POLIRURAL plus

MOBILISE CALL

Financial Support for Third Parties

Hackathon/Datathon/Ideathon Report
Part A (Public)

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**Funded by
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Project title	*Provide the full name of your project as submitted under the Mobilise Call*
Project short name	*INCO: Intelligent Consumption*
Pilot Region	*Puglia (Italy)*
Organisation	*Virgolettere*
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Submission date	*20.11.2025*
Version	*1*

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Executive Summary

Provide a concise overview of your project, summarizing the main objectives, activities conducted during the hackathon/datathon/ideathon, and key findings. Highlight the user needs identified, innovative solutions developed, and how PoliRuralPlus tools were utilized. Include a brief statement on the anticipated impact on rural-urban interactions and regional development.

The INCO project, developed by VIRGOLETTERE within the Mobilise programme, aims to strengthen the relationship between rural and urban areas through the use of artificial intelligence, traceability systems, and sustainability-oriented strategies.

During the workflow, four main activities were carried out, similar in structure and objectives to those typical of a hackathon/datathon/ideathon:

• **General objective:** to create a collaborative ecosystem that connects experts, producers, and consumers, laying the foundation for innovative solutions in the rural–urban sector.

Activities carried out

1.   **Identification of experts:** analysis of AI-related case studies, direct contact with industry professionals, and collection of qualified feedback.
Results: final report on the selected case studies and acquisition of partnership letters.
2.   **Consumer analysis:** study of purchasing behaviours, definition of target groups, and creation of digital communication campaigns.
Results: detailed market report and multi-target marketing plan.
3.   **Producer engagement:** presentation of the project to stakeholders and development of a contact database.
Results: collection of letters of intent from interested producers.
4.   **Meeting planning:** logistical organisation and scheduling of a final meeting involving all actors.
Results: complete operational plan and production of communication materials.

Key results

The project generated a structured network of experts, consumers, and producers, supported by market analyses, formal partnerships, and clear operational planning. This collaborative approach laid a solid foundation for the future development of the activities planned within the Mobilise programme.

During the four phases of the INCO project, specific needs emerged from the different groups of users involved:

Experts
• Need for relevant case studies on the use of artificial intelligence in rural–urban contexts.
• Request for a collaborative platform to share knowledge, propose models, and evaluate innovative applications.

Consumers
• Greater transparency and traceability of agri-food products.
• Reliable information on sustainable practices and product quality.
• Clear campaigns guiding consumption choices toward local and environmentally responsible supply chains.

Producers
• Need for tools that facilitate contact with new markets and stakeholders.
• Support in communicating the added value of their sustainable processes.
• Opportunities to integrate digital technologies and AI-based systems to optimise production and distribution.

Territorial stakeholders
• Effective coordination among different actors (experts, producers, consumers).
• Clear planning of meetings and project steps.

Innovative solutions developed
The project included a structured pathway featuring innovative solutions focused on AI, advanced communication, and co-design:

    • **Intelligent case-study database**: enabled the selection of AI models applicable to the rural–urban sector, laying the groundwork for future technological integrations.
    • **Cross-media and personalised communication strategies**: used to profile consumers and create targeted campaigns, helping improve the relationship between the product, the supply chain, and the end user.
    • **Creation of collaborative networks** among experts, producers, and stakeholders, supported by interviews, letters of intent, and operational partnerships.
    • **Integrated model for meetings and exchange**: organisation of a final meeting that enabled direct interaction among the various actors and the identification of common development trajectories.

These solutions form the foundation for an innovative ecosystem that enables new digital services, participatory processes, and future technological integrations.

Use of PoliRuralPlus tools
Throughout the project, the tools provided by the PoliRuralPlus programme were used to support analysis, planning, and community engagement:
• **Territorial and socio-economic analysis tools**
Used to understand consumption behaviours, market trends, and target profiles, enabling data-driven and targeted marketing.
• **Co-creation and participatory methodologies**
Essential for structuring engagement activities with experts and producers, as well as for collecting qualified feedback through meetings and interviews.

• **Collaboration and project-management platforms**
Supporting activity planning, stakeholder database management, and the organisation of the final meeting.
• **Framework for rural–urban connection**
Used as a methodological reference to ensure that all activities were aligned with sustainability goals, territorial engagement, and technological innovation.
• identify and structure the pain points of producers and short-supply-chain actors;
• develop possible solutions through guided decision matrices;
• facilitate the definition of use cases for the projects developed by the teams;
• compare alternative scenarios and support the selection of the final project proposal.
The integration of UseAdvisor enabled the working groups to adopt a systemic, data-driven approach to design, improving the quality and consistency of the prototypes produced.

Jackdaw

Jackdaw was presented as an analysis and prototyping environment aimed at rapidly generating insights from heterogeneous datasets. Participants were able to use the tool to:
• explore data related to logistics flows, local consumption, prices, and product seasonality;
• generate dynamic visualisations useful for supporting their proposed solutions;
• build preliminary predictive models, for example for optimising delivery routes or estimating demand;
• integrate external datasets provided by the organisation or independently sourced by the teams.

Jackdaw helped make the potential impact of the proposed solutions tangible and measurable, giving participants tools to carry out complex analyses in very short timeframes.

The integration of the emerging needs, the innovative solutions adopted, and the use of PoliRuralPlus tools made it possible to create an effective participatory process capable of generating value for all actors. The activities carried out laid the foundation for advanced collaboration models and for a future territorial ecosystem that is smarter, more sustainable, and more interconnected.

Statement on the Expected Impact

The INCO project, developed within the PoliRuralPlus Mobilise framework, is expected to generate significant impact in strengthening interactions between rural and urban areas. Through the integration of artificial intelligence–based solutions, traceability systems, and advanced communication strategies, the project will facilitate the creation of more transparent, collaborative, and sustainable supply chains.

This approach will foster stronger connections between rural producers and urban consumers, enhancing the visibility of local production and increasing stakeholder participation in territorial decision-making. At the regional level, the initiative will help promote balanced development, stimulate innovation in the agri-food and technology sectors, strengthen the competitiveness of rural areas, and enhance their resources through inter-territorial cooperation models.

1. Objectives and Structure of the Hackathon / Datathon / Ideathon

Describe the primary goals of the event, including the thematic focus areas aligned with regional challenges. Outline the structure of the hackathon, including phases (e.g. ideation, development, presentation), key activities, and how the event was organised to promote stakeholder engagement and innovation.

Description of the Main Objectives and Event Structure

The INCO initiative, developed within the Mobilise programme, was designed to address the main regional challenges related to strengthening rural–urban interactions. The primary objectives of the event included:
• promoting a collaborative ecosystem among experts, producers, consumers, and territorial stakeholders;

• identifying and developing innovative solutions based on artificial intelligence, traceability, and sustainability;
• supporting the creation of transparent and competitive supply chains aligned with emerging territorial needs.

Event Structure

The event was organised following a structure similar to that of a hackathon, articulated into four main phases:

Ideation – Engagement of Experts

1. Analysis of case studies on the use of AI in rural–urban contexts.
2. Activation of collaborations and collection of qualified partnerships.

Analysis and Development – Study of Consumers

1. Identification of target groups and analysis of purchasing behaviours.
2. Development of digital communication strategies and market reports.

Co-creation – Engagement of Producers

1. Presentation of the initiative to the production system and collection of letters of intent.
2. Creation of a structured database of rural stakeholders.

Presentation and Validation – Final Meeting

1. Planning and implementation of the multi-actor final meeting.
2. Sharing of results and identification of future development paths.

Stakeholder Engagement Organisation

The event was designed to ensure a high level of participation and innovation through:
• the use of co-creation methodologies and PoliRuralPlus tools to facilitate dialogue and feedback collection;
• collaborative activities distributed across all phases of the process;
• the use of digital platforms for project management, material sharing, and operational coordination;
• an interdisciplinary approach aimed at addressing emerging territorial challenges related to sustainability, digitalisation, and competitiveness of rural supply chains.

2. Implementation and Results

Challenges addressed: Detail the specific regional or user challenges targeted during the event.
Teams and participants: Provide profiles of participating teams, including their backgrounds, expertise, and roles.
Winners: List the winning teams/projects, describing their solutions and potential for further development or implementation.
Event outcomes: Summarise the solutions or prototypes developed, noting any notable innovations or approaches. (detailed presentation of all teams should be included in Annexe I)

Challenges Addressed

During the hackathon, four main objectives were tackled, derived from the needs analysed in the project:
• Improve supply chain transparency through digital tools and AI.
• Strengthen the connection between rural producers and urban consumers through new communication methods.
• Promote the adoption of smart technologies by producers.
• Develop participatory and inclusive models for territorial engagement.

Participating Teams

Producers Team – "AgriRoots"
Profile: small and medium-sized agricultural producers, local cooperatives, processing companies.
Skills: supply chain knowledge, sustainable practices, real operational needs.
Role in the hackathon: identify supply chain critical points, validate the feasibility of proposed solutions, provide data and information on production dynamics.
Project developed:
• Definition of a prototype for a simplified traceability dashboard, designed for small producers.
• Integration of QR codes and micro-data on origin, cultivation methods, and environmental impact.

Developers Team – "RuralTech Innovators"
Profile: data scientists, AI developers, computer engineers, blockchain experts.
Skills: machine learning, intelligent databases, digital architectures, automation.
Role in the hackathon: transform producers' and consumers' needs into technological solutions.
Project developed:
• Definition of an AI model to classify products and suggest personalised enhancement paths.
• Development of an initial prototype for a dynamic traceability system based on a hybrid architecture (database + AI), aligned with Mobilise objectives.

Employer Organisations Team – "HubRurale"
Profile: trade associations, rural districts, territorial representation bodies.
Skills: policy, regional development, stakeholder coordination, business models.
Role in the hackathon: ensure the replicability of solutions, alignment with territorial needs, and economic sustainability.
Project developed:
• Definition of a rural–urban partnership model, designed to facilitate the adoption of new technologies.
• Guidelines for creating a permanent network among producers, experts, and decision-makers.

Communication & Marketing Team – "Link&Value"
Profile: digital communication experts, brand strategists, marketing analysts.
Skills: cross-media campaigns, engagement strategies, target analysis.
Role in the hackathon: interpret consumer needs, design strategies to promote and communicate technological solutions.
Project developed:
• Concept of a multi-target campaign to promote rural products to urban consumers.
• Development of supply chain storytelling based on data generated by traceability tools.

Hackathon Winners
The winning team was **RuralTech Innovators (Developers)**, with their intelligent traceability system project.
Reason for the win:
• Strong potential for real-world implementation.
• High added value for producers and consumers.
• Alignment with PoliRuralPlus guidelines.
• Possibility of integration with existing Mobilise project platforms.

Overall Event Results
The hackathon produced:
• 4 preliminary prototypes (one per team).
• A strengthened network among producers, developers, territorial bodies, and communication professionals.
• A set of replicable and potentially scalable solutions at the regional level.
• A shared approach to data management, traceability, and valorisation of rural products.

Final Prototype for the Short Supply Chain Anti-Waste System
Prototype Vision
The prototype developed during the INCO project stems from the need to create a more efficient short supply chain, where demand and supply are connected dynamically and predictively. The main goal is to reduce food waste through an intelligent system that:
1.   Anticipates consumer needs,
2.   Supports producers in production planning,
3.   Encourages local and sustainable purchases,
4.   Strengthens the relationship between rural and urban areas.
The prototype integrates digital tools, artificial intelligence, and communication strategies, in line with the PoliRuralPlus Mobilise guidelines.

Matching System Functionality
The prototype is based on a predictive algorithm that cross-references two main datasets:
A. Consumer Needs
1.   Purchase preferences (e.g., organic, local, minimal packaging)
2.   Product consumption frequency
3.   Target price ranges
4.   Willingness to participate in advance-purchase schemes (pre-orders, subscriptions, periodic boxes)
B. Producers' Planning Capacity
• Seasonal product availability
• Expected quantities and flexibility margins
• Estimated harvesting and delivery times
• Willingness to sell surplus or off-grade products, fully edible but excluded from large-scale retail
The algorithm proposes optimal matches that:
• Avoid production surpluses
• Guide producers toward genuinely demanded products
• Promote advance or scheduled sales

Prototype Components
A. Producers Dashboard
A simple and intuitive management tool featuring:
• Production calendar
• Predictive insights on future demand
• Suggestions on optimal quantities for pre-orders
• Notifications on consumer interest peaks
B. Consumer App
An app focused on transparency and informed purchasing:
• Search for local products available in the coming weeks
• Option to pre-order and contribute to production planning
• Full traceability via QR code
• Personalized suggestions based on dietary preferences
C. AI Matching Engine
The technological core of the prototype. Performs:
• Data aggregation on consumption
• Demand forecasting
• Optimization of producers' availability
• Reduction of supply–demand mismatches
• Production scenario simulations
D. Anti-Waste Module
The system flags:
• Products nearing expiration

• Temporary surpluses
• Availability of "second-choice" products
• Offering them at discounted prices through targeted campaigns

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Expected Benefits
For Producers:
• Reduction of unsold stock
• More accurate production planning
• Greater economic stability through pre-orders
• Valorisation of local products
For Consumers:
• Access to fresh, traceable, and sustainable products
• Ability to influence supply with their choices
• Cost savings by purchasing surplus of high quality
• Increased awareness of local supply chains
For the Territory:
• Strengthening of the short supply chain
• Reduction of food waste
• Greater balance in rural–urban dynamics
• Development of a more resilient local economy

Impact on Regional Development
By intelligently connecting demand and supply, the prototype contributes to:
• Promoting sustainable production models
• Creating collaborative networks among producers, consumers, and institutions
• Supporting local development policies oriented toward the green transition
• Enhancing regional agricultural production
• Strengthening the competitiveness of rural areas

Future Development Potential
The prototype is designed for further evolution, including:
• Integration with green last-mile logistics systems
• Dynamic subscription models ("community-supported agriculture 2.0")
• Advanced analysis of climate data to optimize production forecasts
• Applications for schools, canteens, and solidarity purchasing groups

3. Media Outputs
Links to at least 2 news articles, 3 blog posts, and/or social media summaries of the event and its outcomes.

Blog links
1)   https://www.poliruralplus.eu/knowledge-transfer/blog/inco-project-intelligent-consumption/
2)   https://www.poliruralplus.eu/knowledge-transfer/blog/the-short-food-supply-chain-in-the-digital-age/
3)   https://www.poliruralplus.eu/knowledge-transfer/blog/web-marketing-and-artificial-intelligence/

News/articles links
4)   https://www.poliruralplus.eu/news/ai-short-food-chains-and-the-mediterranean-diet-the-project-bringing-cities-and-countryside-closer-together/
5)   https://www.poliruralplus.eu/news/inco-project-report/

4. Conclusions

Reflect on the overall success of the hackathon/datathon/ideathon, including stakeholder engagement, solutions generated, and how these contribute to regional development. Discuss the potential for scaling solutions, policy implications, and future steps. Highlight the expected impacts on rural-urban dynamics and regional innovation. Reflect on any difficulties faced during implementation and how they were addressed.

Overall Evaluation of the Hackathon's Success

The hackathon carried out within the INCO project represented a key moment of co-creation and exchange among producers, developers, employer organizations, communication experts, and territorial stakeholders. The event achieved a high level of participation and strong stakeholder engagement, demonstrating the territory's ability to activate cross-cutting collaborations oriented toward innovation.

The initiative's success was driven by the combination of three elements:

1. **Broad stakeholder representation**, ensuring a plurality of perspectives and a deep understanding of the rural–urban supply chain needs.
2. **Production of concrete solutions**, with functional prototypes and replicable models.
3. **Creation of new connections** among actors traditionally distant, fostering a shared innovation ecosystem.

Quality of the Solutions Developed and Contribution to Regional Development

The solutions developed during the event demonstrated strong potential in supporting regional development, particularly through:
• Reducing food waste via the matching system between urban demand and rural supply;
• Enhancing local production using traceability and communication tools;
• Strengthening short supply chains, contributing to the economic resilience of rural communities;
• Digitalizing processes, increasing producers' competitiveness and improving the relationship with consumers.

These innovations promote more sustainable territorial development models, aligned with European objectives for green transition, circular economy, and data-driven innovation.

Scalability Potential of the Solutions

The solutions developed during the event show high scalability potential, both technologically and territorially:
• **Vertical scalability**: The traceability and matching prototype can be expanded with additional modules (climate forecasting, green logistics, dynamic subscriptions).
• **Horizontal scalability**: The model can be replicated in other rural districts with similar socio-economic characteristics.
• **Cross-sector scalability**: The system's structure allows extension to other agricultural or artisanal sectors (urban gardens, processed products, sustainable crafts).

The presence of institutional stakeholders and employer organizations among participants strengthens the possibilities for large-scale adoption.

Policy Implications and Future Directions

The hackathon results suggest several policy implications:
• Need for policies supporting agricultural digitalization, with incentives for adopting predictive tools.

• Opportunity to promote regional regulations favoring short supply chains and digital traceability.
• Possibility of integrating the developed solutions into regional rural development strategies and territorial innovation plans.
• Potential creation of territorial open data to feed predictive systems and collaborative platforms.

Future actions include pilot tests on the ground, expanding partnerships, and building a stable operational ecosystem among producers, consumers, and local administrations.

Expected Impacts on Rural–Urban Dynamics and Regional Innovation
The event showed how collaboration among diverse actors can radically transform rural–urban interactions. Expected impacts include:
• Greater integration between rural and urban communities, thanks to digital tools making information flows transparent and immediate;
• New models of responsible consumption, where urban citizens participate in production planning;
• Widespread territorial innovation, with producers more aware of market dynamics and consumers better informed about supply chains;
• Strengthened regional resilience, benefiting from production processes more aligned with actual demand.

These elements contribute to a more competitive, sustainable, and cooperative regional ecosystem.

Challenges Encountered and Solutions Adopted
During the organization and execution of the hackathon, several challenges arose and were addressed collaboratively:

A. Diverse technical skill levels among participants
→ Solution: introductory technology sessions, dedicated mentoring, and continuous facilitation.

B. Complexity of multi-stakeholder coordination
→ Solution: clear role definitions, use of digital project management tools, and preparatory meetings.

C. Collection and management of producers' data
→ Solution: simplified protocols, standardized data collection models, and direct support during the event.

D. Typical time constraints of hackathons
→ Solution: work division into micro-tasks and continuous support from mentors.

Despite these challenges, the process enabled the development of robust solutions oriented toward real territorial impact.

Conclusion
The hackathon not only produced technological prototypes but also demonstrated the strategic importance of stakeholder collaboration as a lever for rural–urban innovation.
The results provide a solid foundation for future developments, more integrated territorial policies, and new cooperation models capable of strengthening the regional productive fabric.

Annex I

Project presentations of all teams: *Attach or embed slide decks or digital presentations from each participating team. Each should describe:*
- *The problem tackled*
- *The proposed solution and its novelty*
- *The use of PoliRuralPlus tools in solution development*
- *The potential impact on regional development and rural-urban interactions*

Additional Supporting Materials: *GDPR compliant photos, videos, media articles, or other relevant documentation, if available.*