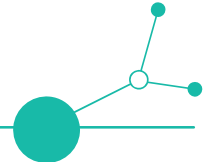


BEST PRACTICES AND LOGISTICS SOLUTIONS OF AFNs IN HUNGARY

Short report summary





Food4CE

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1. Executive summary

This report analyses **five best practice cases** and **logistics solutions** within Alternative Food Networks (AFNs) in **Hungary**, 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.

The study highlights that **Hungarian Alternative Food Networks (AFNs) excel in prioritizing local engagement and sustainability**, demonstrating strong practices in waste reduction, eco-friendly packaging, and energy-efficient logistics. However, **challenges** persist in areas such as **transparency**, **advanced logistics**, and **digitalization**.

To enhance resilience and sustainability, the study emphasizes the **need for greater operational transparency**, the **adoption of advanced logistics solutions**, and the **integration of digital tools** for improved traceability and data management. These insights not only support the development of Hungarian AFNs but also provide valuable lessons for other regions aiming to establish robust and sustainable food systems.

The study concludes by **stressing the importance of collaboration, innovation, and education** to address existing challenges while strengthening the sector's current achievements.

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.



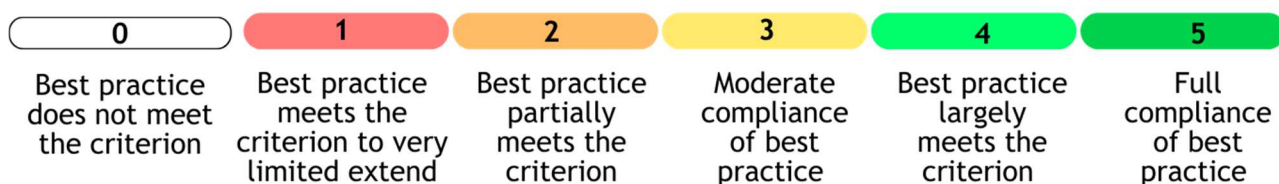
2. Tool for best practice assessment

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.

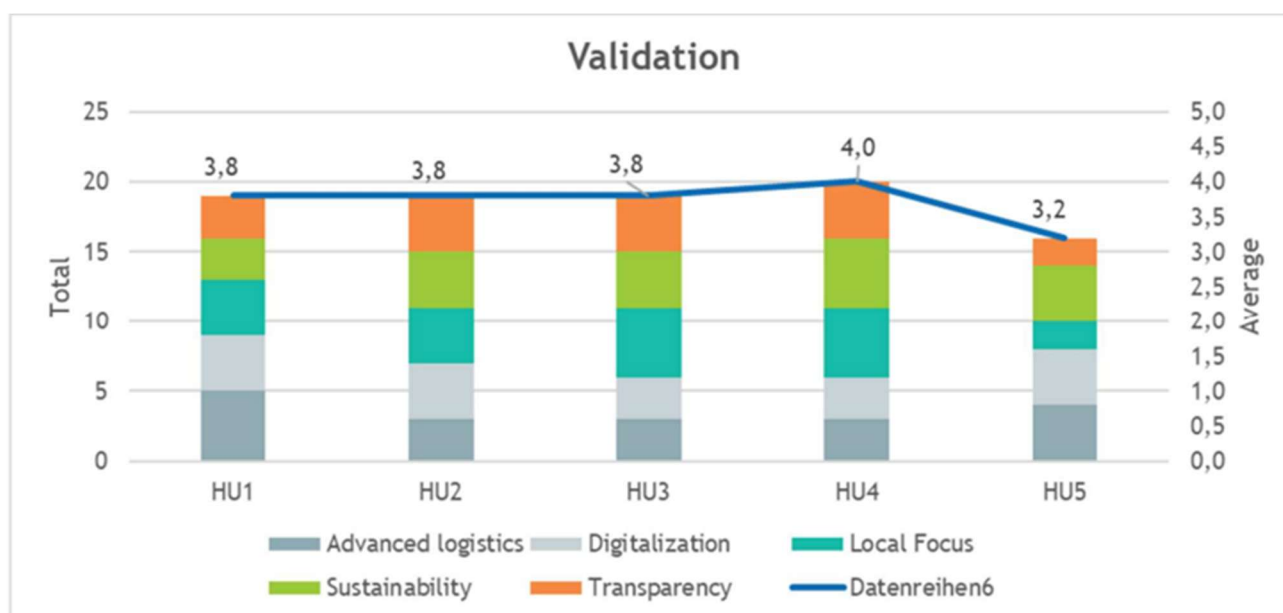


To provide a simplified comparison, the **average score** for each AFN was calculated and plotted as a line on the graph, showing overall performance across the different criteria. Only AFNs with an average score **higher than 3** (above the average) **qualify as best practice AFNs**.



3. Best practices and logistics solutions

An evaluation of the **five best practice cases of Alternative Food Networks (AFNs) in Hungary (HU1 - HU5)** across key criteria revealed **distinct performance trends**. **Local focus** and **sustainability** ranked highest, while **digitalization** and **advanced Logistics** followed closely. **Transparency**, however, had the lowest average score at primarily due to the weaker performance of HU5, which significantly lowered the overall rating in this category. In contrast, **local focus** remained strong across the other four AFNs, maintaining its high average despite HU 5's lower score.



These results highlight **key areas for improvement**, particularly in **transparency, logistics, and digitalization**, which, despite moderate scores, still exhibit weaknesses. The findings emphasize the need for AFNs to strengthen transparency efforts and enhance logistics and digital integration. Moving forward, future projects should prioritize these weaker areas to ensure a more balanced and resilient food network system.

The **logistics and warehousing strategies** of the five surveyed Alternative Food Networks (AFNs) demonstrate varying levels of development and efficiency. Four out of five AFNs **combine in-house deliveries with outsourcing**, allowing them to maintain control over local distribution while delegating more complex or long-distance deliveries. In contrast, HU5 **handles all deliveries independently**, without outsourcing.

Regarding **transportation, vans are the most used delivery vehicles**, employed by four AFNs. Additional transport modes e.g. bicycles, cars, trucks, and motorcycles are used by one AFN each. **Three AFNs utilize two types of transport, while the remaining two rely exclusively on either a car or a van.**

In **warehousing, four AFNs operate their own storage facilities** without outsourcing. More advanced AFNs tend to employ a greater variety of storage solutions. **Shelf storage** is universally used, while three also incorporate **pallet storage**. Common warehousing tools include **carts and lifting devices**, while the most advanced AFNs also utilize **forklifts and conveyors**. For internal transport, **euro pallets and boxes** are standard. Regarding order **picking**, three AFNs use single-order, paper-based picking, whereas the most



advanced one employs batch, scan-based picking. **Storage solutions** include traditional, refrigerated, and frozen storage, with some AFNs utilizing multiple types.

AFNs also emphasize **sustainable packaging practices** by minimizing packaging waste. One AFN operates as a **fully packaging-free store**, requiring customers to bring their own containers for purchases and utilizing **deposit-paid or recyclable paper and glass packaging** for deliveries. **Three AFNs prioritize reverse logistics**, actively organizing the return and recycling of packaging materials.

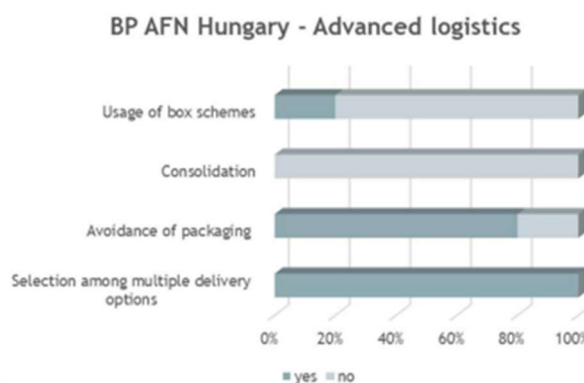
These findings highlight the adaptability of AFNs in logistics and warehousing, with **more advanced networks leveraging diverse transportation, storage, and packaging strategies** to enhance efficiency and sustainability.

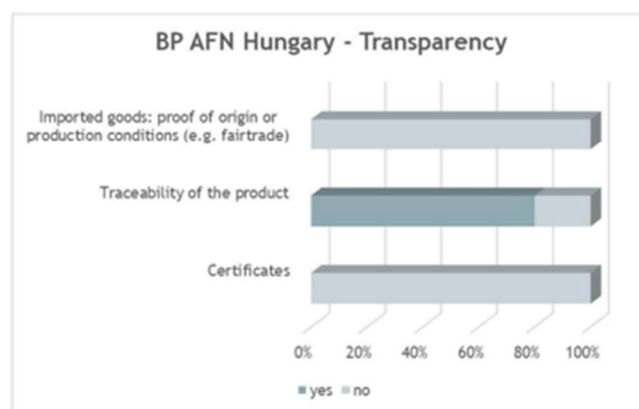
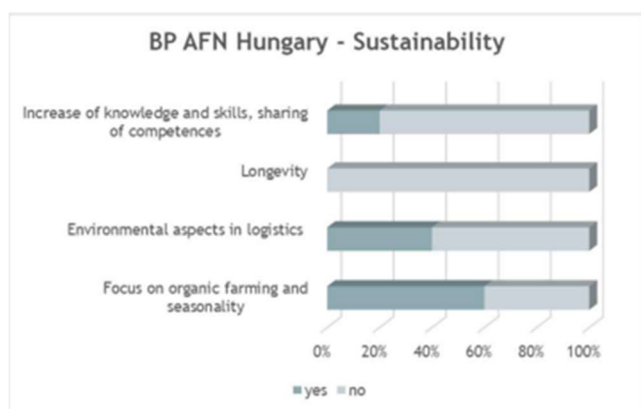
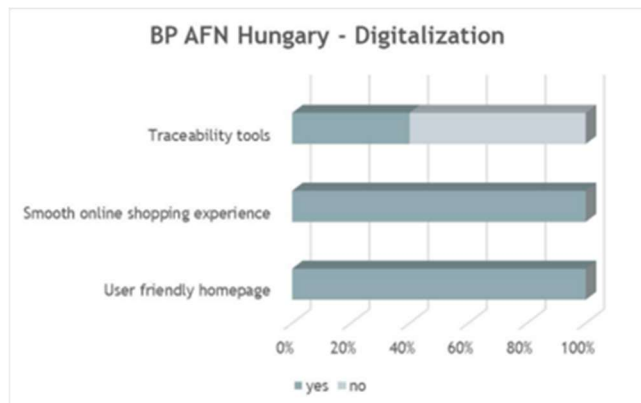
The graphs indicate that while Alternative Food Networks (AFNs) in Hungary perform well in several areas, **there is still room for improvement regarding Best Practice criteria**. **Digitalization** is relatively advanced, and **product traceability** is strong, though not all networks have fully developed traceability tools. **Logistics operations** are generally well-developed, despite some gaps in **consolidation**. However, positive practices such as **minimizing unnecessary packaging** and offering **multiple delivery options** are evident. The **box scheme** is gaining popularity, though it is not as established in Hungary as it is in Austria.

The **focus on local products** is commendable, yet AFNs could further strengthen **collaboration with local organizations** and enhance **fairness in supplier and customer relations**. While certifications are not common among the AFNs studied, their absence does not necessarily indicate poor quality or failure to meet standards. Additionally, since these AFNs typically **do not market imported products**, proof of origin for such goods is generally irrelevant.

In terms of **sustainability**, there is a **need for greater emphasis on environmental responsibility**. Furthermore, Hungarian AFNs **lack strong initiatives in knowledge-sharing, skill development, and competence building**, areas that could benefit from further investment and focus.

ASSESSMENT OF
BEST PRACTICE CRITERIA
(in detail)





The five surveyed Alternative Food Networks (AFNs) employ a **combination of general best practices, technological advancements, and sustainability initiatives** to drive their success. Maintaining **product quality and freshness** is a top priority, achieved through **strict supplier selection, proper storage and temperature control, just-in-time production, employee training, consumer engagement, and robust traceability measures**.

Technology plays a crucial role in optimizing operations and enhancing transparency. AFNs utilize **warehouse and transport management systems**, employ **ordering platforms** such as instant messaging apps, QR codes, and online systems, and implement **traceability technologies** like RFID, supplier audits, and internal controls to ensure supply chain visibility.

Sustainability is a core focus, with efforts directed at **waste reduction, energy-efficient technologies, sustainable procurement, water conservation, and carbon footprint reduction**. Additionally, AFNs are actively transitioning to **eco-friendly packaging materials** to minimize environmental impact.

Each AFN takes a unique, tailored approach to balancing **operational efficiency, environmental responsibility, and customer satisfaction**, ensuring long-term growth and relevance in the evolving food network landscape.



4. Conclusion

The research highlights the strengths, challenges, and opportunities for Alternative Food Networks (AFNs) in Hungary, with a focus on best practices and logistics solutions.

- The findings indicate that **Hungarian AFNs excel in sustainability efforts**, including **waste reduction, eco-friendly packaging, and energy-efficient logistics**. Additionally, AFNs employ a mix of **in-house and outsourced deliveries, diverse transportation methods, and sustainable warehousing practices** to enhance efficiency and product quality.
- However, **challenges persist, particularly in transparency, advanced logistics, and digitalization**. While digitalization efforts are progressing, **traceability tools and logistics consolidation** remain areas for improvement. Additionally, there is a **need for greater emphasis on environmental responsibility, collaboration with local organizations, and knowledge-sharing initiatives** to strengthen competence building and fair supplier-consumer relations.
- Moving forward, **Hungarian AFNs should focus on improving traceability, expanding digital integration, and fostering greater collaboration** within the sector. Strengthening policy support, investing in logistics infrastructure, and enhancing consumer awareness campaigns will be crucial for long-term growth. By addressing these areas, AFNs can continue to play a vital role in promoting sustainable, resilient, and locally focused food systems in Hungary and beyond.