

FEAST

# Living Labs kick-off

Report

# M4.1



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## Food systems that support transitions to hEalthy And Sustainable dieTs

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## Table of contents

Table of contents .....	2
List of Figures.....	3
List of Tables .....	3
Key Facts .....	4
1 Introduction.....	5
2 Overview of the Living Labs.....	7
2.1 General Information .....	7
2.2 Methodologies and process .....	9
2.3 Next steps .....	11
3 Results.....	11
3.1 Alto Minho, Portugal.....	11
3.2 Avignon, France .....	13
3.3 Ghent, Belgium .....	15
3.4 Guldborgsund, Denmark .....	17
3.5 LEADER region Weinviertel-Donauraum, Austria .....	19
3.6 Lodz, Poland.....	21
3.7 Tuscany, Italy.....	23
3.8 Oxfordshire, United Kingdom .....	25
3.9 Prilep, North Macedonia .....	27
3.10 Rotterdam, Netherlands .....	29
3.11 Sitia (Crete), Greece.....	31
4 Discussion of results .....	34
5 Appendices .....	35

## List of Figures

Figure 1	Geographical food system typology and location of FEAST Living Labs (typology developed by FEAST)	6
Figure 2	Food system model showing how WP4 Living Labs cut across levels and are addressing various stakeholders	6

## List of Tables

Table 1	Document history of changes	4
Table 2	Overview of Living Labs and target groups	7
Table 3	SWOT Analysis Alto Minho Living Lab	12
Table 4	Kick-off meeting Alto Minho	13
Table 5	SWOT Analysis Avignon Living Lab	14
Table 6	Kick-off meeting Avignon	15
Table 7	SWOT Analysis Ghent Living Lab	16
Table 8	Kick-off meeting Ghent	17
Table 9	SWOT Analysis Guldborgsund Living Lab	18
Table 10	Kick-off meeting Guldborgsund	19
Table 11	SWOT analysis LEADER Living Lab	20
Table 12	Kick-off meeting	21
Table 13	SWOT Analysis Lodz Living Lab	22
Table 14	Kick-off meeting Lodz	23
Table 15	SWOT Analysis Tuscany Living Lab	24
Table 16	Kick-off meeting	24
Table 17	SWOT Analysis Oxfordshire Living Lab	26
Table 18	Kick-off meeting	26
Table 19	SWOT Analysis Prilep Living Lab	28
Table 20	Kick-off meeting	29
Table 21	SWOT Analysis Rotterdam Living Lab	30
Table 22	Kick-off meeting	30
Table 23	SWOT Analysis Sitia Living Lab	32
Table 24	Kick-off meeting	33

## HISTORY OF CHANGES

Table 1 Document history of changes

HISTORY OF CHANGES		
Version	Publication Date	Changes
1.0	21.12.2023	First version See first document version here: <a href="https://zenodo.org/records/10552169">https://zenodo.org/records/10552169</a>
2.0	28.05.2024	Update of the funding logo and the disclaimer

## Key Facts

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## 1 Introduction

To further the development of food democracy on multiple levels across Europe while also improving food sovereignty, FEAST (Food systems that support transitions to hEalthy And Sustainable dieTs) was launched in July 2022. The 5-year project is run by a consortium consisting of 35 partners across 15 European countries and is funded under the program HORIZON-CL6-2021-FARM2FORK-01-15. FEAST aims to explore new forms of governance through processes of social-ecological transformation in various institutional settings<sup>1</sup>. In doing so, FEAST is laying emphasis on vulnerable groups and all those that remain unheard or do not have sufficient leverage to shape food systems.

One crucial element of FEAST are participatory forms of co-creating solutions that are called Living Labs (LL). In a LL, actors affected by a problem, and those that are needed to help design or implement a solution, come together to jointly develop possible solutions. In FEAST, our LL and co-designed solutions will focus on supporting vulnerable people with food security related issues taking into account six dimensions of food security<sup>2</sup>. These solutions will be implemented within FEAST from 2024-2026 and their impacts will be measured. In this way, promising solutions can be replicated further by replicator cities within FEAST and other actors beyond the project. FEAST LLs include municipalities directly representing approximately 3.35 million individuals across different European contexts and varied food system actors through our small city and rural partners as well as an additional 14 million individuals through our associated large city LLs. Each LL is dedicated to a unique vision.

Within FEAST, WP4 is designed to support FEAST's community-based Living Labs (LL) to identify locally relevant challenges for vulnerable target groups to access and utilize healthier and more sustainable food<sup>3</sup>. WP4 aims to co-create and test solutions for healthier and more sustainable diets of these groups. This includes understanding challenges and opportunities at the local government level related to systemically transforming behavior towards healthier and more sustainable food while also exploring how to improve food environments to ensure people have better access to healthier and more sustainable food (see below). The LLs represent a diversity of important dimensions of food systems across Europe, using a geographical food system typology developed by FEAST (Figure 1), which combines existing classifications of regional diets, food production systems and welfare systems. In this way, they cover different nutritional and agricultural as well as social policy and institutional contexts. The following map situates FEAST LLs in relation to geographical food system types.

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<sup>1</sup> *Frontiers | Transitions to food democracy through multilevel governance (frontiersin.org)*

<sup>2</sup> see for the classical definition using four dimensions: <https://www.fao.org/3/al936e/al936e00.pdf>; see for expanding this concept including agency and sustainability: <https://www.fao.org/3/ca9731en/ca9731en.pdf>; also see <https://www.sciencedirect.com/science/article/pii/S0306919221001445>

<sup>3</sup> Thus addressing the dimensions of access, utilization, agency and sustainability of the updated FAO food security concept: <https://www.fao.org/3/ca9731en/ca9731en.pdf>

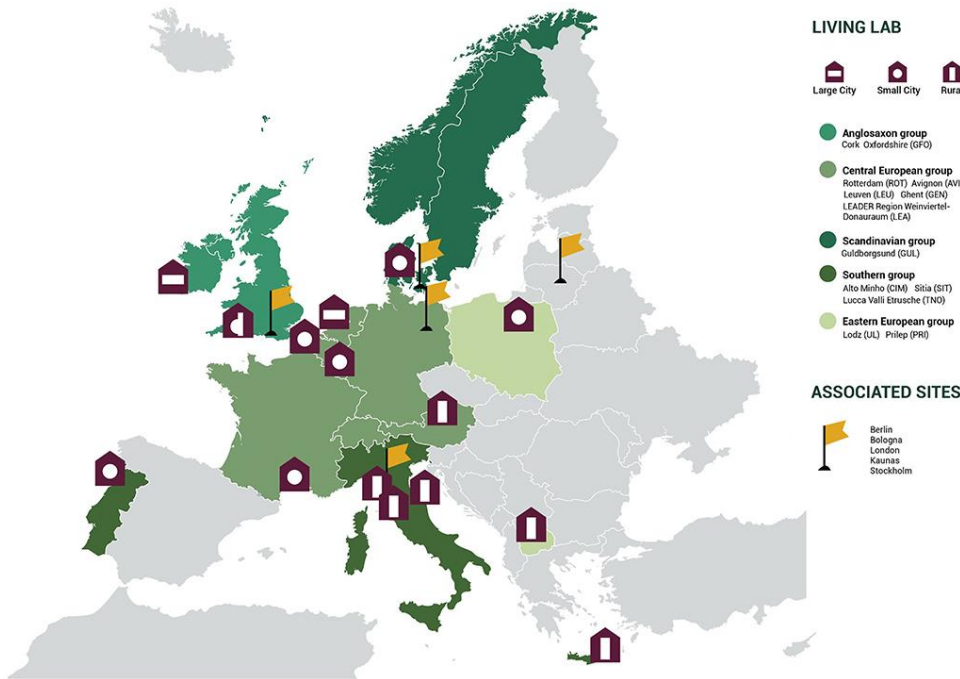


Figure 1 Geographical food system typology and location of FEAST Living Labs (typology developed by FEAST)<sup>4</sup>

LLs also cut across different levels of Europe’s food systems, from production to distribution, processing and consumption. In this way, WP4 LLs are addressing food environments, and how these are shaping consumer behavior as being reflected in diets and their health and sustainability impacts (Figure 2).

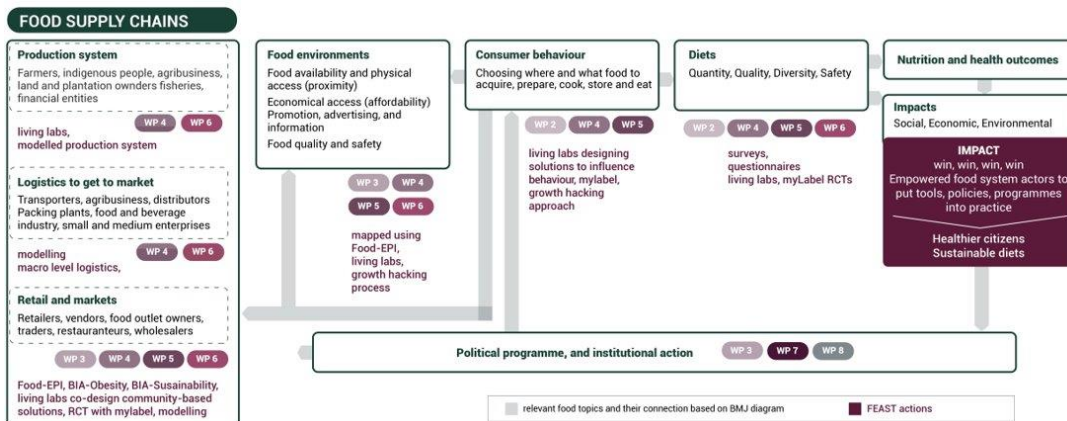


Figure 2 Food system model showing how WP4 Living Labs cut across levels and are addressing various stakeholders

This report describes how FEAST LLs assess local situations regarding challenges related to vulnerable target groups they have identified, features of the relevant food system mapped through SWOT-analyses, and respective kick-off events that brought together those actors that are necessary to co-design and implement solutions including the voices of those affected by the local burning issue related to food security.

<sup>4</sup> See: <https://www.frontiersin.org/articles/10.3389/fsufs.2022.1039127/full>



## 2 Overview of the Living Labs

### 2.1 General Information

Building on FEAST's multi-actor approach, community-based LLs were kick-started after an assessment of relevant stakeholders and their perspectives in relation to specific food security-related challenges faced by target groups in each LL location. Stakeholders included, depending on local context, residents (including both citizens and non-citizens), civil society organizations, local businesses such as catering companies, farmers, charity organizations, school managers and teachers, social centers, academia, planners, and public administrations. Each LL was responsible for a community workshop kick-off event, to serve as a start for the co-design process in view of possible solutions for the local burning issue affecting vulnerable groups. Based on prior knowledge and activities, LLs already had a certain idea regarding vulnerable groups and their specific challenges in accessing and offering healthier and more sustainable food choices in local contexts.

After an in-depth mapping and analysis of the situation regarding food security linked to healthier and more sustainable diets in their specific context, the LLs have kick-started the co-design process with the following target groups (Table 2).

Table 2 Overview of Living Labs and target groups

Living Lab	Food system type	Partners	Target groups and topics
<b>Alto Minho (Portugal)</b> <a href="https://feast2030.eu/livinglabs/cim-alto-minho">https://feast2030.eu/livinglabs/cim-alto-minho</a>	Southern Group	<ul style="list-style-type: none"> <li>○ Comunidade Intermunicipal do Minho-Lima – CIM Alto Minho</li> <li>○ Instituto politecnico de Viana de Castelo (IPVC)</li> </ul>	Children/schools : food competency; small farmers and fisherman: supply chain strategies
<b>Avignon (France)</b> <a href="https://feast2030.eu/livinglabs/avignon">https://feast2030.eu/livinglabs/avignon</a>	Central European Group	<ul style="list-style-type: none"> <li>○ City of Avignon</li> <li>○ Institute national de recherche pour l'agriculture, l'alimentation et l'environnement (INRAE)</li> </ul>	Children/schools : nutritional education and public food procurement through local partnerships
<b>Ghent (Belgium)</b> <a href="https://feast2030.eu/livinglabs/ghent">https://feast2030.eu/livinglabs/ghent</a>	Central European Group	<ul style="list-style-type: none"> <li>○ City of Ghent</li> <li>○ ICLEI Europe</li> </ul>	Low-income neighborhood to identify strategies to enhance access

			for all citizens to healthier and more sustainable diets
<b>Guldborgsund (Denmark)</b> <a href="https://feast2030.eu/livinglabs/guldborgsund">https://feast2030.eu/livinglabs/guldborgsund</a>	Scandinavian Group	<ul style="list-style-type: none"> <li>○ Guldborgsund Municipality</li> <li>○ Roskilde University</li> </ul>	Children/schools : nutrition education; investigating how to introduce a school food scheme to the public schools in the municipality
<b>LEADER region Weinviertel-Donauraum (Austria)</b> <a href="https://feast2030.eu/livinglabs/leader">https://feast2030.eu/livinglabs/leader</a>	Central European Group	<ul style="list-style-type: none"> <li>○ LEADER-Region Weinviertel Donauraum</li> </ul>	Workers /company canteens in the industry sector
<b>Oxfordshire (United Kingdom)</b> <a href="https://feast2030.eu/livinglabs/goodfood-oxfordshire">https://feast2030.eu/livinglabs/goodfood-oxfordshire</a>	Anglosaxon Group	<ul style="list-style-type: none"> <li>○ Good Food Oxfordshire</li> <li>○ Heidelberg University</li> </ul>	Food poor low-income households: understand and influence national supply chains and local markets
<b>Lodz (Poland)</b> <a href="https://feast2030.eu/livinglabs/lodz">https://feast2030.eu/livinglabs/lodz</a>	Eastern European Group	<ul style="list-style-type: none"> <li>○ Uniwersytet Lodzki</li> </ul>	Senior citizens/care homes: increase well-being through healthier and freshly cooked meals
<b>Tuscany (Italy)</b> <a href="https://feast2030.eu/livinglabs/tuscany">https://feast2030.eu/livinglabs/tuscany</a>	Southern European Group	<ul style="list-style-type: none"> <li>○ Tuscany Region</li> <li>○ Scuola superiore di studi universitari e di perfezionamento Sant'Anna</li> <li>○ Università degli studi di Scienze Gastronomiche (USG)</li> </ul>	Adolescents and elderly people: promoting a healthy and conscious approach towards food and nutrition

<b>Prilep</b> (North Macedonia) <a href="https://feast2030.eu/livinglabs/prilep">https://feast2030.eu/livinglabs/prilep</a>	Eastern European Group	<ul style="list-style-type: none"> <li>○ City of Prilep</li> <li>○ ARETE Association for Sustainable Prosperity</li> </ul>	Children/schools : working with the municipal government to improve their capacities in positively influencing the food environment and food system
<b>Sitia</b> (Crete, Greece) <a href="https://feast2030.eu/livinglabs/sitia">https://feast2030.eu/livinglabs/sitia</a>	Southern European Group	<ul style="list-style-type: none"> <li>○ Dimon Sitia – Municipality of Sitia</li> <li>○ Demokritos</li> </ul>	Vulnerable, small scale olive oil farmers: enhance local sustainable olive oil production and supply chains to impact income and food security for vulnerable farmers
<b>Rotterdam</b> (Netherlands) <a href="https://feast2030.eu/livinglabs/rotterdam">https://feast2030.eu/livinglabs/rotterdam</a>	Central European Group	<ul style="list-style-type: none"> <li>○ City of Rotterdam</li> <li>○ Susmetro</li> </ul>	Low-income neighborhoods: improving supply and accessibility of fresh food

## 2.2 Methodologies and process

LLs were supported through a range of tools and activities conveying specific methodologies and methods. We first provided LLs with a protocol integrating the time plan of the LL development with useful tools regarding group and vision building, stakeholder engagement and the analysis of local challenges. Part of the protocol was a LL toolkit<sup>5</sup> that had been developed under the JPI projects Smarter Labs and URB@Exp<sup>6</sup>. We then organized internal webinars for the LLs with experts in human centered design to facilitate co-creating solutions in local contexts through hackathons (see Appendix 1 for an example of an agenda). A further webinar addressed nutritional guidelines. The input of these webinars was enhanced by training sessions on lived experience research. Regular group meetings (see Appendix 2 for the example of an agenda) with all the LLs safeguarded knowledge exchange, facilitated by supporting mutual learning of LLs within LL clusters that were defined according to type of

<sup>5</sup> <https://smarterlabs.uni-graz.at/en/>

<sup>6</sup> [https://static.uni-graz.at/fileadmin/projekte/smarterlabs/downloads/SmarterLabs\\_Guidelines.pdf](https://static.uni-graz.at/fileadmin/projekte/smarterlabs/downloads/SmarterLabs_Guidelines.pdf),  
<https://www.maastrichtuniversity.nl/research/msi/research-output/urban-lab-kit>

vulnerable group that LLs were working to support. Further meetings were held regularly for the group of partners leading the tasks of WP4 plus the overall WP lead. Finally, bilateral meetings between the WP4 and Task4.1 leads with individual LLs were scheduled depending on issues that required more intensive communication and problem-solving. LLs provided monthly updates on their progress, ideas, and challenges in a common repository to mutually keep track of activities, which allows WP and Task leads to react quickly to challenges in the LLs.

To sketch out the local situation regarding burning issues and possible solutions, and respective challenges, LLs first elaborated stakeholder maps. In this way, LLs gained a better understanding of local food system structures and processes. As a result of the information gained in this way, each LL narrowed down the target group and the burning issue using a “population, intervention, control and outcome” approach (PICO). For vulnerable groups, FEAST adopted a general understanding in line with usual lists of vulnerable groups that refers to how exposure to stressors and shocks relates to resilience<sup>7</sup>, i.e., the possibility to adapt to challenges. Resilience depends on social, economic and cultural capital as well as on political support. It is regulated by a range of factors such as legislation, income distribution, the existence of welfare organizations, social policies etc<sup>8</sup>. In that way, any group that is exposed to significant risks and has insufficient means to counter them is considered as vulnerable. Yet this definition also includes those that have already been wounded by unjust social, economic and political structures. Regarding our general concept of vulnerability, and relating it to FEASTs topic of sustainable and healthy diets, groups such as children, inmates, people with disabilities, single mothers, low-income households (including small scale farmers suffering food insecurity) and similar ones were regarded as being vulnerable. It is important to note that these groups do not refer to any substantial social entities. In reality, any individual is positioned in social space across several dimensions of inequality. For this reason, vulnerability is an intersectional concept that should not be understood as essentializing social groups, but as guiding the identification of target groups, their resources, and challenges with the aim of reducing societal inequalities.

Based on this understanding of the relevant stakeholder landscape, challenges and options relevant for tackling local burning issues for local food security issues linked to sustainable and healthy dietary choices by vulnerable groups were identified using a Strengths-Weaknesses-Opportunities-Threats (SWOT) analysis tailored to the specific focus of each LL. The SWOT analyses were then used for identifying possibly relevant stakeholders regarding an intervention that will be co-designed in the next phase of the LL development process, considering different barriers to food system change, and options for dealing with these. Relevant stakeholders identified through the information that had been structured by local LL SWOT models were then contacted for kick-offs.

Kick-off events were organized by each Living Lab individually. These were the first stakeholder meetings with the whole group of involved stakeholders, vulnerable groups and policy makers. These meetings varied from LL to LL: some involved a broader public, others designed these meetings as closed-door conversations. These kick-off events marked the beginning of a co-design and co-creation process with the stakeholders providing advice on guidance on the context-sensitive co-design approaches that should be taken by the LL. We expect stakeholder groups to further vary depending on the intervention the LL decides upon.

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<sup>7</sup> Building on <https://www.sciencedirect.com/science/article/abs/pii/S0301421515302445>, and adapting the concept presented there; also see <https://www.tandfonline.com/doi/full/10.1080/23254823.2021.1997616>

<sup>8</sup> See in particular <https://www.tandfonline.com/doi/full/10.1080/23254823.2021.1997616>

## 2.3 Next steps

The activities reported here feed into other tasks within WP4 (4.2, 4.3 and 4.4). Thus, in the phases following activities documented in this report, LLs will work to co-develop local catalogues of best practices for different target groups and actors in the food system such as producers, consumers, processors, distributors/retailers, and municipalities (Task 4.2). This catalogue will further inform the co-creation processes that will be established in the next phase subsequent to the one reported here. The strategies for intervention implementation will be clustered within Task 4.3 and later replicated to other European cities in Task 4.4.

In the first two quarters of 2024, the LLs and their scientific partners will – following the kick-off meetings each LL has had with relevant stakeholders – start a co-design and then co-creation process. This shared effort of the LL stakeholder groups will be followed by implementing concrete interventions and refining the stakeholder group that functions as an inner circle for the intervention. They will then also begin data collection to assess outcomes and impacts before and after the intervention. For analyzing the interventions' outcomes and impact, each LL is working on its individual research design and data collection method taking advantage of the PICO-approach. To collect data on the vulnerable target groups, LLs will need national ethics approvals of their respective research designs – some of which have already been approved, while others are expected to be in place in early 2024.

## 3 Results

In this chapter, each subsection highlights a specific FEAST LL; first, the target group and corresponding challenges will be described, before presenting the respective SWOT-analysis, followed by a description of the LL's kick-off meeting.

### 3.1 Alto Minho, Portugal

#### Target group

Alto Minho's LL main target group are school children who have their daily meals (lunch) at school canteens. The LL in Alto Minho is focused on public school canteens, whose purpose is to promote the transition (firstly within the school environment and, through it, the wider territory) to healthier and more sustainable food consumption and production habits. Due to a high sugar and salt intake in schools, bars and canteens, Alto Minho implemented salt and sugar reductions in school menus and, thus, in students school meals. The sale of products such as pizzas, ice cream, rissoles, hamburgers, and soft drinks was prohibited. However, a potential shortcoming of this measure may be associated with the growth of fast-food restaurants and cafés within school boundaries and the demand for these foods by students.

#### Challenges

In terms of education, only 11.36% of Alto Minho's residents have a higher education degree and most of this territory's population (61.18%) has only concluded the basic level of education. Statistical data from 2020 point out Alto Minho having 32,001 students distributed across its 123 schools – from kindergarten to secondary schools – the majority of which are managed by or jointly with Alto Minho's municipalities. A key area of work for the municipality is to support vulnerable groups, particularly people with a low socio-economic status. There are already systems and initiatives in place to meet the

food needs of these individuals through initiatives like social pricing in several restaurants and grocery stores, as well as food support provided by local social organisations. Generally, the area suffers from the abandonment of cultivated land, weak territorial cohesion, and climate change.

### SWOT Analysis

Alto Minho finds itself in a stage where many infrastructures for change are already in place, most importantly a network of already existing initiatives that the municipality can leverage due to its influential position. At the same time, the position of the municipality comes with some constraints which include certain procurement rules at the municipal level as well as the challenge to understand and act upon these rules and laws. Changing food systems towards more sustainable and healthier diets within the target group of the LL brings along the chance to also change local supply chains and foster local production of healthier and more sustainable food. The ongoing challenge consists of competing problems the food sector is facing; i.e. once economic concerns increase, the interest in sustainability automatically seems to falter. Also, parents and students must identify and realize their own benefits of changing diet if they are to be motivated to support food system transformation.

Table 3 SWOT Analysis Alto Minho Living Lab

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>○ Active smallholder agriculture / fishermen</li> <li>○ Trendy topics: sustainability; healthy food in public institutions; endogenous products</li> <li>○ Green schools [ecoschools], working on healthy food and sustainability</li> <li>○ Schools with equipped and functioning kitchens and canteens</li> <li>○ Municipalities with autonomy to decide on how school food is supplied</li> <li>○ National public policies - food and health - directed to schools</li> <li>○ Ongoing awareness campaigns on healthy food choices targeting pupils of various ages</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>○ Large portions on the plate lead to food waste</li> <li>○ Children's unhealthy dietary preferences (food choices)</li> <li>○ Intervention towards sustainability might create extra work/hurdles</li> <li>○ No direct marketing structures</li> <li>○ Lack of knowledge about public procurement tenders (EU) which lead to a lack of capacity from local food suppliers to respond to tenders</li> <li>○ Legal constraints for public food procurement in municipalities</li> <li>○ Prices of sustainably produced food are higher than those of unsustainable alternatives</li> <li>○ Lack of networks (food procurement and smallholders)</li> <li>○ Production seasonality and small sized production (may lead to supply shortage)</li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>○ Safeguarding income opportunities for organic/local smallholders</li> <li>○ Promoting healthier and more sustainable local food at schools for upscaling</li> <li>○ Food waste reduction along the value chain</li> <li>○ Decrease of conditions, such as overweight, obesity and malnutrition in school children</li> <li>○ Promote shorter food chains and decrease environmental impacts</li> <li>○ Work on communicating healthy and sustainable attributes in locally based foodstuffs (e.g. algae, olive oil)</li> <li>○ Promote economic development of rural areas and, thus, contribute to population fixation ("retainment")</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>○ Parents' criticism of or reluctance for the intervention</li> <li>○ Children's' resistance to change – difficulty in the uptake of healthier food habits/products (in the short term may lead to an increase in food waste)</li> <li>○ Pedagogical staff not participating in the intervention</li> <li>○ Lack of interest from some municipalities (focus solely on healthy food and not on healthy food produced in a sustainable way)</li> <li>○ Lack of interest from agricultural/fishermen associations (which may be necessary/helpful for direct marketing)</li> <li>○ Ongoing inflation makes healthier and more sustainable food less attractive to stakeholders</li> </ul>

	<ul style="list-style-type: none"> <li>○ Climate change (may influence production cycles)</li> </ul>
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### Kick off

Table 4 Kick-off meeting Alto Minho

Date	February 24th, 2023
Location	Alto Minho
Attendees (Type)	Alto Minho municipalities, directors/representatives of school groupings
Agenda	Target group, methodology, strategic objectives, stakeholder roles, next steps

## 3.2 Avignon, France

### Target group

Children aged from 3 to 11 years in Avignons' schools are part of vulnerable groups and exposed to various conditions linked to excess of unhealthy food, i.e., highly processed products and unbalanced diets, especially when they come from disadvantaged families where parents are facing social and cultural difficulties<sup>9</sup>. The population of Avignon is facing several social difficulties as the poverty rate is around 19.5%<sup>10</sup>. Poor nutrition, non-communicable diseases and obesity are consequences of unfavorable dietary patterns that are impacting children in negative ways. Our main target group consists of children attending municipal canteens. These canteens deliver from 4,000 to 5,500 meals per day. The municipality has just carried out a large survey covering 12 schools regarding food habits at home and appreciation of the canteen. The municipality is currently analyzing these data with regard to how social difficulties impact childrens' daily diets. This will provide important background knowledge for making canteens a driver to improve current diets. The 12 schools captured by the survey will not necessarily be the same schools that will be addressed by the intervention. Avignon has 52 schools in total, including 36 canteens serving these.

### Challenges

Being a municipality in charge of our school catering, we – as the local LL organizer - prepare between 4,000 and 5,500 meals daily for our children, distributed through 36 canteens. The municipality of Avignon is already engaged in activities strengthening and extending partnerships with local producers, raising awareness for seasonality and freshness of products, improving access to healthier and more sustainable food, and enhancing respective choices. Within the FEAST project, the municipality aims to go further and to deepen and extend activities in favor of childrens' health and the sustainability of food. Food has now become a strong component of public health policies. The LL takes this as an opportunity for change, with the municipality running the LL being in charge of school catering. National legislation is supportive of such actions, but the challenge is to re-structure local policies accordingly.

<sup>9</sup> [https://www.foodwatch.org/fileadmin/-FR/Documents/Foodwatch\\_Publication\\_rapport\\_malbouffe\\_pub-enfants\\_23\\_09\\_12.pdf](https://www.foodwatch.org/fileadmin/-FR/Documents/Foodwatch_Publication_rapport_malbouffe_pub-enfants_23_09_12.pdf), <https://www.unicef.fr/article/grandir-en-france-un-defi-pour-les-6-18-ans-des-quartiers-prioritaires/>

<sup>10</sup> CAF de Vaucluse (2022): La CAF au service de la commune d'Avignon. Données CAF au 01/01/2022.



Accordingly, the LL concentrates on two challenges: First, to increase the quality of meals prepared by the central kitchen of the municipality by selecting quality suppliers and producers, offering more plant-based menus, and reducing processed products. Second, to develop a healthier and more sustainable food culture at school, collaborating with different types of stakeholders to raise childrens’ awareness of healthier and more sustainable food.

SWOT analysis

The LL in Avignon can build upon political will, a network of fresh food suppliers as well as experiences from previous European projects, while also needing to support a large number of people living in low-income households. The will and drive for change within the municipality, also looking at recent laws and regulations, is beneficial, and stakeholders from within the city are highly engaged in changing the school food system. However, inflation and the economic situation in general will pose a challenge to the work of the LL: Food prices are rising while low-income households suffer from economic vulnerability especially in times of inflation. The challenge is, inter alia, to ensure healthier and more sustainable food provision while not overburdening households. Ideally the intervention will not result in trade-offs, but in co-benefits.

Table 5 SWOT Analysis Avignon Living Lab

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>○ The City of Avignon is in charge of food catering for school canteens since 2014</li> <li>○ Political will is strong about the high quality of food offered in the canteens</li> <li>○ Long term partnerships are already set up with some local producers</li> <li>○ We can find a lot of fresh products (fruits and vegetables) as we are located in an agricultural area</li> <li>○ The team of the central kitchen is already aware of the importance of this topic</li> <li>○ The City of Avignon is already involved in another European project about food, FoodSHIFT 2030, ending in December 2023<sup>11</sup></li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>○ Avignon is one of the poorest cities in the South of France; the poverty rate is around 19.5%</li> <li>○ Children come from families that face various issues: economical, social (low incomes), cultural</li> <li>○ Lack of knowledge and expertise on food practices are observed within families; children are not used to cooking or getting information about their daily local supply is difficult for some products such as meat/fish, all types of dairy products</li> <li>○ Food is not included as an educational topic in French school curricula</li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>○ The French government promoted a law on food catering and qualitative requirements: a certain percentage of organic products and local products, evaluation of food waste, etc.</li> <li>○ The current legislation is also promoting actions about environmental issues: the ban of plastic for central kitchens and restaurants, composting biowaste or at least finding a treatment solution about food waste</li> <li>○ The relationship between schools and our municipal Education Department is already well established, some schools participated in the children food habits survey</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>○ High inflation rate and increase of prices of food products and fuel/energy</li> <li>○ Risks of shortage in the supply of food products for the central kitchen</li> <li>○ The next annual budget allocated to the central kitchen will decrease by 15%</li> <li>○ In a context of high inflation, the families’ economic difficulties will increase and the quality of food will not be a priority</li> </ul>

<sup>11</sup> <https://foodshift2030.eu/labs/regional-lunch-for-all-lab/>, <https://foodshift2030.eu/children-involvement-food-waste/>



- Some other municipal actors are already involved in food-related topics (social centres)

### Kick-Off Event

Table 6 Kick-off meeting Avignon

Date	June 15th and 16th, 2023
Location	Avignon, in a municipal park
Attendees (Type)	285 children, 12 teachers, 15 parents and 10 municipal workers, 3 elected representatives
Agenda	Pedagogical strategies (slogan: “Sustainable food for you, children!”) and gaming methods to change food culture, related to topics such as seasonality, the role of bees, how to plant seeds, the impacts of food marketing on childrens’ food choices, food waste, composting methods, and cooking workshops; how to involve various local NGOs but also municipal services (library, waste management service, nutritional service etc.)

## 3.3 Ghent, Belgium

### Target group

The main target group of this LL are people with low income, first focusing on households with a yearly income below 25,291.73 € (with 4,682.19 € added per each family member), which amounted to 20.4% of the population of Ghent in 2022<sup>12</sup>. Households within this category are automatically granted the right to healthcare at lower prices, to food support and some leisure activities. The LL considers this group as being officially recognized as low income-households. Within this population, the LL plans to distinguish different groups based on socio-demographic factors. For example, young people between 18-25 years old, families with children, seniors. Geographically, the LL will focus on one or more neighborhoods with a high poverty rate (specifically the Watersportbaan neighborhood, a food desert, and the Heilig Hart neighborhood, a food swamp)<sup>13</sup>.

### Challenges

Currently, for food poor households, there are two channels of emergency aid in Ghent. Organizations distribute food for free to people in poverty who are referred by the OCMW<sup>14</sup> or other first-line help. These organizations want to fight poverty through distributing food donations, but often also organize other activities and measures including double pricing systems. They get their supplies through Foodsavers (a City distribution platform that collects surpluses from auction, food companies and retailers), FEAD (Fonds voor Europese hulp aan de meest behoeftigen) and a local food bank. These organizations are run by volunteers, most of which are seniors, and human resources for continuing these services appear to be precarious in the longer run. In addition, there is a channel called Let's Save Food, where ecologically motivated members collect and redistribute surpluses. Anyone, including

<sup>12</sup> [https://gent.buurtmonitor.be/jive?report=rap\\_arm\\_ind\\_v\\_02122020](https://gent.buurtmonitor.be/jive?report=rap_arm_ind_v_02122020); for definitions see [https://www.caami-hziv.fgov.be/nl/leden/terugbetaling-medische-kosten/voordelen/verhoogde-tegemoetkoming#:~:text=U%20heeft%20enkel%20recht%20op,februari%202022%20\(huidige%20inkomsten](https://www.caami-hziv.fgov.be/nl/leden/terugbetaling-medische-kosten/voordelen/verhoogde-tegemoetkoming#:~:text=U%20heeft%20enkel%20recht%20op,februari%202022%20(huidige%20inkomsten)

<sup>13</sup> A food desert is defined as an area suffering from a lack of outlets that are offering healthy and affordable food. A food swamp denotes an an area suffering from a disproportionate share of outlets that are offering unhealthy food.

<sup>14</sup> <https://stad.gent/nl/samenleven-welzijn-gezondheid/ocmw-gent>

people not affected by poverty, can collect/use surplus food. This organization operates in several neighborhoods and relies on young volunteers. Such emergency food aid channels are generally not perceived as a solution to fight poverty in Ghent, yet they are increasingly used for this end in practice.

Against this backdrop, the City of Ghent wants to create another channel where people can consume or purchase more sustainable, healthier and affordable food in a non-stigmatizing way. The LL wants to support this policy shift from focusing on poverty alleviation through charity to more empowering, emancipatory strategies. Moreover, these strategies would in the best case also help to overcome the problem of traditional anti-poverty organizations struggling with a lack of human resources. The LL thus is working with the boundaries of current food policies at local, national and European levels in view of experimenting with innovative, potentially more sustainable solutions for food poor households to demonstrate whether and how Ghent’s current food policies can be improved.

The existing Ghent en Garde initiative<sup>15</sup> aims to provide more sustainable and healthier food in an accessible way to all inhabitants of the city. To achieve this goal, a variety of actions have been implemented, but they have not been mapped systematically. This LL tackles the challenge to create a coherent policy for all stakeholders within the city. Accordingly, the LL will aim to increase access to more sustainable and healthier food for people with low income. Several organizations in Ghent are already using various methods, such as double pricing, free contribution or solidarity systems to this end. Other organizations are exploring ways to utilize such systems to ensure that people with low income are able to benefit from their services. This LLs’ goal is to increase the number of low-income individuals who can access the double pricing system in various sectors of the food system, such as retail, hospitality industry, farms and schools (e.g., double pricing restaurants, social canteens, community supported agriculture). Solidarity systems depend on wealthier households that pay more for vegetables than poorer households. The difference is distributed to reduce costs for low-income households when buying food at a venue with such a scheme.

SWOT analysis

The Ghent LL can benefit from a wide range of initiatives and infrastructures that work in the sectors of low-income households or food security and provide a good outreach to stakeholder groups as well as from a wide basis of data to build upon, though an overview of this data and networks has yet to be achieved. At the same time there is no political consensus for accessibility of healthier and more sustainable food for everyone – especially low-income households. The main thread, as in many other cities, is the economic component, rising food prices, inflation that hits low-income households the most and makes sustainability (in the sense that sustainability of products makes those pricier) a secondary priority.

Table 7 SWOT Analysis Ghent Living Lab

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> <li>○ A large amount of data is already available</li> <li>○ A large number of organizations work with people with low SES, spread in different neighbourhoods</li> <li>○ A large number of grass root food initiatives</li> <li>○ A large number of different methods to make food accessible</li> </ul>	<ul style="list-style-type: none"> <li>○ There is no general overview of data concerning food and people with low SES</li> <li>○ There is no general overview of food initiatives for people with low SES</li> <li>○ There is no political consensus on accessible food for everyone</li> </ul>

15

[https://stad.gent/sites/default/files/media/documents/20230404\\_PU\\_GeG%20Voedselraad%20brochure\\_EN\\_finaal.pdf](https://stad.gent/sites/default/files/media/documents/20230404_PU_GeG%20Voedselraad%20brochure_EN_finaal.pdf)

<ul style="list-style-type: none"> <li>○ The social service has a decentralized strategy for food support systems</li> </ul>	
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>○ More well organised grass root initiatives such as Let's Save Food, Farmers Market, Kookploeg Solidair</li> <li>○ Outreachers in each neighbourhood</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>○ Rising food prices makes the need for food support bigger</li> <li>○ Budget cuts in different departments of the city; less investment in food support</li> <li>○ More sustainable food is not always affordable</li> </ul>

### Kick-Off Event

Table 8 Kick-off meeting Ghent

Date	January 31st, 2023
Location	Kunstencentrum Vooruit / Viernulvier, Ghent
Attendees (Type)	Organizations which work with people with low household income, providers of more sustainable and healthier food
Agenda	Round table conversations about food security with the following guiding questions: "What does work, what is not working and why?" and "What do we need to make things work?" Outcomes: The eight characteristics for accessible food ("B's" in Dutch) should be used, i.e., that food has to be accessible, available, affordable, usable, understandable, reliable, familiar and understanding.

## 3.4 Guldborgsund, Denmark

### Target group

This LL's target group are school children (aged 6-16 years old, i.e. grades 4-10), in the context of a general deterioration of public health in the municipality. Studies show that roughly 5% of young children (1<sup>st</sup> grade students, aged 6-7) have a tendency towards being overweight when they start primary school, rising to about 20% by the time they graduate from the 9<sup>th</sup> or 10<sup>th</sup> grade<sup>16</sup>. Due to the decline in public health, associated human, societal and financial costs are increasing.

### Challenges

Approximately 55% of all adults in Guldborgsund Municipality are classified as being overweight according to the BMI guidelines of the Danish Health Authority and the Health Profile for the Region of Zealand<sup>17</sup>. Likewise, the overall health and mental wellbeing, especially among young people, is deteriorating, inter alia due to low quality food<sup>18</sup>, with repercussions at both the personal and societal levels. The part of the population who has access to knowledge (education) and resources (income) is able to live healthy lives and feed their children, while citizens with lower income and education

<sup>16</sup> Data from The BørnUngeliv (ChildrenYouthLives) and Ungeprofil (Youth Profile) Survey:

<https://www.boernungeliv.dk/Public/Forside.aspx?ReturnUrl=%2f>

<sup>17</sup> Health Profile of Region Zealand, 2021:

<https://www.regionsjaelland.dk/fagfolk/sundhedsprofilen/sundhedsprofilen-2021>

<sup>18</sup> <https://www.vive.dk/da/udgivelser/boern-og-unge-i-danmark-velfaerd-og-trivsel-2022-0xgg53xk/>,

<https://ugeskriftet.dk/videnskab/mulig-sammenhaeng-mellem-kost-og-depression>,

<https://sciencenews.dk/en/people-with-depression-or-bipolar-disorder-have-an-imbalanced-gut-microbiota>,

[https://app-rsdxp-cms-prod-](https://app-rsdxp-cms-prod-001.azurewebsites.net/media/ze1eei5l/062333_resj_mat_sundhedsprofil_2021_tilnettetapril2022.pdf)

[001.azurewebsites.net/media/ze1eei5l/062333\\_resj\\_mat\\_sundhedsprofil\\_2021\\_tilnettetapril2022.pdf](https://app-rsdxp-cms-prod-001.azurewebsites.net/media/ze1eei5l/062333_resj_mat_sundhedsprofil_2021_tilnettetapril2022.pdf)

experience significantly more challenges in health and wellbeing. It was recently announced that Guldborgsund Municipality will have to introduce severe austerity measures to meet the budget requirements for the coming years. Over a period of four years, from 2024-27, the municipality has to cut back and reprioritize activities, which in part is due to rising health care related expenses. The situation is not unique to Guldborgsund, but is shared by the majority of the rural municipalities in Denmark. Currently, in Guldborgsund Municipality, 90% of the health care budget is spent on secondary and tertiary care and only 10% of the health care budget is spent on preventive measures<sup>19</sup>.

As in most Danish municipalities, there is no common school food program for children in Guldborgsund Municipality at the primary school level, grades 1-9. Data gathered by the municipality show that many school children, especially from the 7<sup>th</sup> grade onwards, do not eat at all, or eat very little during the day. Nutrition education is a mandatory part of the national curriculum in the 5<sup>th</sup> and 6<sup>th</sup> grades, with 60 mandatory hours per year. Furthermore, some schools offer voluntary nutrition education for grades 7-9. It is up to the individual teacher to decide how to teach nutrition education, as long as the guidelines determined by the Ministry of Education are taken into account. In Denmark, the municipality has the overall legal responsibility of providing education and running the schools, as part of the core, municipal tasks. This does not include providing food or eating opportunities, as is the case in some other Scandinavian countries, such as for example Sweden, Finland and a number of other countries across Europe. Consequently, there is great variation in available kitchen facilities in local schools – some have authorized kitchen and dining facilities, most schools do not.

### SWOT analysis

Against a backdrop of budget constraints and overall inflation, a major strength of the Guldborgsund LL is the shared understanding of the importance of stimulating positive changes in the dietary habits and “food competency” of children and young people in order to empower them to become “healthier adults”, who, in turn and over the long run, will need less medical attention and social assistance from public institutions. Building up technical and logistical infrastructure and cross-sector cooperation will be a task in the coming years. The Living Lab operates within a strong national framework for green transition which ensures a pulling force and good timing.

Table 9 SWOT Analysis Guldborgsund Living Lab

<b>STRENGTHS</b>	<b>WEAKNESSES</b>
<ul style="list-style-type: none"> <li>○ Political interest in public health and children/vulnerable groups -&gt; potential "political will" and high-level support</li> <li>○ High degree of understanding among schools of the importance of healthy nourishment for children and youths</li> <li>○ Existing local public infrastructure for food preparation and delivery</li> <li>○ High commitment to sustainability and UN SDGs and good support from the administration</li> <li>○ High level of experience with EU projects in the municipality and good support from the political level</li> <li>○ The LL activities can have positive impact on other municipal activities, objectives and goals.</li> </ul>	<ul style="list-style-type: none"> <li>○ Financial constraints and unknown cost/investment for healthier and more sustainable food in schools</li> <li>○ Inability to identify cost-benefit across sectors (investment now-&gt; long-term savings on public health expenses (physical, mental health etc.))</li> <li>○ Normative adversity to pre-prepared food (political ideation about "home-made cooking")</li> <li>○ Lack of institutional cross-sector cooperation - &gt; unidentified "common interest"</li> <li>○ Resistance from the municipal school administration could shut down the trial testing of a school food scheme</li> <li>○ "Jealousy" from schools not selected for trial testing</li> </ul>

<sup>19</sup> Sundhed og sygdom i Guldborgsund Kommune – forebyggelse i det kommunale sundhedsvæsen, Martin Løf Krøyer, 2023.

	<ul style="list-style-type: none"> <li>○ Insufficient facilities for preparation and eating of meals</li> <li>○ Inability to find funding for trial testing</li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>○ Strong national and regional agendas on green transition, sustainable development and public health</li> <li>○ External funding possibilities available</li> <li>○ Could become "a good story"/example for other rural municipalities in Denmark</li> <li>○ High level of attraction to new settlers</li> <li>○ Useful expert experience available (local expertise, Copenhagen school system, etc.)</li> <li>○ Prominent and experienced advocates in the area (Claus Meyer) and relevant events (The Food Summit)</li> <li>○ Good cross-sector communication and experience in cooperating on health issues (including at the national and regional level)</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>○ Inability to engage constructively with all relevant actors (municipal actors, schools, parents etc.) in the processes leading to activities</li> <li>○ Inequality in access / insufficient funding /pricing issues</li> <li>○ Logistical challenges (delivery, waste etc.)</li> <li>○ Force Majeure (war, energy sector breakdown, disease, lock-down and/or other unforeseen events).</li> </ul>

**Kick-Off Event**

Table 10 Kick-off meeting Guldborgsund

Date	October 28 <sup>th</sup> 2022
Location	Rosenvænget 17, 4800 Nykøbing F
Attendees (Type)	Regional development actors, academia, hospital
Agenda	Scope and plans for the LL

**3.5 LEADER region Weinviertel-Donauraum, Austria**

Target group

Target groups are workers and administrative personnel (people with very different nutrient requirements) in large companies (with canteens) situated in industrial zones without access to alternative eating options, which amounts to literal food deserts. One such company comprises about 800 employees, with 40% working in seed production and a garden outlet. Workers and other types of employees are often vulnerable regarding access and agency dimensions of food security when a company is located in a (rural) food desert. Due to shift work or because of the location of the company at the outskirts of cities Workers, employees and administrative personnel partly do not have access to alternative food choices besides the canteen menu. In general, the Austrian population shows a high share of overweight persons (54%), with 16.6% classified as being obese. Lower Austria is slightly above these values. Only 5.4% of the Austrian population state that they eat the recommended five portions of fruit and vegetables a day. This situation is even worse for men aged 45-60<sup>20</sup>.

Challenges

<sup>20</sup> <https://www.statistik.at/services/tools/services/publikationen/detail/848>

Canteen kitchens in Austria provide 2.2 million meals daily, of which 1.3 million meals are provided in company canteens.<sup>21</sup> The aspect of healthier and more sustainable food in companies is usually not prioritized. As a result many companies do not have any mass catering or if there is catering, the quality of the food provided is low (when comparing it to sustainable and healthy food choices). Additionally, these canteens often offer fried, meat-based or processed meals. There are no general policies in place that target mass catering in companies, but since September 2023, canteens must indicate the origin of meat, milk and eggs.

### SWOT analysis

The LEADER Living Lab has the benefit of building on existing stakeholder networks, infrastructure and supply chains for sustainable food production and awareness of involved groups. In practice there is a lack of interest but also the difficulty to change the status quo due to unwillingness from the companies, lack of interest in dietary changes and also the extra burdening of canteen staff, when buying fresh and regional food as well as preparing freshly cooked meals. Additionally fresh cooking always depends on kitchen infrastructure.

Table 11 SWOT analysis LEADER Living Lab

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>○ Active smallholder agriculture</li> <li>○ Trendy topic: healthy food in companies</li> <li>○ Active LEADER management with well-developed networks</li> <li>○ Some regional producers already have relationships with local companies</li> <li>○ Some companies already offer regionally-produced food in their canteens</li> <li>○ Awareness of company management for healthier and more sustainable food in canteens</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>○ No direct marketing structures</li> <li>○ Lack of interest/distrust by stakeholders</li> <li>○ Lack of information in advance of LL</li> <li>○ Lack of knowledge about procurement</li> <li>○ Intervention will create extra work for staff</li> <li>○ Underestimation of importance of healthier and regional food</li> <li>○ Unwillingness of companies to change the status quo</li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>○ Safeguarding income opportunities for organic/local smallholders</li> <li>○ Setting an example of healthier and more sustainable food in local companies for upscaling</li> <li>○ Food waste reduction along the value chain</li> <li>○ Possible cooperation with already existing organisations</li> <li>○ Increasing importance of the topic (in politics)</li> <li>○ Awareness of topic as an asset to make companies more attractive for employees</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>○ Companies' criticism towards the intervention</li> <li>○ Stakeholders do not participate in intervention</li> <li>○ Lack of farmers' interest</li> <li>○ Building networks and relationship is too expensive/complex</li> <li>○ Lack of interest by agricultural associations (that may be needed/helpful for direct marketing)</li> <li>○ Ongoing inflation rendering healthier and more sustainable food less accessible to stakeholders, in particular regarding the price of locally produced food</li> <li>○ Direct marketing logistically too demanding</li> </ul>

### Kick-Off Event

<sup>21</sup> <https://www.landschaftleben.at/hintergruende/gemeinschaftsverpflegung>



Table 12 Kick-off meeting

Date	6.9.2023
Location	Korneuburg
Attendees (Type)	FEAST-LL-Team, staff-representative, canteen operator, canteen cook
Agenda	Presentation of FEAST, assessment of canteen offers from different stakeholder perspectives, brainstorming regarding possible options for improvement.

### 3.6 Lodz, Poland

#### Target group

This LL is focusing on users of a Senior Day Care Centre called “WIGOR”, which is part of a chain of day-care institutions for elderly people financed by the Ministry of Family and Social Policy within the second edition of the Senior+ governmental programme (2021-2025). According to Marlena Małag, the Polish Minister of Family and Social Policy, there are currently 970 senior homes and senior clubs operating under the ministerial programme “Senior+”, offering more than 23,000 places for seniors from local communities. In the current edition of the programme (2021-2025), it is estimated that the total number of day-care facilities will be greater than 1,080, with more than 25,600 places for senior residents<sup>22</sup>.

The choice of the day care center WIGOR was strictly connected to: a) location (closeness to the University of Łódź), b) willingness to participate in the research, and c) offer type. Location close to the University of Łódź was important because the respective LL requires both regular and spontaneous interventions. People representing the University of Łódź should be able to reach it within a maximum of two hours to have oversight of interventions applied and observe residents. Willingness to participate in the research is also crucial when it comes to ethical issues. Offer type refers to the Senior-WIGOR house in Tuszyn meeting all three requirements.

There is relatively little knowledge on healthier and more sustainable diets among the age group of senior residents (60-96), which has a relatively low intake of fresh vegetables / raw salads on site<sup>23</sup>. For instance, seniors were complaining about monotonous and hard to chew cabbage-based salads that were hardly ever consumed. As the Polish Living Lab is a Day Care Centre, the residents still function as consumers and housekeepers, most of them still prepare meals independently at home. The primary target group comprises 21 residents (18 women and three men), between the ages of 60 and 96. The group’s physical and mental abilities vary, but none of the residents are legally incapacitated.

#### Challenges

Currently, the improvement of the dietary situation is challenging due to a lack of national policies on the quality of diets in such centers. At the day care center of the LL, residents fluctuate, and are attached to traditional meals that are less healthy than recommended. Moreover, bureaucracy, which is not conducive to facilitate or implement co-created solutions, presents further challenges. To have wider outreach, national action is needed in order to achieve three goals: a) to evaluate the quality of

<sup>22</sup> <https://www.gov.pl/web/rodzina/senior-dzieki-tegorocznej-edycji-programu-liczba-placowek-przekroczy-tysiac>

<sup>23</sup> <http://www.phie.pl/pdf/phe-2018/phe-2018-2-166.pdf>

meals provided at other Senior WIGOR Day Care institutions (there are approximately 257 Senior WIGOR homes in Poland financed by the Ministry of Family and Social Policy in years 2021-2025); b) to raise awareness of healthier and more sustainable diets among residents of senior homes; c) to share best practice and recommend other Senior WIGOR sites to establish their own vegetable gardens, or at least movable vegetable pots.

**SWOT**

The Lodz LL benefits from the high acceptance and enthusiasm their involvement creates in the target group. Working with this special target group comes with some challenges, such as the high rotation of the seniors as well as cognitive difficulties that especially influence the ability to engage in research activities such as interviews. At the same time the political situation for the LL intervention is not favorable, since the right-wing ruling party presents a difficult political climate for food system change. The bureaucratic framework forces the LL to find creative solutions, while advocating for a change in policies.

Table 13 SWOT Analysis Lodz Living Lab

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>○ Promising &amp; fruitful cooperation established between the University of Lodz &amp; the Senior Day Care Centre</li> <li>○ Recognition of the importance of the topic of healthier &amp; more sustainable diet in old age</li> <li>○ Willingness &amp; enthusiasm of LL residents to participate in the project</li> <li>○ Active engagement of staff members (care takers, manager of the site)</li> <li>○ Sufficient infrastructure to initiate positive change (space for the garden, planting herbs, access to kitchen appliances etc.)</li> <li>○ Strong food culture &amp; significant meaning of meals in everyday life of residents</li> <li>○ Professional and emotional engagement of Lodz FEAST team in the project tasks, dedication, responsibility and mission</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>○ Rotation of residents (death, sickness)</li> <li>○ Cognitive impairments of some of the participants</li> <li>○ Strong attachment to tradition and life-long customs in age group 60-96 (potential reluctance to change, might be gender-biased)</li> <li>○ Potential exchange of the manager of the facility during the course of the project</li> <li>○ Bureaucracy, time-consuming procedures</li> <li>○ Inflation, financial constraints</li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>○ Potential effective cooperation with the Mayor of Tuszyn municipality</li> <li>○ Potential effective cooperation with the contractor (meals provider) – a local vocational institution</li> <li>○ Potential effective engagement of local farmers / food producers</li> <li>○ Potential effective engagement of business partners (sponsors, donors, CSR)</li> <li>○ Ambition of upscaling &amp; providing guidelines / recommendations / good practices / policy papers addressed at other „Senior-Wigor” institutions nationwide</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>○ Adverse circumstances, general reluctance to „gender issues” of right-wing ruling party (and right-wing local politicians), unfavourable political/ideological conditions</li> <li>○ High inflation rate and rising costs of food</li> <li>○ Fixed procurement / tender procedure (path dependency theory)</li> <li>○ The risk of discontinuation of the ministerial programme under which „Senior-Wigor” Day Care Centres operate nationwide</li> </ul>

**Kick-Off Event**



Table 14 Kick-off meeting Lodz

Date	November 24 <sup>th</sup> , 2022
Location	Senior-WIGOR Day Care Centre, Tuszyn
Attendees (Type)	Senior users, staff
Agenda	Getting to know each other, pyramids of healthy eating

### 3.7 Tuscany, Italy

#### Target group

This LL addresses two target groups: first, adolescents between the age of 12 to 16; second, elderly people between the ages of 60 to 85, with different socio-economic and ethnic backgrounds, health conditions, experiences and needs. In the Tuscany Region, 14% of adolescents are overweight and 2.5% are obese, a trend that, despite several policy initiatives, remains relatively stable compared to previous findings except for a slight increase in the prevalence of obesity<sup>24</sup>. Moreover, 22.6% report never eating breakfast, which can affect metabolic profile, concentration and learning abilities, and can lead to the consumption of junk food. Even fruit and vegetables consumption is far from National Guidelines - just 17.8% eat fruits and vegetables “more than once a day”<sup>25</sup>. Tuscany is one of the Italian Regions with the highest percentage of elderly people (65+), representing one Tuscan citizen out of four<sup>26</sup>. Data from National Surveillance “PASSI D’ARGENTO” (2021-2022)<sup>27</sup> report that 42.9% of Tuscan elderly people are overweight and 11.2% are obese. Furthermore, it is important to highlight that 4.6% show unintentional weight loss due to biological and pathological factors, representing a commonly used indicator for frailty. Even in this case, the consumption of fruit and vegetables does not reach the recommended quantity. However, despite the relevant National and Regional initiatives relating to active aging and the management of chronicity, nutrition education represents an aspect to be improved and promoted. The Tuscany Region showcases a concerning scenario, reporting high prevalence of excess weight and a low adherence to the principles of the Mediterranean Diet both in adolescents and in older populations.

#### Challenges

Existing research indicates that the Italian population currently exhibits unhealthy eating habits that are not aligned with the Mediterranean Diet, increasing the risk of overweight, obesity, eating disorders and the development of chronic noncommunicable diseases (NCDs), which represent a public health priority and a shared global challenge due to the high impact on individuals’ quality of life and the enormous burden on health and social services. According to these premises, the Italian National Prevention Plan 2020-2025 and the consequent Tuscan Regional Prevention Plan<sup>28</sup> in which priorities and goals are reflected, highlight the relevance of outlining interventions that can encourage the

<sup>24</sup> <https://www.epicentro.iss.it/hbsc/indagine-2022-nazionali>

<sup>25</sup> <https://www.crea.gov.it/en/web/alimenti-e-nutrizione/-/linee-guida-per-una-sana-alimentazione-2018>;  
<https://www.crea.gov.it/documents/59764/0/Dossier+Scientifico+Linee+Guida+2018+%281%29.pdf>

<sup>26</sup>

[https://www.ars.toscana.it/images/pubblicazioni/Collana\\_ARIS/2022/Documento\\_ARIS\\_116/Documento\\_anziani\\_2022\\_15\\_02.pdf](https://www.ars.toscana.it/images/pubblicazioni/Collana_ARIS/2022/Documento_ARIS_116/Documento_anziani_2022_15_02.pdf)

<sup>27</sup> <https://www.epicentro.iss.it/passi-argento/>

<sup>28</sup> National Plan: [https://www.salute.gov.it/imgs/C\\_17\\_notizie\\_5029\\_0\\_file.pdf](https://www.salute.gov.it/imgs/C_17_notizie_5029_0_file.pdf), Regional Plan:

[https://www301.regione.toscana.it/bancadati/atti/Contenuto.xml?id=5314160&nomeFile=Delibera\\_n.1406\\_de\\_l\\_27-12-2021-Allegato-A](https://www301.regione.toscana.it/bancadati/atti/Contenuto.xml?id=5314160&nomeFile=Delibera_n.1406_de_l_27-12-2021-Allegato-A)

adoption of healthier eating habits to promote both individual well-being and decrease health and social costs associated with unhealthy diets.

**SWOT**

In the Tuscany Living Lab, support from several partners – such as local initiatives, the “Education and Health Promotion Department” as well as the Scuola Superiore Sant’Anna as Academic Partner – can be counted on. Also, a wider political acceptance can be seen as an opportunity. Difficulties present themselves through the lack of interest and possible withdrawal from the project, as well as in budgetary challenges of the Living Lab.

Table 15 SWOT Analysis Tuscany Living Lab

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>○ Partnerships and networks already in place with some local producers, companies and projects (ex. "Piana del Cibo", "Slow Food")</li> <li>○ Growing interest for healthier and more sustainable food habits from different sectors</li> <li>○ Presence of social vegetables gardens</li> <li>○ Education and Health Promotion Department devoted to draft projects concerning health promotion and with a significant experience of projects in schools, with children and adolescents</li> <li>○ Scuola Superiore Sant'Anna as Academic Partner</li> <li>○ Already existing networks with schools of Piana di Lucca and Valle del Serchio District Zones</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>○ Parents' skepticism and shortage of available time</li> <li>○ Lack of interest from relevant stakeholders</li> <li>○ Withdrawal of relevant stakeholders during the project</li> <li>○ Administrative/requirements obstacles</li> <li>○ Delays in project preparatory activities</li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>○ Mediterranean Diet as a food culture and tradition</li> <li>○ Existing projects: “Proxy Young-Be Food”, “Circularifood”, “Move junior”, “Invecchiamento Attivo”, "FoodClic"</li> <li>○ National agendas and programs fostering healthier and more sustainable diets (National and Regional Prevention Plan 2020-2025) throughout the life-course</li> <li>○ National Initiatives such as "Scuole che promuovo salute"</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>○ Privacy issues</li> <li>○ Possible increase in costs for healthier foods</li> </ul>

**Kick-Off Event**

Table 16 Kick-off meeting

Date	October 16 <sup>th</sup> , 2023
Location	Online
Attendees (Type)	Health and education authorities from different levels
Agenda	Status of activities, envisaged outcomes, next steps

### 3.8 Oxfordshire, United Kingdom

#### Target group

In Oxfordshire, people on lower incomes have poorer diet-related health outcomes and higher incidence of type-2 diabetes<sup>29</sup>. For example, the most deprived areas of Oxfordshire have a greater prevalence of childhood obesity than the least deprived areas at both Reception (11.5% versus 6.5% respectively) and Year six (24.4% versus 13.6% respectively). Furthermore, despite Oxfordshire having lower admission rates for heart attacks than the average for England, six of Oxfordshire's most deprived wards had admission rates that were rated as significantly higher than the average across England. We hypothesize that people on lower incomes are less likely to participate in more sustainable and healthier dietary choices due to access and affordability constraints. We also know that many residents are facing problems in being able to afford healthier and more sustainable food<sup>30</sup>. We have data that shows that healthier and more sustainable food is less available and more expensive in some of the most deprived areas<sup>31</sup>. We estimate that around 100,000 people in Oxfordshire were experiencing food insecurity in September 2022 based on extrapolations of national data and our local knowledge around the current use of foodbanks and larders<sup>32</sup>. Anecdotally, the Oxfordshire LL observes citizens to experience challenges, including a lack of knowledge, confidence and skills around cooking, including budgeting, planning, cooking techniques and facilities for cooking. We also know, from local knowledge, that Oxfordshire is made up of many unique and diverse community groups, and therefore a 'one-size-fits-all' solution derived through a top-down research process is unlikely to have the greatest impact and sustainability. The target group are thus communities that are most at risk of diet-related ill-health and food insecurity. This broadly defined group consists of parents with children aged under 18, expectant mothers, ethnic minorities, as well as adults without children in the household with low incomes. In particular, those who rely on community-based food services in areas with high levels of deprivation are the Oxfordshire LL's target.

#### Challenges

In recent years in the UK there has been some traction to influence food system policy at a national level, e.g. through levies on sugar sweetened beverages. Yet, despite some success, progress has been slow, with more recent legislation being delayed in response to other evolving policy positions. Without grass-root, community led interventions to influence and support change at a local level, the socioeconomic gap in diet related ill-health will continue to widen, exacerbating the intergenerational cycle of malnutrition and poverty.

#### SWOT

The Oxfordshire LL's approach is being implemented in the context of momentum for the topic, meaning the support and infrastructure in initiatives and organizations is high and society has a growing

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<sup>29</sup> Oxfordshire Insight. (2022). Joint Strategic Needs Assessment, <https://insight.oxfordshire.gov.uk/cms/joint-strategic-needs-assessment>

<sup>30</sup> <https://priorityplacesforfood.which.co.uk/>

<sup>31</sup> Oxfordshire Insight. (2022). Joint Strategic Needs Assessment, <https://insight.oxfordshire.gov.uk/cms/joint-strategic-needs-assessment>; Food Foundation. (2022). Food insecurity tracking. <https://foodfoundation.org.uk/initiatives/food-insecurity-tracking>

<sup>32</sup> Food Foundation. (2022). Food insecurity tracking. <https://foodfoundation.org.uk/initiatives/food-insecurity-tracking>

normative understanding of the need for more sustainable and healthier diets. At the same time, stakeholders are experiencing a cost-of-living crisis due to inflation and supply shortages and the diverse needs of the target groups are difficult to face through one single solution. In terms of participatory research processes, the LL can rely on strong and good connections to research agencies and a general interest in participatory research processes, while the sustainable implication of the intervention will require a maintenance budget which is difficult to ensure.

Table 17 SWOT Analysis Oxfordshire Living Lab

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>○ Strong network of community groups across Oxfordshire with similar missions to address poverty and food related poverty</li> <li>○ Strong local Public Health interest for the planned outcomes</li> <li>○ Growing normative understanding of the need for healthier, more sustainable and affordable diets</li> <li>○ Normative understanding of the need for suitable nourishment to support childhood growth and development, and the need to address food insecurity for diverse groups</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>○ Some research fatigue amongst community groups</li> <li>○ Slow decision making within community groups</li> <li>○ Challenges with designing a solution that meets the needs of a diverse range of groups serving different communities</li> <li>○ Cost of living challenges changing the focus from ensuring healthier and more sustainable diets to other competing priorities</li> <li>○ Inherently challenging to accurately measure programme impacts for dietary nutritional composition improvements within the programme timescales</li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>○ Growing interest and drive for participatory research approaches, that benefit communities, rather than being extractive</li> <li>○ Strong networks with local academic and research institutions that are looking to actively support community-based research approaches</li> <li>○ Strong networks with local academic and research institutions that provide routes to external funding opportunities</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>○ Perceived and real high costs of eating healthier and more sustainable food may challenge the sustainability of a solution</li> <li>○ Challenges to secure maintenance costs to support implemented system</li> <li>○ Inability to proactively engage with all relevant actors required to ensure programme success</li> <li>○ Force Majeure</li> </ul>

**Kick-Off Event**

Table 18 Kick-off meeting

Date	June-September 2023, 4 events
Location	In each district of Oxfordshire (City, Cherwell, West, South & Vale)
Attendees (Type)	Local councilors, local council officers, members of our Community Food Network (e.g. Food Larders, Food Banks), local food producers and retailers, members of the National Farmers Union, academics
Agenda	Attendees were given a background on the project, it’s aims and objectives and an overview of the plan for delivery, and asked to nominate suitable community groups to be involved in the co-design process.

### 3.9 Prilep, North Macedonia

#### Target group

The primary target group of this LL are children (aged 3-6) attending kindergartens within the Municipality of Prilep and their families. These children are likely to be of different ages, genders, ethnicities, and socio-economic backgrounds, and may have different food preferences, health conditions, and learning abilities. The families are likely to be diverse and may face different challenges and opportunities, such as time constraints, financial constraints, and health illiteracy. In North Macedonia, malnutrition is persisting at a relatively low rate, but is an enduring concern, particularly within vulnerable groups. Concurrently, there is an alarming rise in childhood obesity. Additionally, socio-economic limitations hinder some families from providing adequately balanced meals for their children.<sup>33</sup>

#### Challenges

Failing to comprehensively improve childhood nutrition could perpetuate and intensify the existing malnutrition and intensify the obesity epidemic<sup>34</sup>. Neglecting this issue risks long-term health ramifications, hindering childrens' cognitive, emotional, and physical development. In the context of promoting and preserving local, traditional and sustainable diets, the absence of action could lead to further erosion of traditional diets and the loss of health benefits associated with these diets. Without intervention, the homogenization, standardization, and commodification of food driven by globalization, urbanization, industrialization, and Westernization would continue to dominate, potentially leading to a decline in dietary diversity, nutrition, and overall well-being.

#### SWOT

The combination of a local tradition for agriculture, an interest in the topics of healthier and more sustainable diets as well as the small size of the municipality, and therefore availability to gain an overview of the risks and opportunities, presents the Prilep LL with a good point of departure. The cooperation with the national government is slow and transparency is lacking, which at the same time enables room for creativity and initiative for civil society priorities. The biggest threat can be seen in inflation that is at nearly 20% and subsequently the food and energy crisis in the country.

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<sup>33</sup> Jasar, D., & Curcic, B. (2021). Common nutrition and health issues of food in the Balkans. In *Nutritional and Health Aspects of Food in the Balkans* (pp. 279-297). Academic Press, [http://globalnutritionreport.org/files/2014/12/gnr14\\_cp\\_the\\_former\\_yugoslav\\_republic\\_of\\_macedonia.pdf](http://globalnutritionreport.org/files/2014/12/gnr14_cp_the_former_yugoslav_republic_of_macedonia.pdf), Stojcheska, A. M. (2023). The role of food systems in the transition of diets and the prevention of malnutrition in North Macedonia. *Sustainable and nutrition-sensitive food systems for healthy diets and prevention of malnutrition in Europe and Central Asia*, 277

<sup>34</sup> Министерство за труд и социјална заштита (2022). Правилник за изменување на правилникот за стандардите и нормативите за вршење на дејноста на установите за деца, 11-3643/1, available at [https://www.mtsp.gov.mk/pravilnici-ns\\_article-pravilnici-od-zakonot-za-zashtita-na-decata-novo.nspix](https://www.mtsp.gov.mk/pravilnici-ns_article-pravilnici-od-zakonot-za-zashtita-na-decata-novo.nspix), [http://globalnutritionreport.org/files/2014/12/gnr14\\_cp\\_the\\_former\\_yugoslav\\_republic\\_of\\_macedonia.pdf](http://globalnutritionreport.org/files/2014/12/gnr14_cp_the_former_yugoslav_republic_of_macedonia.pdf)

Table 19 SWOT Analysis Prilep Living Lab

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>○ There is a local tradition for sustainable agriculture</li> <li>○ Active small farmers/agriculture producers and agriculture associations</li> <li>○ Sustainability and health is a topic that is gaining traction locally</li> <li>○ The municipality is small enough to be able to easily map out risks/opportunities and to organise local distribution</li> <li>○ There are positive examples that can be drawn from nationally and applied in the local context</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>○ The municipality may not have the full autonomy to take up big projects, due to administrative, political and procedural obstacles</li> <li>○ Low national and local government transparency that may pose difficulties with needs mapping</li> <li>○ Disorganised government at a local and national level, low levels of coordination</li> <li>○ Often slow responses by local and national governments</li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>○ High level of motivation by the team in the municipality</li> <li>○ Many young/creative people live in the municipality but very few activities for their involvement</li> <li>○ IT Sector is strong nationally</li> <li>○ The municipality of Prilep is in traditional farming areas</li> <li>○ There are existing food-related initiatives and networks such as “Slow Food MKD” and “Zemjodelie.mk” that demonstrate a local interest in food sustainability</li> <li>○ Several development agencies are working on sustainability in the country, and we can cooperate with them if there are synergies</li> <li>○ Since not much is done by the central government, there are opportunities to make tangible changes, in areas such as reducing food waste, safeguarding income for local small farmers, providing/promoting more sustainable food for local schools, reducing food waste, promoting locally sourced consumption patterns, and in the process helping the municipality’s local development model</li> <li>○ Could become a good story and especially so if we find complementarity between FEAST’s WP4 and WP5 and are able to address real needs</li> <li>○ The global cost of living crisis increases the need to be more food independent</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>○ With inflation of nearly 20% and food+energy insecurity rising, anything apart from short-term direct provision of food to vulnerable categories may be viewed as redundant or detached from social needs</li> <li>○ Political/bureaucratic threats in dealing with local and national governments</li> <li>○ Being viewed as competitors by existing initiatives</li> <li>○ Lack of interest by farmers/schools/consumers</li> <li>○ The perception of our project and party-politically driven, or as an external intrusion</li> <li>○ The project achieves its own objectives, but has little positive, local impact</li> <li>○ Backlash from supermarkets</li> </ul>

## Kick-Off Event

Table 20 Kick-off meeting

Date	December 10 <sup>th</sup> 2023
Location	Online
Attendees (Type)	Pedagogists, representatives of public authorities, project managers
Agenda	Visions, objectives and anticipated impact of the LL, ways of collaboration, roles and responsibilities, brainstorm and feedback on the initiative

### 3.10 Rotterdam, Netherlands

#### Target group

Beijerlandse laan is the largest shopping street in Rotterdam South area and is surrounded by three neighborhoods, including the Hillesluis district. Hillesluis has about 12,000 inhabitants of which about 2,400 are under 16 and about 4,000 are under 25. In the Hillesluis neighborhood, where this LL will be taking place, 57% of adults are overweight compared to 50% nationally, which amounts to about 4,500 people. 21% of adults are severely obese compared to 15% nationally, which amounts to approximately 1,600 people. 59% of adults perceive their health as good/very good against 75% nationally<sup>35</sup>. Against this backdrop, the target group consists of unemployed individuals and families in a low-income neighborhood. In this neighborhood, we hypothesize that there are many more people with overweight problems and an abundance of shops that sell fast food than on average.

#### Challenges

The Beijerlandse laan-Groene Hilledijk (together Boulevard Zuid) has 240 shops and catering establishments, of which 51 are entrepreneurs selling food. There is a one-sided food offer with most of the shops selling fast food. Therefore the neighborhood can be considered to be a food swamp. This problematic local foodscape is contributing to obesity and other health issues. At the same time shop-owners are open to new approaches such as implementing more plant-based food choices. These initiatives show that the offering of healthy alternatives is a possible solution that resonates among businesses.

#### SWOT

The Rotterdam Living lab has a wide network of collaborations through an established dietician in the area as well as the alliance of shop owners. At the same time the target group faces severe problems when it comes to income, debts and overall economic stress that influences dietary choices. These problems call for holistic solutions that have already been proposed by the local government, whilst the situation now is highly influenced by a cost-of-living crisis, where healthier eating is pushed to the back end of the priority list.

<sup>35</sup> [https://gezondheidinkkaart.nl/jive/report?id=tabellenboek\\_incl\\_wijk&inp\\_geo=wijk13\\_rap\\_059910](https://gezondheidinkkaart.nl/jive/report?id=tabellenboek_incl_wijk&inp_geo=wijk13_rap_059910),  
<https://gezondheidinkkaart.nl/dashboard/dashboard/voeding>



Table 21 SWOT Analysis Rotterdam Living Lab

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>○ The City of Rotterdam will focus on primary prevention of health problems in its policies</li> <li>○ Collaboration with a dietician that operates for 20 years in this neighbourhood</li> <li>○ Collaboration with an alliance of shop owners</li> <li>○ Focus on collaboration with inhabitants</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>○ Significant research fatigue among community members</li> <li>○ Disrupted access to vulnerable groups because of an unanticipated major construction project</li> <li>○ The perspective of an economically feasible solution to the problem is still missing: for how long will a local government be able to support this project?</li> <li>○ Health and sustainability policies should be far more integrated with policies on income and on debt management. Low income and debts are an important source of stress among inhabitants. This stress interferes with making healthier and more sustainable choices about food intake</li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>○ Several local partners invest in improving this neighbourhood</li> <li>○ The national government announced the preparation of legislation that gives local authorities instruments to limit the number of shops that supply fast food in certain areas (december 14th 2022)</li> <li>○ The rise of a local policy program on management of poverty in the city</li> <li>○ Collaboration with a National network of local governments with similar projects</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>○ Local politicians are reluctant to bother shop management with health-related issues;</li> <li>○ High inflation rate and increasing prices of heating: "heat or eat?"</li> </ul>

**Kick-Off Event**

Table 22 Kick-off meeting

Date	March 2023
Location	Community building in Boulevard Zuid area in Rotterdam
Attendees (Type)	Shop owners, entrepreneurs
Agenda	Healthy alternatives in the food offerings



### 3.11 Sitia (Crete), Greece

#### Target group

Sitia Municipality's population, according to the 2021 census, is 20,268 people; the population of people with a farmer profile is approximately 7,500<sup>36</sup>. The main farming occupation is the production of extra virgin olive oil from Sitia Protective Origin (extra virgin olive oil category is based on the oils acidity, so all olive oils below 0.8 acidity belong to this category). With the exception of professional farmers in Sitia, most of the local citizens produce their own olive oil (self-sufficiency) as a base for the traditional Mediterranean diet<sup>37</sup>. According to pre-project mapping and exploratory conversations with the main stakeholders of the region, olive oil is the backbone of the local economy and is exposed to diverse and divergent pressures including climate change and degrading environmental conditions (including pests), economic factors, the cost of energy and rural de-population. Farmers and domestic producers are also acting as consumers; usually, during production season they store quantities of olive oil for their own use (olive oil is the basic ingredient of the Cretan Diet). Generally, farmers could be distinguished as farmers and owners of the olive groves or professional (specialized workers) who rent and / or collect olives from olive groves.

Due to this year's challenging economic conditions (low production and high product price), local farmers are forced to follow a strategy that leads to a series of cascading effects. Persistently increasing production costs, which sometimes synergistically acts with the Greek economic crisis, has led many farmers either to sell all their production of olive oil through existing markets or to try to lower production costs which then leads to a smaller production of olive oil (for example, the olive trees are not pruned properly because of the cost of specialist workers). Combined with the fact that the market price of olive oil has tripled during the last year, farmers have focused on selling at a high price to cover cost obligations. This chain of events has led to the utilization of less quantities of olive oil for domestic use or to an increase of different types of oils for cooking. For the situation of local farmers being consumers themselves, although they produce a very healthy and sustainable food product, they are exposed to food insecurity and are forced to change their diet. This key threat for this vulnerable group will orient farmers (as consumers) to the use of other cooking oils for every day meal preparation and transition away from their traditional food culture to dietary alterations which may be less healthy.

#### Challenges

The olive oil produced locally is the foundation of the daily diet and many local producers are not certain that they will be able to continue their occupation and continue to keep their normal dietary/culinary routines. Sitia Olive Oil production, a product of Protected Designation of Origin with unique characteristics of the Koroneiki variety, relies heavily on the expertise and knowledge of local producers and farmers. The cultivation of olive trees has been a part of the local culture since the Minoan Era (ca. 2,000 BC), and this knowledge has been passed down from generation to generation. The farmers' experience, combined with present-day technology and guidance from agronomists, has led to the creation of the world-renowned Sitia Olive Oil brand. Cretans consume large quantities of olive oil per person (larger than Greece's average 11.2 kg) per year. Studies conducted over many years have concluded that olive oil is considered a key food for health and well-being, related to long life and

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<sup>36</sup> <https://www.sitia.gr/information-services/press-release/207apografi.html>,  
<https://esdak.gr/wp-content/uploads/2021/07/%CE%9C%CE%A0%CE%95-%CE%94-%CE%A3%CE%97%CE%A4%CE%95%CE%99%CE%91%CE%A3.pdf>

<sup>37</sup> <https://www.sciencedirect.com/science/article/pii/S1568163714001123?pes=vor>

the reduction of several diseases such as diabetes and heart problems<sup>38</sup>. With the need for a healthy diet, olive oil is now considered a super food providing many essential nutrients. It is thus important for olive oil, being undoubtedly the basis of the Mediterranean diet (and notably the Cretan diet), to maintain all those quality characteristics that make it unique. It is also important for local agriculture groups to maintain and increase production levels so that they may deal with all olive oil production challenges starting from the field all the way until the final products reach the consumer. Faced with challenges such as climate change, farmers cooperatives have to restructure their organization as well as explore adaptation measures in the production chain to be able to keep providing this product to regional consumers.

**SWOT**

The Sitia Living Lab operates with the benefit of being part of the UNESCO Global Geopark network and having a fast acceptance for their intervention within the community. Confronted with threads such as climate change, that poses special risks to the Mediterranean, and rising prices of energy, the situation for farmers is difficult. Reacting to these crises, the Sitia LL will co-design a holistic change management approach that presents opportunities such as changing the system to be more resilient through i.e. biological and chemical free fertilizers.

Table 23 SWOT Analysis Sitia Living Lab

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>○ The city of Sitia has a long tradition of olive oil production</li> <li>○ Sitia Geopark is a major part of the municipality and is registered within the UNESCO Global Geopark Network. Olive trees are an inherent part of the Geopark</li> <li>○ The international proprietary name “Protective Origin Sitia Lasithiou Kritis (Crete)”, presents the unique properties of a fine olive oil , produced in the region, one of the most well known brand names in markets world wide</li> <li>○ The area includes approx. 2.5 million olive trees, producing between 10 to 15 thousand tons of olive oil per year</li> <li>○ Olive oil is an integral part of the traditional Mediterranean diet</li> <li>○ Local olive oil production has been officially monitored by the cooperatives since the 1980s</li> <li>○ Major percentage of the farmers are members of cooperatives or a farming group</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>○ Continual increases of economic and energy costs for olive production</li> <li>○ Abandonment of the villages by young people</li> <li>○ Effects of Climate Change - the Mediterranean is considered a climate Hot Spot according to IPCC</li> <li>○ Use of synthetic fertilizers and chemical pesticides</li> <li>○ Difficulties for local producers to get their products into public institutions</li> <li>○ Promotion of Sitia Olive Oil into global markets</li> <li>○ Accessibility of the area (especially in winter)</li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>○ Novel procurement model that helps local food producers in the region to get their products into main markets</li> <li>○ Improvement of the quality of cultivation/products and of its environmental footprint through biological cultivation</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>○ Climate change due to dry-thermal conditions</li> <li>○ Continuous increase of economic and energy costs</li> <li>○ Rising olive product prices</li> </ul>

<sup>38</sup> <https://www.cambridge.org/core/journals/british-journal-of-nutrition/article/mediterranean-diet-and-cardiovascular-health-an-historical-perspective/D257C33D41BDCE1C747D9C6A76C4AF9D>

<ul style="list-style-type: none"> <li>○ Use of biological pest management</li> <li>○ Increased awareness of local olive oil supply chain values</li> <li>○ Support local economy through local interventions</li> <li>○ Promotion of bio/chemical free olive oils without reduced yields</li> <li>○ Participation in research projects related to the agri- sector</li> </ul>	<ul style="list-style-type: none"> <li>○ Limited olive oil production compared to international competition</li> <li>○ Invasive insect pest species</li> <li>○ Rural depopulation/ lack of labor force</li> </ul>
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### Kick-Off Event

Table 24 Kick-off meeting

Date	June 9 <sup>th</sup> , 2023
Location	Sitia Municipality
Attendees (Type)	Board of farmers, cooperative, local packers, municipality officers, researchers
Agenda	Productivity, promotion of olive oil, nutrition benefits, consumers' access and use of olive oil

## 4 Discussion of results

The starting conditions, initial assessments of challenges and identified target groups cover a broad range of different situations captured by FEAST's food system typology as well as rural-urban gradients. Those features can be used to group LLs according to type of challenge faced, in relation to specific types of target vulnerable groups. Four LLs are addressing school food (Alto Minho, Avignon, Guldborgsund, Prilep), reacting to lack of school food or to a lack of healthier and more sustainable school food options. The local contexts of these schools are quite different. While in Prilep, food poverty is an issue and in Avignon, the share of poor households is significant, in Alto Minho and Guldborgsund, the LLs rather identify health issues as their prime concern. Tuscany is focusing on food education and literacy in schools and is also addressing the elderly. Similar to these school food LLs regarding institutional context is the LL in Lodz, targeting users of a senior daycare home. Two LLs stand out for their low-income neighborhood focus, Ghent and Rotterdam. In these cases, food poverty is a significant concern, coupled with a prevalence of unhealthy and unsustainable food within food environments near poor households. Finally, two LLs are addressing further, distinct groups of vulnerable people. The Sitia LL is engaging with olive oil producers struggling with economic decline and other stressors, threatening local provision of healthy and sustainably produced olive oil, while the LL in the Weinviertel is targeting company workers who suffer food desert-like situations and other difficulties in accessing and eating healthier and more sustainable food.

LLs have been developing differently according to the availability of information on challenges and possible solutions, the interest and engagement of relevant stakeholders, and the specific barriers for food system transformation that their sites are facing. Additionally, the network LLs can build upon, such as the existence of a food policy council or active civil society groups, has turned out to be a crucial advantage for kicking off LLs' work.

In the next phase, building on the results documented in this report, LLs will refine their perspective on local challenges related to vulnerable groups with the help of stakeholders engaged in their kick-off events, and additional collection of data on situations of vulnerability and barriers for food system change. In particular, they will start the co-design process of the solution to be tested in their LLs, together with relevant stakeholders. This will be the basis for elaborating research designs to measure pre- and post-intervention impacts in terms of variables and qualitative information necessary to assess health-related, ecological, social and economic impacts associated with food security and the consumption of healthier and more sustainable diets.

## 5 Appendices

### Appendix 1: Agenda of a LL webinar on hackathons

#### **Agenda of Hackathon meetings**

- Meeting #1 - 13.02.2023: USERS - How understanding people is fundamental in creating effective solutions that can be uptaken
- Meeting #2 - 27.02.2023: TOOLS - Some useful tools that can be used in the different stages of the development of ideas
- Meeting #3 - 13.03.2023: HACKATHONS - Structure and outcomes, how to prototype and why it is so important

#### **Agenda meeting #1:**

- What is human-centered design
- Case study on human-centered design
- Stages of a hackathon
- Systems thinking
- Working iteratively
- Human-centered design and co-design
- Complexity of need identification
- Techniques (interview guidelines, daily journals, clustering)
- How to document results
- How to develop a solution
- How to develop a prototype

### Appendix 2: Exemplary agenda of a LL meeting

Time	Section/Presentation	Additional info
2:00-2:10	Welcome & housekeeping messages	Chair: Johanna
Inputs from other WPs		
2.10-2.25	Louis Bolk WP GMB workshops & feedback	Leonie
2.25 - 2.40	Reporting & Q&A	Anant
Updates from WP leads		
2.40 - 2.50	Deliverable 4.1	WP4
2.50-3.00	Presentation of Baseline Measurement Outcomes	WP4
3.00-3.10	Buffer/small break	
Small Groups		
3.10 - 3.30	Vision Interviews	Andreas & Livia
3.30 - 3.45	Small Group Structure & Feedback	Johanna

3.45 - 4.15	Breakout Session: Small groups	Facilitation: Andreas, Livia, Maria, Johanna
4.15 - 4.30	Groups report back and good byes	All

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