transformation (Olsson et al. 2006, Chapin et al. 2010). However, the Södertälje case shows how much one dedicated individual can accomplish. Moore et al. (2014) emphasize that the leadership needed in the first two phases is different from the leadership in the last phase. However, for navigating the transition in Södertälje, a different leadership was required than when preparing for change. The head of Diet Unit (HDU) acted as a link between politics and practice, and her drive has been key for navigating the change process and motivating the kitchen personnel as expressed by all interviewees. Moore et al. (2014) also highlight the importance of leadership evaluating current structures and envisioning new ones when preparing for change. The results, in this case, show this importance both when preparing and navigating, the political council envisioned changes of the public meal on a theoretical level in the phase of preparation and the HDU envisioned the practical aspects of re-organization and changes in practices.

Seizing opportunities

The case of Södertälje shows the importance of seizing arising opportunities such as policy opportunities at different levels and research collaborations. When the green party entered a political coalition, a window of opportunity opened, and the diet unit received the political mandate to transform the public meal. The organizational change was made possible when stricter EU rules acted as an opportunity and facilitated the shift in governance structures. In the navigating phase, The Biodynamic Research Institute Foundation acted as a bridging organization when offering Södertälje the opportunity to participate in the BERAS implementation project. The important role of bridging organizations as an opportunity for learning, sense-making, and collaboration has been highlighted in previous studies (Hahn et al. 2006, Crona and Parker 2012). Participating in the BERAS project was of utmost importance since it brought legitimacy to the food concept DGP by bridging science and policy. It also generated knowledge and involved officials. The results show that it was subsequently to implementing the DGP that the diet-related changes started to take off. Without it, Södertälje might not have come as far as they have today.

6.2 The importance of scaling deep to foster stewardship and individual will to change practices.

Research shows that even though backed up by political decisions and policy change, transformations are highly dependent on individuals and what they bring into the system in terms of values, norms, and culture, as these factors affect their level of will and motivation for action (Pesch 2015, Hicks et al. 2016). Even though the diet policy is politically grounded and mandatory, the extent to which it is being followed also depends on the agency of individual actors in the kitchens as they now hold the responsibility for following the concept. The interviewees witnessed how institutionalizing the transformation has been difficult in cases where the personal will is lacking. That, in combination with insufficient knowledge of practices and, in some cases, language barriers. These findings align with previous research by O'Brien and Sygna (2013) on the three spheres of transformation where the personal sphere, consisting of individual values and beliefs, affects possibilities to action in the practical sphere (in this case, a diet change) and the political sphere (in this case the political decision). The most powerful changes are done in the personal sphere because they will influence action in the other spheres (O'Brien and Sygna 2013). Practices could potentially be forced upon the personnel through threats of unemployment, for example. However, as Moore et al. (2013)

pointed out, transformations also need to consider power imbalance and social justice to be sustainable, which might not align with that type of top-down control. It could also erase what has been built up among the personnel in terms of trust and motivation. As highlighted by O'Brien and Synga (2013), action cannot be forced ethically but needs to come from an individual's own will to change or through education.

Previous research also highlights the importance of testing new ideas in protected spaces (niches) before adopting and spreading them (Geels 2002, Pesch 2015). Södertälje tested the DGP at one unit before implementing the food concept at all other units simultaneously. The setback was that not all kitchen staff had the prerequisites for working with the new concept, resulting in differences between kitchens regarding how implemented new practices have become. An alternative way would have been to introduce the concept (scale-out) to a few kitchens at a time, focusing on grounding knowledge (scaling deep) in the navigation phase to establish values amongst the personnel and educate them in how and why new practices should be adopted to create a will for stewardship when entering the phase of Institutionalization.

Besides providing key functions, there are also risks associated with having strong key leaders; if they disappear at a critical time, the course of the transformation might be affected (Olsson et al. 2004). Some kitchens are still adjusting to navigating without the HDU, and her constant drive and positive force for motivation and are struggling to fully implement the practices. Other kitchens that have shown to have committed managers and chefs are now engaged in institutionalizing practices. They have established a way of working successfully with the concept and are motivated by the political decision and individual values and will. Moore et al. (2014) pointed out that the sub-process of routinization, when new practices become standard, often requires a different kind of leadership than envisioning and selecting the trajectory. In the Södertälje case, the leadership in the last phase of transformation needs to focus on rooting (scaling deep) new values and beliefs to create a sense of stewardship amongst the personnel and a personal will to act for change (agency).

6.3 Creating collective will and building networks to fully institutionalize the transformation.

As expressed by interviewees, a greater collaboration from the school management and teachers' team is requested, and a mutual understanding of why working according to the diet policy is important. Building a network of actors from both the diet unit side and the school management side, including principals, teachers, and educators, could lead to the kind of co-operation and collaboration needed to stabilize and institutionalize the transformation. These results align with previous studies of the public meal in Sweden (Holmberg 2019, Björklund 2016). Björklund (2016) mentions the success of scheduling pedagogic meals where teachers eat together with the children to engage with them and talk about the meal. Incorporating education about sustainable food in school could affect and change values amongst both children and personnel and lead to change in food-related behavior and the sense of stewardship mentioned earlier.

In the institutionalizing phase, MatLust has been an important initiative to spread and scale-out practices. Södertälje municipality has, through MatLust, been engaged in several transnational, national, and local projects that all contribute to spreading the food concept Diet for a green planet and to creating cross-scale interactions by establish networks that are spreading it to other regions, municipalities, and countries and generate opportunities for change. Bridging actors like MatLust could be an opportunity for municipalities to spread (scale-out and up) sustainable practices as the municipalities themselves might have limited resources and other priorities. As argued by Folke et al. (2009), transformative organizations need to establish networks of organizations that together form a common niche to make new practices "stick" and influence the overall attitudes in society, something that is being done in Södertälje through MatLust.

6.4 Contributing to the food transformation at large: Municipalities as potential food systems changemakers.

After having studied the case of Södertälje municipality, I found that the transformation has shown signs of affecting both social and ecological elements: The distribution of power has shifted by establishing the diet unit with a political mandate, and by going from centralized to decentralized kitchens, giving the units responsibility for their own menus. Rules have changed by introducing a diet policy and practices by going from ready-made to homemade food. The

food concept Diet for a green planet, is in line with research on sustainable and healthy diets, promoting a diet high in locally produced plant-based food, including less meat, more vegetables, fruits, legumes, and whole grains, limiting food waste, emitting fewer greenhouse gases, and being more energy efficient (Willett et al. 2019, Gordon et al. 2017). However, to reach the recommendation of 14-gram meat per person per day set out by the EAT Lancet commission (Willett et al. 2019), Södertälje still has a way to go. Today's focus lies largely on sourcing local and organic produce, even though developing new vegetarian dishes is also a priority.

As mentioned in the introduction, the school meal in Sweden has shown to have positive effects on children eating habits if healthy food is promoted (Colombo et al. 2020). A study of Danish schools shows the same results, that school meals could be used as a tool to promote healthy eating (He et al. 2012). These studies align with the findings in Södertälje, where they are already experiencing a change in behavior amongst the younger children that have adapted well to new alternatives such as barley and seasonal vegetables. This result shows that the food served in public schools and preschools in Södertälje has the potential of creating new norms around what constitutes a good diet. Something that could be even further spread and deepened amongst both the older children and teachers if strengthening the co-operation with the education side. Interviewees in this case also witness being privately influenced by the health and sustainability aspects of the food they cook at work and are transferring this mindset to choices they make on a private basis. Former employees are scaling out these values and norms related to food by spreading the ideas as they become employed by other municipalities. All these factors show that the transformation of the public meal in Södertälje has the potential of contributing to the food system transformation needed. Changes are now local and spread nationally and internationally through MatLust, creating a transnational network of dedicated actors. Since Sweden has strong municipal rule, political decisions to make public meals more sustainable must be made on a local level. As pointed out by previous research by Sellberg et al (2020), municipalities such as Södertälje who has resources and political support have the potential to lead other smaller municipalities in adopting new practices and spreading transformative change. By establishing similar food nodes throughout the country and beyond and connecting them in networks with various food system actors could help scale up sustainable food practices at the level required.

6.5 Reflections related to the theoretical framework

Initially, I found the theoretical framework confusing, especially related to the starting and endpoints of the different phases, making it difficult to match them to the events I found in my case. I also found that the sub-processes of the preparation phase were repeated in the navigating phase when the HDU evaluated the organization, made sense of it and envisioned new organizational structures, and prepared the kitchen personnel for managing new practices. Moore et al. (2014) mention that the processes could take place in a different order than presented in the framework, as I found to be true in this case with several of the sub-processes. The last point I struggled with was related to events that set off the different phases. Moore et al. 2014 mention the pre-transformation phase as a trigger for change when a social or ecological disruption creates a window of opportunity but does not point out wherein the process this opportunity might come, making it open for interpretation. The framework by Olsson et al. (2004) and Folke et al. (2009) suggest (and the literature on SES transformation agrees) that the window of opportunity is what moves the system from the preparation into the navigation phase. A study that looks at crises as an opportunity for transformation (Herrfahrdt-Pähle 2020) is combining these two ideas by suggesting two perturbations; one that is triggering the preparation phase and a second one at the end of the preparation phase that provides the window of opportunity needed to move into the navigation phase. The updated framework was helpful and relevant to my case. I found the triggers to be connected to an evolving interest in organic food practices as well as the political election cycle, and the window of opportunity for change was when the Green party joined the coalition. Geels (2005) also mentions an event in the navigation phase that could act as an opportunity for innovations to reach a breakthrough. In the case of Södertälje, I found that the participation in the BERAS implementation project acted as a tipping point for when dietary changes broke through and suggested this second opportunity could be added to the navigating phase as it helped move the transformation into the next phase. To conclude, I found the framework useful for understanding how the different sub-processes affected the transformation and how opportunities was vital for moving forward. However, I think it is important not to follow the framework too strictly but to rather use it as a guidance to understand the specific process and to possibly speed up the transformation.

CHAPTER 7 – CONCLUSIONS

This study analyses actors' use of agency and opportunities when navigating through the phases of a social-ecological transformation of the public meal in Södertälje municipality and explores opportunities for further institutionalization. Findings show how the agency of one individual has the power to initiate transformations. It also shows the importance of having political support to facilitate decisions and motivate individuals to action. Driven and persistent leadership has restructured the organization, introduced new practices, and changed local policy. This case shows how seizing the right opportunities, especially the collaboration with a bridging organization, created the prerequisites needed to bring the transformation to the next phase. However, it also shows the importance of ensuring that individuals have the qualifications and knowledge needed to act on decisions. Values must be shaped that strengthens a sense of stewardship and an individual will of following policies. A closer collaboration in this case between the diet unit and the school management side could help foster sustainable norms amongst children and personnel and create a stronger collective will for change. With the help of bridging actors like MatLust, sustainable practices and values could be scaled out and spread nationally and internationally.

The framework was useful to better understand the processes and actions that facilitates transformations. However, my findings show the importance of seizing opportunities and I suggest future research to investigate the possibility of adding a second opportunity to the framework. Further studies on how to use school teaching to foster biosphere stewardship amongst schoolchildren would also need to be conducted to determine the long-term effect that healthy and sustainable public meals could have on consumer behavior.

To conclude, changing the school meal alone is not enough to accomplish a larger food systems transformation, it must be combined with a change in the private consumption of food. But the public meal is an opportunity for municipalities to introduce healthy and sustainable eating habits amongst children early in life and thereby affect their consumption in the future. That could contribute to the transformation needed.

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APPENDIX 1 - INTERVIEW GUIDE

Diet unit personnel

1. Explain the research project
2. Ask about consent
3. Any questions?
4. Interview questions:

Warm-up question:

When did you start working for Södertälje municipality?

Main question:

Tell me about the change process of sustainable public meals in Södertälje from when you started until today!

- What enabled the change?
- Important factors in the process
- Success factor
- What in the process has been most difficult/easiest?
- Biggest challenges
- Biggest differences before and after implementing the food concept
- Key individuals or groups involved and who/what role?
- Has responsibility changed over time?
- How is the work being followed up?
- Has the attitude towards the process changed?
- What advice would you give to a municipality or similar that is in the starting pit of initiating a similar change?

Could you give me an example of...

Could you elaborate...

Could you explain what led to...

Could you explain further what you mean....

APPENDIX 2 - INTERVIEW GUIDE

Political council

1. Explain the research project
2. Ask about consent
3. Any questions?
4. Interview questions:

-During what years were you politically active in Södertälje municipality?

-Tell me how it came about that Södertälje started the work around sustainable school meals?

- What factors made the change possible?
- What events led up to the decision?
- Context that induced change
- Events or trends in the outside world?
- When (what years)?
- Your part?
- Why were KRAV labelling important?

Tell me about the change process of sustainable public meals in Södertälje from when you started until today!

- How was the overall attitude to this change?
- What reactions did you get?
- What factors in the process have been of most importance?
- Hardest/easiest during the process?
- Biggest challenges
- Key individuals or groups involved and who/what role?
- What has your role meant and in what way?
- Has responsibility changed over time?
- What was the initial goal, and did it change throughout? How?
- What advice would you give to a municipality or similar that is in the starting pit of initiating a similar change?

APPENDIX 3 - ETHICAL REVIEW - FINAL REVIEW

Prior to this research project an ethics review was undertaken based on the principles and procedures for research ethics at Stockholm resilience center, reviewed by supervisors and an independent researcher to ensure the study aligned with good ethics practices and sent to the ethics review board at Stockholm resilience center.

As predicted in the ethics review the study resulted in no negative harm for neither the researcher nor the participants, on the contrary it was a very pleasant experience for everyone taking part. No minors or people with special needs participated as was also predicted and consent were sought from all participants. The researcher has been the only one who have had access to raw data as stated and confidentiality has been maintained throughout. The review also highlighted potential conflicts of interest of which non arose, neither did any of the risks assessed.

To conclude, the ethics review conducted at the start of this research process has proven to be sufficient.

