

## URBAN SUSTAINABLE DEVELOPMENT AND INNOVATION PARTNERSHIPS

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### ***Abstract***

The urban innovation and sustainable development agendas currently guiding policy initiatives at both the European and global level, illustrate a shift from cities as objects of research to cities as testbeds for policy experimentalism. This article introduces the concept of Urban Sustainable Development and Innovation Partnerships (USDIPs) as a key legal and policy tool to design and manage policy experiments that can at the same time accelerate the technological and ecological transition and guarantee accountability and equality if they involve a multiplicity of local stakeholders and in particular community and scientific actors collaborating in delivering sustainable development-oriented (otherwise known also as “mission-oriented”) innovation.

The theoretical triangulation of literature on inclusive and innovative public-private-partnerships (PPPs), urban co-governance, and citizen science can contribute significantly to the development of a theory on urban sustainable development and innovation co-governance. The analysis of the existing multi-disciplinary scholarship shows that these new forms of urban governance apply the theory of the commons to cities’ most promising attempts to answer the technological and ecological

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transition. The intersection between innovation procurement and pre-commercial procurement, sustainable development and urban co-governance, city science imposes the design and use of new legal tools and more specifically new forms of public partnerships enabling the full integration of community and scientific actors within city governance.

The article first reviews the academic discussion on the most inclusive and innovative forms of public-private partnerships, urban co-governance, and city science. Then, tapping into the global and European policy context, the article explains that co-governance has become key to policies, programs, and projects aimed at delivering urban sustainable development.

These forms of cooperation between urban authorities, private stakeholders and community-based key urban actors are acquiring greater significance within the global and European level policy framework. But the EU Urban Innovative Actions Initiative (UIA) and specifically the “UIA Co-City Turin” project on collaborative management of urban commons to counteract poverty and socio-spatial polarization are considered here as a blueprint case study in USDIPs experimentation. The article however draws empirical evidence also from twelve other city projects particularly relevant to co-governance and city science, all funded by UIA. The empirical analysis shows that an approach rooted in multistakeholder and equitable cooperation can serve as a powerful accelerator and as a safeguard for a more equitable urban sustainable development that leverages the power of innovation procurement and city science.

In particular, the empirical analysis of these projects demonstrates that innovation procurement and city science can play a fundamental role in accelerating mission-oriented innovation. More in general this analysis demonstrates the need for a larger policy toolkit. The empirical evidence emerging from the case studies unveils a set of four key tools instrumental in the combined effort of creating USDIPs: (1) a legal and policy initiative leveraging the flexibility and adaptiveness of innovation procurement at the city level; (2) the design and rollout of a social and sustainable finance plan; (3) the use of digital tools to nurture and manage the complexity of multistakeholder cooperation and (4) institutional and physical spaces to invest on capacity building of both public and non-public actors.

Finally, this article calls for concrete policy action at the EU level to use USDIPs to bridge the gap between different policy agendas such as the Green New Deal Industrial Plan, the Horizon Europe 100 climate-neutral and Smart Cities Mission, the new European Urban Initiative, and the 2021-2027 Cohesion Policy.

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### 1. Introduction

The legal category of Urban Sustainable Development and Innovation Partnerships (USDIPs) that this article advances is a first attempt at capturing the distinctive features of a new breed of multistakeholder cooperation agreements attempting to go beyond the traditional public-private partnerships models (PPPs), even the most inclusive and innovative models of PPP<sup>2</sup>. USDIPs try to coalesce a plurality of urban stakeholders around projects and initiatives EU cities are forging to produce just and sustainable innovation at the city level.

They build on one side on the widespread diffusion of new democratic and inclusive urban governance and legal arrangements based on the cooperation between public, private, scientific, social, and civic actors that operate on an equal footing in the common interest of a city<sup>3</sup>. Their implementation increasingly relies on new forms of public partnerships<sup>4</sup> and the growing role played by scientific actors in the city under the scholarly and policy framework of city science<sup>5</sup>.

USDIPs do not rely on a notion of innovation that follows a Schumpeterian approach to development and applies it to the urban context. Schumpeter defined development as a “new combination of productive means (..). This concept covers five cases: (i) the introduction of a new good and of a new quality of a good (2) the introduction of a new method of production, that is one not yet tested by experience, which need by no means to be

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<sup>2</sup> See P. Chirulli, C. Iaione, *La Co-Città. Diritto urbano e politiche pubbliche per i beni comuni e la rigenerazione urbana* (2018); S. Valaguzza ed E. Parisi, *Public private partnerships. Governing common interests* (2020).

<sup>3</sup> S.R. Foster, C. Iaione, *Co-Cities. Innovative Transitions toward Just and Self-Sustaining Communities* (2022).

<sup>4</sup> S. Valaguzza, E. Parisi, *Ricerca sull'identità giuridica del Partenariato Pubblico-Privato*, in *1 Munus 1* (2020).

<sup>5</sup> C. Nevejan, *City Science, 1 Values for Survival Cahier 126* (2020).

founded upon a discovery scientifically new and can also exist in a new way of handling a commodity (3) the opening of a new market (...) (4) the conquest of a new source of supply of raw materials (..) (5) the carrying of the new organization of any industry or the breaking up of a monopoly position”<sup>6</sup>. To adapt the concept of innovation to the urban context, this article adopts on one side the definition provided by the EU program Urban Innovative Actions Initiative (hereinafter: UIA). This program characterizes urban innovation as “new products, services and processes able to add value to the specific policy field and have never been tested before in Europe”<sup>7</sup>. On the other side, this article considers the definition of local democratic innovations as city-led initiatives aiming at fostering innovations which are defined as: “innovative programs at the municipal level in which some form of civil society participation was institutionalized”<sup>8</sup>.

Cities are increasingly playing the role of facilitators creating the conditions to enable the birth and rollout of more collaborative, sustainability-minded just innovation ecosystems. In these ecosystems the equitable redistribution of decision-making powers and economic benefits is key. City inhabitants are therefore encouraged and supported in developing projects and skills to build collaborative relationships among each other, with public authorities and other city actors. USDIPs represent a legal category that can shape and formalize these new governance and legal arrangements pushing for a more equitable cooperation between local communities, public authorities, civil society, local businesses, and knowledge institutions<sup>9</sup>.

Structure of the article is articulated in four parts. The article first reviews the academic discussion on the most innovative and inclusive forms of PPPs, urban co-governance and city science. Then, embedding the discussion within the global and European policy context, it highlights how co-governance of urban

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<sup>6</sup> J.A Schumpeter & A.J. Nichol, *Robinson’s Economics of Imperfect Competition*, 42(2) *Journal of Political Economy* 249–259 (1934).

<sup>7</sup> A. Barresi, *L’iniziativa comunitaria Urban Innovative Actions: una lettura critica dei progetti selezionati*, 14 *TECHNE* (2017).

<sup>8</sup> G. Baiocchi, P. Heller & M.K. Silva, *Bootstrapping Democracy: Urban Reforms in Brazil* (2011).

<sup>9</sup> S. Foster, C. Iaione, *The City as a Commons*, 34 *Yale Law & Policy Review* 281 (2016).

innovation has become central in programs and projects designed to achieve urban sustainable development.

USDIPs emerge as the best way to conceptualize the complexity of these co-governance mechanisms and find their blueprint in the regulation on urban collaboration experimented in various Italian cities and more specifically through the UIA “Co-City Turin” project<sup>10</sup>. This regulation has become the source of a set of new forms of urban multistakeholder partnerships that apply the theory of the commons to the city<sup>11</sup>. Starting from the exemplary case study of the City of Turin (Italy), the article provides more empirical evidence by elaborating on twelve city projects all funded by the urban EU program UIA particularly relevant for their use of a co-governance arrangement, as well as the use of legal tools inspired by innovation procurement and by the role played by scientific actors in the city.

An empirical analysis of these thirteen case studies enabled to draw key takeaways and insights on USDIPs experimented to reach multistakeholder governance and inclusive innovation. Operational proposals, supported by the empirical evidence collected from the case studies, as well as from other European programs and projects, such as the EU programs Horizon2020 and Urbact, unveil a set of four key tools instrumental to a possible policy framework enabling USDIPs: (1) an urban legal policy framework leveraging the connection with innovation procurement; (2) a social and sustainable finance to support the startup and long-term sustainability of USDIPs; (3) the implementation of digital tools enabling and accelerating participation and cooperation of a large network of stakeholders and (4) institutional tools guaranteeing and nurturing capacity building in city government and the local ecosystems.

Finally, the key finding emerging from the analysis is the need to integrate city science and innovation partnerships within a larger policy program on urban sustainable development by using USDIPs as key delivery mechanisms for policy programs aiming at delivering a just transition in cities from both a technological and climate point of view.

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<sup>10</sup> Projects documents are available at <https://uia-initiative.eu/en/uia-cities/turin>

<sup>11</sup> S. Foster, C. Iaione, *The City as a Commons*, cit. at 9.

## 2. Beyond Public-Private Partnerships: USDIPs as Public-Private-Science-Social-Community Partnerships

The relevance of public-private partnerships in the management of public infrastructure or services has informed the culture and practice of public administrations in the last decades<sup>12</sup>.

However, the traditional model promoted in the 1990s finds itself at an important crossroad<sup>13</sup>. The most successful partnerships appear today to be more complex and hybrid<sup>14</sup>. Its most recent epiphanies are evolving towards partnerships embedding openness<sup>15</sup>, and innovation or sustainable development goals<sup>16</sup>.

Nonetheless the literature still fails to understand the consideration of multistakeholdership, the common interest leading to an equitable sharing of the benefits, the collaborative dialogues or co-design process leading to their closing, the outcome-oriented, ex-post evaluation approach as key distinctive features of these newly conceived forms of cooperation<sup>17</sup>.

Indeed, Tvarnø still defines these new forms of PPPs as “a collaboration between a public authority and the industry. The

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<sup>12</sup> See S. Arrowsmith, *Public Private Partnerships and the European Procurement Rules: EU Policies in Conflict?*, 37 *Common Market Law Review* 7009 (2000); C.D. Tvarno, *Law and regulatory aspects of PPP*, in C. Greve, G. Hodge & A. Boardman (eds.), *International Handbook on Public-Private Partnerships* 216-235 (2010).

<sup>13</sup> C.D. Tvarnø, *Climate Public Private Partnerships in the EU*, 15 *European Procurement & Public Private Partnership Law Review* 200 (2020).

<sup>14</sup> A. Castelli, *Smart Cities and Innovation Partnership*, 13 *European Procurement & Public Private Partnership Law Review* 207 (2018); J. Leigland, *Public-Private Partnerships in Developing Countries: The Emerging Evidence-based Critique*, 33 *The World Bank Research Observer*, 103 (2018).

<sup>15</sup> Daniel E. Schoeni, *Whither Innovation: Why Open Systems Architecture May Deliver on the False Promise of Public-Private Partnerships*, 70 *Admin. L. Rev.* 409 (2018).

<sup>16</sup> F. Fracchia, S. Vernile, *I contratti pubblici come strumento dello sviluppo ambientale*, in 2 *Rivista quadrimestrale di Diritto dell'Ambiente* 2020, p. 4; L. Mélon, *Sustainable Public Procurement Best Practices at Sub-National Level*, *European Procurement & Public Private Partnership Law Review* 138 (2020); S.M. Denta, *Public-Private Partnership for the Climate*, 16 *European Procurement & Public Private Partnership Law Review* 318 (2021); Bruno De Cazalet, *The New UNCITRAL Legislative Guide on Public-Private Partnerships (PPP) and New Model Legislative Provisions*, *INT'l Bus. L.J.* 387 (2020).

<sup>17</sup> See C. Iaione, *L'azione collettiva urbana tra partenariato pubblico-comunità e pubblico-comunità-privato*, in P. Chirulli, C. Iaione (ed.), *La Co-Città*, cit. at 2; Id., *Il diritto all'innovazione sostenibile per l'investimento nelle infrastrutture sociali. Un'analisi empirica*, in *Riv. giur. ed.* 301 (2021).

industry holds the technology and the capital; the public entity holds the knowledge of the climate needs”<sup>18</sup>.

### 2.1 Inclusive and Innovative Public-Private Partnerships

The model of public-private partnerships for the delivery and management of public infrastructure or services is an established leading practice in Italian public law<sup>19</sup>. This is rooted in a broader culture of public-private partnership that was initiated in the eighties and it is still dominant today in the practice of public management. However, considering the challenges posed to the law by global crises that percolate at the local level (for example, the climate crises and the pervasive development of disruptive technologies), this model might be obsolete, at least in its original configuration.

First, empirical evidence on the use of PPP is available now, roughly 30 years after their first ideation. In developed countries, progressive critiques against PPPs and more generally against the profit-oriented (rather than public service-oriented) framing of the public sector-private actors’ relationships<sup>20</sup> are growing. According to some estimates, in low- and middle-income countries the use of PPPs is not even pervasive, representing between up to 25% of the overall infrastructure development, and between 5 and 15% in OECD countries<sup>21</sup>. Their impacts of poverty are not significant<sup>22</sup>, suggesting that the main justification for the contracting of a private actor, that of providing affordable access to the poor to essential services, may be flawed.

Yet, some authors in public procurement law are speculating on a potential category of climate public-private partnerships<sup>23</sup>. The idea behind these efforts is to use leverage on the existing legal framework for public procurement but apply some changes that are required to structure the collaboration between public and private actors better when it comes to climate change mitigation or adaptation measures.

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<sup>18</sup> See C.D. Tvarnø, *Climate Public Private Partnerships in the EU*, cit. at 13.

<sup>19</sup> R. Dipace, *Partenariato pubblico-privato e contratti atipici* (2006).

<sup>20</sup> M. Mazzucato, R. Collington, *The Big Con. How the consulting industry weakens our businesses, infantilizes our governments, and warps our economies* (2022).

<sup>21</sup> J. Leigland, *Public-Private Partnerships in Developing Countries: The Emerging Evidence-based Critique*, in 33 *The World Bank Research Observer* 107 (2018).

<sup>22</sup> J. Leigland, *Public-Private Partnerships in Developing Countries*, cit. at 21, 108.

<sup>23</sup> C.D. Tvarnø, *Climate Public Private Partnerships in the EU*, cit. at 13.

Other scholars are speculating on the necessity to envision multi-auctorial categories of partnerships. This small group of scholars is advocating for the inclusion in the partnerships of a variety of actors from civil society and different forms of not-for-profit entities such as social enterprises, NGOs, Foundations, and even informal groups such as, for example, service end users and city inhabitants. The assumption behind these theorizations is that these arrangements would be a more sustainable and equitable form of partnership<sup>24</sup>. Examples have been defined as public-private-people partnerships or, still within a bilateral relationship, public-community partnerships<sup>25</sup>. Initially developed in the urban planning of smart cities projects' field<sup>26</sup>, it expanded to other areas such as research and innovation<sup>27</sup>, disaster response<sup>28</sup>, culture, and cultural heritage<sup>29</sup>.

The role of civic, social, not-for-profit, research and innovation actors in PPPs theory is gaining the attention of the scholarship also thanks to the Next Generation EU plan<sup>30</sup> and more in general due to the EU 2021-2027 policy framework which is increasingly valuing the role of these actors in the co-production of public value<sup>31</sup>.

### 2.1.1. Inclusive PPPs

The Italian legal framework does not recognize yet a public-private-people or a public-community partnership model as a

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<sup>24</sup> C. Irazábal, *Public, Private, People Partnerships (PPPPs): Reflections from Latin American Cases*, in A. Lehavi (ed), *Private Communities and Urban Governance* 191-214 (2016).

<sup>25</sup> R. Lang et al., *Co-operative Governance of Public-Citizen partnerships: Two Diametrical Participation Modes*, in L. Gnan et al (eds.), *Conceptualizing and Researching Governance in Public and Non-Profit Organizations* 227-246 (2013).

<sup>26</sup> P. Marana et al., *A framework for public-private-people partnerships in the city resilience-building process*, in *110 Safety Science* 39-50 (2018).

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<sup>28</sup> H. Seddighi et al., *Public-Private-People Partnerships (4P) for Improving the Response to COVID-19 in Iran*, in *15 Disaster Medicine and Public Health Preparedness* 44 (2021).

<sup>29</sup> C. Boniotti, *The public-private-people partnership (P4) for cultural heritage management purposes*, in *13 Journal of Cultural Heritage Management and Sustainable Development* 4/5 (2023).

<sup>30</sup> A. Moliterni, *Le prospettive del partenariato pubblico-privato nella stagione del PNRR*, in *2 Dir. Amm.* 449 (2022).

<sup>31</sup> S. Valaguzza, *Sustainable Development in Public Contracts, an Example of Strategic Regulation* (2016).

legitimate legal vehicle for the delivery of public services or management of public goods. However, recent legal reforms of the 'Third Sector Code' and the 'Public Contracts Code' introduce forms of collaboration between public and social actors that are inspired by the principle of solidarity and civic collaboration, rather than competition<sup>32</sup>.

The reform of the 'Third Sector Code', *Codice del Terzo Settore*<sup>33</sup>, introduced two provisions on co-design involving the public sector and not-for-profit organizations, and one on the concession of publicly owned cultural heritage assets needing restoration to not-for-profit organizations, respectively in articles 55 and 71. The 'Public Contracts Code', *Codice dei Contratti Pubblici*<sup>34</sup> introduces, at articles 189 and 190, two new forms of inclusive partnerships: the 'horizontal subsidiarity interventions' and the 'administrative barter' (*baratto amministrativo*), better defined in the text of article 190 as 'social partnership'.

In particular, the social partnership was already provided by a previous legislative decree, n. 133/2014 (art. 24) but its scope was more limited. The social partnership provision gives local entities (i.e., Cities; Metropolitan Cities; Regions) the authority to realize contracts with residents acting individually or jointly (for example, an NGO), to realize projects on a specific territorial area having as object interventions of urban decay, public space cleaning, maintenance and improvement of green spaces, recovery and reuse of unused buildings or brownfields. The projects are carried out by the civil society actors, free of charge for the local entity. The local entities can foresee an in-kind compensation for individuals involved, a tax credit or a tax exemption on regional or city taxes. Tax credits or exemption can be granted to residents who owe city taxes. The Court of Auditors qualified this legal provision as expression of the constitutional principle of horizontal subsidiarity (art. 118, c. 4)<sup>35</sup>. The type of contract realized as social partnership does not fall within the purview of the EU law definition of a concession or public works contract: the residents are not

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<sup>32</sup> C. Iaione, *L'azione collettiva urbana tra partenariato pubblico-comunità e pubblico-comunità-privato*, in P. Chirulli, C. Iaione (ed.), *La Co-Città*, cit. at 2; R. Cavallo Perin, *Proprietà pubblica e uso comune dei beni tra diritti di libertà e doveri di solidarietà*, 4 Dir. Amm. 839 (2018).

<sup>33</sup> Italian Legislative Decree n. 117/2017.

<sup>34</sup> Italian Legislative Decree n. 50/2016.

<sup>35</sup> Corte conti, Sez. autonomie, n. 16/2017.

professional actors performing a type of work that they regularly offer on the market; there is no economic exchange, although the fact that the individuals can be compensated with tax credits distinguishes it from volunteering work; the projects are realized with the spirit of pursuing the general, public interest and not for economic profit.

Even though it does not qualify as a public contract after all, the social partnership contract is still under the purview of the Public Contracts Code (*contratto incluso*) for Rosanna De Nictolis<sup>36</sup>, because the object of the partnership is the realization of a public work or service. The inclusion in the Public Contracts Code has the effect of applying some of the procedural safeguards that normally apply also to public contracts that are exempted from the Code. In other words, the social partnership contract is excluded from the purview of EU public procurement law but it is included pursuant to the Italian Public Contracts Code. The Italian Public Contracts Code has a broader scope than the EU law definition of public procurement and concession agreements. This is especially true if article 190 is read in combination with article 36 on contracts under the minimum threshold (*contratti sotto soglia*). Especially if a private individual initiates a proposal of social partnership, for a project whose overall costs are lower than the threshold, the local entity has the legitimacy to directly award the contract to an economic operator, without a public procurement procedure (*gara d'appalto*). Fabio Giglioni<sup>37</sup>, who agrees that the social partnership contracts cannot be classified as a form of income-generating contracts subject to public procurement law, advocates for a new intervention of the legislator as the only way to clarify the legal nature of social partnerships. Valaguzza and Parisi note that the possibility for social actors to propose projects allows non state actors to contribute to the definition of the general, public interest, going beyond the mere execution of a project<sup>38</sup>.

The issue that seems to emerge is that, in both the Public Contracts and the Third Sector Code, the relationship being regulated is a bilateral relationship between the public actor (i.e.,

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<sup>36</sup> R. De Nictolis, *Il baratto amministrativo (o partenariato sociale)*, in P. Chirulli, C. Iaione (eds.), *La Co-Città*, cit. at 2, 61.

<sup>37</sup> F. Giglioni, *Limiti e potenzialità del baratto amministrativo*, 3 *Rivista Trimestrale di Scienza dell'amministrazione* (2016).

<sup>38</sup> S. Valaguzza, E. Parisi, *Ricerca sull'identità giuridica del partenariato pubblico-privato*, cit. at 4, 7.

the City) and a private actor (i.e., an NGO). Under this view, a social partnership is not that dissimilar from a public-private partnership, except that the private actor is not interested in pursuing economic gain.

This generates issues from the perspective of the feasibility of the projects. Is it possible to conduct a complex urban regeneration project with a not-for-profit model? It also raises risks of lack of inclusivity. Vulnerable, low income or minority individuals and communities may not be sufficiently resourced to be proactive and realize a project of renovation of a publicly owned building for no compensation or for tax credits (which cast a shadow on potential exploitation of fragile individuals with a tax debt). These are the kind of issues that advocates of public-private-people partnerships are trying to address.

Scholars analyzing case studies of projects that resemble public-private-people partnerships have spotted positive impacts, as well as downsides. For example, in projects of water provisions in low-income areas,<sup>39</sup> the inclusion of NGOs equipped with poverty awareness and connected to the needs of the local populations makes the intervention effective from the perspective of granting access to service and providing poverty alleviation (e.g.: producing the effect of lowering the monthly cost of water provision for households and allowing them to create and maintain job opportunities thanks to this). However, these cases also seem to entail risks of instrumentalization of the social or community partners<sup>40</sup>.

From a legal perspective, it is probably evident at this point that the literature described here is interdisciplinary and fragmented. The heavy reliance on small-size samples of case studies and the geographical fragmentation of the research also entails that the knowledge generated by these studies is not generalizable, nor transferrable without proper contextualization. The concept of partnership is not always used to describe a legal arrangement within a public procurement framework. It is often used to encompass collaborative relationships between multiple actors in the context of projects, programs, coordination mechanisms tackling complex situations like social, ecological,

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<sup>39</sup> R. Franceys, A. Weitz, *Public-private community partnerships in infrastructure for the poor*, 15 J. Int. Dev. 1083 (2003).

<sup>40</sup> M. Le Feuvre et al., *Understanding Stakeholder Interactions in Urban Partnerships*, 52 Cities 55-65 (2016).

economic, health crisis<sup>41</sup> characterized by high risks of failure, lack of information and therefore uncertainty that suggest the creation of a large coalition of actors coalesced around a common goal<sup>42</sup>. It is, therefore, necessary for legal scholars to take these case studies more seriously and address issues like the legal basis of a public-private-people partnerships or the implications in terms of revenues distributions and liability allocations, and obviously the role of public and other actors like the scientific actors.

### 2.1.2. Innovative PPPs

Social innovation partnerships like the ones described in the previous paragraph are not the sole new kid in the town of new collaboration models between the public administrations and a larger network of other stakeholders beyond the private economic operators. The literature on technological innovation and procurement again more specifically the applied to the city, in particular smart cities, and urban innovation<sup>43</sup>, is increasingly pointing to innovative procurement practices overcoming the business-as-usual PPP model of long-term exclusively profit-oriented private operation of public infrastructure and services<sup>44</sup>.

The analysis of the literature on research and development services and pre-commercial procurement first clarifies that these are innovative forms of partnerships and secondly sheds light on a further epiphany of a much broader legal category and definition of public private partnerships, different from the usual definition of PPPs relying essentially on the key distinctive features of a particular form of PPP (*i.e.* concession agreements)<sup>45</sup>.

The European Commission notice “*Guidance on Innovation Procurement*” of 18 June 2021 clarified that the key distinctive feature of these partnerships is governing the deployment of a

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<sup>41</sup> A. Moliterni, *Le prospettive del partenariato pubblico-privato nella stagione del PNRR*, in 2 Dir. Amm. 449 (2022).

<sup>42</sup> R. Cavallo Perin, G.M. Racca, *La cooperazione amministrativa europea nei contratti e servizi pubblici*, in 6 Riv. It. Dir. Pubbl. Com. 1457 (2016).

<sup>43</sup> R. Caranta, P.C. Gomes, *Public procurement and innovation*, *ERA Forum* 371–385 (2021).

<sup>44</sup> P. Marana, L. Labaka & J.M. Sarriegi, *A framework for public-private-people partnerships in the city resilience-building process*, in *Safety Science* 39-50 (2018).

<sup>45</sup> L. Vandercruysse, *Data Protection in Smart Cities: Pre-Commercial Procurement as a Silver Bullet?*, 17(2) *European procurement & public private partnership law review* 81 (2022).

common interest project by using expressions like “mutually beneficial solution” or “risk benefit sharing”<sup>46</sup>.

As demonstrated in the previous paragraph on inclusive partnerships moving towards the involvement of a larger array of partners, including civic society actors, city inhabitants, and local communities for social and ecological objectives, R&D services contracts and pre-commercial procurement are partnerships that allow the risk and benefit of investing in innovative services and infrastructures to be shared amongst multiple actors. In this case the main protagonist are normally innovators, SMEs, start-ups, and spin-offs created by knowledge, scientific operators and responsible research and innovation or sustainable development private economic operators.

The Urban Agenda Partnership on Innovative and Responsible Procurement has tapped into the potential of these innovative PPPs by formally considering public-private-people partnerships (4Ps), Public-Community Partnerships (PCPs), Public-Private-Community Partnerships (PPCPs) and therefore also public-private-science-social-community partnerships (5Ps) as institutional, legal, and policy arrangements that could foster innovation and sustainable development through the strategic use of public procurement and public contracts.

Researching innovative approaches to public procurement represents a key task of the action plan of the Urban Partnership on Innovative and Responsible Procurement<sup>47</sup>. The action plan of the Urban Partnership on Innovative and Responsible Procurement suggests also the introduction of “innovation procurement brokers [...] offering concrete support to public buyers and public administrations willing to exploit the full potential of the EU Directives on procurement which grant room for the experimentation of newly conceived partnerships with the private

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<sup>46</sup> European Commission, *Guidance on Innovation Procurement*, C (2021) 4320 final, 18 June 2021, p. 56. In the Italian legal context this has been sanctioned both by the scholarship A. Blasini, *Prime riflessioni in tema di appalto pre-commerciale*, 19 *Federalismi* (2016); C. Spada, *I contratti di ricerca e sviluppo*, 3 *Dir. Amm.* 687 (2021) and by the interpretation of the Italian Anti-Corruption authority ANAC with deliberations n. 58 of 30 January 2019, AG 1/2019/AP and n. 619 of 4 July 2018, AG 7/2018/AP; opinion 30 July 2013, AG 42/2013. See also administrative tribunal decision TAR, Puglia, Lecce, sez. I, 21 July 2010, n. 1791.

<sup>47</sup> Urban Partnership on Innovative and Responsible Procurement, *Action Plan*, 2018, available at <https://futurium.ec.europa.eu/en/urban-agenda/public-procurement/library/public-procurement-partnership-final-action-plan>.

or social sector and local communities especially at the urban level (e.g. public-social partnerships, public-private-community partnerships, public-community partnerships, public-private-people partnerships, etc.), as well as collaborative dialogue procedures to enable the co-design of such social and digital innovation partnerships and innovative procurement solutions.”

The action plan of the Urban Partnership calls on innovation procurement brokers both at the local and national level to “involve civil society and local communities in the co-creation of innovative solutions to urban challenges”<sup>48</sup>. This approach is coherent with the overall EU Public Procurement strategy contributing to the corroboration of a legal basis for which PPCPs or P5s or PCPs are to be understood as USDIPs.

The question that arises is now, whether existing public procurement laws and regulations are enough to support this type of partnership. Specifically, is the public Procurement of Innovation a potential tool to support these innovation urban partnerships? This article elaborates on the issue and argues that a possible answer is that of USDIPs existing as a variation of the existing PPI tools.

This solution presents several challenges a) they have never been experimented before; b) pre-commercial procurement and PPI have been designed for public-private-industry or university actors’ collaboration and therefore their adaptation seems complex but it is necessary to try; c) there are several critical points related to the involvement of city inhabitants and civil society in general in public procurement procedures according to the existing literature and policy debate.

As a matter of fact, EU Directives clearly state that these rules are intended to support “Research and innovation, including eco-innovation and social innovation” (EU Directive 2014/24, 47). According to the directives they should be “among the main drivers of future growth and have been put at the center of the Europe 2020 strategy for smart, sustainable and inclusive growth”. And that is why the 2014 legislative package has foreseen a new contractual tool: The Innovation Partnership. Now, this new legal tool seems to have been narrowly interpreted as aimed only at digital innovation. Practice, especially in cities, has demonstrated that Innovation

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<sup>48</sup> Urban Partnership on Innovative and Responsible Procurement, *Action Plan*, cit. at 46.

Partnerships can extend their scope to also encompass social innovation initiatives and/or social-digital innovation initiatives, such as many of the cases under which PCPs fall. The EU directives equally recognize the principle of self-organization and public-public cooperation. Considering that many of these urban common's initiatives act in the general interest, it is possible to understand the cooperation between the city and the urban commons as a reconstructed form of public-public cooperation. Finally, the EU Commission initiated a stakeholder consultation to gather suggestions on the scope of a guidance on green and social procurement and the issues it should address, including "how to best integrate the demand-side function for social innovation and social entrepreneurship"<sup>49</sup>.

There are critical points related to the involvement of city inhabitants and civil society in general in public procurement procedures. They can be related to expertise, knowledge and representation. If the civil society groups involved are not representative or do not possess the necessary knowledge and experience to actively cooperate with both public and private actors, there is an inherent risk that their role within a public procurement process will be meaningless or produce distortive or negative effects<sup>50</sup>.

As innovating public procurement legal tools and procedure is a central challenge for many European programs working on urban sustainable development. As we will see UIA projects, such as Co-City (Turin) and USE-IT (Birmingham) for instance, highlight the need to identify new institutional frameworks to allow a productive collaboration between different city actors. As highlighted at the beginning of the article, UIA indeed stresses that in order to test and implement bold solutions, urban authorities cannot act alone: "(...) urban authorities need to involve all the key stakeholders that can bring expertise and knowledge on the specific policy issue to be addressed. These include agencies, organizations,

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<sup>49</sup> Communication from The Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *Making Public Procurement work in and for Europe*, COM(2017) 0572 final 2017 at 8. See C. Iaione, *Public procurement with social impact*, September 13, 2021, available at <https://cooperativacity.org/2021/09/13/public-procurement-with-social-impact/>

<sup>50</sup> C. Cravero, *Rethinking the Role of Civil Society in Public Procurement*, 14 *European Procurement & Public Private Law Review* 30 (2019).

private sector, research institutions, NGOs [...] Bold projects need them all”<sup>51</sup>.

Besides, introducing end-users in the procurement process allows the development of more collaborative and therefore more innovative solutions targeting local challenges and needs.

## **2.2 The Role of Communities in Urban Governance.**

Public policy programs across cities have forged new legal tools allowing inhabitants to take action on challenges and opportunities within their communities. Local governments have appeared receptive to the innovative dynamics needed to push public administration towards collective urban welfare. These approaches represent a policy and legal response to the challenge of going beyond the traditional duality of PPPs. This article finds that while the unequivocal relevance of PPPs appears to head the movement, the traditional model promoted in the 1990s finds itself at an important crossroad<sup>52</sup>; Today’s most successful partnerships appear under hybrid forms, evolving towards more sustainable, equitable and participatory forms of multi stakeholder partnerships. An innovative approach to partnerships emerges from the policy horizon with a strong emphasis on end-user’s participation and involvement. These models of partnership integrating the community in the planning process itself exist under a variety of forms, to name a few: public-private-people partnerships (PPPPs), Public-Community Partnerships (PCPs), Public-Private-Community Partnerships (PPCPs) or Community Benefits Agreements (CBAs). Theories of urban informality, self-organization and neighborhood governance come to light in this notion of end-user’s integration. The cooperation between local communities, civil society, businesses and knowledge institutions becomes action-oriented policy in these theories of urban co-governance.

This article seeks to highlight the role of civic, social or not-for-profit actors within the world of urban governance. Often, when regional government representatives decide to support bottom-up initiative, the tensions between the different urban stakeholders are lessened. The social implications are in the realm of participatory

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<sup>51</sup> See UIA, *What is Urban Innovative Actions?*, available at <https://www.uia-initiative.eu/en/about-us/what-urban-innovative-actions>.

<sup>52</sup> F. Miraftab, *Public-Private Partnerships: The Trojan Horse of Neoliberal Development?*, in 24(1) *Journal of Planning Education and Research* 89–101 (2004).

democracy as it appears to strengthen the solidarity and social cohesion at the neighborhood level<sup>53</sup>. An interesting concept here is the strengthening of the role of city inhabitants as co-producers of local public services<sup>54</sup>.

In this sense, Ostrom considered the role of city inhabitants as a key element to achieve the improved delivery of services as well as strengthen social cohesion and the democratic empowerment of citizens. Elinor Ostrom's empirical research on Common Pool Resources (CPRs) investigates the cooperative governance strategy as a way of dealing with CPRs dilemma and avoiding the tragedy of the commons. It is an alternative to the public (the "Leviathan" solution) or the private property solution.

The attention of the literature on collective action for the commons is also concentrating on the emerging field of urban commons. The governance of urban commons can be conceptualized as a new form of sharing, governing, producing and owning urban resources. The coproduction of public services refers to "an arrangement wherein city inhabitants produce their own services at least in part"<sup>55</sup>.

The research by Richard Lang<sup>56</sup> brings forth the example of Austrian local partnerships' structures wherein municipalities are seeking support from their city inhabitants in the delivery of vital public services such as childcare, care for the elderly, education and recreational facilities. It is suggested that sustainable user and citizen empowerment becomes a question of "bottom-linked institutionalization rather than bottom-up creativity alone"<sup>57</sup>. The 2013 report on Co-operative Governance of Public-Citizen Partnerships and participation modes presents the possibility of PCPs enhancing participatory democracy as well as improving public service provision. Indications of cooperative governance

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<sup>53</sup> R. Lang, D. Röfl & D. Weismeier-Sammer, *Co-operative Governance of Public-Citizen Partnerships: Two Diametrical Participation Modes*, in L. Gnan, A. Hinna, F. Monteduro (eds.), *Studies in Public and Non-Profit Governance. Vol. 1: Conceptualizing and Researching Governance in Public and Non-Profit Organizations* 227 (2013).

<sup>54</sup> C. Hess, E. Ostrom (eds.), *Understanding Knowledge as a commons* (2007).

<sup>55</sup> T. Brandsen, V. Pestoff, *Co-production, the third sector and the delivery of public services*, 8:4 *Public Management Review* 493-501 (2006).

<sup>56</sup> R. Lang & A. Novy, *Cooperative Housing and Social Cohesion: The Role of Linking Social Capital*, 22:8 *European Planning Studies* 1744-1764 (2014).

<sup>57</sup> R. Lang, D. Röfl & D. Weismeier-Sammer, *Co-operative Governance of Public-Citizen Partnerships: Two Diametrical Participation Modes*, cit. at 4, 7.

strengthening solidarity and social cohesion at the neighborhood level were also found throughout this article.

Community Benefits Agreements (CBA) represent here another important tool for integrating the roles of civic, social or not-for-profit actors within the processes of urban governance. A CBA is defined as “a private agreement between a community coalition and the developer on multiple issues that may or may not be included in the regular planning process. The CBA is different from other private agreements in that it is between a developer and a coalition of multiple community groups with plural interests”<sup>58</sup>. In this form of governance, community groups can negotiate directly with the developer rather than having to go through the hoops of bureaucracy embedded within city staff, politicians or the added difficulties of legislative action.

In this context, citizen science, in particular the citizen production of data through analog or digital tools, can prove valuable to prevent pollution of natural resources or reduce environmentally related health risks<sup>59</sup>. Cities are experimenting with citizen science to inform and shape smart city policies or solve challenges such as air quality. The City of Bristol developed a “Bristol Approach to citizen sensing”, which provides a set of tools and a way of working that helps different groups – from council members and businesses to schools and community organizations – to tackle the pressing issues in their community. It does so by using a range of sensors – usually a mix of new and old technology – and meshing it with the wider resources and knowhow that already exists in the involved community. Through the first pilot project, supported by Urbact, more than 700 people 13-80 years old were engaged in more than 45 events and workshops. Three sets of prototype citizen sensing tools were devised, designed, deployed and tested, tackling damp homes, food waste and mental health.

A theoretical framework guiding the institutional design of co-governance of cities’ resources can be found in the theory of urban commons and the quintuple helix of governance. The underlying principle in a commons-based understanding of urban

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<sup>58</sup> M. Baxamusa, *Empowering Communities through Deliberation the Model of Community Benefits Agreements*, in 27 *Journal of Planning Education and Research* 261-276 (2008).

<sup>59</sup> A. Berti Suman, M. Van Geenhuizen, *Not just noise monitoring: rethinking citizen sensing for risk-related problem-solving*, 63:3 *Journal of Environmental Planning and Management* 546-567 (2020)

space, assets, services and infrastructures is that resources within the city can be shared, co-managed, co-produced and cooperatively owned. The fair distribution of social and economic resources of the city and communities is at the heart of this 'commons' conceptualization<sup>60</sup>.

Elinor Ostrom and her followers, the scholars of the Bloomington School of Political Economy have analyzed how urban commons are shaped by urban transitions<sup>61</sup>. Several authors investigated the dynamics of production of urban commons as a social practice. Relevant research efforts are recently emerging in different economics and geography studies to identify and understand the mechanisms of functioning and sustainability of collaborative strategies to govern shared urban resources or public spaces or co-producing services<sup>62</sup>. The study of the urban commons is indeed trans-disciplinary and approached the issue from a different standpoint. The commons are often framed as a reaction against conjunctural phenomena (financial and economic crisis) to increase access to resources at risk of privatization and achieve the goal of equality. The investigation of the related emergence of policy innovations that foster active citizenship, collaborative democracy and governance of city commons and the way this process shapes relevant dimensions of urban democracy is still an open challenge. The effect of conjunctural financial and economic phenomena on cities were analyzed by Sassen in terms of the connection between financial investments in urban spaces in global cities and increase of inequalities<sup>63</sup>.

The activation of forms of collective action and political protest for reclaiming urban commons as a reaction against the impact of financialization and the post-2008 economic crisis is a

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<sup>60</sup> S. Foster, C. Iaione, *Ostrom in the City, Ostrom in the City: Design Principles and Practices for the Urban Commons*, in D. Cole, B. Hudson, J. Rosenbloom (eds.), *Routledge Handbook of the Study of the Commons* 235-255 (2019).

<sup>61</sup> E. Ostrom, H. Nagendra, *Applying the social-ecological system framework to the diagnosis of urban lake commons in Bangalore, India*, 19(2) *Ecology and Society* 67, (2014).

<sup>62</sup> K. Soma, M.W.C. Dijkshoorn-Dekker, N.B.P. Polman, *Stakeholder contributions through transitions towards urban sustainability*, 37 *Sustainable Cities and Society* (2018); C. Wyborn, A. Datta, J. Montana, M. Ryan, P. Leith, B. Chaffin, C. Miller, L. van Kerkhoff, *Co-Producing Sustainability: Reordering the Governance of Science, Policy, and Practice*, 44:1 *Annual Review of Environment and Resources* 319-346 (2019).

<sup>63</sup> S. Sassen, *Expulsions: Brutality and Complexity in the Global Economy* (2014).

common object of study in the sociological or anthropological strand of literature<sup>64</sup>.

At the same time, we can observe a blossoming of urban commons-oriented policies that are experimental and innovative in cities, most famously in the City of Bologna, which was a pioneer in this area, the city of Barcelona, with the government led by Barcelona en Comu that is providing a radical approach toward the urban commons or the city of Naples, where the city recognized illegal occupations of city owned buildings as urban commons. These policies activate local city inhabitants to collectively decide over, manage or govern a host of urban resources, which can range from open spaces to buildings to culture. In some cases, they provide a radical approach to change the democratic engagement in their cities and to promote new forms of social inclusion and justice. Relevant research efforts are devoted to the understanding of the processes behind the activation of collective action for the urban commons and the mechanism of self-governance carried out by NGOs or urban social movements. Although we can observe research efforts for analyzing and assessing policy strategies for active citizenship, collaborative democracy, and governance of the city commons, particularly in the research strand devoted to the democratic innovations and deliberative or participatory democracy, a comprehensive analytical framework, and empirical efforts to describe the phenomenon and his implications for democratic quality and inequality in cities are lacking.

Social movements and civil society organizations advocating for the urban commons and the right to the city have a global extent and so are single cities or cities' networks policy initiatives such as the Mexico City Charter for the Right to the City (2008) as well as NGO-based networks such as the Global Platform for the Right to the city. This analysis stresses on one side a relational process of collaboration – not focusing only on the commons as shared resources, but also as a process of social cooperation – and on the other side on the way they reconfigure the relationship between urban social movements and public institutions. This can also be defined as a literature on "urban commoning". Here, the scholars try to capture the nature of how urban inhabitants are changing the way of living and working and

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<sup>64</sup> D. Harvey, *Rebel cities: from the right to the city to the urban revolution* (2013).

being in cities - *i.e.* commoning in different aspects - and investigate the dynamics of production of urban commons as a social practice<sup>65</sup>. These aspects also relate to some of the policies and other governance innovations that this article is trying to capture.

Urban Commons have led to the emergence of a new approach to bringing innovation and sustainability in cities. Co-cities are based on a large partnership approach, going beyond the duality of the public-private relationship. The commons imply ultimately the creation of economic diversity in the city, in itself impossible without the economic independence of the urban commons' supporters. The legal recognition provided through existing forms of urban partnerships is no longer sufficient. A model of sustainability is needed to bring about true commons in the city.

Many cities have taken the leap and complemented the legal recognition of commons with a concrete and holistic vision of the city as a cooperative space, or co-city. There have been implementations of institutions, economic and financial operations, as well as digital and educational platforms designed as the first steps towards the final goal of truly enabling a collective and collaborative governance of the city.

The previous paragraph argued that there is room for a model of governance of innovation that is based on the application of the triple and quadruple helix theories to the urban context. It also showed the necessity to include in such models another category of actor, the unorganized social actors (*i.e.* city inhabitants, local communities not organized as NGOs or in other legal forms).

The notion of urban co-governance invoked here herein involves the pooling of resources and important collaboration between five categories of actors - social innovators, public authorities, businesses, civil society organizations and knowledge institutions - representing the above mentioned "quintuple helix model". These co-governance arrangements have three main aims: fostering social innovation in urban welfare provision, spurring collaborative economies as a driver of local economic development, and promoting inclusive urban regeneration of blighted areas.

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<sup>65</sup> C. Borch & M. Kornberger, *Urban Commons: Rethinking the City* (2015).

The triple helix model, first designed by Etzkowitz and Leydesdorff<sup>66</sup>, is based on the tripartite relationship between universities, industry and governments. The Quadruple Helix, developed by Carayannis & Campbell<sup>67</sup>, is blended in the aspect of a media and culture based public. The Quintuple Helix has added environmental knowledge and innovation into this framework of understanding. It is interpreted as an approach in line with sustainable development and social ecology. The goal of this 2012 evolution of the helix model into a quintuple helix was to design and propose a conversation bringing to the table an interdisciplinary framework of analysis to the question of sustainable development tying together knowledge, innovation and the environment. This model folds in the triple and quadruple helix and contextualizes them within the broader issue of sustainability. An application of such theories of the urban context is lacking. The concept of the quintuple helix could be at the core of an evolution of these models towards a model of governance of urban innovation that includes a wider variety of actors. The authors Carayannis and Campbell imply that a comprehensive understanding of this latest helix model proves that knowledge production and its use, as well as innovation, must be set in context by the natural environment of society itself.

The quintuple helix builds off the highly interactive and collaborative governance model of the triple helix and is being tested throughout Italian cities. Universities are facilitating the creation of partnerships between public and private organizations, social innovators and city inhabitants.

On the basis of these findings, a scientifically-driven research project called the “Co-Cities Project” has been developed. The “Co-City”<sup>68</sup> is based on five design principles extracted from practice in the field and cases identified as sharing similar approaches, values and methodologies. While some of these design principles find their origins within Ostrom’s principles for the governance of

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<sup>66</sup> H. Etzkowitz, L. Leydesdorff, *The Dynamics of Innovation: From National Systems and “Mode 2” to a Triple Helix of University–Industry–Government Relations*, 29 *Research Policy* 109-123 (2000).

<sup>67</sup> E.G. Carayannis & D. Campbell, 'Mode 3' and 'Quadruple Helix': *Toward a 21st century fractal innovation ecosystem*, *International Journal of Technology Management* (2009).

<sup>68</sup> S. Foster. C. Iaione, *The City as Commons*, in *Yale Law & Policy Review*, 2016, 34, 281.

Common Pool Resources, they are each adapted to the contexts of the urban commons and the realities of constructing common resources in the city. Five key design principles for the urban commons have been identified: (1) Collective governance; (2) Enabling State; (3) Social and Economic Pooling; (4) Experimentalism and (5) Tech Justice.

The Co-City framework builds itself around the structure of co-governance. Co-governance is presented throughout this article as a formula based on varying degrees of self-governance, shared, collaborative and polycentric organizations in the management of urban assets, resources and services in the city. In the principles of the quintuple helix model<sup>69</sup>, we find new forms of urban governance models applying the theory of the commons to the city. The Community integration and end-user involvement frameworks of the PCPs seen above are multi-stakeholder partnerships going in the direction of an increasingly sustainable model of urban development. Resting on the fundamental concept of co-governance, this article will take the reader through the processes of Urban Sustainable Development and Innovation Partnerships (USDIPs) and the ways to unlock the underlying potential of going beyond the static public-private dualities.

### **2.3 Urban Innovation and City Science**

The article conceptualizes city science as a type of citizen science, embedding an emerging perspective on the role of city inhabitants, social, civic, and nonprofit actors in producing empirically driven knowledge, rooted in concrete experimentations, on innovative governance arrangements for cities' resources in cooperation with local governments and knowledge institutions.

City science theory comes into play within a theory of urban co-governance as a way to define the body of knowledge produced by experimentations on innovative forms of governance of city resources. However, city science can also be a way for cities to implement the right to benefit from science and its applications. The

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<sup>69</sup> E.G. Carayannis, D. Campbell, 'Mode 3' and 'Quadruple Helix': Toward a 21st century fractal innovation ecosystem, in *International Journal of Technology Management* (2009).

right to science is recognized by Article 15 of the International Covenant of Economic, Social and Cultural Rights (ICESCR)<sup>70</sup>.

Debate on Article 15 and the right to science more broadly has been largely neglected in the literature on economic and social rights, and by States<sup>71</sup>. However, recently, the debate on this has been revived<sup>72</sup>.

In 2020, the Committee on Economic Social and Cultural Rights (CESCR) published a comment on article 15. The first, important clarification is on the normative content of the right to science which encompasses a right to receive the benefits of the applications of scientific progress, but also a right to participate in scientific progress<sup>73</sup>. The comment clarifies that the definition of science is not limited to scientific research produced by scientific professionals, but also any form of knowledge that contributes to the production of scientific progress. Citizen science which refers to 'ordinary people doing science'<sup>74</sup>, is included in the realm of the right to science. The right to the protection of intellectual property and to enjoy the freedom to research or to not perform research if contrary to one's ethical principles is also part of the normative content. The right also provides the possibility of states to impose limitations on the right, to protect people from the implications that the right to science might have on other economic, social, and cultural rights. And, generally speaking, 'limitations can also be

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<sup>70</sup> According to article 15 right to science is operationalized as "the right of everyone: (a) to take part in cultural life; (b) to enjoy the benefits of scientific progress and its applications; (c) to benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author". For the full realization of this right States shall take initiatives aimed at "the conservation, the development and the diffusion of science and culture" (par. 2), but also "undertake to respect the freedom indispensable for scientific research and creative activity" (par. 3), and "recognize the benefits to be derived from the encouragement and development of international contacts and co-operation in the scientific and cultural fields." (par. 4).

<sup>71</sup> A.M. Hubert, *The Human Right to Science and Its Relationship to International Environmental Law*, 31 *European Journal of International Law*, 2, 625–656 (2020).

<sup>72</sup> C. Geiger, B.J. Jütte, *Conceptualizing a 'Right to Research' and Its Implications for Copyright Law: An International and European Perspective*, 77 *PIJIP/TLS Research Paper Series* (2022).

<sup>73</sup> General comment No. 25 (2020) on science and economic, social and cultural rights (article 15 (1) (b), (2), (3) and (4) of the International Covenant on Economic, Social and Cultural Rights) At 2.

<sup>74</sup> *Ibid* at 3.

necessary when the research affects human beings in order to protect their dignity, their integrity, and their consent when involved in the research'<sup>75</sup>.

The normative content of the right to science entails a duty of the State to protect the freedom to pursue scientific research. States have several obligations: a general obligations to remove all barriers that hinder the equal participation of citizen in scientific activities; States must 'adopt the measures necessary to eliminate conditions and combat attitudes that perpetuate inequality and discrimination in order to enable all individuals and groups to enjoy this right without discrimination, including on the grounds of religion, national origin, sex, sexual orientation and gender identity, race and ethnic identity, disability, poverty and any other relevant status'<sup>76</sup>.

States must pay attention to vulnerable groups, for example women, children, persons with disabilities, persons afflicted by poverty; indigenous peoples and local communities, who should participate in a global intercultural dialogue for scientific progress, as their inputs are precious, and science should not be used as an instrument of cultural imposition<sup>77</sup>". For example, States must ensure that all children, especially children living in poverty and/or children living with disability, 'have full access to the enjoyment of the right to participate in and to enjoy the benefits of scientific progress and its applications, as they are entitled to special care and assistance, especially through pedagogical tools and quality scientific education that allow the development of the child's personality, talents, and mental and physical abilities to their fullest potential'<sup>78</sup>.

In terms of specific obligations, the States have an obligation to protect, an obligation to respect, and an obligation to fulfill the right to science. The core obligations are: Eliminate laws, policies and practices that unjustifiably limit access by individuals or particular groups to facilities, services, goods and information related to science, scientific knowledge and its applications; Identify and eliminate any law, policy, practice, prejudice or stereotype that undermines women's and girls' participation in scientific and technological areas; Remove limitations to the

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<sup>75</sup> Ibid at 5.

<sup>76</sup> Ibid at 6.

<sup>77</sup> Ibid at 8.

<sup>78</sup> Ibid at 8.

freedom of scientific research that are incompatible with article 4 of the Covenant; Develop a participatory national framework law on this right that includes legal remedies in case of violations, and adopt and implement a participatory national strategy or action plan for the realization of this right that includes a strategy for the conservation, the development and the diffusion of science; Ensure that people have access to the basic education and skills necessary for the comprehension and application of scientific knowledge and that scientific education in both public and private schools respects the best available scientific knowledge; Ensure access to those applications of scientific progress that are critical to the enjoyment of the right to health and other economic, social and cultural rights; Ensure that in the allocation of public resources, priority is given to research in areas where there is the greatest need for scientific progress in health, food and other basic needs related to economic, social and cultural rights and the well-being of the population, especially with regard to vulnerable and marginalized groups; Adopt mechanisms aimed at aligning government policies and programmes with the best available, generally accepted scientific evidence; Ensure that health professionals are properly trained in using and applying modern technologies and medicines resulting from scientific progress; Promote accurate scientific information and refrain from disinformation, disparagement and deliberately misinforming the public in an effort to erode citizen understanding and respect for science and scientific research; Adopt mechanisms to protect people from the harmful consequences of false, misleading and pseudoscience-based practices, especially when other economic, social and cultural rights are at risk; Foster the development of international contacts and cooperation in the scientific field, without imposing restrictions on the movements of persons, goods and knowledge beyond those that are justifiable in accordance with article 4 of the Covenant<sup>79</sup>.

This is also where city science connects with citizen science theory, mentioned above. Citizen science advances greater availability and open sharing of research and findings, but also a collaborative way of producing science through everyday engagement and cooperation between citizens, professional scientists, policy makers<sup>80</sup>. Overall, as Effy Vayena and John

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<sup>79</sup> Ibid at 11.

<sup>80</sup> A. Berti Suman, *Challenges for Citizen Science and the EU Open Science agenda under the GDPR*, in *Eur Data Prot. L. Rev.* (2018).

Tasioulas<sup>81</sup> noted already when theorizing a human right to citizen science, the legal framework for the right to science is still heavily concerned with the right of individuals to access the benefits of science equally, rather than individuals being able to contribute to science, whether as professionals or as ordinary people.

To the extent that CSOs do promote the integration of researchers into city bureaucracy and that they promote science at the service of the everyday challenges of cities, they are expression of the State implementing the right to science. But in those cases where the CSOs adopts urban co-governance as a working method but also a goal, then it becomes an implementation of the more dormant dimension of citizen science.

To address some of these issues in connection with their climate neutrality strategy, the City of Reggio Emilia recently issued a City Regulation for democracy and urban climate justice. The Regulation defines among its rules the possibility of an institutionalized 'City Climate Neutral Contract' with knowledge, economic and social actors. How this can be used to steer the collaboration with regional institutions toward achieving common climate justice goals is an open question. The role of the CSO in this phase is to support the City in drafting the Regulation and in coordinating the inputs of all the different actors into the administrative process.<sup>82</sup> But this is a purely anecdotal observation. This is not inherently connected to the nature of the CSO, which may also well be a research-oriented team supporting the city in promoting its policies. The task of connecting city science with citizen science is a normative one and must be directed by the policies.

### 3. The Global and EU policy framework for Urban Sustainable Development

The theories developed above must be positioned within the broader international and EU policy framework. Co-governance

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<sup>81</sup> E. Vayena, J. Tasioulas, *"We the Scientists": a Human Right to Citizen Science*, 28 *Philos. Technol* 479 (2015).

<sup>82</sup> City of Reggio Emilia, *Regolamento sulla democrazia e la giustizia urbana e climatica* (2022), available at <https://www.comune.re.it/documenti-e-dati/atti-normativi/regolamenti/regolamento-sulla-democrazia-e-la-giustizia-urbana-e-climatica-a-reggio-emilia> (last visited Dec. 12, 2022) (text only available in Italian, more materials in English available at [www.euarenas.eu](http://www.euarenas.eu)).

and urban commons are indeed recognized by UN-Habitat, Human Rights frameworks especially in housing, EU framework vertical policies (such as the City science initiative), the Urban Agenda for the EU as well as the Cohesion Policy and in particular its urban programs (URBACT, UIA) on urban sustainable development. The diversity of programs, levels and policies involved are brought to investigate how this approach can be implemented. A co-governance approach is foreseen for cities to realize successful sustainable and inclusive urban development and supports the creation of multi stakeholder Urban Sustainable Development and Innovation Partnerships (PPCPs or P5s or PCPs). With this article's combined approach of co-governance and city science, a framework for sustainable urban development is envisioned on the basis of the involvement of city inhabitants as actors in both issues of collective interests and processes of co-governance. In this sense, the concept of USIP was elaborated through the lighthouse case study of the Co-City Turin Project in honor of its innovative legal design.

As brilliantly recalled by Mariana Mazzucato<sup>83</sup> in the so-called Missions Report, Nelson's work on *The Moon and the Ghetto*<sup>84</sup> raises the fundamental question of "why innovation has resulted in such difficult feats as landing a man on the moon, and yet continues to be so terribly disorganized and technologically unsavvy in dealing with the earthlier problems of poverty, illiteracy, and the emergence of ghettos and slums. He argued that while politics was partly the culprit, the real problem was that a purely scientific and technological solution could not solve such problems. There is a greater need to combine understandings of sociology, politics, economics and technology to solve these problems, as well as to make the conscious decision to point innovation towards them. This is exactly what a well-designed mission can achieve."

The Missions Report underlines how important it is to enable the following elements: bottom-up solutions and experimentation, participation across different actors, stronger civic engagement, new forms of partnerships for co-design and co-creation. It also recognizes that cities are important drivers of innovation and

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<sup>83</sup> M. Mazzucato, *Mission-Oriented Research & Innovation in the European Union. A problem-solving approach to fuel innovation-led growth*, European Commission Directorate-General for Research and Innovation, (2018).

<sup>84</sup> R.R. Nelson, *The Moon and the Ghetto Revisited*, in *Science and Public Policy*, 38(9), pp. 681–690, (2011).

advances the idea that public procurement, as much as social innovation, is a key lever for the implementation of a missions driven policy<sup>85</sup>.

The starting point of this article is to position this approach to urban innovations within the existing international and EU policy framework on urban sustainable development. The article argues that an approach towards PCPs or PPCs as a leverage for urban sustainable development is enshrined in global policies as well as in EU policies and agenda. Having elaborated above on the conception of Urban Commons and the importance of urban co-governance, this article aims at presenting an alternative approach to creating a city ecosystem in which sustainable development is in reach. Through innovative procurement processes and urban partnerships, UN and EU frameworks, initiatives such as City Science Initiative (CSI), Cities Initiative and the UIA initiative present important aspects of urban sustainable development.

### **3.1 The Agenda 2030 and the New Urban Agenda (NUA) of the United Nations**

The 2030 Agenda for Sustainable Development of the United Nations and a subset of the Sustainable Development Goals set by the Agenda itself, set a crucial framework of action for sustainable urban development, in particular through two of the seventeen goals<sup>86</sup>.

The first one is Goal 11 of making cities and human settlements inclusive, safe, resilient and sustainable, which includes target 11.3 “By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries”. The second one is Goal 17 of strengthening the means of implementation and revitalize the global partnership for sustainable development in particular target 17.16 “enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries,

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<sup>85</sup> M. Mazzucato, *Mission-Oriented Research & Innovation in the European Union*, cit. at 71.

<sup>86</sup> C.C. Anderson, D. Manfred, A. Warchold, J.P. Kropp, & P. Pradhan, *A systems model of SDG target influence on the 2030 Agenda for Sustainable Development*, 17:4 *Sustainability science* 1459 (2022).

in particular developing countries”, target 17.17 “Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships” and 17.19 “By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries”.

The NUA contributes to the implementation and localization of the 2030 Agenda for sustainable development. Multi-stakeholder partnerships clearly emerge as a way to implement the NUA objectives<sup>87</sup>. The NUA is committed to promoting “the systematic use of multi-stakeholder partnerships in urban development processes, as appropriate, establishing clear and transparent policies, financial and administrative frameworks and procedures, as well as planning guidelines for multi-stakeholder partnerships”<sup>88</sup>.

It also values the role of city inhabitants as urban actors. It refers to “citizen-centric” digital-governance tools to implement technological innovations and it enhances the role that urban renewal strategies based on urban resources, for instance cultural heritage, can play in strengthening citizenship and participation. Paragraph 149 of the NUA states: “We will support local government associations as promoters and providers of capacity development, recognizing and strengthening, as appropriate, both their involvement in national consultations on urban policies and development priorities and their cooperation with subnational and local governments, along with civil society, the private sector, professionals, academia and research institutions, and their existing networks, to deliver on capacity-development programs.”

### **3.2. The EU Framework. The Urban Agenda for the EU (Pact of Amsterdam) and the European Green Deal**

The Urban Agenda for the EU recognizes “the potential of civil society to co-create innovative solutions to urban challenges, which can contribute to public policy making at all levels of

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<sup>87</sup> N. Davidson, G. Tewari (eds.), *Law and the New Urban Agenda* (2020).

<sup>88</sup> SDG17 of *The New Urban Agenda* which was adopted at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito, Ecuador, on 20 October 2016. It was endorsed by the United Nations General Assembly at its sixty-eighth plenary meeting of the seventy-first session on 23 December 2016.

government and strengthen democracy in the EU” stating: “[i]n order to address the increasingly complex challenges in Urban Areas, it is important that Urban Authorities cooperate with local communities, civil society, businesses and knowledge institutions. Together they are the main drivers in shaping sustainable development with the aim of enhancing the environmental, economic, social and cultural progress of Urban Areas. EU, national, regional and local policies should set the necessary framework in which citizens, NGOs, businesses and Urban Authorities, with the contribution of knowledge institutions, can tackle their most pressing challenges.”<sup>89</sup>

The need for new governance models that push Urban Authorities to cooperate with local communities, civil society, businesses and knowledge institutions is indeed one of the key messages sent by the Pact of Amsterdam. Co-governance is seen as a fundamental tool to both foster democratic decision-making and social innovation. The Urban Agenda for the EU calls for a recognition of “the potential of civil society to co-create innovative solutions to urban challenges, which can contribute to public policy making at all levels of government and strengthen democracy in the EU” (Urban Agenda for the EU, Title X, point 52). Co-creation models moreover prompt social urban innovation: local communities, civil society, business, and knowledge institutions together with urban authorities “are the main drivers in shaping sustainable development with the aim of enhancing the environmental, economic, social and cultural progress of Urban Areas” (Urban Agenda for the EU, preamble, 4).

In addition to addressing governance and social innovation through the Urban Agenda, the EU has been working on supporting innovation in member-states by launching several initiatives in the field of social innovation. Under Horizon 2020, the European commission has funded “innovation actions” through Large Scale Demonstration Projects that address the cross-cutting Focus Area on ‘Smart and Sustainable Cities’: “These demo projects are widening the solution portfolio beyond technological innovation and include social innovation for new governance, finance, and business models that can help develop new and sustainable markets for innovative solutions”<sup>90</sup>. The creation of the

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<sup>89</sup> European Commission, *Urban Agenda for the EU – Pact of Amsterdam* (2016).

<sup>90</sup> European Commission, DG RTD, *EU Research and Innovation for and with Cities – Yearly Mapping Report – September 2017*, 10.

European Capital of Innovation Award also symbolizes the EU-wide effort to promote social innovation at the city level. Last year, Athens won the iCapital Award 2019 for its innovative policies on the social integration of migrant populations.

One of the avenues taken by the Urban Agenda for the EU is the implementation of a multi-stakeholder approach towards sustainable urban development, through the Urban Partnerships constituted within the Agenda. The Urban Agenda for the EU recognized this potential and has identified responsible and innovative public procurement as one of the twelve priority themes around which partnerships among various governmental levels and stakeholders were founded. We can identify references to a multi-stakeholder approach in many of the partnerships. For instance, the Partnership on Sustainable land use and nature-based solutions are focused on conservation of natural resources and sustainable use of land, containing the phenomena of urban sprawl. This is a key issue in terms of urban planning to which the NUA gives a peculiar operationalization by specifying that to fight urban sprawl, cities need to promote sustainable use of land as well as mixed social and economic use. (New Urban Agenda, 71). One of the actions identified by the TP Action Plan “Identifying and Managing Under-Used Land” (Sustainable Use of land and nature-based solution partnership, 2019) specifically provides that cities promote the creation of collaborative partnerships between public, private, social actors and other stakeholder that could be interested in the process. Above all, the “Partnership on Innovative and Responsible Public procurement” aims to push forward the development and implementation of an ambitious procurement strategy as an integrated and supportive management tool for governance. The Urban Agenda for the EU highlights the strategic importance of Public Procurement and Procurement of Innovation from a governance point of view, as they constitute management tools that cities can use to address social and environmental challenges.

Through the European Green deal, the European Commission calls for rethinking governance models to reach a more sustainable EU<sup>91</sup>. This policy roadmap aims at making the continent’s economy climate neutral by turning environmental

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<sup>91</sup> A. Bongardt, F. Torres, *The European green deal: More than an exit strategy to the pandemic crisis, a building block of a sustainable European economic model*, 60 *Journal of Common Market Studies* 170-185 (2022).

challenges into opportunities for innovation across all policy areas. A major policy initiative is the creation of the Just Transition Mechanism, making the transition just and inclusive for all. In the words of Ursula von der Leyen, “people are at the core of the European Green Deal [...]. And it will only work if it is just - and if it works for all”<sup>92</sup>. This mechanism will provide financial support to the regions most affected by the green transition towards carbon neutrality, amongst which cities. But it is about more than funding, as the Just Transition Platform will provide technical assistance to both Member States and investors to “make sure the affected communities, local authorities, social partners and non-governmental organizations are involved” (Financing the green transition, 2020). It also relies on Horizon Europe to leverage public and private investments for research and innovation. The European Commission thus emphasizes the need for co-governance and innovative territorial collaboration to address the challenges brought by climate change in all areas.

### 3.3. The City Science Initiative

A handful of European municipalities are experimenting with an organizational innovation: City Science Offices (CSOs). While CSOs are not a public-private-people partnership themselves, they are an organizational innovation that can create multi-actor partnerships, or they can be part of one. The phenomenon is still in its infancy, so it is too soon to tell, but it definitely is an innovation to keep under close observation. The Joint Research Center of the European Union created a “City Science Initiative” (CSI)<sup>93</sup>, along with the City Science Office (CSO) of the City of Amsterdam, as a coalition of CSOs in Europe. Among participant cities are Reggio Emilia, Athens, Paris. The City Science Initiative’s objective is to provide structured and long-term contact between cities, science officers working in the CSOs, European level actors and other stakeholders.

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<sup>92</sup> U. von der Leyen, *Financing the green transition: The European Green Deal Investment Plan and Just Transition Mechanism*, Statement 14 January 2020, available at [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_20\\_17](https://ec.europa.eu/commission/presscorner/detail/en/ip_20_17).

<sup>93</sup> European Commission, JRC Science Hub Communities, *City Science Initiative* (2020) available at <https://ec.europa.eu/jrc/communities/en/community/city-science-initiative>.

By putting forward the idea of a mutual exchange, cities are promoting an increased interconnectivity between their bureaucracy and research, sharing fundamentally the values of citizen science initiatives. Recognizing that urban policies on co-governance of resources, services and infrastructures form part of a larger framework concerning the role of cities in the international policy making arena, we must consider the international dimension of cities' activities and on which policy domains it is currently directed. City science might be directed towards the development of solutions to cope with climate change or pandemic prevention.

The CSOs are interdisciplinary teams of researchers or individual researchers, hired temporarily through a university-City agreement. The CSO takes the form of a physical or virtual setting where innovative civic entrepreneurs of the city, students, and urban social innovators, converge, share resources and knowledge, and join efforts with more structured and organized actors (public, private, social) to generate new solutions to tackle inclusive sustainable development targets that the City struggles to address alone.

The Municipality of Amsterdam was the first city in Europe to appoint a City Science Officer, prominent urban design scholar Caroline Nevejan. Its function is twofold: to develop structured collaborations between the City and knowledge institutions in the area; to inform urban policy making with emerging research trends that could potentially contribute to solve urban challenges<sup>94</sup>.

In Italy, the City of Reggio Emilia (Emilia Romagna) created a City Science Office with the social science university 'Luiss'. The Reggio Emilia CSO is composed by an interdisciplinary team of researchers (law; political science; management; architectural engineering) that could help draft policies on climate and technological justice<sup>95</sup>. The Reggio Emilia CSO is part of a broader effort of the city government to create an institutional, collaborative ecosystem composed by science actors, local communities, socio-economic actors, and city government. In the last few years, the city crafted legal and policy tools to leverage the potential role of

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<sup>94</sup> C. Nevejan, *City Science for Urban Challenges. Pilot assessment and future potential of the City Science Initiative 2019-2020*, <https://openresearch.amsterdam/nl/page/63027/city-science-for-urban-challenges> (last visited Sep 25, 2022).

<sup>95</sup> For full disclosure, the author of this article is involved in the Reggio Emilia CSO, in the capacity of coordinator of the research team and lead scholar.

residents, social, civic, and non-profit actors, mission-oriented local start-ups, and SMEs in experimenting with solutions for urban challenges and promoting inclusive economic development. Through the “Neighbourhood as a Commons” urban policy program, the City in 2015 approved a Regulation for Citizenship Agreement that introduces: an administrative office for social innovation; a new professional figure, the neighbourhood architect; a network of neighbourhood houses; a regulatory tool the citizens/neighbourhood agreement. In 2017, it initiated the "Co-Laboratory" initiative aimed at designing the governance and functions of the Reggio Emilia Open Lab as a space for co-creation, incubation, and acceleration of social economy solutions offering neighbourhoods-based community-owned services and infrastructure<sup>96</sup>. The Covid-19 pandemic confirmed the relevance of proximity services and citizen-co-owned local infrastructures as they increase city preparedness to crises.<sup>97</sup> The CSO provides support as a scientific advisor for the co-design of urban policies requiring a cross-cutting, interdisciplinary policy approach. Thus, it supports the social innovation department in facilitating and coordinating the capacity building of city officers. On the other hand, it manages specific projects through policy and business experimentalism labs to engage multiple public, private, social, scientific, and community actors in order to generate trailblazing and very experimental projects, policies, and solutions, that can benefit from an intergenerational knowledge exchange as confirmed by the possibility to have on field Ph.D. students actively involved in local challenges and problem-based research.

#### **4. Bridging Urban Sustainable Development, Urban Innovation and Urban Governance: A Cross-cutting analysis of UIA case studies.**

A key emerging feature related to the increasing relevance of cities at the EU level is their capacity to foster multi-stakeholder

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<sup>96</sup> A. Antonelli et al., *Promoting Urban Co-Governance: Towards Just and Democratic Ecological Transitions in Cities (IT)*, UN Habitat (2020), [https://urbanmaestro.org/wp-content/uploads/2021/03/urban-maestro\\_promoting-urban-co-governance-by-a-antonelli-e-de-nictolis-c-iaione.pdf](https://urbanmaestro.org/wp-content/uploads/2021/03/urban-maestro_promoting-urban-co-governance-by-a-antonelli-e-de-nictolis-c-iaione.pdf).

<sup>97</sup> <https://opendata.comune.re.it/dataset/questionario-reggio-emilia-come-va> (City of Reggio Emilia Institutional Website), (last visited Sep 25, 2022).

urban governance or “urban co-governance” and city science approaches to address complex urban challenges. This is reflected both in literature on urban co-governance and in the policy documents on urban sustainable development at the UN and EU level.

The previous part of the article positioned the urban co-governance and city science concepts, both initially introduced and discussed from a theoretical perspective, within a broader policy framework. It aimed to show whether and how practices of urban co-governance are valuable to the European and global urban goals, especially when implemented adopting urban commons institutional design principles.

This part advances the hypothesis that the sustainable urban development approach enshrined by such policies can be locally implemented through urban co-governance and city science. This entails the adoption of a multi-stakeholder approach stressing the role of public actors, private actors, non-governmental organizations (NGOs), knowledge institutions and city inhabitants that those policies foresee in some of their provisions or that they implement through urban programs such as the Urban Innovative Actions (UIA) initiative on which this article is focused.

This article argues that the implementation of this approach increases the access to urban resources and creates governance capacity of local communities towards them. By supporting this process, cities can structure opportunities to generate community-led urban sustainable development and innovation. Therefore, they can empower city inhabitants and improve the responsiveness of city governance. Among the tools that cities can use or craft to stimulate this process, USDIPs leverage among other things innovative ways to apply procurement rules, one of the greatest challenges for including a variety of urban actors in urban innovation. Codifying USDIPs would stimulate further the rule of law, accelerate investment in innovation and eventually increase the capacity of local bureaucracies to manage innovation procurement.

The UIA initiative is a perfect testbed for this approach. It is an initiative of the European Union within the Cohesion policy, supported by the Regional Development Fund. The UIA aims at providing urban areas throughout the EU with resources to apply innovative solutions to emerging urban challenges. UIA seeks to help cities answer complex challenges by facilitating innovation

within urban structures and authorities and going beyond the traditionally applied policies and services provided<sup>98</sup>.

UIA supports the testing of new and innovative solutions addressing issues related to sustainable urban development through pilot projects. UIA advocates primarily to provide urban authorities throughout Europe the space and resources necessary to create arenas of innovation and bring about new answers to the increasingly interconnected challenges cities are facing today.

UIA projects have brought about the production of key knowledge surrounding the need to identify new institutional frameworks allowing productive collaboration between urban actors and enabling social production of urban law and policies<sup>99</sup>. UIA emphasizes the importance of testing and implementing bold solutions as well as the idea that urban authorities cannot act alone: "(...) urban authorities need to involve all the key stakeholders that can bring expertise and knowledge on the specific policy issue to be addressed. These include agencies, organizations, private sector, research institutions, NGOs [...] Bold projects need them all"<sup>100</sup>.

Within this framework of cooperation between urban authorities, stakeholders and key urban actors, the Urban partnership report on Public Procurement acquires full significance. Researching innovative approaches to procurement represents a key element of our understanding of urban governance. Innovating public procurement by streamlining public money spending, making strategic use of the UIA funds, and setting up multi-actor's collaboration schemes are some of the challenges inherent to the UIA mission.

The following paragraph provides case studies from the UIA initiative. The UIA was, in fact, designed to stimulate urban innovation and put innovating public procurement as one of its operational challenges. We will therefore gather empirical evidence from a basket of UIA funded projects on how this vision can be achieved by cities through PPCPs or P5s or PCPs.

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<sup>98</sup> C. Iaione, *The Pacts of Collaboration as Public-People Partnerships. UIA Cities, Zoom-in I* (2018), available at <https://www.uia-initiative.eu/sites/default/files/2018-07/Turin%20-%2001-051%20Co-City%20-%20Christian%20Iaione%20-%20Zoom-in%201-%20July%202018.pdf>

<sup>99</sup> U. Mattei, A. Quarta, *Right to the City or Urban Commoning? Thoughts on the Generative Transformation of Property Law*, 1 Italian L.J. 303 (2015).

<sup>100</sup> Urban Innovative Actions Initiative, 2019.

#### **4.1 The UIA project Co-City Turin, a blueprint case for urban co-governance.**

The exemplary case of Turin's Co-City Project serves as a lighthouse case study for this article. Its experimentation with co-governance and commons are in fact an exemplary case of an urban innovation that resulted from experimentations. These experimentations, based on the collaboration of the City with city inhabitants, produced a body of knowledge that constitutes a form of city science on governance<sup>101</sup>.

This knowledge was then codified in a policy. Adopting an experimentation-based, scientific oriented approach, in fact, the City the City produced a new version of the Regulation for Governing Urban Commons. The new Regulation was adopted after the end of the Co-City project implementation phase and the reviews and integrations were inserted on the basis of the lessons' learnt through the experimentations on the factors that enable collective action and sustainability of the commons' co-governance.

The project, beginning in 2017, studied and implemented collaborative management of urban commons as a tool to counteract poverty and socio-spatial polarization. The UIA Co-City project has been carried out through a partnership with the Computer Science Department and the Law School of the University of Turin, the National Association of Municipalities (ANCI) and the Cascina Roccafranca Foundation as the leader of the Neighborhood Houses Network<sup>102</sup>.

The results are seen through the renewal of real estate and public spaces considered as urban commons and instruments of social inclusion. Through the Neighbourhood Houses Networks, city inhabitants found the information necessary to support the drafting of proposals for different pacts of collaboration as well as the opportunities to meet other city inhabitants interested in cooperating in efforts to take care or regenerate these same urban commons. These pacts of collaboration represent the key legal tools of the Co-City project, envisioned through the Regulation for the collaborative governance of the urban commons. Many of the pacts of collaboration implemented through the Turin project envisioned

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<sup>101</sup> See R.A. Albanese, E. Michelazzo, *Manuale di diritto dei beni comuni urbani* (2020).

<sup>102</sup> G. Ferrero, A. Zanasi, *Co-City Torino*, in *Urban Maestro* (2020), available at [https://urbanmaestro.org/wp-content/uploads/2020/09/urban-maestro\\_co-city-torino\\_g-ferrero-a-zanasi.pdf](https://urbanmaestro.org/wp-content/uploads/2020/09/urban-maestro_co-city-torino_g-ferrero-a-zanasi.pdf).

an innovative form of partnership notably seen through the Via Cumiana pact proposing a green Neighbourhood house resulting in the design of a covered square. The body of knowledge produced by the Turin Co-City project is instrumentalized throughout this article in as a comparative lighthouse case study approach for USDIPs experimentation. In comparing the failures and successes of this first exemplary case, to the twelve UIA case studies chosen for their respective innovative value, this article creates a reliable toolkit for establishing functioning and successful USDIPs.

Such policies and programs bring opportunities and challenges for urban policy and practice, in light of the implementation of their goals and targets. The city model designed by the global and European urban policies introduced above is close to the urban model designed by the scholarship on urban co-governance and the more recent one on the urban commons and the City as a Commons. This is a model of development found throughout the Turin Co-City project.

The initiatives presented above, as well as the EC's programmatic lines, show how multi-stakeholder collaboration is a key strategic component of the Urban Agenda for the EU. Public procurement is identified as a key factor to foster sustainability and resilience in cities, as well as for equitable urban growth. It must be carried out through innovative legal tools and sustainability mechanisms, as experimented by the city of Turin through the Co-City project<sup>103</sup>.

The European Commission further invests in innovation through a specific focus on the development of new commercial solutions, aimed at maximizing the potential of small companies and entrepreneurs to turn bright ideas into action. European Innovation Partnerships (EIPs) and the pilot project on the European Innovation Council (EIC) are two examples of this effort. Currently, there are five European Innovation Partnerships working in the health, agriculture, raw materials, water, as well as smart cities and communities' sectors. These EIPs "act across the whole research and innovation chain, bringing together all relevant actors at EU, national and regional levels in order to: (i) step up research and development efforts; (ii) coordinate investments in demonstration and pilots; (iii) anticipate and fast-track any necessary regulation and standards; and (iv) mobilize 'demand' in

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<sup>103</sup> G. Ferrero, A. Zanasi, *Co-City Torino*, cit. at 99.

particular through better coordinated public procurement to ensure that any breakthroughs are quickly brought to market”<sup>104</sup>.

Practice across thematic fields has therefore shown that Innovative partnerships constitute a key strategic tool to foster digital and social innovation in cities. The European Innovation Council pilot initiative also taps into the potential of these multi-level and cross-sectorial partnerships by investing in the skills of local entrepreneurial communities. The European Commission has confirmed its intention to set up this new body under the Horizon Europe proposal with the aim of “supporting top-class innovators, entrepreneurs, small companies and researchers with bright ideas and the ambition to scale-up internationally”<sup>105</sup>.

The main driver behind these initiatives is the need to fast-track the kind of innovation that can create new potential markets and contribute to solve current challenges. Patrick Child, the European Commission Deputy Director General for Research & Innovation, reiterated the programmatic line of the Commission for Horizon Europe during the “Science for the City” Roundtable, jointly organized by the City of Amsterdam Chief Science Officer, the DG Research & Innovation, and the Joint Research Centre. The Deputy Director General confirmed the EU Commission intention to move towards more multi-stakeholder partnership models in order to build bridges among disciplines and increase the level of engagement of local actors. The Commission is aiming to make EU R&I strategy more linked to local challenges, with a stronger place-based approach, triggering a shift from cities as objects of research to cities as systems of engagement.

Such an approach has been at the center of the discussion of the above-mentioned “Science for the City” roundtable, which has brought together innovation officers, Chief Science Officers (CSOs), and European cities network organizations from all over Europe in order to discuss the existing structures of interaction between urban policy making and scientific research. The informal roundtable allowed for the sharing of solutions as well as common challenges among cities like Amsterdam, Berlin, Copenhagen, Madrid, Paris,

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<sup>104</sup> ERA-LEARN, *Other ERA relevant Partnership Initiatives. European Innovation Partnerships (EIPs)*, available at <https://www.era-learn.eu/partnerships-in-a-nutshell/type-of-networks/partnerships-under-horizon-2020/other-era-relevant-partnership-initiatives> (last accessed 22 December 2022).

<sup>105</sup> European Commission, *European Innovation Council: empowering European innovators: business acceleration services: corporate days 2017-18* (2019).

Groningen, Reggio Emilia, Stockholm, Hamburg, Cork (and more). This initiative underlined the need for the creation of new regulatory and governance frameworks, capable of enabling cooperation between knowledge institutions and city administrations in order to foster social innovation. It also highlighted the need for innovative institutions able to bring together public, private, knowledge and civil society actors in order to bring collaborative design and implement innovative solutions to tackle the variety of local challenges<sup>106</sup>.

Many other organizations at the European level have contributed to the debate on social innovation<sup>107</sup>. The work of EUROCITIES is especially interesting for the purpose of this study as it confirms the necessity of a wide debate within the European community of urban authorities and city experts on the state of local innovation systems in cities and on the role of city administrations in the design and implementation of new institutional models for the development of social innovation. Both the EUROCITIES Spring Economic Development Forum, taking place in Florence from the 27<sup>th</sup> to the 29<sup>th</sup> of March, and the EUROCITIES Social Innovation Lab, taking place in Glasgow on the 26<sup>th</sup> and 27<sup>th</sup> of March, indeed tackled these questions. The EDF forum in Florence brought together urban authorities and urban experts to “discuss how new business models, new methods of participation and co-creation of innovations, stronger and more agile institutions, innovation ecosystem local champions, and better cities involvement for better regulations, can all contribute to the development of a stronger European Innovation ecosystem”. The Pan-European Matchathon hosted in May 2020 enabled the brokerage of a total of 2335 partnerships by the European Commission. This example of innovation brokerage illustrates vividly the role we have envisioned for brokers in public procurement. Both the previous EUv Virus European-wide hackathon and the following Matchathon act as examples of exactly how the Commission, acting as a broker, can ‘fast track’ the creation and development of these citizen-led solutions to all kinds of challenges. These new partnerships, henceforth created to tackle

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<sup>106</sup> See the City Science Initiative, available at <https://openresearch.amsterdam/nl/page/43873/european-city-science-initiative-csi-eu>

<sup>107</sup> See Eurocities, People’s power to improve cities, 2021, available at <https://eurocities.eu/latest/peoples-power-to-improve-cities/>

the challenges of the global health crisis, will be scaled up over the coming months in an effort to accelerate and improve the European wide recovery. Alongside the EDF Forum, the theme of the Social Innovation Lab in Glasgow will be 'Making Inclusive Cities through Social Innovation'. It represents a one-of-a-kind initiative that will gather “100 urban policy-makers, city practitioners and 'change makers' (social entrepreneurs, start-ups with social impact, foundations) from over 50 cities in Europe to share social innovations, learn to transfer their lessons and co-create potential solutions to implement in cities”.

The Charter of Fundamental Rights of the European Union states in Article 34 (3) that in order to combat social exclusion and poverty, the Union recognizes and respects the right to social and housing assistance so as to ensure a decent existence for all those who lack sufficient resources, in accordance with the rules laid down by Union law and national laws and practices<sup>108</sup>.

Along the same line is the European Pillar of Social Rights proclaimed on 17 November 2017 which recognizes through principle 8 the importance of social dialogue and collective action and the right to access essential services.

President Juncker and Commissioner Thyssen jointly declared on November 13th, 2018: “The Commission has also launched a number of legislative proposals to implement the Pillar. But several of our proposals are still under negotiation between the European Parliament and the Member States. This concerns in particular the European Labour Authority, our initiative on work-life balance for parents and carers, the new Directive on transparent and predictable working conditions, and the reform of the rules on social security coordination. It also includes our proposal for the next European budget to help the Member States invest in people. The European Social Fund Plus alone is to be equipped with more than €100 billion over the period 2021 to 2027. To deliver on our joint promise, we must make swift progress on all these proposals before the European elections in May 2019. Together with the European Parliament, Member States, social partners and civil society, we are committed to safeguard and promote social rights

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<sup>108</sup> European Commission, *European Pillar of Social Rights: Statement by President Juncker, Vice-President Dombrovskis and Commissioner Thyssen one year following its proclamation*, available at <https://ec.europa.eu/social/main.jsp?catId=89&langId=en&newsId=9240&furtherNews=yes>.

that better support fair and well-functioning labour markets and welfare systems now and in the future.”<sup>109</sup>

However, we know that 800 million jobs worldwide will be lost to automation<sup>110</sup> and that 1.5 trillion euro is the estimated need for social infrastructure from 2018 through 2030<sup>111</sup>.

The EU Commission has implemented the Social Investment Package aimed at scaling up projects and policies on social innovation. In particular, within the EU framework, the objective is to strengthen levels of autonomy and possibility of action of city inhabitants in society and support them in their work and social lives.

The European Commission made also a clear reference to social innovation within the EaSI Program (Employment and Social Innovation), outlining a framework of priority interventions in the Regulation and relating it to two key challenges.

This article aims at developing two main strands of ideas when it comes to analyzing the state of the art in the field of innovative procurement practices.

On the one hand, the research will focus on understanding the functioning and the use that has been done of the institutional mechanism of PPPs and PCPs. On the other hand, it seeks to identify what are the institutional infrastructures that can be developed in order to sustain these partnerships. In other words, we will delve into the literature and the case studies on PPPs, PPCPs or P5s, PCPs, while analyzing the role of different institutional instruments that can make these partnerships work: innovation brokers, urban laboratories, living labs, CTOs, Competence centers, Chief Science Officers. The ultimate goal of this research is to map existing practices of urban co-governance of innovation when it comes to public procurement, using a basket of cases from UIA funded projects, and understand what the main challenges are. In order to do this, this article will attempt to respond to the three following questions: We will analyze the challenges surrounding the formation of innovative procurement practices and the connections that exist among the different

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<sup>109</sup> President Juncker and Commissioner Thyssen jointly declared on November 13th, 2018.

<sup>110</sup> McKinsey Global Institute, *Jobs Lost, Jobs Gained: Workforce Transitions in a Time of Automation* (2017).

<sup>111</sup> A. Hemerijck, M. Mazzucato, E. Reviglio, *Social Investment and Infrastructure*, in F. Saraceno, F. Cerniglia (eds.), *A European Public Investment Outlook* (2020).

practices mentioned (PPCPs or P5s or PCPs, innovation brokers, urban labs, CSOs).

As mentioned in the introductory presentation, local administrations often encounter numerous challenges when it comes to designing and implementing innovative procurement practices. During the ‘Science for the City’ roundtable, city officials and representatives from cities organizations have highlighted the regulatory and governance barriers that hinder the development of a structured cooperation between the public sector, knowledge institutions, and civil society organizations.

Inherent to this reflection is the necessity to transform the role of public administrations, city inhabitants, civil society organizations and private actors.

Before we delve into the description of the operational challenges, it is important to ground the approach empirically and bring robust evidence to how the approach is described in this article. It is rooted in the most innovative projects financed or considered by the main EU programs aimed at dealing with urban governance and policy innovations.

#### **4.2 A selection and analysis of case studies of approved UIA projects (1st, 2nd and 3rd call for proposals)**

The basket of case studies analyzed for the article is composed of 12 cases selected from a dataset of the 56 projects admitted to funding in the first 3 UIA calls for proposal. The selection was based on the policy inputs as well as on an evaluation of the key tools and dimensions of the “Co-City”<sup>112</sup> developed on above.

The basket of case studies was selected on the basis of the following dimensions:

- Experimentation of a form of shared management or collaborative governance of an urban asset or infrastructure (both tangible or intangible)
- Involvement of the urban community/communities aimed at the creation of PPCPs or P5s or PCPs
- Sustainable and inclusive Economic development purposes

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<sup>112</sup> C. Iaione, *Città, scienza e innovazione. Il diritto alla scienza per la città come pietra angolare di una nuova governance urbana orientata allo sviluppo sostenibile e alla responsabilità intergenerazionale*, in *Munus*, pp. 491 – 551.

- Co-design/collaborative process implemented
- Use of digital platform(s)
- Role for a “Neighborhood House” to provide learning and institutional tools to local communities and to act as a bridge between urban authorities and local communities

We collected through web mining the information available on the 56 projects using the official UIA website. The information for the case studies selection were collected using: a) the project general description; b) the project library’s contents, namely the project journals, Zoom ins, media and project news.

The projects admitted to funding in the fourth call for proposals were excluded from the selection since at the time of writing their implementation phase was in a too early stage<sup>113</sup> to allow the analysis to measure the project’s outputs and potential outcomes. Once the information was collected, the basket of case studies was filtered using the criteria that at least one source of information was available in the project library.

Building on the understanding of the city as a commons, the cross-cutting analysis of UIA projects aims at collecting a series of lessons and best practices for the future of our co-city project and Urban and Science Innovative Partnerships.

After the first analysis of the dataset, a basket of 12 projects was selected:

1. Barcelona, “B-MINCOME - Combining guaranteed minimum income and active social policies in deprived urban areas”
2. Birmingham, "USE-IT! - Unlocking Social and Economic Innovation Together"
3. Gothenburg, “FED - Fossil Free Energy District”
4. Lille, "TAST'in FIVES - Transforming Areas with Social Talents: Feed, Include, Value, Educate, Share"
5. Nantes, “5Bridges - Creating bridges between homeless and local communities”
6. Vienna, "CORE - An incubator for innovative integration projects in Vienna"
7. Athens, “Curing the limbo”

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<sup>113</sup> X. Wu, M. Ramesh, M. Howlett & S. Fritzen, *The Public Policy Primer. Managing the policy process* (2010).

8. Maribor, "URBAN SOIL 4 FOOD - Establishment of Innovative Urban Soil Based Economy Circles to Increase Local Food Self-sufficiency and Minimize Environmental Footprint"
9. Brussels, "CALICO - Care and Living in Community"
10. Budapest, "E-co-Housing"
11. Lyon, "Home Silk Road - Housing toward empowerment"
12. Matarò, "Yes We Rent"

The basket could most certainly benefit from the integration of more cases. We suggest, as a future research agenda, to integrate the analysis with cases from the fourth call of proposals as well as cases from the previous calls for proposals that are not included in this analysis because at the time of data collection they had not yet produced measurable outputs for the scope of analysis of the article. Examples are: two projects in the city of Ghent "ICCARus (Gent knapt op) - Improving housing Conditions for CAptive Residents in Ghent" and TMaaS - Traffic Management as a Service; a project in the city of Pozzuoli, "MAC - Monteruscello Agro City"; a project in the City of Bologna, "S.A.L.U.S. 'W' SPACE - Sustainable Accessible Livable Usable Social Space for Intercultural Wellbeing, Welfare and Welcoming".

The following phase of data collection and analysis consisted in the in-depth analysis of projects' outputs available in the project's library as well as for additional data gathered through semi-structured interviews conducted with one or two key interlocutors of each project: the project coordinator appointed by the City and/or the project expert appointed by UIA. The data collected was coded against an analytical grid crafted by the author.

The analytical grid builds on the body of knowledge produced by the UIA expert's academic activity within the urban commons and PCPs and PPCPs scholarship as well as on the work carried out as an UIA expert for the Co-City project of the City of Turin. The UIA Co-City Turin project carried out an intense knowledge production effort to measure such innovation and their potential impacts in terms of urban sustainable and inclusive development at the neighborhood level.

The empirical analysis was based on the measurement of five design principles of the governance of urban commons, elaborated

through the Co-Cities theory<sup>114</sup>. In order to identify potential fertile grounds for a city in transition from the governance of various urban commons towards the governance of the city as a commons or Co-city, it is useful to offer a gradient which captures the most relevant characteristics of that transition. These principles are: urban co-governance; enabling state; social and economic urban pooling; urban experimentalism; tech justice. For the article, the analytical grid was inspired by the Co-City framework but focused primarily on the first dimension, urban co-governance. The author crafted specific indicators aimed at measuring the creation of a PPCPs as well as detecting the legal tools adopted and the type of governance implemented.

The grid is composed of the following variables:

Actors	Partnerships	Initiator (policy goal)	Management /Governance mode	Use/Impact	Sustainability and responsibility	Legal tools adopted	Role of Community
Typology of actors involved (public, private, scientific, NGOs, communities, others)	Presence of a public-community or public-private-community partnership	Purely economic or public policy (sustainable development)	Participatory /Deliberative /Collaborative vs. Traditional/Exclusive	External Mutualism vs. Exclusive rights of use	Risks on one actor (mainly the public) vs. risks is shared	PPI solutions / PPPs /	Community empowered vs. Community as a beneficiary

Finally, two further sets of case studies were considered but only through desk analysis, one rooted in projects of the Horizon 2020 program and another rooted in the URBACT program to see if they show similar variables and use of similar policy tools.

**4.2.1. Barcelona (Spain), "B-MINCOME - Combining guaranteed minimum income and active social policies in deprived urban areas"**

The B-MINCOME project aims at empowering vulnerable families through the creation of a guaranteed minimum revenue, hence relieving economic pressure.

<sup>114</sup> S. Foster, C. Iaione, *Co-Cities*, cit. at 4; Id., *Ostrom in the City*, cit. at 4.

The point of departure of the B-MINCOME project is a municipal desire to redesign the provision of social services to fight off urban poverty. In particular, the initiative aims at building a participatory and community-oriented system empowering vulnerable populations, reducing their dependence on subsidies in the long term and making them the actors of the service they receive through the creation of a guaranteed minimum income (GMI).

To this end, B-MINCOME is conducted by a partnership gathering municipal authorities, a think-tank, a research center and multiple universities. The project also includes key stakeholders such as social services and the Chamber of Commerce. The large engagement of knowledge institutions has enabled the development of a research-oriented process. Indeed, the experimental approach is a major strength of B-MINCOME. The guaranteed minimum income created is distributed on a trial basis with randomized control groups to test various types of revenues and their impact on the reduction of urban poverty. This experimentalism will enable the development of more efficient welfare services in the long run.

To test its relevance within the larger framework of social services provision, the GMI in Barcelona is accompanied by a set of other services made available to the selected families to provide them with a greater autonomy and responsibility, as a lever to overcome poverty. The project has thus developed an innovative ecosystem enhancing private, public and community initiatives. One of them is the creation of a social currency, which should covert part of the GMI. Such a tool stimulates local exchanges and services, creating a form of pooling economies. Overall, the innovative services provided by social workers enabled to unlock the full potential and opportunities brought by the GMI that relieves economic insecurity and pressure, thus giving greater freedom of choice to the families that benefited from it.

Despite not using the EU public procurement or legal framework, the B-MINCOME project brings important learning insights with regards to the governance and working structure of social services. Innovative and community-oriented welfare requires a large flexibility in social workers' activities to bring participative and group-work that would better respond to people's needs.

#### **4.2.2. Birmingham (United Kingdom), “USE-IT! - Unlocking Social and Economic Innovation Together”**

UIA Category: urban poverty

The USE-IT! Project addresses integration of migrants through the development of social enterprises. It aims to identify and train overseas migrants with relevant medical and non-medical qualifications that could be matched with jobs available in the NHS hospital, a major provider of health resources and employment in the area of Greater Icknield.

The projects' achievements are impressive: 208 individuals with relevant medical and non-medical qualifications are on the USE-IT! clients database; 143 have been invited to the free training for the language exam IELTS (International English Language Testing System); 15 persons have started work experience placements at the Hospital; 32 are in paid work in Health Care as an interim employment opportunity.

There was strong cooperation between the local government, the health service, universities and neighborhoods to gather qualitative and quantitative data as well as to create jobs and social enterprises.

The cornerstone of the project was the partnership constituted between the NHS Trust, the social care providers and the hospital and community organizations. This partnership was key to build effective employment paths for migrants in the new NHS hospital built through the project.

The USE-IT! project supported the development of socio-economic activities in the community through social enterprises and cooperatives, boosting “community services” through city inhabitants and socially innovative producers; this is linked notably to a hospital and housing developments in the project's area. The main activities have been the awareness and capacity building within the communities in the area of Greater Icknield to activate inhabitants to become social and community entrepreneurs and to solve local social and economic issues by starting social enterprises, cooperatives and community businesses. The project developed a Social Enterprise network, an Online Networking Platform (SOHO) and a social enterprise consortia. The platform hosting consortium is a key tool to support social partnerships because it allows existing social and community businesses to connect and cooperate for new opportunities together in different market areas (health and social care, creative industry, food, construction and tourism).

### **4.2.3. Gothenburg (Sweden), “FED – Fossil Free Energy Districts”**

UIA category: energy transition

The FED project addresses the district level energy system to reduce carbon consumption. The municipality of Gothenburg aims at reducing energy consumption in the city. It also has as its goal to develop the innovative FED project establishing a local marketplace for electricity, heating and cooling that would work towards an energy transition.

The project aimed at experimenting and developing a new energy system at the district level based on the use of information and communication technologies for electricity, heating and cooling. The technology enables a smoothing of energy consumption, reducing peak loads, and enhancing the use of fossil-free energy. It has a strong experimental aspect with the municipality foreseeing a scaling-up in the future, which could make Gothenburg a carbon free city.

The FED project is based on a public-private partnership involving the local government, numerous public and private companies working mostly in the energy sector, and two research centers. In the project, the community is an end beneficiary who is not directly involved during the process, given that FED is based on business-to-business transactions and marketplace.

The experimentation of the project took place mainly on the campus turned into a “demonstrator area”. This was so due to the legal context: the exemption from the law of concession of electricity distribution made it possible to test and validate the district level energy market. It also aimed at balancing buildings usage profiles, managing the volatility of energy markets through an optimization system. On the business side of things, the project enabled the creation of sustainable markets fostering exchange and cooperation between stakeholders to create value.

The strength of the FED project is its sustainability. The district level energy market entails new revenues and flows for key stakeholders: utility companies, third party suppliers, homeowners and users, meaning the community. This cost-effective energy improvement strategy enables the implementation of green solutions while avoiding the increase of rental cost for the most vulnerable of the city’s inhabitants.

#### **4.2.4. Lille (France), "TAST'in FIVES - Transforming Areas with Social Talents: Feed, Include, Value, Educate, Share"**

UIA category: urban poverty

Lille project "TAST'in FIVES - Transforming Areas with Social Talents: Feed, Include, Value, Educate, Share" aims at building a shared space to provide social meals. The project will build a collective governance for the space. The main goal of the project is to activate urban development through social entrepreneurship promotion using the topic of food as a commons as an entry point for the activation of collective action.

The collective governance mechanisms adopted are particularly relevant to our work. The use of a shared community kitchen illustrates for this article the concept of USDIPs and serves to demonstrate an important example of district-based inclusive economic development. The TAST'in FIVES project is a lighthouse case study within this article, illustrating the potential of a co-governance mechanism based on a PCP in instigating district-based inclusive economic development.

The project aims at counteracting poverty in a low-income neighborhood of the city of Lille, the Fives district (50% of the population lives under the nationally established threshold of poverty). It will do so through the creation of a collective kitchen in the Fives-Cail-Babcock brownfield. The kitchen will be a space to provide training opportunities, job opportunities and socialization opportunities around shared meals to counteract loneliness.

The main innovation of the collective kitchen is the co-governance mechanism based on a PCP aimed at empowering the neighborhood inhabitants and relying upon them to be drivers of the district-based inclusive economic development. At the same time, the Lille case the challenges faced when developing co-governance, in particular the challenge of reaching out to and involving actors that are not part of the project's initial partnership.

The kitchen is not operative yet. A temporary site has been set up to carry out a co-design and experimentation phase while the kitchen facility was under construction. The project invested serious efforts in an experimental strategy of involvement of stakeholders, particularly of neighborhood inhabitants, through the co-design process of the community kitchen, the future incubator, and the organization of food-related workshops in the temporary kitchen. The co-design process was implemented through a series of participatory workshops and co-creation workshops on field (in

the temporary site) that involved local inhabitants, public authorities, NGO, and entrepreneurs with a food-related business idea. The goal of the workshops was to collect input on the design of the future collective kitchen alongside engaging the actors that could be involved at a later stage of the process when both spaces will be set up and running their activities. The food-related workshops also proved key to engaging with neighborhood inhabitants, NGOs, and a number of non-UIA partners booking the kitchen for various purposes. All of this shows that ownership of the project is building up at neighborhood level. The project strongly relies upon local NGOs and public services as being anchors of the involvement of beneficiaries in the co-production process of the facility.

There remain significant challenges, however, when it comes to the project's ability to reach out to socially excluded populations as well as inhabitants who have yet to enroll in NGOs or public social services.

The City of Lille has also decided to launch a call for proposals for the organization of social events on the temporary site. A total of 30.000 euros will be allocated to food-related social business projects, with a minimum of 500 euros and a maximum of 3.000 euros per project. Beneficiaries will use the community kitchen for free and receive support from the City of Lille for their dissemination. By targeting NGOs and groups of inhabitants operating in the Fives district, this call for proposals aims at boosting the involvement of the latter in activities on site to enrich the partnership with social actors and to improve the outreach of the project.

The partners are still in the phase of designing the governance model which will be based on the output of the co-design workshops. The collective kitchen is not yet operative.

The public procurement did not present major challenges in the first phase of the project's implementation. It will certainly present some challenges however once the kitchen will be fully operative. The Lille project brought to light a key feature of public procurement in collaborative governance partnerships: the tendering process cannot formally make space for the whole partnership. Therefore, a potentially important challenge facing projects like these is that of embedding its vision and complex design in each and every one of the tendering processes issued by the partners.

#### **4.2.5. Nantes (France), “5Bridges - Creating bridges between homeless and local communities”**

UIA category: urban poverty

The 5Bridges project experiments with an urban design-based strategy to counteract homelessness and promote social integration. The project is based on the premise that the pathways towards homelessness (inadequate housing, unemployment, social segregation, poor health) can be counteracted with a policy strategy based on high quality housing. It adopts a comprehensive approach towards homelessness as a complex and multi-variable situation. The 5Bridges project will create a high-quality housing unit (it will be able to host 40 people) within an urban regeneration project in a central area of the city of Nantes. This is far from the conventional approach towards public and social housing wherein complexes are often built in poorly served areas in the cities' outskirts far from many of the workplace and without social or economic diversity. This more traditional approach may result in a worsening of the social segregation of homeless people. Rather, Nantes' project embraces the assumption that social segregation is often the result of a negative perception of homeless people living in shelters within isolated areas. Such negative perceptions are due to the lack of interaction with the rest of the urban population, and directly tied to the isolation of the urban areas in which shelters are positioned.

5bridges foresees the creation of a building operating as a one-stop shop interconnecting different social groups, providing work opportunities, as well as social and solidarity services (e.g. housing, health care, and other tailored social services) and counting on an active involvement and empowerment of potential users. The mechanism of collective governance of the one-stop shop is not in place yet. In this first phase of project implementation, the activities focused on the process of co-design of the complex itself, involving inhabitants of the area, homeless people, welfare and social service professionals.

The project embraced co-design as a working methodology to design the functioning of the solidarity shop. However, the relationship between the homeless as potential clients involved in the co-design phase and the neighborhood inhabitants proved so difficult that the experimentation with the urban farm was brought to suspension. Moreover, the number of neighborhood inhabitants involved remains too weak. In a process of co-design that strongly

empowers the homeless people, the professional expertise of social workers might continue to be unnecessarily undervalued. That's why the project managers decided to take more time to organize the participation of homeless people and bring about their empowerment.

Alongside a hostel and a social housing complex, 5bridges will also host an urban farm and social kitchen, social economic activities (in particular, a solidarity shop) and a set of health care services. This is called a "One stop shop" for homelessness.

Public procurement is a very important factor in this project. The construction work as well as core tasks of social and community activities are tendered out in this way. This element is key to the proposals made in the next part of this article in efforts to move towards collaborative governance in such Urban Sustainable Development and Innovation Partnerships.

One aspect in which there is scope for improvement is in the lack of involvement of the stakeholders active in the fight against homelessness in the tendering procedures of the 5bridges project. The impact of the project on the way homelessness is addressed in the city would be greater if the stakeholders usually involved in these policies participated in the project. They could learn from it, and finally implement changes and improvement thanks to these processes. Their participation should therefore be more thoroughly encouraged.

In projects experimenting with co-governance partnerships for urban innovation, a key challenge is identifying a social business model. Securing a business model that is financially and socially sustainable for activities supported by a multi-stakeholder partnership and run by the urban community is crucial. In the 5bridges project it is clear that public procurement has helped to inject creativity and innovation even within the core tasks. An example is the tendering out of the development and management of the urban farm, a key feature of the one-stop shop for homelessness. The tender has been awarded to a provider that turned the high expectations of the design into a financially viable proposal.

#### **4.2.6. Vienna CoRE (Austria) - "CoRE – An incubator for innovative integration projects in Vienna"**

The Vienna CoRE project promotes the creation of a physical and digital platform to enable cross-sectorial cooperation and peer mentoring for integration of asylum seekers.

CoRE' becomes a lighthouse case study throughout this article in its use of digital tools for co-governance purposes. It is a key example of tech-based citizen-led innovation. The utilization of a digital platform co-created by cooperation between refugees and professionals brings a crucial element of analysis to the article.

CoRE has been conceptualized as an empowerment fabric jointly planned, utilized and operated by public institutions, NGOs, civil society initiatives and refugees. It is aimed at developing a physical and digital platform focused on finding innovative solutions to facilitating the integration of highly fragile refugees such as unaccompanied minors. CoRE initiates a smart transformation of the integration system by considering refugees as equal partners with whom to work in collaboration with rather than solely as passive beneficiaries.

The CoRE building offers both community spaces and services, pooling resources from a broad range of stakeholders to promote the proper integration of asylum seekers. Services offered include mentoring and coaching to empower refugees' entrepreneurship capacity, as well as the facilitation towards access to affordable housing solutions and social and cultural integration. CoRE has also launched a call for ideas through which related projects can apply for funding, including funding for Housing First and Health Promotion projects. This was CoRE's greatest success in their implementation of various integration projects based on social cooperation between NGOs, civil society initiatives and refugees. CoRE is thus perceived as the incubator of innovative integration projects. The digital platform was co-created and realized by refugees and professionals in cooperation. It provides information, in native languages and in an accessible format, on the integration opportunities and basic services available in the city and at the CoRE facility. The last aspect of the project is to function as a think-tank. This entails that CoRE will continuously monitor and evaluate the innovative solutions and policies tested. Such analysis will enable the adoption and development of new practices.

Injecting innovation into the system of integration of refugees is a cornerstone of the CoRE project and public procurement is of a crucial relevance. The project is characterized

by a high degree of flexibility, resulting from both systemic factors and from the characteristics of the innovation involved.

Public procurement was identified since the beginning as the main challenge of the project's implementation as the features of its innovation require a high degree of flexibility, especially in a policy domain that is so innately subject to change. The project might therefore need to adapt to the changing legislative framework. A big challenge for CoRE is adapting to the changing demands of the target beneficiaries resulting from a more restrictive approach in asylum law at the national level, which required adjustment of the projects' activities.

The project as a whole is highly experimental, and evolutions are difficult to predict. Several of the tasks of this project, starting from the digital platform development to the social capital building and training activities carried out in the CoRE hub are inherently collaborative, especially because they are self-organized by NGOs and refugees involved.

#### **4.2.7. Athens (Greece), "Curing the Limbo - From apathy to active citizenship: Empowering refugees and migrants in limbo state to ignite housing affordability"**

The project "Curing the limbo" (City of Athens, Greece) develops innovative affordable housing solutions and collaborative arrangements to improve the employability of refugees.

Curing the limbo addresses the issue of refugee integration through affordable housing, support to find employment and involvement in active citizenship activities. This is achieved by supporting the refugees and local unemployed searching for affordable housing and employment by leveraging on the promotion of social integration through concrete involvement of existing community-led neighborhood improvement activities.

By utilizing a learning and institutional tool, the project 'Curing the Limbo' has demonstrated how such elements can bring about a mutually beneficial result to two parties that previously were unknown to one another. Athens' project here represents another lighthouse case study for the use of learning and institutional tools enabling the Urban Sustainable Development and Innovation Partnerships described in this article. In associating refugees with property owners, the project has created a form of brokerage of need and availability. The pooling together of the available resources has rendered fruitful exchanges.

The project creates a circular “housing exchange” system. Refugees receive affordable living spaces from the city’s available housing stock or from privately owned stocks, through the intermediary of the City while they are involved in citizen-led activities addressing the improvement of quality of life in cities’ neighborhoods. Participants receive training supervised by the University of Athens, (including language learning, psychosocial support, “street law” knowledge, social and soft skills).

The exchange is developed around the incentives given both to tax-paying property owners of currently empty spaces as well as to the beneficiaries through their integrated inclusion in active citizenship activities organized by inhabitants and/or NGOs. The idea behind it is that through the involvement of refugees in the activities of the civil society the integration process will be facilitated and the opportunities to find affordable housing options will be increased. As a potential result of relations and connections created through the activities the emergence of accommodation options that are not yet in the radar of the public housing stock. The housing exchange mechanism is based on the city acting as a platform between multiple actors pooling their resources to facilitate the integration of refugees in the social and economic life of the city. The cornerstones of the housing exchange models are the connections between refugees and civil society initiatives for the city neighborhoods; the intermediation provided by the City between large property owners and individual property owners and the refugees in search for an affordable housing solution; the training offered to refugees of language and ICT courses.

The City has a proactive role coordinating the pooling of resources of the multi-stakeholder partnership.

The City uses Synathina - a platform developed by the City to collect and connect the civil society initiatives for urban regeneration, cultural activities, cooperative placemaking, community organizing taking place in Athens in order to identify all activities in which the refugees beneficiaries of the project can be put in contact with and provide capacity building workshops for cultural mediators acting as ambassadors bridging together refugees and local communities.

The Synathina platform is also used to launch the call for property owners willing to cooperate with the Curing the limbo project. To map existing and potential housing opportunities the City created a list of abandoned properties in the city and at the

same time, is developing partnerships with the big property owners in the City. So far, the most advanced relationships are with the University of Athens, an institution with over 700 apartments and buildings – that signed a Memorandum of Understanding with the City and the Ministry of Labor, one of the largest property owners of the whole Country. A series of meetings were organized with individual property owners through the National landowner association. The beneficiaries have access to a package composed of lower rent in exchange for 2.200 euros renovation budget (for the property owners) and a 6 months subsidy for the refugees (the preliminary findings from the first round of meetings with property owners show that this package might not be attractive enough and there property owners sometimes have doubts that six months is enough time for refugees to find a job allowing them to pay a rent). To facilitate the process, the project constituted a Housing facilitation unit that will design tailored housing plans for refugees. A key role is played by Catholic Relief Services - United States Conference of Catholic Bishops Greek Branch - that has issued a report with a review of innovative housing mechanisms: exchange models, credit-based systems, incentive schemes.

In the case of Athens, public procurement did not play an enabling role. The project did not adopt legal tools offered by the EU public procurement for innovation framework. The public procurement procedures are indeed very complex in Greece and this resulted in additional burden and delays for the project in its initial phase.

#### **4.2.8 Maribor (Slovenia), "URBAN SOIL 4 FOOD - Establishment of Innovative Urban Soil Based Economy Circles to Increase Local Food Self-sufficiency and Minimize Environmental Footprint."**

Issue addressed and policy domain: transformation of municipal waste in urban soil community gardens to reduce carbon footprint

The municipality of Maribor launched Urban Soil 4 Food to reuse the city's waste in the circular economy and minimize its environmental footprint. Its goal is to optimize the use of local resources in a sustainable fashion, in a mutually connected system bringing together public and private companies, city inhabitants and local government. The creation of a model of urban-soil based economy aims at positive economic, environmental and social

outcomes. The production of the urban community gardens will be part of a local circle to increase the city's self-sufficiency.

The municipality partnered up with three NGOs working on social projects and innovation, as well as infrastructure and public service providers, a consulting company and a national research institute for the project. Urban Soil 4 Food is thus close to the quintuple helix model gathering actors from both public and private sector, the community and knowledge institutions.

The project is testing a pilot system for urban soil production based on waste from various sectors including the industry. The experimental approach is also reflected in the creation of an Agri Living Lab in which activities regarding social innovation, urban environment and agriculture take place. Moreover, Urban Soil 4 Food aims at creating an urban food chain from the community gardens to promote local production and consumption. In this context, they are still working to build a sustainable business model based on the pilot system for urban soil production.

The urban community gardens were built on unused municipal land and are open to the public after a year, monitored by the NGO Aktiviraj.se. They emphasized the importance of learning-by-doing in the first phase of the project's experimental gardens, as a "know-how tool kit" for individual gardeners. The community gardens involved diverse populations and are an opportunity for social inclusion through workshops and community building. The definition of the open call process to identify the criteria for selecting the gardeners was made in collaborative fashion and a participatory approach was adopted for the development of the gardens' management model.

Public procurement is a crucial part of the project, especially for the technological part of the project. Despite the length of the procedure, Urban Soil 4 Food is proceeding with the procurement process for the soil production facility and have already signed the rental agreement for the pilot site. They are also working on environmental permits.

#### **4.2.9. Brussels (Belgium), "CALICO - Care and Living in Community"**

The Calico project supports the creation of a community land trust for housing purposes. Through Calico, the City of Brussels is pushing for a new form of welfare that would rely less on institutions and more on civil society. It does so by providing

community-land trust housing, providing an alternative opportunity to building a community-led model of care and strong collaboration amongst different urban actors. The project aims also at reinforcing the autonomy of vulnerable populations and bringing forth their social inclusion through greater participation in the decision-making process.

Calico is the fruit of a large partnership gathering several local and regional public authorities, community land trusts, interest groups advocating for the right to housing, and a research institute. The project experiments with a model of public-community cooperation for urban innovation.

The pilot project will provide thirty-four homes organized in three community-led cohousing clusters. The community land trust bought the land and common parts of the building, sharing the risk with the municipality and enabling the renting of affordable and social apartments. Each cluster will target a specific group particularly affected by housing issues, such as women, older people and low-income families, with an intergenerational and intercultural approach. The future inhabitants have been selected and chosen groups constituted at the very beginning of the project to make sure their involvement will be seen every step of the way. They will benefit from workshops and training for cohousing and property management to reinforce their autonomy.

The building will be managed following a cooperative model, although it is not formally and legally constituted as such. This means that inhabitants will be in charge of the maintenance and management of the common spaces and organize social gatherings to improve social cohesion.

The community land trust resale mechanism supported by public funding will ensure the sustainability of the project and guarantee that affordable housing will be provided in the long term with some kind of economic returns.

Calico is not based on the European legal framework and used the national procurement law for the restructuring of the building that will host the project.

#### **4.2.10. Budapest (Hungary), "E-Co-Housing - Co-creating a Regenerative Housing Project Together with the Community"**

The E-Co-Housing project was funded by UIA under the category "housing" and it supports the creation of a regenerative and collaborative social housing community co-created by

inhabitants. Sustainability is key in the project's design way, alongside the increase of awareness among district inhabitants to the topic. To answer housing needs, the project proposes the creation of a modular building adapted to the different size of the families it will host. It relies upon the principles of circular economy to create a green space, through the regenerative use of land and the recycling of waste of materials.

A crucial aspect of the project's partnership is the large involvement of the private sector, which is not always easy in collaborative projects which due to their nature tend to gather mostly the interest of mostly public and community actors. E-Co-Housing brings together the municipality, four small and medium-sized enterprises working mostly in urban planning and sustainable development, NGOs, a research institute as well as an infrastructure and public service provider. This is a very comprehensive partnership which again echoes the quintuple helix model.

E-Co-Housing will offer housing collaboratively created by inhabitants themselves for around 100 people in a social community. The future renters are involved from the design process and for each step of the project. They were precisely selected on the basis of their motivation for cooperation and community development, besides the economic considerations. Some empowerment mentoring programs will be conducted for the creation and development of a sustainable social housing community.

In E-Co-Housing, great attention was paid to the public procurement process. It was the first milestone of the project in May 2019. An integrated design process enabled the provision of tender documentation for the public procurement needed for the construction of a modular multi story regenerative building. This design process was supported by the use of the innovative system enshrined in the Building Information Modelling system. Moreover, the architects were directly involved in the partnership, making them part of the project rather than simple contractors, which should guarantee the realization of a building true to the ambitions of the project.

#### **4.2.11. Lyon (France), "Home Silk Road - Housing toward empowerment"**

The Home Silk Road project experimented with innovative accessible housing as a tool to foster territorial, economic and social integration through urban planning, social cohesion, culture and heritage enhancement. The project acknowledges the role of municipal authorities in fighting gentrification and providing accessible housing for vulnerable groups, most notably in central neighborhoods. The project aims at changing the housing paradigm and bringing vulnerable populations, which are too often relegated to the urban peripheries, to the heart of the city. This effort aims to show that these 'at risk inhabitants can also contribute to the societal and economic value of these areas.

In Lyon's community restaurant project is used a source of funding built on a hybrid economic model for neighbourhood sustainable economic development. This makes the Home Silk Road project a lighthouse case study for the financial tools presented as an operational proposal in this article. Through a financially sustainable model, the restaurant is able to contribute to stimulating the economy of the community and fostering the neighborhood perennity.

The populations benefitting from this new housing space will have a more direct access to urban resources and opportunities. They will benefit from a new kind of welfare, through support aiming at giving them new tools for citizen empowerment. The project also foresees the creation of other services in the building, fostering social interactions that will also alleviate the negative perception of vulnerable populations.

The partnership leading the Home Silk Road project involves public, private and social actors. The Lyon Metropole and Villeurbanne municipality are associated with a public infrastructure and services provider, the East Metropole Housing, a cultural interest group (the Ecumenical Cultural Centre) and the association ALYNEA, which accompanies persons in situation of precariousness towards social and professional autonomy. This collaboration was enabled by a French legal tool, the Economic Interest Grouping (Groupement d'Intérêt Economique).

This initial partnership is enriched by the inclusion of the community, especially of vulnerable populations, at each stage of the design and implementation process, including that of procurement. Twenty temporary occupation agreements were also set with diverse local NGOs working on art and culture, inclusion, city lab and handcraft, as a way to anticipate future collaborations

for an upcoming multipurpose project that is lead in parallel of Home Silk Road, as part of the larger territorial development on l'Autre Soie brownfield. The Home Silk Road will function as a laboratory that will gather inhabitants with housing and non-housing business partners to renovate an emblematic building. The place will then host diverse populations in need (migrants, students, families) through different housing adaptable solutions, as well as services enhancing innovation and community aggregation.

The lab format will enable the testing of new housing solutions. For instance, as soon as the first phase of construction work will begin, a new model of temporary housing will be provided for thirty vulnerable families which will be offered support through capacity building and integration activities.

A community restaurant has already opened, attracting people from the neighborhood and offices around. This ensures a diversity that alleviates the stigma that could be attached to the complex. This restaurant is a source of self-financing but the economic model, still in discussion, will be a hybrid one.

Public procurement was crucial in the project, as the services offered by Home Silk Road started along with the construction work through an integrated worksite. Therefore, it is necessary to include the new model of temporary housing as part of the renovation work. A participatory process that includes inhabitants and users' consultations enabled this innovative renewal.

Moreover, social clauses were put in the procurement to guarantee the inclusion of unemployed people in the restructuration work, meaning that 2930 hours will be dedicated to them during construction works.

#### **4.2.12. Matarò (Spain), "Yes We Rent - leveraging vacant private property to build up a cooperative affordable housing scheme"**

The Matarò project got funded through the UIA category "housing" experimented with an organizational model of a publicly funded and controlled multi-stakeholder cooperative of homeowners providing affordable housing.

The key learning for this article is the successful use of the legal tool of cooperatives. This makes the case of Matarò an important element of the article analysis.

The model works on the basis of the empowerment and self-management potential of coops as well as the empowerment of its tenants. The model of cooperatives enables a self-organization of homeowners that will create favourable conditions to generating affordable and stable rental housing. The project aims at transforming vacant private property into accessible rental supply, thus using housing for territorial inclusion and social cohesion in the city. It also recognizes the role of the community and private individuals in providing services and social opportunities such as affordable housing. Yes We Rent! aims at developing a replicable model that could thus be exported. The project is the fruit of a multi-stakeholder partnership between Mataró City Council, the provincial authority of Barcelona, NGOs (Fundació Unió de Cooperadors and Fundació Jovent) and research institutions (IGOP and TecnoCampus). They worked with key local stakeholders in the steering group, advisory board and technical commission to run the project, however homeowners are not directly part of the partnership due to existing regulation, there are only social clauses.

A Learning event was organized on the 12<sup>th</sup> of December 2019 to reach a larger audience of experts, key parties and to gain support from a larger variety of people. It was an opportunity to discuss the role of municipal administrations in promoting the rental of social housing.

The Yes We Rent! project proposes innovative housing solutions in the form of the creation of cooperatives of tenants offering. Owners of empty properties joined the project and were trained to learn the functioning of the cooperative.

Given that their houses and apartments are not rented because of lack of resources and fear of tenants not paying, certain incentives were put in place to foster homeowners' commitment through a virtual currency created by the cooperative itself. Additional financial and organizational support is provided for the writing of rental contracts, the energy-oriented renovation of the property (up to 16,000 € for renovation and up to 2,000 € for energy-related renovation measures can be subsidized), through tax relief and rent guarantee. At the start of the project, while the cooperative remains under construction, the municipality will act as a contractor for homeowners and thus ensure the delivery of the incentives. On the owner side, they must each commit to renting their property to the affordable housing scheme for a minimum of five years below market price.

The final goal of the project is to hand over the affordable housing scheme to the cooperative once it becomes itself a sustainable autonomous agent in the housing market. They are working to attract new empty flats and defining a solid financial model that will enable the city council to take leave from the project. They then foresee a scaling-up beyond the municipality of Matarò via a collaboration with other cities.

The project does not plan innovative public procurement as it addresses existing private housing that is not yet occupied. However, professional training was provided to unemployed youth for the rehabilitation of vacant flats for the scheme, so that they are ready to be rented. This will enable homeowners of the cooperative to hire youth in the perspective of restructuring work in their own private houses or apartments that are subsidized by the municipality. Through the renovation work, the city targets the employability of young people, an issue that remains important in Matarò. The training provided with the association Salesians Sant Jordi will give them better starting opportunities on the labour market even after the renovation of Yes We Rent! Properties.

#### **4.3. Key Takeaways from the Comparative Analysis of UIA case studies.**

The selection of UIA projects listed and analyzed above has brought to light several new operational insights and new challenges to urban co-governance theories. With the background understanding of the Turin Co-City Project and its co-governance innovation, the case study analysis leads to some key takeaways useful to illustrate and build further the concept of USDIPs.

A key element of our analysis of these cities initiatives is the need to couple comprehensive policy frameworks composed of a wide array of legal tools enabling co-governance – therefore not limiting the consideration to pacts of collaboration or civic uses, but integrating also other tools like innovation procurement, impact contracts, participatory foundations, community coops and community land trusts - with financial tools (solidarity funding; mechanisms to allow the initiation of forms of external mutualism and solidarity) and innovative strategies of multi-stakeholder engagement, often centered on the creation of physical and virtual experimentation and learning environments (*i.e.* living labs, city science offices, innovation brokering spaces or platforms, etc.). This

article finds empirically relevant solutions for implementing co-governance theory as shown throughout the previous case studies and the lessons learned from their analyses.

The implementation of the Community Land Trust as a legal design tool in the CALICO project in Brussels is of significant importance to this article's understanding of co-governance. The project has allowed for the community and inhabitants to have a substantial legal voice in development processes. Utilizing the legal tool of community land trusts has allowed the project to make its partnership functional and grant to the community members a role of their own in the processes. The long-term benefits of such legal tools ensure the sustainability of the project. The success of the community land trust has made Calico's project a lighthouse example of the integrating legal policy program elaborated on in the following pages of this article.

Matarò's "Yes we Rent!" has also conducted a similar approach by utilizing the legal design tool of cooperative housing, creating a possibility for economic profitability from the project. This grants inhabitants important forms of independence and long-term sustainability for housing. The use of these legal tools to create innovative approaches to challenges of urban governance supports in this way the concept of Urban Sustainable Development and Innovation Partnerships.

In the case of Lyon, a community restaurant is used as a source of funding, building a hybrid economic model for neighbourhood sustainable economic development. Through a financially sustainable model, the restaurant is able to contribute to stimulating the economy of the community and fostering neighbourhood durability. The same element is seen through the collective governance mechanisms adopted in the Lille's TAST'in FIVES project. The use of a shared community kitchen illustrates for this article the concept of USDIPs and serves to demonstrate an important example of district-based inclusive economic development. The TAST'in FIVES project is a lighthouse case study within this article, illustrating the potential of co-governance mechanism based on a PCP in instigating district based inclusive economic development.

In Gothenburg's FED project on energy transition, we find important involvement of the private sector, bringing about significant opportunities for the community to create pooling economies. The use of digital tools is also significant in Vienna's

CoRE incubator for refugee integration. Through the collaboratively created platform, the citizen-led tech-based innovation adds an important element to the understanding of co-governance presented throughout this article. The brokerage aspect of CoRE's project is seen through its goal of enabling cross-sectorial cooperation and peer mentoring for integration of asylum seekers.

#### **4.3.1. An Integrated Approach rooted in Co-Governance and City Science.**

With this article combined approach of co-governance and city science, a framework for sustainable urban development is envisioned on the basis of the involvement of city inhabitants as actors in both issues of collective interests and processes of co-governance. In this way, the exemplary case of Turin's Co-City Project serves as the foundation for this article analysis. The innovative legal design elaborated in this case study has largely contributed to the understanding of USDIPs and the extended role of city inhabitants as going beyond that of data providers. Instead, it is the combined efforts with other actors such as learning institutions (Universities and schools), private economic actors and social innovators. This is the approach taken by the CSI initiative in efforts to include university researchers within City Offices for the benefits of data collection and the shaping of policy. Throughout this article we find these actors continually experimenting with a set of tools themselves instrumental to the success of urban co-governance. This toolkit composed of legal, learning, digital and financial tools represent the foundations of this article operational proposals in the creation of sustainable USDIPs.

In the case of Turin, for instance the pacts of collaboration initiated through this framework were the first legal tools to be utilized in the ongoing process of establishing sustainable USIP) With the innovative legal and economic nature of these first partnerships came the issue of risk aversion. The challenge becomes integrating risk-takers in the inside processes of public administration to boost innovation funding and propel the innovators.

In Athens, the combined use of digital tools and learning processes resulted in a successful collaboration between users and suppliers for housing units. The digital platform created is used in this project to launch a call to property owners that are then allowed to rent their property to migrants and refugees with the help of a

mechanism distributing the risk between the owner, the tenant and the City. The learning exchange existing between users and suppliers defines the project as an innovative solution to both housing crises as well as inequalities of opportunities.

A key factor herein is the need for capacity building processes especially in terms of financial skills for local communities and legal skills in terms of policy capacity. This challenge is tackled through the support of advisors in projects supporting the City's adaptation of existing tools of the legal framework to the project's goals. Through an integrated policy approach, we find that the scope of influence is greater and makes clearer the strong ties between policy and law in this new wave of urban governance.

This article rested on the theories of urban co-governance and its relationship to city science initiatives. The concept of USDIPs was built through a co-city science approach. This governance model is characterized at its core by the shift from a model of top-down decision-making to one understood by bottom-up and citizen-led solutions. It is an approach based on the collaboration and shared responsibility of each and every one of the different actors and stakeholders that make up the city and its ecosystem. Through the lens of this proposed co-city science, this article foresees the involvement of city inhabitants as going far beyond mere data providers. USDIPs imagine city inhabitants as contributing actors to the ongoing processes of co-governance taking place with a variety of actors, from knowledge institutions to private economic actors, social innovators, and the public sector. The science produced in this way has contributed to the experimentation measures of the tools instrumentalized and fundamental to the continuous development of the urban co-governance concept. Legal tools as in the exemplary case of Turin's innovative legal design are found to be the first tool in the kit as they present an initial, written regulation for the project and its potential. Learning tools were found such as Collaboratories (Co-Labs) or NGO houses as seen in Riga's partnerships between the city council and local NGOs inside a former school. The UIA case study example of Fed Gothenburg or Vienna's CoRE project demonstrated important use of digital tools for their respective efforts of sustainability and social integration. Financial tools of social project financing were used in projects such as Lyon's community restaurant as a source of funding built on a hybrid

economic model for neighborhood sustainable economic development. In this way, we find that many cities have taken the leap towards legal recognition of urban commons. When applied with a holistic vision of the city as a space of cooperation or co-city, there have been successful implementations of institutions, economic and financial operations, as well as digital and educational platforms designed as the first steps towards the final goal of truly enabling a collective and collaborative governance of the city.

#### **4.3.2. The Brokerage Role of Innovation Procurement**

With these four tools properly instrumentalized this article aims at establishing concrete and functioning city science and innovation partnerships. However, to do so it is key to examine the brokerage role of public procurement for innovation.

In a recent output<sup>115</sup> of the Urban Agenda for the EU on Innovation Public Procurement Broker (IPPB), the focus is put on elements of 'open innovation intermediation'.

Innovation Public Procurement Broker (IPPB): IPPB is an intermediary in the interaction between public solution seekers and all the possible solution providers aimed to support public procurement of research<sup>116</sup>.

The Urban Agenda for the EU discusses the importance of this brokerage between innovative SMEs or start-ups and public buyers on the basis of the naturally weak links connecting the two parties of innovation solutions. In this way, IPPB establishes the overdue partnership of key actors in urban governance innovation.

With arguments in favour of public sector beneficiaries, the recent guidelines for IPPB establish the positive impacts on policy-making and urban governance. The incorporation of this document was important to the understanding of this article as it illustrates

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<sup>115</sup> Urban Agenda for the EU, *Innovation Public Procurement Broker (IPPB) An introduction for practitioners Guidelines to design a broker for innovation public procurement* (2020), available at [https://ec.europa.eu/futurium/en/system/files/ged/action\\_7\\_innovation\\_public\\_procurement\\_broker\\_guideline.pdf](https://ec.europa.eu/futurium/en/system/files/ged/action_7_innovation_public_procurement_broker_guideline.pdf), established a set of guidelines to design a broker for innovation public procurement was released. It established a procurement strategy with the tagline 'using a city's buying power to achieve political goals.

<sup>116</sup> Urban Agenda for the EU, *Innovation Public Procurement Broker (IPPB) An introduction for practitioners Guidelines to design a broker for innovation public procurement*, cit. 105.

the arguments made for an integrated approach to innovation supported by the four-part operational tool kit proposed throughout the following pages.

This same document situates public procurement in its role as a ‘powerful tool for spending public money in an efficient, sustainable and strategic manner for driving the development of innovation’ – in this way, IPPB is understood as more than merely a unidimensional legal tool. In the context of both this article and the EU guidelines elaborated on above, public procurement is seen as a sustainable model for cities to address the everyday challenges of socio-economic inequalities, environmental changes and bureaucratic inefficiencies. In a similar scope of understanding as this article, IPPB requires a consistent and integrated strategy of locally-tailored policies and case-sensitive financing. Cooperation is needed between different levels of actors at government levels, private involvement, and innovation creator in order to create effective partnerships of public procurement as well as to spread the word and verified information on efforts of Innovation and Responsible Public Procurement.

IPPB represents a key lesson learnt throughout the research processes internal to this article on the state of Urban Sustainable Development and Innovation Partnerships. The UIA case studies of projects such as Birmingham’s USE IT! platform grants this article a strong basis of analysis for incorporating the importance of IPPB in the operational proposals and conclusions of this article.

### **5. The need for a Policy Toolkit to Establish USDIPs**

The analysis finds that the case studies analyzed throughout this article generate enough empirical evidence for policy solutions and administrative measures necessary for implementing concrete co-governance measures in urban sustainable development and innovation processes. Based on the analysis of the thirteen UIA projects which used the key dimensions extracted from the Co-Cities framework<sup>117</sup>, this article suggests the adoption of a policy toolkit. The findings provided above have demonstrated a meaningful connection between governance innovation and city science initiatives. Bridging co-governance to city science suggests however the need for a four-part policy toolkit composed of the

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<sup>117</sup> S. Foster, C. Iaione, *Co-Cities*, cit. at 4.

following operational elements: (1) a regulatory initiative recognizing USDIPs and leveraging the existing innovation procurement legal framework; (2) financial tools; (3) learning and institutional tools and (4) digital and technological tools.

### **5.1. Innovation in procurement and public contracts tools**

As mentioned above, multi-level governance at the city level often results in the creation of multi-actor partnerships to provide for service or infrastructure development. While Public-Private-Partnerships (PPPs) have by now become a common solution for the public sector risk aversion and for its lack of resources, it is increasingly clear that sustainable innovation and smart city infrastructures require new types of partnership in order to overcome the public-private binary<sup>118</sup>.

We have found the best practice to be the integration of existing and newly innovated legal tools. These tools are pacts of collaboration, Urban Civic Uses, Agreements pursuant to the existing legal framework (i.e. in the case of Madrid, Spain), Community Coops and Community Land Trusts. Through an integrated policy approach, we find that the scope of influence is greater and makes clear the strong ties between policy and law in this new wave of urban governance measures. As mentioned above, the pacts of collaboration initiated through this framework were the first legal tools to be utilized in the ongoing process of establishing a sustainable innovative urban partnership. With the innovative legal and economic nature of these first partnerships came the issue of risk aversion as a complex issue facing many public municipal officials. The challenge becomes about the necessity of having risk-takers in the inside process of public administration to boost innovation funding and propel the innovators. The Co-City Turin project was able to forge and adopt an UIP approach. The direction in which such cooperative meetings are going is one of sustainability, generating both social and economic impacts, based on frameworks of end-user engagement in which financial institutions can safely invest their resources and finally go beyond the traditional and hence-forth questionable model of PPP investment.

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<sup>118</sup> C. Oliveira Cruz & J. Miranda Sarmiento, *Public-Private Partnerships and Smart Cities, in Network Industries Quarterly*, - Vol 19 - Issue 3 "Regulatory challenges for smart cities", (2017).

The challenge emerges clearly in cases like the Lille project *Tast'n'Five*. Finding partners willing to share the legal and financial responsibility related to the management of the collective kitchen was challenging and the City was brought to ask for support. A key role was played by a publicly owned investment company, EPARECA, (Etablissement Public d'Aménagement) for the redevelopment and restructuring of commercial spaces in deprived neighborhoods. The Lille experience shows clearly that the key issue around local government acting as enablers of the commons, through economic development, is financial sustainability. The capacity of the community to develop a business plan pursuing social benefits while being financially viable, has also presented itself as a significant challenge. In such a process, actors such as public/institutional investors providing advice and capacity building for the financial aspects to cities proves crucial. In the Budapest project this is seen through the Eco-Housing, Community development and economic empowerment mentoring programs involving future renters from the design process.

A crucial role is played by the public demand for innovation. The academic discussion and policy practice on innovation policy often focuses on supply-side measures such as grants and neglects public procurement as a demand-side driven innovation policy measure<sup>119</sup>. We argue whether urban public procurement can be a leverage for the development of sustainable urban innovations. An example is the Nantes project *5Bridges*, where the city supported the creation of multi-stakeholder mechanisms of governance of the space, to benefit the most socially excluded groups of the neighborhood with a sustainable social business model. Public procurement participated in the innovative and creative processes, although the contractors were eventually selected through a standard tender procedure.

Especially when it comes to the inclusion of city inhabitants and civic associations, innovative procurement practices hold the potential to experiment new regulatory and governance solutions for the co-design, collaborative management, and implementation of urban regeneration projects as well as service delivery. The projects did not use any of the tools that the EU legal framework on public procurement offer to support the purchase of innovation

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<sup>119</sup> J. Edler, L. Georghiou, *Public procurement and innovation: resurrecting the demand side*, 36 Research Policy 949–963 (2007).

(Public Procurement of Innovative Solutions or Pre-Commercial Procurement) but used traditional procedures of public tendering.

Although the inclusion of city inhabitants in pre-procurement phases or in the service design and implementation is said to reduce the risks linked to top-down complex urban regeneration projects, infrastructure development or service delivery; the literature on public-private-people partnerships (P4)<sup>120</sup> sees increased public engagement as a strategy that “can help improve the development process by moderating the risk of unforeseen oppositions, building clear responsibilities and rights, and creating opportunities for public inputs; scholars argue that formulating such effective and genuine public engagement framework for PPP projects would assist government bodies (...) to better realize the changing public aspirations and demands for infrastructure planning and policy formulation, the concrete implementation of innovative procedures entails a high degree of complexity at the local level. Building a framework where cities can feel free to experiment with innovative procurement procedures safely, share risk, receive support from advisors and policy capacity building processes is crucial. Although all projects analyzed are aimed at building a co-governance strategy where the community plays a pivotal role, the institutional and legal tools adopted often result in bilateral or exclusionary governance mechanisms. The spaces and infrastructures renovated through the project will be eventually managed by a single NGO or a service provider with the communities as beneficiaries.

In cases like Lyon Silk Road (where the social restaurant designed through the project will be managed by inhabitants) and Lille Tast’n five (where a cooperative gathering of diverse actors will manage one of the buildings) there is a higher degree of control and responsibility on the communities’ side, although the involvement of private economic actors/financial actors and knowledge actors in the partnership is still weak.

If public-private-people partnerships represent an alternative option to the traditional PPPs, a further step can be taken by establishing public-people partnerships that allow for a direct participation of city inhabitants both in the procurement and in the delivery/implementation process. The UIA Co-City project

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<sup>120</sup> S.T. Ng, J.M.W. Wong, & K.K.W. Wong, *A public private people partnerships (P4) process framework for infrastructure development in Hong Kong*, 31 *Cities* 370 (2013).

is a clear example of this and represents a unique experiment in the field of innovative partnership. As a matter of fact, the Co-City model “a) establishes a procedure of “collaborative dialogue” as it implies the co-design of the content of the construction of the partnerships and therefore creates the possibility to replace collaboration with competition as a design principle of tendering procedures; b) it attempts to go beyond the traditional concession or public contract approach trying to build a more cooperative system in which there is no transfer of risk but rather a sharing of risks. Thanks to the legal tool of the so called “pacts of collaboration”, citizens and the administration cooperate for the care, shared management and regeneration of urban commons. The introduction of ‘pacts of collaboration’ could be considered “as the first example of social innovation-led public-people or public-private-people partnerships”<sup>121</sup>.

## 5.2. The Financial Tool: Urban Commons Project Finance

When speaking of innovation in public procurement and more widely of social innovation it is important to address the rise of new financing instruments aimed at investing in projects with a social impact<sup>122</sup>: “Social Finance (SF) defines the set of alternative lending and investment approaches for financing projects and ventures, requiring to generate both positive impacts on society, the environment, or sustainable development, along with financial returns”<sup>123</sup>.

As much as they are aimed at creating positive social impact, Social Finance instruments are key tools for the development of the social innovation sector. In fact, Moore et al. define SF “both as a social innovation itself and as a vehicle for redirecting financial capital, thus providing new opportunities for social innovation to grow”<sup>124</sup>.

The first model of social project finance was born in the UK in 2007 as an organization that aimed to tackle the problem of

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<sup>121</sup> S.R. Foster, C. Iaione, *Ostrom in the city*, cit. at 4.

<sup>122</sup> W. Cheng, S. Mohamed, *The World That Changes the World: How Philanthropy, Innovation and Entrepreneurship are Transforming the Social Ecosystem* (2010).

<sup>123</sup> F. Rizzi, C. Pellegrini, M. Battaglia, *The structuring of social finance: Emerging approaches for supporting environmentally and socially impactful projects*, 170 *Journal of Cleaner Production* 805-817 (2018).

<sup>124</sup> M.L. Moore, F.R. Westley & A. Nicholls, *The Social Finance and Social Innovation Nexus*, 3:2 *Journal of Social Entrepreneurship* 115-132 (2012).

reoffending short-sentenced offenders from the Peterborough prison. The idea behind it was to provide support to vulnerable city inhabitants that were struggling to find their way back into society after prison.

Thanks to the coming together of professionals from the social, financial and government sector, this project has been able to rethink the purpose of financial instruments and couple economic growth with social impact. As of 2017, the Peterborough Social Impact Bond has “reduced reoffending of short-sentenced offenders by 9% compared to a national control group” (Social Finance Group, Peterborough, 2017).

There are multiple financial instruments used in the sector of Social Project Finance, depending on the sector: Social Investment Bank, Social Impact Bonds and Development Impact Bonds. Social Impact Bonds are especially interesting for the purpose of this research as their mechanism implies the involvement of a public subject, who indirectly guarantees the financing for a social utility project managed by a non-profit subject in light of the attainment of a specific result. In other words, with Social Impact Bonds (SIBs) “a payer (usually Government, at a national, regional or local level) agrees to pay for measurable improved outcomes of social projects, and this prospective income is used to attract the necessary funds from commercial, public or social investors to offset the costs of the activity that will achieve those better results” (Mulgan, 2010). The potential of this model lies in the injection of financial capital to provide funding for civil society initiatives with the transferring of risk to the public authorities.

Especially when it comes to the digital infrastructure, circular economy, renewable energy, and cultural heritage sectors, Social Finance solutions provide a partnership model able to have a real impact on local communities. They are able to bring together local associations, citizens, private and public actors. The case of Reggio Emilia is especially relevant to provide a practical example of how the coming together of these actors can positively benefit a marginalized community. The project “Coviolo Wireless” represents an example of local investment in digital infrastructures that allows for the extension of the wifi access to an area of the City of Reggio Emilia characterized by its severe digital divide. The project realized community wi-fi thanks to the collaboration between the local community, the City, civic entrepreneurs and public and private operators. Using the neighborhood social center

as a community infrastructure, city inhabitants have been able to access the new wireless broadband coverage at an affordable cost. After having won the European Broadband Awards 2017, the Coviolo Wireless model has been replicated in other neighborhoods in Reggio Emilia.

In the Gothenburg Fed project, a mechanism of risk sharing was created to support the Energy district through diverse sources of funding and creation of a sustainable business for energy efficiency. The Lille project TAST'in FIVES invested serious efforts in an experimental strategy of involvement of stakeholders, particularly of neighborhood inhabitants, through the co-design process of the community kitchen and the future incubator and the organization of food-related workshops in the temporary kitchen, that proved key to engage neighborhood inhabitants and NGOs. A total of 30.000 euros will be allocated to food-related social business projects, with a minimum of 500 euros and a maximum of 3.000 euros per project. In the Brussels project CALICO, a mechanism of risk sharing is created through public funding and a CLT resale mechanism that ensures sustainability of affordable housing on the long run. In the Matarò project Yes We Rent, the risk-sharing mechanism is temporary and used as a leverage to stimulate collective action. The project start-up with public support and subsidies, but the city will leave the cooperative as soon as it becomes sustainable. The possible role played by tech finance and purpose finance shall also be discussed.

### **5.3. The Institutional and Learning Tool: the Co-Labs as urban innovation brokers**

Bringing so many different actors together, finding the proper ways, methodologies, rules to foster such multi-stakeholder forms of cooperation such as P5s and PCPs requires attention, competences, skills, time and resources.

The action plan of the Urban Partnership on Innovative and Responsible Procurement mentions innovation brokers. They are third party facilitators that offer support to public administrations by acting as moderators between private, public, and civic actors. Innovation brokers at the urban level can manifest themselves in the form of public officials in charge of research and innovation (i.e., Chief Science Officers, Chief Innovation Officers, etc.) or in the form of entities like Urban Laboratories, Living Labs, or Competence Centers.

The role of a brokering place and/or agency in pushing the public sector to invest in innovative partnerships with private and civic actors has been proven to foster innovation in procurement processes. Innovation brokers allow for the overcoming of barriers inherent to public sector service delivery. The literature on PPP shows that the public sector lacks skills, incentives, and resources to experiment and change its traditional system of service delivery through partnership with city inhabitants and other civil society actors<sup>125</sup>. In order to effectively innovate, there is therefore a need for risk-takers in public administrations to overcome the barriers of change and experiment new partnerships with different actors. They are also brought to brainstorm on new ideas for service delivery and are generally open to test innovative solutions coming from external actors.

In many cases, especially at the city level, such public open innovation processes are supported by what we can call urban laboratories acting as innovation brokers. We can observe in this way, digital innovation brokers, such as digital platforms. In Athens, these platforms are used to launch calls to property owners that are then allowed to rent their property to migrants and refugees with a mechanism that distribute the risk between the owner, the tenant, and the City; or physical innovation brokers, exemplified by the neighborhood houses that have a key role in disintermediating between the City and local communities in the Co-City Turin project.

Similar features emerge in the incubator created through the Vienna CORE project, as a physical and digital platform presenting a high degree of empowerment of the community. The platform was collaboratively designed and is managed by the refugees involved in the program, although aspects related to platform ownership, data governance and the possibility to develop services starting from the data collected through the platform are still far from advanced. They can also take the form of “science parks”, as in the case of Gothenburg project FED where in the board you can find alongside public authorities the local stakeholders, that develop projects at the park / district area. Be it “Collaboratories”, “Urban Innovation Labs” or “Living Labs”, these environments generally act as intermediaries between public authorities, private

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<sup>125</sup> S.A. Ahmed, S.M Ali, *People as partners: Facilitating people's participation in public-private partnerships for solid waste management*, in Habitat International 781-796 (2006).

actors, knowledge institutions, civic society actors and city inhabitants<sup>126</sup>. Living Labs are for instance defined as forums “for innovation, applied to the development of new products, systems, services, and processes, employing working methods to integrate people into the entire development process as users and co-creators, to explore, examine, experiment, test and evaluate new ideas, scenarios, processes, systems, concepts and creative solutions in complex and real context”<sup>127</sup>. Urban laboratories are especially suited to experiment with multi-stakeholder collaboration<sup>128</sup> on pressing urban challenges such as climate change and sustainability<sup>129</sup> digital and technological tools for citizen-centered smart cities and, more recently, with cultural heritage innovative reuse<sup>130</sup>.

Innovation brokers therefore play an important role not only in the production of knowledge but also for their experimental innovative solution to local challenges. They often allow for multi-actors meeting and networking; they set up collaborative processes of design and implementation; they foster learning and skills development; and provide for the infrastructure necessary for the participation of civic society actors or citizens, through the organizations of meetings, assemblies, and workshops. This is the case for the “Local Competence Centers” mentioned in the WP 2 of the Urban Partnership Action Plan: “Learning can happen through cooperation and peer learning, namely through Local Competence Centres which provide opportunities for training and skills development, but also for networking, technical assistance provision and potentially joint purchases. Such Local Competence

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<sup>126</sup> M. Gascó, *Living labs: Implementing open innovation in the public sector*, in *Government Information Quarterly* 90-98 (2017).

<sup>127</sup> H. Bulkeley, S. Marvin, Y.V. Palgan, K. McCormick, M. Breiffuss-Loidl, L. Mai, T. von Wirth, & N. Frantzeskaki, *Urban living laboratories: Conducting the experimental city?*, 26(4) *European Urban and Regional Studies* 317-335 (2019); E. Eneqvist, J. Algehed, C. Jensen & A. Karvonen, *Legitimacy in municipal experimental governance: questioning the public good in urban innovation practices*, 30:8 *European Planning Studies*, 1596-1614 (2022).

<sup>128</sup> T. Tukiainen, S. Leminen & M. Westerlund, *Cities as collaborative innovation platforms*, 5:10 *Technology Innovation Management Review* (2015).

<sup>129</sup> Y. Voytenko, K. McCormick, J. Evans & G. Schliwa, *Urban living labs for sustainability and low carbon cities in Europe: towards a research agenda*, *Journal of Cleaner production* 123 (2016).

<sup>130</sup> C. Garzillo, A. Gravagnuolo & S. Ragozino, *Circular governance models for cultural heritage adaptive reuse: the experimentation of Heritage Innovation partnerships* (2018).

Centres are specifically valuable for smaller and medium-sized cities, and can complement new and on-going national and EU-wide initiatives, such as the Procure2Innovate project that was launched by DG CONNECT” (Urban Partnership on Innovative and Responsible Procurement, Action Plan, December 2018)

Closing the gap between public administration, service providers, users, and facilitating cooperation and exchanges between these actors, appears as the principal goal of innovation brokers. They have become essential instruments for the development of USDIPs.

The role of USDIPs is crucial to strengthening cities’ capacity to develop their innovations. They can do so by providing legal and institutional tools allowing cities to experiment, support measurement, knowledge capitalization, the scaling up and ultimately the mobility of the innovations’ achievements. In addition to attracting investments in key issues of the European Social Pillars and in issues such as climate transition, social cohesion, social protection for vulnerable people, culture, and cultural heritage, it appears coherent with the new strategic agenda of the European Council (Council of Europe, a New Strategic agenda, 2019) which highlights how these values lay at the heart of the European identity. Also, USDIPs could be spaces of interaction and mutual improvement of the EU funding addressing cities, namely UIA, URBACT, urban-related topics of Horizon2020, allowing them to mutually learn from one another and at the same time supporting cities with the implementation of their complex challenges acting as a capacity building tool focused on solving legal and institutional-capacity related obstacles through innovative applied methodologies. It will ultimately support cities in one of the greatest challenges they face in the future, implementing at the local level the objectives established by the Global Urban Agenda. This challenge and its potential solution envision cities as places for sustainable and inclusive development and entrusts them with the role of experimenting with concrete implementation solutions to develop resilient, safe, inclusive, sustainable, place-based social and economic development.

#### **5.4. The role of digital tools**

With the increasingly connected network of cities, city diplomacy has emerged as an important area of study for urban scholars. The international cooperation observed has taken an

important role in shaping urban policies, notably in the vein of ‘citizen-science’ wherein citizen production of data, through both analog and digital tools, is encouraged in efforts inform and shape better functioning and just cities. European cities, such as UIA projects Gothenburg and Vienna seen in this article, are going in the direction of city science investments. In the FED project in Gothenburg, it was the tech-based development of a new energy system at the district level based on the use of information and communication technologies for electricity, heating and cooling. The technology created enables a smoothing of energy consumption, reducing peak loads and bringing positive outcomes to both user and supplier. The important involvement of the private sector has also enabled the community to create pooling economies, rendering the project sustainable. In Vienna, CoRE promotes the creation of a physical and digital platform to enable cross-sectorial cooperation and peer mentoring for integration of asylum seekers. The use of a co-created digital platform for collaborative governance and sustainable living conditions, presents this project under a city science light.

The digital tools this article has identified as being valuable elements to fostering cooperation and innovation partnerships are (1) E-procurement platforms; (2) cooperatively owned digital platforms and (3) online forums coordinated by city authorities for the safe meeting and prosperous discussion of a variety of urban actors. The third element, digitalization for urban co-governance, might find an important relevance in the post-Covid-19 era. Creating an online space, perhaps connected to or managed by the Co-Labs, for inhabitants and other urban actors to meet and discuss the challenges they are facing might be essential in ensuring the continuity of these collaborative processes. In a society where social distancing and face masks are becoming the new normal, adapting and innovating public forums is essential. Having these online forums coordinated by city authorities and attended by key urban actors will potentially allow for innovation partnerships to continue to grow both in importance and in citizen participation.

## **6. Conclusions and Call for Concrete Policy Action: Bridging Policy Agendas**

Fostering cooperation between urban authorities and key urban stakeholders through legal arrangements that shape urban

co-governance partnerships has the capacity to accelerate urban sustainable development and innovation. Local communities and knowledge institutions need to be fully onboard and work together with urban authorities, civil society organizations and local business. These partners can be “the main drivers in shaping sustainable development with the aim of enhancing the environmental, economic, social and cultural progress of Urban Areas”<sup>131</sup>. The analysis developed in this article leads to three main conclusions for this to happen.

First, benchmarking in terms of existing policies, practices and projects at the EU, national and local level has proven that public procurement can be both an enabler and a factor hampering the process. An intervention on public contracts regulatory frameworks would contribute to bringing all cities to the same level and would allow most of the projects to overcome their main challenges. In some of the UIA projects analyzed, legal arrangements for inclusive and innovative partnerships played a crucial role. The recommendations to reform the public contracts to sustain urban innovations such as those at the core of the UIA projects can be applied to other cases. In these projects the mastery of innovative public procurement and partnerships proved to be an obstacle or an accelerator.

As a general remark, the preference of the national legislation for competition as the only guarantee for security and quality of the public procurement procedures results in underestimation of the environmental, social and governance aspects. The UIA projects demonstrate that this could generate a possible loss of territorial economic, social, and climatic value. Through a public procurement procedure based purely on competition it might be difficult to adapt to local environmental and social conditions. The suggestion emerging from the UIA projects is that, when the local ecosystem can satisfy the request, it is preferable to develop local pre-commercial solutions and networks as opposed to acquiring the service on the market from large economic operators or electronic public marketplaces. The basic issue at stake here is the protection of the local environment and the network of local communities and businesses. To achieve this, it is important to tap into local networks directly and support their work to protect the local environment or boost the pooling of

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<sup>131</sup> European Commission, *Urban Agenda for the EU – Pact of Amsterdam* (2016).

their resources to make their places more attractive, thereby strengthening their economic and social bonds, as well as sense of ownership towards their environment and spaces. This can only be done by introducing USDIPs as legal tools based on the territoriality, the level of cross-sectoral integration, the knowledge of local social and territorial context, as well as the climate and social impact.

More specifically, where a publicly owned building is concerned, the national regulatory provisions necessarily normally foresee the sole consideration of the economic value of real estate to award the public contracts. This provision makes it very challenging for the use of these assets for sustainable development, cultural and social activities. While there is the possibility, in general, of evaluating social utility and demonstrating the cost-effectiveness of managing the building for social purposes, it is also true that this is a complicated path, filled with obstacles even for entrepreneurial and skilled civil servants. This procedures and legal tools enabling specific consideration of sustainable development goals should be codified and simplified.

Second, these innovative forms of urban partnerships cannot become self-sustainable without proper financial support. The presence of socially and ecologically minded financial actors is key to building this policy program. Therefore, when speaking of sustainable development through innovation and newly conceived partnerships it is essential to design them as ready to finance instruments sharing a common goal of investing in projects with true and valuable social impact. Sustainable and Social Finance encompasses the set of alternative lending and investment approaches for financing projects and ventures, to generate both positive impacts of society and on the environment<sup>132</sup>. Combining innovation, urban development and concrete, sustainable projects is the framework under which the USDIPs are flourishing. This policy program represents the ingredients needed for the proper fostering of sustainable and resilient cities built on equitable growth and strong community ties.

Third, one of the biggest challenges related to USDIPs is that given their complexity they may not stimulate the participation of actors external to the partnership if they are not involved in the

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<sup>132</sup> See reports and other materials of the *Platform on Sustainable Finance*, available at [https://finance.ec.europa.eu/sustainable-finance/overview-sustainable-finance/platform-sustainable-finance\\_en](https://finance.ec.europa.eu/sustainable-finance/overview-sustainable-finance/platform-sustainable-finance_en)

project since the beginning. The role of urban laboratories (*i.e.* open labs, living labs, houses of emerging technologies, collaboratories and other spaces for experimentation and prototyping, even if they are digital or virtual) in injecting collaboration in the development of the solutions is very relevant to allowing this activity of outreach and engagement. It also ensures coordination both between partners and with external actors under the umbrella of a same and unified vision, even in cases when the interests, motivation, tools and resources available are very different between partners and the tasks are diversified. This is often the case with the prototype and development of complex innovations. The use of physical and virtual spaces for experimentation also brings the different city actors to learn and face together recurring obstacles such as public procurement. Indeed, they are also necessary as physical and technological environments where cities and urban actors can meet, discuss and engage in mutual capacity building processes as well as work out appropriate solutions. These spaces should be utilized to develop concrete experimentations at the neighborhood level through which cities stakeholders can mutually learn from one another and then export to other places.

Finally, the analysis developed in this article has also identified two key needs. First, there is the need to fine-tune this practices and projects with the rapidly evolving EU policy framework implementing the Green Deal Industrial Plan, the 100 Climate-Neutral and Smart Cities Horizon Europe Mission, the new 2021 – 2027 Cohesion policy. The second is instead the need for a more formal recognition of a general principle that establishes and protect the rights of local communities and recognizes the role of scientific actors. They all need to sit not only at the decision-making table but also at the “dinner table” to share a “piece of the pie” which means that when it comes to redistribute the benefits, the shares, the profits they need to be treated as equal partners, much like private and social partners currently are. This is the only way for USDIPs to truly add value to the conversation and represent a step beyond even more inclusive and innovative forms of PPPs.