

# CONCLUSION

## NEW CO-CITY HORIZONS AND CHALLENGES

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The design principles articulated in chapter 5 are based on projects undertaken, surveyed, and studied. However, much of what is exciting about our research and applied experiments in different cities is the potential for the co-city approach to spread and scale beyond the mostly European and US cities featured in our survey results to other continents and thus to other political, social, and economic contexts. Although we identified projects and plans all over the world that have some of the indicia and beginnings of a robust co-city approach, many if not most of these lacked support from local governments or financial investment sufficient to become transformative for urban residents. On the horizon are new challenges from projects in Baton Rouge, Louisiana, and Rome, Italy, which will test the power and saliency of the co-city approach to address endemic racism and injustice in an American city and bureaucratic ossification and wealth concentration in a capital city with one of the richest cultural heritages and most vibrant sustainable innovation ecosystems in the world. These applications raise new opportunities and challenges along with new research questions that we will briefly reflect on as we close out the book.

Looking to the future, we detect seeds of a commons-based approach in parts of Africa, Asia, and Latin America that are characterized by efforts to create new forms of co-governance, co-ownership, and stewardship of infrastructure, goods, and services that serve the most disadvantaged

communities. New commons-based institutions and economies in African cities include the spread of co-created energy communities in African countries like Cameroon, Kenya, South Africa, Uganda (Ambole et al. 2021), and wireless community networks in cities like Cape Town and Pretoria, South Africa. These include the creation of a network of Fab Labs collectively owned by their members which develop alternatives to waste management, mobility, and economic resources. The Labs prototype, build, and test digital tools that can provide business opportunities for the community residents. In 2013, Woelab (Lomè, Togo), which makes technology accessible to all in the community, collectively constructed the first 3D printer built in Africa (Osayimwese and Rifkind 2014). The Ker Thioissane project (Dakar, Senegal) has created a park, a Fablab, and a School of the Commons and organizes many artistic and cultural interventions in the neighborhood.

In Asia, the emergence of Urban Villages in cities like Seoul and various Chinese cities resonates with many co-city principles and with collective-economy-based organizations. Urban villages can emerge from the effort of local officials or from community and/or private initiatives.

For instance, the Seoul Metropolitan Government supported the creation of the Seoul Community Support Center (SCSC) and the *Village Community Movement* (VCM) as forms of community-based economic development at the neighborhood level. The city invests in facilitation of community building to stimulate the creation of cooperatives that deliver services that could make the village self-sustainable, such as food coops, preschools, or co-housing buildings. The inspiration for the creation of urban villages likely derives from the experience of the Sungmisan village, the first urban village to be created in Seoul. This village was founded in 1994 when a group of neighbors joined forces to set up a local childcare center. Today, it includes about seven hundred households as well as seventy businesses and other institutions and runs a Village School and a consumer coop for purchasing ecofriendly goods (Bernardi 2017b).

Other examples of self-sustainable communities built as urban villages can be found in China within large metropolis areas such Shenzhen and Guangzhou (Tang 2015; Chung and Unger 2013). China's urbanization is characterized by the territorial expansion of cities primarily through the expropriation of surrounding rural land and its integration

into urban areas. Urban villages in China emerge when rural villages are geographically incorporated in cities and granted urban administrative status. Chinese urban communities are typically governed by local residents' committees, which are part of the state governance system and responsible for delivering public services. In urban villages, however, it is the village shareholding companies that play a leading role in local governance. The shareholding companies are supposed to focus on economic activities only; that is, renting out collectively owned land or buildings to local factories and investing in real estate or services businesses. However, they also actively participate in community governance and look after the villagers. They provide welfare programs and other community services, sponsor community activities organized by residents' committees, and mediate conflicts between residents. The future of this governance depends on whether and to what extent the urban villages manage to maintain their collective assets and develop their village collective economy. The stronger and more profitable the village collective economy is, the more governance autonomy the village is likely to sustain (Tang 2015).

In Latin America, community land trusts in informal communities and favelas are being adapted to maintain self-constructed communities and to avoid gentrification in areas that are on the periphery of cities like Rio de Janeiro. According to organizers in Brazil, the basic logic of CLT governance and the idea of land stewardship are fitting for favelas that are characterized by residents who can own and sell their homes through an affordable housing market but yet do not own the land on which those houses sit (Williamson 2018, 17–18). That land is, in a sense, owned collectively, and residents' associations and other neighborhood institutions collectively govern the community by engaging in and advocating for infrastructure improvements in the community. However, collective governance of the favelas is precarious because of the tenuous authority that local authorities have over the favelas. Establishing a CLT would formalize this collective governance, represent the community, take action to improve that land, and provide security from eviction and real estate speculation.

Unlike CLTs in the US and Europe, which operate as nonprofit developers of land, CLTs in informal settlements and favelas would serve more to formalize existing housing and community stock. It would require that current homeowners *opt in* to the CLT, allowing the CLT to hold their

titles, in exchange for lower property taxes and long-term affordability (Williamson 2018, 18–21). Communities in places like Rio are drawing inspiration from the CLT in San Juan, Puerto Rico, described in chapters 1 and 2, which includes seven communities that had built five thousand homes informally along the Martín Peña Canal in one of the most densely populated areas of Puerto Rico.

These examples from African, Asian, and Latin American cities intrigue us. We will continue to investigate them, and others, for how strongly they reflect the presence of the co-city design principles. At the same time, we continue to develop and refine these principles and the co-city approach developed in chapter 5 through application in different urban contexts, working with local partners and a constellation of knowledge institutions, public officials, and private enterprises. We describe two of those projects below and the ways they are challenging the co-city approach, on the one hand, while expanding its reach.

### **ADDRESSING STRUCTURAL RACISM: CO-CITY BATON ROUGE**

The Black Lives Matter (BLM) protests around the world have drawn attention to the structural nature of racism and its devastating effects on Black communities. Nowhere is the legacy of racism and discrimination more evident than in the US, where this contemporary movement was born. More than fifty years after its historic Civil Rights Movement, and federal desegregation efforts, the US continues to suffer from persistent and deep racial segregation. This racial segregation and geographical stratification are particularly notable in US cities of all sizes with significant African American populations. This segregation is partly a legacy of legally segregated neighborhoods from the mid-twentieth century Jim Crow era and also from continuing discrimination in housing and financial lending, as well as the enduring racial preferences of whites choosing to live near other whites (Rothstein 2017). Many segregated American cities are the product of mid-century *White flight* to newly built suburbs, which excluded Blacks, in order to resist the racial integration taking root in urban schools and neighborhoods. The resulting infrastructure decay and capital disinvestment in these areas over the past forty-plus years have underscored the need for revitalization and equitable development in these urban neighborhoods.

Unfortunately, the US federal government's *urban renewal* and urban revitalization policies, as well as local efforts, have historically left these communities short of economic rehabilitation and often did more harm than good. Although urban renewal policies and practices have shifted over the decades, leading to important distinctions between the older mid-century efforts and latter twentieth-century and more contemporary efforts, one recurring pattern between the two periods is the focus on stimulating the redevelopment of underutilized areas located near central business districts across the country (Hyra 2012). The result has too often been displacement of Blacks, particularly the poorest, from central city neighborhoods with rising land values, and simultaneously the abandonment and persistent disinvestment of Black neighborhoods on the periphery of the urban core. Because of this history, many Black urban communities are deeply distrustful of any top-down policies and planning solutions that have not empowered their residents or community-based institutions.

The widespread economic inequality and deeply rooted, persistent racial segregation in America provides an opportunity to demonstrate the transformative impact of the co-city approach. For this reason, the application of the co-city model in the US has focused on cities and communities that continue to feel the effects of the historical legacy of racism for far too long. The first application of the co-city protocol in the US was used in Harlem, New York, to address the *digital divide*—that is, the inequitable access to the internet of low to moderate-income, residents of color—in an otherwise “smart city.” The project sought to leverage the example of user-created and collectively managed wireless “mesh” networks created in different cities in the Europe and the US, and principles of digital stewardship, to sketch a co-created, community-managed network computing environment (Foley et al. 2022). The lessons from that project—specifically the pre-conditions for collaboration, which include trust-building and power asymmetries between stakeholders—have been carried over to a project with a set of broader challenges in a different urban context but with similar legacies of historic injustices and contemporary inequities in access to essential goods and services.

In 2019, the Co-City Baton Rouge (CCBR) project launched by partnering with a local redevelopment authority, Build Baton Rouge (BBR), and their mission to revitalize the historically African American Plank Road

Corridor of Baton Rouge, Louisiana. Plank Road was once a thriving commercial corridor but over the years has suffered from the white flight and disinvestment of similar Black communities in the US as well as from deeply flawed urban renewal practices. The City-Parish of East Baton Rouge (the city), where Plank Road is located, has a population of approximately four hundred fifty thousand and demographically is about 50 percent white and 50 percent African American. The surrounding urban metro region, referred to simply as Baton Rouge, is the capital of Louisiana and has a population of approximately eight hundred thousand.

Baton Rouge is spatially segregated by race and income, in what some describe as a tale of *two cities*, with higher-quality housing, amenities, and transportation in white areas and a lack of these amenities in Black areas, one of which is Plank Road. Plank Road extends for over four miles and varies in the character of its built environment. Sidewalks, although present, are inconsistent and not continuous. The Corridor is bordered by mostly commercial land uses, with residential uses in the intersecting side streets and extending for several blocks in either direction. The northern end of the Corridor contains more established businesses and is considerably more developed, whereas the southern and middle portions of the Corridor are considered severely *blighted*, with hundreds of vacant lots and dilapidated buildings. While many of the city's social and economic challenges are concentrated along this Corridor, Plank Road is also a significant anchor for the surrounding neighborhoods because it contains numerous assets. These assets include not only the available land and buildings that hold the opportunity for productive reuse but also strong social and civic organizations and institutions.

Over the last thirty years, there have been many failed efforts to revitalize the area. However, a 2019 Plank Road Master Plan has opened the door for a different approach to revitalization through extensive community engagement. Inspired by this master planning process, which envisions the installation of a ten-mile Bus Rapid Transit line that runs through the city that will economically transform the project area, BBR began to institute the highly iterative and deliberative co-city protocol and adapt it to this community and city. The collaborative approach of the protocol was designed to build on the work done during the master planning process to develop and implement projects that are addressing the needs that

the local community have articulated—specifically, affordable housing, accessible green space, access to economic opportunity, and local capacity building.

As a first step in breaking from the legacy of urban renewal efforts in communities such as Plank Road, the redevelopment authority rebranded itself in 2019 under its new leadership. Previously known as the East Baton Rouge Redevelopment Authority, the then-president and chief executive officer Chris Tyson wanted to position the organization to be more akin to an urban laboratory that engaged the communities with which it works to solve its challenges and shape development outcomes. Tyson initiated a four-month visioning process in which the organization (through a consultant) conducted surveys and met with residents and stakeholders across the parish to arrive at a new identity and strategic vision. Part of the new vision of the agency is to “advance partnerships to build community-wide capacity” and to “bring people and resources together to promote equitable investment, innovative development, and thriving communities” ([buildbatonrouge.org](http://buildbatonrouge.org)). Tyson understood that the new agency name and mission could not be only a matter of branding but must represent a new approach to development and revitalization of local communities that have been historically deprived of investment and virtually ignored as potential agents of their own revitalization.

Working closely with BBR, the focus of CCBR is on increasing the capacity of this community to pool resources with other local actors that will enable residents to determine how best to govern the process of neighborhood regeneration. The approach to resident-driven revitalization includes promoting “community wealth building,” a concept rooted in systems/network theory that creates an inclusive, sustainable economy built on locally rooted and broadly held ownership of community assets. CCBR is developing a portfolio of innovative co-designed and co-governed prototypes designed to prevent widespread gentrification, to create new kinds of community goods (such as housing, parks, and micro-entrepreneurial space), and to establish new institutions for community stewardship of these goods.

The CCBR prototypes to date include a co-designed Community EcoPark and a hybrid community land bank and trust (CLBT). These prototypes are made possible by the existing BBR Land Bank, enabled by state statutory

authority, which has acquired and is assembling vacant land to be used for developing prototypes that meet a range of critical needs related to social and economic determinates of health and overall well-being. The newly created Community Land Bank and Trust, in particular, will support the community-driven development of land under BBR's control for housing, green space, and commercial uses.

The CCBR projects' focus on community-driven, co-created development is happening at a time when local governments are beginning to partner with African American communities as a way to address the legacy of systemic racism in the US. The City of Seattle, for instance, recently announced that it would transfer one million dollars and a decommissioned fire station to a local community land trust in a historically Black neighborhood, the Central District (Scruggs 2018; City of Seattle 2020). The grant from the city is designed to help the Africatown Land Trust develop affordable rental housing, homeownership, and business opportunities in the district. The fire station will be used to establish a Center for Cultural Innovation in the neighborhood, a collaborative effort between the community and the city's Department of Neighborhoods and Office of Planning and Community Development. These public-community partnerships are one way to address calls for racial justice, as the city of Seattle recognizes. "We at the City of Seattle understand the urgency behind making bold investments in the Black community and increasing community ownership of land in the Central District" (City of Seattle 2020).

The CCBR project is in its third year and has attracted significant financing from both local and national foundations. This new financing will support ongoing efforts to increase the capacity of community members to continue to engage in the design of these institutions and their governance structures as new investment flows into their community. Part of the co-city protocol, referenced in chapter 5, is mapping the assets—including material, social, institutional, cultural, digital, and others—that are available in a community before putting in place a particular institutional or policy prototype. As decades of community economic development literature has shown, identifying and leveraging existing community assets enables collective solutions by building on existing associations, organizations, relationships, and other local resources (Kretzmann and McKnight



1993). When paired with financial and technical assistance, even the most disadvantaged and marginalized communities can robustly participate in the creation and sustainability of neighborhood-based development and revitalization.

Ultimately, CCBR is thinking bigger, beyond the Plank Road area, to scale up and adapt the process and outputs across the Baton Rouge metro region. To do so requires that at the end of the project there will be an evaluation of the programs and policies that have been implemented. The evaluation will include both qualitative measures, undertaken through surveys of all participants of the process, and quantitative measures. The evaluations of the process will allow predictions of what policies and programs will be successful and what adaptations may be useful or necessary to increase the likelihood of successful interventions. Armed with the results and lessons of this evaluation, the hope is that the co-city approach can take root in other American cities that are characterized by persistent racial segregation and economic stratification, dis-invested and forgotten neighborhoods, with significant assets and resources (material and social) that can be leveraged to create new collaborative ecosystems that enable inclusive enterprises so that these communities can thrive.

### **SCALING UP: CO-ROMA**

One open question often posed about the co-city model is whether, and how much, it can scale to global or capital cities. It is one thing to activate collective action around shared resources in specific neighborhoods, or focused on a specific resource (e.g., a park, a community garden, wireless network), or to launch a citywide collaboration policy of public-community partnerships in a place like Bologna, Turin, Naples, or Reggio Emilia. Although these are cities with sizable populations, they lack the administrative and political complexity of Rome or New York City, for example.

Rome as the capital city of Italy is a city of contradictions. Standing as the country's second most economically productive city, after Milan, it represents 9.4 percent of the share of the national GDP (UN-Habitat 2016). Yet, the City of Rome presents surprisingly elevated indicators of social and economic vulnerability, high unemployment rates, and significant disparities in wealth distribution and health conditions with large numbers

of families in danger of falling into economic distress and diseases (ISTAT 2017; Lelo et al. 2021). Although Rome was at the heart of the Italian *commons movement*, it is also a city that has to date not been able to recognize or implement effective legal or policy protections for collective management or governance of its rich and varied community spaces.

The Co-Roma project was established in 2015, with the support of ENEA, the Italian National Agency for New Technologies, Energy and Sustainable Economic Development, and the Horizon 2020 OpenHeritage EU project. Co-Roma is designed to test whether and how the co-city approach can apply to a large metropolis. The Co-Roma project grew out of the university-based urban collaboratory, a concept that we described in chapters 4 and 5, to test the saliency of the design principles in relation to different types of urban commons, especially abandoned assets and underdeveloped infrastructure. The project has taken root through a focus on activating collective and collaborative governance of urban essential infrastructure and resources. Such infrastructure and resources include the city's natural resources (i.e., Tiber and Aniene rivers and several urban parks), energy provision, housing, culture, and heritage in distressed areas and neighborhoods of the city (Cellamare 2017).

Some milestones of the Co-Roma project thus far are the establishment of a coalition of social actors (Agenda Tevere), an agreement for the sustainability of the urban segment of the Tiber River, a community association established to safeguard the local cultural heritage according to the Faro Convention, a treaty recognizing the importance of local heritage to communities and society, and a multi-purpose neighborhood community cooperative (CooperACTiva). The cooperative will catalyze the development of three distressed neighborhoods' assets into sustainable tourism, urban farming, and communal energy enterprises.

In pursuing co-governance of the city's rich and varied community spaces, cultural assets have emerged as a key entry point, particularly in the most economically distressed areas. The Co-Roma project is seeking to implement the principles of the 2005 Faro Convention, specifically on the value of cultural heritage, through the establishment of a Faro Community (pursuant to article 2 of the Convention) and the establishment of public governance mechanisms that enable the "joint action" of community, public, social, cognitive, and private stakeholders.

The first major step toward co-governance in the project was to establish a foundation for the care and regeneration of the historic Tiber River, which runs through the city of Rome. The river is important to the cultural heritage of Rome, to which city inhabitants are strongly attached, and is also part of the critical green infrastructure of the city. The *Tiber for all* (Tevere per Tutti) foundation is the result of a process initiated by a coalition of civic, social, private, and scientific partners grouped within Agenda Tevere, a nonprofit association. The foundation was identified by the coalition as the most appropriate institutional tool to pool different actors and to raise the necessary resources to regenerate the river banks, promote the capacity building of local administrators on the issues of environmental preservation and sustainable development, support data collection and analysis on various uses and activities that take place on the river banks, and partner with knowledge actors active in the city (i.e., universities and applied research centers) to carry out field experiments exploring sustainable uses and regeneration activities of the river.

Due in large part to the efforts of the Agenda Tevere coalition, Sapienza University, and Luiss University (specifically the LabGov), the Regional Council of the Lazio Region approved a law (Lazio Region law no. 1 of 27 February 2020, article 20) mandating that the Governor establish the foundation. The Lazio Governor's office has already kick-started the implementation phase by passing a motion that activates the legal process to incorporate the foundation. In the meantime, thanks to the Agenda Tevere coalition, the first co-governance mechanism was established through the signing of the Tiber River contract in February 2022.

The second and most complex field experiment of the Co-Roma project, GrInn Lab, emerges out of the Luiss University LabGov's Urban Transdisciplinary Clinic which has been laying the groundwork for the field research program since 2015. This groundwork included attracting grants for the energy community project from the ENEA and the Horizon2020 program, as previously mentioned. LabGov also proposed to establish and implement a *smart co-district* as a way to implement the co-city principles and cycle in distressed neighborhoods around the city (Meloni et al. 2019). The initial phases of the co-city approach, including data analysis and mapping, revealed that the southeastern district of the city—where the Alessandrino, Centocelle, and Torre Spaccata neighborhoods

are located—has the highest indicators of social and economic distress. These neighborhoods present very low Human Development Index values, with the lowest value and lowest income levels in the Torre Spaccata area (Lelo et al. 2018; d’Albergo and De Leo 2018; ISTAT 2017).

The university-based urban collaboratory seeks to revitalize the above-mentioned neighborhoods through the co-city cycle, described in chapter 5. The cheap talking and mapping (both analogic and digital) phases identified the key entry points for collective action as neighborhood identity, culture, and heritage. Each neighborhood contains significant cultural heritage and green infrastructure, including Roman ruins and major parks such as the Public Archeological Park of Centocelle that hosts two Roman villas, Villas Ad Duas Lauros, and Villa della Piscina (Gioia 2004), as well as the first military airport which opened in 1909. The park is currently located in the middle of a highly urbanized area, and it is only partially accessible to the public. It has never had great appeal either to tourists or to the local community due to the poor conditions of the area, which also host illicit activities that pose security threats to city inhabitants (Celauro et al. 2019). Other cultural assets include the Osteria di Centocelle, the historic Tunnel of Centocelle, and the Tower of Centocelle or San Giovanni Tower.

City agencies with responsibility for this district have failed to leverage the richness of this culture and heritage to develop and improve the neighborhoods within it. On the other hand, neighborhood residents and activists have coalesced into a movement to claim rights on, and to protect, this heritage. Through the co-city process, Luiss University’s Lab-Gov has helped to institute co-design laboratories, organized microregeneration activities (including the creation of community gardens in each neighborhood and placemaking activities to preserve the neighborhood’s heritage, and other activities), and created a legal association for the collective action of local residents to care for their parks (the Community Association for the Public Park of Centocelle). The development of neighborhood labs has allowed residents to identify and focus their efforts on the establishment and sustainability of neighborhood collaborative welfare services, distributed energy production, and heritage-based sustainable tourism. The collaboratory processes also confirmed that the *co-district* is the most suitable scale to experiment with urban co-governance, given

the territorial coalescence between the three neighborhoods (i.e., social, economic, and infrastructure) (Calafati and Veneri 2013).

Another significant Co-Roma development is the establishment of CooperACTiva, a multipurpose neighborhood community cooperative incorporated in December 2018. The community cooperative was established in order to leverage the social and economic pooling of efforts and resources that were already deeply rooted within the three neighborhoods. The business plan for the cooperative is based on three kinds of investments. The first requires a minimum initial investment and generates revenues from the sale of sustainable tourism services. The services developed by the community enterprise include citywide bike tours, electric mobility services at the neighborhood level, and a local food-based heritage promotion activity. The second is real estate investment and urban farming. The cooperative is exploring the acquisition of a large piece of land in order to revitalize and manage an existing urban farm. The third investment is to create an energy community from existing community resources—human skills, infrastructure, and available equipment—that would serve as a local node of a large network of energy communities. The by-laws of the cooperative contain a reinvestment clause that ensures that the district benefits from the pooling of human capacity and physical infrastructure and assets, and not just a small group of the most active residents and activists. This by-law clause requires that 30 percent of revenues must be reinvested in projects for the improvement of the neighborhoods even if they benefit residents who are not members of the cooperative. This allows for a collaborative economy, in which financial benefits flow more widely to sustain the various social enterprises and community-based activities of the cooperative.

Finally, Luiss LabGov established the social start-up GrInn.City to support the Co-Roma project through self-sustaining agriculture activities and the provision of adequate housing around the city. The agriculture work was inspired by the Luiss University community garden, which was the first field experimentation that LabGov researchers and students engaged in beginning in 2014. As part of that effort, LabGov students and researchers designed a governance plan to collectively maintain the garden space, co-managing it with university offices. This collaborative governance model,

which students had to learn by practicing it, was later exported from the University into the city of Rome.

Luis students created five satellites of the university community garden, leveraging their own fieldwork. The first one was developed inside a community space dedicated to children and their families in the Centocelle neighborhood, which is still used as an educational garden. The second one was created and donated to a Roma family informally living in a private space of the Centocelle Archeological Park. The third one was set up in Torre Spaccata, inside a public library, where people with disabilities (thanks to a local NGO) have the chance to manage the space. Each of these three community gardens was conceived with adaptive features based on the different urban context.

This field experimentation led students to deepen the study of urban community agriculture and food policy in Rome, which in turn has led to the establishment of two more gardens with educational missions—one in a primary school and the other in a museum (that studied the Luis LabGov and Co-Roma management model to replicate it thanks to the funding of the Erasmus+ EU program). The creation of this network of schools, museums, neighborhoods, and university community gardens has led to a collaboration between Confagricoltura, the General Confederation of Italian Agriculture Industries, which represents and protects Italian agricultural identity, and LabGov for a research project on agriculture. Together, LabGov and Confagricoltura has been working on the creation of a digital platform devoted to the collection of data on food consumption and supply chains in order to make the agricultural industry and consumers aware of urban consumption trends and to thereby reduce food waste. The project involves the digital transformation of participating urban gardens in the city, using a system of small solar panels, to assist urban gardeners to collect and deliver data to the digital platform. Students and urban gardeners will be the first owners of the platform and the data. A connected strand of work will involve designing and refining the legal and governance aspects of community gardening in Rome, informed by lessons learned through the Ru:urban network project, to which LabGov students have contributed. That project funded was devoted to the creation and strengthening of a municipal regulation on urban gardens and agriculture (Karamarkos 2018). This regulation is

considered to be the only real achievement for the commons movement in Rome, at least in terms of legal recognition of community rights to co-construct and co-govern shared infrastructure and assets.

A closely related strand of work of the start-up GrInn.City is devoted to self-sustaining adequate housing units. This strand too derives from the work of LabGov students, researchers, and practitioners and their experience gained over the years working on public and social housing policy. This work, done in collaboration with Federcasa, a federation of more than a hundred public agencies that build and manage public and social housing in Italy, has led to the development of a study that was partially synthesized in a book, *Housing for All* (Iaione et al. 2019). This work and experience will lead to the development of prototypes for different forms of self-sustaining housing units to be developed with Federcasa and the city of Rome. This collaborative housing project will be crafted using new technologies, such as blockchain technology, and new legal vehicles and instruments, such as “renewable energy communities,” recognized by article 22 of the 2018 EU directive on the promotion of the use of energy from renewable sources. The business model will be based on the sale of the energy produced and will redirect surplus revenues toward other less profitable, but not less important, community welfare activities such as community-based healthcare services.

Last, the activity developed by LabGov in Rome led Luiss to become one of the main partners of the city of Rome within a major state-funded program: “House of Emerging Technologies.” The program is part of an investment plan of the Ministry of Economic Development to support large broadband emerging technologies, starting with cities conducting 5G-related experimentations (Turin, Rome, Catania, Cagliari, Genova, Milan, Prato, L’Aquila, Bari, and Matera) (Mise Gov n.d.). The Rome project, named the Rome Open Labs, foresees the drafting of a 330 million euros worth Urban Integrated Plan for the Metropolitan Authority of Rome. The plan would sustain the innovation and climate change adaptation in the metropolitan city of Rome. The plan will also become the pillar of the Rome dossier for the candidacy to host the EXPO2030 exhibition. The Rome Open Labs will be physically hosted in freshly renovated spaces within the area of the Tiburtina train station to create a technology district in the heart of the city. The first project within the Rome

Open Labs creates a collaboratory in Rome with the city in cooperation with Luiss and three technical departments at other universities within the city (i.e., Sapienza Innovation, Tor Vergata School of Engineering, and Roma Tre Information Engineering Department) alongside several technical and corporate partners (Comune di Roma n.d.).

## LOOKING AHEAD: OPPORTUNITIES AND CHALLENGES

Our involvement in the ongoing Co-City Baton Rouge and Co-Roma projects promises to yield new insights and challenges for the co-city approach. However, we are also mindful of the existing challenges that the co-city approach poses for future research and experimentation grounds. In closing, we identify five open questions or takeaways that will shape future applications of the co-city approach.

First, the co-city approach and its implementation are intentionally conceived of and designed to further inclusive city-making and to further social justice and racial justice. The most structurally disadvantaged and distressed neighborhoods and communities stand to benefit the most from our co-city approach. However, it is naïve to believe that any approach, including ours, is a panacea for what are fundamentally structural and systemic challenges in so many places around the world. The Black Lives Matter movement, and specifically the 2020 protests, underscore the depth of the challenge of institutionalized racism and inequality around the world, for example. Similarly, the headwinds faced by the commons movement in Europe, but specifically in Rome, has failed to gain sufficient formal and legal recognition over the last decade or so in large part because of vested interests entrenched in an old-fashioned urban development model.

These deep, structural changes face intense resistance all over the world. The approach that we propose here can be part of that change, but it too faces resistance because it requires disrupting current dominant economic models and social belief systems. Overcoming this resistance requires nimbleness and adaptability in applying the model. The most important lesson for us is, first, to listen to communities. At the same time, however, we must create bridges to other urban stakeholders and enable collective action, where possible, through inclusive and transformative deliberative processes. As we have argued in the book, this often



benefits from the creation of public-community partnerships or public-private-community partnerships.

Second, there remains the challenge to attract to these urban commons institutions and co-city experiments financial institutions and private investors seeking social and sustainable investments rather than mere financial returns and profits. Although many of the projects, past and ongoing, have attracted significant state and philanthropic financial support, private sector investments too have the potential to become an enabling force. One hopeful sign is that financial investors are looking for impact to measure what they call “additionality” (European Investment Bank 2018) and “profit and purpose” (Fink 2019; 2020).

At the same time, we are also conscious of the risks of opportunistic behavior in the private sector. This implies that financial institutions nudge markets to advance social impact and environmental objectives such as climate-neutrality, climate mitigation and adaptation, sustainable use of resources such as water and marine resources, prevention and reduction of pollution, and protection and restoration of biodiversity and ecosystems.

Potential opportunities for responsible and transformative investment in co-city initiatives could result from the effort to develop an environmental, social, and governance (ESG) value proposition for private investment in financial markets. This effort is supported by emerging regulation, at least in the US and the EU, which would help steer financial investment away from environmentally harmful industries, possible misconduct issues, and potential governance failings. The European Union recently introduced Regulation (EU) 2020/852, known as the Taxonomy Regulation, which establishes an approach aimed at facilitating sustainable investment, as well as a platform for monitoring its implementation. The platform recently published a report on social taxonomy, which includes among its objectives the creation of “inclusive and sustainable communities and societies,” which implies respect and support of human rights and emphasizing issues such as improving/maintaining the accessibility and availability of basic economic infrastructure and services like clean electricity and water for certain vulnerable groups or groups in need (Platform on Sustainable Finance 2022).

Third, commons-based legal and policy models are powerfully suited to guarantee accessibility and availability of basic economic infrastructure

and services. Indeed, commons-based legal and policy models can introduce reinvestment clauses on urban infrastructure and services thereby guaranteeing that part of the value produced is captured by locals and residents. This legal and policy solution is the only one that can enable the “external mutualism” ingredient that ordinary cooperatives do not guarantee by design. We are aware of the legal and policy innovation that these models demand and also of the potential failures due mainly to the self-serving and opportunistic behavior that still animates many urban actors, including community representatives.

Fourth, we are aware that our analysis and our field research are based mainly on cases and experience taking place in developed countries, mainly the US and the EU. It is therefore crucial in the coming years to broaden the scope of the analysis and experimental work in a diverse set of countries to understand if and how the co-city approach can be adapted to contexts in which the quality of democracy or the institutional capacity is significantly lower and knowledge institutions enjoy fewer resources and funding opportunities. Communities and the civic nonprofit sector might be the driving force in these contexts. Knowledge actors and international organizations can be of assistance by redirecting or redesigning their cooperation or their cooperation programming in developing countries through the lenses of the co-city approach. An early attempt to work in Accra, Ghana, with the Ghana Institute for Public Management and a local NGO was a step toward identifying the potential and limits of the model in a developing economy in the Global South (Galizzi and Abotsi 2011). These efforts, by us and others, must continue there and in other parts of the world to demonstrate that the co-city approach can be constructed by observing, working in, and learning from a diverse set of cities. Only then can the co-city approach be proposed as a universally valid vision for a just and democratic self-sustaining city.

Last but probably the most important point of our personal intellectual journeys is that scientific, knowledge, education, and cultural institutions like research centers, universities, schools, museums, and libraries can play an important role by acting as brokers of strong alliances between individuals, the public sector, the private sector, and social or civic actors. They can help safeguard and protect community interests, acting almost like independent authorities to defend and represent the interests of the

weakest voices. We have seen how they can serve the role of entrepreneurial, enabling platforms. They must also decide to boldly invest in the capacity building of individuals and communities in order for the kind of co-governance that we describe here to work in the most disadvantaged and marginal communities. We also need to accept the fact that not everybody in the community and not every community or neighborhood is ready or willing to be entrepreneurial, or be able and willing to create economically diverse systems through an urban-commons-based approach.

Equally important is that knowledge institutions can be the space where future generations can self-empower and equip themselves to join the fight for a just ecological, technological, and digital transition. Indeed, sustainable development implies an intergenerational solidarity: present generations shall act having in mind that they bear a duty towards future generations who hold a right to the future, which they share also with other species that have no voice or agency in the present.

The rights of future generations have already been codified in laws and even case law. For instance, according to the 2021 German Constitutional Court decision, Article 20a of the German Basic Law implies “the necessity to treat the natural foundations of life with such care and to leave them in such condition that future generations who wish to carry on preserving these foundations are not forced to engage in radical abstinence” (Federal Constitutional Court 2021). Similarly, in 2022, the Italian Constitution has been modified to follow in the footsteps of eighty-one other constitutions by establishing that the Republic (not just the state and therefore every individual, much like every social or territorial autonomy) must safeguard the environment, biodiversity, and the ecosystem “also in the interest of future generations.” And this addition has been inserted in Article 9, the same article that establishes that “the Republic promotes the development of culture and scientific and technical research,” and that it safeguards “landscape and the historic and artistic heritage of the Nation” (Italiano Legge Costituzionale 2022).

We believe that what is still missing is the design and implementation of policies that on a large scale can promote an intergenerational alliance to spread knowledge and take joint action about the daunting common challenges that the planet and all its species will have to tackle in the near future. The diffusion of this knowledge and collective action can help

change the culture and behaviors of present and future generations and enlist their vast majority in implementing effective solutions to dangers that threaten the future existence of the Earth and all its species. At the same time, we are still missing procedures that give voice and agency to those that have no voice and no agency in the present, especially in its decision-making institutions and processes. Younger generations, other species, plants, and animals, and the not-yet-existing generations and species do not get to participate in the present electoral cycles that representative democracy periodically grants. Participatory, deliberative, associative, and collaborative democracy processes, tools and institutions need therefore to become increasingly more relevant if we want to safeguard future generations, as much as the future of the planet and democracy itself.

Thanks to the lessons learned through the co-city project, it is our strong conviction that intergenerational collective action, deliberation, and an alliance of minds and energies can take place or be accelerated within or with the support of knowledge institutions. It is also our firm belief that the presence of knowledge institutions can strengthen further public and social institutions' role in making sure that digital, technological, and ecological transition processes do not happen at the expense of the interests of the poor, the disenfranchised, those discriminated against, and therefore may contribute to building a more equal society and markets, as well as to the improvement of the quality of democracy by changing the way public institutions work.

The efforts developed and energies spent to research, experiment, and practice the co-city approach also made us realize that we need to build on the pillars of open science, citizen science, city science, and more generally responsible research and innovation for a new framework of analysis and engaged research that can guide younger generations willing to serve the interests of the planet, all its species, and their future generations in particular those that have no or reduced voice and agency. After all, the city is a wonderful classroom where everyone can learn and an unbeatable laboratory where everyone can experiment with new ideas and approaches. Therefore, we hope that the co-city approach will inspire present and future generations of researchers to initiate a co-science project that can transform cities into laboratories for experimentation and learning toward a just and democratic ecological and technological transition and therefore sustainable development.

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# Co-Cities

## Innovative Transitions toward Just and Self-Sustaining Communities

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