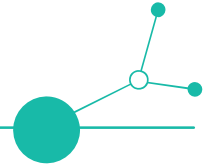


BEST PRACTICES AND LOGISTICS SOLUTIONS OF AFNs IN ITALY

Short report summary





Food4CE

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1. Executive summary

This report analyses **six best practice cases** and **logistics solutions** within Alternative Food Networks (AFNs) in **Italian region Emilia-Romagna**, with a focus on key aspects such as **sustainability**, **digitalization**, **transparency**, **local focus**, and **advanced logistics**. The analysis was carried out with the help of an Excel tool that was also developed as part of the Food4CE project.

Alternative Food Networks (AFNs) play a crucial role in connecting local food producers, consumers, and key stakeholders, such as resellers and logistics providers, serving as driving forces behind Short Food Supply Chains (SFSCs). Among these, certain best practice cases stand out for their innovative approaches and significant impact. These pioneering AFNs set new standards and have often developed exemplary logistics solutions—encompassing processes, technologies, use cases, and business models—that can be adopted by other AFNs, either directly or in an adapted form. These solutions focus on **critical areas** such as **warehousing**, **transportation**, **logistics processes**, and **IT applications in logistics**. By sharing and disseminating these best practices, pioneering AFNs inspire others to explore new or alternative approaches while helping them develop tailored solutions to their specific logistics challenges.

Overall, **Italian AFNs demonstrate high levels of transparency and local focus**, suggesting that ethical practices and regional food systems are priorities. **Sustainability initiatives**, such as organic farming, reduced packaging, and short food supply chains, **are well established**.

Despite this, **digital tools for traceability and online shopping, as well as sustainable logistical solutions like electric vehicles and optimized transport, remain underdeveloped**. Currently, most AFNs manage their own deliveries, primarily using vans and trucks, with limited access to large-scale warehousing or advanced packaging systems. This decentralised approach, while environmentally conscious for production, oversees the sustainability of logistics, and limits scalability and efficiency, particularly for perishable goods. Greater investment in digital infrastructure and logistical capacity could enhance operational efficiency and competitiveness.

In summary, Italian AFNs excel in transparency, and fostering local networks, but require targeted support in digitalisation and sustainable logistics to sustain growth and competitiveness. Addressing these gaps through innovation and collaboration will ensure the continued success and resilience of Italy's alternative food networks.

About the Food4CE project

Food4CE is a European project funded by the INTERREG Central Europe Programme, aimed at supporting Alternative Food Networks (AFNs) in their efforts to create sustainable and resilient food supply systems. Within Food4CE, 5 local and 1 Transnational Innovation Hub (IH) will be established and will focus on advancing AFNs logistics efficiency through the development of innovative tools and solutions. Two innovative tools, the Knowledge Transfer Platform (KTP) and the Matchmaking Platform (MP) will be developed within the project. The former is intended for sharing logistics best practices and solutions, while the latter is intended for creating new B2B logistics solutions and services. These tools will facilitate knowledge exchange across regions, creating a strong support network for AFNs in Central Europe.

Food4CE will also provide jointly developed regional action plans for each participating region and transnational (CE) policy guidelines for AFN support. The project aims to establish a sustainable and lasting AFN support mechanism, which will continue working even after the project end. By integrating local and transnational Innovation Hubs with cutting-edge tools and strategies, the project seeks to establish a long-term support framework that will continue to drive collaboration and innovation beyond its completion.



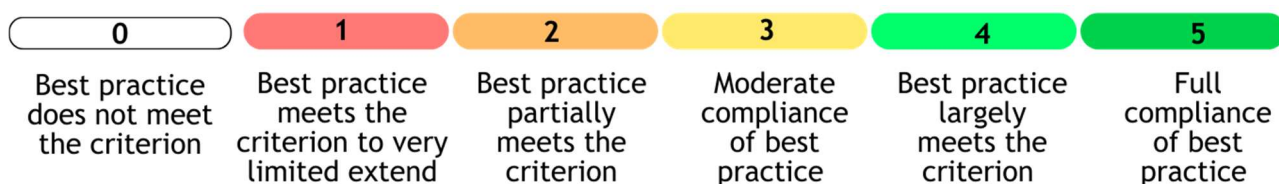
2. Tool for best practice assessment

The best practice assessment was carried out using a **specialized tool for mapping best practices and logistics solutions** developed within the project. This tool can also serve as a self-assessment resource for AFNs and other stakeholders.

Using this tool, each potential best practice AFN was evaluated based on the extent to which it fulfils key criteria, including **advanced logistics, digitalization, local focus, sustainability, and transparency**. Each of these criteria encompasses multiple aspects:

- **Advanced logistics** refers to the efficiency and organization of logistics operations within AFNs, such as offering multiple delivery options for customers.
- **Digitalization** focuses on comprehensive information flow along the supply chain, including user-friendly shopping experiences.
- **Local focus** reflects an organization’s commitment to its regional identity, demonstrated through strong ties with local institutions and stakeholders.
- **Sustainability** addresses environmental, economic, and social aspects, such as a focus on organic farming, carbon footprint reduction, and fair-trade practices.
- **Transparency** ensures trust through clear and verifiable measures, such as food certifications and quality seals.

Each AFN was evaluated against these criteria using a **0 to 5 rating scale**, where **0** indicates that the best practice does not meet the criterion, **1** means it meets the criterion to very limited extend, **2** means it partially meets the criterion, **3** signifies moderate compliance, **4** indicates that it largely meets the criterion, and **5** represents full compliance.



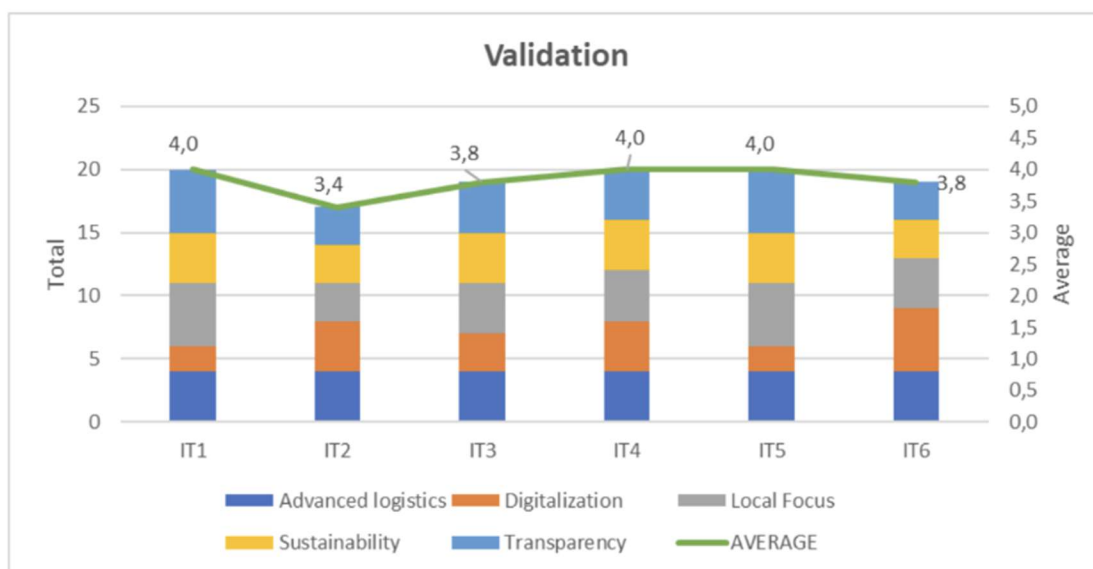
To provide a simplified comparison, the **average score** for each AFN was calculated and plotted as a line on the graph, showing overall performance across the different criteria. Only AFNs with an average score **higher than 3** (above the average) **qualify as best practice AFNs**.



3. Best practices and logistics solutions

Looking into overall performance of six best practice cases in Italy (IT1 to IT6), across the different criteria, there seem to be some differences across the cases, especially concerning the level of digitalization.

However, overall, it is evident that local focus, advanced logistics and transparency score relatively well across all networks, suggesting that Italian AFNs prioritize ethical practices, environmental responsibility, and transparency. On the other hand, sustainability and digitalization tend to have lower scores, signalling that these are areas where improvement is still needed.



The detailed analysis of criteria's reveals that, there are several strengths and weaknesses among the Italian AFNs.

In terms of advanced logistics, the AFNs are simple but very effective, as they avoid packaging, coordinate for consolidation, and offer local consumers several distribution options, including box schemes. However, the logistics and transportation organization they have is not sustainable, being strongly reliant on fossil fuels, driving down the sustainability of their logistics activities.

Sustainability is a complex dimension for Italian AFNs, with farming practices being organic and ecological, whereas the economic sustainability and the footprint of transportation and logistics operations hinder the overall sustainability of the networks. Italian AFNs are very young and sometimes struggling financially.

Another strength of Italian AFNs is the local focus, driven by social and community building, the high share of local products, links with the citizens and civil society organizations. In particular, their models (CSAs, food-coops, peasant networks with Participatory Guarantee Systems) are the result of strong connection between consumers and producers. Yet, room for improvement can be found in the fairness towards suppliers and customers.

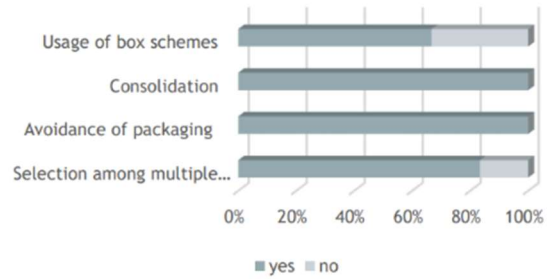
Two areas where improvement is more necessary are transparency and digitalization. In particular, the traceability of imported good is an issue for the overall transparency of the networks. The introduction of digital traceability tools, the development and improvement of online shopping tools and digital platforms could foster the overall sustainability of the AFNs.

In conclusion, the local focus, sustainable farming practices, and trust in the networks could be the starting point for the energy and digital transition necessary for making the logistics of Italian AFNs more sustainable economically and ecologically.



ASSESSMENT OF BEST PRACTICE CRITERIA (in detail)

BP AFN Italy - Advanced logistics



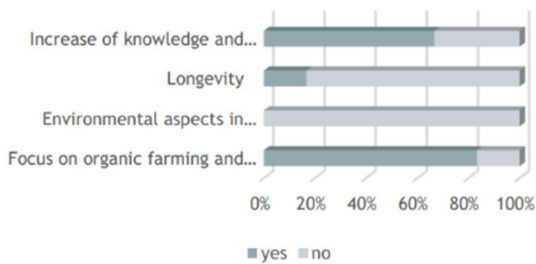
BP AFN Italy - Digitalization



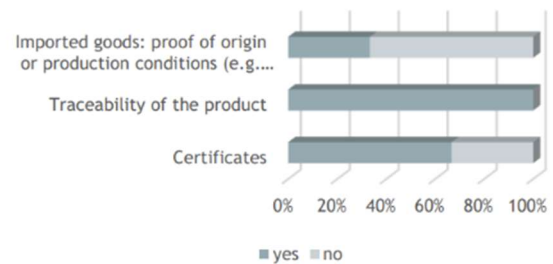
BP AFN Italy - Local focus



BP AFN Italy - Sustainability



BP AFN Italy - Transparency





4. Conclusion

Italian Alternative Food Networks (AFNs) demonstrate strong commitments to **transparency**, and **local focus**, making them key players in promoting ethical and community-based food systems. Their operations are largely structured around short supply chains, reducing food miles and fostering direct relationships between producers and consumers. Models such as **Community Supported Agriculture (CSA)** and **food cooperatives** are widespread, ensuring fair pricing, participatory decision-making, and consumer engagement. Additionally, initiatives like **Participatory Guarantee Systems (PGS)** and community-led verification schemes reinforce trust and accountability within these networks.

However, despite their strengths in sustainable production and ethical sourcing, Italian AFNs face **challenges in logistics and digitalization** that hinder their scalability and long-term efficiency.

To overcome these challenges, several key areas require improvement:

- **Sustainability** is a core principle of Italian AFNs, with most networks emphasizing organic farming, minimal packaging, and environmentally responsible sourcing. **Many AFNs actively avoid packaging**, and when necessary, **they use eco-friendly materials**. While sustainability is well integrated into production, **logistical aspects, including transportation and warehousing, still need improvements** to reduce environmental impact further.
- **Logistics** remains a major area for development, as **most AFNs handle their own distribution with conventional vans and trucks**. There is limited infrastructure for shared transportation or warehousing solutions, making it difficult to optimize delivery routes, reduce emissions, and improve overall efficiency. Unlike in some other European countries, the adoption of alternative fuel vehicles, cargo bikes, or consolidated delivery networks is still in its early stages in Italy. This gap highlights the **need for investment in sustainable logistics** to enhance both economic and environmental performance.
- **Digitalization** is another critical challenge, as **many AFNs lack the technological tools** necessary to streamline operations and expand their market reach. Online shopping platforms and traceability tools are underutilized, limiting consumer access and efficiency in supply chain management. **Improving digital infrastructure** could help AFNs manage inventory, optimize deliveries, and provide better transparency for consumers. **Investing in user-friendly websites, digital payment systems, and online ordering platforms** would not only enhance customer engagement but also support the overall sustainability and competitiveness of these networks.

Despite these challenges, Italian AFNs benefit from **strong community engagement and participatory governance**, which contribute to their resilience and long-term success. Local networks, cooperatives, and direct producer-consumer relationships foster trust and ensure that ethical values remain central to operations. By strengthening collaboration among AFNs and leveraging policy support, these networks can address logistical and technological gaps while maintaining their core sustainability principles.

In conclusion, Italian AFNs play a crucial role in promoting sustainable and ethical food systems but require targeted support to overcome logistical and digitalization challenges. Investments in sustainable transport, shared warehousing, and digital tools will be essential for enhancing efficiency, scalability, and environmental performance. By fostering innovation and collaboration, Italian AFNs can continue to grow while staying true to their mission of providing fair, local, and sustainable food to communities.