

The Role of Climathon® in the challenge of Multilevel Ecological Planning

Viviana Lorenzo¹, Martina Massari²

1 University of Bologna, DA Department of Architecture, viviana.lorenzo2@unibo.it

2 University of Bologna, DA Department of Architecture, martina.massari4@unibo.it

Abstract: The paper explores through the lens of participatory processes the growing movement of Climathon®, understanding their potentiality in innovating urban planning. Climathon® are expressively collaborative design events, aimed at developing solutions to tackle climate change at the urban level. These events represent ‘safe arenas for experimentation’ where multiple levels of knowledge, institutions, resources and actors, are systematically involved in the development of ‘urban climate change experiments’ to increase resilience and foster the ecological transition of cities. Through documentary research and semi-structured interviews, the paper analyzes two European case studies, from the genesis of the challenge to the outcomes, to understand their degree of participation and inclusiveness, which forms of partnership and incentives make the ideas come into action, who are the actors and stakeholders involved, how charges and benefits are distributed, and how does Climathon® fit into local and regional planning. By reading the process beyond the products, the paper explores if these co-planning moments, if properly linked to the overall planning process, could represent a new form of ecological planning made of small incremental parts, foreseeing their replicability on regulation and decision-making practices.

Keywords: Climathon, urban resilience, co-planning, ecological planning

1. Introduction

To cope with the ongoing ecological and climate crisis (UN Environment, 2019; WWF, 2018; Steffen *et al.* 2018) and accelerate societal bottom-up contribution to the achievement of global Sustainable Development Goals, Agenda 2030 needs to refer strongly to local contexts and policies and to a multiplicity of small incremental actions. As confirmed in the European Urban Agenda (2016), in this context, urban institutions are invested of the crucial role to tackle global issues with new methods (Barresi and Pultrone, 2018) aimed at fostering urban resilience. Resilience, is here understood as a perspective and attitude (Gabellini 2018) that modifies and mobilizes planning practice, in reaction to shocks and stresses and in a process of continuous adaptation.

In this process, the contribution of participation as a foundation principle for “building resilience” (Stockholm Resilience Center, 2014; Biggs *et al.*, 2012; Folke *et al.* 2005) is widely recognized (De Boer, 2009), but the question raises difficulties because of the contrasting dimensions of scale (bigness vs. smallness), timing (long-term view vs. short term achievements) and different levels of knowledge (remote science vs. near knowledge and first hand experience) involved, between ecological and participatory action (Hester, 2007). The challenge for participation, according to

Hester (2007), is to put in place design capabilities that embrace the different social and ecological geometries, because ecological democracy “can shape distinctive and resilient cities” (*ibid.*). Against this background, we are witnessing increasingly frequent attempts by public administrations to involve systematically multiple levels of knowledge, institutions, resources and actors, in the development of the so-called ‘urban climate change experiments’ (Castán Broto and Bulkeley, 2013). It is the case of the participation of the Municipality of Bologna and of Lisbon to the organization of Climathon®2018, a 24-hour hackathon for climate action developed by EU EIT (European Institute of Innovation & Technology) Climate-KIC platform. Both the two European cities have undertaken a process of re-orientation of urban policies towards a resilience perspective, building space for experimentation on environmental issues. These experimentations are locally anchored but transversely oriented towards global issues, adapted to each referring context.

Through documentary research, semi-structured interviews and conversations with key players, the paper aim is to analyze, through the lens of participatory processes, the Climathon®2018 event in Lisbon and Bologna, analysing their differences and contact points, and its position with respect to the urban planning and the connection with the collaborative framework and the policies adopted by the cities, exploring their potential and limits in innovating urban planning. In order to draw this comparison, it seems necessary to start from the excursus of multilevel planning framework and the available tools that the cities are implementing to begin the transition towards resilience.

2. Bologna and Lisbon: multilevel planning frameworks for urban resilience

Bologna recent history shows the trajectory of the city’s urban planning and environmental policies intertwined with a holistic view of a collaborative city (Ostanel 2017; Massari 2018). This vision have seen a formal consolidation since 2014, with the approval of the “Regulation for collaboration between citizens and administration for the care and regeneration of urban common goods”. Thanks to the collaboration with Urban Center Bologna (now Fondazione per l’Innovazione Urbana - FIU), the city has been experimenting thematic neighbourhood laboratories (*Laboratori di Quartiere*), places of discussion on central issues for urban transformations (environment, reuse of buildings, welfare, urban regeneration) that have contributed to “increase the effectiveness of public action on the territory, promoting a broadened governance” (Evangelisti 2009). The thematic and place-based laboratories are the devices through which Bologna is currently aiming to connect the level of the practices with the macro policies. In 2006, the adherence to the Aalborg commitments for the implementation of Local Agenda 21, integrates collaborative policies in a framework of sustainable development. The opportunity to put the new approach into practice in the field of sustainable development and climate action was provided by the preparation of the SEAP - Sustainable Energy Action Plan (2012), a voluntary plan whose assumptions are based on collaboration between actors, local stakeholders and urban planning. Through the definition of a ‘protocol of understanding’ for the implementation between the Municipality and local stakeholders, the SEAP provides a formal commitment and sharing of objectives for the implementation and monitoring of actions. In 2015, Bologna adopted another voluntary tool, the BLUE AP - Local Climate Change Adaptation Plan (2016) that defines strategies and objectives starting from the current climate situation and prescribes the actions necessary to achieve them. The Adaptation Plan interacts with urban planning leading to the progressive adaptation of existing planning tools, in which it transfers certain environmental measures making them applicable. The two voluntary plans are necessarily based on collaboration

between actors, involving specific stakeholders on environmental issues, in project-oriented processes.

These devices were included in 2017 in the “Bologna Resilient City” vision, defined by the Deputy Mayor for Urban Planning and Environment Valentina Orioli as «primarily a slogan, within which we wanted to bring attention to the issues of mitigation and adaptation to climate change, and stress the need to tackle the issues in an increasingly coherent and structural urban planning framework». The effectiveness of the strategic choices of this vision passes through forms of democratic co-management (Allegretti and Herzberg 2004) of public resources, including the Participatory Budget (PB). PB in Bologna has been experimented since 2017. It entails the direct management of a portion of the municipal budget by the citizens, to finance a series of projects organized in different neighborhoods, previously defined through a path of co-planning on a territorial scale. The process foresees the direct selection of the co-designed proposals through an online voting, from which priority projects are elected to be realised in the following year. In 2017, the amount of one million euros of the municipal budget, has been set aside for 2018 and 2019 to be allocated to the Participatory Budget, while for 2020 the figure has been doubled. The process, saw more than 1,800 citizens participating in the co-planning events in both editions and respectively 14,584 and 16,348 people voting on-line for the realisation of the projects at neighbourhood level.

Lisbon was the the first capital in Europe to sign the New Covenant of Mayors for Climate and Energy in 2016 and will be Europe’s Green Capital in 2020. Many are the steps that the city took in the past decade to become a “Green, Smarter and Sustainable City” (Application Form for the European Green Capital Award 2020) encompassing: Lisbon’s SEAP (2010), managed together with Lisbon E-Nova, local energy agency that regularly organizes thematic public meeting with stakeholders (municipalities, NGOs, public entities, companies, students of higher education and professionals of the sectors under analysis); the Lisbon Strategic Charter (2010-2024) that starting from the city’s major challenges such as depopulation, vulnerability to natural events and loss of biodiversity, established three main objectives of ‘City regeneration’, ‘Climate change adaptation’ and ‘Connectivity of green spaces’; the Master Development Plan (PDM) 2010-2022 (2012), that was the result of a public discussion around 6 key sustainable questions and focuses on viable sustainability and local solutions, moving from zoning to block and street planning management; Lisbon 2020 Strategy (2013) that highlights the priority area of Low Carbon Lisbon; the Lisbon Climate Adaptation Plan (2017) that was the result of the national project ClimAdaPT-Local (2015-16), and the Lisbon Biodiversity Action Plan (2015-2020).

The development and implementation of these voluntary and mandatory planning tools is deeply rooted in the great efforts that the Municipality of Lisbon puts into participatory governance as a municipality’s strategy (Green Surge Project). This strategy has brought to an increase of the degree of participation in recent years, thank to several informative and participative actions connected to the *Lisboa Participa* platform portal (*Na Minha Rua Lx*, a portal and an app to signal necessity for intervention in green and public space; *LisBOAidea*; *Lisboa Debate*, a virtual and physical space of discussion around the city’s decisions; *Lisboa Aberta* for accessing the city’s open datasets) and that is well represented by the Participatory Budget (Orçamento Participativo Lx) process, one of the most successful experience of this kind in Europe so far. Started in 2008, Lisbon was the first European Capital to implement the Participatory Budget and today it represents a central forum for public decisions of the City of Lisbon. Lisbon’s PB chose from the first edition to recover a central aspect of

co-decision and not merely of consultation (Allegretti and Antunes, 2014) of the famous original model of Porto Alegre (Brasil). Through the online platform *Lisboa Participa* or during the several assemblies held each year, any citizen or non-governmental actor can present an idea for the city in the form of a project, that is then submitted to technical evaluation and public consultation, voting and implementation. The city commits 5% of the overall city's spending budget to the realization of the most voted ideas. During the 2017/2018 PB edition, the city invested 2.5M€ to realize 15 winning projects voted by more than 37.000 people, among 434 proposals adapted into 128 projects during the phase of technical analysis and public consultation.

This overview of urban planning and citizens participation in Lisbon and Bologna, shows a substantial consolidated tradition of the two Municipalities of using participatory approach in decision-making and collaborative action to face urban and environmental issues. Against this background, the contribution intends to analyze one of these actions, the Climathon® 2018 for each city, by reading the process from the genesis to the preliminary results achieved, to understand their degree of participation and inclusiveness, which forms of partnership and incentives make the ideas come into action, who are the actors and stakeholders involved, and how does Climathon® fit into local and regional planning, exploring their potential and limits in innovating urban planning. The analysis was carried out through semi-structured interviews with Valentina Orioli, Deputy Mayor for Urban Planning and Environment of the Municipality of Bologna, Valeria Barbi - Eu Projects, Climate change and Sustainability Coordinator for Bologna Foundation for Urban Innovation (FIU), and Francesco Rocca - Project Manager of Impact Hub Lisbon.

3. The performance of Climathon as safe arenas for urban climate experimentations

Climathon® is a global 24-hour marathon, aimed at finding solutions to climate change challenges through co-design¹, developed by EIT Climate-KIC, one of the eight Knowledge and Innovation Communities (KIC) created in 2010 by the European Institute of Innovation & Technology², to accelerate the transition to a zero-carbon economy. Climathon® is meant to be an action to catalyse innovation and encourage fresh new thinking from beyond the mainstream (*ibid.*) and a format that cities or other organizations interested can use, simply by applying to host the event on the official website. It originates from Hackathons, a popular format in technologists and makers communities during which a group of developers come together to challenge each other for a fixed amount of time, allowing participants to exercise creativity and to “maintain the code” (Taylor and Clarke, 2018), and in particular from Green Hackathons, a series of international coding events addressed to broaden participation and collaboration among ICT developers and sustainability practitioners and researchers (Zapico *et al.* 2013). Climathon® is nowadays taking the shape of global movement: it ranged from 20 cities involved in 2015 to 114 in 2018, 15 of which only in Italy.

As other Hackathons, Climathon® are moments of intensive and collocated collaboration (Trainer, Kalyanasundaram *et al.* 2016) during which participants with different backgrounds (ICT, environment, economics, technology, social etc.), skills (creatives, developers, designers, entrepreneurs, institutions' officers, technicians etc.) and levels of knowledge (university level

¹ According to the official event's website “Climathon empowers citizens, cities and local economies to come together to develop local solutions to climate challenges” (www.climathon.climate-kic.org).

² A body created by the European Union in 2008 to strengthen Europe's ability to innovate and formed by a community of more than a thousand partners among universities, research centers, companies including SMEs (www.eit.europa.eu).

students, researchers, decision makers, stakeholders, interested citizens, etc.) come together in a playful way to co-design solutions to tackle climate change in their city or region. The format proposed by Climate-KIC encompasses moments of information to introduce the topic, team building, brainstorming and networking among participants, experts and ad hoc stakeholders related to the challenge, training on business tools and presentation skills (business model canvas elements, pitching etc.), relax (yoga lessons, coffee and lunch break, movie screening, art performing etc.). The location also plays an important role, as often the event happens in appealing modern architectures (e.g. coworking places, innovation centers, museums) or original locations (renewed industrial buildings, former silos). As described by one of our respondents (Valeria Barbi - FIU) «Climathon® is not only a respectable scientific event, but is meant to be also a fun social event that focuses on the engagement on the climate change theme in an informal way». The working groups, often formed impromptu, challenge each other for a prize, which is typically the access to an incubation programme, following a strict timetable. This urgency, together with the competition, helps creativity to burst, while the awareness of the contemporary happening of the event in other cities of the world and the importance of the goal invests the participants of a sense of commitment and proud³.

Even if Climate-KIC does not refer openly to the word “participation” or “participatory design” in its Climathon® communication, many elements make these events a form of participatory activity (Taylor and Clarke, 2018). Namely, the tools employed such as team building activities, visioning or backcasting and design thinking methods, stakeholder needs’ analysis and dialogue, informal setting, action planning and prototyping, and other properties such as enlightening different kinds of knowledges, mutual understanding and learning, building trust and a sense of community (Lorenzo, 1998) which are typical outcomes of participatory processes.

In this respect, Climathon® represent ‘safe arenas’, where the participants, through co-design and ‘open innovation’ approach (Chesbrough *et al.* 2006) are allowed to ‘experiment’ and discuss openly, imagine and develop and eventually realize creative and innovative solutions, to global adaptation and mitigation issues. However since Climathon® deals with complex issues affecting a wide and diversified public, it seems necessary to critically understand the established format, the tools used (mainly business oriented) and the selected objectives, as well as its position with respect to other ongoing participatory and planning processes, to improve their degree of participation consistent with their mission and consequently their ability to increase the resilience of the urban contexts in which they are implemented. The following interviews, while outlining the Lisbon and Bologna case-studies, helped to analyze Climathon®.

4. The cases of Lisbon and Bologna

The 2018 edition of Climathon® took place on October 26th, with each participating city scheduling the 24 hours start and end, according to necessity. For the City of Bologna it was the third edition organized by FIU in partnership with Climate-KIC and the Municipality, and it took place in the headquarters of Urban Center Bologna (former name of FIU) at Sala Borsa. In the words of Valeria Barbi the decision to participate Climathon®, besides their membership in Climate-KIC, was due to «the theme [that] allowed us to combine not only an important and actual issue, such as sustainability

³ The analysis of the concrete development of Climathon® contained in this paragraph is based on the descriptions of Climathon programs around the world displayed in the official website, on the answers of our respondents and on the direct participation of one of the authors, namely Viviana Lorenzo, to the 2017 edition of Climathon® in Bologna.

and climate change» but also to practice «participatory processes, or citizen engagement, which are another of our core activities». FIU policy for participants' engagement in the event was, as Barbi reports, «to leave the participation very open, we have not identified specific targets (companies or subjects with particular preparation) as often happens in Hackathons addressed to a technological target. Neither we have set any age limits» and this paid in terms of diversity of participants, with a good gender balance.

The Municipality of Bologna was an active partner of all three editions, contributing to the event by setting the challenges and providing technical content. The challenges launched during the events, concerned issues related to the Adaptation Plan (Climathon®2016), the use of satellite data from the EU Copernicus project to increase urban resilience (Climathon®2017), while the third year (Climathon®2018) the challenge was linked to an ongoing municipal participatory process, the *Laboratorio Aria* (Air Laboratory), that provided the main theme, with the explicit request to participants to further develop the Aria App, one of the outcomes for the process, enriching it with more interactive features.

In the words of Barbi, the solutions that emerged encountered some obstacles, due to the lack of a clear follow-up path, in some cases left to the initiative of individual participants and partners, but also due to the peculiarity of the process and topics that characterize Climathon®. Barbi reports: «When we talk about Climathon®, and therefore of issues more closely related to climate change, it can be more difficult because the theme is very complex, more easily understandable for experts rather than citizen, who may have an awareness of the problem, but not related immediately to daily life [...] and because the projects that are born [in Climathon®] are also more difficult to achieve [e.g. sustainable mobility] and are complex to be managed immediately by a public administration». Despite the difficulties, in the words of the Deputy Mayor Orioli, the interest of the Bologna administration in taking part to the organization of Climathon® «lies in the exemplary value of this event and in its international resonance: the Climathon® allows to focus attention, for a limited amount of time but in a very intense way, because of its global repetition, on issues related to mitigation and adaptation to climate change and innovation through the use of technologies. It is therefore a 'climate experiment' very useful also for the dissemination of knowledge and awareness on environmental issues».

For Lisbon the decision to participate to Climathon® for the first time, came from a private initiative of a researcher. The Municipality of Lisbon was then involved through the intermediation of the local division of Climate-KIC. The team included Francesco Rocca of Impact HUB Lisbon, a local coworking space, part of a larger international network of spaces for entrepreneurs and social innovators. In the words of Rocca, the main reason to participate to Climathon®2018 for Impact Hub, was «a strong alignment between our strategy as agents for sustainability and supporters of environmental and social projects here in Lisbon and Portugal, and the goals of Climathon®, e.g. to work for solutions to local problems identified by the municipality».

The challenge for 2018 concerned smart management to reduce plastic and food waste in the city of Lisbon, and was proposed by the Municipality. Rocca reports: «The winners would have the possibility to develop their idea by being incubated here in Impact HUB for the following three

months and to do networking at the Web Summit⁴, and then the city intention was to implement the idea through the Orçamento Participativo. [...] In practice, this did not happen because the projects were all at the ideation stage and did not go ahead because of limited time or low interest from participants, mainly international students». This aspect is underlined also for Bologna by the Deputy Mayor Orioli, which confirms that «the resulting proposals are interesting for the Administration, but in general they need to be deepened to be effectively implemented in policies and public action», and that nevertheless «promoting a synergic approach between actions, processes and events around a key theme, allows to analyze the problems with greater depth, multiplying the points of view and the answers that the administration can put in place, also together with citizens, associations and other stakeholders».

In the opinion of Rocca, the success of the event relied in the flexible format provided by Climate-KIC and in the enabling space of ImpactHUB, and mostly in the relationships of value that arose among the participants and partners, rather than in the production of solutions: «One of the projects that won the membership here, C., became part of our team of coworkers [moreover] establishing relationships with the Çamara [...] and having the possibility to collaborate with them on other projects, was useful. But there was not much follow-up». One critical point for Rocca in Lisbon, was the substantially voluntary nature of the event and the lack of clear commitment and responsibilities of the partners in the follow-up phase, which prevented continuity in the process after the event.

Similarly, what Barbi in Bologna sees as positive in proposing this activity to citizens beyond the implications within the public administration or the realization of the project itself, is «to give life and organize events [...] that are however fundamental from an educational point of view, because they enter the negotiation process on climate change [for which] in the last United Nations conferences, there was a call to the direct participation of citizens, because it was understood that the real change comes from below. And in my opinion, events like the Climathon® are notably functional for this».

5. Conclusions

Based on the interviews and research carried out, the conclusions reflect the considerations of the authors and the necessarily specific visions of the interviewees. From the planning and policy excursus reported, it seems clear that both cities are putting in place many efforts to address in a more structured and normative framework, issues related to environment addressed through participatory approach, to tackle climate change at the urban level. While comprehensive environmental planning becomes necessary in face of urgent action to tackle climate change, Lisbon and Bologna have started to implement informal confrontation and collaboration moments that go further the typical forms of citizens' consultation on environment issues (e.g. Agenda21 forums), towards more active engagement forms such as public-private partnership (e.g. the SEAP protocol for both cities, *Bologna Città Resiliente* Call for proposals), co-management of common goods (e.g. Regulation for collaboration ... of urban common goods and Bilancio Partecipativo in Bologna, Orçamento Participativo in Lisbon), and thematic urban/neighborhood laboratories (Laboratori di Quartiere and Laboratorio Aria in Bologna) in settings that could be considered 'safe arenas' for developing 'urban climate change experiments'. In both the case-studies, the possible integration with successful

⁴ Winners of Lisbon Climathon® won also a ticket for Lisbon Web Summit 2018, the largest event in the world relating to the sector of new information technologies and the internet.

existing Participatory Budget processes, could represent an asset to legitimate and realize these ‘experiments’ while reinforcing the link with overall urban and environmental planning.

Climathon® can therefore embody ‘safe arenas for experimentation’ that embrace both local and global dimensions (Hester, 2007) and involve multiple levels (Walker *et al.* 2004) of knowledge, institutions, resources and actors, for which codified planning and design tools could result overstructured. As for the metaphor of “the path and the forest” (Lanzara, n.d., pag. 52-53) this sort of ‘project-action’, between design and prototyping, could mean for urban institutions to be able to experiment “local sequences that make sense” (Lanzara, *ibid.*) for complex problems, before proceeding further. This consideration resonates with the aptitude of ‘agile innovation’ (Wilson 2011) to create space for experimentation and learning, where top-down approaches are no longer sufficient to meet contemporary challenges, including rapid reactions to needs and fast assessment of the impact of the solutions, to avoid the risk of incurring into irreversible disruptions when moving in uncharted territories.

With regard to the inclusion and integration of Climathon® in local and regional planning, Ass. Orioli states that Climathon®, as a punctual ‘climatic experiment’ can be oriented to «offer specific answers to a theme or a problem treated through environmental and urban planning». However, because these process remains isolated from the very reasons of the planning overall process, only if effectively connected and integrated they can have a complementary role with respect to the actions implemented through planning. These considerations open the possibility for such interaction tools to represent portions of a new form of ecological planning made of small independent and incremental parts (Alexander, Ishikawa and Silverstein, 1975; Alexander, 2004), foreseeing their replicability on other regulatory planning procedures and decision-making processes.

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