

Learning from the past: AI-Driven insights from SNAI 2014–2020 to guide territorial strategies definition processes

Diana Rolando ⁽¹⁾ - Alice Barreca ⁽¹⁾ - Giorgia Malavasi ⁽¹⁾ - Manuela Rebaudengo ⁽²⁾

⁽¹⁾ Politecnico Di Torino, Architecture And Design (dad), Torino, Italy - ⁽²⁾ Politecnico Di Torino, Interuniversity Department Of Regional And Urban Studies And Planning (dist), Torino, Italy

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Abstract Inner areas in Italy face persistent socio-economic challenges—including demographic decline, weak service provision, and limited economic dynamism—which traditional development policies often fail to address effectively. A key limitation is the absence of structured, data-driven evaluation mechanisms to guide strategic planning. This research aims to develop and apply a data-driven and Artificial Intelligence (AI) based methodological approach to support decision-making processes that address territorial inequalities and enable multidimensional evaluation of local development strategies.

Conducted by the Politecnico di Torino within the Branding4Resilience (B4R) research project, this research proposes a five-step AI-based methodological approach combining data-driven analyses and participatory listening processes with stakeholder engagement. It integrates open datasets (notably the “OpenCoesione” database), text and data mining, topic modeling (LDA), and clustering techniques to identify spatial and thematic investment patterns, strategic gaps, and funding imbalances in past territorial development interventions.

The proposed methodological approach was applied and tested in the context of Valsesia, a new Italian Inner Area nominated by the second programming cycle 2021-2027 of the “National Strategy for Inner Areas” (SNAI), with a specific focus on the agri-food sector.

The analysis revealed a national underinvestment in “Research & Innovation” and “Competitiveness of companies” within agri-food strategies, particularly in the Piedmont region. In Valsesia, SMEs in the agri-food sector emerged as potential drivers of local development, with strong potential to support youth employment, sustainable resource use, and innovation. Mapping past interventions allowed the identification of recurring strategic actions at the national level, in the field of technological innovation and digitalization of the agri-food sector and of circular economy and food waste reduction.

Results showed how open data analyses and AI-empowered text mining can effectively support territorial strategies definition processes and the related allocation of resources. The test conducted in the Valsesia area led to the identification of a set of Key Strategic Actions (KSAs) in the agri-food sector, as integral components of a broader Territorial Roadmap, offering a replicable planning support tool for

local authorities. The framework bridges technical potential with local needs, empowering public decision-makers to design and prioritize strategic and place-based interventions.