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Resilience in Action: The Bottom Up! Architecture Festival in Turin

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Resilience in action: The bottom up! architecture festival in Turin (Italy)

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ABSTRACT

This article describes the practice of co-evolutionary and transformative resilience through a case study conducted in Turin (Italy). According to a broad definition, resilience includes performing actions of urban design and planning, innovating community-based project procedures, and creating positive financial outcomes that are assessable because of the monitoring process of short- and long-term outcomes and impacts. Through the Turin-based case of the Bottom Up! Architecture Festival, this article observes processes in which resilience is in action in metropolitan areas, feeding urban projects and practices of self-organization of the social and financial actors involved. By applying the definition of community projects, the festival manages to take territorial problems and crises (the pandemic, inequality, etc.) and view them as an opportunity to change the system, recommending integrated action on the natural, cultural, financial, and social capital, innovating practices and holding society and institutions more accountable. The transformation of spaces relies on collaborations between social and institutional actors, operating spatially concentrated transformations in the city of Turin, and using flexible governance tools based on co-planning and crowdfunding for project design and financing.

1. Introduction: practicing resilience. the objectives of an urban, local-scale experiment

As is known from recent debates [1–3], the concept of resilience substantiates itself in multidisciplinary ways—both conceptual and applicative—gleaning from metaphors and semantic utopias [4], which pave the way for broad studies and widespread actions around an inclusive definition [5,6] that can be used to interpret urban processes and design experimentations.

This article aims to investigate bottom-up project actions that innovate local governance and planning, focusing on issues that have not yet been thoroughly researched, that is, social community resilience [7] and some of its specificities, such as financial resilience (in particular for aspects pertaining to measuring and monitoring impacts) in practices that accompany urban regeneration interventions.

In addition, this article investigates evidence of "success," that is, practices that have been successful and should therefore be scaled and replicated (e.g., experiences of resilience in action). Community resilience encompasses notions of well-being, adaptability, and resourcefulness in the face of adverse conditions through the activation of a network of community actors for maintaining the system's structure and its social capital for defining territorial strategies [8,9].

Based on these premises, this article begins with a recognition in the literature of how, in recent planning processes and urban projects, the connection between urban planning, community design/community co-design, and the economy has provided theoretical answers and supported the development of innovative practices that offer a "resilient" answer to contemporary challenges, including the pandemic Disease(see 4, 4.1, 4.2, 4.3, and 4.4).

This research background is instrumental to reading a "resilient community" case study [10], which analyzes the 12 projects of the first edition of the "'Bottom Up! When the City Transforms from the Bottom' Festival of Architecture of the Order of Architects, Designers, Landscapers, and Restorers of the Province of Turin and of the Foundation for Architecture of Turin," which ended in May 2021.[1] The practice of Bottom Up!'s resilient communities is paradigmatic in highlighting essential theoretical points for an interpretive re-reading of the concept of resilience in territorial, urban, architectural, and technological planning and design.

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[1] The results were discussed at the Architecture Biennale 2020, Venice 2021, May 29.

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2. Materials and methods

2.1. Introduction

This article's experimentation on the resilient communities of Turin's Bottom Up! can be described starting from a literature review. The strategic changes and theoretical points applied starting from the early 2000s and emerging themes have already been discussed in the literature of the 1970s. From the definitions of "engineering resilience" to the more recent transformations of this concept, in the 1970s, the concept of "ecological resilience" took hold [11–13], paving the way for the study of the functioning of socioecological systems from a co-evolutionary perspective [14].

Recently, this concept has been rebranded as "co-evolutionary resilience" [15] and has entered the theories and practices of territorial governance, planning, and urban design, which necessitate a holistic approach to resilience. This holistic approach requires overcoming "engineering resilience," which focuses on a single state of equilibrium or stability, to which a resilient system would revert after a crisis [12]. Innovation also consists of embracing the ecological paradigm to work on the socioecological interface [16], integrating features related to communities and their territorial environment.

The resilience metaphor [17] aims to reduce the vulnerability of territorial systems to different crises that can affect a given territory and its community. Resilience is associated with a wider vision and strategies that include the dynamic transformation of cities and territories [18]. As Davoudi [15] indicate, this perspective adopts a managerial approach—a command-and-control interpretation of systems to define resilience trajectories through methodical planning and design actions.

More recently, the spatial planning literature has defined resilience as the ability of a socioecological system to absorb external disturbances and reorganize itself while maintaining its function, structure, local identity, and values [19]. In this sense, "resilience is a challenge of planning, not a fixed attribute of the system; it is a process of transformation. It is the becoming – not the being – of the system" [15]; it is strictly correlated to a strategy of transformation of the system, which needs to find its growth in the practices of urban planning [20] and in innovation in the field of architecture and technology. It can be interpreted as a generative metaphor of new techniques and methodologies for bottom-up urban regeneration planning based on self-organization, intended as an approach on behalf of the communities involved in putting resilience into action [21] and practicing transformative resilience [22].

Bottom Up!'s resilient communities practices take the broad definition with which we look at the concept of co-evolutionary and transformative resilience [22], referencing the action taken in the territories after COVID-19 to overcome the crisis without "bouncing backward" and developing sustainable transformation paths of socioecological systems through the integration of natural, human, social, and built capital, involving social, public, and private institutional actors for well-being and shock prevention.

In particular, transformation practices in Turin started through the self-organization of social actors and these can be interpreted as an opportunity to "bounce forward" through adaptation and transformation strategies, strengthening and mobilizing community creativity for dealing with the crisis and for developing territories in the long term. In Turin, practices of self-organization of the local community began, contributing to overcoming the notion of the system's static balance in the face of crises, disturbances, and/or changes [12,23,24] in favor of a condition of dynamic or multifaceted balance. The dynamic balance displayed in Bottom Up! interprets territorial problems and crises such as COVID-19 as an opportunity to innovate the system [25] through community activation in innovating urban practices.

Bottom-up projects that were developed and financially sustained by social actors during the COVID-19 emergency are aware that it is not possible to return to or try to "bounce back" to the pre-crisis conditions, and they attempt to facilitate bouncing forward toward a better and more sustainable pathway from an economic, social, and environmental standpoint [22] in a system with different conditions. They promote integrated action on the natural, cultural, economic, and social capital, innovating and holding communities and institutions accountable for territorial governance (municipalities, cultural foundations, and the social sphere) to overcome crises and problems in the territory.

Through the lens of the case study, which saw the direct involvement of the authors of this article,[23] recurring features and innovation in practices emerge, of which it is essential to illustrate developments and future reasoning: the Bottom Up! section of this article is based on this evidence, and this experience has been analyzed through specific aspects that emerged as "lessons" to successfully execute resilience. At the end of the article, issues of perspective are highlighted, particularly considering the specific and innovative features of a multidisciplinary and multiscale approach to resilience in action.

2.2. Resilience as a metaphor of the project for the co-evolution of bottom-up!

Over 30 years of academic analysis and debate on resilience in the urban planning and design framework highlight the multitude of different definitions and diverse experiments conducted to implement resilience processes contributing to implement experimentations and convert them into operational tools [6]. Resilience can be used to describe the ability of an ecological system to continue functioning (or to "persist" when changed) in the awareness that the COVID-19 pandemic has required a radical transformation in our approaches to resilience through integrated and innovative policies and projects [22]. In the broad cultural framework, we define territorial resilience [26] as a reference for exploring community-based innovation practices.

Territorial resilience has been interpreted as an interdisciplinary operational theory that considers co-evolutionary dynamics as a system's property, an emerging concept to overcome vulnerabilities affecting the system, considering the relationships of communities, the heritage, the governance system, and its learning capacity for the community's resilient co-evolution and territorial system [26] through concerted planning and design actions.

As highlighted in Section 2, Bottom Up! is an example of the territorial resilience of Turin's socioecological system promoted through procedural management and design innovations, as well as the ability to adapt the system and the co-evolutionary dimension as essential components of actions for resilience, placing more attention on bottom-up and top-down processes of change than on the system's state.

The resilience of the territorial system is developed through the study of actions introduced (with a focus on urban territorial, architectural, and economic aspects) with a view to guiding its transformation. The result is in the territorial transformations, which synergistically combine the ecological, landscape, and socioeconomic approaches in urban and architectural planning [27] through the communities' actions of self-organization.

From this perspective, resilience can be seen as a generative metaphor for new approaches (Fig. 1), as highlighted by Pickett et al. [28], which is useful for innovating territorial governance and starting procedural processes on different action scales (from planning to urban, architectural, or technological projects). Resilience as a metaphor or as an act of imagination can promote specific technical meanings, which may also be represented in an informal and nontechnical way in local, "non-expert" communities. This also explains the success of resilience thinking on an international level and its use in innovative community co-designed processes such as Bottom Up!

Fig. 1 shows the monitoring and evaluation process through two lines of attention: the first is linked to the dimension of the "effectiveness of

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[2] As…omitted for anonymity
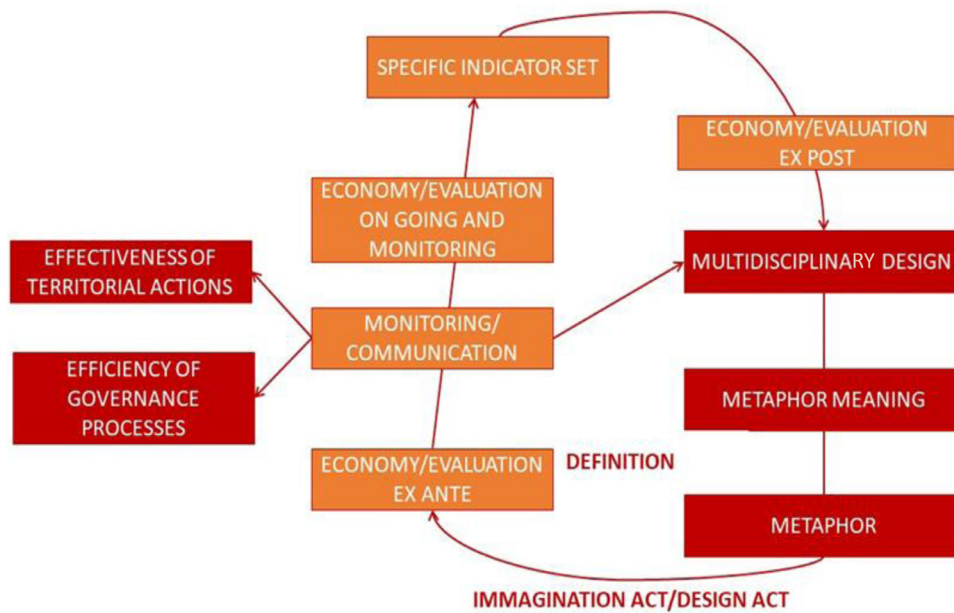[3] As illustrated in [10]

Fig. 1. Authors elaboration of Pickett et al.'s (2004) vision.

territorial action/actions," both the coordination of the 12 projects and the single actions characterizing each of the 12 projects, essentially of a descriptive/qualitative nature (level of achievement of the objectives in the different phases, measured example with ordinary or ordinary measurement scales at intervals); and the second is linked to the dimension of "efficiency of governance processes," of a qualitative and quantitative nature. This research perspective is still in progress and has not reached maturity for immediate application (see Section 5); even so, it is founded on some theoretical-methodological evidence that will be illustrated and reread critically through the Bottom Up! case study.

Resilience as a metaphor can become a theoretical tool useful for creating operational models of representation of systems, which can in turn generate new design metaphors, new approaches, and open perspectives of action on different scales with general or specific short- or long-term objectives; this can allow technicians to interact with communities and strengthen social accountability and self-organization [28].

Bottom Up! is an example of how the system works and showcases the system's components, which, through specific rules in the tender, indicate how the communities could interact in space and time; these define the generative processes of urban planning and design, governance, and interactions between the different components of the system (be it ecological, social, economic, and governance) in the practices, which are essential for defining trajectories of development and urban transformation.

3. The bottom up! experiment

3.1. The projects and the numbers

The experiment, conducted with the Bottom Up! Festival in Turin (www.bottomup.it), highlighted the paradigmatic elements of urban, financial, and community resilience that determined its success. More specifically, the case study responded to the criticalities of the pandemic in terms of transformational resilience, that is, flexibility and innovation of the socioecological system, which are also elements of the "crowd" and the co-design approach of the accompanying actions.

The 12 Bottom Up! projects highlighted below are the expression of processes of creative diversity aimed at accompanying the transformations and actions of change (not only physical but also of "corporate resilience") of the territories, innovating the decision-making, manage-

ment, and action-taking models through collaboration between institutions and participation in the project and its realization. The community project [29,30] focuses on cultural and creative production as a motor of innovation and empowerment of the community, which, in turn, becomes the protagonist in the creation of sustainable projects, supporting not only the crowdfunding campaign but also co-planning the communication and promotion of the project and generating added value, even in terms of intangible and immaterial components according to a social impact and "social accountability" approach [31–34].

Culture and creative diversity are strategic resources for resilience [35,36] put in practice by the festival and its projects because they produce innovation on a local scale and a broader scale, affecting multiple aspects of urban action (social, landscape, environmental, and financial), recognizing the interconnections and interdependencies of the socioecological system's components. These projects promote resilient actions of recovery, adaptation, and evolution [37,38], flexibly open to the needs of the community in terms of time and transformations. Furthermore, they innovate places and practices of action and management, strengthening the ability of communities to learn, experiment, and develop [2,39], embracing changes, and recognizing and strengthening the system's memory.

Starting from the innovative features of Bottom Up!'s resilient-approach experiment, with the purpose of enucleating its scalable elements, we illustrate the genesis of the process/project and provide some data on the preliminary results of the first edition.

The Bottom Up! Festival was designed as an "experiment" for the transformation of cities to better serve urban communities. It was created in Turin (Italy) in November 2019 and refers to its Turin 2030 Action Plan and the revision of the Turin Land Use Plan (the current PRGC), which open up to new flexible and temporary uses, able to respond to the needs and assess the creativity of the community in the project proposal. The subjects involved in its governance, experimentation, and implementation are the Architecture Foundation in Turin (a private no-profit entity of the Public Law Order of Architects, Planners, Landscapes and Restorers of the Province of Turin) in its 2019–2030 mandate, and the Order of Turin. In 2019, MIBAC (the Italian Ministry of Culture) encouraged initiatives centered on "methods of intervention for the promotion of contemporary architecture, the dissemination of architectural quality and aware urbanism."

This call to action resulted in projects that, thanks to innovative and inclusive processes, favor the introduction of interven-

tions for urban regeneration (https://www.creativitacontemporanea. beniculturali.it/festival-dellarchitettura-edizione-1/).

As highlighted by the curators of the Bottom Up! Festival (architects Maurizio Cilli and Stefano Mirti) from the preliminary phases of the project, the format adopted was intended to trigger a virtuous process of transformation and recovery of the territory through "generative" practices and projects on polarized urban areas and often abandoned or underutilized areas, where architecture is at the center as the catalyst of community practices and shared construction practices, based on the "memory" of the places and on the "desires" of quality of life and of the environment across the territory.

In its long process (perhaps the longest Turin Festival ever, starting in November 2019 and ending on November 3, 2020), the first edition of Bottom Up! experimented with numerous innovative practices that were "multidimensional" by nature because it attempted to keep together both new bottom-up public participation models and urban community approaches; it relied on new (public–private) partnerships and recovery models of financial and social resources, which—thanks to the use of information and communication technologies (ICTs)—assessed social impact, crowdfunding, and methods of communication and dissemination of practices.

"Listening to desires" revealed itself not only as an effective metaphor but also as a real practice guiding the bottom-up process, social participation, and the concretization of proposals through the valorization of communal creativity, awareness, and accountability of the communities' dimensions, which are also financial-managerial, organizational, and technical-procedural.

A highly significant "local" factor of cohesion emerged, which highlighted the active involvement of the entity commissioning the project (public, private, and public-private) and the network of the community behind each proposal. This synergy consolidated the Turin municipality's long-term commitment to increase accountability and strengthen a bottom-up model and public participation in its practices and strategies aimed at improving the quality of life of its citizens (fighting climate change, designing quality housing spaces, promoting integration and inclusion). It is also important to highlight that this final aspect, even in its declinations, was one of the preliminary selection and evaluation criteria of the proposals introduced in the initial selection tender: as a matter of fact, it informally constituted an ongoing monitoring factor and a retroactive assessment in the short term of the festival's first phase, which ended in November 2020.

The outcomes of the festival are published in the Bottom Up! Manual.

Supporting the theoretical-methodological reasoning in the following paragraphs, Table 1 shows a synthetic overview of the 12 projects, with a brief description, public-private commissioning promoters, and geolocation, which are highlighted in Fig. 2.

Fig. 3 provides a "financial" overview of the 12 projects in Turin and two in Milan: the initial fundraising goals to start the "core" projects were all reached, for a total of 142,365.00 euros (100,226.000 euros in special donations), involving 105 communities, 929 donors, and an average donation of 33 euros.

Furthermore, it is a "widespread" festival (see https://www. bottomuptorino.it/la-citta-bottom-up/?fbclid=IwAR2cAepNiJHCO7-YTDxKQWqJVIC9kpKqG3iju3DL8KHtv5ncEkx-dqz5LxFw) because the projects' geographical distribution highlights the multicentricity of the concept of urban transformation, strengthening the now established concept of plurality of centralities in urban contexts [40].

Refer to Section 3.2 for in-depth observations regarding the final results. It is worth highlighting, however, specific crowdfunding elements for a festival of this kind: experimenting with one year of festival, even if lengthy, allowed us to limit the fundraising campaign to a very brief period (September to November 2020) owing to the long preliminary phase of proposals and experts' continuous support in defining said proposals. The digital approach allows for the involvement of new targets (e.g., young people and digital natives), who often display a low level of participation in the community's civic and social dynamics [41]. In

this sense, the platform used represents an element of innovation that is located between "collaborative" tools and "civic engagement" tools, which are now frequently used abroad and in Italy [42–44].

For the success of the process, which began with the 12 proposals, the role of the social architect was not neutral because they also needed to be a competent project manager; similarly, the role of memory and the communities' interventions were unneutral, which were necessary for a clear project quality, and the process of mapping the stakeholders (e.g., interlocutors, users, public administrators, technicians, sponsors, economic and cultural operators).

Crowdfunding is a new form of financing that subverts traditional logics associated with the process of top-down funding. It is the financial resilience modality that goes beyond the financial amount of the contributions because it creates added value in strengthening the identity of places and common interests, which are at the basis of processes of rooting in time and contexts.

As stated by Starteed's Nawel Faisal, "asking citizens to participate (financially, but not only) in the execution of an initiative of public interest is a strategy to generate a sense of appropriation and closeness, which eliminates the distance between the administration and the direct beneficiaries, strengthening local identity. It is therefore a real experience of active citizenship" [45, https://www.fondazioneperlarchitettura.it/wpcontent/uploads/2021/02/BottomUp_Booklet_Report_Singole_WEB.pdf, p. 57] and accountability on behalf of the community on territorial action, which is a key aspect of resilience [46].

3.2. Methodology: the reacting and sustainable factors of the bottom up! model

The Bottom Up! case indicated the recurrence and replicability of certain factors owing to the checklist of prerequisites included in the application procedure for proposals. The latter, constituting a form of preliminary "evaluative" support for the selection of community resilience practices that encompass "sustainability" factors, has revealed itself to be effective even during the monitoring stage of the 12 projects/processes of resilience in action and in the subsequent stage, where the guidelines/instructions for the replicability of the Bottom Up! Model are defined.

The so-called emerging reacting factors (which led to the success of the practices, also because they seemed to be appealing during the crowdfunding campaign) can be represented by extrapolating macrothemes present in each of the 12 projects to varying degrees, as highlighted in Table 2:

1 Flexibility/circularity.
2 Community creativity.
3 Connectivity, networking, and inclusion.
4 Integration of practices.
5 Robustness, memory, and valorization of permanence.
6 Transformability.

These factors represent indispensable pieces of a bottom-up community resilience process and feature in the 12 proposals to different extents and levels of interaction.

This diversity can also be interpreted as a key to "flexibility" in response to complexity, crises, and emergencies. It is on this multidimensional draft that the descriptive–qualitative reading was proposed for this first phase and first edition of the festival's impacts in the short term (one year from its launch); if these factors were also implemented in their quantitative dimension (where possible, for example, with statistics and/or historic series of data), it could represent an experimental framework for retroactive monitoring and assessment, even over the long-term period of said processes of community design and economic resilience [47] within the lifecycle of communities and generative processes. The "reacting" factors could constitute the "performance" assessment criteria of the proposals, indicating the levels of success and gra-

Table 1

The 12 Bottom up! Projects: Short description, public-private commissioning promoters, and geolocation (Source: reworking and translated by the authors from https://www.fondazioneperlarchitettura.it/wp content/uploads/2021/02/BottomUp_Booklet_Report_Singole_WEB.pdf).

Title of the project/Short description	Stakeholders (Public-private commissioning of a project and promoters)	Localization
1 CONVI – *IL CONTAINER DI QUARTIERE ESPERIMENTO DI COMUNITÀ AI CONFINI DI TORINO* From the first meeting with the community of Villaretto, the perceived desire was clear: to have a place to meet and be together where to build and strengthen the community. Thus, "ConVi" was born—the first "neighborhood container," which is a home, a concierge, a spontaneous meeting place, and the driving force of local activities and events. The choice of the container was dictated by its characteristics of practicality, reversibility, and speed of realization. The Temerario company, a Turin-based company specialized in the sector, supported the project with a reversible (possible rent temporary structure) and flexible (modularity of the object) solution. The network of the Civic Libraries innovatively collaborates in the project: "ConVi" thus also becomes a territorial outpost where the service is absent, a place of connection with the rest of the city and its services and an image of "another" library that is intended more for interactions and building relationships that for individual fruition.	**Public-private commissioning:** Elisa Campra (architetto paesaggista) Pasquale Pellegrino (fundraiser) Mattia Della Libera (strategic designer) Marta Della Giustina (communication specialist) Elena Giaccone (architetto) Marco Da *Re* (digital communicator) **Promoters:** Comitato Borgata Villaretto (espressione dei residenti) Biblioteche Civiche Torinesi Parrocchia e Oratorio San Pio X Società Polisportiva PGS Conqui	Strada del Villaretto, Torino
2. CORTILE MONDO *LA NATURA SI FA SCUOLA* The idea of "Cortile Mondo," namely that nature becomes school, was born to respond to the collective desire of the community of the municipal kindergarten Marc Chagall to keep a fragment of nature and make it a place open to the neighborhood and the city. The challenge is to transform a green school area into an opportunity, making it a public space, a desirable place, and a welcoming space for integration and exchange between different cultures. "Cortile Mondo" proposes, with an inclusive path, an intervention on the green to make the garden a public space open to the outside, an action to create communities with co-design workshops as well as self-construction and animation activities. "Cortile Mondo" is articulated through three themes that design and animate the space: the house, the water, and the forest and undergrowth. We work in the garden with the rhythms of nature and the learning times of children and in a relationship with the communities, which is a form of collaboration and social bonding.	**The public-private commissioning**: Progettiste: Mariolina Monge (architetto), Angela Nasso (architetto) Scuola d'Infanzia comunale Marc Chagall Associazione Insieme dei genitori della Chagall Accademia di Agricoltura Torino LIPU Torino Associazione ORME Associazione Il campanile onlus Associazione Educadora onlus Associazione Ultramondo Associazione Solco onlus Associazione GreenTo, dott.ssa Ilaria Scalzo	Via Cecchi, 2, Torino Quartiere Aurora
3. CORTI.Lì *SPAZIO E TEMPO PER ESSERE* The corner of central Turin where there are two large communicating courtyards, while offering many opportunities, lacks spaces that offer a continuity of places, times, and relationships of engagement of citizens. The courtyards want to respond to this need by becoming an open, attractive, and inclusive place: urban regeneration as regeneration of social bonds. The project is a challenge: can any place, like a courtyard, transform itself from a simple place of passage into a community space, a generator of social bonds, to take care of our future? The state of the courtyards shows a stratification of sediments that has left fragmentary and discontinuous traces (buildings, vegetation, laying) with time. The idea of redevelopment starts from the desire to rebuild a unitary image, enhancing the plurality of activities, present and possible, between metaphor and concrete transformation. The accommodation provides for different levels of intervention: rainwater control, preparation of scenographic lighting, electrical and audio systems, flooring, greenery, and installation of furniture elements. The core strategy of the project will move to restore unity with the open space, composing and facilitating different uses (play, rest, meeting) and mitigating the disturbing presence of existing artifacts and works.	**The public-private commissioning (coordination):** Francesca Sisto (Opera Munifica Istruzione) Progettisti: Barboso *Re* Opera Munifica Istruzione (OMI) Cooperativa Proges - Nido della Musica Casa maternità Prima Luce CAMERA Centro Italiano per la Fotografia Il Centralino Club L'uovodicolombo	Via Giovanni Giolitti 35, Torino
4. FORNO SOCIALE S.P.I.G.A *SPAZIO DI PANIFICAZIONE INCLUSIVO PER LE GENERAZIONI ARTIGIANE* "S.P.I.G.A." envisages the construction of a social oven for the Barriera district of Milan as a tool for the inclusion and strengthening of the fabric social network of the northern suburbs of Turin. The goal is to return a new centrality to bread-making and the self-production of food, essential for the creation of more cohesive and supportive communities. The project also provides for the creation of a grain library (an experimental field where different varieties of seeds are cultivated together with the gardeners) and activities with schools, to educate on proper nutrition and strengthen family empowerment. The "S.P.I.G.A." project aims to stimulate attention to the production and consumption of quality grains and flours, promoting the purchase of products coming from free seeds and diversified varieties, protecting biodiversity, and contrasting the standard intensive farming of agricultural seeds. The health emergency has partially changed our objectives: we have combined reflections on the theme of food poverty with the strengthening of social inclusion paths, trying to imagine small, symbolic actions in support of the most fragile realities, such as baking bread of quality for the ones most in need. Our work is driven by the awareness that good nutrition is essential for proper human development. The social distancing imposed by the pandemic has put relationships, which remain at the core of our existence, to the test.	**The public-private commissioning (coordination)**: RE.TE. Ong, il progetto AgroBarriera, gli ortolani del Boschetto. Il progettista di riferimento: architetto Egidio Sandron	Via Petrella 28, Torino

Table 1 (*continued*)

Title of the project/Short description	Stakeholders (Public-private commissioning of a project and promoters)	Localization
5. HEAR ME "HEAR ME" is an urban "rehabilitation" pilot project focused on the dimension of listening as a tool for social inclusion. It is born to listen to the city in the face of some uneasy situations and marginality in the field of mental health by working on the SOUND dimension as a universal connection tool. HEAR ME is aimed at citizens residing in the Borgo San Paolo district, with particular attention to the users followed by the Mental Health Centers living in the psychiatric residences overlooking the garden and who do not attend and therefore do not benefit from contact with nature and with other citizens. The project involves the activation of practices of social inclusion that connect users and citizens through listening. The impossibility of physically working on the green area during the pandemic has not distorted the project; indeed, in some ways, it has restored value to its deeper meanings. In recent months, a much wider community has experienced forms of isolation and marginalization, mistrust and prejudice, fear of illness, and uncertainty. The need for connection with nature, the city, and its inhabitants has become a universal need, and no longer for just the inhabitants of psychiatric residences. If it was not possible to immediately activate co-design practices on the area in question, the project took the opportunity of that moment of pause to reaffirm the importance of its assumptions by activating digital communication tools that can be used by a wider audience.	**The public-private commissioning:** Giulia Mezzalama (architetto, MinD Mad in Design) Giulia Sala (architetto, PUSH) Elena Varini (psicologa Blu Acqua Srl) Salvatore Cristofaro (designer) Enza Brunero (designer) Amelia Valletta (architetto) **In collaboration with (promoters):** Circoscrizione 3 (presidente Francesca Troise) Comune di Torino, area Beni comuni (architetto Laura Socci)	Giardino F. Piredda, via Issiglio 129, Torino
6. MIRAORTI The project's general objective is to create a large, long agricultural park on the Sangone, giving the public green back to the citizens. The project of research-action "Miraorti" was born in 2010 to activate decision-making processes that included the participatory planning of the territory. One of the initially envisaged purposes was to support the administration in drafting the projects; however, owing to the work in the field, "Miraorti" has identified the need to redefine the objectives of redevelopment and fit into a unitary framework on a neighborhood scale. The association that manages it today, Orti Generali in Strada Castello di Mirafiori, established, at the time, lasting communication with citizens with illegal gardens in Strada del Drosso, investigating meanings attributed to places, developing an idea of environmental policy not limited to the legal-formal sphere but capable to enhance the skills of all stakeholders, making the cognitive process a social action and the research activity an agent of change. The work was conducted mainly in the field, without the pretense of neutrality but, on the contrary, following a relational approach (constant exchange of knowledge, emotions, and experiences) necessary to create spaces for collaboration. To introduce one into the context and building interactions with gardeners, "Miraorti" has been running an illegal vegetable garden since 2010. In 2020, with the interest of a sector of the administration in the redevelopment of this area of 6 hectares, the association participated in Bottom Up! to resume the phases of reclamation from below and the activation of community creation processes launched in 2010–2014.	**The public-private commissioning:** Federico Guiati (architetto) Associazione Coefficiente Clorofilla: Stefano Olivari (paesaggista), Matteo Baldo (sociologo) Gruppo informale ortolani abusivi di Strada del Drosso Comitato Borgata Mirafiori Fondazione della Comunità di Mirafiori Onlus	Strada del Drosso, Torino
7. UNA PIETRA TIRA L'ALTRA The spaces of the Centro di Aggregazione Culturale-Via Cavagnolo 7 host the Piccolo Cinema, with projections, presentations, workshops as well as school and educational support activities for children, with proposals for cultural and recreational activities for all ages. The abandoned and degraded building of Via Cavagnolo 9 overlooks the street with an easily outside space connectable to the center's courtyard and can correspond to an outpost recognizable in the neighborhood where the activities are conducted. It is necessary to create a unique, seamless space between the two buildings and the courtyard given the position of the center, which is set back and hardly noticeable at the bottom of the current courtyard, currently underused and in a state of neglect. We need a space that is a catalyst and diffuser of initiatives—a laboratory, a neighborhood notice board that welcomes and connects people, communities, ideas, and cultures: supervision and support for the inhabitants, neighborhood concierge, biblio/video library, playroom, kitchen and restaurant, vegetable garden, and "neighborhood planter." To this end, an inclusive, participatory methodology, co-planning, with an exchange of ideas and sharing of physical and social space is aimed at promoting active citizenship and the responsibility of the same inhabitants in the care of their territory, programming every activity from the bottom. It is proposed to renovate the property in Via Cavagnolo 9 and annex it to the center of Via Cavagnolo 7 through 10 container modules in addition to the enhancement and preparation of the external spaces relating to the two buildings; the pedestrianization of part of Via Cavagnolo suitable for a green connection between the two current courtyards and part of the square now unpaved, made so common in a single garden per area game; a refreshment point, a reading area; an open-air cinema; a vegetable garden; a useful parking setup in part of the aforementioned square facing between Corso Vercelli and the first part of Via Cavagnolo.	**The public-private commissioning:** Antonio De Serio (presidente dell'Agenzia per lo Sviluppo di Pietra Alta) Il Piccolo Cinema (Diana Giromini, Roberta Di Mattia, Massimiliano De Serio, Gianluca De Serio, Silvia La Torre) Armando Poggi (Gruppo Anziani) Silvia Cucco (Cooperativa Animazione Valdocco) Francesco Massarini (architetto) Valentina Claudia Mangiarotti (architetto)	Via Cavagnolo 7–9, Torino

Table 1 (*continued*)

Title of the project/Short description	Stakeholders (Public-private commissioning of a project and promoters)	Localization
8. RISORGIMENTO SOCIAL CLUB A chance meeting of a group of friends at bowling tables triggered a discussion on the needs, desires, and potential of the historic Circolo Risorgimento, a community of people united by the purpose of revitalizing and regenerating a peripheral urban area of strong social value in the heart of the working-class district of Barriera di Milano—in particular, the re-appropriation of the (never completed) large, wooden shed, which, in the intention of the municipality, was to become a bowling alley. The project had to act as an engine of transformation and allow the club to take advantage of this covered space and make it usable by all to expand the supply of activities needed by the neighborhood. The initial stages of the project involved the construction of mutual knowledge between the working group and the reality of the club, which is constituted by an association that manages the bar-restaurant and by people who have frequented it for decades. We collected the necessary information through questionnaires, interviews, and meetings and tried to translate the needs that emerged, focusing on the interventions and their cost. Even in the months of lockdown, the club has represented a point of reference for the neighborhood, distributing food, helping people in difficulty, and giving closeness and comfort to many elderly people living alone. We have tried to maintain contact through a knowledge campaign based on small interviews, telephone calls, and exchanges of images and historical material. The answers were very interesting, and some of the material has been published on social networks by means of brief "episodes" filmed, in which the protagonists spoke of their experience and their needs. The club's management has moved alongside the institutions to find the necessary funds for more expensive structural work, also obtaining a first small loan from the Compagnia di San Paolo Foundation through the call for proposals "Rincontriamoci."	**The public-private commissioning:** Giorgio Davì, Paolo Freschi, Elena Carmagnani, Galla Vallée, Valentina Garbolino Circolo Risorgimento Associazione di Promozione Sociale Casseta Popular	Circolo Risorgimento, Via Giovanni Poggio 16, Torino
9. RUOTA DI SCARTO The project, which during the Bottom Up! has undergone a name change from "Furgoncibo" to "Ruota di Scarto," has not changed its role or the intentions with which it was initially conceived. The proposal aims to reduce food waste through the creation of a mobile kitchen capable of recovering, transforming, and distributing the otherwise unused surpluses of the food supply chain in the Turin context. In particular, the project aims at a "social reuse" of these surpluses in favor of the weaker sections of the population, acting also on the value system to restore the value of a resource (reusing food waste) through a series of online actions that favor the development of a system that, from the micro level of the neighborhood scale, can be replicable and extendable on a macro scale in the urban fabric.	**The public-private commissioning:** Associazione Eufemia (20+ altri enti di cui Eufemia è capofila) Rete Food P.R.I.D.E. Grazia Giulia Cocina (architetto) Giacomo Mulas (architetto)	Piazza della Repubblica, Torino (prima sperimentazione)
10. STIAMO FRESCHI! The Casa del Quartiere di San Salvario is a laboratory for the design and implementation of social and cultural activities involving associations, citizens, and operators—an open and multicultural space that from 2010 welcomes over 200 cultural events, 250 courses, nine services education, and 13 free advice counters every year. In the summer, most of the activities utilize the courtyard: 600 m^2 representing a unicum in the neighborhood, where children can play undisturbed from the traffic. In the hottest hours, however, the courtyard becomes unusable as it is an expanse of concrete without shading and greenery. With the project "Stiamo freschi!" we want to create a system of green pergolas in correspondence with the perimeter seats, which increase the shaded space outdoors, also sheltering the walls of the indoor rooms mostly used for public events. The element of green will help mitigate the climate impact and beautify the small public square. Even with the impact of the pandemic, the project remained intact: what we want is to transform the courtyard of the Casa del Quartiere into a green and fresh garden to welcome summer activities. For the crowdfunding campaign, the name of the project has changed: from "Stiamo freschi" to "10 × 10 Dieci euro x dieci anni di bellezza."	**The public-private commissioning:** Giulia Cerrato, Anna Rowinski, Marina Pelfini, Mattia Paco Rizzi, Luigi Greco ed Edoardo Santoro **Institutions involved:** Agenzia per lo Sviluppo Locale di San Salvario Onlus - Casa del Quartiere San Salvario (capofila) Cooperativa Tavola di Babele - Bagni Municipali - Associazione Sguardo nel Verde - studio GRRIZ, Luigi Greco (architetto**)**	Casa del Quartiere San Salvario, via Morgari 14, Torino
11. WALL COMING! *UN TEATRO PER IL FERRANTE* "WALL coming!" is an experimental path that involves children detained in the juvenile penal institute of Turin to rediscover one's own ability, in conscious actions of imagination, planning, and concrete transformation of the common spaces inside the prison. The project aims to offer young people the opportunity to manifest and establish themselves through the co-design and preparation of a multifunctional space with a prevalent theatrical vocation: a new neighborhood theater, internal to the institute but open to the citizens. In the first phase of the lockdown, we designed a communication plan with thematic reviews published on the project's Facebook page. In addition to presenting the innovative elements of our project and the entities of the proposing group, we have also chosen to tell of virtuous cultural projects conducted in Italian and foreign juvenile prisons, also through online dating.	**The public-private commissioning:** Gruppo di progetto: Eleonora De Salvo, Marta Grignani, Giulia Cerrato, Andrea Ciommiento, Simone Rosset, Giulia Albano, Cristina Riggio **Institutions involved:** Associazione di Volontariato Aporti Aperte Associazione Artieri Associazione CODICEFIONDA RiGenerAzioni APS Inforcoop Ecipa Piemonte IPM Ferrante Aporti Fondazione Teatro Ragazzi e Giovani Onlus Progettista: Marta Grignani (architetto, Associazione Artieri)	Via Berruti e Ferrero 3, Torino

Table 1 (*continued*)

| Title of the project/Short description	Stakeholders (Public-private commissioning of a project and promoters)	Localization
12. 28. LO SPAZIO DI MEZZO Although the Chinese presence in Turin is substantial (8000 people, of which 2300 university students), there is no permanent opportunity for intercultural dialog. The project involves the reactivation of an empty and underused space in via Medici 28 to respond to this shortage, giving life to a new place of Sino-Italian cultural exchange. The premises made available, through a concession by District 4, will be able to host daily study, work, and cultural events. To use the premises, some setup works must be conducted through a design and construction workshop. Faced with a reorganization during the first lockdown (March–May 2020) due to COVID-19, the project was reactivated through a tight schedule of meetings between the organizers, some students, and local administrations. The perspective of presence, in addition to on-site workshops to renovate the premises at via Medici 28, necessarily had to undergo a detour, transforming the planned activities into an opportunity for cultural exchange and consolidation of the design hypothesis.	**The public-private commissioning:** Referente responsabile: Francesco Carota Architetto: Luca Barello Gruppo progettisti: Niccolò Suraci, Cristiano Tosco, Ling Xiang, Michele Bonino **Associations involved:** China Room Atelier Mobile CSSA Polito Zhisong Babelica	Via Giacomo Medici 28, Torino
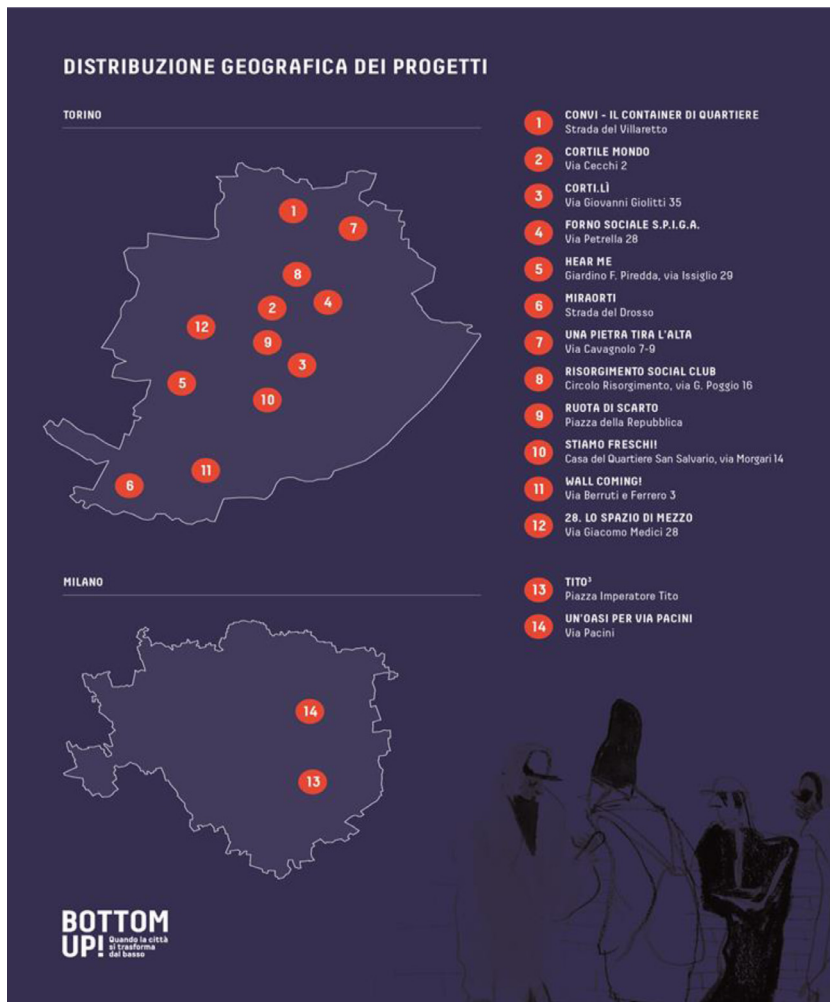
Fig. 2. Bottom up!: Location of the 12 projects in the city of Turin and the two projects in the city of Milan (Source: data collated by the authors from https://www.fondazioneperlarchitettura.it/wp content/uploads/2021/02/BottomUp_Booklet_Report _Singole_WEB.pdf, p. 52).

dients of attaining these objectives, which are not general or generic but strictly connected to the concept of multidimensional resilience, as highlighted in 1, 2, and 2.2. A complex framework emerges, in which innovative features that envision a multi-agent, multiscale, and multidisciplinary approach came to light in all 12 projects; the role of the "translators" and "conductors" of the processes remains the common denominator of all projects despite their diversity.

In this sense, as highlighted in the aforementioned Bottom Up! report, the "architect's resilience" is also key; in other words, architects must show the ability to be "social project makers," that is, professionals capable of steering the project alongside the community with their competence and control of the (even formal) outcomes of transformation. They act as mediators, translators of needs and desires, and directors of bottom-up processes. Their presence was a binding requisite in assembling the board of experts and constituted the "fulcrum" [https://www.bottomuptorino.it/, p. 59].

In the future, we could also examine this aspect in "evaluative terms," that is, by identifying the positive impact of said role in the
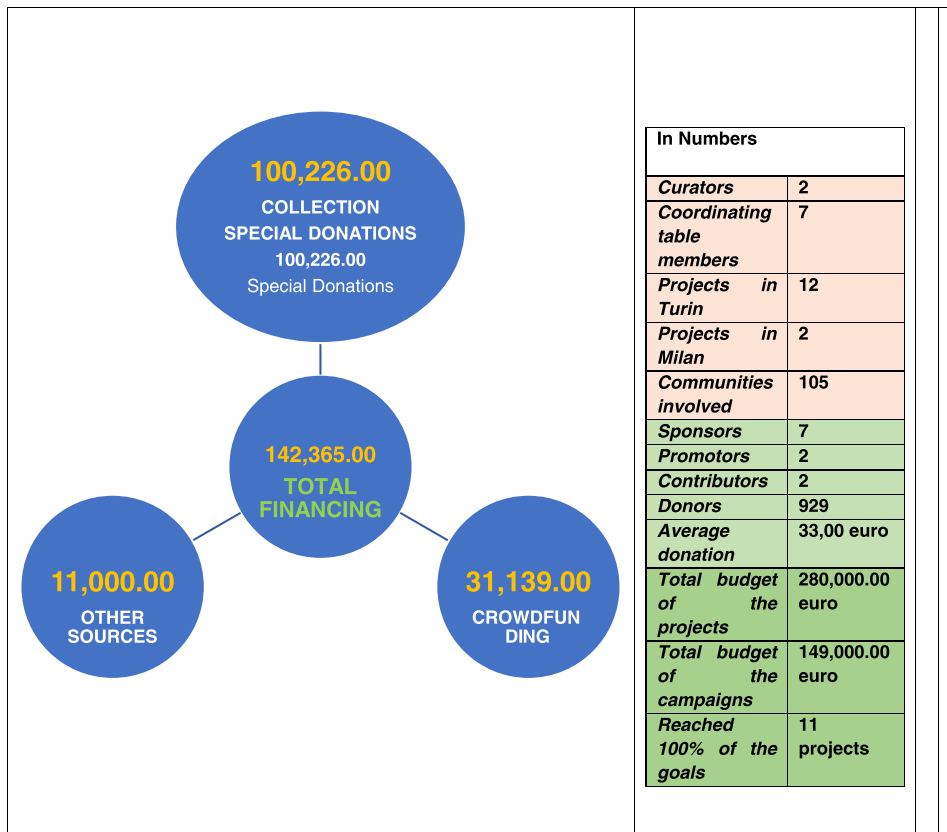
Fig. 3. Bottom Up! Results and overview of the numbers (updated Nov 2020, crowdfunding campaign at 3 months. Source: data collated by the authors from https://www.fondazioneperlarchitettura.it/wp-content/uploads/2021/02/BottomUp_Booklet_Report_Singole_WEB.pdf, p. 53).

In Numbers	
Curators	2
Coordinating table members	7
Projects in Turin	12
Projects in Milan	2
Communities involved	105
Sponsors	7
Promotors	2
Contributors	2
Donors	929
Average donation	33,00 euro
Total budget of the projects	280,000.00 euro
Total budget of the campaigns	149,000.00 euro
Reached 100% of the goals	11 projects

Diagram figures: 100,226.00 COLLECTION SPECIAL DONATIONS — 100,226.00 Special Donations; 142,365.00 TOTAL FINANCING; 11,000.00 OTHER SOURCES; 31,139.00 CROWDFUNDING.

bottom-up process and in the proposal's financing operations. Through the festival, we analyzed its specific and innovative multidisciplinary (economy, architecture, urban planning, and management) and multi-scale (technology, the definition of community-based urban and architectural projects and policies) features, which assume resilience as an emerging metaphor in the urban and territorial project—a metaphor [48,28] that can be the catalyst to attributing strategic meaning to the objectives of well-being, safety, health protection from potential threats to society, financial development, and environmental quality, capable of communicating these objectives to a wide audience and holding it accountable for its actions and outcomes.

On the one hand, in planning theories and urban project design, this constitutes a metaphor that can be efficiently used to interpret territories and guide them toward transformative processes; on the other hand, it creates action, generates consensus on objectives, and launches governance and territorial innovation projects through a community-based project.

The applicative field of the concept in this experience is broad and includes the use of resilience to better analyze and understand the relationships—or better, the interdependencies—between local communities and the environment [49], building the adaptive capability of socioecological systems and the efficacy of public policies (i.e., institutions and actions of the city of Turin), and innovative governance processes [50] (co-design, co-management, and co-financing of the process/projects).

Furthermore, it helps us assess the short- and long-term, place-based impact of social, financial, and environmental changes [20], which are implemented to prevent crises (social or economic; e.g., the needs of the less privileged and food networks), to study solutions and carry out interventions [51], also through territorial (self-organized), community-based, and co-designed processes [52].

Within this framework, and from this co-evolutionary perspective [24,53] with a holistic approach to resilience [15], the practices con-

sider resilience to be a driver, which impacts the change in the policies and actions of institutions, organizations, and social networks [54,55]. It strengthens the robustness of the system, which is strictly linked to social capital (rust and social networks), the institutions' ability to learn, social memory, and self-organization, which are viewed as essential factors for territories and models of governance to adapt and transform, and for action to be conducted in social, ecological, territorial, financial, and managerial fields. The project strategies have a cross-scale and cross-temporal outlook toward building knowledge, strengthening communities, and generating adaptive governance, which can ensure the dynamic balance of the territories and their communities.

Bottom Up! successfully represents a multiscale, multi-temporal transformation process that strengthens institutions' ability to learn, social memory, and self-organization, viewed as essential factors to adapt to crises and guide the transformation of territories.

4. Analysis, results, and discussion from the experiment to scalability: what bottom up! teaches us

Bottom Up! has therefore revealed itself to be a practice of resilience in action for the transformation of the territory in response to the pandemic, and for the needs of local communities experimenting with innovative community approaches, community projects, and governance of economic processes, with the potential for long-term outcomes in both urban and territorial plans and projects. It offers experiences that can certainly be exported to other contexts and scales of action for the resilience of the socioecological system. Resilience is an essential metaphor for building community-based projects in response to the pandemic.

4.1. Bottom up! in a self-organizing city

As described in this article (see Sections 3 and 3.2), Bottom Up! managed to promote a multiscale regeneration process with different tem-

Table. 2

"Reacting" Factors in the 12 Bottom Up! Projects: A Comparative Table (Source: Collated by the authors).

"REACTING" FACTORS (emerging, characterizing the resilience action of a "highly appealing," "sustainable" community) Note: we highlight the presence/absence in an emerging and connotating mode						
PROJECTS	FLEXIBILITY CIRCULARITY	COMMUNITY CREATIVITY	CONNECTIVITY NETWORKING INCLUSION	INTEGRATION OF PRACTICES	ROBUSTNESS MEMORY VALORIZATION OF PERMANENCE	TRANSFORMABILITY
CONVI - IL CONTAINER DI QUARTIERE ESPERIMENTO DI COMUNITÀ AI CONFINI DI TORINO Strada del Villaretto, Turin		X				
CORTILE MONDO LA NATURA SI FA SCUOLA Via Cecchi 2, Turin		X				
CORTI.LÌ SPAZIO E TEMPO PER ESSERE Via Giovanni Giolitti 35, Turin				X		
FORNO SOCIALE S.P.I.G.A. SPAZIO DI PANIFICAZIONE INCLUSIVO PER LE GENERAZIONI ARTIGIANE Via Petrella 28, Turin	X					
HEAR ME Giardino F. Piredda, via Issiglio 129, Turin			X			
MIRAORTI Strada del Drosso, Turin				X		
UNA PIETRA TIRA L'ALTA Via Cavagnolo 7–9, Turin					X	
RISORGIMENTO SOCIAL CLUB Circolo Risorgimento Via Giovanni Poggio 16, Turin					X	
RUOTA DI SCARTO Piazza della Repubblica, Turin [1st experiment]	X					
STIAMO FRESCHI! Casa del Quartiere San Salvario, via Morgari 14, Turin						X
WALL COMING! UN TEATRO PER IL FERRANTE Via Berruti e Ferrero 3, Turin		X				
28. LO SPAZIO DI MEZZO Via Giacomo Medici 28, Turin			X			

poral horizons to strengthen institutional learning, social memory, and self-organization, which are viewed as essential factors for adapting and guiding change. The case study also allowed us to define resilience in relation to urban self-organization.

Cities are nonlinear systems and open adaptive complex systems [56], in which a possible feature is the idea of self-organization and creativity; they are open because they exchange matter, energy, information, and people with the environment. Being open implies that the system continuously reacts to external changes in an adaptive and dynamic manner. Second, cities are complex because "their parts are so numerous and changing that there is no way to describe them in terms of cause and effect" (as the urbanists of the 1950s and 1960s did, nor in terms of probabilities, as the urbanists since the end of the 1960s and the regional scientists of the 1970s and the 1980s did) [56]. Thus, an important property of cities viewed as open and complex systems relates to the process of self-organization: cities can self-organize their internal structures independently of external causes.

Cities, which are considered open, adaptive, complex systems, lead to the development of a modified panarchy model [24,57], where they are characterized by self-organization and are therefore able to gradually adapt, learn from their past experiences, and preserve their memory. In other words, the reactions of cities to external disturbances such as the COVID-19 pandemic demonstrate that they depend on a certain degree of self-organization. They can self-regulate and create innovative solutions for urban development. Resilience and self-organization are therefore strictly related in terms of dynamic processes of renewal

and urban and architectural design through constant adaptation and innovation of their communities, which can react creatively to problems proposing solutions [58,59].

Within this framework, the practices discussed here centralize the dimension of social and economic accountability—institutions and society—through the Bottom Up! Festival, learn to self-organize to define territorial projects, innovatively execute them (both in terms of process governance and financing), and develop their ability to "play the game" [28] and take action during crises, viewing these moments as the system's windows of opportunity [10,57].

4.2. Global challenges: from a local case to the next generation EU challenges

An additional—and by no means less important—aspect that emerged from the Bottom Up! experience, which can be viewed as a "scalable" lever for other urban realities and civic projects, is the more technical-cultural one connected to competencies and knowledge: the cultural background linked to the practice of the Bottom Up! urban and architectural project—but also in many processes of urban, civic, and economic resilience—confronted itself with the challenge of innovation and flexibility in light of global challenges, some of which were foundational in the declaratory statement of the 17th International Architecture Exhibition at the Venice Biennial in 2021, curated by Alessandro Melis. Bottom Up! was selected to participate in the pavilion called Italy-Resilient Communities (https://www.comunitaresilienti.com/) and to

discuss the challenges of this project during two sessions of a seminar that took place on May 29, 2021 [60].

The festival explored how architecture can be a catalyst for the transformation of social cohesion and urban communities and how forward-thinking it can be in envisioning future ways of co-living and co-existing. The knowledge and practices of the architect—who, in these processes, is more of a social architect—are used in their hybrid role of mediator, translator of needs, and bottom-up process project manager.

By expanding one's horizons and reflecting within the confines of experimentation, teaching—which, of course, is not free of criticism—goes in the direction of bottom-up, sustainable, European processes, in which urban design and community design explicitly reveal their ability to co-design public-private partnerships [61] and show flexibility to change and to sudden transformations. They also show their versatility and adaptability to the needs and well-being of formal and informal communities [62], which are shared by certain experiences developed in relation to the National Recovery and Resilience Plan (PNRR) and the Next Generation EU program [63,64]. This approach fully aligns with the New European Bauhaus [64], which is an environmental, financial, and cultural project aimed at combining sustainability, aesthetics, inclusivity, design, and accessibility, even from an economic perspective, to support investments that contribute to realizing the European Green Deal. It brings into play fundamental values in an innovative process of co-design, creating new solutions in three stages: call for solutions, creation of solutions, and dissemination of solutions.

4.3. Financial resilience in community resilience: social, sustainable, and "Appealing" memory

Of the many interesting and emerging facets of resilience according to the three lenses of technological, social, and procedural innovation, economic resilience, which can also be taken from the Turin experience described in 2, appears to be worthy of further exploration, even in the presence of multidisciplinary approaches of the scientific community [65].

Through the Bottom Up! case for the financial declension of resilience, three macro-trajectories of research, which potentially demonstrate certain points of contact, seem to emerge: (1) social resilience linked to the territorial and community heritage of memory [66] and specific factors of the urban and territorial dimensions connected to local development processes [67,68]; (2) measurable effects, even in an economic and organizational key of resilience in times of crisis and climate emergencies and beyond [69–73]; (3) the importance of the supply chain through synergy and leverage effects of new types of public-private partnerships, which reveal themselves to be extremely flexible, with attention paid to financial components of impact and ethics, often in support of processes of urban metabolism [31–33,74–76].

Regarding the first point, Wilson's statements are particularly interesting and destined to future research developments; he states that "the notion of 'resilience' is rapidly emerging as a research topic in its own right, with the notion of 'social resilience' also rapidly gaining importance. Yet, due to the relative novelty of the research field, discussions about processes of social resilience are not yet fully developed, especially with regard to how the inbuilt 'memory' of a local community helps shape resilience pathways (social memory)" [[66], p. 227].

The second macro-theme presents rich literature, accompanied by specific observations of case studies and the application of extremely innovative analysis models. The focus seems to be consolidated on qualitative, quantitative, or qualitative-quantitative metrics, which, for the most part, measure aspects of resilience and financial impact originating from environmental and climate crises and focus less—at least to date—on analyzing their effect combined with social emergencies. In fact, what is tangible and/or secondary are the processes of creation of value and factors of resistance generated by processes of community resilience.

The third thread seems to highlight more innovative perspectives. As a matter of fact, recently, "flexible" response modalities to changes and/or emergencies in financial-economic and economic-social terms have given rise to debates and experiments (https://www.aisre.it/xlii-conferenza-scientifica-annuale-2021/) that see the hybridization and critical rethinking of traditional tools of analysis, assessment, and/or support to the financial feasibility and sustainability of urban and territorial regeneration interventions. We observe investments from a social impact assessment perspective [77,78,33], with the application of fundraising tools hybridized with crowdsourcing and crowdfunding (pure public, public–private, self-organized, or from platforms and repositories of private initiatives), or with experimentation of social and ethical finance and cooperative credit [79].

In the heterogeneity of said instruments, methodologies and processes implemented to provide urgent "economic" responses to regenerative (or generative) urban practices, the key element shared by all is urban community design—in other words, a factor of sharing and/or cooperation and/or participation of resilient communities in processes that, in some cases, just like the Bottom Up! case, can become a bottom-up process through the activation of crowdfunding campaigns.

In its financial declension, the concept of resilience passes through tools revised to respond to "financial traceability" during climate, environmental, and social emergencies. The latter are extremely impactful in the processes of urban regeneration, in heritage valorization interventions in a redistributive and adaptive view, in the protection of common goods, and in urban and material dynamics. These material dynamics are, in turn, strictly connected to the dynamics of the life cycles of the offer (e.g., construction heritage, widespread systems, and cultural heritage) on the one hand; and to the life cycles of demand with the recent disruptions caused by the COVID-19 pandemic, to models of family life, to balancing movements and life/work spaces in social, cultural, and ethical behavior, and to the scale of needs on the other hand.

4.4. Adaptability and execution of action for resilience: creating knowledge and adaptive governance

The Bottom Up! practices appear to be innovative in strengthening the role of sociopolitical and community systems to generate social capital and innovation [80,81] through community collaboration processes for the construction of projects and their realization (co-design). They experiment with a resilient approach [82] in terms of the following:

- Strengthening flexibility, seen as the adaptation and the evolution of the transformation system.
- The construction of diverse creativity, such as the ability of institutions and communities to find solutions.
- The construction of empowerment, strengthening connectivity/networking/inclusion between social and institutional actors, to share perspectives and the inclusion of Bottom Up! initiatives.
- The valorization of urban territories through actions capable of developing innovative projects, which are specific and multiscalable, affects the quality of the territory in its entirety (food chains, new ecologies, and new economies).

The community acquires robustness (persistence), which is the ability to maintain memory in the face of changes. In other words, it strengthens the quality of the community and reduces vulnerability, which is capable of balancing adaptation, transformation, and the preservation of memory, integrating persistence and innovation and enforcing communities as communities of care in their territories. From the bottom up, it is possible, through self-organization, to innovate the system, set up different transformation plans, and open up to the research of new tools for the operational efficacy of practices (crowdsourcing and co-design).

The approach is mostly transversal because it impacts many dimensions recognized by resilient action, which is developed through the integration of urban project practices capable of producing transforma-

tions in models of governance and empowering the community by curating the community and territory and raising awareness of common goods. The creativity of the communities is expressed in actions operating in the territory, in social spaces, neighborhoods, reusing containers and re-qualifying open spaces, creating innovative social services spaces (mental health centers, community kitchens, creative and didactic spaces), promoting inclusion, cohesion, and the leveling of inequalities, even in terms of digital access (the digital divide), which is essential in times of COVID-19.

5. Conclusions: the local approach

The festival is a local case characterized by an approach to resilience that is replicable and scalable. It is a site-specific model of innovation connected to the Turin landscape, the quality of the local and associative fabric, and the centrality of the cultural and local professional system.

However, as highlighted in this article, it represents a new approach to territorial governance based on the synergy between institutions and the community and on a proactive vision for planning, policies, and governance, in which communities play a vital role in active learning for creativity, robustness, and the ability to adapt and show innovation in the face of change [83].

Furthermore, the experience of the first edition of the festival during the COVID-19 pandemic confirmed the centrality of the role of communities in the management of risks connected to new COVID-19-related social and environmental vulnerabilities. Factors of success are found to be the realization of social, institutional, and financial macro changes to create projects, accompanying the system's co-evolution processes and its innovation/transformation from the bottom up through self-organization, and the elaboration of adaptive strategies and dynamic processes of planning and design.

These actions promote processes from the bottom up that can support innovation in planning, which is multi-objective and trans-sectorial by nature. They offer positive outcomes in multiple components of the system, acting in a multiscale way in terms of both temporal (short, medium, and long terms) and spatial (from broad scale to local scale) dimensions. The practices relied on process innovations and "new tools" to execute decisions and to act, even in the dimension of economic sustainability characterized by ethics and social accountability, projects and procedural innovation that centralize, as indicated in the Peccioli Charter [84 Art. 8.], interface spaces, private and public spaces and open and closed spaces with practices of permanent cogeneration capable of constructing resilient communities and a new alliance between living species, space and society, and individuals and communities [85].

The limits of the experimentation and case study analysis are related to the need to evaluate the effectiveness of urban design implementation and the operativity of design innovations in relation to the economic resources invested.

Although a comparison grid has not been applied to the timeline of the initial phases of the processes with respect to the ongoing trajectories implemented, it should be noted that all 12 projects, in light of the 2020 lockdown phases due to the COVID-19 pandemic, have experienced sudden changes in their goals owing to the self-organizing capacity of the communities involved.

Instead, we can evidence, as open issues, the need to develop a monitoring system to interpret the long-term environmental, territorial, and socioeconomic effects and impacts related to individual actions and innovation processes.

As highlighted in Fig. 1, a future research development (ongoing) that could be beneficial to phase 2 of Bottom Up! is in the identification of a tool for rapid and advanced analysis using business intelligence [86].

To support the monitoring process, the ongoing search identified the dashboard modality and approach configured for monitoring indicators on the two dimensions of the effectiveness of territorial actions and efficiency of the governance process. Data dashboards are visual displays that feature the most crucial information needed to achieve specific goals captured on a single screen. Effective dashboards should be designed as monitoring tools that are understood at a glance but may also be used in the analysis phase. In particular, the ongoing research is investigating a mix of two different types of dashboards, both strategic and analytical-operational [87,88]: the first can qualitatively monitor the level of achievement of the effectiveness of territorial actions; and the second can not only observe but also allow robust quantitative analyses on some aspects of an economic-financial nature and of finding resources in a multistakeholder key—successfully tested, for example, in the healthcare area [89].

Credits and knowledge

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

CRediT authorship contribution statement

Cristina Coscia: Methodology, Formal analysis, Investigation, Data curation, Writing – original draft, Writing – review & editing, Visualization, Supervision. **Angioletta Voghera:** Methodology, Formal analysis, Investigation, Data curation, Writing – original draft, Writing – review & editing, Visualization, Supervision.

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