



# SMART VILLAGES

a common perspective through different visions

## CALL FOR POSTERS



# Smart Villages – a Common Perspective Through Different Visions.

## Call for Posters

The purpose of the call was to collect researches, case studies and projects related to Smart Villages from all over the Alpine region. Participants to the call were asked to prepare a poster paper and to present it during the conference [Smart Villages – a Common Perspective Through Different Visions](#).

The event has been organized by Regione autonoma Valle d'Aosta within the Italian presidency of EUSALP, the European macro-regional strategy for the Alpine region, to exchange ideas about the introduction of new approaches to deliver better services and improve the quality of life in Alpine villages.

Younger citizens are leaving Alpine villages, while the remaining inhabitants are growing older. Bringing basic services to remote areas is becoming increasingly expensive, due to low density of population. Fortunately, in the era of digitalization, innovation might be the key to find a solution. This is the main idea beyond Smart Villages: local communities in rural areas who obtain a better access to services of general interest and foster a sustainable development of their territory by means of new technologies and better connectivity.

Computer literacy, smart mobility and energy efficiency are some of the topics related to Smart Villages, but they are also a starting point to design real projects and best practices tailored on the needs of the Alpine population.

This conference was meant to bring together politicians, researchers, project managers, associations and all those people who can provide new inputs for the introduction of Smart Villages in the European Strategy for the Alpine Region.

## AREAS OF INTEREST

Contributions were accepted in all fields related to Smart Villages or the use of technology in remote areas, with a particular interest in:

- Digital skills, digital education, computer literacy, and digital support for senior citizens;
- Smart social aspects for a better life quality, work-life balance, better education and training;
- Smart mobility, car sharing, carpooling, demand responsive transport, e-mobility (e-bikes and e-cars), multimodal transport, tourism and sustainable mobility;
- Digital connectivity and Services of General Interest, broadband infrastructures, provision of digital services and accessibility to SGI in remote areas;
- Smart grids and renewable energy, energy system in the future, independency from fossil fuels, prosumers, grid stability, charging infrastructure for e-mobility (integrated energy systems).

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## 01 - TOWNFOODS, Good. Next to you!

### Abstract

Townfoods give a new kind of distribution for little or micro food producers, which are living in the rural areas, or little mountains communities. We wanna help these people, with our new business model. We wanna create new smart areas, where concentrate, vending machines, recharge services, and interactive instruments for the user, which can use it for plan their new roads to know, slow walking or Bikers or better E bikers. Our Start up is oriented by a green circular economy, so we can have, a new model of distribution for producers, more equal, less costs, less waste product, less smog or fuel problems. And also improving of the renewable energy, but also a new experience, for visitors, or tourist who like don't stop more, but don't miss nothing about the territory where they pass and go by.

### Smart Villages Approach added value

Imagine, one location dedicated, special skyline, or little square, a point for these areas, one point where the user can be relaxed, helped by our services to be more calm, so he can be able to spend more time to look around, or maybe buy some local products by our vending machines. We wanna create a point where people wanna stay just for a "stop and go", but, we wanna offer the better they have in this particular place. Tastes of territory, and panoramic zone, is an immersive new experience, where the people feel inside the desire to start a "treasure hunt" what's next? Townfoods good. Next to you!

<https://www.townfoods.it>  
<https://www.facebook.com/townfoods.it>



# ENJOY

the territory in a comfortable way



# TASTE

the local products

# RECHARGE

mind, body, smartphone, e-bike



**Townfoods**  
Good, next to you!

[www.townfoods.it](http://www.townfoods.it)





## 02 - e-MOTICON project contribution to mobility in smart villages

### Abstract

Smart Mobility in Alpine Area is a challenging issue. In particular in Alpine villages . They often have common feature, as a fragile environment, depopulation, distance from metropolitan areas and proximity to borders.

e-MOTICON project, co-funded by Interreg Alpine Space Programme 2014-2020, provides concrete measures and instruments, such as Strategy, Regional Action Plan and training materials, to support regional and local administration to enhance their planning instruments for a transnational interoperable charging infrastructure for e-mobility and e-vehicles in Alpine Regions.

Since a low and inhomogeneous deployment of electric mobility affects Alpine regions, the project aims to overcome the Public Administrations (PA) lack of knowledge in technological innovation and business model of charging infrastructure and to provide them a strategic instruments for e-mobility diffusion.

E-mobility is a crucial issue to be approached not only in the Alpine area but also at European level, according with European regulation and targets fixed for next periods.

The fragile Alpine ecosystem will benefit from e-mobility diffusion also on transnational level ensuring access to a sustainable mobility options for residents and international tourists.

Among the instrument developed in order to support public administration, a unique Alpine Space strategy on innovative planning complying with the e-mobility requirements and coherent with EU policies and EUSALP strategy objectives on energy and transport was provided.

e-MOTICON strategy was experimented in different Alpine Space areas through pilot actions that tested the three level of interoperability of charging network: communication to key stakeholders, management system and localization of the infrastructure. These pilots' actions were also developed in small villages of Alpine Space area thanks to the contribution of e-MOTICON partners and Alpine Pearls network.

e-MOTICON also delivered practical Guidelines for decision makers for the application of the strategy and set-up and implemented a transnational community among e-mobility stakeholders of the Alpine Space regions

### Smart Villages Approach added value

e-Mobility can play a relevant role in smart mobility in particular in villages. e-mobility can also play a relevant role in decarbonizing transport and to get a more eco-friendly mobility, as private mobility, but also as sharing-mobility and LPT or Last Mile Freight Transport. All these elements can contribute to smart mobility and an innovative integrated approach in the planning instruments is needed. The proposed tools increase local administrator capabilities in planning a transnational and interoperable network for e-mobility, as test demonstrated.

<https://www.alpine-space.eu/projects/e-moticon/en/home>  
<http://www.rse-web.it/home.page>

# E-MOTICON project contribution to smart mobility in small villages

## The problem

**Smart Mobility** in Alpine Area is a challenging issue., above all in small villages. They have common features, as a fragile environment, distance from metropolitan areas, low sustainable transport services, proximity to borders and usually high turistic pressure.

**e-mobility** can play a relevant role in **decarbonizing transport** in villages and get a more eco-friendly mobility. Low **interoperability** and **low and inhomogeneous** deployment of e-mobility charging network characterizes all the Alpine Space and could represent a bottleneck to e-mobility deployment



## Project contribution

**Help Public Administrations to support** e-mobility deployment, through a **large diffusion of electric charging stations for vehicle** with a wide **interoperability**:

Overcome the lack of **knowledge** in **technological** innovation and business model of charging infrastructure

**E-MOTICON on line Training Courses**

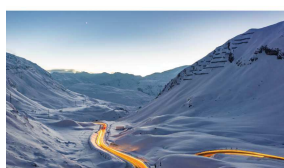
Funding and Financing of E-CS	Types of E-CS	Role of Public Administrations
Interoperability and Roaming	Definition of the Number of E-CS	Localiza-tion of E-CS
e HUB - Best practices	e-HUB Model	Promoting e-Mobility

Provide an innovative and **transnational approach** (coherent with EU and EUSALP policy and strategies) and test it in small villages and cities

**E-MOTICON White Book**



e-Mobility Transnational strategy for an Interoperable Community and Networking in the Alpine Space  
WHITE BOOK



Interreg  
Alpine Space  
E-MOTICON

Provide measures and **instruments** to enhance administrators capability in **planning** and **implement** interoperable and transnational e-mobility charging network

**E-MOTICON Guidelines**



Support **communication** among public bodies, stakeholder and citizens: **E-MOTICON Networking Platform**: <http://www.e-moticon.eu/>

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## 03 - Smart and green mobility to improve the Seriana Valley

### Abstract

The mountain region plays a strategic role in Lombardy. It is an organic combination of different factors, such as altitudes, climatic areas and socio-economic structures, that covers about the 40% of the whole regional territory.

The Regional Territorial Plan (Piano Territoriale Regionale – PTR) is the most important and strategic governance tool for spatial planning at regional level. Mountain is considered as a resource that must be preserved and, due to this, the Plan includes devoted policies to face a number of negative phenomena that involve all the European Alpine area. These phenomena, handled in an integrated socio-economic and territorial planning, are referred to the widespread tendency to depopulation and ageing of local residents.

The PTR provides criteria for the territorial development of the whole Region and gives addresses to Provinces and Municipalities for territorial and urban planning. It provides for addresses to regional sectoral plans and programmes too; being one of them is the Territorial Plan of the Alpine Valleys (Piano Territoriale Regionale d'Area delle Valli Alpine – PTRA), that is related to the Policy area of the EUSALP Action Plans.

#### PTRA Alpine Valleys

The instrument of PTRA is a planning tool drawn from the Regional Law for Town and Country Planning (n. 12/2005). It is referred to large area interested by strategic development projects or subject to particular phenomena of regional and supra-regional relevance.

The PTRA Alpine Valley, approved in 2015, is a multilevel, multigovernance and multi-action planning instrument. DG REGIO of European Union recognized the innovative content of this plan, and it was selected as one of the eight Best Practices of strategic planning in Europe in 2015.

The Territorial Plan of the Alpine valleys includes 45 Municipalities in the heart of the Lombardy mountain area, in the pre-Alpine belt of the Bergamo Orobie Alps and Valsassina plateau on the Lecco province. In this area, there is a very high percentage of Municipalities with very low inhabitants (total 47.100 in 2011). Municipalities with less than 1.000 inhabitants predominate in the area.

In order to face the negative demographic trend of population and the marginalization of these areas, the main purpose of PTRA is to outline a sustainable economic development path compatible with the mountainous character. In particular, three specific objectives are sketched: enhancing the local identity and landscape, promoting a new model of development based on high-quality tourism and promoting new settlement models to avoid land taking. Instead, the main proposals of the Plan are:

- Tailored planning solutions to reduce land taking;

- Energy requalification of public and private buildings;

- Driving transition to an environmentally and climate-friendly transport system, including the project of a multifunctional Green Infrastructure (GI) devoted to light mobility;

- Specific territorial marketing strategies to attract “conscious” tourism.

#### Best practice

The design of a new green infrastructure (GI) for a sustainable slow mobility is the most significant project of the Plan; it is integrated with the local public transportation system and the

marketing strategy involves the entire territory.

In this regard, a new initiative will start in summer 2019: "E-bike experience", an electric bike sharing along Val Seriana and Val di Scalve. Many points to rent and recharge e-bikes will be provided in the valley and the same fare is valid for all rental points with a wide choice of e-bikes as well as different theme-based routes. The initiative is linked with the railway line Bergamo-Albino, being the last town the modal-split station; it is promoted by the local tourist agency "Promoserio" with the collaboration of the Institute "ITS Mobilità Sostenibile" of the University of Bergamo, with a Master in training of sustainable mobility

### **Smart Villages Approach added value**

Green mobility initiatives proposed by the Plan and realized with the E-bike in the Seriana Valley, contribute to improve a more friendly knowledge of the valley by tourists, helping to reduce air pollution and traffic congestion and improving environment, particularly during tourism high season. At the same time, the project contributes to deseasonalize tourism and improve local slow mobility

<https://www.valseriana.eu/eventi/e-bike-experience/>



# SMART VILLAGES

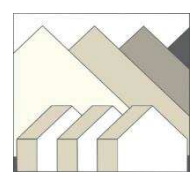
## A COMMON PERSPECTIVE THROUGH DIFFERENT VISIONS

### LOMBARDY REGION: TERRITORIAL PLANNING FOR ALPINE VALLEYS

May 23rd-24th 2019 – Courmayeur, Italy



#### PTRA - Alpine Valleys



**TO PROMOTE ECONOMIC AND SUSTAINABLE DEVELOPMENT FOR THE MOUNTAIN AREA**

#### KEY WORDS

- ☐ MULTI-LEVEL GOVERNANCE
- ☐ INTERSECTORAL OBJECTIVES
- ☐ SUSTAINABLE DEVELOPMENT

#### OBJECTIVES

SUSTAINABLE TOURISM

#### GREEN MOBILITY

CONSERVATION OF NATURE AND LANDSCAPE PROTECTION

ENERGETIC EFFICIENCY OF PUBLIC AND PRIVATE BUILDINGS

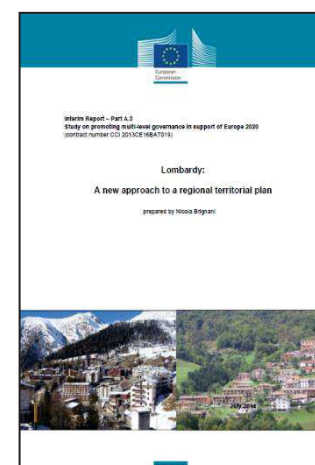
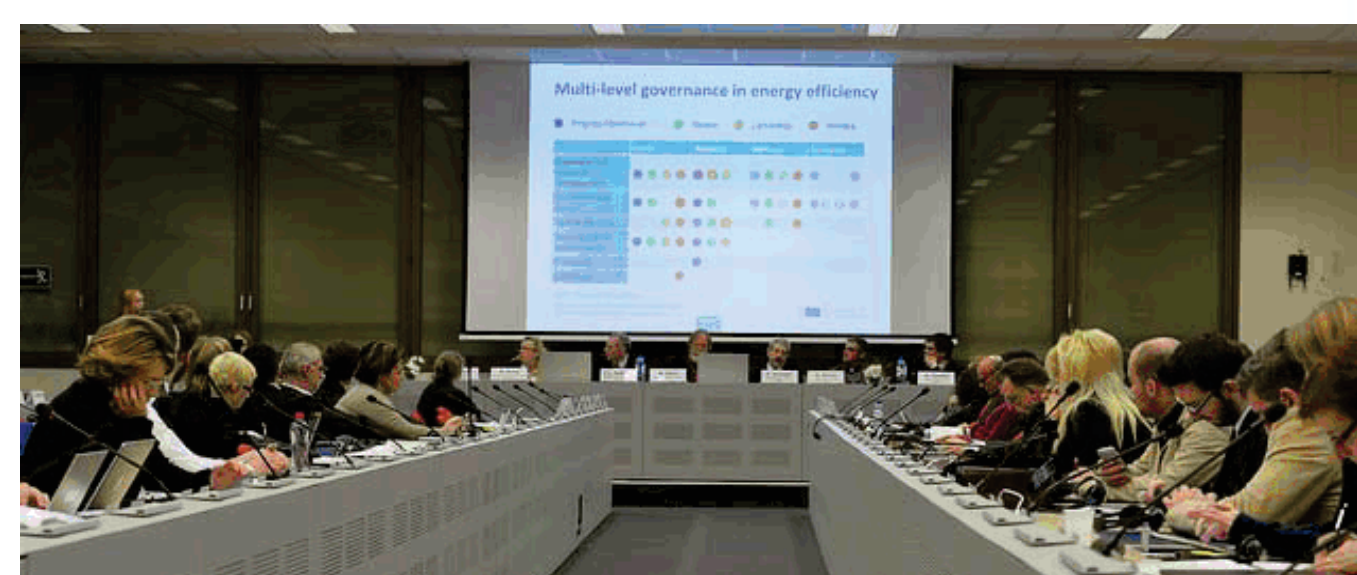
PLANNING SOLUTIONS LIMITING SOIL CONSUMPTION

DIGITAL-DIVIDE REDUCTION



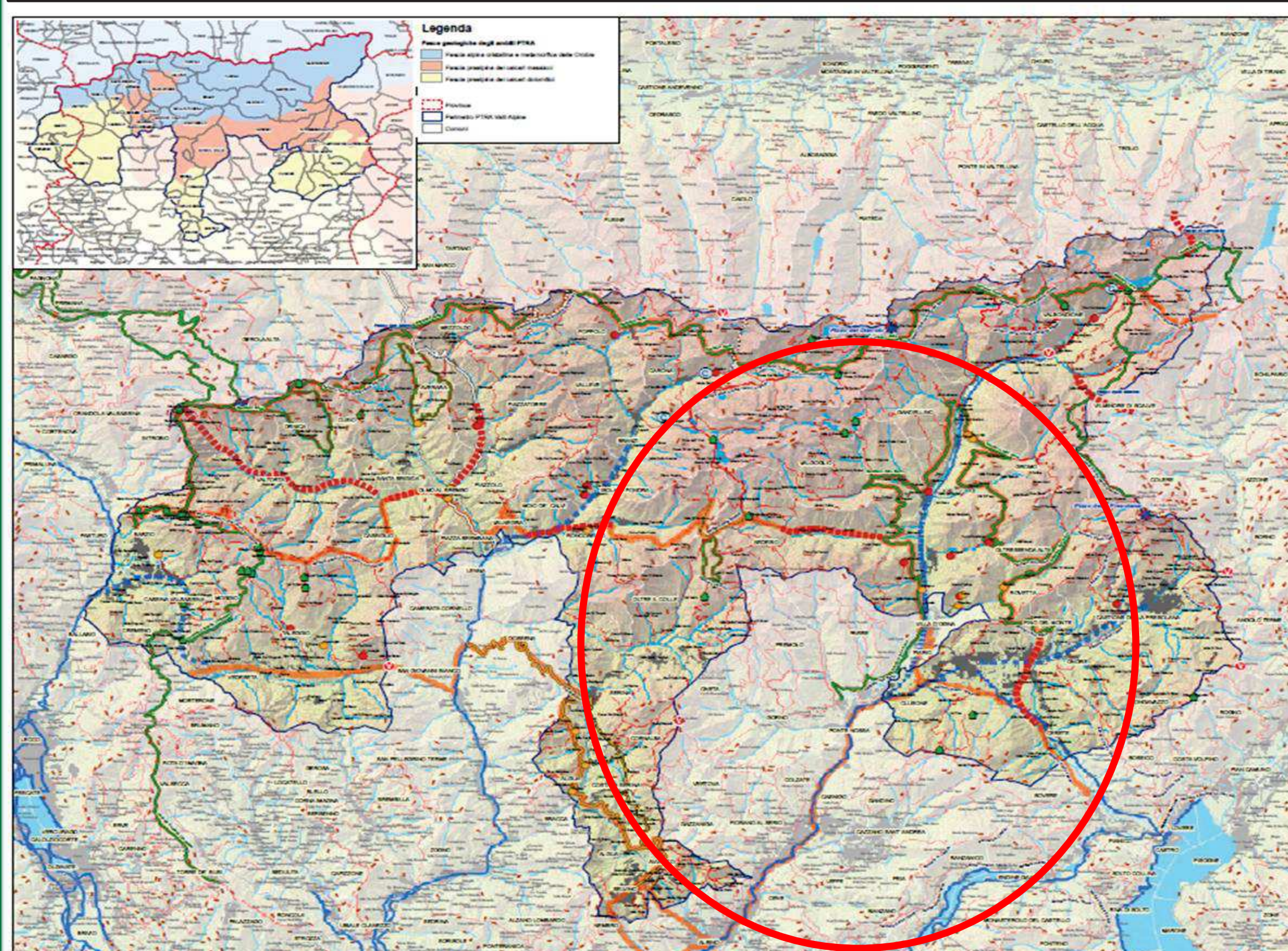
#### PTRA Alpine Valleys:

45 Municipalities  
30 Municipalities have less than 1000 inhabitants



PTRA Alpine Valleys has been selected by DG REGIO of European Union as one of the eight Best Practices of strategic planning

#### The PTRA proposal for green mobility



#### E-bike experience in the Seriana Valley

Various bicycle types, one rental price in all points of the Valley, recharge points spread over the territory



Poster edited by Barbara Grosso



## 04 - Renewable energies and smart-grids: feedback from French initiatives involving local communities in rural areas

### Abstract

Rural areas generally offer a high potential for the development of renewable energy sources (RES). Many initiatives appear on these territories, either led by local municipalities which develop ambitious action plans, or from project developers which can be private companies, farmers or citizens. They aim at increasing renewable energies in the energy mix, but increasingly aspire to combine ancillary grid operation services or to offer new supply agreements for local consumers. They also propose new modes of governance where local communities can play a significant role. This evolution towards a higher resiliency of grid networks tries to overcome the weaknesses of rural areas which often have lighter grid networks than in urban areas, making it more difficult to develop RES plants and to fit with the local energy objectives.

Various pilot projects have been led in Auvergne-Rhône-Alpes (France), based on advanced smart-grid technologies and involving local communities. The SMAP project, one of the first French smart-grid demonstrators in rural areas, involves many partners among which a citizen-owned local cooperative which operates a number of photovoltaic plants in a rural village. This village has been equipped with smart meters, cluster controllers on PV inverters and one on-load tap changers transformer in order to test various solutions regarding voltage control. Computer simulations have been implemented to assess the capacity of the grid to absorb important amounts of RES by 2050, taking into account different smart-grid solutions and comparing their different costs. Additionally, the local population has built awareness and actively participated to the project.

Another experience, led through the PEGASUS EU project, focuses on the development of rural microgrids. The French pilot site, located in the Alps, is a rural village which suffers from regular power outages and decided to launch a very ambitious program to increase energy self-sufficiency and sustainable mobility through the active commitment of a local energy community. After a year of smart metering and various technical and economical simulations, a business model has been built based on the French new mechanism on “collective self-consumption”. Local consumers will be able to buy part of their electricity from the energy community which will directly own and operate a number of photovoltaic plants in the village.

The poster will give an overview of rural smart-grids main stakes, focusing on these two innovative experiences.

### Smart Villages Approach added value

These initiatives combine innovative schemes on technologies, business concepts and social governance. Their added value is showcasing that smart technologies are not enough to draw rural villages towards energy transition, but need to be completed by citizens' involvement and robust business plans. These give clues to build efficient projects in rural areas and to finally increase the share of RES in the energy mix.

<http://www.enauvergnerhonealpes.org/fr/reseaux/reseaux-electriques/le-projet-pegasus.html>,

<http://www.enauvergnerhonealpes.org/fr/reseaux/reseaux-electriques/le-projet-smap.html>

<http://www.auvergnerhonealpes-ee.fr/fr/agence-regionale-de-lenergie-et-de-lenvironnement-en-auvergne-rhone-alpes.html>





## SMAP

### Increase RES integration in low voltage grids

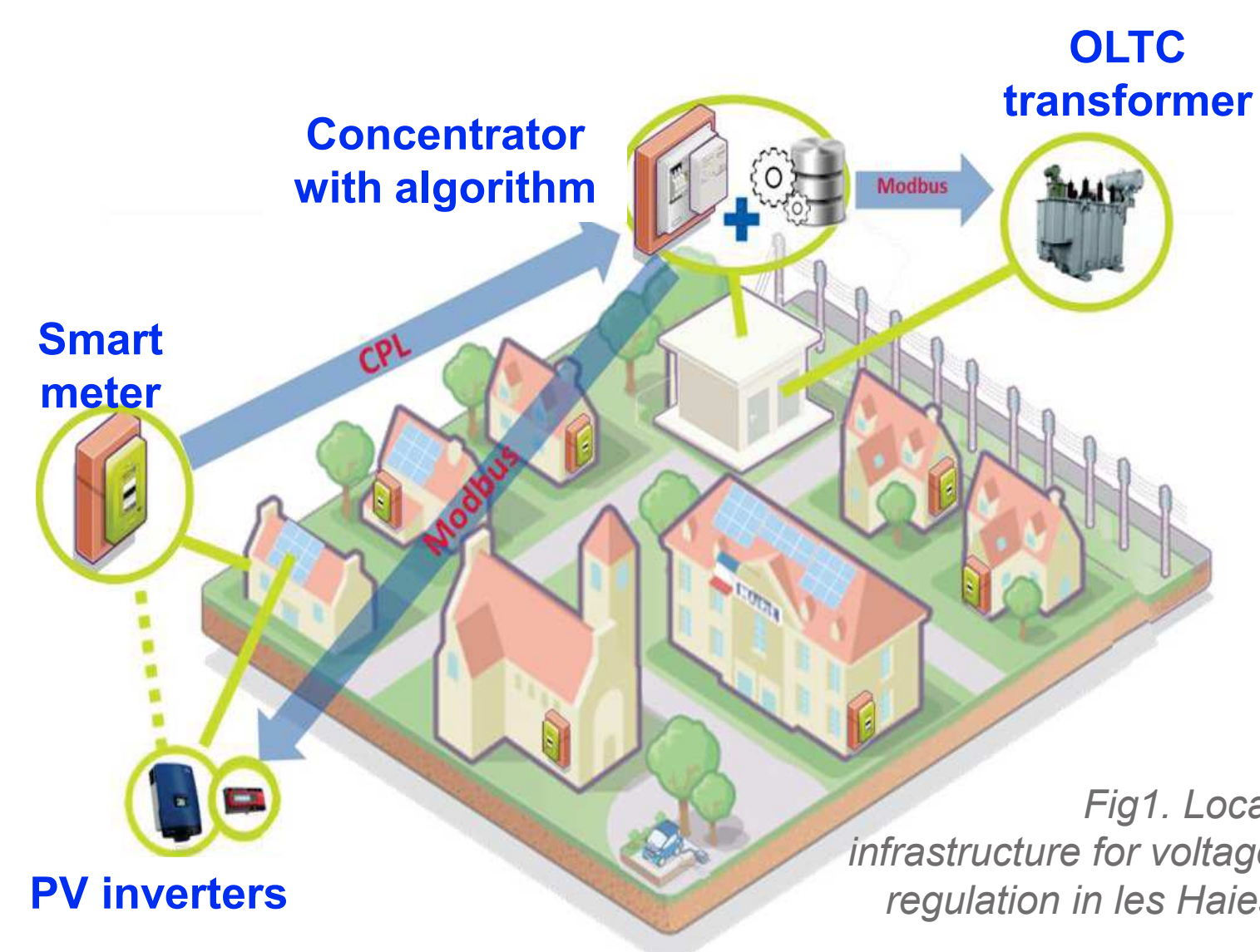
Les Haies is a small village with 800 inhabitants located in the Natural regional park of Pilat (France). A citizen-owned local cooperative operates 8 photovoltaic plants (76 kWp) in the center of the village. Installing more PV would lead to strong reinforcements of the local grid, to avoid over-voltages and keep the voltage within the authorized bandwidth of the grid. Multiple smart-grid solutions have been tested or simulated to avoid these expensive reinforcements. The simulations have been applied to prospective scenarios describing consumption and production evolution by 2050



The technical solutions which have been analysed concern both grid operation (through an on-load tap changer transformer) and inverter control (active / reactive power control within a centralized or decentralized operation mode). In the case of Les Haies, reactive power control  $Q=f(U)$  shows better results than other solutions from an economic point of view.

Moreover, various activities have been carried out alongside local inhabitants to involve them in the project and test their ability to shift some electricity consumptions during daily hours.

SMAP Project (2015 – 2018) – ENEDIS & AURA-EE (project leaders in a consortium of 10 partners)



## PEGASUS

### Microgrids in rural areas

PEGASUS aims at defining the technical, economical and legal conditions that can foster rural microgrids. In France, the pilot site of Saint-Julien-en-Quint is analyzed through the monitoring of 31 consumers in the center of the village. The aim is to design the photovoltaic and potential storage equipment which could generate local electricity directly purchased by inhabitants.

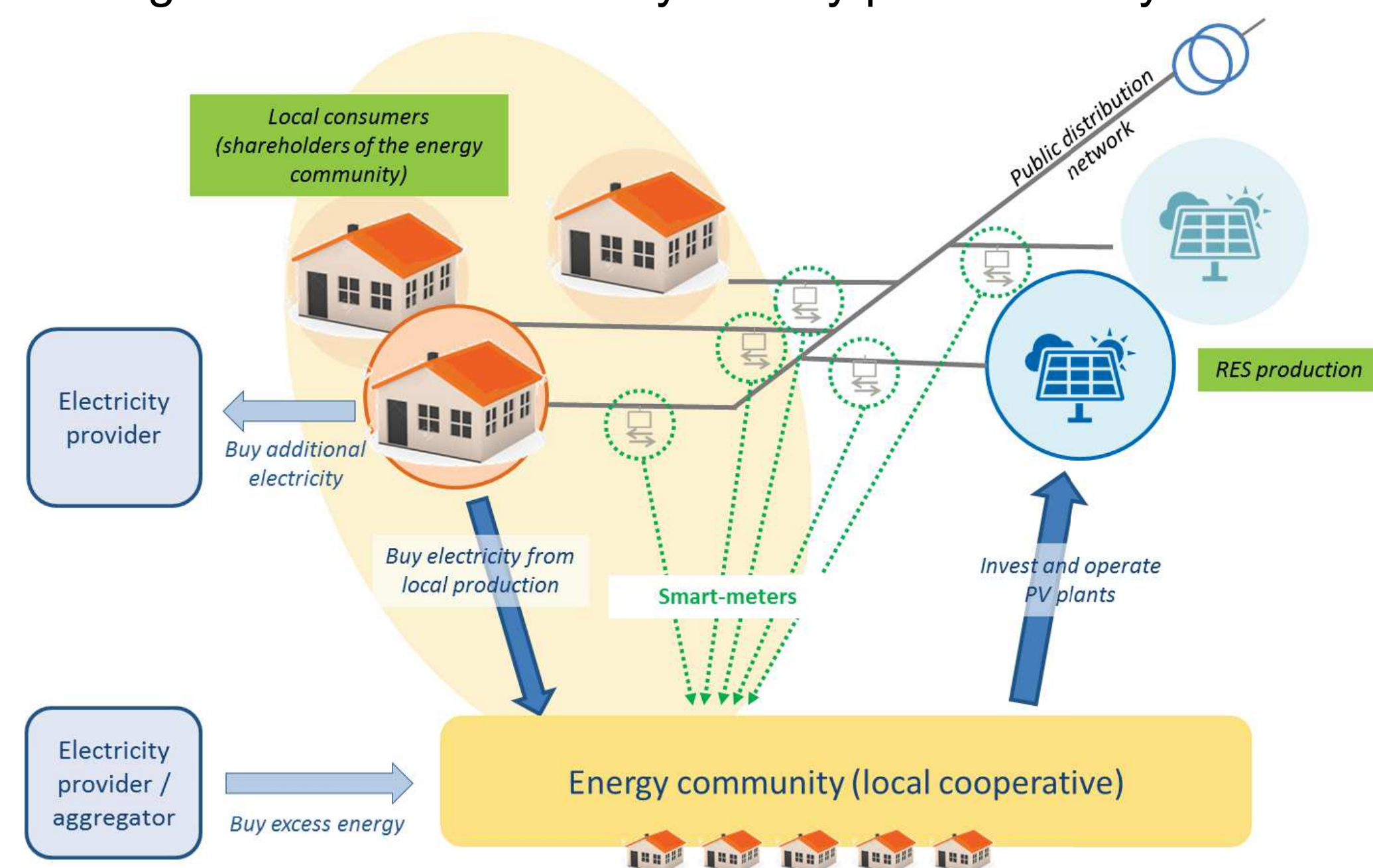


Fig2. « Collective self-consumption » model in Saint-Julien-en-Quint.



The governance model relies on a local energy community, which gathers local stakeholders (mainly citizens and local consumers) and is operated through cooperative status. The community can sell energy to local consumers, provided that the local PV electricity remains cheaper than the present mix. An agreement is signed with the local DSO to define which part of the local PV production is associated to which consumer, on the basis on smart-metering data. This model fits within the new French regulatory framework on “collective self-consumption”.

PEGASUS Project (2017 – 2019)  
<https://pegasus.interreg-med.eu/>



## STORES

### Promotion of distributed PV through storage

STORES focuses on the development of storage paired with residential PV systems. More than 35 pilot plants are analysed in 7 Mediterranean countries and serve as a basis to build knowledge, share experience and develop design tools for future prosumers. The aim of the project is to foster measures to support storage solutions in rural and islanded areas. In STORES project, the analysis of the pilot plants has proved that storage could significantly increase the self-consumption or decrease peak dependence thanks to an appropriate sizing.

STORES Project (2016 – 2019)  
<https://stores.interreg-med.eu/>





## 05 - Ambornetti - Back to the future

### Abstract

Ambornetti is an innovative and visionary project: to recover a mountain pasture at high altitude for creating an off-grid resort.

The project is promoted by the Turin companies IRIS s.r.l. e Ambornetti s.r.l.s., both active in the innovation and research fields, with the collaboration of the Turin Polytechnic. The most innovative technologies are funded by European Funding like Horizon 2020, Piano di Sviluppo Rurale (P.s.r.) 2014/2020 and LIFE Climate Change Application.

The project is located in the mountain hamlet of Ambornetti, in the municipality of Ostana (CN), at 1630 metres high.

Until the middle of the last century, the village was an intermediate mountain pasture serving the underlying settlements. Ambornetti is currently abandoned and is not used for any activity.

In the surroundings of the hamlet are present the remains of a dense trail network, once used for traveling around the area and now used for hiking purposes.

Its location allows ample panoramic views of the Monviso massif, which constitutes an impressive visual fulcrum. The excellent southern exposure makes the place suitable for the settlement of human activities.

The project involves the construction of a resort of about 25 rooms, a restaurant, a SPA and a coworking laboratory, partly in new wood buildings, partly in recovered stone buildings.

Electric and thermal energy will be produced entirely by the sun and local biomass.

The microgrid will be powered by 100% renewable electricity produced by a photovoltaic system and a high-performance wood chips microcogenerator (m-CHP), combined with an innovative hydrogen storage system.

The entire complex will be heating by a district heating powered by CHP and a wood chip boiler. Energy efficiency and comfort will be guaranteed by a BEMS system for managing thermal loads based on presences, indoor air quality and continuous monitoring.

Waste management will be based on a strategy to minimize garbage production by increasing the separate waste collection percentage. An innovative plasma system (Greenplasma Hot), whose application will be tested in the case of the hamlet, will be able a treatment in situ of the residual fraction by thermochemical conversion, obtaining thermal and electrical energy from the undifferentiated share of waste.

Minimum consumption and maximum recovery are the main goals of the water management system. The wastewater of the entire village will be divided into uses, treated and reused in order to minimize the use of spring drinking water. The treated water is reused for laundry, swimming pool replenishment, filters cleaning, external area irrigation and WC supply. A plasma system, subject to experimentation in the complex, will allow a reduction of the organic load, sanitization and reuse of wastewater.

The recovery project aims to improve the value of local wood: new buildings will have a timber framing structure made of wood from Piedmont; floors will be realized using specific parquet solution with a lower quality wooden base and high-quality wooden coating (all wood from Piedmont).

Access to the area and internal transfers will be guaranteed by a system of e-mobility (e-bikes and e-cars), powered by renewable energy produced on site, able to minimize emissions for transfers.

A coworking space, will be a place of aggregation, study and experimentation of new technologies.

Ambornetti will not be a simple resort in a remote area, but aims to be an innovative off-grid smart village: equipped with a microgrid that is independent of fossil fuels; based on a circular system for collecting, treating and reusing water and waste; able to enhance local resources, both natural and human.

### **Smart Villages Approach added value**

The project adds to the traditional smart village approach the following peculiarities:

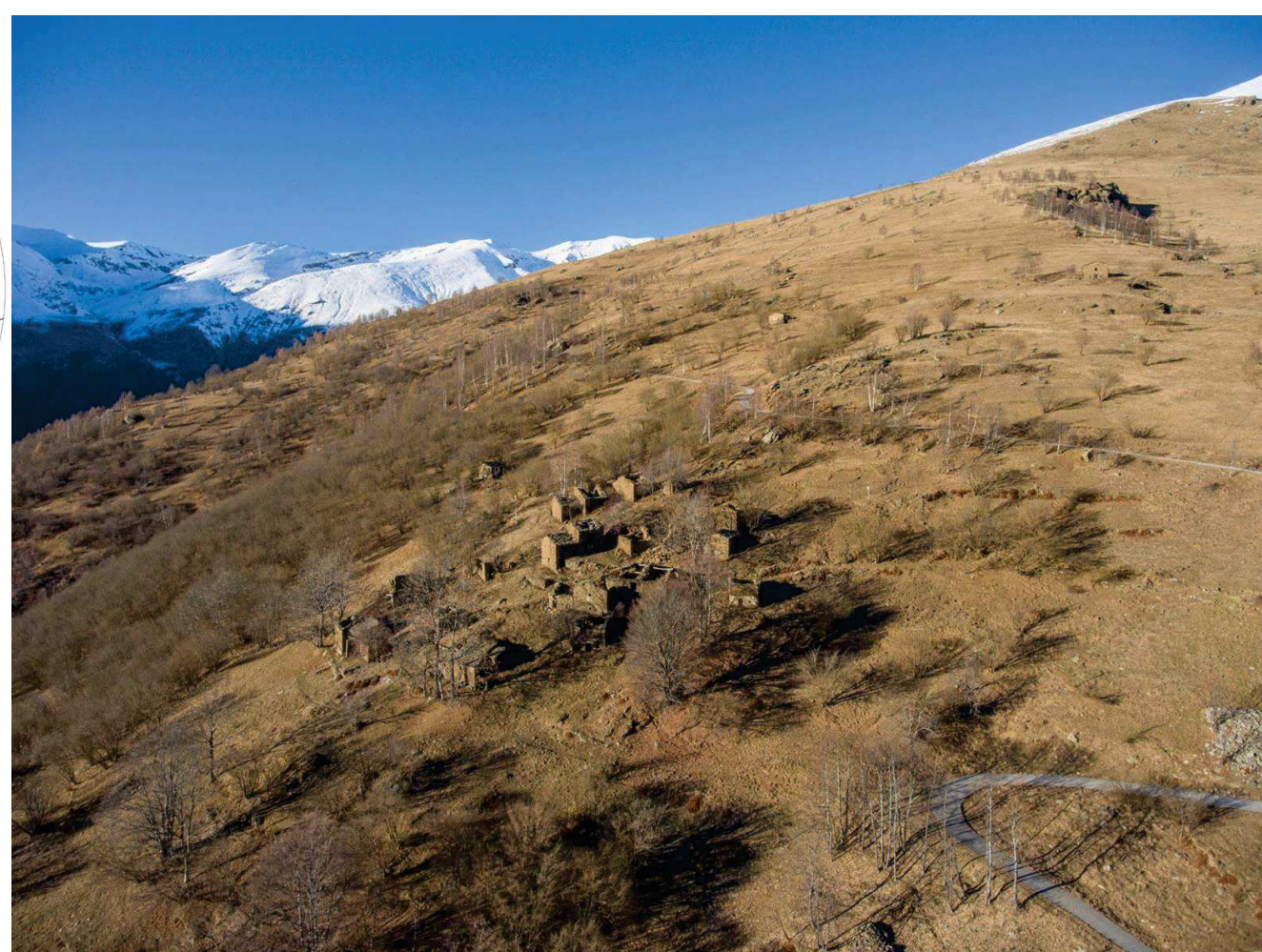
- localization in a remote area with enormous potential, currently little exploited;
- sharing the energy efficiency, sustainability and circular economy principles with resort users;
- enhancement of the local supply chain through a business model based on supply and human and natural resources of the place.

These components will make it possible for all users of the complex to be spectators of mountains landscapes and actors in a new way of sustainability and tourism.

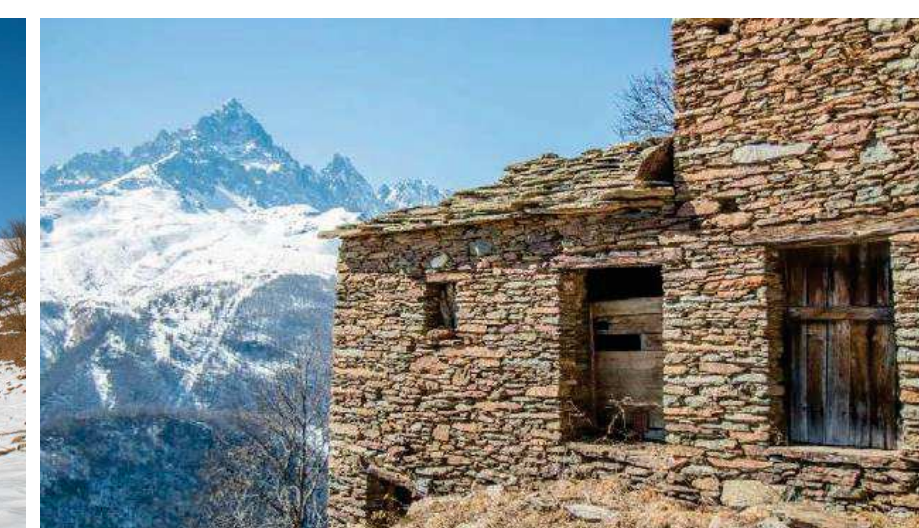
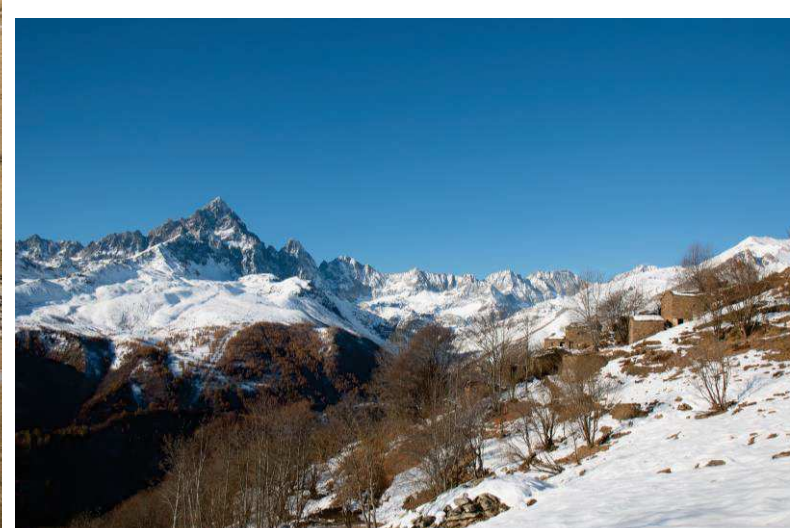
<http://www.ambornetti.it/>  
<http://www.irissrl.org/>



## The village today



- ✓ Ambornetti is a project with an innovative and visionary objective: to recover a mountain pasture at high elevation in order to create an off-grid resort.
- ✓ The project is located in the mountain hamlet of Ambornetti, in the municipality of **Ostana (CN)**, at 1630 metres of elevation.
- ✓ Until the middle of the last century, the village was an intermediate mountain pasture serving the underlying settlements.
- ✓ **Ambornetti is currently abandoned and is not used for any activities.**



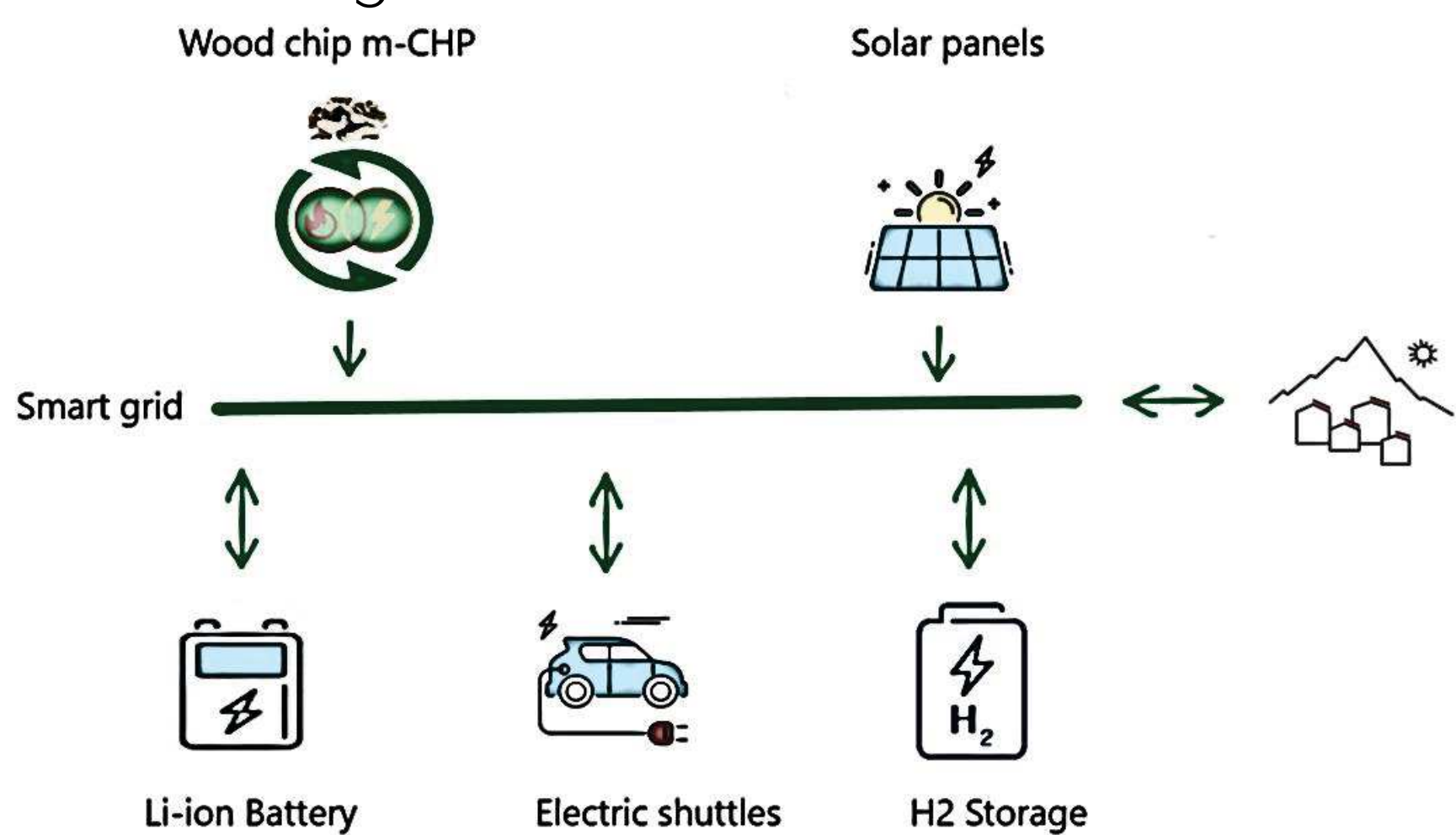
## The off-grid resort project



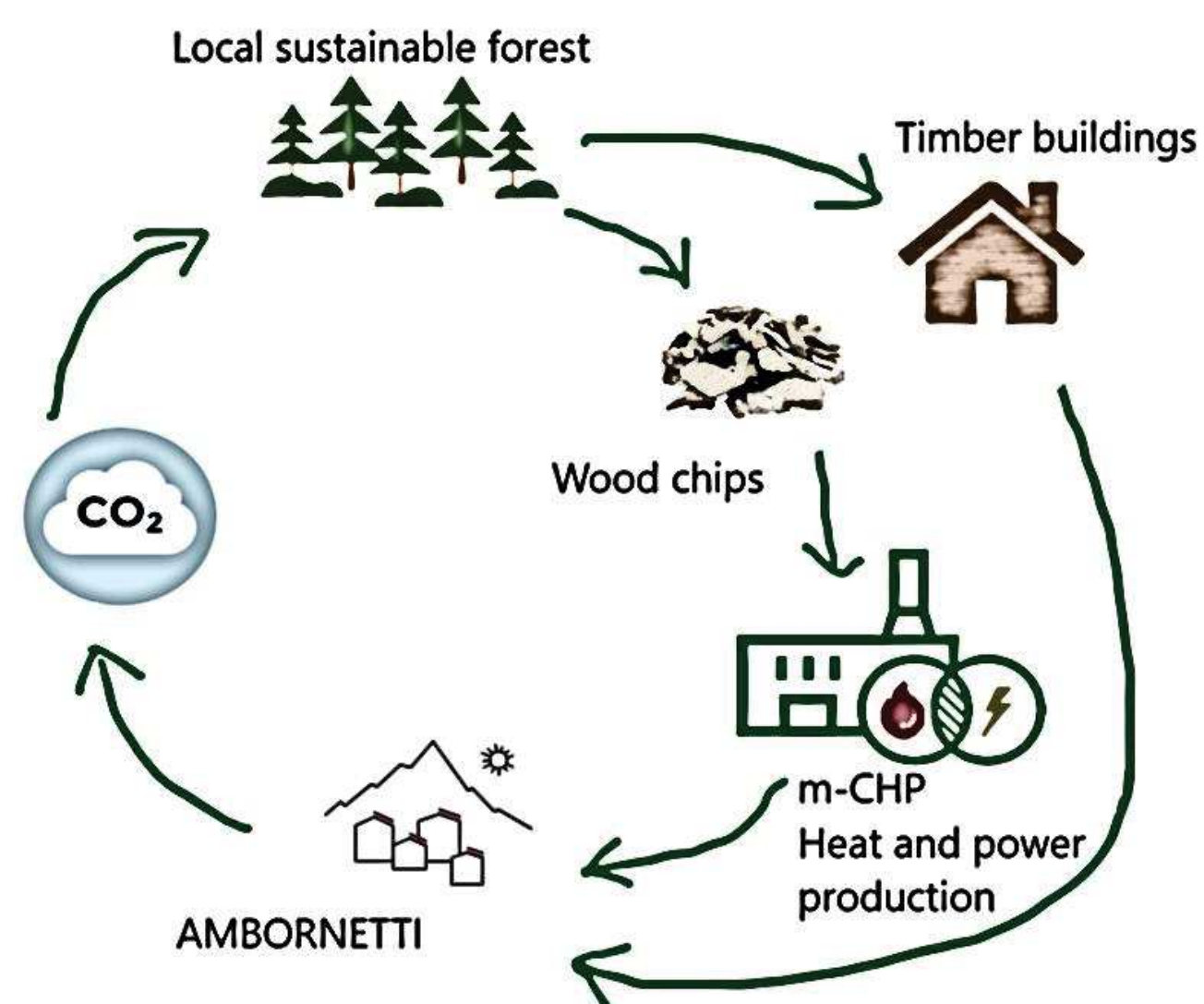
- ✓ Transformation of the current village in an accommodation structure will take place through a new conscious and responsible approach, for a better quality of life.
- ✓ Like many of the alpine villages, **public spaces (coworking, restaurant, spa) will be placed in the center of the village.**
- ✓ A coworking area will help the development of local start-ups.
- ✓ New construction buildings, made with local wood, are planned to be placed close to the existing buildings, remodelled using local stone.
- ✓ The project involves the creation of **over 20 new jobs.**



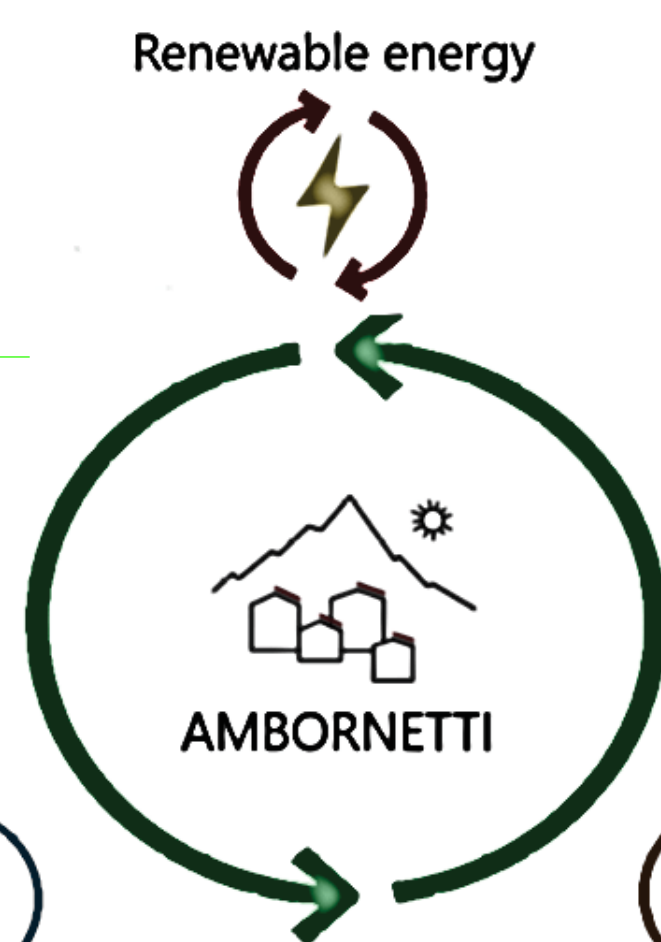
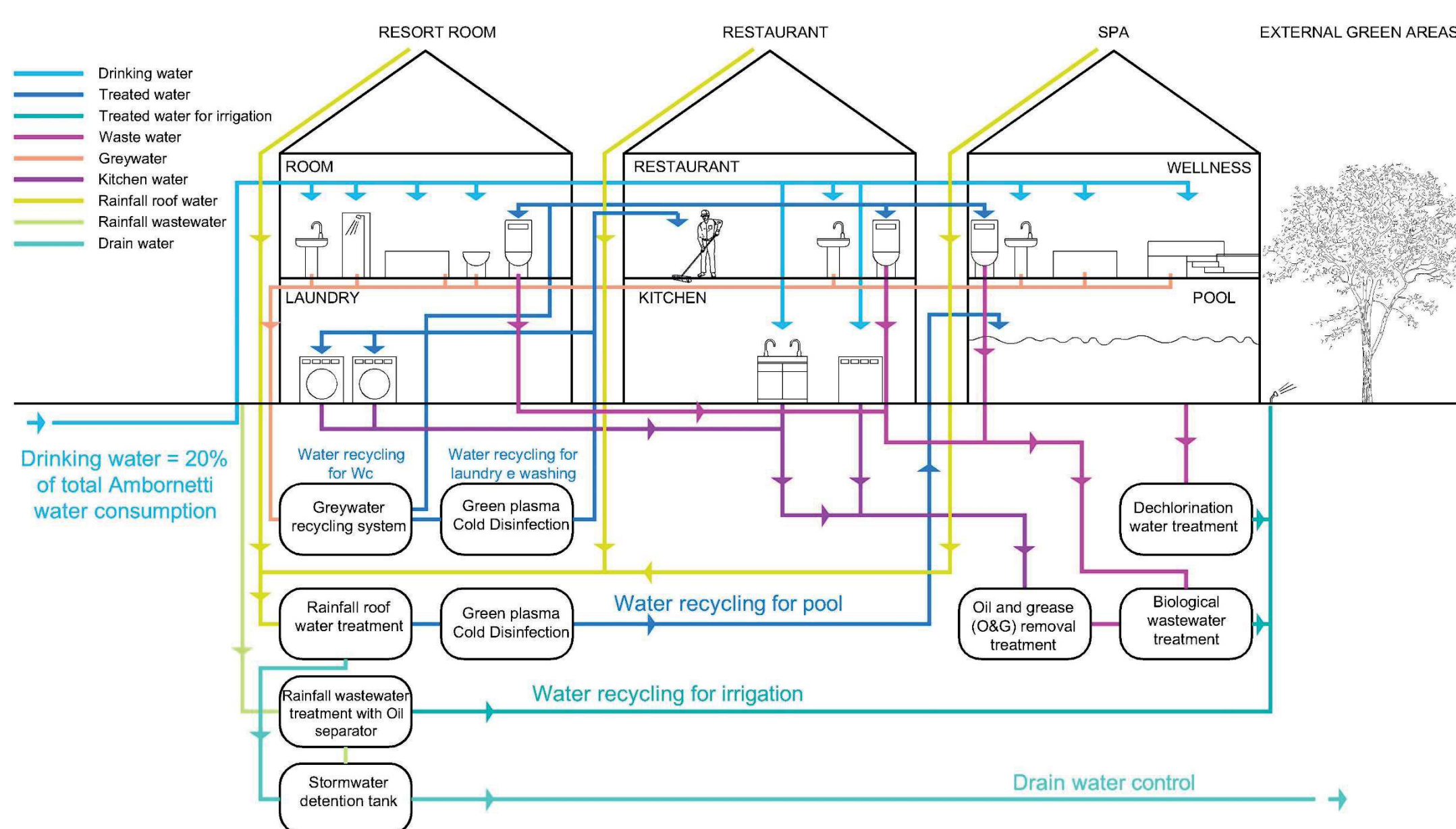
## Smart village



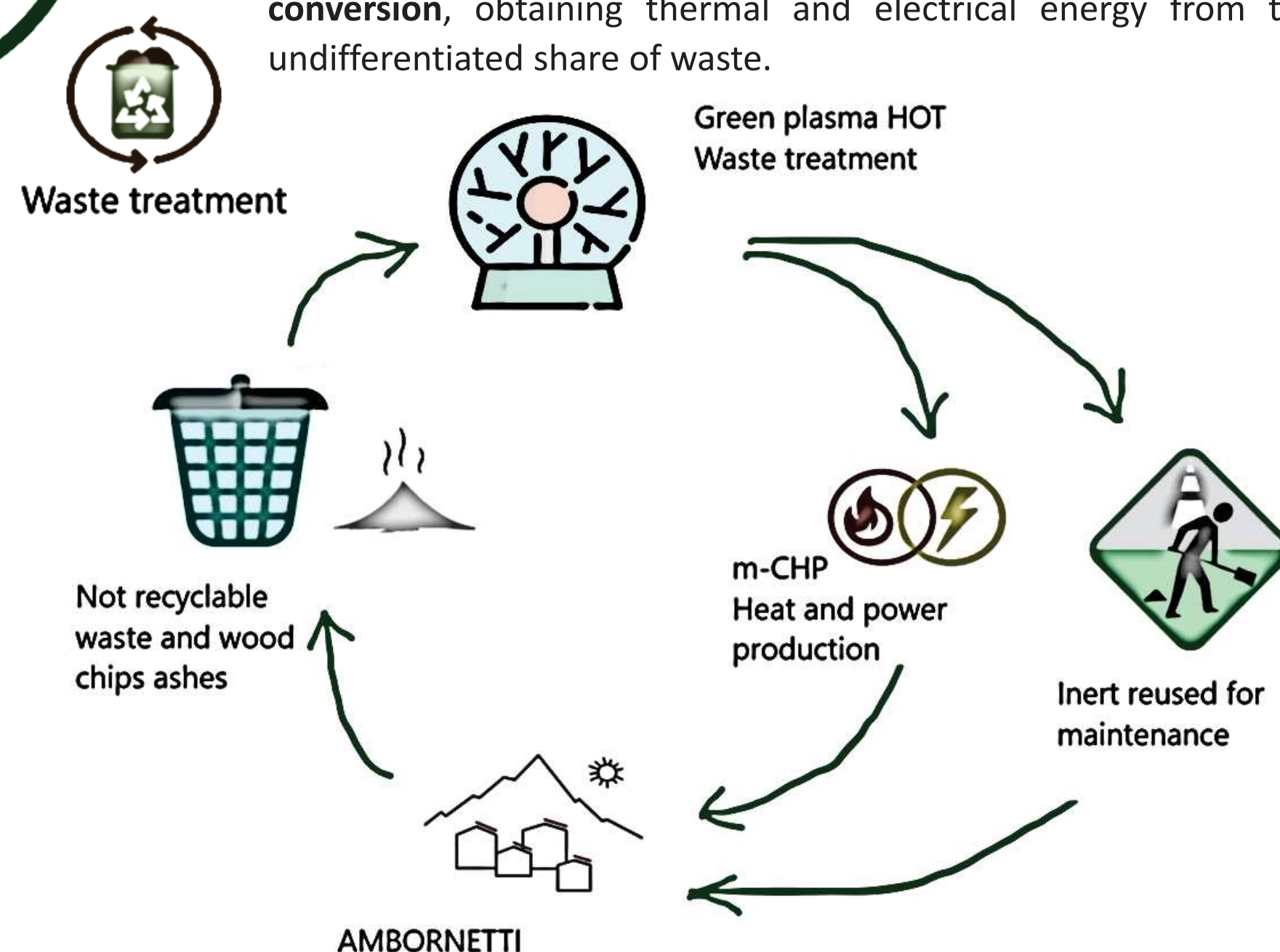
- ✓ The microgrid will be powered by **100% renewable electricity produced by solar panels and a high-performance wood chips micro-cogenerator (CHP).**
- ✓ An innovative **hydrogen storage system** will store energy, that will supply the smart grid in case of CHP plants maintenance operations and abnormal demand peaks.
- ✓ Energy efficiency and comfort will be guaranteed by a **BEMS system** for managing thermal loads based on presences, indoor air quality and continuous monitoring.



- ✓ A water management system will result in a **40% reduction of water consumption** (compared to standard water consumption).
- ✓ **The wastewater of the entire village will be divided based on uses, than treated and reused** in order to minimize the consumption of drinking water.
- ✓ The **treated water is 100% reused** for laundry, swimming pool replenishment, filters cleaning, external area irrigation and WC supply.
- ✓ **An innovative plasma system (Green Plasma Cold), under testing in Ambornetti, will allow a reduction of the organic load, sanitization and reuse of wastewater.**



- ✓ Waste management will be based on a **strategy to minimize garbage production** by increasing the separate waste collection percentage.
- ✓ **An innovative plasma system (Green Plasma Hot) will allow an in situ treatment of the residual fraction by thermochemical conversion, obtaining thermal and electrical energy from the undifferentiated share of waste.**





## 06 - SmartVillages - Smart Digital Transformation of Villages in the Alpine Space

### Abstract

The Alpine Space SmartVillages aims to bring together policymakers, business, academia and civil society in so called Regional Stakeholder Groups (RSGs) following a quadruple helix approach to improve the framework for innovation through effective forms of stakeholder involvement facilitated by ICT. The project works on the organisational and societal aspect - through the work with RSGs - and the technical aspect - with the creation of a Digital Exchange Platform (DEP) and a Toolbox - and combining the strengths of both sides. Finally the results are integrated into the policy level.

### Smart Villages Approach added value

The SmartVillages project is related to the Smart Social Eco Villages working definition that underlines the importance to build on existing local strengths and opportunities to engage in a process of sustainable development of their territories. The project relies on a participatory approach to develop and implement strategies to improve economic, social and environmental conditions, in particular by promoting innovation and mobilizing solutions offered by digital technologies. The test areas benefit from cooperation and alliances with other communities and actors in rural and urban areas.

<https://www.alpine-space.eu/projects/smartvillages/en/home>  
<http://www.sab.ch>



FURTHER INFORMATION  
[www.alpine-space.eu/smartvillages](http://www.alpine-space.eu/smartvillages)  
[www.facebook.com/project.SmartVillages](https://www.facebook.com/project.SmartVillages)

# Interreg Alpine Space



**“SMARTVillages”**  
EUROPEAN REGIONAL DEVELOPMENT FUND

## Smart Digital Transformation of Villages in the Alpine Space



**Alpine Space rural communities**, including mountain communities, are often deprived of highly needed jobs, good provision of services as well as of a favorable climate for entrepreneurship and social innovation, which result in a brain drain. **Digitalization** is a promising approach to counter the situation. A **“Smart Village” approach** for mountain areas could unlock the potential of local actors to make their region a more attractive place to live and work.

In cooperation with thirteen partners, Alpine Space SMARTVillages aims to bring together **Policymakers, Business, Academia and Civil Society** in a quadruple helix approach to improve the framework for innovation through effective forms of stakeholder involvement facilitated by **Information and Communication Technologies**. The Project is also a strategic initiative of EUSALP AG5 and follows an integrative, participatory approach implying a city - village dialogue.

### REGIONAL STAKEHOLDER GROUPS

- > Assist the assessment of smartness level of Test Areas
- > Give input for Best Practices
- > Test the Digital Exchange Platform
- > Codesign the Toolbox
- > Transfer results to the policy level

### REGIONAL ANALYSIS

- > Analysis of readiness and needs for a Smart Transition in the Test Areas

### DIGITAL EXCHANGE PLATFORM

- > Digital platform that ensures a transnational knowledge sharing of the findings within the project as well as with the wider public

### TOOLBOX

- > Tools, methods and techniques that facilitate the development of SV ecosystem in all TAs

### POLICY RECOMMENDATIONS

- > Recommendations for local, regional and national public authority will lead the Alpine communities to the creation of a Smart Village environment in their Regions



#### Duration

Project start date 17/04/2018  
Project end date 16/04/2021

#### Funding

2.689.072,80 EUR  
ERDF 2.065.136,87 EUR

This project is co-financed by the European Regional Development Fund through the Interreg Alpine Space programme



## 07 - SMART Rurality - Alpes Provence Verdon

### Abstract

Created in 2017, the community of communes Alpes Provence Verdon (CCAPV) gathers 41 municipalities on 1716 km<sup>2</sup> and counts approximately 11300 inhabitants. Representing a quarter of the area of the department for only 7% of its population, the territory is organized around the valleys of Verdon, Asse, Vaire and Haut Var.

Hyper rural, marked by a very strong bi-seasonal tourism and the persistence of forestry and pastoralism, the community of communes embarked on the development of a territorial project. The lack of infrastructures and the state of the existing coverage in terms of telephony and constant access to a sufficient Internet flow make it difficult to mobilize the stakeholders around credible digital development initiatives. Traders, secondary residents, tourists and residents are beginning to communicate about the low level of connectivity of the territory which hampers its development, its attractiveness, its image and could eventually downgrade it for some tourist clienteles. Elected representatives are also confronted with these feedbacks and regularly meet internet providers to identify common solutions. Highly aware of these issues around the digital world, they decided be proactive and to use their political power in relation to “digital spatial planning” and “public service homes” to foster the digital transition. Beyond that, it seemed essential to support the investments for better coverage to allow a quick implementation of new and more efficient services.

The CCAPV then embarked on an experimental “SMART Rurality” initiative launched by the Provence-Alpes-Côte d’Azur Regional Council with the support of the Rural Network in 2018. The objective is to mobilize and federate all actors around a digital development strategy for the territory. The final idea is to demonstrate that the existence of a global digital development project can enable a rural area to influence decision makers and service providers to accelerate the deployment of infrastructures.

As such, a diagnosis of the territory was made by Alpes de Haute Provence development agency and the Chamber of Commerce. 4 thematic working groups were then set up from November 2018, to brainstorm on the first actions to be deployed. The topics selected cover: “digital and telephone infrastructures”; “Economy, tourism, agriculture”; “Services to the population”; “Inter-administration cooperation”. These different working groups bring together elected representatives of the territory, CCAPV technicians, Regional Council, Departmental Council, State services, Development Council, local associations, tourist offices, consular chambers, companies ...

Nearly 40 projects / proposals / ideas were formulated around 3 main objectives:

- Create a digital culture
- Create and promote hubs encouraging people to access digital services
- Create digital meeting places

These projects are carried by administrations, associations and companies of the territory. The funders and project leaders will meet in early May to reach an action plan (to be finalized by June). However, new actions may continue to be added to the action plan as it is implemented.

In terms of first results, beyond the positioning of the territory and the best knowledge of the actors, 2 sites were selected for the improvement of mobile coverage and a meeting was held with the operator in charge of deployment of optical fiber to draw attention to the needs of professionals and provide technical elements to accelerate its deployment. This operator also proposed the skills of its IOT (Internet of Things) service to enable a faster implementation of the action plan.



## Smart Villages Approach added value

Experiment conducted by the Regional Council South Provence-Alpes-Côte d'Azur and the CCAPV :

- Methodology : external diagnosis, technical committee, steering committee involving all the partners of the community of communes, thematic working groups, action plan
- Philosophy: a unifying and participative approach favoring the networking of many actors (state, public and private structures, citizen associations, tourist offices, companies ...).

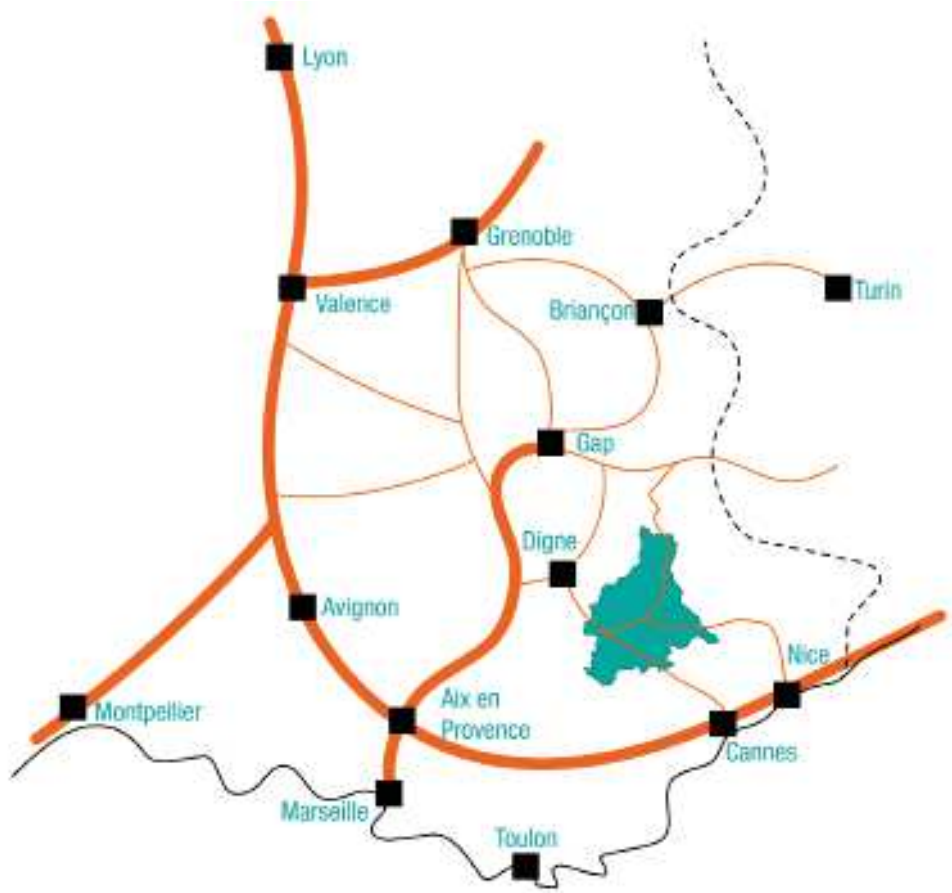
The two axes « create a digital culture on the territory » and « create and promote places of digital access » include many projects in terms of acculturation and support to the population, promotion of good digital behavioursdigital uses (with young audiences and their parents), training of all types of public (citizens, companies, associations), intervention with companies to facilitate their digital transformation (training, dedicated support). The public service houses have been closely associated and will play a key role in the support scheme proposed to the public, particularly through workshops offered to the elderly. New services are also planned for locals and tourists.

<https://reseausrural.maregionsud.fr/chantiers/acces-aux-services-smart-ruralite/>  
<http://www.ccapv.fr>



# DIAGNOSTIC

## SOUTH OF FRANCE



41 municipalities  
11193 inhabitants

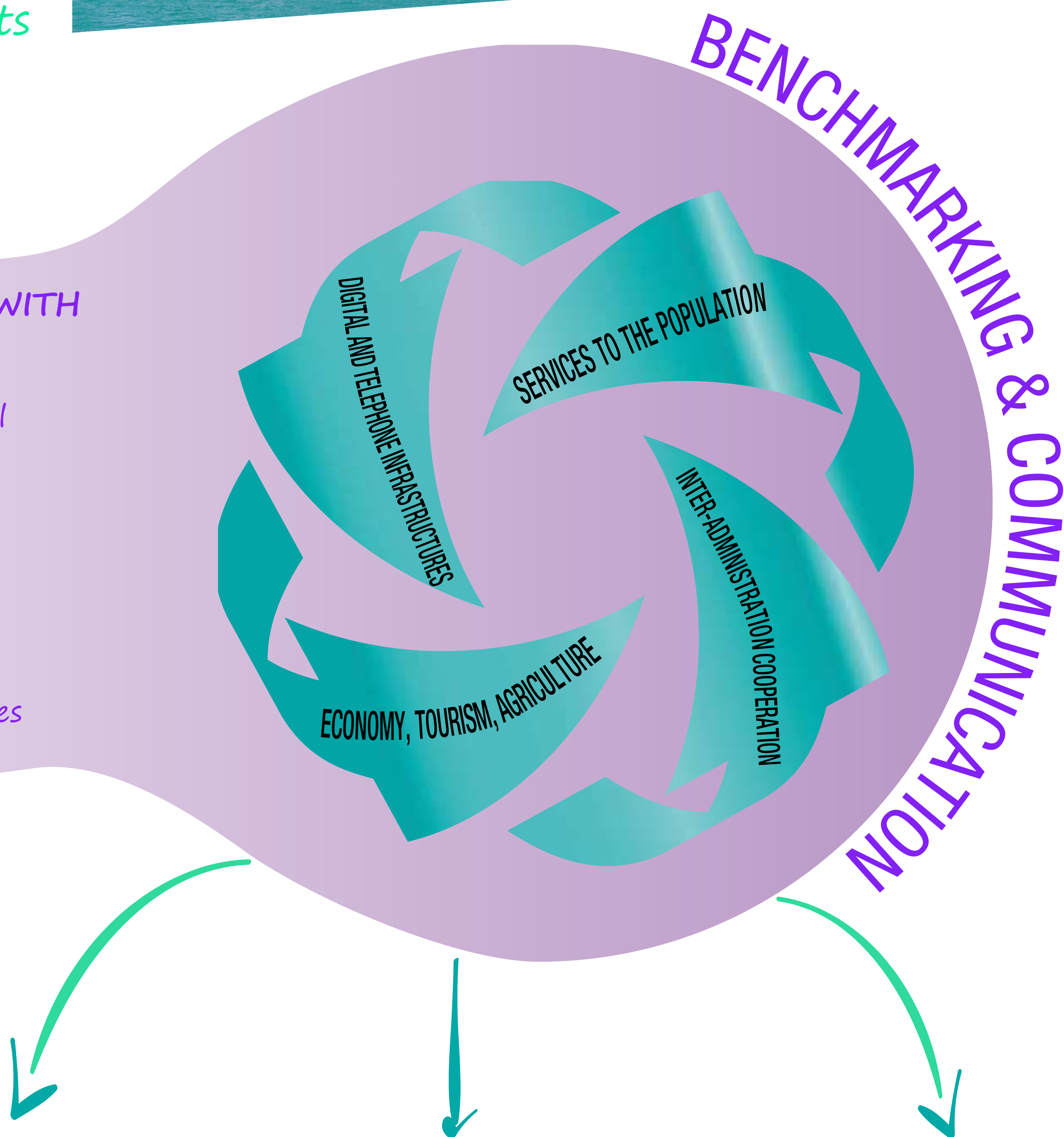
# SMART RURALITY



# ANALYSIS

## WORKING GROUP WITH

- Regional Council
- Departmental Council
- State services
- Development Council
- Local associations
- Tourist offices
- Consular chambers
- Companies
- CCAPV technicians
- Elected representatives of the territory...



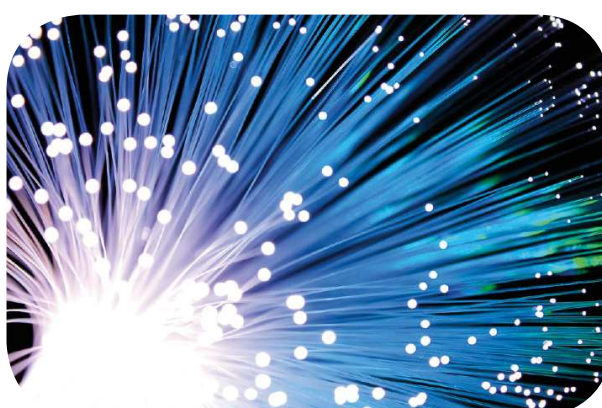
## DIGITAL CULTURE



numeric formations for all publics, acculturation, digital transformation



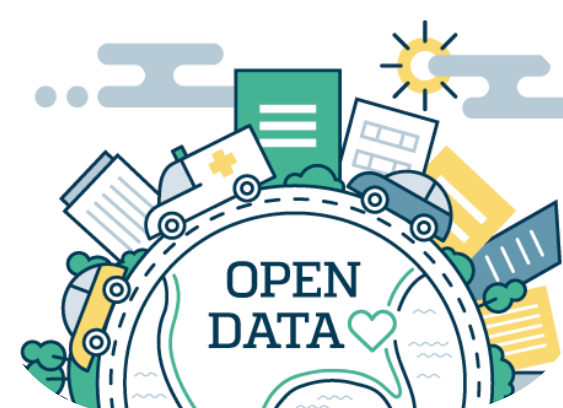
## DIGITAL ACCESS



optical fiber, telephone network, wifi point access, public service houses



## DIGITAL MEETING PLACES



open data developpement, coworking spaces, forums & platforms, citizen application, GDPR...



# ACTIONS

Partners:





## 08 - SV2: Smart Visions X Smart Villages

### Abstract

The ultimate goal of smartization is the improvement of the quality of life within a customized system which works on the interactions among humans and their environment.

Life takes advantage from a safe and healthy environment and from availability of services, so called ecosystem services, able to provide satisfactory answers to citizens' needs. Smartization springs from the analysis of lives in the environment, and becomes real from the combination of natives' culture, shaped by centuries of interactions with mountain realities, and possibilities provided by new technologies and improved and fast connections.

Though technologies play a crucial role in finding appropriate answers, their introduction comes after the identification of needs, an accurate, iterative and resource-demanding planning phase that involves humans beings, institutions and stakeholders. A bottom up itinerary builds up the design process: from one side, a solicitation of needs, a verification of data sharing availability and, from the other, the design of a distributed network, able to find answers which could influence habits of individuals and collectivity. Elder, active and young people engaged in their activities, performed in normal, abnormal and emergency conditions will feed the knowledge base of an Artificial Neural Network (ANN) technologies used to obtain algorithms able to tune the improvement of quality of life IN monitored and improved environmental and landscape conditions.

Keeping under control and improving these areas is meaningful for those who permanently live in mountain villages and of tourists, too, whose lives can be dramatically endangered by landslides or avalanches, harmful events, manifestation of natural risks due to a poor maintenance of the territory.

Scatol8 per la Sostenibilità srl (briefly, Scatol8 srl) is an academic spin-off of the University of Turin and an innovative start up. It works in the field of clean technologies and environmental monitoring. Its activity concerns the development, production and marketing of innovative products and services with a high technological value, and more specifically the development, production and marketing of integrated electronic systems and networks for the collection of variables - in particular environmental - and analysis of data collected through intelligent dashboard, primarily intended for agricultural, commercial and industrial activities.

To develop its vision of a Smart Village, Scatol8 srl counts on previous experiences, mostly in mountain and hilly areas, and always focused on Sustainability, that will be networked and improved by ANN:

- Mountain Huts Management: Monitoring of variables that affect the quality of living in interior and the relations with environment and landscape in term of material and energy consumptions;
- Inte.Ri.M. - Internet of Things for natural Risk Management: a management system, IoT based, developed considering environmental and economic dimensions of identifying, preventing, managing and restoring mountain areas affected by landslides and avalanches hazards;
- Environment & Health: biometric and environmental parameters, detected by wearable devices, put in relation to test the healthiness of a living environment;
- Education: a customizable itinerary to watch the environment and deepen the relations between daily activities and environmental quality that is a system conceived to promote the active learning and to found assumptions on data analysis, from Primary School to University;
- Grass8: a system oriented to monitor and improve pastures and supply chains that provide mountain products.
- Baril8: a system oriented to monitor and improve environmental and economic management of

the wine supply chain, balancing the multifunctionality of vineyards, lending value to mountain wines and derived products.

In order to consider the wide diversity of situations under the umbrella of "smart village", our proposal is currently in the phase of defining the specifications in equally diversified territories, through dialogue with local players: the Municipality of Valprato Soana and the MonterosaSki area.

### **Smart Villages Approach added value**

The initiative is proposed after significant experiences in mountain areas and combines a participatory approach with technologies, namely internet of Things, in the field of environmental monitoring, sustainable management of economic organizations (SME's) and education to sustainability. It aims to build an accessible and replicable model, thanks to the highly customizable solutions founded on Scatol8 system, which is based on open source technologies. The initiative stands for a capitalization of experiences partly developed in EU funded projects.

<http://scatol8.net>



VALPRATO SOANA ..... MONTEROSASKI



## 09 – Integrated program towards the relaunch of Valgioie: recovery of tourist and accommodation business and social inclusion

### Abstract

Valgioie is a mountain village of 1000 inhabitants, mostly elderly, located at the entrance to the Orsiera Rocciavré park, half an hour from the center of Turin and Susa and 45 minutes from the airport of Caselle, near the symbol of Piedmont: the beautiful Sacra di San Michele.

It is located along a route that is very popular and frequented by large groups of cyclists and motorcyclists.

From there start many paths for trekking and mountain biking. In a few minutes you can reach the paragliding school. Its territory is renowned for its mushrooms. The ski slopes of Pian Neiretto are 15 km away.

Avigliana, 15 minutes away, is a medieval village whose lakes have small beaches, and offer countless sports activities and nightlife.

Giaveno, ten minutes away, has a market for typical products.

Nevertheless, Valgioie suffers from depopulation and aging of the population, and urgently needs a solution not to die.

It would therefore be necessary to reopen its activities, to revive its economy, that is:

Chalet Villa Ortensia: independent villa with three apartments, surrounded by about 1600 square meters of land, along the SP 188 and two km from the Sacra, ideal holiday home for families with children, or for educational trips.

It can also be proposed as a location for events and small receptions, also for:

- creative workshops, perhaps involving the elderly with their knowledge and traditions
- educational farm with small animals
- cultivation of vegetables and fruit with which to supply the project's restaurants

Hotel Valgioie: 30 rooms, in the centre of the village, along the SP 188, equipped with professional cuisine, restaurant and various other places.

Ideal as a wellness center or as a hotel dedicated to couples, to celebrate special occasions.

Closed for some time and in need of renovation.

Vecchia Locanda della Posta: 60 seats restaurant located in front of the hotel, now closed, with restaurant license, bar and two-star hotel, where to create a characteristic mountain restaurant.

It has a lounge and twelve rooms, to create a coworking and accommodate the staff who would work in all activities of the project.

Restaurant al Colle Braida: currently restaurant, bar and pizzeria with wood-burning oven.

200 seats inside, on two floors plus a loft, plus 100 in the large outdoor area.

In addition to a strong flow of tourists, it boasts an uninterrupted passage of buses from the Sacra, large groups of motorcyclists, people who go trekking. Opposite, there are four bowling alleys, in the summer hosting tournaments every weekend (and in the winter potential skating

rinks).

It is the favourite stopping place for cyclists and motorcyclists arriving from Giaveno or Avigliana, with a passage of about 500 cyclists a day; it has a huge parking lot that can hold even more coaches and cars at the same time.

An ideal location to create the "Bike and Bikers Paradise", where you can find changing rooms, coin-operated showers, vending machines and energy bars and where the kitchen is based on a fast and cheap menu, but quality, suitable for large groups and tourists passing through, such as grill and pizza.

The project involves the creation of about thirty jobs, including employees and freelancers.

The manager will be responsible for managing all activities and hiring the necessary staff, with priority given to disadvantaged people.

The operation involves in any case the acquisition of ownership of the property and the licensing of the restaurant at Colle Braida through European and/or regional funding, or, even in parallel, through external investors who will cover all or part of the purchase of the property. Both directly and through operations of real estate crowdfunding, fundrising, sponsoring, venture capital.

A total investment of about 5,000,000 can reasonably be assumed.

### **Smart Villages Approach added value**

The main objectives of the project are:

- to bring Valgioie back to the splendour of past years, adequately enhancing all its beauties and the many attractions of its territory
- creating new jobs for otherwise disadvantaged and excluded people
- recovering the tourist and building heritage by transforming it into a driving force for the local economy
- countering depopulation, with a view to promoting generational turnover through the settlement of young people and families

through the reopening of activities now closed or underused.



# Valgioie Relais & Nature

## INTEGRATED PROJECT TOWARD THE RELAUNCH OF VALGIOIE

### RECOVERY OF TOURIST AND ACCOMMODATION BUSINESSES AND SOCIAL INCLUSION



Valgioie is a mountain village of 1000 inhabitants, mainly elderly, located to the gate of Orsiera Rocciavère Park, thirty minutes from Turin and Susa downtown and 45 minutes from Casale airport, near the symbol of Piedmont: the wonderful Saint Michel's Sacra. It is located along a very frequented path by large groups of cyclists and motorcyclists. Here start numerous tracks for trekking and mountain biking. In a few minutes, you can join the paragliding school. Its territory is renowned for its mushrooms.

In only 15 km, you can join the **Plan Nèmetto** ski slopes. **Avigliana**, 15 minutes away, is a medieval village whose lakes have small beaches, and offers countless sports and nightlife activities.



**Giaveno**, ten minutes away, shows the market of the typical products.



Nevertheless, Valgioie suffers depopulation and the aging of its population, and urgently needs a solution in order not to die. **IT SHOULD THEREFORE REOPEN ITS TOURIST SITES, TO REVIVE ITS ECONOMY, NAMELY:**

#### CHALET VILLA ORTENSIA

Independent villa with three apartments, surrounded by about 1000 square meters land, along the SP 188 and two kilometers far from the Sacra, the suitable holidays home for families with children, or for educational trips.



It can also be an excellent location for events and social parties, and for creative workshops, involving the elderly people with their knowledge and traditions. Educational trips can even be organized, such as visits to the Sacra, or to the restaurants of this project.

#### HOTEL VALGIOIE

30 rooms, in the town center, along the SP 188. Equipped with a professional kitchen, a dining room and several additional rooms.



Ideal as a Wellness Center with corners focused on couples, to celebrate special occasions. Closed since a long time, it needs a deep renovation.



#### "VECCHIA LOCANDA della POSTA"



Restaurant with 60 seats located in front of the hotel, now closed, with restaurant, bar and two-star hotel license.

Suitable to create a typical mountain restaurant. It has a lounge and twelve rooms, to create a co-living and co-working for digital nomads (medium/long stays) and to allow the restaurant to work all year round.



#### THE RESTAURANT AT COLLE BRAIDA



Currently restaurant, bar and pizzeria with wood-burning oven, 200 seats inside, on two floors plus loft, plus 100 in the large outdoor area. In addition to a strong flow of tourists, it boasts an uninterrupted passage of buses coming from the Sacra, thick groups of motorcyclists, people who go trekking. To the opposite side, there are four bowling greens, in summer it hosts tournaments every weekend (and in winter could become skating rink).



It is the favorite stopping point for cyclists and motorcyclists arriving from Giaveno or Avigliana, with a pass of about 500 cyclists a day. It has a huge parking lot that can hold even several buses and cars at the same time. An ideal location to create the "Bike and Bitter Paradise", where you can find changing rooms, coin showers, vending machines for drinks and energy bars and where the kitchen is based on a quick and cheap quality menu, suitable for large groups and to the passing tourists, such as grill and pizza.

The project involves the creation of around thirty job positions, between employees and freelancers. The manager must deal with the management of all the activities and hiring the staff, with priority towards disadvantaged people. In any case, the operation involves the acquisition of the ownership of the buildings and the license of the restaurant at Colle Braida through European and/or regional funding, or, even together, through private equity that will cover all or part of the entire investment. Both directly and through crowdfunding, fundraising, sponsoring and venture capital operations. A total investment of approximately € 5,000,000 can reasonably be assumed.



## 10 - Smart Villages: Innovative Mobility Solutions for Public Authorities and Transport Operators

### Abstract

The past two decades have seen the world become increasingly connected; IT solutions have made their way into every aspect of day-to-day life and have been deployed ever more widely in the transport and mobility sectors. The convergence of several technologies and the widespread adoption of smartphones have enabled people, especially the youth in metropolitan areas, to have better access to information and greater control on when and how they travel. However, innovative transport solutions are not just relevant for metropolitan areas but hold promise to improve mobility options for people in rural areas too.

The poster will present the on-going project "Improvement of cross-border mobility and passenger flows – Innovative Solutions for Public Authorities and Transport Operators".

#### Approach:

First, an international best practice and stakeholder analysis lead to the deduction of general innovative solution archetypes

Second, the project archetypes underwent a Strengths-Weaknesses-Opportunities-Threats Analysis.

Third, the results of the first two steps are to be presented and discussed at local work-shops with the relevant stakeholders.

Finally, the discussions between the workshop attendees are to be reincorporated into the work and a final report will be produced

#### Aims:

Through collecting state of the art and innovative solutions and assessing them, the project aims to transfer suitable ideas to the Alpine Region. It is meant to not only inform the local stakeholders about what options are available, but also to show them how/if these solutions are suitable for their regions that vary in structure (Metropolitan, Urban or Rural areas).

The poster will present the SWOT analyses for two archetypes that are suitable in the context of smart villages, "Rural Shared Mobility" and "Digital Solutions".

The project represents Work Package 4 of the wider "Cross-border Mobility in the Alpine Region Project" that is co-financed by the European Union through the Alpine Region Pre-paratory Action Fund (ARPAF).

### Smart Villages Approach added value

The Smart Villages initiative aims at introducing innovative solutions to the Alpine Region not only in an aim to attract youth but to also provide services to the populations living there. This project presents viable ideas in a systemic approach.

<https://www.kcw-online.de/>



# Smart Villages: A Common Perspective Through Different Visions

## Innovative Mobility Solutions for Public Authorities and Transport Operators

Nabil Nakkash, KCW GmbH, Germany

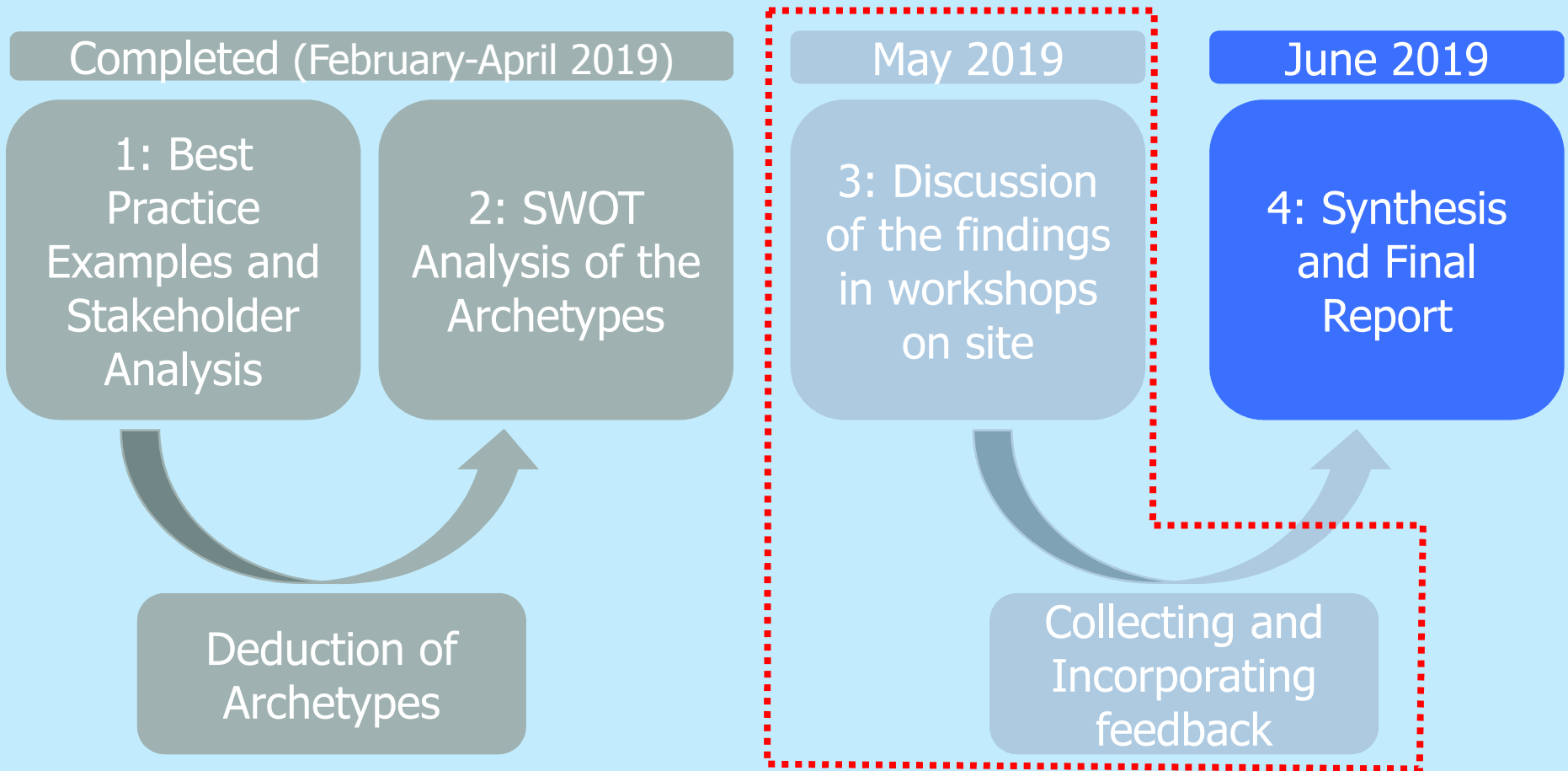
**Project:** "Improvement of cross-border mobility and passenger flows – Innovative Solutions for Public Authorities and Transport Operators"

**Background:** The past two decades have seen the world become increasingly connected; IT solutions have made their way into every aspect of day-to-day life and have been deployed ever more widely in the transport and mobility sectors. The convergence of several technologies and the widespread adoption of smartphones have enabled people, especially the youth in metropolitan areas, to have better access to information and greater control on when and how they travel. However, innovative transport solutions are not just relevant for metropolitan areas but hold promise to improve mobility options for people in rural areas too.

### Aims:

Through collecting state of the art and innovative solutions and assessing them, the project aims to transfer suitable ideas to the Alpine Region. It is meant to not only inform the local stakeholders about what options are available, but also to show them how/if these solutions are suitable for their regions that vary in structure (Urban, Suburban or Rural areas).

### Project Working Steps



### 1. Best Practice Examples

Twenty projects have been selected across different

- a) project types (deducted from WP3)
- b) settlement system characteristics (Urban, Suburban, Rural)

Facts and insights on the projects were recorded separately in an Excel Table.

**These include:**

- Short description and main facts
- Aims and user benefits
- Spatial commuting structure
- Transport modes
- Countries and stakeholders involved
- Funding / investment sources
- Intensity of cooperation

### Deducted Archetypes

1. Physical Link
2. Physical Link +
3. PT Cross-border Cooperation
4. Experimental / Research Projects
5. Shared Mobility in Urban Areas
6. Shared Mobility in Rural Areas
7. Digital Solutions
8. Harmonizing Standards
9. Multimodal Hubs
10. Joint Ventures (Cross-border)

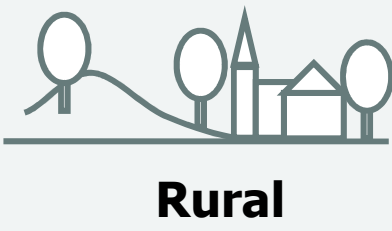
### Shared Mobility in Rural Areas

These services usually require financial subsidies and are introduced into low density areas to provide mobility where public transport offer is either weak or non-existent (eg: Call-a-bus). Furthermore, such services could be used to encourage tourism and stimulate the economy in rural areas

Suitable in Rural Areas

Examples: E-Bikenet , Co-wheels

Strong potential for cooperation for PTO/PTA depending on regulatory landscape and general attitude towards experimentation



Strengths	Weaknesses
<ul style="list-style-type: none"><li>• Innovative offer, multimodal when included in PT</li><li>• Promotes sustainable travel to/in the touristic destination</li><li>• Need for cooperation<ul style="list-style-type: none"><li>• Services can be tailored to specific locations and needs</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Cost for implementing, operating subsidies for private partner needed</li><li>• Not accessible to everyone (license, credit card, data etc.)</li><li>• Lack of or limited demand (e.g.: seasonal)</li></ul>
Opportunities	Threats
<ul style="list-style-type: none"><li>• Increased mobility options/accessibility</li><li>• No need for (second) car ownership (seniors-low income youth)</li><li>• Pay as you go –reduced costs for users, no ownership required</li><li>• Convenience, ease of use, door to door</li></ul>	<ul style="list-style-type: none"><li>• Lack of or limited demand (e.g.: seasonal)</li><li>• Inability to find private partner or a willing provider for the services</li><li>• Vandalism</li></ul>

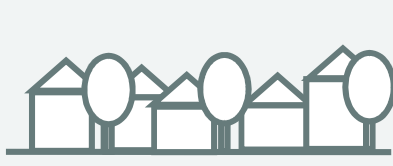
### Digital Solutions

Digital service or solution that acts as a connector between the user and the service provider. Platform for mobility generally does not need any extra infrastructure investment

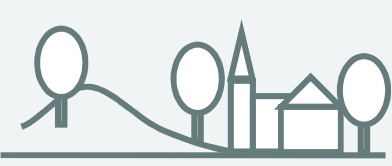
Suitable in Rural, Urban and Metropolitan areas



Urban



Suburban



Rural

Examples: The Trainline, FAIRTIQ, WhimApp

Strengths	Weaknesses
<ul style="list-style-type: none"><li>• No physical infrastructure needed, low operating costs</li><li>• Quick implementation (if solution available on the market)</li><li>• Improved service/ information access</li><li>• Modal shift, multimodal journeys</li></ul>	<ul style="list-style-type: none"><li>• Custom solution / in-house development in the public sector can have high costs, take a long time, and require intense cooperation</li><li>• Provider may not need to cooperate with public sector<ul style="list-style-type: none"><li>• Does not share data</li><li>• Exploits loopholes</li></ul></li></ul>
Opportunities	Threats
<ul style="list-style-type: none"><li>• Improved access to information</li><li>• Personalizing and/or reducing complexity of information available</li><li>• Bundling (Whim) and best price (Fairtiq) lead to customer cost savings</li></ul>	<ul style="list-style-type: none"><li>• Not accessible to everyone (need to own smartphone, roaming, extensive data package)</li><li>• Variety of apps confusing customers</li></ul>



# 11 - Smart Mountains: an empirical application of EUSALP Strategies

## Abstract

### DESCRIPTION OF THE PROJECT

The purpose of this paper is to provide a testbed for innovation by reversing the logic of “Smart Cities” (by elaborating the concept of “Smart Mountains”) in Trentino and to capture the essence of EUSALP Strategies.

The literature on “Smart Cities” has evolved since the late 2000s, and the authoritative IEEE (Institute of Electrical and Electronics Engineers) gives a proper definition to the debate: “A smart city brings together technology, government and society to enable the following characteristics: smart cities, a smart economy, smart mobility, a smart environment, smart people, smart living, smart governance”.

In April 2019, the Osservatori of the Politecnico di Milano defined, in their latest published paper on the theme, the Smart City as “a wide concept that embodies a conception of the urban reality that goes beyond technological boundaries and that - in a broad vision that ranges from mobility to energy efficiency, from eGovernment to the active participation of citizens - aims to raise the standards of sustainability, liveability and economic dynamism of the cities of the future”. Moreover, in the same paper it is stated that between 2016 and 2018, 26% of Italian towns with more than 15.000 inhabitants have initiated one or two Smart City projects. The concept of Smart City can therefore be scaled horizontally to every type of urban settlement, where in the case of the Alpine landscape this concept is represented in the “Smart Village”.

At European level, the Smart Cities and Communities initiative, launched in 2011, forged partnerships between industry and cities. We are primarily interested in the elaboration of public-private partnership for the benefit of the local stakeholders, observing international technology companies (Cisco, Hitachi and IBM, for instance) which became agents of conceptual development and partners in pilot projects.

### IMPLEMENTATION

As described in [http://www.smartcitiesandsport.org/wp-content/uploads/2018/12/Sports\\_Innovation\\_Hubs\\_Publication.pdf](http://www.smartcitiesandsport.org/wp-content/uploads/2018/12/Sports_Innovation_Hubs_Publication.pdf), Trentino, as an innovation ecosystem, has embarked on a period of strategic reflection with the Winter Universiade 2013 Trentino – defined as “a paradigmatic example of integration between sport and innovation” by the Council of Ministers of Sport of the European Union.

In this framework, Trentino as a region developed a “Smart Specialisation Strategy” in 2014, which paved the way for a global integration of the vision of sport as a driving force for development, technological innovation and social integration and a transversal vision of innovation, well-being and technology through sport.

Trentino Sviluppo, Trentino’s territorial development agency, has been recently mandated by the Autonomous Province of Trento to develop a 3-year international strategy on Sport Tech, Sport Economy and Sport Innovation. In this context we wish to bridge the gap between EUSALP Strategies (in particular Action Group 5, 3, 4, 5, 9), “Smart Mountains” and “Smart Villages” in close coordination with public authorities and <https://statigeneralimontagna.provincia.tn.it/> where the Economic Minister of Trentino declared “the States General of the Mountains are a great challenge for the governance system. The first answer can come from the development of innovative technologies and value-added activities” <https://www.ufficiostampa.provincia.tn.it/Comunicati/Montagna-lo-sviluppo-possibile-grazie-a-tecnologia-e-collegamenti-veloci>

### OUTCOME

We wish to provide and promote Trentino as an open-air laboratory for experimentation of new technological solutions, with permanent technological hubs (as it has been done at the Festival of Sport with the “Trentino Sport Tech Arena” <https://sportup.startupitalia.eu/2018/10/06/festival-dello-sport-trento-occhi-puntati-sulla-sport-tech-arena/>).

By adopting and adapting the idea of “Smart Cities” to the new field of “Smart Mountains”, we wish to provide technological solutions to increase the connectivity of the mountains both at an infrastructural level as well as at the level of application solution for users (i.e. tourists or territorial stakeholders), with the final aim to continuously engage the community, create a community solidly rooted in the territory and develop a users-friendly technological environment. This reflects the concept that sees the frontier of technological innovation also as the frontier of social innovation.

Provided with a sound technological infrastructure, the Smart Mountain evolves a morphological element into an interactive land, where existing activities are empowered and new ones are generated, acting as an economic and employment propeller for the region.

Recently developed technological solutions allow even impervious landscapes to be easily connected through a reliable and durable infrastructure with low battery consumption, which ultimately allows the creation of a cooperating network between the different mountain stakeholders. This structure benefits not only digital born services, since these solutions can be highly beneficial even to existing traditional activities, such as breeding or wildlife safeguarding.

Tourism would certainly be impacted by such empowerments, with an increased commercial power for touristic operators thanks to a responsive mountain that would be more appealing to tourists, with a plethora of available new services to amplify their high altitude experience.

We propose to undertake these actions in the view of the EUSALP Strategies and in sync with the “Stati Generali della Montagna”. We are problem-solvers with a technological mindset, oriented towards a new application of public-private partnership in the EUSALP/Trentino context.

Partner4Innovation and TrentinoSviluppo

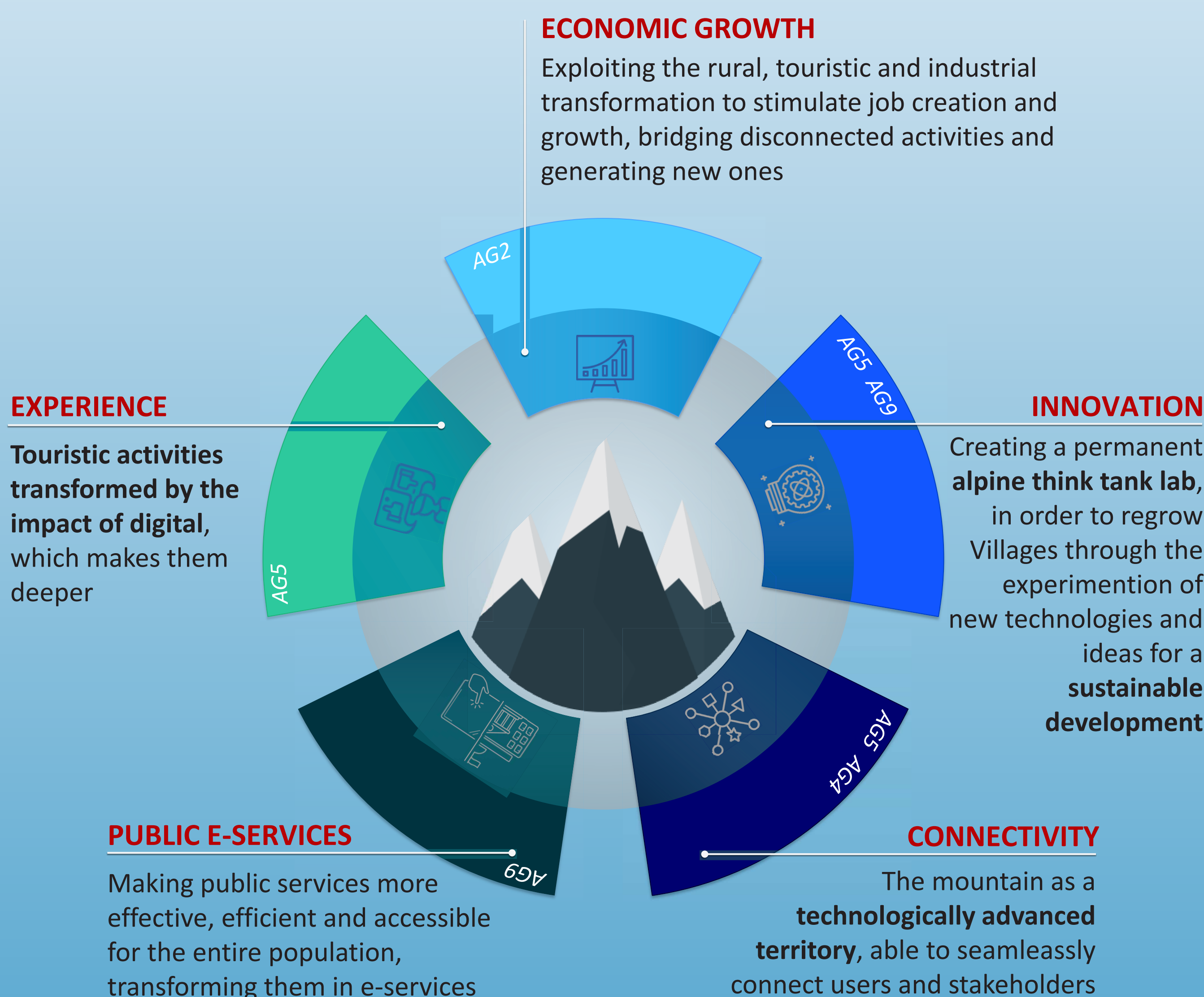
### **Smart Villages Approach added value**

The Smart Mountain concept aims at transversally filling a gap between the following Specific Objects of the different Action Groups mainly involved in the call:

- AG4: To develop cooperation and greater integration between the existing bodies and structures in the field of transport.
- AG5: Propose technical solution with focus on ICT; Propose a strategic approach to the accessibility of services of general interest (SGI); Install a permanent alpine think tank on the accessibility to services of general interest; Encourage the exchange of experiences in the EUSALP perimeter; Foster synergies with other Action Groups of EUSALP; Offer ICT solutions for the work of the other action groups
- AG9: Setting up an Alpine energy efficiency cluster; Support energy management systems in the Alpine Region by developing, sharing and installing energy efficiency and decentralised monitoring systems at the local level and by promoting regional energy monitoring.



## Smart Mountains: an empirical application of EUSALP Strategies

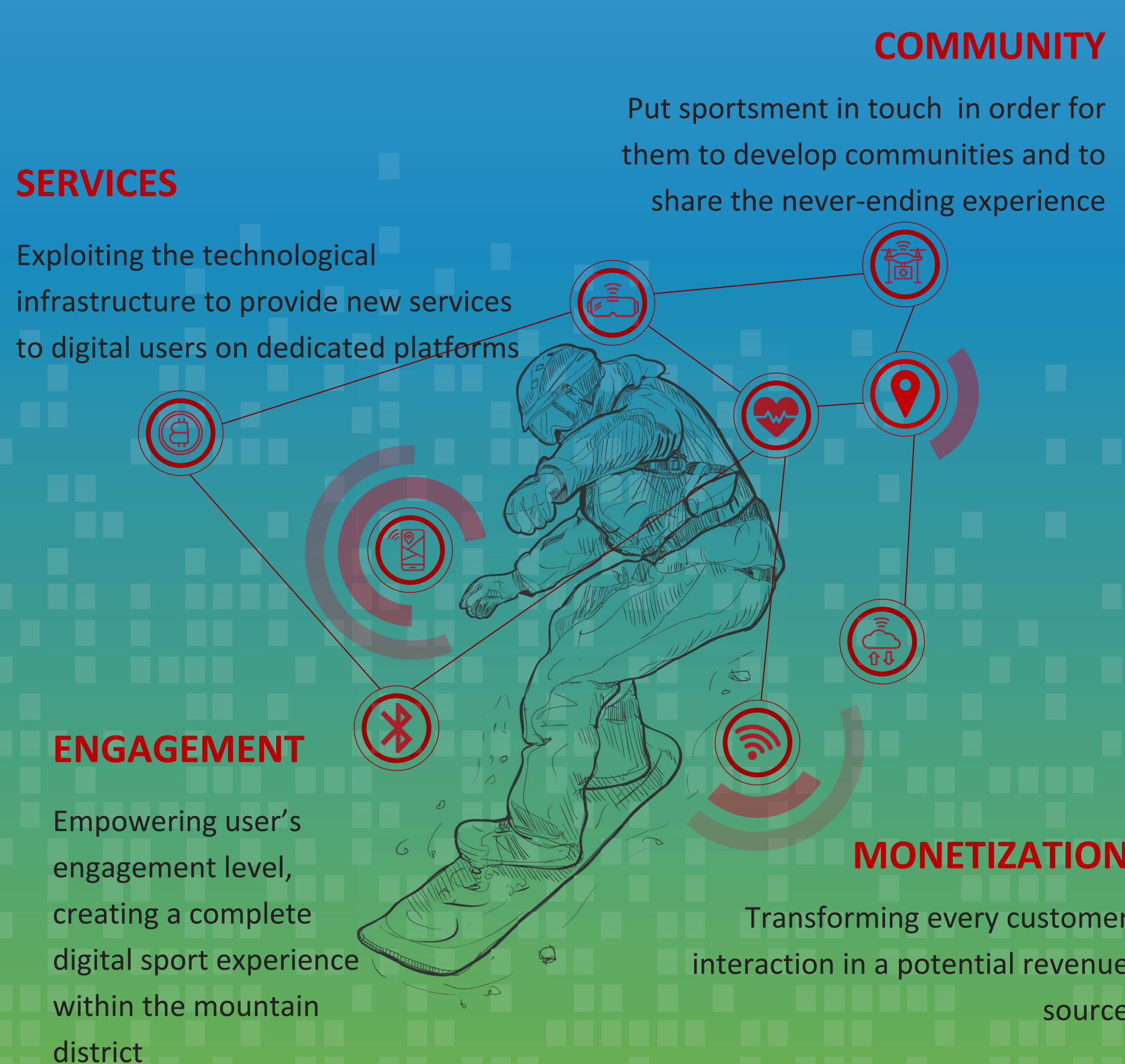
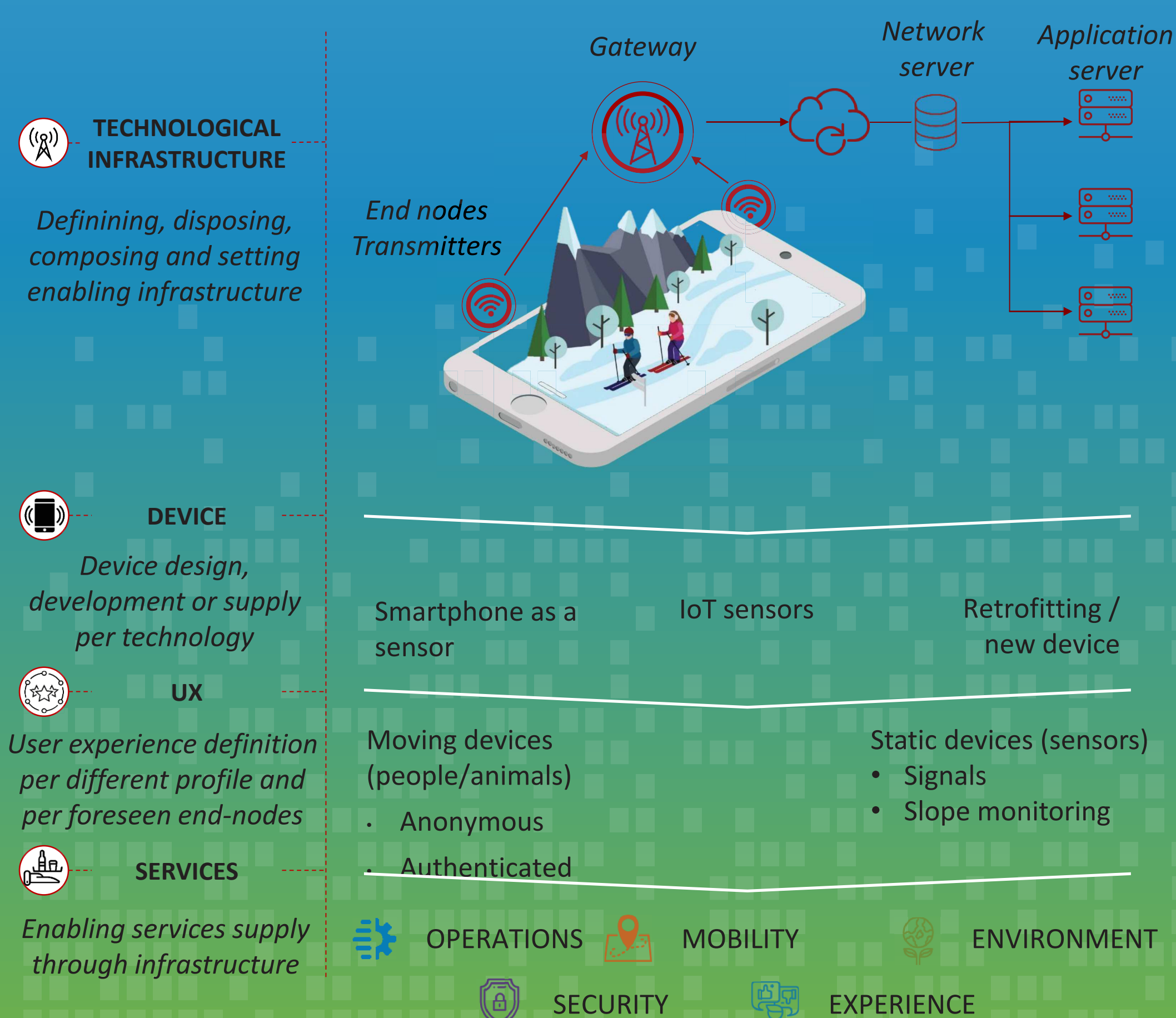


Trentino, as an innovation ecosystem, has embarked on a period of strategic reflection with the Winter Universiade 2013 Trentino. In this framework, **Trentino as a region developed a “Smart Specialisation Strategy” in 2014**, which paved the way for a global integration of the vision of sport as a driving force for development, technological innovation and social integration.

By adopting and adapting the idea of “Smart Cities” to the new field of “Smart Mountains”, we wish to provide technological solutions to **increase the connectivity of the mountains both at an infrastructural level as well as at the level of application solution for users** (i.e. tourists or territorial stakeholders), **with the final aim to continuously engage the community**, solidly rooting it into the territory, and develop a users-friendly technological environment. This reflects the concept that sees **the frontier of technological innovation also as the frontier of social innovation, promoting Trentino as an open-air laboratory** for experimentation of new technological solutions.

The Smart Mountain evolves a morphological element into an interactive land connectable through a reliable and durable infrastructure with low battery consumption, where existing activities are empowered and new ones are generated, acting as an economic and employment propeller for the region. **This structure benefits not only digital born services, since these solutions can be highly beneficial even to existing traditional activities and with tourism certainly being impacted by such empowerments.**

## Connecting people and objects An enabling infrastructure to empower deep and seamless experiences





## 12 - EOLO Missione Comune project

### Abstract

EOLO Missione Comune is a project ideated by EOLO, the main operator in Italy in fixed-wireless ultra-broadband for the business and residential segments, to help small municipalities under 5,000 inhabitants to counter the growing depopulation, donating 1 million euros at 100 municipalities in 1 year, offering technological devices and connectivity that can lead these realities to become "Smart City". From April is online a dedicated platform on which municipalities can be chosen directly through the vote of citizens and sympathizers, with the opportunity to gain the maximum contribution of 14,000 euros, thanks to social "missions". Two months after the launch, the platform has counted one million votes.

### Smart Villages Approach added value

EOLO Missione Comune is a project that can contribute to a better connectivity of small mountain villages, encouraging the digitization of services and ensuring the infrastructure necessary to develop a digital ecosystem that serves as a basis for the development of Smart Villages, to counter the growing depopulation and fostering economic growth.

[Missionecomune.eolo.it](http://Missionecomune.eolo.it)



In Italy —————

9.937.212 PEOPLE

LIVE IN CITIES WITH LESS THAN

5,000

INHABITANTS.

NEVERTHELESS, THESE TOWNS ARE  
DRAMATICALLY DEPOPULATING.



## EOLO'S commitment

This is why we decided to donate

3 million  
euros   
in 3 years

and launch **Missione Comune**,  
a dedicated platform aimed  
to help and support Italy's  
smallest cities.

[missionecomune.eolo.it](https://missionecomune.eolo.it).



## Mechanic

The first towns will be chosen directly  
by the website's users from a list of small  
Italian towns.

The 300  
most voted  
cities



will then be awarded with state-of-the-art  
technologies and public internet connectivity.

**eolo**

Internet dove  
gli altri non arrivano



# SMART VILLAGES

a Common Perspective Through Different Visions

Courmayeur – Valle d'Aosta – Italy

May 24<sup>th</sup> 2019





