

Full Research Paper

Enhancing local food systems through the Plan'eat-kids Living Lab

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Abstract

This study explores an innovative collaborative system involving local stakeholders within the school catering ecosystem and the broader food environment of children aged 6 to 11. The project, a joint effort between researchers, local authorities, and food service providers, aims to improve the implementation of the national Egalim law, which promotes healthy, sustainable, high-quality food of local origin in school canteens. A collaborative methodology, entitled '2 local menus', was developed through the European research-action project PLAN'EAT and the French living lab Plan'eat kids. The impact of this initiative is assessed across the entire stakeholder system, from children's eating behaviours to the local economy and associated policy issues, highlighting the benefits and challenges of implementing such a programme.

Keywords

Local food systems, Living Labs, Ferrandaise beef, sustainability, school canteens, collaborative governance

Introduction

The '2 local menus' initiative represents a significant step towards improving local food systems through collaborative efforts. Coordinated by the Plan'eat kids Living Lab (LL), the French initiative originated from a partnership between Clermont Auvergne Metropole (300,000 inhabitants in 2022, surface area of 300.62 km²), chefs and municipal councillors responsible for 12 school canteens, 20 local farmers (within 50 km), supply and delivery platforms, and researchers in geography and food. The LL Plan'eat kids provides methodological support for collaboration and evaluation concerning the promotion of the French Egalim law, which advocates for the consumption of sustainable, high-quality, and locally sourced food in school canteens. As part of the European research-action project PLAN'EAT, this approach not only meets the nutritional needs of children but also supports local farmers and reduces the environmental impact of procurement.

This paper analyses how the '2 local menus' action, developed within the Plan'eat kids LL, achieves innovative coordination between the actors involved in this collaborative scheme. (Polge et al., 2024). Specifically, it investigates whether coordinating efforts from the child consumer to the broader system of actors in their environment and the local food system can overcome obstacles to the local implementation of the Egalim law. The analysis focuses on the development of coordination among school canteen cooks around the implementation and evaluation of the co-constructed '2 local menus' initiative.

This article outlines the political context of the research within a Living Lab (LL), the theoretical foundations of the coordination and evaluation methodology, and the main results concerning the impact on creating an innovative collaborative system between local players in the school catering ecosystem and the food environment of children aged 6 to 11. It examines the obstacles and levers involved in implementing this initiative, which promotes a local breed of beef (Ferrandaise) and a vegetarian menu based on local produce.

Context

EGAlim Law, an obligation in school canteens

The EGAlim law, introduced in France in 2018 and reinforced by the Climate and Resilience law (2021), mandates that all school catering must source at least 60% of their products sustainably, particularly meat and fish, and 20% of all products organically. These laws aim to rebalance commercial relationships in the agricultural and food sectors, while ensuring access to healthy, sustainable food for all in school catering. The Egalim

law also presents new opportunities in public food contracts, emphasising freshness, seasonality, and the reduction of ultra-processed products. Furthermore, it requires the provision of one vegetarian menu per week.

Whilst the concept of 'local' is not explicitly defined within public procurement regulations, it remains a crucial concept, particularly for the municipalities of Clermont Auvergne Metropole involved in local legislation such as Grand Clermont-Livradois-Forez Natural Park Territorial Food Project, which aims to achieve food sovereignty. The LL aims to experiment with levers for using local, healthy, sustainable and raw food in 'real-life' scenarios.

Plan'eat kids living lab

PLAN'EAT is a European research programme (Horizon) designed to advance the scientific understanding of dietary behaviours and their health, environmental, and socioeconomic impacts. Since 2022, it has been generating data and interventions through a pan-European network of nine LLs and one Policy Lab, targeting vulnerable population groups who may not be able to make fully informed, healthy and sustainable food choices.

All Plan'eat LLs aim to: (1) provide an overview of the dietary habits and food environments of target populations; (2) analyse the factors and drivers influencing dietary behaviours at the macro (food system), meso (food environment), and micro (individual) levels; (3) co-construct solutions and policy recommendations with stakeholders in the food chain, consumers, and political decision-makers. Beyond the targeted population, each LL should include representatives from the local food system -- from Farm to Fork, policy makers, researchers, civil society (including citizens, associations, NGOs), healthcare professionals and educational systems.

The PLAN'EAT programme has enabled each LL to clearly identify desired outcomes, particularly improved eating behaviours amongst target audiences. In France, the LL named Plan'eat kids focuses specifically on children aged 6 to 15.

Various high impact eating behaviours (HIB) were analysed based on (Reipurth et al., 2025): a) their potential to be changed (behavioural plasticity), b) acceptability to target groups and stakeholders (the initiative's feasibility), and c) their role in a safe operating space in terms of environmental, social and health impacts (Technical potential; Nielsen et al. 2020). For the '2 local menus', two HIBs were selected (Olhau et al., 2023; Vespa, et al. 2024): "eating less red meat, but with a better quality", and "increase consumption

of legumes". A systematic analysis of the factors influencing children's eating behaviours is essential to fully understand them and identify levers for behavioural change. The interventions carried out via the LL aim to highlight these levers and obstacles by considering the specific determinants of these behaviours.

Methodology & Epistemological Device

The methodological approach is founded upon both participant observation research techniques and an epistemological device (Soulé, 2007 ; Ciesielska et al., 2018), thereby aligning with the principles of LLs : by participating in the day-to-day activities of the participants, the researcher gains access to tacit information, implicit logics of action and informal interactions often inaccessible through other empirical methods. Collaborative innovation is based on trust, shared governance and the ability to manage the organisational costs associated with cross-sectoral cooperation (Vivona et al. 2023). Similarly, researchers act as mediators of knowledge and facilitators of innovation (Rossoni et al. 2024). Thus, the researcher's involvement in a LL is not limited to a methodological posture, but constitutes an epistemological device in its own right, enabling the production of situated, co-constructed knowledge directly mobilizable by the stakeholders in a territory.

To construct and analyse this epistemological device stage (Tab. 1), we used The Living Lab Markers tool (Henry et al. 2021; Reipurth et al., 2025). From our perspective, this is an epistemological device because it can be defined as a theoretical, methodological and practical arrangement that structures knowledge production in a given context. It is not simply a tool or method, but a heterogeneous whole comprising stakeholders, knowledge, standards, techniques and institutions, which guides ways of seeing, questioning and intervening in reality (Dodier & Barbot, 2016), such as the implementation of the Egalim law as a vector for transitions in children's healthy and sustainable eating behaviours. Other post-intervention impact measurement tools are required. The Consolidated Framework for Implementation Research (CFIR; Mathijs & Vespa, 2024) offers an overarching typology--a list of constructs and verification about what works where and why across multiple contexts.

Table 1. Epistemological device stage – Plan’ea kids INRAE, 2023 – The Living Lab Markers tool (Henry et al.2021; Reipurth et al. 2025)

INDICATOR	IMPACT	MEASUREMENT TOOLS AND METHODS
1. NEEDS FORMULATION AND ITERATIVE PROCESS	Needs were questioned and redefined with users and certain stakeholders throughout the project.	One focus group workshop, six co-working groups, real-life interventions, feedback focus groups, and evaluation of needs and strategies.
2. ROLE OF USERS AND STAKEHOLDERS	Children were consulted, while stakeholders were involved in the operational and strategic management of the intervention.	Three main methods for children (participatory observation in canteens, micro-interviews, digital tablet surveys), and interviews with stakeholders before, immediately after, and one-year post-intervention.
3. DIVERSITY OF USERS AND STAKEHOLDERS	The project progressively involved a broader range of stakeholders from various backgrounds and regions, with differing interests.	A stakeholder involvement tracking map covering the periods before, during, just after, and one year after the intervention (ongoing in 2025–2026).
4. INVOLVEMENT IN CO-CREATION AND PROTOTYPING	Stakeholders co-created a functional, replicable experiment (e.g., sourcing Ferrandaise beef, developing a vegetarian menu).	Same as Indicator 1.
5. TESTING CONDITIONS	The two menus were tested under real-life conditions.	Same as Indicators 1 and 3.
6 & 7. OUTPUTS (PRODUCT, SERVICE, TOOL) AND ACCESSIBILITY/DISSEMINATION	The project fosters new collaborations and uses beyond the initial area of action, addressing territorial issues through collective dialogue and management.	Observation of how the project inspires other territories; shared objectives between researchers and local stakeholders to promote behaviour change.
8. EMPOWERMENT	The initiative enables stakeholders to transfer new skills and knowledge.	Monitoring of all materials produced (e.g., farmers’ association social media, classroom focus groups with children using tablets, participatory observation of municipal meetings with parents, cooks, and officials).

The CFIR classifies factors influencing implementation processes, assigning them to one of five domains-of-origin (Mathijs & Vespa, 2024): 1) the outer setting (outside the implementation setting), 2) the inner setting (where the intervention is implemented), and characteristics of the 3) intervention, 4) process, and 5) involved individuals. The adapted framework has been used in our action model to co-create tailor-made solutions with

stakeholders in the food chain. The CFIR method will serve as a grid for reporting and analysing our results.

Results

The '2 local menus' co-created initiative

The '2 local menus' is a co-created initiative based on collaboration between various stakeholders, including, for the macro level, policy makers from Clermont Auvergne Métropole, managers and coordinators of the Grand Clermont - Livradois-Forez Natural Park Territorial Food Project, three supply platforms, two slaughterhouses, a butcher, more than twenty farmers, and at meso level, twelve chefs and school canteen staff, four schools, seventeen municipalities, and five researchers from INRAE and Clermont Auvergne University.

This initiative is part of the gradual convergence of two local actors, illustrating a dynamic of social innovation based on co-construction. A group of farmers, organised as an association, embarked on a process of adding value to meat from the local Ferrandaise breed. This group has undertaken a strategic review to move away from conventional marketing channels by exploring alternative marketing methods, particularly through the school catering sector. This approach aligns with a regional food transition, where producers seek to strengthen their local connections while diversifying their outlets (Lamine 2017, Polge, et al. 2024).

In 2022, elected representatives and cooks from two local authorities joined forces to adapt their supplies to meet the requirements of the Egalim law and the challenges of sustainability. These meetings facilitated stakeholder networking and encouraged a shared vision (Torre & Traversac, 2011). With the involvement of farmers, officials and catering professionals, an initial experiment introducing Ferrandaise meat into school canteens was conducted.

In April 2023, supported by the Plan'eat Kids LL, this initiative expanded to the metropolitan level and led to the creation of a group of cooks, strengthening local capacity for coordination and collective learning. Five main objectives structured this collective action (Friedberg, 1997) as part of a regional food transition, combining sustainability objectives, supply relocalisation and inter-municipal cooperation:

- Addressing the obstacles linked to the implementation of the Egalim law and the transition of the local food system.
- Adapting local policies on healthy, sustainable and local food supplies.

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- Improving food education in canteens and schools.
- Reducing the environmental and socio-economic impact of food.
- Changing the behaviour of adults looking after children, thereby improving their health and well-being and reducing their environmental footprint.

In May 2023, twelve cooks and elected representatives launched the '2 local menus' initiative to pool purchases and promote local and sustainable food in school collective catering. In practical terms, it involved preparing two meals using the same recipes and ingredients, which were selected primarily from local producers. The first menu, serving a total of 14,000 meals, featured a traditional Burgundian beef recipe, prepared using meat from the local Ferrandaise breed, thus helping to promote the heritage of livestock farming. The second menu (implemented in 2024-2025) engaged 9 canteens, serving 12,500 meals. It was vegetarian, comprising a starter of raw vegetables, a main course based on pulses, and a dessert made from local fruit. INRAE researchers conducted comprehensive surveys of children using digital tablets (fig. 1), encompassing 784 children across 4 pilot canteens for the Ferrandaise menu and 437 children across 3 pilot canteens for the vegetarian menu.



Figure 1. Individual surveys of children at school canteen and using digital tablets – P.A. Heydel, Plan'eat kids INRAE, 2024

In this context, the LL is defined as an open innovation environment centered on the child consumer, in which researchers, elected representatives, producers and educational institutions co-construct solutions to complex problems (Bergvall-Kåreborn & Ståhlbröst, 2009). This case study demonstrates how multi-stakeholder interventions can generate local innovations in food governance by combining agricultural issues, public policies and professional practices (Bui et al. 2016).

Characteristic of the interventions and its evidence from the stakeholders' point of view

The operation benefited from tools linked to the LL, including support from a team of researchers to help create schematic representations of the results at each stage and visual communications adapted to children, as well as co-ordination with Clermont Auvergne Metropole staff of meetings with cooks, farmers and supply platforms. The perception of stakeholders involved in implementing interventions within organisational settings is fundamental to understanding implementation dynamics and evidence uptake. The acknowledgement and endorsement by cooks, canteen staff and elected representatives of empirical evidence demonstrating intervention effectiveness proves essential for embedding practice changes within organisational structures. This evidence-based validation strengthens stakeholder commitment to replicating the intervention in 2024 and 2025., thereby providing tangible proof of successful organisational integration and sustainable implementation capacity within participating institutions.

The relative advantages for the various stakeholders of taking part in this action compared with other solutions are numerous and echo the characteristics of an innovative ecosystem of stakeholders:

- **Relational elements linked to the collective action:** the creation over time of a relationship of trust between all the stakeholders through the stages of meeting, listening and getting to know each other, encourages the creation of an interdisciplinary, multi-player working group that is now sustainable and committed to the creation of new actions. As one of the chefs puts it: ' What's interesting about this kind of operation is that it puts faces, the human side '. The cooks benefit from the discovery of new direct sales outlets and purchasing links, as well as new recognition from their elected representatives. The elected representatives are happy to support the local economy and promote collective initiatives. The children are learning about the production process for the food they eat every day, and the parents are deconstructing their view of the quality of what is served in the canteen.
- **Factual elements linked to the experiment going beyond the expectations of the Egalim law but reinforcing the strategies of the Climate Resilience law:** promoting short circuits and local production, reducing costs... For example, farmers have been paid €1 more for the Ferrandaise operation, boosting sales of their animals and promoting hardy breeds. The development of a relationship of trust between the parties involved has also been built around a major order for

producers, facilitated by the support of local councillors, who have allowed purchases to be made outside the public market (Brunori et al. 2011). These interventions have enabled several producers to discover the advantages of direct sales, opening up new economic and relationship prospects. Some canteens have even seen a reduction in their purchasing costs since this initiative, while benefiting from higher quality products (fresher, less water in the meat, organic).

- **The creation of shared values:** For all the parties involved, these experiments have encouraged the creation of new values, including that of reconnecting with the area in which they operate. 'We are attached to our area, and it is also valuable for us to work with people around us' (exchanges between elected representatives, chefs and producers in 2024). For the chefs, the values relate to the revaluation of their profession: 'often chefs lose the flame they wanted to find in this profession, working with a noble product like yours has given them the desire and we can see that they apply themselves to rendering a product worthy of it' ; 'we are proud to have worked with a local product'.
- **Reducing economic and environmental costs:** Analysis of costs, encompassing both intervention costs and associated costs (investment, supply, opportunity), is crucial. Whilst local meat and organic vegetables incur higher purchase costs, reducing water content and optimising procurement quantities can enhance profitability. Furthermore, slow cooking at low temperatures reduces energy consumption. Additionally, local sourcing diminishes transport costs and contributes to a more sustainable approach. One participating canteen has reduced its procurement budget by €10,000 since joining the LL.

One of the levers highlighted by the LL is the central role played by dieticians (Desmarlières et al., 2023). Today, in a number of local authorities, the menus are drawn up by a dietician who, through this operation, incorporates the opinions of the children and their different attitudes to the consumption of meat and legumes. Within the '2 local menus' operation, this stakeholder helped some kitchen staff and elected representatives to find the best ways of preparing and explaining quality products to children.

Impact of the operation on children's food environments

Analysis of the food environment of children aged 6 to 10 years and individual surveys conducted using digital tablets during the '2 local menus' operation revealed their perceptions and their capacity to improve their eating behaviours within the canteen environment.

- **Interaction of sensory, social and cognitive factors:** Analysis of children's discourse revealed that eating behaviour within the context of school catering was determined by a complex interaction of sensory, social and cognitive factors (Nicklaus, 2018). The canteen environment, food preparation methods and the criteria employed by child consumers emerged as central elements in the construction of food preferences and acceptance (Pinquart, 2016). Children's perception of their canteen was frequently negative, often influenced by their food experience (service presentation, cooking methods, as well as taste, aroma and texture). They highlighted differences with their usual family meals, which were generally more appreciated. Food acceptance could be conditioned by specific elements, such as the presence or absence of sauce. Concurrently, food neophobia, which is common amongst children under 8 years of age, manifested itself as a rejection of certain foods (e.g. legumes), sometimes mitigated by preferences for particular preparations. Texture emerged as a key sensory factor, textures perceived as unpleasant (excessively crunchy or elastic) have had a negative impact on the acceptance of vegetables and meat.
- **How food is prepared and served:** Another approach has been to optimise the sensory properties of food, by favouring pleasant textures and attractive flavours. The children expressed strong tastes for certain foods (purée, cheese) and rejections for others (lentils, pumpkin), often linked to previous experiences. Cooks have become more aware that the way food is put together is also crucial. Some children preferred separate foods, while others appreciate harmonious mixtures. Exchanges of practices between cooks for cooking beef bourguignon in low-temperature ovens contributed to a rate of enjoyment of the meat by the children of 72%. The communication tools used to explain to the children where the products they were tasting came from were relayed by the service agents.
- **Children's criteria and changes in eating behaviour:** The chefs adapted their practices during these two menus to best meet the children's preferences and expectations, emphasising the importance of taste and texture. Exposure to new culinary experiences, as was the case with the vegetarian menu, influenced discoveries and therefore future preferences. But choices are also guided by pre-existing preferences and satiety. To encourage positive and new eating habits linked to local produce, cooks and dieticians now consider the different factors that influence children's choices. One effective strategy in our work has been to improve the canteen environment by creating a friendlier, less stressful space.

The involvement of families plays a crucial role in educating children about food, encouraging them to adopt healthy and sustainable eating behaviours (Martinez-Yarza et al. 2024): None of the parents reported any dissatisfaction with the initiative. Involving parents in canteen activities and supporting them to adapt educational and dietary practices at home encourages positive eating habits (Pinquart, 2016). Since the operation, some local authorities have established canteen committees where parents are invited to share meals with children and subsequently engage in discussions with elected representatives, service agents and cooks, who also participate in the meal. There has been positive and interested feedback from parents, some of whom expressed a desire to be more involved in the communal project surrounding the vegetarian menu, which remains subject to ethical and nutritional considerations.

The collective action of the '2 menus' shows that it is important to involve the stakeholders upstream and downstream of the meal in order to better identify the levers for implementing the Egalim law. Children's food preferences are the result of complex interactions between the sensory properties of food, family habits, school standards, preparation methods, dialogue with cooks and staff, the layout of the catering area and individual experiences. Understanding these dynamics is essential if we are to promote a balanced diet tailored to children's needs.

Discussion

The CFIR analysis of the '2 local menus' operation, based on data collected through the LL, identifies the facilitators and barriers to Egalim law implementation across multiple dimensions (fig.2): social pressures, incentive policies, organisational characteristics, communication processes, organisational culture and individual perceptions."

Outer Setting: Pressures and Incentives

The initial examination of these findings focuses on the role of peer pressure and collective dynamics. Whether mimetic or competitive, peer pressure played a crucial role in the adoption of this collective action. When the two municipalities and their cooks initially pooled their meat supplies in 2022, other stakeholders perceived this as a pioneering initiative that demonstrated feasibility and potential benefits. The demonstrated success of this pilot phase created a cascading effect throughout the metropolitan school catering network, encouraging broader participation. The active involvement of researchers proved instrumental in strengthening communication channels, forging strategic connections between participants and attracting additional

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municipalities, farmers, supply platforms and canteens. This expansion was facilitated particularly through the institutional anchoring provided by the Living Lab framework.

The second analytical dimension concerns the impact of external policies and regulatory frameworks on stakeholder behaviour. Innovation was particularly evident in the ability of stakeholders to manage the shortfall of intermediary actors such as deliverers and butchers, while meeting the obligation to establish public markets. The flexibility shown by the elected representatives on this occasion showed that viable solutions could be devised. Public policies and external incentives, operating at both local and national level, also influence the spread and sustainability of such initiatives. The Egalim law and the Territorial Food Project, which aim to ensure food sovereignty for local areas, provide regulatory frameworks and financial incentives that support local sourcing projects such as this. More importantly, the Territorial Food Project facilitates the long-term coordination of the network of stakeholders initiated by the LL (Polge et al.2024).

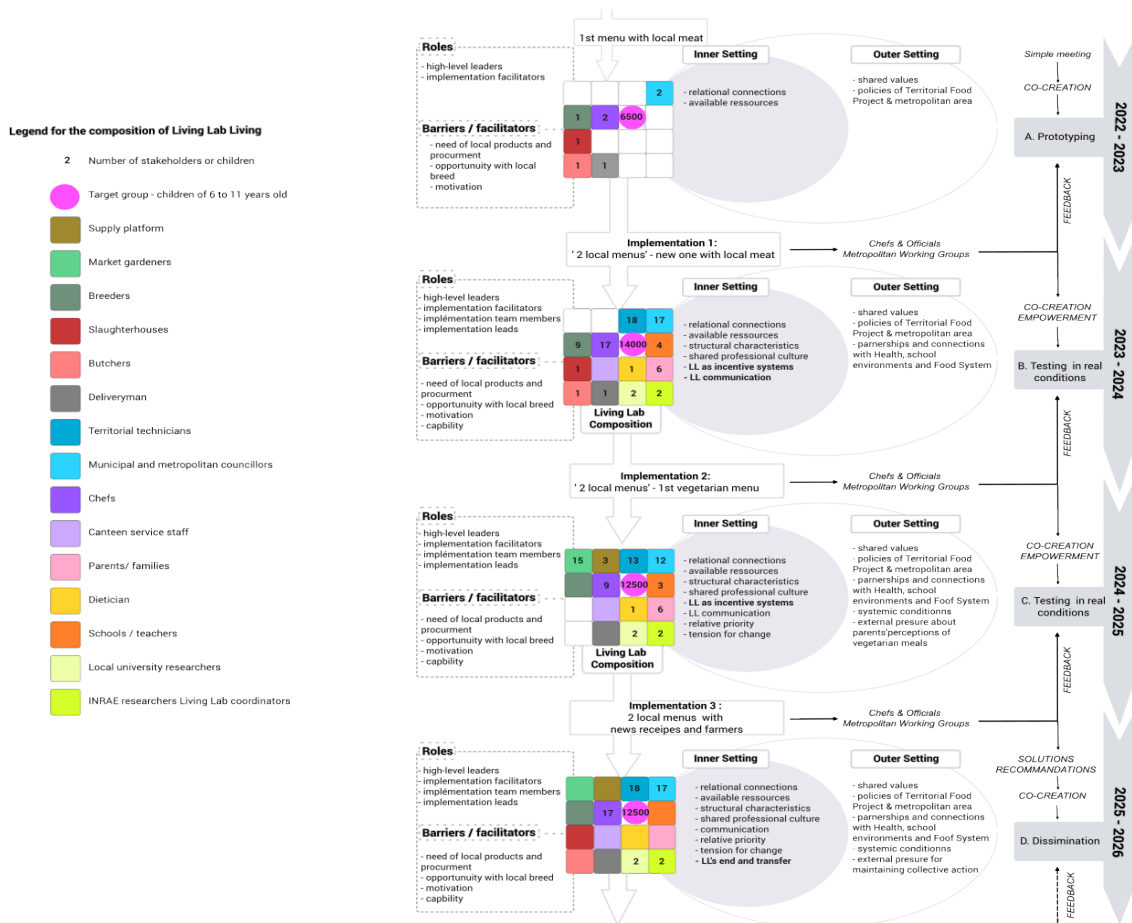


Figure 2. Diagram of CFIR analysis of the '2 local menus' operation – C. Planchat, Plan'eat kids INRAE, 2025 – from: Henry et al.2021; Reipurth et al. 2025

Inner Setting: Structure, Communication and Organisational Culture

Based on the CFIR evaluation, it is likewise important to analyse inner setting modifications linked to the implementation process. Our findings reveal five principal factors of innovation at this organisational level.

1. Structural characteristics, specialisation, and adaptation

The structural characteristics of an organisation, particularly its social architecture, age, maturity, and size, influence its capacity to adopt and implement initiatives. Nearly two years of lifelong LL coordination were required, in addition to nine years of Territorial Food Project policy development, for the school catering stakeholder network to reach maturity and become operational. The niche market characteristics, notably for Ferrandaise breed meat and its production specialisation, constitute additional factors requiring consideration. However, the sustainability and continuity of the initiative depends upon the sustained political commitment of Clermont Auvergne Metropole, which has thus far provided consistent leadership for the consortium by facilitating working groups comprising both chefs and elected officials.

2. Network and communication, information flow, and coordination

Effective communication, both formal and informal, within the organisation and with external stakeholders is essential for successful change implementation (Reiputh, 2025). Whilst elected officials may not always be directly involved, they remain informed and supportive, thereby contributing to overall progress. Upstream and downstream communication with all stakeholders (elected officials, chefs, parents, and children) fosters transparency and collective engagement. The utilisation of diagrams and drawings to highlight both the product and the process constitutes an effective means of communicating with children.

3. Culture, organisational climate, values, norms, and perception

Organisational culture, shaped by shared values and professional practices, strongly influences how change is approached. Whilst the organisational climate reflects this culture in practice. Regular coordination meetings help establish a collaborative climate that supports effective implementation. Stakeholders involved in upstream logistics (ordering, invoicing, slaughtering, storage, delivery, etc.) exemplify the importance of communication and coordination in organising interactions with farmers (availability of produce) and chefs (timetables, deliveries, quantities). Communication between schools,

local authorities, dietitians, and chefs is equally essential for organising joint menus and observing the practices and behaviour of children in the canteens. The scheduling of feedback meetings at times and venues convenient to the majority of stakeholders demonstrates the commitment to fostering inclusive dialogue.

The shared values based on healthy, sustainable food and linked to stakeholders within an established area of practice have served as the binding force holding the LL members together throughout the operation. The physical territory where LL stakeholders live or operate is conceived as a space for dialogue, where actors (public, private, citizens) are brought together to meet, exchange, and co-construct solutions. Territorial dialogue constitutes a process founded upon the recognition of local issues and the pursuit of compromise amongst stakeholders (Barret, 2012). It represents an essential tool for ensuring sustainable and equitable management of both physical and symbolic food territories, facilitating the sharing of expert and lay knowledge, as well as recommendations and intervention strategies.

4. Implementation Climate

Responsiveness and tension for Change in Regulatory Implementation: The implementation climate reflects the capacity to absorb change and the shared receptiveness of individuals. The tension for change, that is the perceived need to alter a situation, constitutes a key driver for the initiative. Chefs aspire to work with ultra-local produce, which is more rustic and flavoursome, and perceive themselves as having a role in educating children about taste. Difficulties are emerging for municipalities that have committed to 100% organic and local catering. This remains unfeasible due to product availability constraints, given that the Territorial Food Project area is located in a mid-mountain region predominantly devoted to livestock farming and arable crops. Market gardening and arboriculture represent marginal activities and cannot supply sufficient organic fruit and vegetables. The shared perception of the importance of collaborative working strengthens cohesion and commitment. Meetings and exchanges help forge personal connections and develop trust relationships concerning produce and its provenance. The establishment of a chefs' working group and visits to livestock farms and kitchens help reassure participants and dispel preconceived notions about product quality.

5. Social recognition and Professional Satisfaction

Incentives and rewards, whether formal (salary increases, promotions) or informal (respect, recognition), stimulate commitment. The initiative does not generate direct financial rewards (except for improved producer remuneration per kilogram of product), but rather social recognition and professional satisfaction, thereby strengthening links amongst stakeholders. Disseminating results and evaluating performance helps improve the initiative's effectiveness whilst maintaining participant satisfaction and motivation. Communicating outcomes to schools, chefs, farmers, processors, and elected representatives highlights the project's impact and encourages its continuation. The positive feedback from schools and parents, successful cattle sales for farmers, and added value from different meat cuts for processors all attest to the project's success.

Identification of obstacles yet to be overcome

It is essential to identify barriers to commitment, linked to organisational perception and individuals' relationships with it (Thévenot, 2006).

- **Farmers:** Planning issues in the face of climate change can become problematic, resulting in produce not being delivered on time to canteens. In such cases, supply platforms should offer greater flexibility and facilitate public procurement (Brunoni et al., 2011).
- **Processors/Suppliers:** Public procurement constraints and the difficulty of sourcing butchers remain major obstacles should this operation expand further.
- **Chefs:** Concerns about changes in municipal teams following each election could disrupt this virtuous cycle. Elected representatives may require minimum legal standards for quality products to be met, but not necessarily local products as part of a regional development strategy. Canteens are also experiencing recruitment difficulties due to declining interest in the profession.
- **Policymakers:** Many remain detached from these issues. Managing canteens according to certain economic rationalities necessitates continuing to build trust relationships with chefs, as demonstrated by one local authority's capacity to increase the use of healthy, sustainable, and local products by up to 70% whilst reducing its overall budget by €10,000.
- **Children:** An increasing number of children abstain from eating meat for cultural, ethical, or religious reasons. The presentation of products to children must be carefully considered to avoid causing offence.

- **Researchers:** The LL programme spans only four years. Given the political and territorial scope of such initiatives, measuring all impacts and guaranteeing the sustainability of this innovative actor ecosystem and genuine long-term legislative implementation remains challenging. In this instance, the research has consisted of supporting initiative implementation by ensuring that objectives, timelines, and participant commitment are respected, but such participatory research may not attract funding.

Conclusion

The '2 local menus' initiative reveals a complex ecosystem where innovation emerges from the interdependence of multiple factors. These factors, identified through academic literature and empirical observations from the Plan'eat-kids LL, are grouped around emergent criteria that foster collaboration, experimentation, and the creation of shared value within the territorial food system (Polge et al., 2024).

The key point to retain for transferring this experimentation concerns the importance of creating diversity amongst stakeholders involved in these innovation ecosystems (businesses, public institutions, universities, users, etc.). This encourages cross-fertilisation of expertise and co-construction of innovative solutions, particularly through intersectoral cooperation and experimentation under 'real-world' conditions. We also emphasise the importance of sharing resources and risks, supported by collaborative infrastructure at the interface between upstream and downstream system components, such as the chefs' working group, and a favourable institutional framework such as the metropole. This professional and political configuration enhances the system's virtuosity and resilience. Finally, we consider that the foundation of this innovation rests upon a culture of trust, as it helps anchor dynamics of sustainable collaboration (Friedberg, 1997). The LL guarantees this culture of trust, notably through the scientific analysis of the approach.

The innovation of the '2 local menus' initiative also relies upon criteria for its operationalisation. The diversity of stakeholders involved, from farmers to children through the association of chefs and elected representatives, has enabled the co-construction of a solution adapted to the region's specific characteristics. Experimentation under real-world conditions, through the preparation of local and sustainable meals in school canteens, has enabled practices to be refined and participant engagement to be strengthened. Knowledge and skills sharing, facilitated particularly by



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LL support, has encouraged the emergence of a culture of innovation and collaboration. We observe here that transferring the approach relies primarily and essentially upon coordination modalities, as each stakeholder ecosystem is adapted to its unique territory (Barret, 2012; European Commission, 2014).

Whilst the initiative has demonstrated its potential to improve local food systems and encourage healthier and more sustainable eating behaviours amongst children (Nicklaus, 2018; Martinez-Yara, 2024), it is not without limitations. Challenges persist regarding logistics, planning, and coordination, underlining the need to strengthen collaborative infrastructure and institutional frameworks. Furthermore, the initiative's long-term sustainability requires a systemic approach that considers the economic, social, and environmental dimensions of the territorial food system.

Ultimately, the '2 local menus' initiative offers an exemplary model for constructing innovation ecosystems in support of food transition. By emphasising collaboration, experimentation, and shared value creation, it contributes to building food systems that are more resilient, sustainable, and responsive to local population needs.

References

1. Barret, P. (2012). *Guide pratique du dialogue territorial* (avec la contribution de Pierre-Yves Guihéneuf). Éditions de l'Aube.
2. Bergvall-Kåreborn, B., & Ståhlbröst, A. (2009). Living Lab: An open and citizen-centric approach for innovation. *International Journal of Innovation and Regional Development*, 1(4), 356–370.
3. Brunori, G., Rossi, A., & Malandrini, V. (2011). Co-producing transition: Innovation processes in farms adhering to solidarity-based purchase groups (GAS) in Tuscany, Italy. *International Journal of Sociology of Agriculture and Food*, 18(1), 28–53.
4. Bui, S., Cardona, A., Lamine, C., & Cerf, M. (2016). Sustainability transitions: Insights on processes of niche-regime interaction and regime reconfiguration in agri-food systems. *Journal of Rural Studies*, 48, 92–103. <https://doi.org/10.1016/j.jrurstud.2016.10.003>
5. Ciesielska, M., Boström, K. W., & Öhlander, M. (2018). Observation methods. In M. Ciesielska & D. Jemielniak (Eds.), *Qualitative methodologies in organization studies: Volume II: Methods and possibilities* (pp. 33–52). Springer. https://doi.org/10.1007/978-3-319-65442-3_2
6. Dodier, N., & Barbot, J. (2016). La force des dispositifs. *Annales. Histoire, Sciences Sociales*, 71(2), 421–450. <https://doi.org/10.1017/S0395264900041262>
7. European Commission. (2014). *Regional innovation ecosystems: Rethinking the role of regions in supporting smart specialisation*. Publications Office of the European Union. <https://data.europa.eu/doi/10.2776/74714>
8. Desmarlières, B., Fardet, A., & Planchat-Héry, C. (2023). *Quel apport du diététicien dans un établissement scolaire pour une transition vers des comportements alimentaires sains et durables? Une étude en milieu scolaire dans le Puy-de-Dôme*. [on ligne]. <https://www.researchgate.net/publication/373444565>
9. Friedberg, E. (1997). *Le pouvoir et la règle. Dynamiques de l'action organisée*. Paris : Seuil.
10. Henry, G., Guyon, T., Martell, Y., Verstichel, P., Goffin, D., & Vigneron, L. (2021). Les Marqueurs Living Lab : Un outil pour qualifier et évaluer des processus collectifs d'innovation avec une approche centrée sur les utilisateurs et les usages. Institut Godin et AISBL Académie du Management. <https://www.marqueurs-livinglab.org/the-tool>
11. Lamine, C. (2017). La transition alimentaire: une notion à la croisée de recherches interdisciplinaires. *Natures Sciences Sociétés*, 25(1), 12–20.
12. Martinez-Yarza, N., Solabarrieta-Eizaguirre, J., & Santibáñez-Gruber, R. (2024). The impact of family involvement on students' social-emotional development: The mediational role of school engagement. *European Journal of Psychology of Education*. <https://doi.org/10.1007/s10212-024-00862-1>
13. Mathijs, E., & Vespa, F. (2024). T4.2.1 Co-creation ideation process to design solutions tailored to each food chain actor's needs: Consolidated Framework for Implementation Research (CFIR) (Deliverable D4.2.1). Katholieke Universiteit Leuven (KUL), Belgium. Project funded by the European Union's Horizon Europe programme (Grant Agreement No. 101061023).
14. Nicklaus, S. (2018). The role of food experiences during early childhood in food pleasure learning. *Appetite*, 120, 265–271. <https://doi.org/10.1016/j.appet.2017.09.016>
15. Nielsen, K. S., Stern, P. C., Dietz, T., Gilligan, J. M., van Vuuren, D. P., Figueroa, M. J., Folke, C., Gwozdz, W., Ivanova, D., Reisch, L. A., Vandenberg, M. P., Wolske, K. S., & Wood, R. (2020). Improving climate change mitigation analysis: A framework for examining feasibility. *One Earth*, 3(3), 325–336. <https://doi.org/10.1016/j.oneear.2020.08.007>
16. Ohlau, M., Röss, E., Fardet, A., Palascha, K., Martinez Cruz, E., O'Sullivan, A., ... Wanecek, W. (2023). Synthesis report on food impact pathways – Guiding principles for healthy and sustainable diets (Deliverable D3.2). TMG - Töpfer, Müller, Gaßner GmbH (TMG), Germany. Project funded by the European Union's Horizon Europe programme (Grant Agreement No. 101061023).
17. Pinquart, M. (2016). Associations of parenting styles and dimensions with academic achievement in children and adolescents: A meta-analysis. *Educational Psychology Review*, 28(3), 475–493. <https://doi.org/10.1007/s10648-015-9338-y>

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18. Polge, E., Barbet, J., & Loudiyi, S. (2024, december). Intégration et territorialisation des enjeux liés à l'alimentation : une analyse par les dynamiques de coordination entre acteurs impliqués dans des projets alimentaires territoriaux en région Auvergne Rhône-Alpes. Communication présentée aux 18èmes Journées de Recherche en Sciences Sociales, Reims, France. <https://hal.science/hal-04742196/document>
19. Reipurth, M., Chang, B., Kuhl, L., Joanes, T., & Planchat-Héry, C. (2025). Toolbox for behavior change intervention strategies targeting consumers (Deliverable D4.3.1). The European Food Information Council (EUFIC), Belgium. Project funded by the European Union's Horizon Europe programme (Grant Agreement No. 101061023).
20. Rossoni, A. L., Vasconcellos, E. P. G., & Rossoni, R. L. C. (2024). Barriers and facilitators of university–industry collaboration for research, development and innovation: A systematic review. *Management Review Quarterly*, 74, 1841–1877. <https://doi.org/10.1007/s11301-023-00349-1>
21. Soulé, B. (2007). Observation participante ou participation observante? Usages et justifications de la notion de participation observante en sciences sociales. *Recherches Qualitatives*, 27, 127–140. <https://hal.science/hal-02345795>
22. Thévenot, L. (2006). *Action in the plural: Sociology of commitment regimes*. Paris: Éditions La Découverte.
23. Torre, A., & Traversac, J. B. (2011). *Territorial governance, local development, rural areas and agrofood systems*. Springer.
24. Vespa, F., Szakàl, D., Mathijs, E., Brons, A., Pozner, V., Fardet, A., ... Rööös, E. (2024). Typology of archetype EU food environments (Deliverable D1.3). Katholieke Universiteit Leuven (KUL), Belgium. Project funded by the European Union's Horizon Europe programme (Grant Agreement No. 101061023).
25. Vivona, R., Demircioglu, M. A., & Audretsch, D. B. (2023). The costs of collaborative innovation. *The Journal of Technology Transfer*, 48, 873–899. <https://doi.org/10.1007/s10961-022-09933-1>