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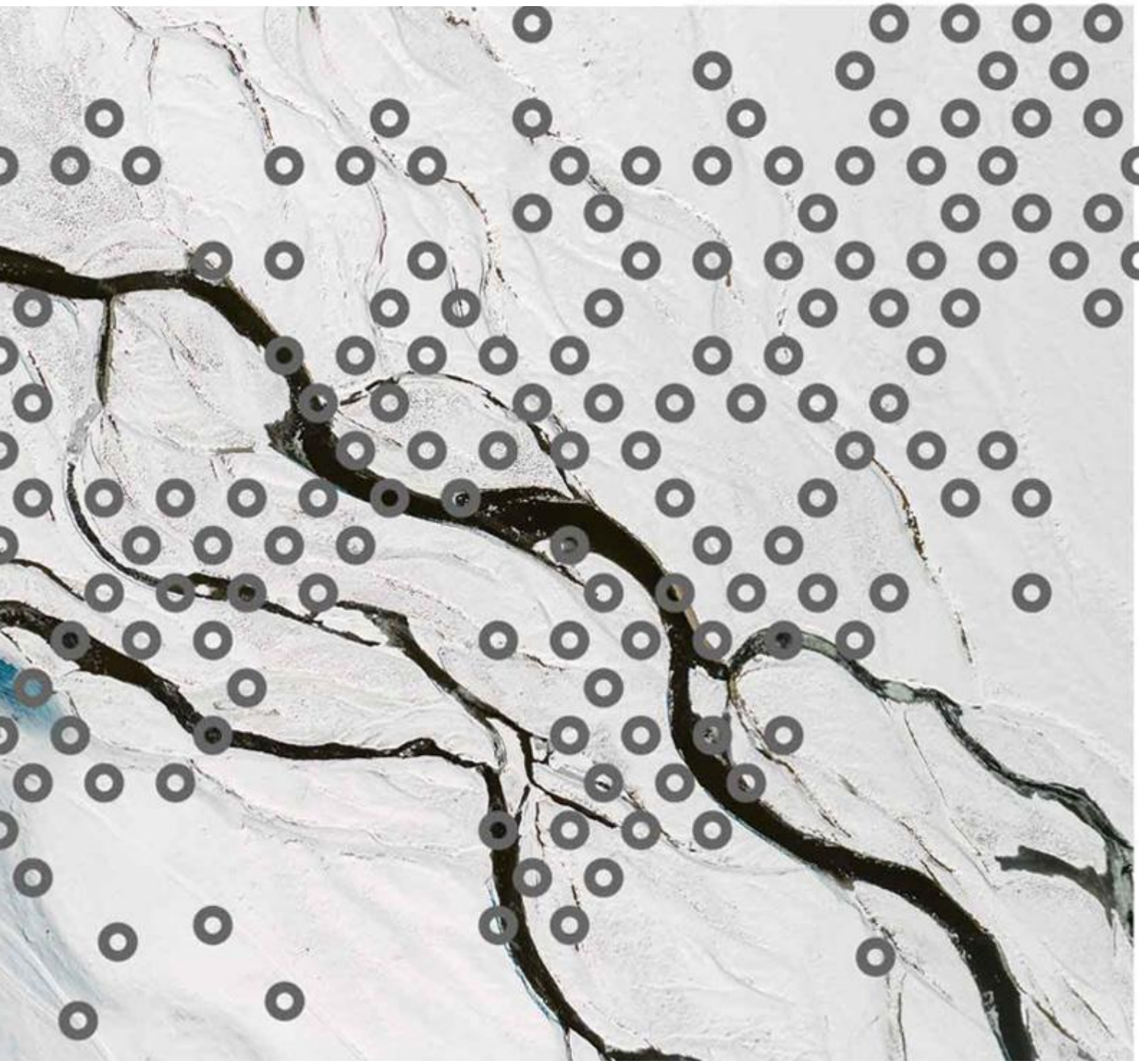

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Report delle attività di ricerca

BEYOND ALL LIMITS

INTERNATIONAL CONFERENCE
ON SUSTAINABILITY IN ARCHITECTURE,
PLANNING, AND DESIGN
11-12, 13 May_2022

edited by
Claudio Gambardella

Università degli Studi della Campania *Luigi Vanvitelli*
Dipartimento di Architettura e Disegno Industriale
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Proceedings Book of Extended Abstracts

BEYOND ALL LIMITS

International Conference
on Sustainability in Architecture,
Planning, and Design

edited by Claudio Gambardella

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Luigi Vanvitelli

*Dipartimento di Architettura e
Disegno Industriale*

RR
Research activity report

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The impact of COVID-19 on Piedmont Circular Economy policy roadmap

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Abstract

The outbreak of COVID-19 in the Italian and international scenario has produced diversified responses to an unknown and unexpected event, rooted in the governance characteristics of each Country. Governments need to overcome established legislative practices and procedures, proposing new legislative and financial frameworks to address endemic or unexpected crises while pursuing sustainable development goals (Capano, 2020). The following contribution explores the emerging results from the new activities implemented by the RETRACE project to investigate how the pandemic has influenced the processes of Circular Economy (CE) that it had stimulated in four different regions considered: Piedmont (Italy), New Aquitaine (France), Biscay (Spain), North-East (Romania). Therefore, this paper delves into the situation in the Piedmont Region.

Keywords

Policymaking, COVID-19, Systemic Design, Circular Economy, Good Practices

1. Introduction

In Italy, regional authorities are key players in shaping the central government's response to COVID-19, due to the way Italian regionalism was conceived (Capano, 2020). Regional governments should therefore be able to set up laboratories to re-launch our economy, providing collaborative scenarios for recovery policies, laying the framework for the construction of the *New European Bauhaus* as a pool of innovation but, above all, demonstrating they can guarantee its functioning (Rosado-García et al., 2021). COVID-19 highlighted the shortcomings of current production and management systems, thus accelerating the pressing need for more sustainable models recalibrated to the CE framework. The paradigm shift towards a CE requires that policies can manage and solve complex problems with new approaches. However, *policymaking* presents complex wicked problems caused by the fragmentation of the *policy cycle* process (Hermus et al. 2020): there are issues at the time level; related to the *knowledge gap* given by the variety of actors involved; in data analysis and processing caused by a large amount of information and difficulties in the evaluation phase of the impacts of policies (Maffei et al. 2016). Hence, in recent years we have begun to discuss and experiment which ways to integrate tools belonging to design in *policymaking* processes, exploiting the ability of design to facilitate multidisciplinary paths and to support participatory processes (Barbero & Bicocca, 2017). RETRACE is a project funded by Interreg Europe Programme 2016-2020 that promotes Systemic Design (SD) as a method to enable local and regional policies to move towards a CE. To innovate governance addressing CE barriers with a systemic approach (Giraldo Nohra et al., 2020), it was necessary to identify education-oriented, and even more, critical policy-oriented Policy Gaps to shift to a CE model.
This allowed all regions involved to better address the nature and scope of useful Good Practices (GPs) to be specifically evaluated for the Action Plan (Barbero, 2017). In a post-pandemic scenario, the results proposed by RETRACE become more relevant than ever to explore further to address the upcoming regions' recovery strategies, proposing innovative circular strategies to build back more resilient EU regions.

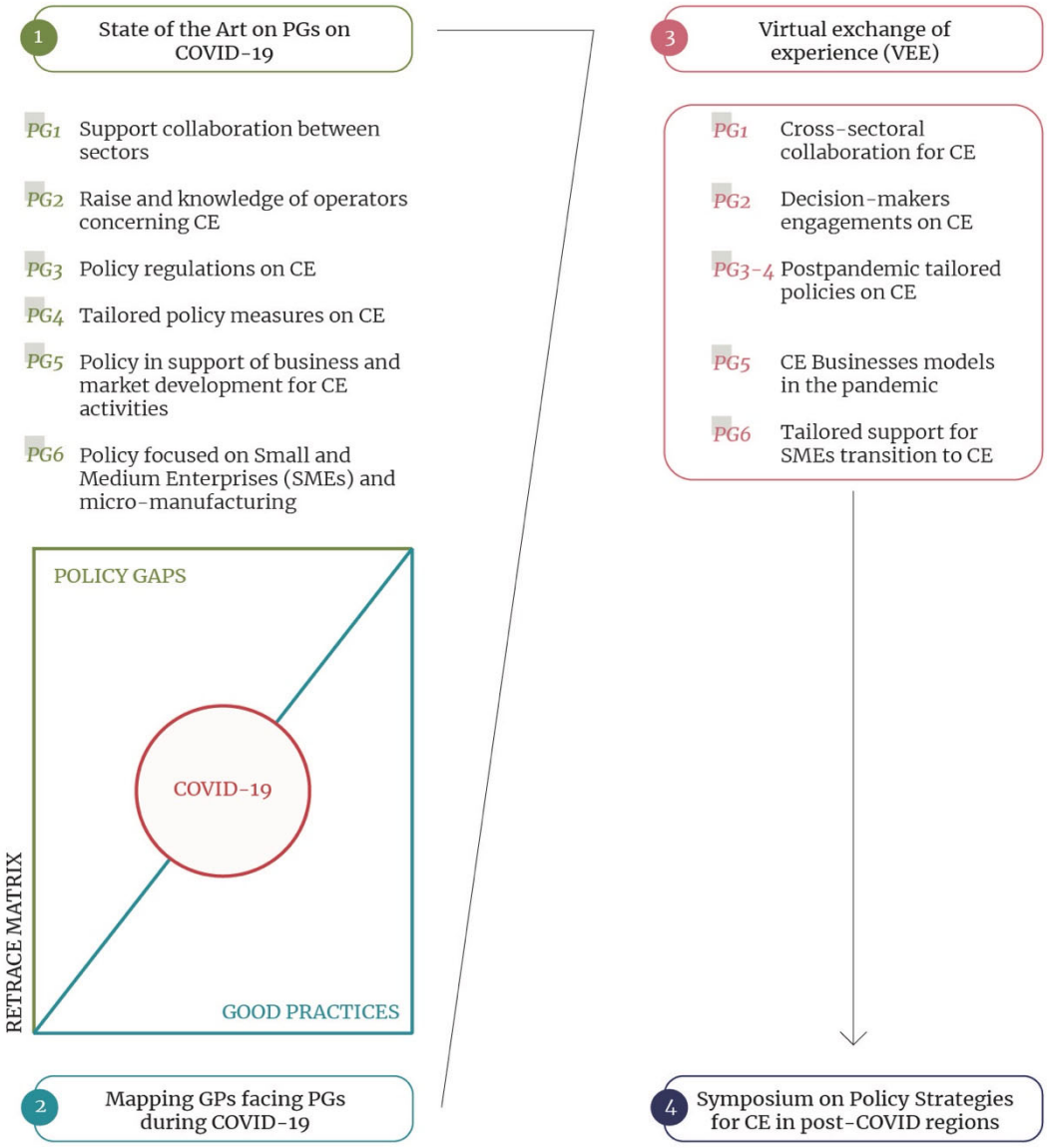

Fig 1. Building on the results of RETRACE: the four phases of the project's additional activities aim to reactivate a process of experience exchange that identifies the new GPs that have been generated in this accelerated innovation process induced by COVID-19. Courtesy of: Padula Cecilia, Pereno Amina, RETRACE: additional activities, 2022.

2. The impact of COVID-19 on the Policy Gaps highlighted in Piedmont Region

The main goal of RETRACE was to promote the adoption of SD as a method to support the transition of regional policies towards CE: in outlining the approach to the development of a new paradigm, the process of breaking down barriers between sectors must be supported at the policymaking level with a shift in the structure of policy instruments towards a more cross-sectoral approach (Barbero & Pallaro, 2018). The outcomes of the RETRACE Action Plans aim to address the cross-cutting Policy Gaps identified through an exchange of experiences that have hindered the regions involved on their path to CE (Barbero & Giraldo Nohra, 2018).
In 2021, the RETRACE project is further funded to carry out additional work on the impacts of the pandemic by addressing the regions' upcoming recovery strategies. The breakdown of COVID-19 strongly influences the relevance of future work on RETRACE project outcomes, as regions play a

crucial role at the forefront of responses to the crisis, which could help implement measures at the national level. The RETRACE consortium aims to assess the current state of Policy Gaps in all partner regions by reactivating a process of experience exchange that identifies new GPs that have been generated in this accelerated innovation process that COVID-19 has fostered [fig. 1]. Throughout the Holistic Diagnosis (HD) process to map the current state of the regional economies, the three strategic economic sectors of each of the regions were investigated. Within these sectors, the most influential stakeholders were identified to be involved in both an assessment phase and the following exploitation of project results and implementation to drive the four regional economies towards a CE model.
Strategic sectors in Piedmont have manifested rather negative economic consequences linked to COVID-19, as it represented a break in the business cycle: the lack of technological tools necessary to deal with the problems in procurement and the management of the supply chain has been denounced. Stakeholders have found a lack of coordination between the production sector and regional actors, a key element to design and implement the measures to outline a successful exit strategy. Pandemic has accelerated the digital transition of the various sectors, however, it still faces some barriers that will have to be overcome: the general level of digitization of the population, the internal skills of companies, and the related management culture.
The importance of implementing a transition towards a CE, as reported in the Piedmont *Smart Specialisation Strategy* (2021), lies in the ongoing change process on three strategic axes: ecological transition, digital transition, social and territorial impact. The instances of renewal of the productive system come from the need to restore the interrupted growth path. The boost to the economy mobilized by national and EU institutions and the urge to renew economic assets, strongly oriented to new technologies, decarbonization, and eco-investments, social infrastructure, are great opportunities to renew the distinctive skills of Piedmont, diversify assets, strengthen the entrepreneurial structure and develop companies in the productions with greater growth potential.

3. Systemic Design: boosting Circular Economy policy tools on a post-pandemic scenario

During the 4 stakeholder group meetings and the partner meeting, 40 best practices were presented out of which 24 were selected through the Online Peer Review process among the partners. The selection criteria for the best GPs in the field of Circular Economy were: degree of innovation, impact on the territory, and link to COVID-19. To assess how GPs could truly help bridge the Policy Gaps identified in each region, it was necessary to refer to the multi-criteria RETRACE Matrix as, in completing the format, partners could cite any GP that provided an inspiring perspective on how to bridge each of the Policy Gaps identified. The selection of GPs (virtuous examples of implementation of CE, tools, and policies) has allowed the identification of development trends that can facilitate the decisions of policymakers:

- green entrepreneurship: the environmental sustainability of processes is a central topic in the current political and economic debate. The crisis caused by the recent pandemic has strengthened the idea that ecological - and digital - transition must be one of the pillars of the new economic and social development model;
- digitalization: the digital transition has been the process that has been accelerated most of all during the pandemic emergency;
- city-system: whose goals, prompted more urgently by the pandemic, have generated a rethinking of private and shared spaces, mobility, and accessibility to places and services.

The results of the bottom-up approach applied, which involves the final users of the policies - the citizens - highlight the potential of the Quadruple Helix paradigm to foster and implement processes through collaboration and proactive sharing of experiences to understand the latent needs and capabilities of Piedmont in post-COVID19 [fig. 2].
In April 2022, an evaluation process of the governance tools delivered will start in order to create tangible results on the process of exchange of experiences among partner territories and to generate, through the SD methodology, concrete impacts on policymaking processes, fostering a transdisciplinary approach to close the policy cycle on CE.

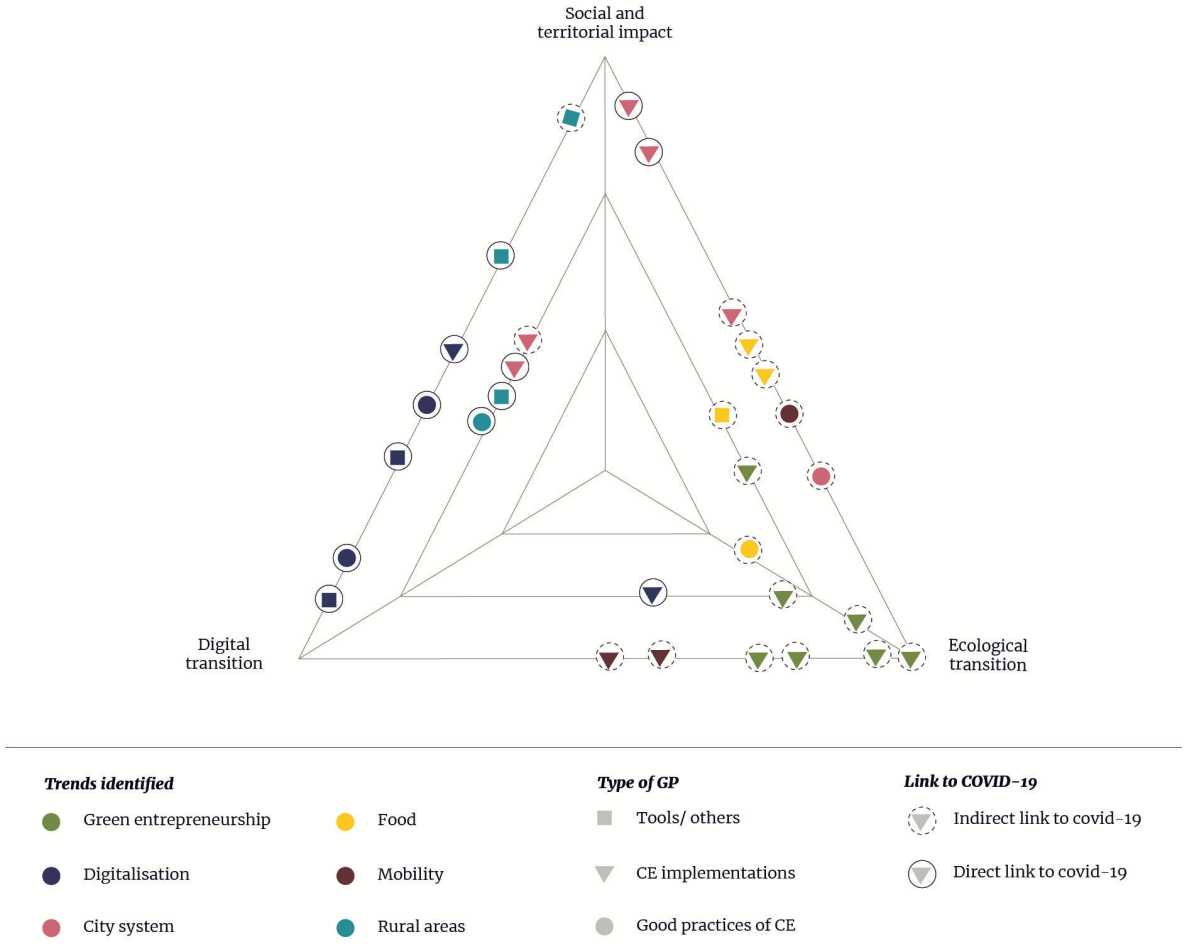

Fig 2. GPs framework of the Piedmont Region has been structured according to the three strategic axes indicated, highlighting the types according to a subsequent categorization based on development trends and the relationship with the COVID-19. Courtesy of: Padula Cecilia, Puglielli Mariapaola, Marchesi Alice, RETRACE: additional activities, 2022.

4. Conclusion

In the Piedmont region, linking the three analyses conducted - HD, Good Practices Framework, and Policy Framework - it is possible to identify areas of intervention and their respective potential applications which, with the use of a multi-criteria matrix, has led to the identification of four complementary strategies. The strategies are based on a meta-strategic vision, which leads to the identification of urban-rural territorial systems for a more holistic consideration of the regional territory. The three sectoral strategies and a fourth transversal one, propose policies and tools for sustainable development of land management, mobility networks, and digital ecosystems, with a view to inclusion and social cohesion.

The outcomes of this extension of RETRACE aim to update the project results on the current erratic scenario of COVID-19. The exchange of experiences among partner regions will provide more tools for the policymakers to deliver innovative approaches to circularity amid challenging circumstances. Practical recommendations will support the different regions on the use of recovery funds towards a *Circular Economic Recovery*. Also, it will showcase an overview of the innovative environment for the CE that the COVID-19 phenomenon brewed. Overall, the expected results will provide regional policymakers with new tools to improve policy instruments in the post-pandemic era. Collaborative methodologies have immense potential in the renovation sector, fostering sustainability through the

introduction of complementary systems. This vision of the ecosystem promotes the idea of smart territories, going beyond the idea of smart cities, by promoting the idea of a networked *place for life* revolving around the cohabitation of humans and nature on the planet, to foster a socioeconomic context that allows creating a *New Sustainability Culture* for sustainable human-nature harmony, inherent in the concept of *New Bauhaus* (Rosado-García et al., 2021).

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