THE INTEGRATED WEB PORTAL 'LACUCINACAMPANA.IT' FOR RURAL DEVELOPMENT: AN EVOLVING PROJECT*

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Abstract. Rural areas in Italy account for more than 90% of the national land area: in many of them, which are mainly dedicated to agriculture, poor socio-economic development is causing depopulation phenomena, so new means must be sought to develop the agri-food sector. The study highlights the role of ICT in the development of rural areas, describing, in particular, the functions of an innovative web portal that promotes typical food and “food & wine” tourism. Case study. We describe the design of the new web portal 'lacucinacampana.it', relating to a southern Italian region (Campania), which is, however, exportable to any area wishing to promote agri-food products. The portal intends to offer in an integrated manner all contents related to typical food from Campania: food products with their suppliers, local dishes with the restaurateurs that offer them, associated places with their tourist attractions, itineraries, food and wine experiences. All content is available in 11 languages to expand the online market and facilitate foreign tourists in Italy. The portal promotes the sale of typical food products and wine and food tourism, which are fundamental levers for the development of rural areas. This study complements the modest literature on portals used for agricultural development. It can act as a driver for further developments in ICT technologies for agricultural development. The research highlights significant potential for gains for the suppliers registered for the portal, which should be brought to the attention of public policy and trade associations.

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**Introduction.** The potential and under-exploited resources of the enormous heritage of rural areas in Italy highlight the need to search for new innovative means for the socio-economic development of these areas, along two lines of action:

1) the development of the agri-food sector (which is the most widespread in these areas).

2) the development of tourism, especially food & wine tourism, which enhances the resources of these areas and in turn brings positive spin-offs to the agri-food sector.

It is also necessary to have a 'holistic' approach to the sustainable development of the territory, which actively involves the 'stakeholders' and local communities and tends to make the most of the territory's entire wealth of resources.

These new innovative means are to be sought above all in the field of ICT, so this study examines the contributions that can be made to the lines of development and the holistic approach by ICT infrastructures and services. The article uses the 'case study' method, presenting the innovative model of a new integrated web portal (www.lacucinacampana.it), which promotes above all typical food & wine products and food & wine tourism in the target territory. This Portal is focused on a southern Italian region (Campania), but its model is easily exportable to any other area of Italy or of the world.

The authors themselves (Lausi, Baldi & Migliaccio, 2023) had already demonstrated how such a portal meets all the requirements of food & wine tourists in Italy. This 'case study' also intends to demonstrate that the portal can effectively support the development of rural areas, promoting food & wine tourism, fostering the development of the agri-food sector, helping to counter depopulation and helping the community to have a 'holistic' approach to the sustainable development of the territory. These results can be extended generally to new ICT technologies (of which the web portal is a good example) and to other areas of the world (thanks to the easy exportability of the proposed model).

**Literature review.** The analysis of the proposed topic presupposes a review of the literature on two pivotal topics: the development of rural areas, including through wine and food tourism, and the use of new technologies that could provide necessary support for this objective.

The typical central theme of international studies on rural areas is the risk of depopulation, which would like to be tackled through various strategies to which different actors can contribute.

With specific reference to Italy, there is first of all the problem of safeguarding the territory which, due to its specific natural characteristics, could become an element of attraction if it is sufficiently enhanced, safeguarding its typical features and surviving architecture, especially where natural disasters have destroyed centuries of history, as in Amatrice (Porrovecchio, 2023).

Alongside the preservation of the territory and agricultural and agro-industrial traditions, a special importance could be given, especially in Italy, to the landscape, which certainly constitutes a basic element for attracting tourists (Agnoletti et al., 2011).

In Italy, and in some areas in particular, such as the Molise region (Mastronardi et al., 2017), a paradoxical situation often arises: there are wonderful landscapes that
are not developed touristically and, conversely, tourist flows are accentuated in areas where there is a lack of appreciable landscape quality.

Yet, the best doctrine holds that tourism development is the only therapy against the evident depopulation of areas rich in cultural, environmental, and historical resources. However, optimal results are not yet in sight, despite specific projects that have characterised some regions such as, for example, Sardinia (Lampreu, 2020) or Calabria (Verardi et al., 2023).

Tourism valorisation requires the contribution of various actors, such as first the regional offices and above all the municipalities and their consortia (Bassi & Carestiato, 2016), which have direct contact with the territories and are therefore better acquainted with the areas that could be suitably valorised. Relevant could also be the role of mountain communities and especially “Local Action Groups” (LAGs) that have demonstrated positive capacities in several European countries (Gargano, 2021).

The most recent principles of sustainability, however, seem to identify social innovation as a relevant tool for the enhancement of these areas (Torre et al., 2020; Navarro-Valverde, 2022): in particular, social agriculture (Elsen & Fazzi, 2021) and more generally the spread of social enterprises (Fazzi, 2021) would also seem to be an excellent tool against crime.

It must be considered that Italian rural society is still firmly anchored to traditional values, such as that of the family, which often contributes as a unit to the running of farms (De Rosa & Luca, 2016). More generally, intangible cultural heritage could be the strategic element for sustainable tourism development in rural areas (Cerquetti et al., 2022). Solidaristic principles could foster the effective realisation of the much sought-after sharing economy (Battino & Lampreu, 2019).

The fondness for tradition and its tourist enhancement, however, transits through the new digital technologies now widespread everywhere.

Indeed, it is impossible to think of food & wine tourism development outside the scope of new digital technologies (Tajeddini & Ratten, 2019; Duarte Santos & Lima Silva, 2019; Filieri, 2007). It represents a new form of web marketing (Cervi, 2009), which has already been experimented for boating (Benevolo & Morchio, 2015) and themed itineraries (Smiraglia & Diolaiuti, 2003).

In this respect, the specific topic 'tourism portals' has still received little attention from international scholars who have mainly focused on technological aspects (Shrestha et al., 2020; Darmawiguna et al., 2019), web page design (Ahmed & Amagoh, 2008) and text semantics (Jrai et al., 2007; Györkös & Leskovar, 2001; Ahmed et al., 2012).

The review of Latin American tourism web portals proposed by Altamirano et al. (2015), although dated, is useful.

This quick literature review highlights the need to valorise the resources of Italy's rural areas in order to foster their agri-tourism development through the use of an integrated web portal that meets all the needs of a potential modern tourist.

It is therefore necessary to answer some research questions:

RQ1: Can new ICT technologies effectively support the development of the agrifood sector in rural areas?
RQ2: Can new ICT technologies effectively promote food & wine tourism in rural areas?

RQ3: Can new ICT technologies provide an important contribution against the depopulation of rural areas?

RQ4: How a web portal could help the community to have a 'holistic' approach to the sustainable development of the territory?

A geophysical analysis of the Italian territory and the development policies adopted, together with the description of a specific company project, could provide adequate answers to these questions.

**Research methodology.** The case method is useful for teaching and research in business economics (Biancone, 2017; Turrini, 2002). It evaluates a concrete experience by assessing its potential economic and social effects.

The study of official documentation, the web portal and other qualitative information is also aimed at uncovering tacit corporate strategies not stated in official documents.

Following these brief methodological traits, we describe a web portal conceived with a view to sustainable digital tourism: focused on the characteristics of the Campania region, it could easily be exported elsewhere. Obviously, this description is preceded by a detailed analysis of the context in which it is applied.

**Rural areas and food & wine tourism in Italy.** “Rural areas” in Italy are very widespread, and are generally made up of small, variously distributed localities: at the national level, those that meet the definition of rural area used in the national PSR (“Programma di Sviluppo Rurale” = Rural Development Program), based on the OECD definition but integrated by considering certain typical features of the Italian territory, account for about 90% of the country’s surface area. Within rural areas, ‘internal areas’ stand out in particular, which, in addition to generally having a low population density, are also distant from the centres offering essential services: according to the definition of internal area used in the 2014-2020 Partnership Agreement between Italy and the EU, these areas account for 61% of Italy’s surface area, 52% of the municipalities and 22% of the population.

These rural areas, especially the internal ones, are to a large extent penalised by various socio-economic factors and a serious lack of infrastructure, which leads them to a strong and progressive demographic decline.

A significant example of the depopulation of these areas is two provinces in the southern Italian region of Campania. In fact, the 2nd 'Rapporto Aree Interne Campania' (Confindustria Campania & Università del Sannio, 2022) shows that the internal areas represented by the provinces of Avellino and Benevento lost 41917 inhabitants (around 6%) in the period 2016-2021, including mainly young people aged between 18 and 39 (around 30% in 2020).

Many internal areas, in Italy as in Campania, are endowed with great resources in terms of food & wine, typicality, history, traditions, landscapes, small villages... It is therefore necessary to enhance these resources in these areas, and this can be achieved above all by developing an experiential, diffuse, 'slow', desезonalised tourism that respects local peculiarities and the relations between community and environment, based on a coherent integration of the plurality of resources present.
This type of tourism is characterised by a substantial difference from the monocultural models of mass tourism and can be an important lever for the rebirth of this vast part of the Italian territories, bringing out their wealth and potential. For example, in the above-mentioned provinces of Avellino and Benevento, as highlighted in the presentation (30/1/2023) of the above-mentioned 'Rapporto Aree Interne Campania', the most attractive factors are:

- Typical local products (agri-food, handicrafts);
- Historical-cultural resources (Unesco sites, historical-archaeological cultural heritage, rural villages with historic centres with great attraction potential);
- Natural capital (park areas, nature reserves, wine and olive-growing landscapes);
- Rural accommodation facilities (discrete presence of agritourisms).

Food & wine tourism, in addition to enhancing these resources, contributes to a 'sustainable' development of the territory, through a close relationship between tourism and food production, so that the elements of sustainability (environmental, social and economic) can guide the tourist in the choice of food & wine experiences, such as visits to places of production, food/wine tours and food & wine events (Garibaldi, Pozzi, 2022).

An impetus to tourism in internal areas is given by the agritourisms, which represent Italian excellence and are the realisation of the concepts of typicality, culinary and territorial tradition: they have fostered the rediscovery of rural areas and their culture and helped to promote innovation and diversification of the agricultural sector.

The agritourisms are a point of reference for an active tourist in search of outdoor experiences, particularly attentive and sensitive to issues of sustainability, typical and healthy food, and the rediscovery of rural traditions. Supporting their further growth will contribute to enhancing and relaunching minor villages and the rural hinterland, places of great charm but often less known to the tourist public' (Garibaldi, 2022).

Among the new winning trends in the sector are educational farms (a good example of experiential tourism) and the expansion of experiences offered by agritourism, based on:

1) tasting proposals, driven by the growing desire to discover and taste typical products;
2) nature observations, which allow people to come into contact with nature and get to know it, often through trekking and cycling.

Over the years, the desire for agritourism has grown steadily among tourists, both Italian and foreign. This growth well expresses travellers' desire to discover small villages and towns in the Italian countryside, as an alternative to the more popular and crowded tourist destinations.

**Initiatives in Italy to foster rural development.** At the level of public interventions, the “National Strategy for Internal Areas” (SNAI) is in place, which represents an innovative national development and territorial cohesion policy aimed at countering the marginalisation and demographic decline phenomena typical of Italy's internal areas. The National Strategy aims to intervene in such places, investing in the promotion and protection of the wealth of the territory and local
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communities, enhancing their natural and cultural resources, creating new employment circuits and new opportunities; in short, counteracting the 'demographic hemorrhage'. There are 72 selected areas, for which funded actions are envisaged; they include a total of 1077 municipalities with approximately 2,072,718 inhabitants.

In Campania, in particular, the strategy has selected four intervention areas: Alta Irpinia, Cilento Interno, Tammaro - Titerno, Vallo Di Diano, which are shown in the map in fig.1

![Figure 1](image_url)

In these areas, the number of municipalities is 86 and the resident population is 206,156, while the total number of municipalities and inhabitants in all the internal areas of the region is 270 and 825,315 (while the total number of municipalities and inhabitants in Campania is 550 and 5,770,111).

Another example of a public initiative is the intervention (in an advanced stage of implementation) for the cultural and social regeneration of small historical villages provided for by PNRR (“Piano Nazionale Ripresa e Resilienza”, using Next generation EU funds), Mission 1 - Digitisation, Innovation, Competitiveness and Culture, Component 3 - Culture 4.0 (M1C3). Measure 2 "Regeneration of small cultural sites, cultural, religious and rural heritage", Investment 2.1: "Attractiveness of historic villages", funded by the European Union - NextGenerationEU, structured in two components:

- intervention line A, which finances the implementation of 21 projects of particular importance and significance (one per region or autonomous province), each amounting to EUR 20 million, for a total of EUR 420 million, selected by the regions/autonomous provinces;
• intervention line B aimed at the implementation of local cultural and social regeneration projects in at least 229 historic villages, in line with the target set out in the PNRR-M1C3-Culture investment sheet 2.1. The available resources amount to a total of EUR 580 million, of which:
  - EUR 380 million for Local Cultural and Social Regeneration Projects submitted by municipalities;
  - 200 million as an aid scheme, activated through a centralised procedure under the responsibility of the Ministry of Culture, for micro, small and medium-sized enterprises, profit and non-profit, located or intending to establish themselves in the selected villages.

A further significant initiative, involving public bodies, associations and private enterprises, is the five-year project '2023-2028 Ritorno in Italia' (2023-2028 Back to Italy), carried out by the network of enterprises 'Rete Destinazione Sud', aimed at Italians living abroad (more than 6.5 million) and at the descendants of 2nd, 3rd, 4th and 5th generation Italians living abroad (about 80 million), who wish to reconnect with the roots of their emigrant ancestors. The idea behind the project is to relaunch Italy's image and promote the country by attracting tourism and investment, fostering exports, business meetings and creating stable partnerships with our compatriots. The 2023 phase of the five-year plan is called '2023 Year of Return Tourism. Discovering the Origins'. Through the promotion of regional traditions, excellences, villages, and territories from where emigration originated, Return Tourism aims to intercept the aforementioned categories of people interested in searching for their origins and getting to know Italy, with the aim of boosting the development of villages and internal areas which, historically, have represented the areas most affected by migratory phenomena in the last century.

A similar initiative has been promoted by the Ministry of Foreign Affairs and International Cooperation with the involvement of Italian municipalities in the activities planned for the 2024 "Year of Italian Roots" within the PNRR Project "Tourism of Roots - An Integrated Strategy for the Recovery of the Tourism Sector in Post-Covid-19 Italy". Within the framework of this initiative, municipalities will be able to organise events and activities of interest to Italians abroad and Italian descendants originating from their territory, as well as to identify facilities suitable for hosting them and subjects willing to join the discount programme in favour of root tourists. The initiative is particularly aimed at small municipalities, especially those with fewer than 5,000/6,000 inhabitants.

The case study: the integrated portal 'lacucinacampana.it. This section presents the web portal 'La Cucina Campana' (= ‘The Cooking of Campania’), available at www.lacucinacampana.it (hereafter referred to as 'Portal'), whose contents and features are congenial to the objectives of enhancing rural areas.

This Portal is the first implementation of an integrated model of innovative food, wine and tourism web portals, conceived and developed by the Italian Innovative Start Up 'La Cucina Campana srl', and for now applied to the Italian region 'Campania'. This model offers in an integrated way all the contents related to the typical food of a specific territory, with the aim of enhancing, starting from food,
all the aspects that can attract tourists (and consumers in general), contributing to the socio-economic growth of the territory.

To this end, the various sections of the Portal are interconnected, so that the linked content can be accessed with one or two clicks (see fig. 2), and contain all useful information for food & wine tourists: food products with their suppliers, local dishes (and their recipes) with the restaurateurs offering them, associated places (with descriptions of their cultural, historical, artistic and natural attractions), proposals for complete itineraries, food & wine experiences, events, food culture topics aimed at educating people about healthy and sustainable eating.

![Multi-access and 360° integrated portal](image)

**Figure 2**

Each topic is structured in information sheets with a similar layout, making it easy to acquire concise information, as well as to explore the topic in greater depth with links to other portal sheets (related to the topic under discussion) and to external sites specialised in that topic.

The '360° integrated' approach, realised through a sophisticated software architecture, is complemented by the 'multi-entry' functionality: from the Portal's home page (see fig.3), via the menus and the powerful advanced search tools, an user can directly access each of the different contents, from where he can immediately reach all the other contents associated with the one entered.
For example, by accessing a local dish of interest from the home page, one can go directly to its recipes, the restaurants that offer it, its places of origin, itineraries and food & wine experiences that allow one to try that dish. Similarly, by accessing a typical local food product, it is then possible to view with one click all the recipes that use that product as an ingredient, the companies where it can be purchased, its places of origin, itineraries and food & wine experiences that allow one to try that product.
The 'Places' section currently contains around 200 entries, mostly dedicated to small villages and rural areas in Campania and also to internal areas consisting of several municipalities.

Each fact sheet aims to meet all the needs of a tourist discovering a place. A general description of the place and how to get there is therefore provided, with references and in-depth links to each of its cultural, historical, artistic, landscape and natural attractions.

With one click you can also access the lists of:
- typical and traditional food & wine products
- local, km.0 suppliers of such products
- typical local dishes and recipes
- local restaurateurs offering such dishes
- local food & wine experiences.

Clicking on an item in such lists opens its tab, which describes that item and contains, in turn, links to all related content.

By way of example, figure 4 shows the file on Postiglione (a hilltop village with around 2000 inhabitants), which contains various contents that help to enhance it: in the figure you can see 7 cultural and naturalistic attractions and 3 typical and traditional products, then by clicking on the various links you can see the local suppliers of these products, the typical dishes of the village and the restaurateurs that offer them, and an experiential tour with a visit and tasting at a local liquor company.

![Figure 4](image_url)

The 'Itineraries' section also aims to introduce the wine and food tourist to little-known rural areas, through various stages proposing visits to small villages with indications of their attractions.
As an example, an itinerary is given in the internal areas of the municipality of Cava de' Tirreni, which acquaints visitors with some of Cava's hillside hamlets and surrounding places, in a combination of art, history, religion, landscapes and nature (Fig. 5). The itinerary also allows visitors to get to know the food & wine of the places crossed, through the links to the 'Typical Dishes' and 'Typical Products' found in the itinerary sheet.

![The Via Dei Colli Orientali of Cava de’ Tirreni](image)

**Figure 5**

The 'Experiences' section also meets the trend of wine and food tourism towards an increasingly experiential connotation, especially when the experience is lived in places not frequented by mass tourism. In fact, this section presents guided food & wine experiences to discover typical products in the rural areas of Campania, such as ‘Sannio’ and ‘Alta Irpinia’.

The 'Agri-Food Suppliers' and 'Restaurateurs' sections contain more than 2000 dedicated and detailed files with information on their products and dishes respectively. In practice, the Portal provides these activities with 'digital showcases', with all the services they need to keep up with the competition and overcome geographical barriers (including e-commerce services), so as to give an important boost to the economic growth of their areas.

Users can easily search for the activities they are interested in by means of sophisticated advanced searches, which, for instance, make it easy to find all agritourisms with certain quality labels in a certain municipality.

The promotion of rural areas at an international level is greatly facilitated by the Portal's multilingual feature, whose contents, in addition to Italian, are available in 10 foreign languages (English, French, German, Spanish, Portuguese, Russian, Ukrainian, Arabic, Japanese and Chinese). In this way, foreign tourists in Campania can more easily take advantage of these contents, living their tourist experience to
the full: for example, when they go to a restaurant they can consciously choose the desired dish thanks to its photo, its name both in Italian and in their own language, and the note describing the dish and its ingredients in their own language. Similarly, consumers from all over the world are motivated to buy Campania’s agri-food products, being able to learn about their characteristics and purchase them online in their own language.

In addition, the Portal contains a cultural section (called 'Know') with hundreds of factsheets on various topics of general interest, such as the 'Mediterranean Diet' (based on products that are very common in Campania), descriptions of geographical denomination brands, the traditions of Campania cuisine, and the rules of healthy eating.

The Portal is available on the web at www.lacucinacampana.it, but is for now accessible through credentials, pending its public opening and launch through a social media campaign that will take place soon.

It is currently dedicated to the Campania region, but its software architecture is fully scalable, so that its model can easily be replicated at any geographical level: in fact, the Start Up has already planned the 'Scale Up' at a national and international level, following the experimentation in Campania.

Main results. From the above, it appears that the 'La Cucina Campana' start-up project fully meets the needs for the valorisation and development of Campania's rural areas, with a model that can be exported and scaled up nationally and internationally.

The developed portal and its model especially benefit agriculture and tourism, which are key levers for the sustainable development of rural areas, and make important contributions to the following objectives:

- stimulate the consumption of quality local products
- raise awareness of local dishes and the restaurateurs who offer them
- implementing the 'digital transition' of agri-food producers and restaurateurs
- promote the 'short supply chain' (thus reducing transport distances and the resulting pollution)
- matching consumer tastes with what restaurateurs offer (reducing food waste)
- expanding the market of agri-food suppliers to international markets
- enhancing local traditions, promoting small, little-known rural realities and excellences
- encourage a more conscious, experiential, sustainable wine and food tourism oriented towards the most internal and little-known territories
- promote the dissemination of food & wine culture and healthy eating
- reduce diet-related diseases, and consequently healthcare expenditure
- helping consumers in their choice of quality food, educating them in conscious and sustainable consumption
- promote sustainable farming methods, making consumers aware of their health benefits
- combat environmental degradation and food waste.
Conclusions. We can therefore get the conclusion that the "lacucinacampana.it" Portal, by means of new ICT technologies, can effectively support the development of the agrifood sector and promote food & wine tourism in rural areas, so positively responding to the research questions RQ1 and RQ2.

Besides the benefits of the Portal can motivate people (mainly young people) who left the rural areas looking for a job, to come back to own territory, leveraging the increase of tourism in those areas and the higher demand of local products from domestic and international markets. E.g. they might create new agricultural and/or touristic activities or find a job in the enterprises that are developing their activity. In this way the Portal can provide an important contribute against the depopulation of rural areas, positively responding to the research question RQ3 too.

The Portal implements a fully integrated and innovative model, where all stakeholders and citizens can provide their own contribution (e.g. local recipes, videos and pictures, events, traditions...) in order to promote the territory and to get own benefit from the positive impacts on the territory, and disseminates the culture of the respect of the environment. In this way the Portal helps the community to have an "holistic" approach to the sustainable development of the territory: this is the answer to the research question RQ4.

This research detects the potential of important benefits on the economy of a territory, such as sales increases of the agri-food suppliers, therefore it should be brought to the attention of public institutions and trade associations.

The project is presently focused on Campania region, but it is gradually evolving towards a 'scale up' on national and international level, since its model is applicable and can help rural development in several territories of the world.

Further contributions to rural development, mainly for agriculture, can also come from other ICT technologies, in addition to web portals, such as 'blockchain' and 'Internet of Things': much can therefore be improved by developing further research for innovative applications of these ICT technologies.

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