

Chiomonte Smart Project

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DIPARTIMENTO INTERATENEEO DI SCIENZE
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POLITECNICO E UNIVERSITÀ DI TORINO

“CHIOMONTE SMART” PROJECT

<https://visitchiomonte.it/>

The “Chiomonte SMART” is a project managed by the **association Chiomonte ImprenD’Oc** and funded by “**Comitati Territoriali IREN**” as a prosecution of the “Chiomonte 2025” project concluded in 2018. While “Chiomonte 2025” was devoted to profoundly understand the territorial reality of Chiomonte mainly related to the High Speed Train Line Torino-Lione (HSTL), “Chiomonte SMART” aimed at a deeper analysis proposing alternative strategies for the territory in exam. In particular, the research conducted by the Working Group (WG) of the Interuniversity Department of Regional and Urban Studies and Planning (DIST) aims to pursue multiple goals:

- verify the relevance of the specific activities for the territory proposed by ImprenD’Oc in collaboration with numerous territorial and academic stakeholders. The activities proposed by ImprenD’Oc are the result of a precise knowledge of the territory and of the problem and of a study and joint research work between different actors.

These activities relate to 4 territorial development plans of Chiomonte (Real Estate Heritage Redevelopment Plan, **PIRIPIC**; Action Plan for sustainable energy and climate, **PAES-C**; Project for agricultural redevelopment and recovery of viticulture sector of Chiomonte municipality, **PRAREVIC**; Integrated plan for economic tourism development, **PISTE**) as described in the reports published by ImprenD’Oc (2016, 2018);

- develop a “platform for data viewer and GIS publishing” using the Web (hereinafter referred to as the “GIS platform”) containing the available data relating to the 4 territorial development plans of Chiomonte and specific activities;
- conducting proactive analyses with a view to a future sustainable development of the municipality of Chiomonte.

In order to come to sensible results, the WG conducted two main activities: 1) implement a GIS system; 2) apply a soft methodology involving different stakeholders to identify possible strategic scenario for Chiomonte.

The need to implement a GIS system, able to show the project scenarios defined in the Chiomonte area has led to the creation of a webGIS platform based on the open source software **QGIS** and some free plugins that allowed the creation of the WEBGIS called **qgis2web**.

The work carried out has made it possible to collect and integrate a multiplicity of heterogeneous information, with the possibility of laying the foundations for any analysis relating to transformation scenarios in relation to aspects of real estate, energy, tourism and agronomy. To facilitate the sharing and greater flexibility of the work environment, the platform was created using free and / or open source software and tools if possible.

In particular: **QGIS** for the GIS analysis; **LibreOffice** for “office automation” and data processing; **XAMPP** for the PHP development environment and publishing; Javascript, HTML and PHP as a scripting language; MySQL for databases. The data affected by the themes of the four transformation scenarios are multiple. In this sense, the management of the scenarios would be impervious and ineffective if not through the use of an appropriate platform capable of structuring and integrating them internally, as well as for visualizing and reporting the scenarios themselves. This is why the different data

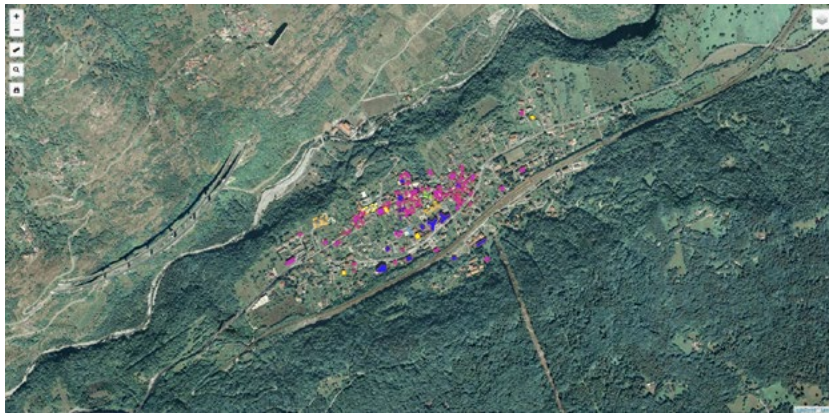


Figure 1. PIRIPIC, web interface

have been appropriately structured within a geodatabase called geopackage. It consists in an adequate format able to integrate all the information with respect to the various analysis scales (Figure 1).

To identify possible alternative scenarios for the territory of Chiomonte, the WG interviewed 15 academic experts and scholars applying a soft/qualitative methodology. The DIST working group has therefore identified specific indicators (KPI) for the measurability of the activities in relation to each specific sector of interest. It is important to emphasize that any territorial action or transformation necessarily implies positive and negative impacts at the same time. Therefore, the indicators identified by the research group are aimed at measuring positive and negative aspects of the activities proposed by ImprenD'Oc.

The research work done so far has been complex and articulated for several reasons. First of all it is important to highlight the difficulty due to the lack of available and accessible data in relation to the four development scenarios hypothesised by ImprenD'Oc. Some data that would have been fundamental for the propositional evaluations carried out by the research group have not yet been collected in the territory and it was therefore necessary to carry out some qualitative simplifications. Secondly, as highlighted by the stakeholders interviewed, it was extremely complex to have to consider different decision plans and territorial scales simultaneously. Finally, it is important to underline the political uncertainty within which this report fits with particular reference to the HSTL. In fact, in April 2018 (when we started working) the political and decision-making conditions were extremely different and the HSTL was given almost as a certainty but it is no longer the case today and it will therefore be necessary to continue the excellent work begun by ImprenD'Oc in an uncertain and difficult landscape. In terms of future developments relating to the propositional analyses reported here it will therefore be necessary to deepen the strategic reasoning carried out on the KPIs in order to bring them into the reality of Chiomonte. In the same way, "participatory methodologies" could be improved and implemented with the territory in terms of inclusion. In this regard we would promote local free mapping events (crowdmapping) in order to increase the database of [OpenStreetMap](https://openstreetmap.org) (openstreetmap.org), at the moment still rather limited on the municipality of Chiomonte.

francesca.abastante@polito.it
francesco.fiermonte@polito.it
luigi.lariccia@polito.it



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Direttore responsabile

Andrea Bocco

Redazione

Costanzo Mercugliano, Luisa Montobbio

E-mail: costanzo.mercugliano@polito.it

Editore

DIST, Politecnico e Università di Torino

Viale Mattioli, 39 – 10125 Torino

Tel.: (+39) 011 090 7456 – Fax: (+39) 011 090 7499



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