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A GOVERNANCE MODEL FOR LOCAL DEVELOPMENT

IN THE TWIN TRANSITION ERA

A MULTIPLE CASE STUDY ANALYSIS ON THE CONTRIBUTION OF SOCIAL SCIENCES AND HUMANITIES AND EUROPEAN PROJECT MANAGEMENT

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Beyond.

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Introduction

Coraggio è reazione attiva ai pericoli individuali e collettivi. Esso è dunque il contrario di indifferenza, di inazione, di passività. È il contrario di rassegnazione.

Il coraggio è virtù da cittadini consapevoli e, in un'accezione più ampia, da persone che accettano la responsabilità di essere umani. È una dote del carattere ma anche dell'intelligenza, e consiste tra l'altro nell'accettazione dell'incertezza e della complessità.

Sia chiaro: non l'accettazione dell'esistente. Inteso in questa accezione il coraggio è l'esito di una scelta e di una pratica; è la forza di affrontare il mondo consapevoli della sua complessità ma anche della nostra capacità di cambiarlo.

Convivere con l'errore e l'incertezza implica coraggio; implica un approccio cauto (il coraggio è cauto, la temerarietà è imprudente) e dunque gentile, al tentativo di trasformare il mondo e di dargli senso.¹

Giancarlo Carofiglio

Della gentilezza e del coraggio. Breviario di politica e altre cose, Feltrinelli, Milano, 2020.

It takes great courage to face this time of complexity and uncertainty and equipping ourselves with social and collective intelligence may be the right key to trying to change the world we live in with prudence and purpose.

The challenges posed by the hope of reaching a sustainable local development in the context of the European Union's green and digital transition (Twin Transition) are

¹ English translation: 'Courage is an active response to individual and collective danger. It is the opposite of indifference, inaction and passivity. It is the opposite of resignation. Courage is a virtue of conscious citizens and, more broadly, of individuals who accept the responsibility of being human. It is a trait of character, but also of intelligence, and it consists, among other things, in the acceptance of uncertainty and complexity. To be clear, it doesn't mean accepting the status quo. Understood in this way, courage is the result of a choice and a practice; it is the strength to face the world with an awareness of its complexity, but also of our ability to change it. Living with error and uncertainty requires courage; it requires a cautious approach (courage is cautious, recklessness is reckless), and therefore a gentle one, in the effort to transform the world and give it meaning'.

multifaceted, requiring governance systems to navigate a dynamic landscape shaped by environmental imperatives, technological innovation, and a strong demand for social inclusivity. This thesis examines the EU's approach to local development, proposing an integrated governance framework designed to enhance the capacity of local systems to address these complexities. It highlights the importance of rigorous yet adaptable governance model capable of aligning diverse stakeholder interests, leveraging local strengths, and integrating shared knowledge to foster sustainable development.

Local development is a concept that evolves with the communities that inhabit the territories: communities are constantly evolving, which is why it is so complex to capture the meaning of this concept in a fixed definition. What makes this field so interesting is its potential capacity to leave space, in a "small territory" to a complex system of relationships and interactions between different actors. For this reason, local development is closely linked to governance structures and their evolution towards multi-level and decentralised forms that seek to support and strengthen such development. Local territories have played different roles in influencing the transformation of existing approaches to local development and the European Union has been instrumental in this process, providing frameworks and funding to support innovative and region-specific development strategies. In the context of the Twin Transition the challenge becomes even more interesting.

The transition to a greener and more digital society is not merely a technological or economic shift but also a profoundly social and relational one. As this thesis argues, meeting the challenges posed by the Twin Transition requires governance systems to move beyond conventional approaches, adopting strategies that promote systemic innovation, inclusivity, and resilience. While the EU has provided significant policy frameworks, funding mechanisms, and tools to support local development, the ability of governance systems to adapt these instruments to specific territorial contexts remains critical. This ability hinges on a transition from basic, reactive governance structures to advanced, participatory models that prioritise collective intelligence and co-creation.

In response to the growing urgency for a green and digital transition within Europe, the present investigation seeks to design a framework for an integrated governance model tailored for local development. Anchored in a human-centered approach, the perspective adopted throughout the research explores Social Sciences and Humanities (SSH) and project

management (PM) methodologies, as crucial instruments capable, together, to address the complex, multifaceted challenges facing regional and local contexts. SSH disciplines are analysed as valuable frameworks for understanding social complexity and translating their results for the promotion of community engagement, social inclusivity, and participatory governance. Project management, treated here as a strategic and interpretative tool, is used as a methodological instrument to coordinate efforts across diverse stakeholders, embodying the QH model of collaboration among government, industry, academia, and civil society.

The proposed framework for integrated local governance offers a layered perspective on how governance capacity can evolve over time. By analysing governance "postures," this framework sheds light on the way and the extent to which stakeholders can be engaged and knowledge systemised to promote sustainable local development. It highlights how the progression from a passive adaptation governance posture to interest-driven, compliance-focused, and ultimately collective intelligence-based governance system can support local development. This progression underscores the transformative potential of participatory governance and its capacity to balance local needs with broader policy goals, aligning the governance process with the vision of the EU's Twin Transition.

Furthermore, the thesis aims to bridge theory and practice by proposing a governance model that has the potential to be tested and adapted in other territories. It acknowledges the importance of local culture, historical governance practices, and economic structures in shaping governance systems and explores how these factors can influence the success of achieving advanced integration levels.

The investigation does not intend to provide an evaluation of SSH's research and its impact, rather it will try to create a context in which SSHs disciplines and social values in general can be useful by complementing the knowledge and expertise of other sectors and actors within the local governance and in the local development area. SSHs and PM are chosen as governance tools capable of generating a foresight strategy aimed not only at anticipating Twin Transition's challenges but also at opening pathways for future-oriented solutions founded on the real needs of local communities. The fusion of SSH with PM creates a foundation for transdisciplinary collaboration, strengthening our understanding of future scenarios and enabling holistic responses to emerging issues. This integrative framework

presents a flexible, strategic foresight model adaptable to varying territorial characteristics, enhancing resilience and fostering a shared vision for sustainable development.

In doing so, this thesis contributes to the growing body of research on governance in the era of the Twin Transition, providing insights into how local development strategies can become more inclusive, innovative, and responsive. Ultimately, it seeks to offer a robust and flexible roadmap for policymakers, practitioners, and stakeholders to navigate the challenges of local development while seizing the opportunities created by the Twin Transition.

Chapter 1 provides a detailed theoretical overview of the European Union's approach to local development, exploring its historical evolution, current strategies, and specific EU funding programs. Historically rooted but only recently formalised, local development integrates socio-economic and environmental goals. It is characterised by its adaptable approach across disciplines, with a focus on how economies and institutions interact locally and internationally.

EU policy supports local development through policy frameworks and funds, and it aims to move beyond traditional industrial development models by emphasising sustainable and inclusive approaches. With Cohesion Policy, the EU highlights the crucial role of territorial cohesion, aiming to address disparities across regions, promoting subsidiarity, and the place-based approach to advocate for tailored policies, multi-level governance and cross-sectors partnerships to address local needs and peculiarities. In this context, territorial diversity is promoted as an asset to be defended and supported through specific local development policies and actions, without undermining its distinctive features. Only through multi-stakeholder cooperation can truly integrated planning be achieved without compromising the tangible and intangible heritage, resources and potential of local territories. In this framework, the Twin Transition plays a crucial role. It could be potentially destructive for local communities if not understood and well managed, or, on the contrary, be a unique opportunity for sustainable development in the long-term strengthening local resilience.

Chapter 2 explores the complex concept of “governance” through a deep theoretical analysis. The boundaries within which this research is developed are defined by specifically referring to local governance as a framework capable of balancing the challenges and harnessing the potential of the Twin Transition by nurturing relations between all the actors involved. All the actors of the Quadruple Helix (QH) model (public authorities and policy

makers, academia and research institutions, industry and business, civil society) are presented as protagonists in a system of interrelations, systemic cooperation for the sharing of knowledge and expertise and shared responsibility towards local development initiatives.

The local governance perspective proposed finds its foundations in a human-centered approach, particularly attentive to participative and co-creating strategies to better target local communities' needs through the involvement and engagement of citizens in decision-making process as active agents of change and not only passive final beneficiaries. To this end, the role of SSHs is seen as crucial in addressing societal impacts, fostering participation, and ensuring that governance structures reflect community needs and social equity within transformative frameworks like the Twin Transition. Project management is highlighted as the second strategic instrument capable of translating broad transition goals into actionable steps at local level. Its intermediary strength is used to support adaptive change and foster incremental, sustainable transformation by generating public value, assessing governance performance, and advancing socially impactful investments at the local level.

Chapters 3 and 4 constitute the core part of the applied research conducted throughout the PhD program. The applied research uses a multiple case study approach within a qualitative framework to compare local governance projects that employ diverse project management strategies for local development. The approach enables an in-depth investigation into each project, comparing cases to identify common patterns and differences in governance strategies across different contexts. This method incorporates various data sources, including project documentation, interviews, direct observations through workshops and formal and informal projects' meetings, and quantitative surveys. Semi-structured and open-ended interviews with project managers and technical staff, provided firsthand insights into project management challenges, stakeholder engagement, and community alignment.

By identifying effective governance and strategic project management tools to drive structural change, the case studies provide interesting successful practices and shortcomings in local governance models, leading to an actionable framework for an integrated governance model tailored to local development needs. The projects aim to foster local development by focusing on unique, yet complementary dimensions of local development: smart city initiatives (case studies 1 and 2) and decentralised cooperation (case studies 3 and 4).

The proposed case studies are all funded through European programs that align with the EU's Twin Transition strategy, integrating digital and green objectives into local governance practices. All projects were implemented within municipal areas, providing a consistent local context. Each case involved a diverse set of stakeholders of the QH model and provides strategic insights to analyse the strengths and weaknesses of a system of interrelations and to reflect on governance strategies to be integrated in a systemic way.

The final chapter proposes an integrated governance framework tailored to meet the challenges of the green and digital transition, based on a comparative reflection and synthesis of the main insights from the case studies analysed through the applied research. The framework presented is the result of a reflective process based on the data collected to address the initial research questions, attempting to provide answers without losing sight of the complexity of the context in which the analysis is embedded. Indeed, this framework is not presented as a fits-for-all model, but as a preliminary structure grounded in elements validated by the local projects explored. The attempt is to provide key elements for the elaboration of a place-based integrated local governance model designed to adapt to the unique needs of local communities respecting the specificities of a given territory, with a particular focus on socio-cultural factors. The purpose of this integrated governance framework is to provide a management strategy in which a constant adaptation to the challenges posed by the Twin Transition and the needs of local communities leads to continuous improvement of the governance system. Given the resources available, the case studies focused on examining only certain notable aspects, reflecting on both strengths and weaknesses. For this reason, just as the particularities of local territories make each one unique, the claim to develop a single model would have been inappropriate, unnatural for the purposes of this research. On the contrary, the exploration of flexible boundaries that take into account the richness of diversity and social needs, even before economic needs, has been the compass that has brought us this far.

Through these contributions, this thesis aims to provide a dynamic territorial-based tool to guide policy makers and all stakeholders of the QH in general to promote local development with a human-centred approach. It can be interpreted as a call to action to raise a collective awareness of everyone's role in envisioning and building a fair and just society with responsibility and active participation, with courage and sense-making.

Chapter 1: The European Union's approach to local development

Local development has existed throughout human history, but as a formal scientific discipline it is relatively new and for this reason there is no single definition. The concept is interpreted in a flexible way through an empirical approach, drawing on different disciplines and policy areas such as sociology, economics, political science and geography, which enhances its relevance and applicability.² What is common is that one of the key components of local development is how economies and institutions interact at the local level, as well as with the rest of the world, especially with other places and countries.³ Local development is directly related to governance structures and their evolution into multi-level and decentralised forms.

Specifically, in the context of the Twin Transition, it is interesting to consider the definition of the specific sustainable nature that local development can assume, as established by the World Commission on Environment and Development. It calls for development that 'meets the needs of the present without compromising the ability of future generations to meet their own needs'⁴, recognising the existence of limits, understood as constraints dictated by technology, social organisation, and the capacity of environmental resources and the biosphere to absorb the impact of human activities. In this definition the human-centred approach is clear when 'poverty' is mentioned requiring meeting everyone's basic needs and providing opportunities for people to achieve a better quality of life as a crucial aspect to be addressed for sustainable development.

The evolving landscape of local development has led to new interventions through instruments and public policies designed to leverage both internal and external forms of

² P. Futó, *On the Governance, Investigation and Education of Local Development*, in: Futó, P. (ed.) *Contemporary Drivers of Local Development* (Maribor: Institute for Local Self-Government), pp. 3-19, 2019.

³ B. Dallago, *Varieties and Perspectives of Local Development: A Conclusion*, in: Futó, P. (ed.) *Contemporary Drivers of Local Development* (Maribor: Institute for Local Self-Government), pp. 455-478, 2019.

⁴ World Commission on Environment and Development, *Our Common Future*, Oxford: Oxford University Press, 1987.

growth and development. Different local territories have played different roles in influencing the transformation of existing approaches and the creation of new experiments in local and regional development. Within this scenario, the European Union has been instrumental in this process, providing frameworks and funding to support innovative and region-specific development strategies.

European policymakers began to recognise the potential of rethinking the concept of local development in order to identify alternatives to the classical model of industrial development (1960s and 70s), coinciding with the imminent accession of Portugal and Spain to the European Community. The challenge was to modernise traditional industries facing competition from low labour costs and to stem the rural exodus affecting certain regions.

The threat of European integration for these areas became a stimulus to rethink local development, giving some regions the opportunity to become eligible for Objectives 2 and 5b1 of the Cohesion Policy between 1989 and 1999.⁵

Over the past two decades, local development has been one of many instruments within Europe's cohesion policy. It gained momentum in the 1990s, when it was integrated into programmes co-financed by the European Regional Development Fund, the European Social Fund or the European Agricultural Guidance and Guarantee Fund (EAGGF), accounting for up to 5% of the annual structural-fund budget. Then, it lost prominence in the early 2000s, as attention shifted towards competitiveness to address the challenges of globalization and the knowledge economy and local development remains in moral sectoral nature programmes (URBAN for regional policy, EQUAL for social policy and employment, and LEADER for rural development policy) with more strict eligibility criteria and financial constraints. With fewer opportunities, the consequence was a radical decline in regions and local organisations' involvement.

⁵ Cohesion policy includes a number of "objectives" corresponding to specific regional situations. Their numbering and content have sometimes changed but in general "objective 1" indicates the least developed regions, with a GDP/inhabitant of less than 75% of the European average. Between 1989 and 1999, "objective 2" targeted areas of industrial restructuring and "objective 5b" declining rural areas.

Since mid-2008, a specific focus on local development through the concept of 'proximity' re-emerged in response to a long period of economic uncertainty and pressing environmental and energy-related challenges. It was in this context that the European Commission's 5th Cohesion Report highlighted 'local development' as a valuable use of structural funds, noting its potential to enhance social and territorial cohesion and help achieve the goals of the Europe 2020 strategy.⁶

The European Union's approach to local development is embodied in the integrated and sustainable territorial development embedded in the EU-wide objective of territorial cohesion. Territorial cohesion is at the heart of the EU Cohesion Policy, which is a programme that targets all regions and cities in the European Union to contribute to strengthening economic, social and territorial cohesion. It aims to correct imbalances between countries and regions, and it delivers on the Union's political priorities, especially the green and digital transition.

Cohesion policy is enshrined in the Treaty on the Functioning of the European Union (TFEU)⁷ which states that the EU shall promote the overall harmonious development of its Member States and regions in order to strengthen its economic, social and territorial cohesion. Actions must support the less favoured regions harnessing their development potential. Particular attention needs to be paid to rural areas, areas affected by industrial transition, and regions which suffer from severe and permanent natural or demographic handicaps, such as the northernmost regions with a very low population density and island, cross-border and mountain regions.⁸

The European Union considers local development as a model which can be applied to a wide range of activities in a defined locale area (usually small scale), within which a strong partnership of relevant local actors operates to mobilise expertise, knowledge, local resources (human and financial) and external resources (public or private finance). The partnership

⁶ European Commission Directorate General for Regional Policy, *Investing in Europe's Future: Fifth Report on Economic, Social and Territorial Cohesion*, LU: Publications Office, 2010.

<https://data.europa.eu/doi/10.2776/29620>

⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012E%2FTXT>

⁸ Title XVIII, *Economic, social and territorial cohesion*, Article 174 (ex Article 158 TEC).

includes various local public and private actors, as well as different administrative levels (local authorities and territorial units of central or regional government). It has two main aims: the short-term one is to improve local living and working conditions, and the long-term one is structural change of the reference local area, with the general aim of creating a path to prosperity and social well-being which is potentially reproducible and exportable. This kind of model requires a strong degree of capacity building and administrative support from several different units, as well as an integrated strategy of management to tackle social, economic and environmental challenges facing the local area.

The complexity of local development sets it apart from other top-down initiatives, indeed not every local action qualifies as local development, whether it's municipal or regional policies or local outcomes resulting from decisions by national authorities or external economic actors, as the impacts can differ significantly. It remains quite complicated to find a standardised approach to local development at EU level and to evaluate its impacts from a traditional analysis of economic benefits, indeed the positive impacts and added-values discovered come from the evaluation of local development programmes and projects.

According to some research and projects and programmes evaluation reports, local development has shown an impressive capacity to adapt to changing circumstances in recent years. This adaptability could now be crucial in addressing emerging challenges in the context of the Twin Transition. In this context, it is also widely recognised that local development increases the overall effectiveness and efficiency of public policies, particularly in the implementation of the European Structural Funds.⁹

Despite this, criticism has been leveled regarding the growing tendency of public and private developers to integrate sustainability and green initiatives into local development and urban strategies as a way to attract investment, while in practice, it results to be a concrete risk of undermining genuine environmental and social concerns. Critics argue that the economic interests of both sectors in promoting urban environmental changes frequently

⁹ M. Jouen, *Local development in Europe. Assessment and prospects after the economic crisis*, in Notre Europe Policy Brief, No.21, 2011.

overlook the social equity dimension, one of the key pillars of sustainability.¹⁰ This approach can lead to uneven local development and segregation, raising questions about who truly benefits from projects labeled as sustainable and livable within a logic of balances between environmental concerns with economic growth.¹¹

The aim of this chapter is to provide an overview of the EU approach to local development, with the main objective of identifying the main aspects of the social dimension underlying EU instruments and policies for local development. This perspective will help to broaden the reflection by raising the question of who really benefits from local development projects labelled as sustainable and liveable, and to start laying the foundations for the construction of a new framework for integrated local governance.

For the purposes of this research, we use the term Local and/or Regional Governments (LAs or LRGs) accordingly with EU documents and the European approach to local development, which refer to all forms of sub-national governments typically defined by geographic and political boundaries and vested with specific administrative mandates within a specific area.

1.1 The Territorial Agenda 2030 and Territorial and Local Development Strategies

The Territorial Agenda 2030 is an intergovernmental document of the EU Member States, developed in cooperation with partners from other countries, EU institutions and organisations, and European stakeholders. It is the result of the revision of the previous Agenda launched in 2007 and updated in 2011 by the Ministers responsible for spatial planning, territorial development and/or territorial cohesion, in cooperation with the European Commission, the European Parliament, the European Committee of the Regions,

¹⁰ A. Blok, *Climate riskscapes in world port cities: Situating urban-cosmopolitan risk communities via ulrich beck's comparative tactics*, *Global Networks*, 20(3), 500–521, 2020. <https://doi.org/10.1111/glob.12258>

¹¹ N. Grauslund Kristensen, *Consequential Urban Development of Sustainable Strategies*, *Urban Geography*: 1–18, 2024. doi:[10.1080/02723638.2024.2359319](https://doi.org/10.1080/02723638.2024.2359319).

the European Economic and Social Committee, the European Investment Bank Group and relevant European and national associations.

It builds on the conclusions of the ESPON State of the European Territory Report (2019), which was developed in the context of the post-2020 EU policy debate and the renewal of key strategic documents on territorial and urban development, to inform and support the preparation of the post-2020 programming period. The ESPON report identified the main challenges facing Europe, including social change, economic transformation, technological advances and environmental pressures, and highlighted an apparent fragmentation between regions, municipalities and neighbourhoods, with certain areas more affected by socio-economic hardship, also due to political instability. The step forward proposed by the report is to address the diverse challenges across Europe's territories with specific policies tailored to local needs, rather than one-size-fits-all approaches.¹² The Agenda also takes into account the main findings of the European Commission's Seventh Report on Economic, Social and Territorial Cohesion (2017), which underlines that the impact of globalisation, migration, poverty, lack of innovation, climate change, energy transition and pollution is not limited to less developed regions and that the quality of government and governance at all levels varies across Europe. For this reason, the report calls for EU-wide policies and increased investment to bridge the remaining gaps between and within our Member States, with three main objectives: harnessing globalisation, leaving no one behind and supporting structural reforms. Against this background, the report argues that cohesion policy should continue to reduce regional disparities, stimulate investment in EU priorities, address new challenges and improve institutions.¹³

1.1.1 Objectives and strategic priorities of the Territorial Agenda 2030

¹² ESPON, *State of the European Territory. ESPON contribution to the debate on Cohesion Policy post 2020*, 2019.

¹³ European Commission. Directorate General for Regional and Urban Policy, *My Region, My Europe, Our Future: Seventh Report on Economic, Social and Territorial Cohesion*. LU: Publications Office, 2017.
<https://data.europa.eu/doi/10.2776/5244>

In the light of these reports and other European and international policy frameworks and agendas, the Territorial Agenda 2030 provides an action-oriented framework outlining a political vision aimed at achieving territorial cohesion across Europe¹⁴, a key goal introduced by the Treaty on European Union (Article 3, TEU).¹⁵

By working for territorial cohesion, the EU aims to promote balanced and harmonious development across countries, regions, cities and localities, ensuring that all areas and people benefit from Europe's diversity and the principle of subsidiarity. It aims to create equal opportunities and improve access to public services for individuals and businesses, regardless of their location. Within the Agenda the principle of territorial cohesion has a predominant cross-cutting role and although its range of action may seem rather broad and vague, it is underpinned by key dimensions that clarify its implementation: the principle of subsidiarity, the place-based approach, and the principle of solidarity.

The Territorial Agenda 2030 emphasises the principle of subsidiarity and recognises the importance of local authorities in designing and implementing territorial policies. By empowering local governments, the EU recognises that local actors are best placed to understand and address the specific needs of their communities. This principle promotes the decentralisation of decision-making and encourages local political and administrative responsibility. Particular attention is therefore paid to strengthening the governance capacity of local governments, especially in involving citizens through participatory strategies. Investing in this capacity is seen as crucial to ensuring effective local development.

This role of citizens and social groups in the construction of a local development project is an integral connotation of the human-centred perspective that guides the intentions of the Agenda. It acquires two implications: on the one hand it places the well-being and quality of life of citizens at the centre of territorial policies and local governance models and,

¹⁴ EU Ministers responsible for spatial planning, territorial development and/or territorial cohesion, *Territorial Agenda 2030: A future for all places*, Ministerial meeting of the EU under the German presidency of the Federal Ministry of the Interior, Building and Community, Berlin, 2020. Available at: https://territorialagenda.eu/wp-content/uploads/TA2030_jun2021_en.pdf

¹⁵ Consolidated version of the Treaty on European Union - TITLE I: COMMON PROVISIONS - Article 3 (ex Article 2 TEU) <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A12008M003>

on the other hand, it aims at strengthening awareness and empowering local and regional communities, going beyond local development as a mere tool for achieving economic performance.

Closely linked to subsidiarity is the place-based approach, which advocates tailoring strategies to the unique characteristics of individual regions. Rather than applying one-size-fits-all solutions, the Agenda emphasises the need to invest in place-based policies that respond to the specific challenges and opportunities of each territory. Under the banner of 'a future for all places', the Territorial Agenda promotes targeted investment aimed at harnessing local assets to drive sustainable and inclusive growth. By adapting policies to local contexts, the EU can address territorial disparities while promoting coherent development across the EU.

This kind of investment is based on horizontal as well as vertical coordination and evidence-informed policy to give priority to the unique challenges and opportunities of different regions, ensuring that policies are adapted to local contexts rather than applying one-size-fits-all solutions. Within this framework, understanding the context and coordinating effective actions is crucial and requires the involvement of different actors at different levels, including citizens, civil society, businesses, research and scientific institutions and knowledge centres. This creates a complex system of internal and external relations.

The principle of solidarity is at the heart of the agenda, promoting convergence and reducing inequalities and promoting social inclusion between more prosperous areas and those lagging behind. To be effective, it requires cooperation at different levels through territorial partnerships and networks, which are presented as key assets to spread and share knowledge and resources with a shared responsibility approach among all the member States and sub-national authorities. Indeed, shared responsibility and efforts are at the basis of an integrated approach to multi-level governance and local development to ensure that each local territory benefits from the green and digital transition within a polycentric development model of development.

In this regard, two main aspects are highlighted as having a significant impact on the well-being of local communities: on the one hand the increasing pressure on the environment, and, on the other hand, digitalisation and disruptive technologies. This direct link to the Twin Transition places the territorial dimension at the heart of these transformations and

underpins the significant impact they can have on local communities and, consequently, on local development.

The Agenda recognises that the transition to sustainable development presents different opportunities and challenges for different rural areas, cities and regions, which require tailor-made responses at all levels to promote mitigation and adaptation processes that do not negatively affect the well-being of communities and local ecosystems and economies. On the other hand, the digital transition could increase territorial inequalities excluding certain areas from digital transformation and to make it sustainable and effective the Agenda calls for fair and affordable access to digital services, tools, infrastructures and skills.

Territorial diversity across Europe is seen as a powerful added value offering considerable development potential and cooperation based on territorial diversity aims at fostering cohesion at cross-border, transnational, inter- and intra-regional level. Territorial cohesion aims to help all regions reach their full potential also within the framework of the Twin Transition, benefiting both individual countries and Europe as a whole addressing different levels of governance and contributing to subsidiarity. For this reason, the Agenda advocates greater use of EU territorial instruments and other instruments as external support to assist regional and local authorities in promoting development through participatory and innovative approaches to integrated territorial development.

In this context, EU support is seen as a means of facilitating cooperation between places with common potential or challenges and between places with complementary potential that can exploit their comparative advantages to create additional development potential. This inherent principle of cooperation is based on exchange of knowledge and experiences, as well as cooperation and coordination between places, levels of governments, policy sectors and societal groups and it ensures that no one acts alone, and no one acts solely in its own interest.

To further support the principles of territorial cohesion, subsidiarity, solidarity and the place-based approach and to translate them into practical policy objectives, the Territorial Agenda 2030 identifies overarching objectives, a Just Europe and a Green Europe, which have six priorities. The priorities guide the implementation of policies and investments to achieve balanced and sustainable development across European territories. They address the main

challenges identified in the ESPON report and are designed to support both urban and rural areas in the context of the green and digital transitions:

1. *A Just Europe that Offers Future Perspectives for All Places and People*: this priority focuses on promoting territorial cohesion by ensuring fair opportunities for development, regardless of geographical location;
2. *A Green Europe that Protects Common Livelihoods and Shapes Climate Change*: the Agenda aims to promote environmental sustainability by addressing the impacts of climate change and ensuring that green policies contribute to territorial development;
3. *Strengthening Resilient Local Economies*: this priority emphasizes the need for economic diversification and strengthening local economies in the face of globalization, technological disruption, and social change;
4. *Creating Functional and Inclusive Communities*: the Agenda focuses on fostering cooperation between different regions and creating communities that are functional, inclusive, and resilient to socio-economic and demographic changes;
5. *Promoting Digital and Physical Connectivity*: digitalization and infrastructure improvements are key to ensuring that all regions, particularly rural and remote areas, are connected to global markets and opportunities;
6. *Improving the Quality of Governance*: the Agenda promotes good governance by fostering collaboration between multiple levels of government, sectors, and stakeholders. This includes empowering local authorities and ensuring citizen participation in decision-making processes.

The Territorial Agenda provides a framework for the elaboration and implementation of Territorial and Local Development Strategies.

1.1.2 The Territorial Approach to Local Development: TALD

In 2013 the European Union acknowledged the "Territorial Approach to Local Development" (TALD) developed by the European Commission. This methodology aims at

responding to the growing need to address the spatial dimension of development, recognizing the comparative advantages of local authorities to act as catalysts of a territorial approach to development.¹⁶ Following the need to localise the SDGs promoted by the United Nations, this strategy is called to support the advancement of the EU's Global Gateway strategy, and it aims to integrate subnational entities into the development process.¹⁷

TALD is a dynamic, long-term method based on a bottom up, multi-stakeholder and multi-sectoral approach that helps define and prioritize development strategies in a given territory. The EC's programming cycle is also based on TALD vision to orient the budgetary cycle in order to empower Local Authorities (LAs) to operate with a meaningful degree of autonomy, enough resources and appropriate accountability to both the central government and the people in their jurisdictions, and to be able to develop their own capacities within a framework of trust and cooperation with other governance actors.

TALD introduces a specific definition of territorial development by understanding "local" not just as the designation of a particular scale ("where" development takes place) but of a focus on "how" and "by whom" development is promoted. This definition highlights the need for empowered local authorities to drive territorial approaches, ensuring active participation from all key stakeholders within a given territory and fostering strong relationships across different levels of governance.¹⁸

Territorial development is understood as a spatially coordinated process, leveraging the interaction of actors operating across multiple scales of planning and administration. According to this definition, TALD recalls the integrated nature of local development to overcome the traditional sectoral fragmentation, and its endogeneity nature by highlighting

¹⁶ *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on Empowering Local Authorities in Partner Countries for Enhanced Governance and More Effective Development Outcomes*. COM 2013 -280 Final. 15.0-5.2013.

¹⁷ The Global Gateway consists in a European strategy promoted by the European Commission and the EU High Representative to boost smart, clean and secure links in digital, energy and transport sectors and to strengthen health, education and research systems across the world through smart and sustainable investments, in line with the EU's values and standards.

https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/stronger-europe-world/global-gateway_en

¹⁸ *The Territorial Approach to Local Development (TALD) in the European Union's External Cooperation*, 2023.

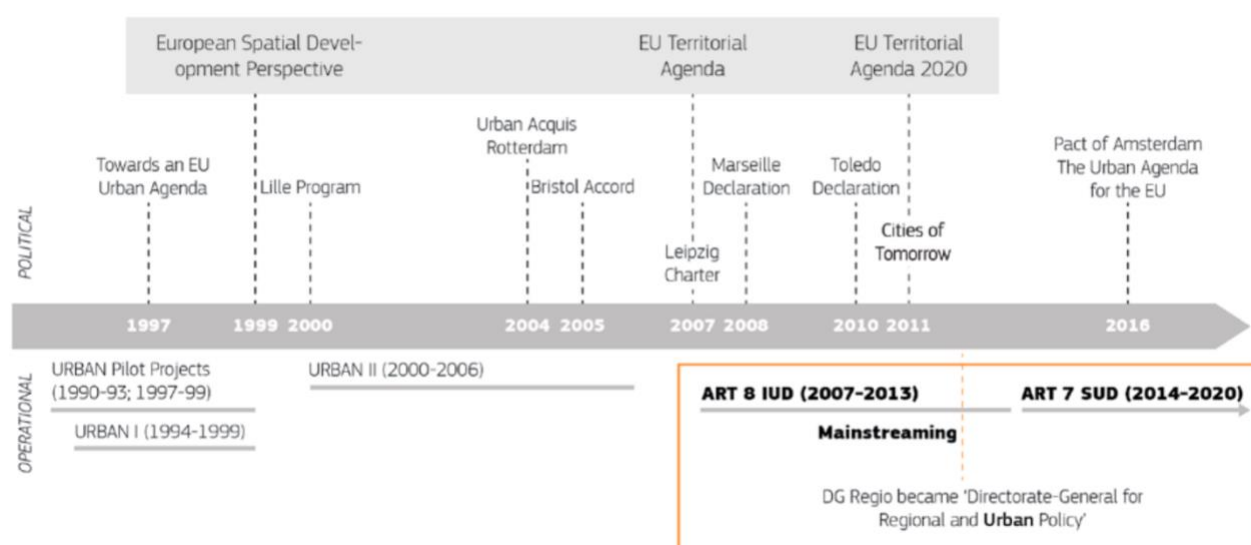
the importance of empowering local authorities in terms of their capacity to mobilise local resources and maintain wide range of partnerships with other actors. This could be possible through effective mechanisms of dialogue, negotiation and collaboration in accordance with the multi-scalar nature of local development. Additionally, TALD underscores the incremental value of local development advocating for decentralization policies that provide local actors with the autonomy, space, and capacity to pursue their initiatives and attract additional resources. More in general, TALD is seen to be a much more promising vehicle to ensure a link between decentralisation and development outcomes by enhancing the efficiency of funding utilization and by ensuring development strategies are better tailored to local needs.

With rapid urbanization worldwide, the importance of such territorial development approaches has become even more prominent, for this reason territorial development approaches have been integrated within the instrument of Structural Funds for Regional Development and European territorial cooperation programs, where European municipalities play a crucial role in decentralized cooperation by adopting territorial approaches to reinforce local governance and foster local development objectives.

1.2 The Urban Agenda and Sustainable Urban Development Strategies

The EU's perspective on urban issues, known as the 'urban acquis', forms a key component of the local development strategy. The approach to sustainable urban development has been progressively consolidated through cohesion policy measures and various urban-oriented initiatives implemented over time.

Figure 1.1. The evolution of the urban dimension of the EU policy



Source: *Handbook of Sustainable Urban Development Strategies*, JRC, 2020.¹⁹

Figure 1.1. illustrates the evolution of the EU's urban development policies, highlighting key milestones. In 2007, during an informal ministerial meeting held under the Germany Presidency of the Council of the EU, it was signed the Leipzig Charter that marked an important milestone in defining two key principles for sustainable urban development. Indeed, the Charter introduced the application of a holistic, integrated development policy, and the focus of special attention on deprived neighbourhoods.²⁰ In the same year, sustainable urban development policies become an integral part of EU funding schemes of cohesion policy.

¹⁹ C. Fioretti, M. Pertoldi, M. Busti, S. Van Heerden, *Handbook of Sustainable Urban Development Strategies*, JRC Research Reports JRC118841, Joint Research Centre, 2020.

²⁰ An updated version of the Leipzig, *New Leipzig Charter- The transformative power of cities for the common good*, was adopted at the Informal Ministerial Meetings organised on 30 November 2020 under German Presidency. The New Leipzig Charter provides a key policy framework document for sustainable urban development in Europe. The Charter highlights that cities need to establish integrated and sustainable urban development strategies and ensure their implementation for the city as a whole.

https://ec.europa.eu/regional_policy/en/information/publications/brochures/2020/new-leipzig-charter-the-transformative-power-of-cities-for-the-common-good

In 2016, with the Pact of Amsterdam, the EU launched the Urban Agenda (UA) to reinforce the principles of the Leipzig Charter by promoting a multi-level working method for urban development policy and practice. The UA promotes cooperation between Member States, cities, the European Commission, and other stakeholders in full respect of subsidiarity and proportionality principles and competences. The UA, reaffirmed in 2021, emphasises a coordinated and integrated approach to EU urban policy, focusing on multi-stakeholder cooperation and addressing challenges beyond administrative boundaries, and targeting cities of all sizes.²¹ Territorial cohesion is a cross-cutting principle that aims to reduce socio-economic disparities in urban areas and regions by involving urban authorities in policy-making.

While the UA outlines a high-level framework for urban development in Europe, Sustainable Urban Development strategies (SUD) serve as a framework that ensures the implementation of the principles and goals of the UA at the local level by promoting integrated territorial cooperation and investment. SUD serve as useful tools for local authorities and decision-makers to develop long-term, integrated plans that are aligned with EU goals. Together, the UA and SUD, ensure that sustainable urban development is not only a policy objective but also a practical approach embedded in the design and management of European cities.

During the 2014-2020 programming period, the EU's cohesion policy made SUD mandatory, allocating 5% of the European Regional Development Fund (ERDF) in each Member State to this purpose. The policy introduces the importance of an integrated approach through two new instruments: Integrated Territorial Investment (ITI) and Community-Led Local Development (CLLD), emphasising respectively the importance of integrating multiple funds, and of engaging with the local community.

For the 2021-2027 programming period, the European Commission requires that at least 8% of the national allocation of the ERDF be earmarked for sustainable urban development strategies. This is meant to ensure that member states focus on addressing

²¹ The Urban Agenda for the EU's website: <https://www.urbanagenda.urban-initiative.eu/urban-agenda-eu>

urban challenges in line with sustainability goals and through an integrated and place-based approach, where integration means multi-sectoral policy, multi-level and multi-stakeholder governance, and multi-territorial and community-led strategy.²²

SUD, as promoted under EU cohesion policy, emphasizes the need for a strategic framework to ensure that investments funded by the European Regional Development Fund (ERDF) are part of a long-term, innovative strategy. The new Policy Objective 5 (PO5) "Europe closer to citizens" highlights the potential of integrated strategies for shaping future cities. Strategic planning, alongside scale and stakeholder involvement, is also a key element of the OECD Principles of Urban Policy.²³ SUD strategies should serve as agendas for implementation, making evident the coherence and facilitating the integration of operational programmes (OPs), thematic objectives, (TOs) and operations with local strategies and projects. This requires new efforts to work differently at local level between administrative levels in a multi-level governance system, including governance bodies, enterprises, academic and research institutions and civic society. Indeed, the strategic planning implies also the implementation of new adaptive process involving the management of change²⁴ as a working framework within which explore new ways of collective planning processes and tailor-made and realistic visions generation.²⁵

The framework of the EU related to sustainable and integrated urban development promotes a strategic vision for the development of urban areas, targeting cities of all sizes and promoting integration at different scales, from neighbourhoods to wider territories. The approach is based on multi-level governance and multi-stakeholder cooperation to coordinate different actors according to their roles, competences and scale of intervention, while

²² Regulation (EU) 2021/1058 of the European Parliament and of the Council of 24 June 2021 on the European Regional Development Fund and on the Cohesion Fund, L 231/60, Article 11.

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R1058>

²³ OECD, Centre for Entrepreneurship, SMEs, Regions and Cities, *OECD Principles on Urban Policy*, 2019. Available at: <https://www.oecd.org/cfe/Brochure-OECD-Principles-Urban-Policy.pdf>

²⁴ L. Albrechts, A. Balducci, J. Hillier (eds), *Situated Practices of Strategic Planning. An international perspective*, Routledge, London, 2016.

²⁵ European Commission (EC), Directorate-General for Regional and Urban Policy, *Cities of tomorrow. Challenges, visions, ways forward*, Annex 1, Brussels, 2011. Available at: https://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/citiesoftomorrow/citiesoftomorrow_final.pdf

ensuring active citizen participation. It is also cross-sectoral, encouraging cities to work across different policy areas. It guides the integration of multiple sources of funding within a more effective results-based logic and establishes frameworks for monitoring and evaluation.

According to a study conducted in 2017 by the European Policy Research Council, investigates how Member States have implemented strategies for sustainable urban development and other territorial strategies under the 2014-2020 regulatory provisions of EU cohesion policy, the SUD has enhanced knowledge and awareness of the importance of strategic, integrated programming. The local governments seem to be more conscious about the importance of investing in ongoing capacity-building in order to improve city strategic planning and increase local authorities' involvement in cohesion policy implementation.²⁶ Indeed, effective SUD strategy reflects the capacity of public authorities to produce a vision and bring it forward, as well as the place-based approach should be defined in accordance with other factors such as the financial resources involved, domestic planning traditions and pre-existing policy frameworks as well as specific regional/national guidelines for cohesion policy²⁷. In this framework, SUD offers a new way of doing strategic planning as it should be connected to local, national, European and global urban agendas. In this regard, the management structure acquires a prominent strategic role to set the conditions for 'acting strategically'²⁸, which implies reciprocally adapting policy phases, funding priorities and internal knowledge-exchange networks. Furthermore, territorial tools, namely Integrated Territorial Investment (ITI), Community-Led Local Development (CLLD) and other territorial tools are deployed to implement integrated territorial and local development strategies.

²⁶ A. Van der Zwet, J. Bachtler, M. Ferry, I. McMaster, S. Miller, *Integrated territorial and urban strategies: how are ESIF adding value in 2014- 2020?*, Brussels, 2017. Available at: <https://op.europa.eu/en/publication-detail/-/publication/01fce46b-e6d6-11e7-9749-01aa75ed71a1/language-en/format-PDF/source-105076479>

²⁷ F. Barca, *An Agenda for a reformed Cohesion Policy. A place-based approach to meeting European Union challenges and expectations*, Independent Report to the European Commission, Directorate-General for Regional and Urban Policy, Brussels, 2009. Available at: https://ec.europa.eu/regional_policy/archive/policy/future/pdf/report_barca_v0306.pdf

²⁸ R. Mäntysalo, J.K. Kangasojä, V. Kanninen, *The paradox of strategic spatial planning: A theoretical outline with a view on Finland*, Planning Theory & Practice, Vol. 16, No 2, 2015, pp. 169–183.

1.3 The European Twin Green and Digital Transition

Since its first mandate, the von der Leyen Commission has been working to lead the transition to a healthy planet and a new digital world capable of addressing the climate, technological and demographic changes that are transforming our societies and ways of life. The ambition to enhance the EU's social market economy was born out of the conviction that the EU's collective strengths, talents and potential can make the most of these changes to create new opportunities.²⁹

The concept of “European Twin Transition” is referred to the simultaneous digital and green transformations aimed at reshaping the continent’s economy and society. On the one hand, the green transition focuses on achieving carbon neutrality by 2050 through sustainable energy, circular economy practices, and reducing environmental impact. On the other hand, the digital transition emphasizes widespread adoption of technologies like artificial intelligence, big data, and automation to boost innovation, productivity, and connectivity.

These transitions are interlinked, and they can reinforce each other, even if they are different in nature and in their dynamics and they do not necessarily always align. Digital technologies play a crucial role in enabling green solutions, such as smart grids or precision farming, while contributing to fighting climate change and environmental degradation, in this sense the digital transition becomes also a powerful tool for advancing a fair and equitable green transition.³⁰

The European Union was the first global leader in presenting a long-term vision to achieve climate neutrality by 2050.³¹ In 2019, the European Commission introduced the

²⁹ European Commission press release, *The von der Leyen Commission: for a Union that strives for more* Brussels, 10 September 2019. Available at:

https://ec.europa.eu/commission/presscorner/api/files/document/print/en/ip_19_5542/IP_19_5542_EN.pdf

³⁰ S. Muench, E. Stoermer, K. Jensen, T. Asikainen, M. Salvi, and F. Scapolo, *Towards a green and digital future*, EUR 31075 EN, Publications Office of the European Union, Luxembourg, 2022, ISBN 978-92-76-52451-9, doi:10.2760/977331, JRC129319.

³¹ European Commission, *Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank. A clean planet for all. A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy*. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018DC0773>

European Green Deal³², a sustainable growth strategy aimed at tackling key environmental and climate challenges. It constitutes the Europe's hallmark to grasp the opportunities from the ecological transition by transforming the EU into a modern, circular, resource-efficient, and competitive economy, aligned with the principles of competitive sustainability. To solidify this commitment, the EU adopted the European Climate Law³³, establishing the legally binding objective of net-zero greenhouse gas emissions by 2050. The Commission has also proposed legislation to meet higher climate targets by 2030. In support of its environmental goals, the EU has launched several strategies, including the Farm to Fork Strategy³⁴, the Sustainable Blue Economy Strategy³⁵, the Climate Adaptation Strategy³⁶, and the New Action Plan on Circular Economy³⁷. Throughout the COVID-19 pandemic and the Russian invasion of Ukraine, the EU

³² European Commission, *Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions the European Green Deal*, COM/2019/640 final. Available at:

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2019%3A640%3AFIN>

³³ European Parliament, Council, *Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law')*.

Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021R1119>

³⁴ European Commission, *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system*, COM(2020) 381 final, 2020.

³⁵ European Commission, *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on a new approach for a sustainable blue economy in the EU Transforming the EU's Blue Economy for a Sustainable Future*, COM/2021/240 final. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2021:240:FIN>

³⁶ European Commission, *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate Change*, COM/2021/82 final. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2021:82:FIN>

³⁷ European Commission, *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions a new Circular Economy Action Plan for a cleaner and more competitive Europe*, COM/2020/98 final. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN>

has upheld its green transition goals through initiatives like the Recovery and Resilience Facility³⁸ and REPowerEU³⁹.

The phenomenon of digital transition is an ongoing process that is strictly linked to the green transition. Its potential to shape the future of societies and economies is inherent in emerging technologies, that can be designed and developed to increase prosperity across Europe and solve many societal challenges. At the same time, increasing digitalisation entails many risks, for example social disruptions and polarisation of opinions, increasing inequality, security risks, or mis- and disinformation. For this reason, the EU are promoting secure, trustworthy, and resilient digital infrastructure within the digital transition framework, with the main aim of mitigating the negative impact of technological change and stay competitive globally. With the Digital Decade Compass, the EU has set 2030 targets to empower people and businesses toward a human-centered, sustainable, and prosperous digital future.⁴⁰

The EU's policy framework, including the European Green Deal and Digital Strategy, seeks to balance economic growth with environmental sustainability while ensuring social inclusiveness and competitiveness in a rapidly changing global landscape.

1.3.1 The European Union funds and programmes for local development in the Twin Green and Digital Transition: an overview

Through the promotion of an integrated approach, the EU's policy framework aims at achieving successful Twin Transition to avoid the pitfalls of pursuing the green and digital

³⁸ European Parliament, Council, *Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility*. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R0241>

³⁹ European Commission, Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions REPowerEU Plan, CPM/2022/230 final. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2022%3A230%3AFIN&qid=1653033742483>

⁴⁰ *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 2030 Digital Compass: the European way for the digital decade*, 2021. Available at: <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52021DC0118>

agendas separately, unlocking synergies and managing potential risks, while exploring their complexity and the possible outcomes of their interaction.

For the integrated approach to be effective, special attention to the social factor is a key necessary element for a successful Twin Transition, indeed civil society (citizens) is not only affected by the challenges of the transitions but should also play a crucial role in driving them forward. Active and positive engagement of citizens is not possible without broad social acceptance, intended an integral precondition for fostering the societal commitment and driving the behavioural change necessary for the green and digital transitions. Social acceptance can be understood in three dimensions related to different actors: socio-political, market and community acceptance. Socio-political acceptance refers to the conviction and willingness of citizens and policymakers to take action. Market acceptance refers to the readiness to adopt new technologies and the willingness of businesses, consumers and investors to get involved. Community acceptance reflects local support for new technologies and innovations, often influenced by the level of trust in the information provided and the intentions behind the changes. Key factors in promoting community acceptance include transparency in decision-making, stakeholder involvement and a fair distribution of costs and benefits.⁴¹

Economic factors also play a crucial role in enabling the Twin Transition. Indeed, new technologies require finance and investment to succeed, and investment incentives are needed to implement green solutions. The EU has developed a number of funding programmes to support local development, with the aim of helping local territories to succeed in the green and digital transitions by promoting a better understanding of how they can be linked, according to a place-based approach, to meet different territorial needs and strategic objectives.

Indeed, most of the challenges posed by climate change and loss of biodiversity are linked to human activities posing an existential threat globally.⁴² The need for mitigation of

⁴¹ R. Wüstenhagen, M. Wolsink, M.J. Bürer, *Social Acceptance of Renewable Energy Innovation: An Introduction to the Concept*, Energy Policy 35(5): 2683–91, 2007. doi:[10.1016/j.enpol.2006.12.001](https://doi.org/10.1016/j.enpol.2006.12.001).

⁴² Intergovernmental Panel on Climate Change (IPCC) 2021, World Economic Forum (2021 a), IPCC 2022.

climate change requires the adoption of environmentally friendly lifestyles and considering the environmental costs of actions especially in local areas. It also entails tackling biodiversity loss and the decline of ecosystem services, which are essential for healthy living and resilient societies, guaranteeing, at the same time, a fair and inclusive green transition.⁴³ Local actions can also influence and foster the development, knowledge and use of digital tools and technologies, as well as ensure that citizens and business can benefit from them preventing a dangerous digital divide.

Cohesion Policy is one of the EU's most important tools for promoting harmonious development across all member states and reducing regional disparities, contributing to strengthening economic, social and territorial cohesion in the EU. Through its various funding mechanisms, it delivers on the Union's political priorities, especially the green and digital transition.

1.3.2 The EU Cohesion Policy

It has significant implications for local development as it finances infrastructure projects, enhancing public services, and supporting economic growth initiatives at the local level. The main areas of interventions of the policy are related to innovation, environmental sustainability, and inclusive growth, ensuring that local development is aligned with broader EU priorities.

The EU Cohesion Policy funding mechanisms promote multi-level governance by encouraging multi-stakeholder cooperation at local, regional and national levels and the involvement of civil society as the main beneficiary of the policy's objectives. This approach aims to ensure that local development strategies are tailored to the specific needs and potential of each region, leading to more effective and sustainable results achieving place-based approaches and integrated territorial development in Europe.

⁴³ V. Vysna, J. Maes, J.E. Petersen, A. La Notte, *Accounting for ecosystems and their services in the European Union (INCA)*, Publications office of the European Union, Luxembourg 2021.

A new policy objective ‘Europe closer to citizens’ has been included in the Cohesion Policy framework for 2021-2027 to ensure that territories can better exploit their potential by aligning local development with EU objectives and ensuring that public investment is used to respond to citizens’ needs. The new policy objective has two aims: sustainable, integrated development of all types of territories, and developing the appropriate strategies to reduce economic and social disparities between regions.

Cohesion policy covers all EU regions and cities and aims to create jobs, improve the competitiveness of businesses, stimulate economic growth, promote sustainable development and improve the quality of life of EU citizens. To achieve these goals, a total of €392 billion has been allocated for the funding period 2021-2027.

Cohesion Policy is delivered through specific Funds, the European Structural and Investments Funds (ESI Funds), which were the largest investment instruments under the 2014-2020 multiannual financial framework (EU budget) supporting the territorial, economic and social cohesion of Europe’s regions, as well as their resilience and recovery from the crisis faced in recent years.⁴⁴ For the 2021-2027 programming period, the European Commission allocated EUR 392 billion to Cohesion Policy and established common rules for the ESI Funds through the Common Provisions Regulation (Regulation (EU) 2021/1060 of the European Parliament and of the Council of 24 June 2021)⁴⁵, in order to simplify regulations and ensure more efficient use of the funds. The CPR is further complemented by specific regulations tailored to each individual fund.

In the 2021-2027 period, Cohesion Policy will support, through its investments, the following five policy objectives (POs):

⁴⁴ 2021-2027 Cohesion Policy overview: https://cohesiondata.ec.europa.eu/cohesion_overview/21-27

⁴⁵ *Regulation (EU) 2021/1060 of the European Parliament and of the Council of 24 June 2021 laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, the Just Transition Fund and the European Maritime, Fisheries and Aquaculture Fund and financial rules for those and for the Asylum, Migration and Integration Fund, the Internal Security Fund and the Instrument for Financial Support for Border Management and Visa Policy.*

Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R1060>

- PO1: a Smarter Europe, through innovation, digitisation, economic transformation and support to small and medium-sized businesses.
- PO2: a Greener, carbon free Europe, implementing the Paris Agreement and investing in energy transition, renewables and the fight against climate change.
- PO3: a more Connected Europe, with strategic transport and digital networks.
- PO4: a more Social Europe, delivering on the European Pillar of Social Rights and supporting quality employment, education, skills, social inclusion and equal access to healthcare.
- PO5: a Europe closer to citizens, by supporting locally-led development strategies and sustainable urban development across the EU.

1.3.3 Cohesion Policy's Funds

The Cohesion Policy's POs are delivered through specific funds, that for the 2021-2027 period are: the European Regional Development Fund (ERDF), which promotes social and economic development in all EU regions and cities; the Cohesion Fund (CF), which invests in environmental and transport infrastructure projects in the less prosperous EU countries; the European Social Fund Plus (ESF+), which aims to enhance employment opportunities and build a fair, socially inclusive society across EU member states; the Just Transition Fund (JTF), which supports regions most impacted by the shift toward climate neutrality ensuring that no territory is left behind in the shift towards a green and sustainable economy.

Together, these programmes not only support infrastructure development and economic diversification, but also foster the digital and green transitions needed to align with broader EU strategic objectives, contributing to the goals of the Commission priorities, notably: "A European Green Deal", "A Europe fit for the digital age", and "An economy that works for the people".

The European Regional Development Fund is a cornerstone of the EU's regional policy, focusing on reducing disparities between regions and promoting balanced development across the EU. The ERDF provides financial support for projects that promote innovation,

digitalisation and the low-carbon economy, while also addressing social inclusion and environmental sustainability. The ERDF has a major impact on local development, funding both urban and rural projects to improve infrastructure, support small and medium-sized enterprises (SMEs) and improve the quality of life for local communities.

A particular focus of the ERDF is to address specific territorial characteristics, including those of urban areas and regions characterised by natural geographical disadvantages, such as remote, mountainous, and sparsely populated areas. In urban areas, the ERDF aims to alleviate economic, environmental and social challenges, with a strong emphasis on sustainable urban development. To support these initiatives, at least 8% of ERDF funding is specifically earmarked for territorial or local development strategies, such as Integrated Territorial Investment (ITI) and Community-led Local Development (CLLD), as well as other instruments tailored by Member States to local needs.

In addition, disadvantaged regions and areas, in particular, rural areas and areas that suffer from severe and permanent natural and demographic vulnerabilities, can benefit from targeted support under the ERDF, with specific assistance designed to address the additional economic and logistical challenges they face and to ensure that they are not left behind in the EU's wider development agenda. Through these mechanisms, the ERDF plays a vital role in reducing regional disparities while promoting inclusive and sustainable local development across Europe.

The Cohesion Fund complements the ERDF supporting investment in Member States with a gross national income (GNI) per capita below 90% EU-27 average to strengthen the economic, social and territorial cohesion of the EU.⁴⁶ Its funding is allocated under the Greener Europe and Connected Europe policy objectives to projects falling under EU environmental priorities and to trans-European transport networks, with a specific focus on energy efficiency and renewable energy.⁴⁷

⁴⁶ For the 2021-2027 period, the Cohesion Fund concerns Bulgaria, Czechia, Estonia, Greece, Croatia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Portugal, Romania, Slovakia and Slovenia.

⁴⁷ *Regulation (EU) 2021/1058 of the European Parliament and of the Council of 24 June 2021 on the European Regional Development Fund and on the Cohesion Fund*. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021R1058>

The European Social Fund Plus is the EU's main instrument for investing in people and promoting the European Pillar of Social Rights.⁴⁸ With a budget of €142.7 billion for 2021-2027, the ESF+ plays a crucial role in supporting EU policies on employment, social inclusion, education and skills development, while contributing to structural reforms in these areas. ESF+ brings together four funding instruments, originally separated in the 2014-2020 programming period including: the European Social Fund (ESF); the Fund for European Aid to the most Deprived (FEAD); the Youth Employment Initiative; and the European Programme for Employment and Social Innovation (EaSI).⁴⁹ As a key component of the EU's cohesion policy, the ESF+ promotes economic, territorial and social cohesion, with the aim of reducing disparities between Member States and regions. The management of ESF+ support is primarily the responsibility of the Member States, with the European Commission overseeing its implementation.⁵⁰

The Cohesion Policy legislative package also includes the Just Transition Fund (Regulation EU 2021/1056)⁵¹, which is a key component of the European Green Deal and the first pillar of the Just Transition Mechanism (JTM)⁵². The fund is designed to mitigate the social and economic impacts of transitioning to a climate-neutral economy by supporting a wide range of activities, primarily focused on diversifying economic sectors and helping workers adapt to a changing labor market.

In addition, there are other funds that are not technically part of the EU's Cohesion Policy in legal and administrative terms, even though they share similar goals in promoting economic, social, and territorial development. Like the European Agricultural Fund for Rural

⁴⁸ *The European Pillar of Social Rights Action Plan*: <https://op.europa.eu/webpub/empl/european-pillar-of-social-rights/en/>

⁴⁹ *Regulation (EU) 2021/1057 of the European Parliament and of the Council of 24 June 2021 establishing the European Social Fund Plus (ESF+) and repealing Regulation (EU) No 1296/2013*. Available at: <https://eur-lex.europa.eu/eli/reg/2021/1057/oj>

⁵⁰ *Regulation (EU) 2021/1057 of the European Parliament and of the Council of 24 June 2021 establishing the European Social Fund Plus (ESF+) and repealing Regulation (EU) No 1296/2013*

⁵¹ *Regulation (EU) 2021/1056 of the European Parliament and of the Council of 24 June 2021 establishing the Just Transition Fund*. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R1056>

⁵² https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/finance-and-green-deal/just-transition-mechanism_en

Development (EAFRD)⁵³, that is part of the Common Agricultural Policy (CAP)⁵⁴, that supports rural areas in addressing economic, environmental, and social challenges by playing a significant role in local development. It finances the EU's contribution to rural development programmes (RDPs) and it aims at fostering agricultural competitiveness, promoting sustainable land management, and improving rural living conditions.

The EAFRD budget for 2021-27 amounts to EUR 95.5 billion, which includes an injection of EUR 8.1 billion from the next generation EU recovery instrument to help address the challenges posed by the COVID-19 pandemic. The EAFRD funding enables local authorities and stakeholders to implement rural development strategies that promote innovation in agriculture, support the diversification of rural economies and ensure the sustainability of natural resources. Importantly, the Fund facilitates the involvement of marginalised communities and small farmers in the development process, ensuring that rural development is inclusive and comprehensive. In addition, the EAFRD enhances the capacity of rural regions to contribute to the EU's wider objectives, in particular with regard to the green and digital transitions.⁵⁵

In 1991, the EU introduced LEADER - *Liaison Entre Actions pour le Développement de l'Economie Rurale*, a special financial instrument of the EU structural policy aimed at supporting economic, social, and environmental development of rural areas through a bottom-up, community-led approach. Its main objective was to engage directly people and local organisations as development actors rather than beneficiaries by forming area based Local Action Groups (LAGs) partnerships between the public, private and civil sectors through a collective approach.

⁵³ The [CAP Strategic Plan regulation \(EU\) 2021/2115](#), together with the [CAP Horizontal regulation \(EU\) 2021/2116](#) as well as the Common Provision [regulation \(EU\) 2021/1060](#), create the legislative framework for financial instruments implemented with EAFRD resources.

⁵⁴ European Commission, *Common agricultural policy for 2023-2027*, 2022. Available at: https://agriculture.ec.europa.eu/document/download/a435881e-d02b-4b98-b718-104b5a30d1cf_en?filename=csp-at-a-glance-eu-countries_en.pdf

⁵⁵ The [CAP Strategic Plan regulation \(EU\) 2021/2115](#), together with the [CAP Horizontal regulation \(EU\) 2021/2116](#) as well as the [Common Provision regulation \(EU\) 2021/1060](#), create the legislative framework for financial instruments implemented with EAFRD resources.

In its experimental phase between 1991-1993, LEADER involved 217 areas in designated disadvantaged rural regions. This focus on disadvantage also applied to LEADER II between 1994-1999 although the number of LAGs increased to ca. 900. The encouraging results led to the applicability of the method being expanded under LEADER+ (2000 – 2006) to cover all types of rural areas. The approach was 'mainstreamed' in its fourth programming period (2007-2013) as an integral part of the EU's rural development policy, covering 2416 rural territories across all the Member States. It became a mandatory component of all Rural Development Programmes, with a minimum budget allocation. In 2007 the method was also extended thematically to fisheries policy with over 300 Fisheries Local Action Groups (FLAGs) being developed in 21 Member States.⁵⁶

For the 2014-2020 funding period, the applicability of the LEADER approach was further extended as Community-Led Local Development (CLLD) initiative, which expanding the scope to urban and coastal areas, in addition to rural regions. CLLD approach can be applied across multiple European funding programs meaning that LAGs can access multiple European funds (EAFRD, the European Maritime and Fisheries Fund (EMFF), the ESF and ERDF) allowing for more integrated strategies. The multi-fund structure also allows for greater flexibility in addressing diverse territorial needs. It operates through a bottom-up model to empower local actors, such as local authorities, community groups, and businesses, to design and implement strategies that respond to the specific needs of their regions.⁵⁷

LEADER, with its focus on rural development, continues to serve as the foundation for CLLD under the EAFRD. Since 2014, it has been possible for a single Local Development Strategy to be supported by multiple EU Funds, known as multi-funded CLLD. In Member States that have adopted this approach, LAGs, whether rural, fisheries, or urban, can leverage CLLD to comprehensively address local needs and integrate tailored solutions. This also

⁵⁶ R. Lukesch, *LEADER Reloaded. The ELARD conference on the heartbeat of the LEADER community*, Keynote paper, 2018. Available at: <https://elard.eu/wp-content/uploads/2020/04/I2020181009XLEADERXRELOADEDXPAPERXROBERTXLUKESCH.pdf>

⁵⁷ European Commission, *Community-led local development. Cohesion policy 2014-2020*. Available at: https://elard.eu/wp-content/uploads/2020/04/community_en.pdf

enables better coordination between LEADER initiatives and local development efforts funded by other EU programs, strengthening the connections between rural, urban, and coastal regions.⁵⁸

The EU's use of different funding mechanisms underlines its recognition that achieving the Twin Transition requires an inclusive, flexible and territorially sensitive approach. By using these instruments, the EU provides a model for how governance structures can balance local needs with global priorities, ensuring that no territory or community is left behind.

1.4 The contribution of research and innovation: the Horizon Europe programme

In addition to programmes and funds specifically and directly targeted at local development, there is Horizon Europe (HE), the EU's flagship programme for research and innovation. Although its main focus is on scientific research, it plays a crucial role in promoting local development across the EU, contributing to the full development of the potential of local communities by fostering innovation, addressing regional disparities and supporting sustainable growth.⁵⁹

Indeed, scientific research promotes the translation of research outcomes into tangible benefits to enhance both social and economic development also at local level. Many projects promoted within the HE programme focus on sectors critical to local development and linked to the Twin Transition with the aim of providing local communities with the tools to innovate their economies, improve quality of life, and ensure long-term sustainability. Through this approach, HE contributes to the balanced development of the EU, enabling all

⁵⁸ European Commission, *European Structural and Investment Funds. Guidance on Community-led Local development in European Structural and Investment Funds*, 2018. Available at:

https://ec.europa.eu/regional_policy/sources/guidance/guidance_community_local_development.pdf

⁵⁹ Regulation (EU) 2021/695 of the European Parliament and of the Council of 28 April 2021 establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination, and repealing Regulations (EU) No 1290/2013 and (EU) No 1291/2013 (Text with EEA relevance). Available at: <https://eur-lex.europa.eu/eli/reg/2021/695/oj>

regions to leverage innovation as a driver of local growth. Moreover, HE is closely aligned with the SDGs, many of which are directly relevant to local development and complemented by EU strategies for local development. For instance, SDG 11 (Sustainable Cities and Communities) and SDG 13 (Climate Action) are central to the sustainable development of local areas. By supporting these efforts, HE helps local communities meet their sustainability objectives, ensuring a greener and more resilient future.

This framework is also an example of how some EU funds support collaborative multi-stakeholder partnerships involving local authorities, institutions and bodies, with a direct impact on local development. Indeed, the HE programme supports the creation of regional and local innovation systems in which universities, research institutions, small and medium-sized enterprises and local authorities work together to promote innovation. The programme provides significant funding to stimulate these partnerships, which aim to develop innovative solutions tailored to local needs and thus strengthen local economies.

More generally, the results of scientific research within HE enable innovative solutions to be applied at local level through synergy with other EU funding mechanisms, such as cohesion policy. In this way, the practical application of research innovations becomes evident, contributing to sustainable development and local growth.

Chapter 2: The integrated governance model for local development

The concept of 'governance' has gained overwhelming prominence in many disciplines and fields, and it is the main structural element with regard to policy making in European Union policy documents and to which specific European funding programmes are dedicated. This increased attention to governance suggests to take a closer look at the concept and how it is reflected in the field of local development policies implementation within the wider framework of the Twin Green and Digital Transition.

The aim of this chapter is to examine the main elements of governance discussed in the literature, particularly in relation to the local public sphere. Given the broad nature of the concept and its various permutations, this review does not claim to be exhaustive. Instead, it seeks to identify key definitions, extract constituent elements, and propose a categorization based on a human-centered approach.

The connections between the integrated governance model and project management are also explored in order to identify strategic tools and strategies that can ensure a coherent exercise of governance through an effective and holistic process aimed at achieving goals and social impact to respond to the needs of local communities.

2.1 The role of integrated governance model for local development: an introduction

Local territory is identified as very appropriate level for analysing governance in a perspective of local development. The word 'local' is used to refer to sub-national levels of governance, taking into account the actors involved in the implementation of European policies and programmes aimed at promoting local development within the framework of the European Twin Transition, with a particular focus on municipal authorities. Considering that governance can vary between the different levels of local government, the research looks at the interactions between them and examines the main governance models responsible for local development, in order to then develop a coherent reference framework for an

integrated governance model, taking into account the common development actors from the quadruple helix model.

The concept of integrated governance is explored to determine how it can contribute to local development and identify elements that could enhance the effectiveness of local development policies, programs, and projects. The primary gap to be addressed is the blurred boundary between the design phase of a policy and its successful implementation. As highlighted by M. Andrews et al.⁶⁰, most development studies focus on the quality of policy design or its implications, neglecting the governance capacity required for implementation. This study aims to introduce and prepare for a discussion on local governance, emphasizing the elements necessary for developing a coherent, integrated model that supports effective local development through a human-centered approach. Given the various meanings of 'governance' in public management literature⁶¹, establishing a baseline definition is crucial for framing the concept within the broader research aim. This chapter will review select definitions from the literature, focusing on those with shared characteristics and complementary elements suitable for the integrated governance framework to be detailed in subsequent chapters.

The chapter explores local governance in its integrated form, specifically within the context of municipalities. By circumscribing the analysis to this local dimension, it aims to understand how local governments can foster development-oriented governance and what actions they can take to advance this goal. Recognizing that local governments are part of a multi-level governance system, the chapter examines how external relationships can contribute to local development⁶², placing them on par with internal capacities. This holistic view is essential for understanding and promoting the development path of municipalities and local areas.

⁶⁰ M. Andrews, L. Pritchett, and M. Woolcock, *Building state capability: Evidence, analysis, action* (First edition). (2017). Oxford University Press.

⁶¹ R. A. W. Rhodes, *The New Governance: Governing without Government*, *Political Studies*, 44(4), pp. 652–667, 1996. <https://doi.org/10.1111/j.1467-9248.1996.tb01747.x>

⁶² D. Atkinson, *Local Government, Local Governance and Sustainable Development*, in *Integrated Rural and Regional Development Research Programme*, Occasional Paper 4, Human Sciences Research Council Publishers, 2002.

2.2 The concept of governance for local development

Trying to define the concept of governance once and for all is not the intent of this research, as, how the prevailing literature has already accepted, it is not possible to develop and ideal one-size-fits-all definition or model of governance, as any attempt would go against the very nature of the concept of 'governance'.

A tentative of all-embracing definition of 'governance' comes from Chhotray and Stoker, who affirm that governance is a system which involves the rules for collective decision-making in contexts where multiple actors or organizations operate and where no formal control system can dictate the terms of their relationships.⁶³ The multi-dimensional nature of the concept makes it adaptable to different contexts of analysis, depending on the observer and the aspect under consideration. The same elements can be found in different types of governance, creating links, and blurring any attempt to draw clear boundaries between different forms of governance.⁶⁴

For the purpose of this research considering governance as the management of the course of events in a social system⁶⁵ and the sum of the many ways individuals and institutions plan and manage the common affairs is the most general way to define it.⁶⁶ Before exploring the semantic concept of 'governance' in its different dimensions, it is necessary to distinguish governance from government. Both the concepts are comprised of systems of rules and steering mechanisms used to exercise authority, which should facilitate the preservation of coherence among the governed and the progress towards desired objectives.⁶⁷ On the one

⁶³ V. Chhotray, G. Stoker, *Governance Theory and Practice*, London: Palgrave Macmillan UK, 2009. doi:[10.1057/9780230583344](https://doi.org/10.1057/9780230583344).

⁶⁴ Edwards, Meredith, John Halligan, Bryan Horrigan, and Geoffrey Nicoll, *Dimensions of Governance for the Public Sector*, In *Public Sector Governance in Australia*, ANU Press, 9–34, 2012. <http://www.jstor.org/stable/j.ctt24h92b.6> (June 28, 2024).

⁶⁵ UN Habitat, *The Global Campaign on Urban Governance: Concept Paper: UN Habitat*; 2nd ed. 2002.

⁶⁶ S. Burris, P. Drahos, C. Shearing, *Nodal governance*, *Aust Journal Leg Philos.* 2005;30: 30–58.

⁶⁷ J. N. Rosenau, *Strong Demand, Huge Supply: Governance in an Emerging Epoch*, in Ian Bache, and Matthew Flinders (eds), *Multi-level Governance* (Oxford, 2004; online edn, Oxford Academic, 7 Apr. 2004). <https://doi.org/10.1093/0199259259.003.0003>.

hand, government is an institution that functions as a structured system overseen by people assigned specific positions, functions, and roles.

Conversely, governance can be defined as a broader structure within which any group, private or public, operates, using both formal and informal governance mechanisms to articulate demands, set goals, issue directives, implement policies, and ensure compliance. A development-oriented government structures its internal relationships to achieve specific development goals, while governance refers more broadly to the context in which the government operates and its relationships with the electorate, the public, the consumers of the services and all the external and non-institutional stakeholders. The specificity of development-oriented governance is that the local government enters into different type of relationships with external stakeholders and encourages them to directly and indirectly support the development that the local government aims to achieve.⁶⁸ The rule systems of governance, then, has the main aim of implementing social functions or perform social processes related to very different issues in different ways and by a wide variety of organizations. Unlike governments, which derive their legitimacy from formal regulatory processes, governance structures derive their effectiveness from informal processes of negotiation between parties or agreements of various kinds that are not linked to sovereignty or constitutional legitimacy and that are able to maintain a level of compliance that sustains its legitimacy.

Governance is defined as the result of the process of governing (goal-directed interventions), intended as social-political-administrative interventions and interactions⁶⁹, through which public and private actions and resources are coordinated and given a common direction and meaning towards final total effects.⁷⁰ For this reason, the involvement of a multiplicity of actors is at the core of this interdependence system that constitutes the so-called socio-cybernetic approach in which no one single actor, public or private, can

⁶⁸ D. Atkinson, 2002.

⁶⁹ J. Kooiman, *Modern governance: new government-society interactions*, Sage, 1993.

⁷⁰ B. G. Peters, & J. Pierre, *Multi-level Governance and Democracy: A Faustian Bargain?*, in I. Bache & M. Flinders (Eds.), *Multi-level Governance* (p. 0), Oxford University Press, 2004.
<https://doi.org/10.1093/0199259259.003.0005>

unilaterally manage the complexity or solve problems, because no one has the necessary knowledge and resources to effectively implement a policy alone.

According to this approach, governance comes from interactive socio-political forms of governing and societal interdependencies in which many different actors shared the same purposes, is not an externally imposed structure, and aims to bridge the public-private divide in the pursuit of collective interests.⁷¹ Rhodes considers this approach integrated to significant elements of the other uses individuating some main shared characteristics of 'governance' like the interdependence between organisations (governance covers also non-state actors in a socio-political environment in which public, private and voluntary sectors operate together), continuing interactions between networks members, who share resources, knowledge, and purposes, game-like interactions (network participants agreed on trusted-rules), and the steering role of the government actor within the network to prevent undesired configurations towards desired ones with no privileged position.⁷²

In this sense, 'governance' signifies 'a change in the meaning of government, referring to a new process of governing; or a changed condition of ordered rule; or the new method by which society is governed'. Therefore, "governance is concerned with creating the conditions for ordered rule and collective action"⁷³, aiming to achieve the same outcomes of government but with different processes, where the emphasis of process over institution results the main novelty of the concept. So, it is more than a public management tool to produce and deliver public services.

Governance's value lies in its contribution as a perspective to provide a framework of analysis and understanding of the governing challenges and changing, a conceptual framework of reference which contribute to raise new questions on the traditional

⁷¹ *Ibidem*.

⁷² R. A. W. Rhodes, *The New Governance: Governing without Government*, Political Studies, 44(4), pp. 652–667, 1996. <https://doi.org/10.1111/j.1467-9248.1996.tb01747.x>

⁷³ G. Stoker, *Governance as theory: Five propositions*, International Social Science Journal, 68(227–228), pp. 15–24, 2018. <https://doi.org/10.1111/issj.12189>

assumptions about traditional public management.⁷⁴ The concept has always evolved as an adaptation to social conditions, and for this reason no one-size-fits-all definition can be taken into account, as governance systems themselves should be adapted to changeable social complexity and designed considering the polycentric nature of governance by emphasizing social learning and coordination rather than centralised, top-down management.⁷⁵

An interesting approach for a better understanding of the current governance discourse is provided by Pierre & Peter, who suggest distinguishing between 'governance as structure' and 'governance as process'.⁷⁶ 'Governance as structure' refers to different institutional arrangements and the involvement of social actors under new conditions, while 'governance as process' deals with the interaction between different structures with the consequent possibility of the emergence of new forms of inclusion and influence of new actors over time and across sectors. In order to analyse governance as a process, particular attention should be paid to the policy-making process in its design, formulation and implementation phases, as well as to how different actors contribute and how the distribution of power is managed and influences the final overall outcome.⁷⁷

Berger argues that "the power relations between different institutions and societal actors need to be taken into account in any governance approach" otherwise there is a risk of underestimating the responsibility of the actors involved, on the one hand, and ignoring the impact of informal spheres of influence on the other.

To avoid these possibilities, Berger suggest developing a clear framework of rules, responsibility, and accountability to better understand the changing and challenging policy-making scenario. The governance perspective calls for shared responsibility between the public and private sectors, the voluntary sector, and citizens (civil society), which, on the one hand, strengthens the social capital and social foundations necessary for effective economic

⁷⁴ D. Judge, G. Stoker, H. Wolman, *Urban politics and theory: an introduction*, in D. Judge, G. Stoker and H. Wolman, *Theories of Urban Politics*, London: Sage, pp. 1–13, 1995.

⁷⁵ N. Devas, *Who Runs Cities? The Relationship between Urban Governance, Service Delivery and Poverty*, Birmingham: University of Birmingham School of Public Policy, 1999.

⁷⁶ J. Pierre, G. B. Peter, *Governance, Politics and the State*, London, Macmillan, 2000.

⁷⁷ G. Berger, *Reflections on Governance: Power Relations and Policy Making in Regional Sustainable Development*, *Journal of Environmental Policy & Planning* 5(3): 219–34, 2004. doi: 10.1080/1523908032000154160.

and political performance, and, on the other hand, can create a degree of ambiguity by blurring responsibilities, raising the issue of blame avoidance, and scapegoating when things go wrong.⁷⁸ Moreover, the main literature on governance talks about a ‘governance in transition’ to refer to a new environment for the public sector performance and accountability where new public policy implementation models need a more collaborative form of governance based on multi-stakeholders’ interactions.

A new scenario opens the way for various governance systems where a wide variety of actors operate and that result interconnected by governance networks. There are different forms of partnerships that can emerge from governance as an interactive process, which can lead to a different form of management coordination of responsibilities between the actors involved. The different forms of partnership envisaged by governance as an interactive process have been categorised by Gerry Stoker as it follows⁷⁹:

Table 2.1. Forms of partnerships in governance

FORM OF PARTNERSHIP	MAIN CHARACTERISTIC	OUTCOMES
<i>Principal – Agent relation</i> ⁸⁰	The principal-agent form rests on one party (the principal) hiring or contracting another (the agent) to undertake a particular task	The principal does not have complete control over the agent and has only partial information about the agent’s behaviour. Predisposition to gameplaying and opportunistic behaviour.
<i>Inter-organizational negotiation</i> ⁸¹	Organizations negotiate joint projects in which by blending their capacities they are better able to meet their own organization’s objectives.	Seeking the best ‘deal’ for the organization provides the defining characteristic of the process which in turn can lead to ambiguous outcomes which can be interpreted appropriately by the various partners.

⁷⁸ G. Stoker, *Governance as theory: Five propositions*, International Social Science Journal, 68(227–228), pp. 15–24, 2018. <https://doi.org/10.1111/issj.12189>

⁷⁹ *Ibidem*.

⁸⁰ J. Broadbent, M. Dietrich, R. Laughlin, *The Development of Principal-Agent, Contracting and Accountability Relationships in the Public Sector: Conceptual and Cultural Problem*, Critical Perspectives on Accounting, 17, pp. 259–84, 1996.

⁸¹ B. Jessop, *Partnership in Greater Manchester and the Thames Gateway*, Paper for DoE Seminar, 1996.

		Predisposition to gameplaying and opportunistic behaviour.
<i>Systemic coordination</i> ⁸²	The organisations develop a shared vision and joint working capacity that leads to the establishment of a self-governing network characterised by mutual understanding and embeddedness.	It involves ‘games about rules’ rather than ‘games under rules, so orders or structures are designed, intentionally chosen, and adopted, in a process in which the power dependence in collective action is recognised and it is accepted that the intentions could not always match the outcomes.

Source: G. Stoker, 2018

By analysing the different forms of governance partnership proposed by Stoker, it is possible to better understand the degree of complexity that characterises the relationships between actors and the management of the process and its outcomes. In any type of governance partnership, the actors involved may face unintended consequences and uncertainty, suggesting that governance requires policy makers to be more willing to deal with uncertainty and openness. This aspect becomes crucial with the presence of self-governing networks that can be created within the partnerships as groups of actors united by related functions or issues, enabling partners to respond to related needs. Networks work to influence government policy by also addressing specific government activities in an informal but stable way.⁸³

Accountability remains the most delicate dilemma in the emergence of such self-governing networks, since, as Stoker pointed out, the combination of resources and objectives of different partners in the network can lead to dissatisfaction on the part of members of certain groups, on the one hand, and to dissatisfaction on the part of people excluded from the network, on the other. In fact, networks tend to be motivated primarily by the self-interest of their members, rather than by a broader concern for the public interest or the needs of those excluded from the network.

⁸² G. Stoker, *Governance as theory: Five propositions*, International Social Science Journal, 68(227–228), pp. 15–24, 2018. <https://doi.org/10.1111/issj.12189>

⁸³ M. Atkinson, W. Coleman, *Policy Networks, Policy Communities and the Problems of Governance*, Governance 5(2): 154–80., 2005. doi:[10.1111/j.1468-0491.1992.tb00034.x](https://doi.org/10.1111/j.1468-0491.1992.tb00034.x).

This brings us back to the steering role that the government actor should play in relation to the existence of self-governing networks, which nevertheless maintain a certain degree of autonomy to achieve their purposes. Specifically, the tasks of a local government in a governance have been classified by Kooiman and Van Vliet as it follows:

1. (de)composition and co-ordination, which includes the definition of a certain situation, the identification of the main stakeholders involved, and the provision of effective coordination tools between the parties;
2. calibration and steering, which is related to the attention to the achievement of desired outcomes by influencing and steering;
3. integration and regulation, which entails addressing more than just individual sub-systems, preventing unintended consequences and creating mechanisms for effective coordination.⁸⁴

In order to be effective in the long term, local government, intended as the powerholder, must therefore exercise legitimate power, which means that it must be perceived as legitimate in order to gain public support and commitment, mobilise resources and encourage cooperation between the actors in the partnership.⁸⁵

From the above definitions, it can be concluded that in an overall system of governance, different concepts operate and interact, each retaining its own settings and features that demand attention. This view of governance as a multi-level, systemic, holistic, and reflexive framework arises from considering various components of the concept, which together contribute to a broader system of local governance.

The local unit of governance itself interacts with other governance systems⁸⁶, where with local is intended all sub-national levels of governance involved in the implementation of European policies and programmes aimed at promoting local development within the

⁸⁴ J. Kooiman, M. Van Vliet, *Governance and Public Management*, in K. Eliassen and J. Kooiman (eds), *Managing Public Organisations* (2nd edn), London: Sage, 1993.

⁸⁵ G. Stoker, *Governance as theory: Five propositions*, *International Social Science Journal*, 68(227–228), pp. 15–24, 2018. <https://doi.org/10.1111/issj.12189>

⁸⁶ M. Edwards, J. Halligan, B. Horrigan, and G. Nicoll, *Dimensions of Governance for the Public Sector*, in *Public Sector Governance in Australia*, ANU Press, 2012, pp. 9–34. <http://www.istor.org/stable/j.ctt24h92b.6>

framework of the European Twin Transition, with a particular focus on municipal authorities. The local governance explored in this research is an integral part of broader public governance systems at both national and European levels (systemic). It is structured in a multi-layered form, where each level is distinct yet interconnected, referring to different local government arrangements that collectively steer the operational function of local governance (holistic).

A series of values and societal norms underlie the public sector, consequently infusing systems of government and their governance arrangements. These values and practices permeate and underpin governance ideas and practices, within its structures, processes, and behaviors shaping and being shaped by the surrounding environment understood as a public management structure in which various actors operate and interact with each other (reflexive). These values and other norms of conduct intrinsically shape governance at multiple levels. Evolution in governmental understandings and practices intertwines with the core thematic influences and emphases in governance values. An interplay exists between societal perceptions of the local government's role and the prevailing trends and priorities in public sector governance and cross-institutional and trans-sectoral integration, as well as shared responsibilities bring out new governance values. This interconnectedness highlights how governance values, whether explicitly embedded or nurtured through public sector regulations, interact with the various components and elements of governance and its institutional structure within government and society.⁸⁷

Given the various applications of the governance concept across different fields and the distinct perspectives offered by each definition found in literature, it appears clear that a blending of theoretical approaches is necessary. By drawing from these varied perspectives, we can enhance the utilization and advancement of governance as both a theoretical concept and a practical tool. A governance framework, indeed, is here considered as an organized structure within the public institution which comprises roles, processes and rules established

⁸⁷ M. Edwards, J. Halligan, B. Horrigan, and G. Nicoll, *Dimensions of Governance for the Public Sector*, in *Public Sector Governance in Australia*, ANU Press, 2012, pp. 9-34.
<http://www.istor.org/stable/j.ctt24h92b.6>

to ensure projects meet the purpose and improve the overall project performance⁸⁸, depending on the context and applied to institutions.⁸⁹

It is proposed a systematisation of the main governance's definition that better can fit within the context of local development by using the following dimensions:

- Institutional / political
- Economic / financial
- Administrative
- Public / social / cultural

An anthology of phrases and terms includes the definitions provides for each dimension.

Table 2.2. The dimensions of governance

GOVERNANCE'S DIMENSION	DEFINITION	SUB-DIMENSIONS
1. <i>Institutional - Political</i>	According to the European Commission, governance refers to the rules, processes and behaviours that influence the way power is exercised, with an emphasis on a structure of greater involvement, participation, and multi-level governance.⁹⁰ This dimension refers to the formal decision-making structure called to provide the set of rules necessary for ensuring democratic accountability and responsibility for the delivery of policy outcomes.	1.1 Project Management 1.2 Capability 1.3 Legitimization 1.4 Internal power relations (accountability, responsibility, rules) 1.5 External partnerships 1.6 Decentralization
2. <i>Economic - Financial</i>	This dimension focuses on economic resources, financial management, and fiscal policies that support local governance enabling the management of public services and development projects.	2.1 Negotiations of goals and objectives 2.2 Public expenditures (quality of budgetary and financial management) 2.3 Public procurement 2.4 Economic attractiveness

⁸⁸ O.J. Klakegg, T. Williams, O.M. Magnussen, H. Glasspool, *Governance frameworks for public project development and estimation*, in Proj. Manag. J. 39, S27–S42, 2008.

⁸⁹ B. Maude, M. Aubry, *The Three Dimensions of a Governance Framework for Major Public Projects*, International Journal of Project Management 34(8): 1596–1607, 2016.
doi:[10.1016/j.ijproman.2016.09.004](https://doi.org/10.1016/j.ijproman.2016.09.004).

⁹⁰ Commission of the European Communities (2001a), *European Governance: a White Paper*, Luxembourg: Office to Office Publications of the European Communities COM (2001) 428.

		2.5 Economic sustainability
3. <i>Administrative - technical</i>	This dimension focuses on the appropriate allocation of administrative and technical responsibilities and tasks. It delineates clear duties to qualified human resources to guarantee and safeguard the right development of internal procedures, the administrative and technical deadlines, and obligations. ⁹¹	3.1 Staff administrative competencies 3.2 Capacity to manage potential red tape ⁹² 3.3 Efficiency of revenue mobilization ⁹³
4. <i>Social - Cultural</i>	This dimension refers to the governance's capacity to create and manage social networks around policy issues. These networks are structures and interactions among societal different actors involved in policy negotiations and policy actions implementation to guarantee inclusive governance with the view to enhancing inclusive outcomes.	4.1 Participatory decision-making processes ⁹⁴ 4.2 Collective intelligence (human development) 4.3 Gender dimension 4.4 Corruption 4.5 Short/Long term orientation ⁹⁵ 4.6 Trust and consensus building

Source: elaboration of the Author

In this scheme, the concept of "governance" is seen as closely linked to the concept of "capability" in order to avoid the risk of perpetuating capability traps in development.⁹⁶ Just by way of example, indeed, public organisations can fall into the so called "trap of isomorphic mimicry", a kind of camouflage technique borrowed from the animal world to explain how public organisations can adopt the strategy of "looking like a successful organisation" in order to increase their legitimacy, conflating form and function: "looks like" substitutes for "does." This attitude can actually slow down internal progress and perpetuate the typical peculiarities

⁹¹ G.S. Cheema, D.A. Rondinelli, *Decentralizing Governance: Emerging Concepts and Practices*, Brookings Institution Press, 2007.

⁹² Indicator source name: Economist Intelligence Unit Riskwire & Democracy Index

⁹³ Indicator source name: World Bank Country Policy and Institutional Assessments (PIA)

⁹⁴ M. Foth, M. Brynskov, *Participatory action research for civic engagement*, in: E. Gordon, P. Mihailidis, editors. *Civic media: technology, design, practice*: MIT Press; 2016. p. 563–80.

⁹⁵ G. Hofstede, G.J. Hofstede, M. Minkov, *Cultures and Organizations: Software of the Mind*, 3rd ed. McGraw-Hill, USA, 2010.

⁹⁶ L. Pritchett, M. Woolcock, M. Andrews, *Looking Like a State: Techniques of Persistent Failure in State Capability for Implementation*, *Journal of Development Studies*, 49(1), 2013, pp. 1–18.

<https://doi.org/10.1080/00220388.2012.709614>

of a closed and agenda-driven ecosystem remaining blocked in a system of no improvement of internal capability with very little performance achieved in a continuous process of “successful failure”.⁹⁷ This perspective helps to see the dimensions of governance presented here as interrelated: each dimension can only be effective if it is seen in the wider context, and each contributes to the strengthening of the others.

The concept of capacity building is a cross-cutting issue instrumental for the understanding of all the identified dimensions. It refers to the sum of organisational, structural, and technical systems as well as individual competencies that create and implement policies in response to the needs of the public.⁹⁸ Defined in this way, the governance structure is the framework in which the capacity building of a public institution can express its potential by acquiring resources and integrating them in a way that favours the internal efficiency. In this framework, each dimension contributes to the development of a different type of capital to perform better (institutional, human, financial, technical, etc.).⁹⁹

The institutional-political dimension refers to the set of indicators that describe the public administration capacity building, aimed both at institutions and individuals, to improve the ability to perform in a more effective and efficient way. The units of reference are the public institutions with their internal departments and units, and the individuals as holders of public offices or civil servants of the institution.

The economic-financial dimension relates to the capacity of the local government to manage economic resources and attract new funding for the provision of public services, the implementation of new local development projects and the sustainability of ongoing projects.

The administrative-technical dimension concerns with the capacity of the local government to guarantee a proper distribution of administrative and technical responsibilities and tasks to facilitate internal administrative procedures and ensure compliance with deadlines and obligations. It includes the capacity of local administrations to

⁹⁷ P. J. Di Maggio, W.W. Powell, *The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields*, *American Sociological Review*, 48(2), 147, 1983. <https://doi.org/10.2307/2095101>

⁹⁸ OECD, *OECD Public Management Reviews: Ireland 2008: Towards an Integrated Public Service*, OECD Publishing, Paris, 2008. <https://doi.org/10.1787/9789264043268-en>.

⁹⁹ J. Odeck, *Position Paper: Institutional Capacity Building*, World Road Organisation (PIARC), 2005.

implement policies, deliver services, and manage public resources effectively and efficiently safeguarding independence from political pressure.

Lastly, the social-cultural dimension takes into consideration social interactions and cultural values as integral parts for the definition of local governance. Indeed, it refers to the capacity of local institutions to create and manage relationships with different stakeholders around policy issues. The networks created have the intangible and tangible role of participating in a co-creation process of goals, actions, and outcomes to meet the needs of the local community in accordance with the shared cultural values. This dimension refers to culture as a set of shared values, attitudes, practices, goals, and expectations that characterise a group of people, an organisation or an institution and that influence the lives of everyone in the community. According to Hofstede, cultural differences lead to differences in socio-economic development between nations. For example, collectivist cultures, which emphasise individuals as part of a collective, tend to promote group harmony and loyalty to shared values and practices. In contrast, individualistic cultures expect individuals to prioritise self-reliance and the well-being of their immediate families.¹⁰⁰ As a consequence, the different role that each person plays within the community can have an impact on how the public system is organised and consequently on the economic performance. As culture constitutes the foundations and the steering tool of the society, cultural values are strictly linked to human development and the governance quality of the community.¹⁰¹ Even if very little has been investigated about the relationship between culture and governance, the literature shows that culture contributes not only to country's development level (here considered as the local community development level), but also to governance and then in turn governance quality would influence the human development level.¹⁰² The assumption underlying this theory is that cultural values can facilitate the emergence of particular

¹⁰⁰ G. Hofstede, *Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations Across Nations*, 2nd ed. Sage Publications, Thousand Oaks, CA, 2001.

¹⁰¹ E. Gaygisiz, *How Are Cultural Dimensions and Governance Quality Related to Socioeconomic Development?*, *The Journal of Socio-Economics* 47: 170–79, 2013. doi: 10.1016/j.soc.2013.02.012.

¹⁰² A. N. Licht, C. Goldschmidt, and S.H. Schwartz, *Culture Rules: The Foundations of the Rule of Law and Other Norms of Governance*, *Journal of Comparative Economics* 35(4): 659–88, 2007. doi:[10.1016/j.jce.2007.09.001](https://doi.org/10.1016/j.jce.2007.09.001).

governance norms that define what is desirable in a society as they are shared within the community. The governance framework should then be defined with particular attention to finding a balance between socio-cultural values and governance norms. This focus on compatibility can make it easier to legitimise governance norms, otherwise governance norms that are incompatible with cultural norms are less likely to take root.¹⁰³

The study conducted by Licht A. N. et al. demonstrated that the governance is not entirely a product of culture, as also economic and historical factors have a crucial impact on governance variations. Despite this, culture ‘makes its independent contribution over and above these factors’¹⁰⁴, constituting an essential and determinant component of governance and strengthening compliance with governance norms.

At an overarching level, cultural factors and societal norms permeate and underpin governance from the design phase of its structure to the implementation of practices favouring citizens’ legitimization. From this, trust and cooperation can have positive implications in the exercise of power and then in local development, especially in terms of responsibility and accountability of the institutions of government as well as through the engagement of the private sector and civil society, as they guide what the people expect from their governments and how governments should themselves behave.

This approach to the concept of governance emphasizes the role of citizens and recognizes their potential contribution within society as active co-creators in the decision-making process, thereby promoting a participatory approach to the exercise of power.

The form of local governance here considered is an integral part of and operates within the European multi-level governance regarding the access to European funds for local development. The multi-level governance, indeed, integrates processes at different institutional levels to promote the interests of the system enhancing exchange and collaboration between both public and private actors. Within it the institutions act as the main actors, both as political authorities and as facilitators, to link the different institutional

¹⁰³ *Ibidem.*

¹⁰⁴ *Ibidem.*

levels that characterise this form of governance.¹⁰⁵ In this broader framework, local and regional authorities are called to mobilise their resources and harness their skills and competences to have access to European financial resources and European and international partnerships.¹⁰⁶

This environment should support local governments in finding the most adequate governance strategies, a steering mechanism to better govern affairs by managing the ever-greater complexities and to move towards desired goals in the face of a challenging and transformative dynamics. In this sense, multi-level governance could represent “a mechanism to steer the tensions of ‘framegration’ in constructive directions”¹⁰⁷, where ‘framegration’ is the contraction of the term ‘fragmentation’ and ‘integration’ putting the emphasis on several and contradictory forces that have an impact on the clash between globalization, centralization, and integration on the one hand, and localization, decentralization, and fragmentation on the other.

In this regard, it is useful to consider the definition of multi-level governance provided in the White Paper on Multilevel Governance according to which “Multi-Level Governance means coordinated action by the European Union, the Member States and Local and Regional authorities, based on partnership...to create and implement EU policies. It leads to responsibility being shared between the different tiers of government”.¹⁰⁸

It is defined as a dynamic concept that represents a political “action blueprint” that define the mechanism of translating European or national objective into local or regional action, on the one hand, and integrating the objectives of local and regional authorities within the strategies of the European Union on the other. The Committee of the Regions recognised the unavoidable role of the local authorities in creating the best conditions for the

¹⁰⁵ B. G. Peters, & J. Pierre, *Multi-level Governance and Democracy: A Faustian Bargain?*, in I. Bache & M. Flinders (Eds.), *Multi-level Governance* (p. 0), Oxford University Press, 2004.

<https://doi.org/10.1093/0199259259.003.0005>

¹⁰⁶ A. Kokaj, B. Sinani, *The Multi-Level Governance of the European Union: The Role of the Local Government*, *Juridical Tribune* 13(1), 2023. doi:10.24818/TBJ/2023/13/1.03.

¹⁰⁷ J. M. Rosenau, *Strong Demand, Huge Supply*, in I. Bache & M. Flinders (Eds.), *Multi-level Governance*, Oxford University Press, 2004.

¹⁰⁸ Committee of the Regions, *White Paper on Multilevel Governance*, 17-18 June 2009, p. 7.

implementation of a truly effective multi-level governance which is embodied in the process of decentralisation and cooperation promoted by the European Commission. The European Union's budget, in this regard, should reflect the progress towards integration by financing common policies and actions, and enhancing local and regional authorities' responsibility by encouraging their participation in the design and implementation of Community policies within the framework of the multi-level governance.¹⁰⁹

It is no coincidence that the first reference to the concept of multi-level governance is of Gary Marks regarding the reform of the EU's structural policy in 1988¹¹⁰, which introduced new governing principles that were crucial to the emergence of this new form of governance, like the principles of partnerships and additionality¹¹¹, and provided the main financial instrument of the EU regional policy, the European Regional Development Fund (ERDF). Since then, the multi-level governance notion has been applied to this policy area more than any other.¹¹²

Considering all the governance aspects analysed so far, now it is possible to introduce the integrated governance model as the one that embraces the main elements that will be introduced in the final elaboration of a framework of governance for local development. Indeed, integrated local governance entails the systematic coordination and collaboration among various government agencies and stakeholders at the local level. This approach aims to deliver public services and meet community needs in a comprehensive and efficient manner. It involves the integration of planning, budgeting, and implementation processes across different local government departments, while actively engaging citizens, community organizations, and the private sector. The goal is to ensure a holistic and responsive strategy for local development.

¹⁰⁹ *Ibidem*.

¹¹⁰ G. Marks, *Structural Policy and Multilevel Governance in the EC*, in Alan Cafruny and Glenda Rosenthal, eds., *The State of the European Community*, (New York: Lynne Rienner), 391-410, 1993.

¹¹¹ I. Bache, *Multi-Level Governance in the European Union*, Oxford University Press, 2012.
doi:[10.1093/oxfordhb/9780199560530.013.0044](https://doi.org/10.1093/oxfordhb/9780199560530.013.0044).

¹¹² I. Bache, *Multi-level Governance and European Union Regional Policy*, in *Multi-level Governance* edited by I. Bache and M. Flinders, Oxford University Press, 2004.

The integrated governance model is seen here as the one that can best provide a coherent and efficient framework for exploring the potential of social science and humanities disciplines as an interpretive lens of analysis to maintain the focus on the human-centred approach, which focuses on collective intelligence and interdependence, and the potential of project management as a tool for coordination and responsibility management within the governance framework. In this sense, integrated governance is a bottom-up synergies' management tool to achieve local development goals and manage public services favouring the integration of bottom-up decision-making process with top-down ones, with the final effect of considering all the actors of the Quadruple Helix (QH) model as local development's agents.

The QH model is the model of choice for this study, as it is considered to be more relevant to the research questions. Specifically, the QH is a collaborative model with a citizen end-user perspective where the community's needs are central for the elaboration of policies and strategic actions. This model involves representatives from all members of society: public authorities (government and regional agencies and policy makers), industry (business), academia (universities, research, and development bodies) and civil society (citizens, communities). Compared to the previous model, the Triple Helix model (three helices: university, industry, and government), the QH introduces civil society as a quadruple helix. Both models address the processes of innovation within society, but the QH recognises civil society as the most important dimension for triggering a process of innovation in a heterogeneous environment where the joint action of different actors across sectors is crucial.¹¹³ The co-creation approach puts all actors on the same level and makes their contribution equally necessary increasing trust towards innovations for local development and fostering greater social benefits.¹¹⁴ The concept of innovation is applied to an ecosystem

¹¹³ Y. Cai, A. Lattu, *Triple Helix or Quadruple Helix: Which Model of Innovation to Choose for Empirical Studies?*, *Minerva* 60, 257–280, 2022. <https://doi.org/10.1007/s11024-021-09453-6>

¹¹⁴ D. Lepore, F. Spigarelli, *Opportunities and challenges in a collaborative governance for Smart Specialization Strategies – A systematic review of the literature*, *Economia Marche*, 37(2), 2018. <https://economieamarche.univpm.it/index.php/em/article/view/81>

that foster innovation to improve sustainable performance from an ecological, economic, and social points of view.¹¹⁵ Cai et al. (2020)¹¹⁶ define innovation ecosystems as

co-innovation networks, in which actors from organizations concerned with the functions of knowledge production, wealth creation and norm control interact with each other in forming co-evolution and interdependent relations (both direct or indirect) in cross-geographical contexts, and, through which new ideas and approaches from various internal and external sources are integrated into a platform to generate shared values for the sustainable transformation of the society.

The structure of the Quadruple Helix model enables to respond more effectively to societal changes, particularly concerning the green and digital transition processes. Some studies suggest that this adaptability makes the model both comprehensive and vulnerable; it was designed to tackle issues emerging from modern society, yet its theoretical foundations remain somewhat abstract, making it difficult to analyse its social dimensions.¹¹⁷ Despite the noted difficulties, the QH allows the integration of emerging factors and elements of innovation in contemporary societies, providing a broader framework of analysis and action and representing civil society as a community, not just individual citizens. Given the focus on the human-centred approach of this research, an attempt is made to provide useful analytical tools to consider the social dimension as an integral part of a governance model for local development, and not merely as a framework within which the actors of the QH operate.

¹¹⁵ Boons, Frank, Carlos Montalvo, Jaco Quist, and Marcus Wagner, *Sustainable innovation, business models and economic performance: an overview*, Journal of Cleaner Production 45: 1–8, 2013.

<https://doi.org/10.1016/j.jclepro.2012.08.013>

¹¹⁶ Cai, Yuzhuo, Jinyuan Ma, and Qiongqiong Chen, *Higher Education in Innovation Ecosystems*, Sustainability 12(11): 4376, 2020. <https://doi.org/10.3390/su12114376>

¹¹⁷ Y. Cai, A. Lattu, 2002.

2.3 Interconnections between integrated governance and Twin Transition

The European Union is the first political entity at global level to establish a strategic policy framework for the 'sustainability transition'. The concept of Twin Transition is composed of two intersecting and self-reinforcing transformational dimensions (the ecological transition and the digitalization) that refer to the entire socio-economic structure including extensive societal and behavioral change.¹¹⁸

The structural transformation of our society is at the heart of the Twin Transition. For this reason, the EU is making lots of efforts in the development of legislative, economic and political convergence tools in an effort to synchronise the move towards a green and sustainable economy, combining climate action and economic progress.¹¹⁹

The COVID-19 pandemic has exposed weaknesses in the resilience of our economies that require serious attention, and rapid technological advances, especially in areas such as digital transformation and automation replacing human labour, together with evolving demographics and, most critically, climate change with its far-reaching impacts on politics, production and consumption, require substantial and comprehensive responses. Without informed political leadership, there is no guarantee that these essential transitions will happen, or that they will happen in time to prevent dire consequences.¹²⁰

Effective governance and institutional quality are key determinants of the success of the Twin Transition, particularly in local contexts, where the interplay of ecological and digital policies requires coherent and integrated governance frameworks.

¹¹⁸ European Commission, *Towards a green & digital future: key requirements for successful Twin Transitions in the European Union*, Joint Research Centre, Publications Office, LU, 2022.

¹¹⁹ C. Patrascu, *EU's Innovative "Missions" and Convergence Tools to Ensure the "Twin Transition" towards Smart Cities and Communities*, Bulletin of the Transilvania University of Braşov Series VII Social Sciences, Law 14(63)(Special Issue): 59–70, 2022. doi:[10.31926/but.ssl.2021.14.63.3.8](https://doi.org/10.31926/but.ssl.2021.14.63.3.8).

¹²⁰ European Commission, Joint Research Centre, *Capacities for Transformative Innovation in Public Administrations and Governance Systems: Evidence from Pioneering Policy Practice*. LU: Publications Office, 2023. <https://data.europa.eu/doi/10.2760/220273>

In transitional processes, sustainability and technological innovations are tightly linked to institutional and societal advancements. Intangible assets, such as knowledge, human capital, organizational structures, and managerial skills, act as key drivers of this change.¹²¹

While the Twin Transition seeks to harmonize ecological sustainability and digitalization, inherent contradictions between these two dimensions present significant challenges. The ecological transition prioritizes reducing environmental impact and fostering sustainable practices, whereas the digital transition often focuses on technological advancement and market dynamics, which can sometimes lead to increased energy consumption and resource use. This creates tension between the goals of sustainability and the rapid pace of digital innovation.

Cicerone et al. (2022) demonstrated that the presence of enabling technologies for digital innovation alone does not guarantee green growth and that investments in digital innovations at the local level are not sufficient to ensure the success of the Twin Transition.¹²²

In this scenario, the quality governance and institutions can have a crucial role, for this reason, the EU delivers many convergence tools aimed at strengthening the role of cities as political and economic players pushing sustainability to the forefront of national and international agendas.¹²³

Much of the success of the actions within this transition depends on local implementation as both transitions have systemic features: its effectiveness depends largely on how well local production and administrative systems can adapt to and integrate policy directives, having a significant influence on the results and consequent impacts of the

¹²¹ F.W. Geels, J. Pinkse, D. Zenghelis, *Productivity opportunities and risks in a transformative, low-carbon and digital age*, Work. Pap. Product. Inst. No. 009, 2021.

¹²² G. Cicerone, A. Faggian, S. Montresor, F. Rentocchini, *Regional Artificial Intelligence and the Geography of Environmental Technologies: Does Local AI Knowledge Help Regional Green-Tech Specialization?*, *Regional Studies* 57(2): 330–43, 2023. doi:[10.1080/00343404.2022.2092610](https://doi.org/10.1080/00343404.2022.2092610).

¹²³ M.M. Betsill, H. Bulkeley, *Cities and the multilevel governance of global climate change*, *Global Governance* 12: 141, 2006.

transition process.¹²⁴ Indeed, factors such as the rule of law, regulations, collective trust, government efficiency, and social norms can affect, both directly and indirectly, the behavior of individuals, business practices, investments, and other social dynamics. These elements play a key role in determining the success of the transition by overcoming barriers and constraints inherent in the existing system¹²⁵, and this is the reason why effective policymaking and governance play a crucial role in driving the innovation process forward.

Local governments, in particular, face the difficult task of balancing these competing priorities. On one hand, cities must develop strategies to mitigate the impacts of climate change on urban infrastructure, resources, and populations. On the other hand, urbanization and digitalization are intensifying environmental pressures, driving climate change even further. This paradox makes it challenging to implement both transitions simultaneously without exacerbating one at the expense of the other.¹²⁶

The study by G. De Pascale et al. (2024) underscores this complexity, highlighting that institutional quality plays a more pivotal role in the ecological transition than in the digital one. Strong governance and clear regulations are essential for driving sustainability goals, as they compel economic agents to improve environmental performance. In contrast, the digital transition tends to be driven more by market forces and economic development, with institutional quality having a relatively lesser impact. Thus, while governance is crucial for ensuring the success of the ecological transition, it has a more limited effect on fostering digital innovation.

This disparity in the importance of governance across the Twin Transition creates an additional challenge. Policies aimed at the digital transition often prioritize technological advancement and economic growth, which can sometimes conflict with the sustainability

¹²⁴ G. De Pascale, A. Pronti, R. Zoboli, *The Role of Local Institutional Quality for the Digital and Environmental Transitions in Italy*, Structural Change and Economic Dynamics: S0954349X24001310, 2024. doi:[10.1016/j.strueco.2024.09.002](https://doi.org/10.1016/j.strueco.2024.09.002).

¹²⁵ R. Kemp, D. Loorbach, and J. Rotmans, *Transition Management as a Model for Managing Processes of Co-Evolution towards Sustainable Development*, International Journal of Sustainable Development & World Ecology 14(1): 78–91, 2007. doi:[10.1080/13504500709469709](https://doi.org/10.1080/13504500709469709).

¹²⁶ S. Chapman, J.E.M. Watson, A. Salazar A, et al. *The impact of urbanization and climate change on urban temperatures: A systematic review*, Landscape Ecology 32(10): 1921–1935, 2017.

goals of the ecological transition. For example, the adoption of new digital technologies often requires significant energy resources, which may undermine efforts to reduce carbon emissions.¹²⁷

Moreover, the fragmented governance structure at both the EU and national levels complicates efforts to achieve policy coherence across the Twin Transition. Each policy area, whether ecological, digital, or economic, is typically managed by separate institutional bodies, leading to inconsistencies in how the transitions are approached. As a result, the integration of green and digital policies remains incomplete, and local governments often struggle to reconcile these differences when implementing policies on the ground.

Finally, the Twin Transition also raises broader societal challenges, as the rapid pace of digitalization can lead to social inequalities. While technological innovation can improve efficiency and foster economic growth, it can also widen the digital divide, leaving vulnerable populations behind and exacerbating social inequalities. Ensuring that the digital transition supports social inclusivity while advancing sustainability goals is a complex task that requires careful policy coordination and governance.

Considering that institutional quality is not a specific policy, but rather the overall state of the governance environment, the results of the study conducted by G. De Pascale et al. (2024) suggest that local development strategies should avoid treating the environmental transition as a mere administrative process, and instead promote a systemic transformation that encompasses the entire economic and social system, potentially improving institutional quality. At the same time, this perspective suggests that policies aimed at the digital transition at the local level need a broader, non-competitive cooperation between different local production systems, improving cooperation between different actors from different sectors and strengthening internal efforts arising from the local economic and technological landscape.

¹²⁷ F. W. Geels, *Socio-Technical Transitions to Sustainability: A Review of Criticisms and Elaborations of the Multi-Level Perspective*, *Current Opinion in Environmental Sustainability* 39: 187–201, 2019. doi:[10.1016/j.cosust.2019.06.009](https://doi.org/10.1016/j.cosust.2019.06.009).

The quality of local governance can also influence the capacity to access exceptional opportunities of public funding for development within the framework of the Twin Transition.

The Recovery and Resilience Facility (RRF) is the key funding instrument developed by the EU to support members state in achieving climate neutrality goals and set them on the path to digital leadership. For this to happen, the RRF recognizes as crucial the role of local authorities that are called upon to pursue sustainable development objectives for local development.¹²⁸

Although the Recovery Plan appears to have successfully invested in many green and digital transition's initiatives in Europe's urban areas, Eurocities noted that cities have not been sufficiently involved in its implementation. It seems that centralised national plans developed by Member States have not sufficiently taken into account the needs of local governments and while the RRF is achieving its recovery goals, local administrators are not sufficiently involved neither in the implementation.¹²⁹ This overlooked involvement of local governments calls for a coherent improvement of cities' role in the implementation of EU public investment for local development¹³⁰ and for a more protagonism of their main actors involved in the Twin Transition.

Given these challenges at the local level, collaboration among various stakeholders becomes essential. The Quadruple Helix (QH) framework offers a promising model to bridge these gaps.

This model promises to be able to tackle complexity and systematic change by integrating expertise and value-driven behavior from all four helixes and, in doing so, to succeed more where individual sectors alone would fail but also to create a more responsible innovation environment and the integration of value and mitigation of risk. Each QH actor,

¹²⁸ European Commission, *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Empty: Forging a climate-resilient Europe – The new EU strategy on adaptation to climate change*, Office of Official Publications of the European Communities, 2021f.

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2021%3A82%3AFIN>

¹²⁹ A. Kennedy, *Cities call for increased climate ambition in EU recovery plan*, Eurocities, 2024.

<https://eurocities.eu/latest/cities-call-for-increased-climate-ambition-in-eu-recovery-plan/>

¹³⁰ Centre d'Informació i Documentació Internacionals CIDOB, *Urban Recovery Watch: Empowering cities in the EU Green and Digital Transition*, CIDOB, Barcelona, 2023.

working in a specific field of interest, can make a decisive contribution from the assessment phase onwards to identifying the specific needs of local communities. This can promote a process of empowerment of territories, rather than a mere distribution of resources through competitive calls.

If we consider the European green and digital Twin Transition as a process towards a sustainable human development, the integrated governance can represent a holistic framework for channeling EU efforts at local level towards the main objectives of the Twin Transition and within which a multi-sectoral perspective is used to understand the relationship between the local development issues and societal challenges. In this scenario also the institutional capacity may find fertile ground for its development.

The integrated governance should be adapted to the local development context (social standards, environmental standards, human rights) and political system in order to better respond to development needs while localizing the objectives of the Twin Transition and, more broadly, the Sustainable Development Goals. ‘Localising’ the SDGs is an action that entrusts regional and local governments with the implementation of a new set of goals in accordance with the SDGs.¹³¹ In this sense, the integrated governance aims at developing an effective governance environment and enhancing institutional quality to achieve the defined development impact through an efficient and sustainable use of resources and the definition of multi-stakeholders’ partnerships with a shared responsibility.

Considering governance as an alive and dynamic process, the integrated model is called to frame synergies across different actors and policy domains to ensure coherence in policy implementation. The integrated governance model could be the adequate framework within which the QH’s actors can operate to mitigate the contradictions that may exist from a conceptual and operational point of views regarding the implementation of the Twin Transition’s values and the achievement of its goals. This model, for its nature, can facilitate the interaction and cooperation of different policy domains and interests as mutually beneficial and aligned towards common and shared objectives. This approach recognises that

¹³¹ P. Lucci, *‘Localising’ the Post-2015 agenda: what does it mean in practice?*, Shaping policy for development, ODI, 2015.

absolute coherence across policy areas is unattainable, as each area is designed to serve different purposes and interests, often resulting in conflicting and sometimes irreconcilable priorities.

The coherence issue is used as a key organizational principle considering both its conceptual and operational dimensions, as defined by X. Gao.¹³² Conceptual coherence involves EU, national and private actors using frameworks to integrate different policy areas and create discursive synergies between them. Operational coherence refers to the process of adopting coordinated policies.

To apply this framework to the process of the green and digital transition, in terms of conceptual coherence, the link between the green and digital transitions has been strongly emphasised at the EU level, while at the national level and within the private sector there are different attitudes, with varying degrees of openness to the transition in question depending on the sector and the interests involved. In terms of operational coherence, the EU has not developed a coordinated framework of policies to achieve a higher level of operational coherence of Twin Transition and this is due to the fragmentation of the institutional governing structure of the EU. In fact, the transition is concerned with many policy areas, each of which is under the responsibility of a different institutional body. Similar operational problems at the national level and within the private sector can be observed, with varying allocation of financial and human resources.

Interpreting the Twin Transition as a 'discursive tool' of governance, as suggested by Kotsila et al. (2021), the primary issues addressed are not per se sustainability challenges, but rather the complexities of managing sustainability dilemmas and the trade-offs involved.¹³³

In this regard, local governments have a crucial role to play in steering the Twin Transition in the desired direction and they are called upon to manage the tensions and risks

¹³² X. Gao, *The EU's Twin Transitions towards Sustainability and Digital Leadership: A Coherent or Fragmented Policy Field?*, *Regional Studies*: 1–11, 2024. doi:[10.1080/00343404.2024.2360053](https://doi.org/10.1080/00343404.2024.2360053).

¹³³ P. Kotsila, I. Anguelovski, F. Baró, J. Langemeyer, F. Sekulova, and J. Jt Connolly, *Nature-Based Solutions as Discursive Tools and Contested Practices in Urban Nature's Neoliberalisation Processes*, in *Environment and Planning E: Nature and Space* 4(2): 252–74, 2021. doi:[10.1177/2514848620901437](https://doi.org/10.1177/2514848620901437).

between the green and digital transitions by adapting governance awareness, action and planning at the local level among cross-cutting priorities.¹³⁴

As underlined in the 2022 Strategic Foresight Report, that examines more in detail the tensions and risks that emerge from the twinning of the green and digital transitions, ‘To diminish adverse side effects and deliver its full potential for enabling environmental, social and economic sustainability, the digital transition requires appropriate policy framing and governance’.¹³⁵ This strategic, forward-thinking reflection on how the green and digital transitions interact, proposes a shift in the narrative defining ‘twinning’ as the way in which these transitions can mutually strengthen one another, rather than developing a unified transition as separate entities.

Within this new approach to the Twin Transition, the role of local governance lies in supporting the transformation of the tensions between them into synergies, by facilitating alliances and partnerships among the actors of different sectors involved.

The integrated local governance could provide the most suitable basis to adopt coordinated policies and to implement coordinated actions to achieve the Twin Transition’s goals with coherence at the local level. The structure should ensure a co-responsible commitment and shared management of all the stakeholders to embrace both the green and digital transition without embracing one excluding the other. Indeed, governance actors’ attitude towards the Twin Transition vary, tending to prioritise one or the other depending on sectoral interests. The Twin Transition requires coordinating multiple policy areas including macroeconomic and growth policies, industrial and sectoral policies, environmental policies, energy policies and social-protection policies and the efforts of all the actors of the QH.

¹³⁴ Z. Kovacic, C. García Casañas, L. Argüelles, P. Yáñez Serrano, R. Ribera-Fumaz, L. Prause, and H. March, *The Twin Green and Digital Transition: High-Level Policy or Science Fiction?*, in *Environment and Planning E: Nature and Space*: 25148486241258046, 2024. doi:[10.1177/25148486241258046](https://doi.org/10.1177/25148486241258046).

¹³⁵ European Commission, *Communication from the Commission to the European Parliament and the Council. 2022 Strategic Foresight Report Twinning the green and digital transitions in the new geopolitical context*, COM(2022) 289 final. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52022DC0289>

Although it is recognised that the relationship between governance frameworks and QH collaborations is generally not very strong, and that collaborations are generally formed because of a mutually recognised benefit from the presence of stakeholders from all sectors, the integrated model within the Twin Transition may promote a compelling policy framework of driving force behind these synergies.¹³⁶

The prominent role of the QH actors in the integrated governance model here proposed is strictly connected to the specific contribution that each actor can provide to the transition at local level and, at the same time, to the unprecedented synergies that can arise from the co-responsible cooperation of different actors. The QH collaborations can constitute a dynamic environment where early risks coming from Twin Transition's contradiction can be signaled and early value potential can be realized.

In conclusion, achieving a just and sustainable Twin Transition requires more than just aligning ecological and digital transitions and a profound shift of socio-economic systems is needed, even if green and digital transitions may differ significantly in their approaches and underlying principles. Recognizing the interdependencies between the two transition processes means addressing them in a comprehensive, coordinated, and transdisciplinary way.¹³⁷

It demands an integrated governance model to maximize the advantages and synergies of both transitions and to mitigate the risk of “pushing two agendas separately”¹³⁸ by activating a process of engagement of local governments and diverse stakeholders across sectors. As technological advancements drive digitalization, local governance must ensure that the benefits of these innovations are equitably distributed, avoiding the exacerbation of

¹³⁶ B. W. Head, J. Alford, *Wicked problems: Implications for public policy and management*, *Administration & society*, 47(6), 711-739, 2015.

¹³⁷ X. Chen, M. Kurdve, B. Johansson, M. Despeisse, *Enabling the Twin Transitions: Digital Technologies Support Environmental Sustainability through Lean Principles*, *Sustainable Production and Consumption*, 38 (2023), 13-27, 2023.

¹³⁸ S. Muench, E. Stoermer, K. Jensen, T. Asikainen, M. Salvi, F. Scapoo, *Towards A Green & Digital Future, Key Requirements for Successful Twin Transitions in the European Union*, JRC science for policy report, JRC129319, Europäische Gemeinschaften, Luxembourg, 2022.

social inequalities while minimizing environmental impact and promoting sustainable practices.¹³⁹

The success of this transition ultimately hinges on recognizing the interdependencies between economic, environmental, and social objectives and on building governance frameworks that foster collaboration, accountability, and resilience across all levels.

2.4 The role of Social Sciences and Humanities in local development in the context of the Twin Transition

The challenges posed by the green and digital transition call for a governance structure capable of addressing both its contradictions and potential. Once it is recognised that the interdependencies between the two transition processes require a comprehensive, coordinated and transdisciplinary framework to promote equitable and sustainable development, the role of governance and decision-making becomes more sensitive and crucial.

In this context, the concept of ‘transformative innovation’, as promoted by the European Union, it refers to development in science, technology, and innovation (STI) policies to be used to mobilize innovation capacities to address major societal challenges.¹⁴⁰ It emphasizes the need for innovations that do not merely improve existing technologies but also foster systemic changes that reshape social, economic, and environmental frameworks.

The integration of Social Sciences and Humanities (SSH) into this transformative process becomes essential, as it allows for a deeper understanding of local contexts, norms,

¹³⁹ M. Müller, S. Lang, L. F. Stöber, *Twin Transition – Hidden Links between the Green and Digital Transition*, Journal of Innovation Economics & Management, Prépublication(0): 1165-XXXVIII, 2024. doi:[10.3917/jie.pr1.0165](https://doi.org/10.3917/jie.pr1.0165).

¹⁴⁰ S. Kuhlmann, A. Rip, *The Challenge of Addressing Grand Challenges A Think Piece on How Innovation Can Be Driven towards the “Grand Challenges” as Defined under the Prospective European Union Framework Programme Horizon 2020*, 2014. doi:[10.13140/2.1.4757.1841](https://doi.org/10.13140/2.1.4757.1841).

values, and the perceptions and hopes of citizens, which are all necessary for effectively transforming external challenges into opportunities for sustainable and fair growth. This understanding helps reinforce governance frameworks, which are severely testing, and resolve policy challenges by providing culturally and socially sensitive insights with a strong capacity of foresight.

The European Green Deal places innovation at the core of this transformation, viewing it as the result of interrelated dependencies between economic prosperity and environmental and social sustainability. Here comes the role of SSHs, that play a crucial role in this transformation by offering a long-term perspective on the social implications of new technologies and by ensuring that innovations are inclusive, participatory, and reflective of community needs. By emphasizing social justice, equity, and cultural considerations, SSHs helps ensure that policy decisions and innovations do not exacerbate existing inequalities or create new forms of exclusion.

Furthermore, the inclusion of SSHs in the development of local governance frameworks contributes to fostering participation and co-creation processes, where local stakeholders actively engage in designing and implementing solutions. This participatory approach is essential for ensuring that innovation pathways are aligned with the specific needs and values of local communities, promoting policies that genuinely reflect the interests of citizens.

This systemic view of transformative innovation emphasises that innovation trajectories are shaped by the complex, path-dependent interaction of different technological, economic and societal factors aimed at system-wide change and innovation in socio-technical systems related to the fulfilment of a societal function. It calls for new approaches to utilizing science, technology, and innovation to address societal needs, while more explicitly tackling issues related to sustainable and inclusive societies, in contrast to earlier innovation policy frameworks.¹⁴¹ This requires strong links between key elements such as human capital,

¹⁴¹ J. Schot, W. E. Steinmueller, *Three frames for innovation policy: R&D, systems of innovation and transformative change*, Research Policy, 47(9), 1554-1567., 2018.

infrastructure and market formation mechanisms to support a particular innovation pathway.¹⁴²

Under these premises, the consequence is that both technological and socio-economic change are influenced or constrained by institutional factors, such as regulations, that shape the socio-technical system where innovation occurs. In this framework, the roles governments might play are primarily related to direction and reflexivity regarding support for innovation pathways that could help solve specific societal problems.

For this reason, there is a growing recognition within the science for policy community that public policy needs to be supported by science-based policy advice in a broader academic perspective, and that more than simple factual evidence is needed. It requires contextualized insights, a peculiarity that is at the core of the social sciences and humanities. These disciplines can provide the tools to interpret scientific advice in relation to different social, cultural, and political contexts, offering a crucial contribution to governance structures and policymaking to ground the findings in local realities.¹⁴³

As underlined by the European Alliance for Social Sciences and Humanities (EASSH), policy making is most effective when challenges and solutions are informed by evidence from robust scientific research. The challenge for science in creating 'impact' lies in providing policymakers with the necessary evidence to make informed decisions and improving the link between science, evidence, and policy. Ensuring that relevant scientific research is easily accessible is the first step toward enhancing policy effectiveness.¹⁴⁴

To this aim, scientist should be put in the condition of collaborating across different disciplines to better connect policymakers with the scientific community. This connection is crucial, as scientists can offer the evidence and insights needed to address policy issues

¹⁴² F. W. Geels, *From sectoral systems of innovation to socio-technical systems: Insights about dynamics and change from sociology and institutional theory*, *Research policy*, 33(6-7), 897-920, 2004.

¹⁴³ F. Brom, *For the humanities to play a stronger role in public policy making, they must move from individual to institutional engagement*, in LSE blog, 2020.

<https://blogs.lse.ac.uk/impactofsocialsciences/2020/01/13/for-the-humanities-to-play-a-stronger-role-in-public-policy-making-they-must-move-from-individual-to-institutional-engagement/>

¹⁴⁴ EASSH, *EASSH Response to the European Commission Consultation on Horizon Europe*, 2023.

https://eassh.eu/Position-Papers/EASSH_HEUConsultation_March2023.pdf

through a systematic knowledge that enables policymakers and governance structures to address local development challenges more effectively.

The final monitoring report on the integration of SSH in Horizon 2020, the EU's 8th Framework Programme for Research and Innovation, emphasizes that SSH integration must be viewed as both an imperative and an opportunity, to be approached strategically. SSH integration is also embedded in the Horizon Europe Strategic Plan 2021-2024, where SSH are a key constituent of research and innovation, especially regarding the twin green and digital transitions. Indeed, the ultimate goal of SSH integration should be to create positive and sustainable impacts on individuals and communities, addressing societal needs and increasing overall well-being.¹⁴⁵ For example, SSH should be called upon to contribute to informing policies on social equity, community engagement, behaviour change for effective mitigation and adaptation strategies, ethics which are vital to the Twin Transition.

While the focus here is not on EU funding mechanisms for SSH research, it is important to note that there is a ferment and a rigorous attention from the scientific community and science policy in recognising the role of these disciplines in the European landscape of green and digital transition and development.

While technical solutions are essential for achieving new policy outcomes, they are often insufficient on their own to create meaningful societal change. Lasting impacts desired by policymakers frequently rely on contributions from Social Sciences and Humanities (SSH) researchers engaged in multi- or interdisciplinary collaborations. The integration of SSH into Horizon 2020 is an example of how SSH have played the crucial role of precursors in ensuring that technical solutions are accepted, understood, and owned by end-users.

By understanding social dynamics, economic behavior, and community values, SSH can provide scientific knowledge and expertise to guide and orient a valuable local governance beyond power-driven practices, fostering policies that genuinely reflect the interests of citizens. Here, SSH can contribute to decision-making processes, providing the evidence

¹⁴⁵ European Commission Directorate General for Research and Innovation, *Integration of Social Sciences and Humanities in Horizon 2020: Participants, Budgets and Disciplines 2014-2020: Final Monitoring Report*. LU: Publications Office, 2023. <https://data.europa.eu/doi/10.2777/075642>

needed to inform socially and culturally sensitive policies ensuring that social, ethical, and cultural considerations are embedded in the Twin Transition's broader goals.

Within the complex scenario of the Twin Transition, SSHs scientific research can be simultaneously a driver of change, a tool for mitigation of impacts and a way to understand and manage the benefits and harms to society. For these reasons, specific efforts and investments are needed to support an interdependent mechanism between science and policy making that can unpick the complex interconnected nature of the challenges we face.

This requires an organised practice of interaction between scientific disciplines, policymakers and the various actors involved in the Twin Transition process at local level. Investment in translational research is essential for applying SSH knowledge to local development, enabling local governments to cope effectively with current social transformations and the challenges of the near future. By emphasizing social values and fostering the involvement of QH actors, SSH can help create governance structures that prioritize community well-being.

The integrated governance is here understood as structure based on cross-disciplinary collaborations with human-centric approach to development challenges. The integrated governance model offers an intermediary structure where interdisciplinary cooperation becomes possible and effective to translate SSH values into the broader framework of governance and decision-making processes. In this regard, SSHs contribution can complement effectively technical advancements for a sustainable and responsible future.

In conclusion, the contributions of SSHs through multi- or interdisciplinary collaborations are crucial in ensuring that technological innovations are understood, accepted, and effectively implemented at the local level. By offering insights into social dynamics, economic behavior, and community values, SSH enhances the capacity of local governance to address current challenges and foster ecological and digital transitions with sustainable human-centered approach.

2.5 Project management for local development: potential contributions to integrated governance

The underlined link between the Twin Transition and the SDGs has a specific aspect in common: the prominent role attributed to the local governments level.

Local action constitutes a cornerstone for addressing the main challenges that SDGs, on the one hand, and the Twin Transition in tow, are trying to manage. With local action we define “on-site processes and projects that aim to develop and implement concrete solutions to specific problems as they occur in real time”.¹⁴⁶ In this regard, research suggests that local action can accomplish things that action at other levels of governance cannot.¹⁴⁷

The integrated governance framework is based on the essential role of the proximity of local actors, from which context-specific opportunities to promote sustainable economic, social and environmental development can emerge. Without this local contribution the addressed achievement of the Twin Transition, and broader of the SDGs, will be not possible.

This proximity advances the translation of goals into concrete projects for which specific management strategies are needed to mobilize economic and human resources and promote social accountability. In this regard, it is important to create the right conditions for guaranteeing synergies between specific local projects objectives and impacts and the Twin Transition ones.

Sustainable development involves redirecting the process of development rather than reaching a fixed end state: it is an ongoing process of continuous social transformation, marked by multiple transitions or systemic innovations in ways that combine economic wealth, environmental protection with social cohesion.¹⁴⁸ These transitions involve co-evolutionary processes involving changes in needs, aspirations, institutions, cultures, and

¹⁴⁶ C. Ansell, E. Sørensen, J. Torfing, *The Key Role of Local Governance in Achieving the SDGs*, in Co-Creation for Sustainability, Emerald Publishing Limited, 9–22, 2022. doi:[10.1108/978-1-80043-798-220220002](https://doi.org/10.1108/978-1-80043-798-220220002).

¹⁴⁷ D. W. Brinkerhoff, R. W. Johnson, *Decentralized Local Governance in Fragile States: Learning from Iraq*, International Review of Administrative Sciences 75(4): 585–607, 2009. doi:[10.1177/0020852309349424](https://doi.org/10.1177/0020852309349424).

¹⁴⁸ WCED, *Report of the World Commission on Environment and Development: Our Common Future*, Oxford: Oxford University Press; 1987.

practices and this means that sustainable development cannot be reduced to a fixed blueprint with clearly defined end goal from which specific criteria and straightforward decisions can be drawn.¹⁴⁹

We use the term 'co-evolution' to define a particular type of interdependence in which development is manifested in multiple interdependent and interrelated subsystems that influence but do not determine each other.¹⁵⁰ In the context of transitions, co-evolution refers to the interaction between different societal subsystems, where these interactions influence the dynamics within each subsystem, ultimately resulting in irreversible patterns of change.¹⁵¹ This co-evolutionary approach can shift from one dynamic equilibrium to another, the transitions, and it offers valuable insights for shaping policy and governance in sustainable development based on an adaptive and not static approach.

Achieving sustainable development requires radical transformations in both functional systems and governance, requiring changes not only in government policy but also in the broader governance systems that shape societal orientations and collective decision-making.¹⁵²

As it is not compatible with strategies centered on direct control, fixed objectives, or predictability¹⁵³, for governance frameworks to be adaptive, they need to rely on management systems capable of guiding the process towards sustainability, that can be termed 'transition management'.

The transition management model was developed by Rotmans et al. and it explores alternative social trajectories in an adaptive and anticipatory manner. It seeks

¹⁴⁹ J.P. Voss, R. Kemp, D. Bauknecht, *Reflexive Governance: A View on the Emerging Path*, In Voss JP, Bauknecht D and Kemp R (eds), *Reflexive Governance for Sustainable Development*. Cheltenham: Edward Elgar, 419–38, 2006.

¹⁵⁰ R. Kemp, D. Loorbach, J. Rotmans, *Transition Management as a Model for Managing Processes of Co-Evolution towards Sustainable Development*, in *International Journal of Sustainable Development & World Ecology* 14(1): 78–91, 2007. doi:[10.1080/13504500709469709](https://doi.org/10.1080/13504500709469709)

¹⁵¹ J. Rotmans, R. Kemp, M. van Asselt, *More Evolution than Revolution. Transition Management in Public Policy*, *Foresight*;3(1):15–31, 2001.

¹⁵² *Ibidem*.

¹⁵³ C. Rammel, F. Hinterberger, U. Bechthold, *Governing Sustainable Development—A Co-evolutionary Perspective on Transitions and Change*, GoSD working paper 1, 2004.

to harness innovative grassroots developments in a more strategic way by coordinating multiple governance levels and promoting self-organization through new forms of interaction and cycles of learning and action. These cycles aim to drive radical innovations that offer sustainability advantages. Transition management views societal change as a result of the interaction between various actors across different societal levels, within the context of an evolving societal landscape. It therefore focuses on coordinating interaction and co-evolutionary processes to foster meaningful transformation.¹⁵⁴ This approach also enhances the distribution of control over various actors with different beliefs, interests and resources, demanding for the definition of a specific network coordination and management.

The co-evolutionary perspective and transition management provide an interesting ground for analysing synergies and potentials between the project management approach and the integration of SSHs in the framework of an integrated governance model within the Twin Transition.

In fact, transition management can be seen as the broader scenario within which project management operates: the former guides a systemic, long-term transition process, while the latter supports the implementation of a specific project that has the same strategic objectives but operates within a limited timeframe. This makes it possible to identify and set project goals that are aligned with a broader vision within a transition process and with a specific attention on the sustainability of the project's impacts, intended as the capacity to be beneficial in the long term. Given that there is little theory on how long-term structural change can be achieved through short-term steps without creating problems for policy makers, the transition management guidelines can support project management in the sense that they provide the broad framework for long-term structural change within which project management can operate to promote short and medium-term steps.

Project management is then called to translate transition management rules into a practical management framework, primarily by analysing the context and specific needs and then promoting specific actions with a forward-looking approach. By implementing short-

¹⁵⁴ J. Rotmans, D. Loorbach, *Complexity and Transition Management*, Journal of Industrial Ecology 13(2): 184–96, 2009. doi:[10.1111/j.1530-9290.2009.00116.x](https://doi.org/10.1111/j.1530-9290.2009.00116.x).

term and pilot actions, it can promote generative lessons to facilitate further change.¹⁵⁵ Indeed, the Twin Transition is a complex development process characterized by many variables and uncertainties, also depending on the peculiarities of each territory. Project management allows to take small steps in what is generally perceived 'the right sustainable direction' in a certain historical time to implement coherent solutions and stimulate an adaptive process towards local sustainable development.

In transition management content (conditions and dynamics, integrated systems analysis, envisioning, agenda building, and experiments) and activities related to the process (network and coalition building, execution of experiments, and process structuring) are explicitly linked as the complexity analysis of the societal system under observation also determines the opportunities for managing such a system.¹⁵⁶ Once identified and analysed patterns and mechanisms of change, it is possible to design process steps and instruments to influence these transitions. This approach emphasizes reflexive planning rather than deterministic rules and it recognised the need for adaptation to the evolving conditions. This attitude towards adaptation, which means adjusting while the structure of the system is changing, makes learning, experimentation, and adjustment crucial and interesting to be applied to the Twin Transition.¹⁵⁷

Within this framework, the project management favours an incremental change that allows the system to adjust to the new circumstances and to build up new structures that align to the new transition configuration.

The definition of specific project management strategies can lead to a better understanding of complex challenges and systemic impacts in a continuous and iterative deliberation and assessment mechanism aimed at structuring a well-organised governance

¹⁵⁵ J. Rotmans, *Methods for IA: The challenges and opportunities ahead. Environmental Modelling and Assessment*;3:155–79, 1998.

¹⁵⁶ D. Loorbach, *Transition management: New mode of governance for sustainable development*, Utrecht, the Netherlands: International Books, 2007.

¹⁵⁷ J. Rotmans, D. Loorbach, *Complexity and Transition Management*, *Journal of Industrial Ecology* 13(2): 184–96, 2009. doi:[10.1111/j.1530-9290.2009.00116.x](https://doi.org/10.1111/j.1530-9290.2009.00116.x).

discourse. Moreover, the specific role attributed to all the actors of the QH within the framework of the integrated governance can find in this approach an adequate space of action.

In order to bridge this perspective with integrated governance, with particular attention to the human-centred approach in project management activities, it is useful to consider the definition of governance proposed by the OECD, which defines governance from the perspective of inclusiveness:

*Inclusive governance involves equitable, accountable and transparent processes and institutions that secure the rights of people to access, influence and exercise oversight over decision-making processes that recognise rights and duties, distribute resources, and determine the direction of public policy at all levels, with the view to enhancing inclusive outcomes.*¹⁵⁸

The term 'outcomes' used in this definition is closely related to the concept of 'outcomes' used in European project management. Within the framework of governance, it refers to the commitment of governance actors to extend the enjoyment of rights and access to public services to all social groups, including ensuring an equitable distribution of social and material benefits across divisions within societies (e.g. gender, ethnicity, income, religion, caste and others). Within the European project management framework, the term 'outcome' is used to identify the effects of an intervention's activities and outputs, that have the final objective of producing an impact aimed to the development of a certain community. In this sense, the project management of a specific project is an instrumental contribution to the broader aim of the local governance.

The inclusive perspective offered by the OECD's definition opens the way for citizens to participate and influence the decision-making processes that affect their lives, and underlines how inclusive processes are at the same time essential for achieving more inclusive development outcomes in terms of improved public service delivery, economic management,

¹⁵⁸ OECD, *Policy Guidance: Enabling Inclusive Governance*, Best Practices in Development Co-operation, OECD Publishing, Paris, 2024. <https://doi.org/10.1787/6d995bed-en>.

growth and job creation, poverty reduction, social cohesion, and political stability.¹⁵⁹ However, the OECD recognized that to inclusive governance not necessarily correspond inclusive outcomes and that it is quite challenging, but necessary, to find the right balance between participatory governance, on the one hand, and responsible, transparent, accountable and effective institutions on the other.

To this end, project management can play an instrumental role in strengthening inclusive governance processes by encouraging the development of a specific strategy to promote participatory processes, while at the same time ensuring the proper technical and administrative functioning of the project in accordance with the principles of responsibility, transparency, and accountability of the public institutions in charge of its implementation.

¹⁵⁹ *Ibidem*.

Chapter 3. Local governance models: case studies on Smart City

Local development is influenced by the quality of governance and the capacity to leverage on appropriate tools to promote structural change of territories and communities. This chapter and the following one analyse relevant case studies of local governance and the use of EU projects to support local development.

Starting from strategic projects in which the author was directly involved during the phd period, strategic practices and failing elements of local governance models are examined in order to derive an action plan for developing a new model of integrated governance for local development.

The data collection and analysis are developed on the basis of two main approaches that characterise this thesis, as already explored in previous chapters. The first considers the role of social sciences and humanities (SSH) disciplines and methodologies in supporting local development. We intend to shed light on the contribution, if any, of a human-centred approach in the design and implementation of an efficient and effective local governance model. The second will consider the role of project management as a holistic approach to public value creation, governance performance assessment and social impact investment for local development.

3.1 Selection criteria of the case studies

The analysis presented in this chapter constitutes a pivotal component of the applied research undertaken throughout the phd program. During this period, the researcher engaged in various field projects, serving in the capacities of project manager, assistant project manager, external evaluator, and as a secondee within international organizations during doctoral mobilities abroad. This diverse experiential background provided a comprehensive perspective on the multifaceted aspects of project management applied to a context of local governance. Following an in-depth exploration of the concept of local governance, case studies were selected from a range of local development projects carried out at the local level, across different sectors.

The selection criteria prioritized projects dealing with crucial aspects of current relevance relating to local development. They present interesting peculiarities that elucidate the dimensions of governance under examination and valuable insights to be included in the final action plan. Each project contributes to the analysis of the dimensions of local governance, while providing a unique focus on a specific area of local growth. Indeed, they all aim to promote local development in urban areas and consider different but complementary aspects of the local development concept: the smart city initiative (case study 1 and case study 2) and the decentralized cooperation (case study 3 and case study 4). In this chapter, the attention is on smart city cases, while chapter 5 is devoted to the analysis of decentralised cooperation.

On the one hand, the smart city is a cross-cutting initiative that aims at fostering local development by promoting a more interactive and responsive city administration, safer public spaces and meeting the needs of the population. It brings together different policy fields and technology sectors in the frame of the twin green and digital transition.¹⁶⁰ On the other hand, the decentralised cooperation recognises local authorities as promoters of a territorial approach to local development, including decentralisation processes, participation and accountability. It contributes to the improvement of the capacity of local authorities to design, implement and evaluate local public policies to actively engage in sustainable development processes, while fostering exchange of knowledge, expertise, and best practices in a continuous learning mechanism on local development.¹⁶¹

The case studies analysed in this chapter are the following:

- Case-study 1

MiMurcia: Tu Ayuntamiento inteligente, Cercano, Abierto e Innovador

- Case-study 2

¹⁶⁰ European Commission:

https://commission.europa.eu/eu-regional-and-urban-development/topics/cities-and-urban-development/city-initiatives/smart-cities_en

¹⁶¹ European Parliament, Council, *Regulation (EU) 2021/947 of the European Parliament and of the Council of 9 June 2021 establishing the Neighbourhood, Development and International Cooperation Instrument – Global Europe, amending and repealing Decision No 466/2014/EU and repealing Regulation (EU) 2017/1601 and Council Regulation (EC, Euratom) No 480/2009*. Available at: <https://eur-lex.europa.eu/eli/reg/2021/947/oj>

SME4SmartCities: Mediterranean SME working together to make cities smarter project

The cases were selected after a doctoral mobility in Murcia (Spain), within the *TRUST - digital TuRn in EUrope: Strengthening relational reliance through Technology* project, within Horizon 2020¹⁶² – MSCA (Marie Skłodowska-Curie Actions)¹⁶³ – RISE (Research and Innovation Staff Exchange)¹⁶⁴ program. The research period abroad, indeed, was effective to get in touch with interesting stakeholders involved in both projects providing useful information from the project management side.

The MiMurcia and SME4SMARTCITIES projects offered a valuable occasion for a reflective approach on a specific perspective of local governance supported by the Smart City initiative to explore if and how it can truly foster local development. Specifically, MiMurcia provided elements on participatory process reflection and SME4SMARTCITIES on the effectiveness of public-private partnerships.

The main shared feature of these case studies, along with the other 2 on decentralised governance, is that they are funded by European funding programmes aligned with the overarching European Twin Transition strategy allowing for an investigation into how digital and green objectives are being integrated into local governance practices. These initiatives demonstrate innovative project management models for promoting local development that are worthy of investigation in the context of this research and provide an opportunity to explore different strategies and tools used.

¹⁶² Horizon 2020 was the EU's research and innovation funding programme from 2014-2020 with a budget of nearly €80 billion. The programme has been succeeded by Horizon Europe. https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-2020_en

¹⁶³ The Marie Skłodowska-Curie Actions are part of Horizon Europe, and they constitute the European Union's flagship funding programme for doctoral education and postdoctoral training of researchers. They fund excellent research and innovation and equip researchers at all stages of their career with new knowledge and skills, through mobility across borders and exposure to different sectors and disciplines. <https://marie-sklodowska-curie-actions.ec.europa.eu/about-msca>

¹⁶⁴ The aim of RISE is to develop sustainable collaborative projects between different organisations from the academic and non-academic sectors (in particular SMEs), based in Europe and beyond.

Moreover, all of them were developed and implemented within a local area in a municipal area, ensuring a consistent contextual backdrop. Regardless of the specific municipal context, each case involved a diverse array of stakeholders, ensuring a comprehensive representation of all the actors of the quadruple helix model, which includes academia, industry, government, and civil society.

3.2 Methods of data collection and analysis

Given the wide use of the concept of governance and its various implications at the theoretical level, this applied research aims to use such concept at the empirical level as a sensitizing concept¹⁶⁵, collecting primary data from multiple case studies regarding the selected projects related to local governance from different but complementary perspectives. The aim is to define the specific aspects of the concept of governance by analysing from a project management viewpoint the processes which characterize the initiatives under investigation. Building upon the collected data, this research points at reflexively elaborate an action plan for an integrated governance model for local development in the Twin Transition era. Each case study is considered instrumental to provide insights into the issue of local governance for development, playing a fundamental role in the meaning-making around the concept of governance.¹⁶⁶ In this sense, this methodological choice contributes to understand if and how social sciences and humanities' disciplines in local governance, can support a human-centered approach which, along with project management strategies, is able to handle complexity, anticipate the challenges of the next future, and explore new opportunities for local development. Moreover, this methodological choice contributes to understand if and how social sciences and humanities' disciplines can truly support a human-centered approach in local development, along with project management strategies. It aims

¹⁶⁵ H. Blumer, *What is Wrong with Social Theory?*, American Sociological Review, 19(1), 3–10, 1954.
<https://doi.org/10.2307/2088165>

¹⁶⁶ R. E. Stake, *The Art of Case Study Research*, Thousand Oaks: Sage Publications, 1995.

to analyse how they can handle complexity, anticipate the challenges of the next future, and explore new opportunities for local development.

The analysis adopts a multiple case study approach using a qualitative research paradigm to compare local governance projects which implement different project management strategies to foster local development. The multiple case study approach enables an empirical inquiry that investigates different cases to identify common patterns or relationships among them, and it is suited for addressing continuously changing phenomena¹⁶⁷, such as the governance for local development. This approach allows to analyse and compare the collected data within each case and across different cases¹⁶⁸ to understand the similarities and differences between them¹⁶⁹ and taking into consideration their relative contextual differences. The unit of analysis of this research is represented by the project management process of each initiative under investigation.

By focusing on the processual aspects of each project, it was possible to assess which strategic tools and strategies fit better with local development, thus identifying which process elements of local governance can be included in a general model adoptable as a reference framework.

To guarantee the feasibility of the study within its scope, specific propositions have been considered in the definition of the methodology for each case study, either to guide the data collection and analysis and to define the case studies conceptual frameworks. The propositions stem from personal and professional experiences acquired during the applied research during the PhD path and they are presented in the final chapter, alongside data analysis and the discussions of findings.¹⁷⁰

During the analysis of the case studies, specific attention was paid to particular aspects as the gender issue, the internal role of politics, cultural traditions, decentralisation and others

¹⁶⁷ R. K. Yin, *Case Study Research and Applications: Designs and Methods* (6th ed.), SAGE, 2018.

¹⁶⁸ J. Gustafsson, *Single case studies vs. multiple case studies: A comparative study*, Academy of Business, Engineering and Science Halmstad University, Halmstad, Sweden, 2017.

¹⁶⁹ P. Baxter, & S. Jack, *Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers*, The Qualitative Report, 13(4), 544-556, 2008.

¹⁷⁰ P. Baxter, & J. Susan Jack, *Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers*, The Qualitative Report, 2015. doi:[10.46743/2160-3715/2008.1573](https://doi.org/10.46743/2160-3715/2008.1573).

that will be examined in detail on a case-by-case basis. Those issues were chosen because each of them contributes to analysing the concept of governance from different perspectives to then create a unified picture in the logic of local development and adaptable to different contexts and the relative social, political, and cultural aspects that may have impacted.¹⁷¹

A scientific reflexive approach was used to enhance the depth, rigor, and validity of case studies by integrating systematic inquiry with ongoing critical hermeneutical reflection. The specific iterative nature of the reflection allowed the findings to be adapted to evolving contexts, as some of the projects considered were still underway when the research was carried out, and others were still generating effects on the contexts, even though they had already been completed. The reflective approach was chosen in order to valorise the innovative nature of the research, without compromising its validity and robustness. In fact, the empirical work included the collection of different but complementary types of data from several sources, with the aim of guaranteeing completeness despite the in the complex and wide-ranging related subjects surrounding local governance as a concept. The scientific reflective approach also supports the definition of a conceptual framework that was developed throughout the study progresses and finalised once the data were analysed, including all the themes that emerged from data analysis, mixing inductive, abductive and deductive inferences.¹⁷²

Multiple data sources were utilised, including projects' documentation, interviews, direct observations, and for two cases, Rebuild and Mudar, also quantitative survey data has been integrated for a nuanced understanding.

Data collected from each case-study was jointly analysed for convergence purposes. The expert interview was used as a qualitative empirical research technique to explore a broad topic by gathering the individual perspectives of the expert interviewees on one of the specific

¹⁷¹ R. E. Stake, *The Art of Case Study Research*, Thousand Oaks: Sage Publications, 1995.

¹⁷² P. Baxter, & J. Susan Jack, *Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers*, The Qualitative Report, 2015. P. 553. doi:[10.46743/2160-3715/2008.1573](https://doi.org/10.46743/2160-3715/2008.1573).

aspects of the topic.¹⁷³ First-hand empirical data was also collected by interviewing managerial and technical staff that had a prominent position in the design and/or implementation phases of the initiative included in case-studies.

Their role was essential since they exercised a crucial function in decision-making processes and have knowledge of the field of interest. The interviews took place between June 2023 and September 2024, lasted 50 minutes long on average and were semi-structured, with open-ended questions to gather as much information as possible as well as detailed feedback; this technique, encouraged respondents to be comprehensive and to go in depth, allowing personalization and the valorisation of unique viewpoints. Main topics addressed include following topics: internal and external elements that had a positive impact on the management of the project; internal and external elements that had a negative impact on the management of the project; project management tools and strategies used to manage the stakeholders involved in the projects; strategies adopted to maintain consistency with the needs of local communities; strategies adopted to act in synergy with other projects and funding funds; strategies adopted to gather participatory decision-making processes. Interviews were integrated with follow-up emails to the experts to gain additional information and to cross-check the findings¹⁷⁴. Interviewees' answers, categorised by topic, are presented in the findings.

The descriptive and interpretative categorisation of primary data through a content analysis helped to gain a coherent framework.¹⁷⁵ For two case-studies, the Rebuild and Mudar' projects, the researcher applied an indirect reflective practice methodology based on experiential learning, which bases learning on first-hand experience, prioritising a posteriori rather than a priori knowledge.¹⁷⁶ Indeed, being part of the external evaluation team of both

¹⁷³ S. Döringer, 'The Problem-Centred Expert Interview'. *Combining Qualitative Interviewing Approaches for Investigating Implicit Expert Knowledge*, International Journal of Social Research Methodology 24(3): 265–78, 2021.

doi:[10.1080/13645579.2020.1766777](https://doi.org/10.1080/13645579.2020.1766777).

¹⁷⁴ Candela, A. G. (2019). Exploring the function of member checking. *The qualitative report*, 24(3), 619-628.

¹⁷⁵ G. Losito, *L'analisi del contenuto nella ricerca sociale*, 4. ed. Milano: Angeli, 2002.

¹⁷⁶ D. A. Kolb, *Experiential learning: Experience as the source of learning and development*, Prentice-Hall, Upper Saddle River, NJ, 1984.

projects, it was possible to propose recommendations for improvements of some aspects of the projects through the evaluative research, and then verify the actual effects of such improvements, acquiring new knowledge to be used in the elaboration of the action plan for a new model of integrated local governance.

3.3 The Smart City initiative to shape local development: cases 1 and 2

The framework of the smart city initiative results interesting within the scope of this research as smart city transformations are increasingly seen as socio-cultural processes aimed at promoting sustainable and inclusive urban development, rather than as static process to achieve immutable outcomes.¹⁷⁷

From a social science perspective, the concept of 'governance' is also closely linked to that of the smart city, recognising the importance of developing an adaptive governance model capable of promoting capacity building at different levels through participatory decision-making processes and collective learning strategies that integrate technological innovation into urban development.¹⁷⁸ Overall, smart city transitions embody a socio-cultural and organizational process where diverse urban stakeholders collaboratively address urban challenges using information and technology.¹⁷⁹

In this sense, the process of urban innovations integrating technical innovations cannot be separated from a process of social innovation as well in a mutual learning approach.¹⁸⁰ This perspective recalls the two main focuses of this research: a focus on the

¹⁷⁷ R. Giffinger and H. Lü, *The Smart City Perspective A Necessary Change from Technical to Urban Innovation*, Fondazione Giangiacomo Feltrinelli, 2015.

¹⁷⁸ D. Diamantini and N. Borrelli, *Theoretical questions for analysing contemporary city*, Fondazione Giangiacomo Feltrinelli: E-Book – series, 2014.

¹⁷⁹ J. Lee, J. Babcock, T. S. Pham, T. Hien Bui, and M. Kang, *Smart City as a Social Transition towards Inclusive Development through Technology: A Tale of Four Smart Cities*, *International Journal of Urban Sciences* 27(sup1): 75–100, 2023. doi:[10.1080/12265934.2022.2074076](https://doi.org/10.1080/12265934.2022.2074076).

¹⁸⁰ F. Moulaert and B. Van Dyck, *Framing Social Innovation Research: A Sociology of Knowledge Perspective*, in F. Moulaert; MacCallum; A. Mehmood, and A. Hamdouch, (eds.) *The International Handbook on Social Innovation: Collective Action, Social Learning and Transdisciplinary Research*, Cheltenham, Edward Elgar, 466-480, 2012.

evolution of local development management processes and strategic planning, in this case related to the implementation of the smart city initiative, and the human-centred approach that the smart city initiative should aim at for truly sustainable and inclusive development.

The concept of smart city was born to point out the solution strategy to respond to the accelerated speed of growth of cities, both in terms of number and population, from which derives a greater economic, political, and technological power, posing new complex challenges to public authorities and decision-makers, who are called to manage an unprecedented phenomenon with innovative solutions to make cities more liveable places.¹⁸¹ Indeed, data published by the United Nations Populations Fund show that by 2025 over 58% of the world's population will live in urban areas and the percentage is expected to increase by at least 2% by 2030.¹⁸²

In the European Union, the latest figure (2022) shows that 75% of the European population lives in urban areas.¹⁸³ The urbanization of cities runs on two main directions: on the one hand, technological progress allows public authorities to have more control over the socio-economic and political development of the cities, on the other hand to the technological progress correspond challenges and threats towards a sustainable future. A “smart” city born when governments adopt new policies, at all levels, that mark a strategic shift in governance aimed at targeting sustainable development, sound economic growth, and better quality of life that fits with the citizens' needs.¹⁸⁴

Nam and Pardo (2011) have identified a set of multidimensional components for the smart city concept and core factors for a successful smart city initiative which include technology factors (infrastructures of hardware and software), human factors (creativity,

¹⁸¹ Samih, H. (2019). Smart cities and internet of things. *Journal of Information Technology Case and Application Research*, 21(1), 3–12. <https://doi.org/10.1080/15228053.2019.1587572>

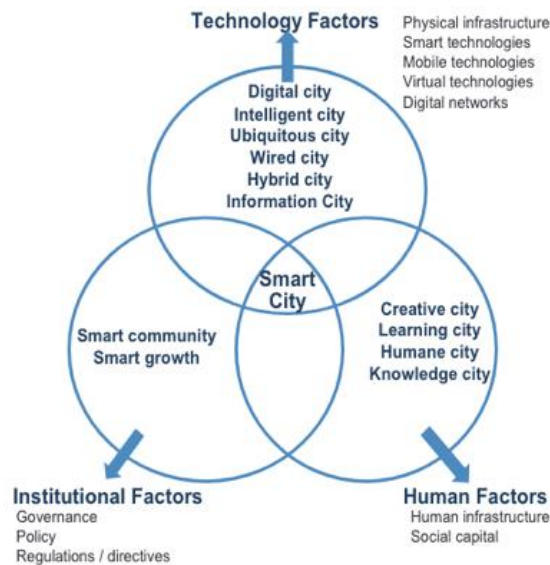
¹⁸² www.unfpa.org

¹⁸³ The World Bank, United Nations Population Division. World Urbanization Prospects: 2018 Revision, <https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=EU>

¹⁸⁴ Nam, T., & Pardo, T. A. (2011). *Conceptualizing smart city with dimensions of technology, people, and institutions*. Proceedings of the 12th Annual International Digital Government Research Conference: Digital Government Innovation in Challenging Times, 282–291. <https://doi.org/10.1145/2037556.2037602>

diversity, and education), and institutional factors (governance and policy) which together synthesise the key functions that characterised an urban area.

Figure 3.1. *Fundamental components of Smart City*



Source: Nam, T., & Pardo, T. A. (2011, p. 286)

Each factor is a core system that does not operate in isolation but must be considered holistically in relation to the others in order to enhance the potential of the smart city initiative in an integrated urban-planning framework where different networks, infrastructure, and environments co-exist: a system of systems.¹⁸⁵

Considering these factors as strictly interconnected, a city can be defined “smart” when sustainable growth and quality of life are achieved through participatory governance that invests in human and social capital and technology to transform the core systems for a better use of resources and collective skills and capacities.¹⁸⁶

¹⁸⁵ Dirks, S., & Keeling, M. (2009). *A vision of smarter cities How cities can lead the way into a prosperous and sustainable future*. IBM Institute for Business Value.

¹⁸⁶ Caragliu, A., Del Bo, C., & Nijkamp, P. (2011). Smart Cities in Europe. *Journal of Urban Technology*, 18(2), 65–82. <https://doi.org/10.1080/10630732.2011.601117>

However, there is not a single definition of Smart City, rather the literature presents several complementary definitions that capture the different dimensions which characterised this approach of urban planification, management, and development identifying three main strategic approaches: participatory governance as a planning strategy, multi-stakeholder cooperation as a management strategy, and inclusiveness as a priority objective of the technological innovation implemented.

Nevertheless, there are cross-cutting issues that unite these definitions, and among them the human dimension is of paramount importance, understood as the coexistence of elements such as people, education, learning and knowledge. The human factor category embedded the concept of smart community, which contributes to the smart city initiative with an integrated approach from a network of different stakeholders to the consideration of entire communities, where human infrastructures (i.e. knowledge networks, creative occupations and workforce, organizations) and social infrastructures (intellectual capital and social capital) become crucial aspects that allow to effectively address the objectives of urban governance and development.¹⁸⁷

Indeed, the technological infrastructures without the human ones are not sufficient to implement a smart city initiative, that, on the contrary, needs active involvement and engagement of entire communities from every sector of the urban context (business, education, government and individual citizens). The potential of these technologies cannot be realised and economic resources and human capital cannot be leveraged without the conscious choice of a smart community that decides to use technology infrastructures as prerequisites to significantly transform its urban and living context.¹⁸⁸ Local leaders are called upon to understand, without misunderstanding, the true nature of ICTs and to engage with them in order to harness their potential and deliver real public value to local communities. Indeed, the recognised value of these technologies lies not only in operational efficiency, but

¹⁸⁷ Coe, A., Paquet, G., & Roy, J. (2001). E-Governance and Smart Communities: A Social Learning Challenge. *Social Science Computer Review*, 19(1), 80–93. <https://doi.org/10.1177/089443930101900107>

¹⁸⁸ Lindskog, H. (n.d.). (2004) *Smart communities initiatives*. https://www.researchgate.net/publication/228371789_Smart_communities_initiatives

also in delivering long-term public value in a dynamic marketplace, both through the provision of services and the facilitation of economic development.¹⁸⁹

This kind of engagement with and use of new technologies requires that special attention be paid to the quality of life of citizens and to the values of the urban community in general as integral parts of the implementation of a smart city initiative. By considering human factors as dimensions of public life that directly involve or affect the local community, new technologies can be used as an innovative means to promote the implementation of an integrated approach capable of reaching and involving whole communities in the process of smart growth. This specific focus on the quality of life opens the way to a public value management approach to smart cities¹⁹⁰, which considers the efficiency of the smart city as directly influenced by the institutional structure and governance organisation within which it is undertaken.¹⁹¹

One therefore comes to consider the citizen-centric approach as a hallmark of smart government, which works with the main purpose of becoming more efficient, transparent, and accountable in a collaborative way that involves citizens in the decision-making process, enhancing their participation and influence over local governance. This requires the implementation of a distributed multi-level governance structure in an integrated city-planning framework where innovation-oriented institutions sustain an effective use of collective intelligence bridging the different stakeholders that play a role in smart city context to effectively use collective intelligence and to get the most out of it.

According to some authors, this governance structure reinforces the so-called ‘right to the city’¹⁹², considered one of the most precious of all human rights, which takes shape in the possibility of reimagining and changing what already exists and remaking it according to

¹⁸⁹ Cosgrave, E., Tryfonas, T., & Crick, T. (2014). *The Smart City from a Public Value Perspective: ICT for Sustainability 2014 (ICT4S-14)*, Stockholm, Sweden. <https://doi.org/10.2991/ict4s-14.2014.45>

¹⁹⁰ Cosgrave, E., Tryfonas, T., & Crick, T. (2014). *The Smart City from a Public Value Perspective: ICT for Sustainability 2014 (ICT4S-14)*, Stockholm, Sweden. <https://doi.org/10.2991/ict4s-14.2014.45>

¹⁹¹ Chourabi, H., Nam, T., Walker, S., Gil-Garcia, J. R., Mellouli, S., Nahon, K., Pardo, T. A., & Scholl, H. J. (2012). Understanding Smart Cities: An Integrative Framework. *2012 45th Hawaii International Conference on System Sciences*, 2289–2297. <https://doi.org/10.1109/HICSS.2012.615>

¹⁹² Lefebvre, H., Kofman, E., & Lebas, E. (1996). *Writings on cities*. Blackwell Publishers.

the desires and needs of citizens, in a cycle of continuous creative destruction as a result of new and different political-economic practices.¹⁹³ It is believed that the potential offered by digital and data-driven technologies can contribute to this ideal of transformation by strengthening the democratic structure of urban development and local governance, both by providing useful data for analysing the urban context and predicting and understanding urban phenomena, thus contributing to urban agenda-setting, and by enabling citizens to participate actively and effectively in urban planning, policy-making, decision-making and management processes.¹⁹⁴ This potential contribution of the technologies has given rise to the notion of the 'right to the smart city', a revisitation of Lefebvre's imperative in the digital age which is also strictly connected to the appropriation of public urban space by the citizens with the support of new technologies.

The latter then become means of transformation in the so called 'placemaking' process, used in urban studies to indicate the process of transforming the meaning of public space, understood as a transition from a well-functioning city to a city of meaning for those who inhabit it.

According to Foth¹⁹⁵, placemaking can take place at four levels, where the city government and the citizens are considered the main poles from which the transformation begins and develops (see figure).

Table 3.1. The evolution of the relationship between city governments and citizens

	CITY GOVERNMENT	CITIZENS
Cities 4.0	Collaborator	Co-Creators

¹⁹³ Harvey, D. (2003). The right to the city. *International Journal of Urban and Regional Research*, 27(4), 939–941. <https://doi.org/10.1111/j.0309-1317.2003.00492.x>

¹⁹⁴ Leclercq, E. M., & Rijshouwer, E. A. (2022). Enabling citizens' Right to the Smart City through the co-creation of digital platforms. *Urban Transformations*, 4(1). Springer Nature Journals. <https://doi.org/10.1186/s42854-022-00030-y>

¹⁹⁵ M. Foth, M. Brynskov, *Participatory action research for civic engagement*, in: Gordon E, Mihailidis P, editors. Civic media: technology, design, practice: MIT Press; 2016. p. 563–80.

Cities 3.0	Facilitator	Participants
Cities 2.0	Service Provider	Consumers
Cities 1.0	Administrator	Residents

Source: Hespanhol, L. (2017, p. 204)

The advent of digitalisation and new technologies, including in urban contexts, has led to the emergence of digital placemaking, mostly characterised by accelerated placemaking, i.e. placemaking in which the influence of developers, construction companies and government officials tends to accelerate the development process in a dynamic and innovative way. Foth proposes a new perspective which considers digital placemaking able to foster a radical shift from viewing placemaking as a mere process of urban optimisation for commercial purposes to a practice of social inclusion and participatory democracy.

Indeed, new technologies should encourage more democratic and inclusive participatory practices of urban development, inspired by Lefebvre's 'right to the city'. In this case, citizens are seen as co-creators of a collaborative process of urban development, and marginalised and economically threatened communities, which may be left behind in traditional placemaking practices, can be reached and involved.¹⁹⁶

However, some critics highlights that smart city governments do not necessarily contribute to more equitable and just cities or to the development of participatory decision-making processes¹⁹⁷, as they tend to see citizens only as providers of useful data in a policy-making process that remains top-down.¹⁹⁸

¹⁹⁶ M. Foth, *Some thoughts on digital placemaking*, in: Hausler MH, Tomitsch L, HespHespanhol, Media architecture compendium: Digital placemaking. Avedition, 2017.

¹⁹⁷ Engelbert, J., Van Zoonen, L., & Hirzalla, F. (2019). Excluding citizens from the European smart city: The discourse practices of pursuing and granting smartness. *Technological Forecasting and Social Change*, 142, 347–353. <https://doi.org/10.1016/j.techfore.2018.08.020>

¹⁹⁸ Cesare Di Felicianantonio, Paolo Cardullo, & Rob Kitchin. (2019). *Citizenship, Justice, and the Right to the Smart City* (edsair.doi.....377fb6fd5eded46133d18e2320550304). OpenAIRE.

As pointed out by Anastasiu, the participatory city-making approach can be deconstructed in three main dimensions which are prerequisites for a collective ownership of the city and for translating into practice Lefebvre's right to the city: the willingness, the right, and the ability.¹⁹⁹ In fact, the citizens should be able to participate in the democratic life of the urban context in which they live by showing their willingness and personal commitment to be involved in a collaborative process in which they are called to exercise their ability.

Assumed that the right to the city is recognised and the freedom to exercise it is safeguarded and guaranteed by the public institutions and the private stakeholders involved, Anastasiu underlines how it is necessary to provide a horizon of action to the citizens, which include financial and material resources and the access to specific infrastructures, as well as theoretical, executive, and technical skills.

Looking at Arnstein's ladder of citizen participation²⁰⁰, with each rung corresponding to the extent of citizens' power in determining the plan and/or program, it is possible to wonder how and to what extent the Smart City initiative can be considered as an adequate approach to promote effective citizen participation and engagement, going beyond the mere information and consultation phases favored by the collection of useful data, that Arnstein called "tokenism", and then ensuring the horizon of action that Anastasiu refers to.

How, then, is it possible to avoid the risk of creating laboratories of social and technological experimentation driven only by the interests of capital in which citizens play a marginal role in terms of active contribution and are mostly seen as users from whom useful data can be gathered? If this is the case, the right to a smart city derives only from having enough capital to enjoy the benefits of smart city technologies as consumers.²⁰¹

<https://explore.openaire.eu/search/publication?articleId=doi::377fb6fd5eded46133d18e2320550304>

¹⁹⁹ I. Anastasiu, *Unpacking the Smart City Through the Lens of the Right to the City: A Taxonomy as a Way Forward in Participatory City-Making*, In M. De Lange & M. De Waal (Eds.), *The Hackable City* (pp. 239–260). Springer Singapore, 2019. https://doi.org/10.1007/978-981-13-2694-3_13

²⁰⁰ S.R. Arnstein, *A Ladder of Citizen Participation*, *Journal of the American Planning Association*, 85(1), 24–34. Social Sciences Citation Index, 2019. <https://doi.org/10.1080/01944363.2018.1559388>

²⁰¹ R. Kitchin, *Towards a genuinely humanizing smart urbanism* [Preprint]. SocArXiv, 2018. <https://doi.org/10.31235/osf.io/5ikx4>

Starting from the assumption that the implementation of a smart city initiative implies considering the complexity of a context in which social and technological factors of services coexist with physical environments, it seems necessary to analyse how human factors and local governance influence the smart city initiative. In order to give citizens an effective right to the city, some researchers argue that it is necessary to change the underlying political economy, so that “the use-value that is the necessary bedrock of urban life would finally be wrenched free from its domination by exchange value”²⁰², to decouple cities from being driven by capitalism and instead build a “genuinely humanising urbanism”.²⁰³

Kitchin proposes the production of an alternative ‘future present’ in which the future oriented approach and the anticipatory logics of smart city technologies give way to “more sustained strategic, ideological, public-led vision that seeks to radically reconfigure the smart city” in order to address persistent inequalities, and discrimination and to build a social context based on fairness, equity, ethics, and democracy.

According to the literature that considers the human-centric approach in smart cities, the smart city is now considered as the driver of innovation, and not the thing in itself to be innovated. This means that smart city is in charge of “empowering the collective intelligence and co-creation capabilities of user and citizen communities for designing innovative living and working scenarios”.²⁰⁴

In addition, the European Union recently signed the Berlin Declaration on Digital Society and Value-Based Digital Government, that clearly put a specific focus on a human-centric approach to guide the digital transition, stating that it “aims to promote a human-centred, responsible and common-good oriented development” and that this “human-

²⁰² Mitchell, D. (2003). *The Right to the City: Social Justice and the Fight for Public Space*. New York: Guilford Press.

²⁰³ Harvey, D. (1973). *Social Justice and the City*. Oxford: Blackwell.

²⁰⁴ Schaffers, H., Komninos, N., Pallot, M., Trousse, B., Nilsson, M., & Oliveira, A. (2011). *Smart Cities and the Future Internet: Towards Cooperation Frameworks for Open Innovation*. In J. Domingue, A. Galis, A. Gavras, T. Zahariadis, D. Lambert, F. Cleary, P. Daras, S. Krco, H. Müller, M.-S. Li, H. Schaffers, V. Lotz, F. Alvarez, B. Stiller, S. Karnouskos, S. Avessta, & M. Nilsson (Eds.), *The Future Internet* (Vol. 6656, pp. 431–446). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-20898-0_31

centred approach aims to ensure that such applications are inclusive, help solve societal challenges and do not reproduce harmful social or economic biases”.²⁰⁵

All this considered, the case studies 1 and 2 aim to explore the potential contribution of the integration of social sciences and humanities disciplines (SSH) and project management as an approach to governance to understand if and how it can be used to move from a mere 'empty ritual of participation'²⁰⁶, that maintains the status quo by only superficially engaging citizens, to the distribution of real power to citizens to promote a participatory city-making process and then support in practice the exercise of the right to the city in the urban context of smart city.

The social sciences and humanities are used as a scientific parameter to verify whether and to what extent the case studies considered use a human-centred approach in the implementation of local governance-related projects. The human-centred approach is analysed from two different levels of analysis:

1. citizen-oriented services with a human-centred approach;
2. spaces for direct citizen participation in local government decision-making processes.

Instead, project management is considered as a means of designing and implementing the smart city model, to reflect on how citizens and different stakeholders can be actively involved in the process, exercising their right to the city.

3.4 The empirical context

The empirical context of the case studies is the Autonomous Community of Murcia, which has an area of 11,313 km², which represents 2.24% of the total surface area of Spain. It is bordered to the northwest by Castilla-La Mancha, to the east by the Valencian Community, to the southwest by Andalusia and to the southeast by the Mediterranean Sea. The total population of the Region of Murcia is 1.531.878 inhabitants (Source: INE 2022), which

²⁰⁵ European Commission (2020)

https://ec.europa.eu/isa2/sites/isa/files/cdr_20201207_eu2020_berlin_declaration_on_digital_society_and_value-based_digital_government.pdf

²⁰⁶ *Ibidem*.

represents 3.23% of the population of Spain. According to the population data by municipality (as of 1 January 2022), 30.40% of the population is concentrated in the capital Murcia (462.979), 14.30% in Cartagena, 6.32% in Lorca and 4.84% in Molina de Segura. These 4 municipalities account for 56% of the population of the Region.

The analysis of the smart city initiative in this region appears to be relevant because Murcia has a long tradition of sectoral strategic planning, and it can represent an example of best practices for other similar local territories. The region has developed a territorial development strategy to promote a model of governance capable of providing a unified, innovative, and participatory response to changes in the local context. In order to narrow the scope of the research and obtain clearer and more evident results useful for comparison, the case studies will focus on the municipal territory of Murcia, the capital of the region.

In 2013, Murcia initiated an internal strategic reflection to adapt the local governance to new strategic planning process to improve the quality of life, foster an inclusive society, and promote sustainability. Through a collaborative approach that involved also citizens, this process culminated in the "Murcia City Strategy 2020," aligning with the 2014-2020 thematic objectives and investment priorities. The process established a dynamic strategic framework, leading to new regulatory tools, planning proposals, sectoral plans, and stable participation mechanisms, reinforcing Murcia's role in various national and international networks. Following the approval of the Sustainable Development Goals (SDGs), notably Goal 11 aiming for inclusive, safe, resilient, and sustainable cities, the city of Murcia reassessed past efforts and reflections to develop the new Urban Agenda 2030, within which the role of citizens was crucial throughout the design phase.²⁰⁷ This evolution required a comprehensive approach to adapt the urban strategy to the new international framework, enhancing multi-level territorial governance and transparency, fostering co-design, co-execution, and co-evaluation of strategic initiatives and intervention proposals.

²⁰⁷ *Agenda Murcia 2030. Plan de acción*, July 2022.

<https://www.estrategiamurcia.es/upload/2024/01/Plan-Accion-Agenda-Murcia-Version-completa.pdf>

Among the fundamental pillars, the need to work in synergy with national and European programmes and the participation of citizens are considered strategic in order to develop efficient and transparent mechanisms and to implement lead projects. The two cases selected are an integral part of this broader strategy.

3.4.1 The case selection: a methodological approach

Two cases have been selected within the context of the Municipality of Murcia, using a purposeful sampling method to choose cases that are most likely to provide relevant and valuable information among those related to the smart city initiative²⁰⁸: the project *MiMurcia - Tu Ayuntamiento Inteligente, Cercano, Abierto e Innovador*²⁰⁹ and the project SME4SMARTCITIES.

Box 3.1.

The cases were analysed as part of a research period within the *TRUST - digital TuRn in EUrope: Strengthening relational reliance through Technology* project, within Horizon 2020 – MSCA (Marie Skłodowska-Curie Actions) – RISE (Research and Innovation Staff Exchange) program. TRUST promotes an interdisciplinary research initiative aimed at understanding the mutual influence between trust and digital technologies, with a specific focus on blockchain technology (BTC).²⁰⁹ The smart city initiative in Murcia is part of the Work Package 5 of the TRUST project, that takes into consideration the urban environments as space of interactions among public authorities and cities and the use of new technologies to foster the development of smart, inclusive, and sustainable communities improving both citizens' participation and the efficient use of public resources and spaces.

²⁰⁸ S. Kelly, *Qualitative interviewing techniques and styles*, in I. Bourgeault, R. Dingwall, & R. de Vries (Eds.), *The Sage handbook of qualitative methods in health research*, Sage Publications, 2010.
doi:10.4135/9781446268247.n17

²⁰⁹ More information about the TRUST project at <https://trust-rise.eu>

The reasons for selecting these specific cases are multiple. Firstly, both cases present an interesting collaborative approach to the implementation of project actions, involving many different stakeholders, including civil society. Secondly, both cases have experienced management challenges worthy of analysis, from which it has been possible to extract elements for reflection on the local governance model. Thirdly, both cases have seen positive social outcomes from the smart city initiative, which are useful from a human-centred point of view. This selection of cases does not pretend to be exhaustive or to present the ‘best practices’ globally, but they were regarded as virtuous examples because they were interesting from an analysis point of view with the data and information at disposal.

After conducting an exhaustive academic literature review aimed at exploring the concept of Smart City and the implications of its governance for local development, following the guidelines proposed by Snyder²¹⁰, the research adopted a qualitative case study methodology as a research strategy²¹¹ to analyze the specific social unit of the Municipality of Murcia in relation to the Smart City initiative.

Different methods of data collection were used, including official policy documents such as urban development policy and sectoral policies, documentary analysis, field interviews, and questionnaires. The review of policy, programme and project documentation provided an in-depth reflection on the structural framework in which the unit of reference develops. Interviews to managerial and technical staff were conducted to collect first-hand empirical data with a reflective scientific approach.²¹²

The point of view of direct actors involved in the projects was used to gain specific knowledge about the content framework of the smart city initiative in Murcia and its key features, individuating strengths and weaknesses of the project management in the

²¹⁰ H. Snyder, *Literature Review as a Research Methodology: An Overview and Guidelines*, *Journal of Business Research* 104: 333–39, 2019. doi:[10.1016/j.jbusres.2019.07.039](https://doi.org/10.1016/j.jbusres.2019.07.039).

²¹¹ R. K. Yin, *Case study research: Design and methods* (4th ed), Sage Publications, 2009.

²¹² University of Newcastle, and L. Mathieson, *Synergies in Critical Reflective Practice and Science: Science as Reflection and Reflection as Science*, *Journal of University Teaching and Learning Practice* 13(2): 46–59, 2016. doi:[10.53761/1.13.2.4](https://doi.org/10.53761/1.13.2.4).

implementation of participatory processes for local development in a smart city context, according to a human-centred approach. The interviews took place between June 2023 and September 2024, lasted 50 minutes long on average and were semi-structured, with open-ended questions. Interviews were recorded and transcribed, besides gathering of the field notes. Content analysis technique were used in processing and interpreting the data. Content analysis techniques were then used to process and interpret the data collected. Questionnaires were used to ask open-ended questions to project stakeholders where direct interviews were not possible.

The interviews and questionnaires put the focus on the following issues:

- the difficulties encountered by local authorities in the process of implementing smart city initiative;
- the contribution of SSHs and human factors to the development of the smart city initiative;
- the contribution of project management to the development of the smart city initiative;
- the synergies, if any, between SSHs and PM to support local development and citizens' engagement, empowerment and emancipation in smart city making.

Both case studies constitute useful examples to investigate how local governance develops and adapt its main characteristics in accordance with the Smart City initiative's objectives. They can also offer an interesting point of reference for policy makers, urban innovators, and scholars, facing issues related to the smart city initiative with similar features elsewhere in the attempt of generating theoretical propositions with broader applicability.

3.4.2 Case Study 1: the MiMurcia project

In October 2015 the Governing Board of the Municipality of Murcia approved the Murcia Smart City (Smart Murcia) Strategic Plan with the main aim of implementing an integrated management model able to optimize the different municipal services and resources, according to a smart model, to allow the citizens to rely on an open, interconnected, close and agile City Council oriented towards their day-to-day needs. This paved the way for the formation of the Smart Murcia Task Force and the Smart Murcia

Advisory Committee, as well as for the search of specific resources for the creation and implementation of the Smart Murcia office and the monitoring centre (*Centro Único de Seguimiento*, CEUS).

As a result, the City Council has been able to actively participate in the National Network of Smart Cities (RECI) and, with the scientific and technological collaboration of the University of Murcia, now it participates in several smart city and ICT projects.

The project '*MiMurcia: Tu Ayuntamiento Inteligente, Cercano, Abierto e Innovador*' is an interesting example of the application of this new local development policy aiming at a human-centred digital transformation, as it stems from the will of the Municipality of Murcia to bring the city administration closer to the citizens through ICT technologies and to take advantage of their continuous progress.

The project, which covers the entire municipality of Murcia, including both the historic centre and the 54 districts that make up the municipality, is provided by the Ministry of Energy, Tourism and Digital Agenda through Red.es and the Municipality of Murcia (69% and 31% respectively) and co-financed by the European Regional Development Fund²¹³ for a total budget of 7,999,018.82 euros. This strategy is part of the actions promoted by the National Plan for Smart Cities of the Digital Agenda for Spain, approved in March 2015, with a budget of 188 million euros for the period 2015-2017.²¹⁴

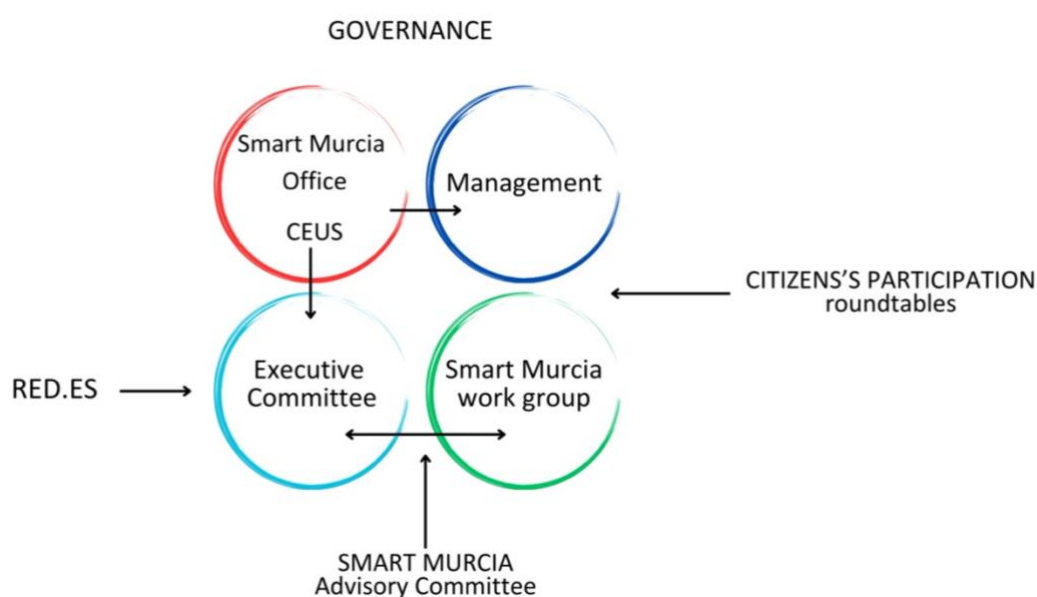
On behalf of the Mayor's Office, the project is managed by the Department for the Modernisation of Administration and Urban Development of the City Council of Murcia, specifically by its Councillor and First Deputy Mayor. Their role is to coordinate all the actions at the political level with the rest of the councils, to coordinate the Smart Murcia Office, the Single Monitoring Centre (CEUS) and to promote the Digital Participation Platform.²¹⁵

²¹³ https://ec.europa.eu/regional_policy/funding/erdf_en?ettrans=es

²¹⁴ *Plan Nacional de Ciudades Inteligentes*: <https://plantl.mineco.gob.es/planes-actuaciones/Paginas/plan-nacional-ciudades-inteligentes.aspx>

²¹⁵ Other municipal departments involved are: Smart City Office, IT Services, Government Office, European Programmes, Environment, Town Planning, Works and Projects Office, Parks and Gardens, Urban Quality, Traffic, Tourism, Health, Local Police, Street Cleaning and General Services. Other stakeholders involved are: University of Murcia, U.T.E. Telefónica Soluciones de Informática y Comunicaciones de España - Informática El Corte Inglés, Murciana de tráfico (Murtraffic), Urbanizadora Municipal (Urbamusa), I-DE Redes Eléctricas Inteligentes.

Figure 3.2. Governance model of MiMurcia project



Source: eSmartCity.es (2018) ri-adapted by the author

The MiMurcia project plays a key role in the strategic objectives outlined in the Urban Agenda 2030 of the Municipality of Murcia²¹⁶, which aims to establish a local governance model focused on improving the quality of life and achieving a more inclusive and sustainable society. Specifically, the MiMurcia project is included in the Action 4 (*Eje 4, Municipio para las personas*) strategic objective number 6 called Universal Accessibility (*Accesibilidad Universal*) and in the Action 5 (*Eje 5, Gobierno abierto*) strategic objective number 1, called Modernisation of the administration (*Modernización de la administración*), strategic objective number 3, called Accountability (*Rendición de cuentas*), and strategic objective number 4, called E-Government (*E-administración*).

By involving different stakeholders, including the citizens, the Agenda proposes a shared and integrated vision for the municipality in line with the Sustainable Development Goals (SDGs), with the ultimate aim of promoting economic and social development. The

²¹⁶ Municipality of Murcia, *Plan de acción murcia 2030 - Agenda Urbana*
https://www.estrategiamurcia.es/upload/2022/09/AgendaUrbana_PlandeAccion2030.pdf

Smart Murcia initiative deserves recognition for its contribution, along with other initiatives, to the design of a strategic framework that is adept at gathering bottom-up policy proposals from different stakeholders, including civil society, as part of the decision-making process. It has also played a role in strengthening the capacity building of all actors involved, in a collective effort process which has led to the elaboration of the city's Urban Agenda 2030.

MiMurcia project works in synergy with the Innovato-R network, of which Murcia has been a member since 2018. The network, led by the City of Turin (Italy) and financed by URBACT, is a transfer network whose aim is to activate a process of innovation within the public administration with the direct involvement of the civil servants, who are called to contribute to the local governance as key human resources and innovation brokers. In this process, the public administration itself becomes an accelerator of innovation by readapting its internal organisational structure to this end.²¹⁷

Indeed, the MiMurcia project places the citizen at the centre of its main objectives and follows the lines of action recommended by the European Union in the following areas: citizen participation, social and user service innovation, open government, sustainable mobility and efficient management of resources and public services. The five areas are complementary in their direct focus on citizens to which the smart development model pays particular attention.²¹⁸

The innovative aspect of this project, which is useful to analyse here, is the ability to increase the degree of personalization, according to their context, location, and time, of the digital services provided to the citizens by the local public administration, in order to shorten the distance with the local government, thus increasing trust and improving the efficiency of public services. Thanks to the implementation of an interactive and proactive ICT platform, the project intends to offer a wide range of services and information sources to provide

²¹⁷ *L'Italia dei Transfer Network – Ogni dipendente comunale può essere innovatore: l'esperienza di Torino e delle città di InnovaToR:*

<https://urbact.eu/articles/litalia-dei-transfer-network-ogni-dipendente-comunale-puo-essere-un-innovatore-lesperienza>

²¹⁸ *MiMurcia: Proyecto de ciudad inteligente del Ayuntamiento de Murcia.* (2018, December 5). [eSmartCity.es]. <https://www.esmartcity.es/comunicaciones/comunicacion-mimurcia-proyecto-ciudad-inteligente-del-ayuntamiento-murcia>

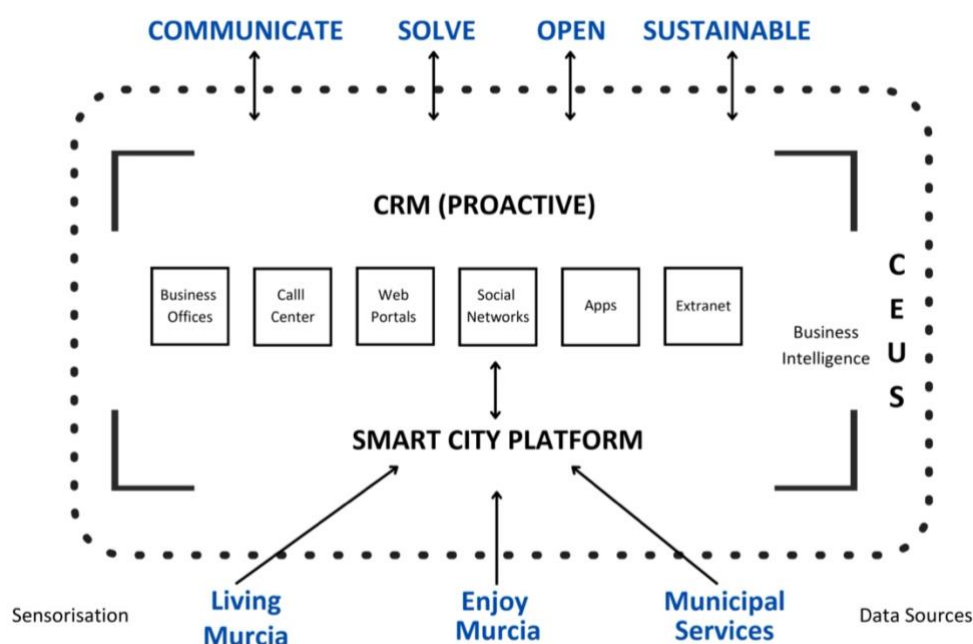
citizens with everything they need in a way that suits them best. This digital model seeks to reduce the fragmentation of information by bringing together all sources of information and all the information obtained from different sensors, and then delivering information according to the data profiling established by the user, allowing citizens to get the specific and timely information they are looking for. Moreover, these digital tools are designed to promote the entrepreneurship of regional businesses that create new services and uses of data contributing to the development of the public innovation systems.²¹⁹

Four lines of action have been developed to achieve these goals:

1. Communication (*Ayuntamiento Comunica*): this axis provides for the creation of new communication channels with citizens to offer them a publication/subscription service for different cultural and/or leisure activities, as well as offering flexible, personalised geolocated information from the local administration and a channel for citizen alerts;
2. Administrative Resolution and Efficiency (*Ayuntamiento Resuelve*): this axis provides for the deployment of digital solutions that allow citizens to carry out most administrative procedures within the digital platform simplifying the public administration apparatus and facilitating citizens' activities;
3. Open and Transparent System (*Ayuntamiento Abierto*): this axis provides for the development and implementation of tools to improve transparency and the availability of data in open format, as well as the promotion of service innovation by regional companies.
4. Sustainable Environment (*Ayuntamiento Sostenible*): this axis provides for the implementation of measures aimed at optimizing the use of the city's facilities by making them energy efficient, an intelligent lighting system, an efficient method of selective waste collection, efficient urban traffic management, optimised irrigation systems in parks and gardens, and improved public safety.

²¹⁹ CEUS, *el cerebro de 'Murcia Smart City', comienza a medir el pulso de la ciudad*. (2021, February 16). Equipamiento y Servicios Municipales. <https://www.eysmunicipales.es/actualidad/ceus-el-cerebro-de-murcia-smart-city-comienza-a-medir-el-pulso-de-la-ciudad>

Figure 3.3. Diagram of the Murcia Smart City model



Source: eSmartCity.es (2020)²²⁰ ri-adapted by the author

The technological apparatus developed within the project is managed and monitored by the Single Monitoring Centre (CEUS), a single control centre that provides a holistic view of the state of the city and that integrates the Smart City Platform and the Proactive Citizen Relationship Management (CRM), which together form the Business Intelligence platform (BI). The Smart Platform consist in a city management platform based on the technical interoperability standard CTN178104:2015, which collects and processes all the information obtained from the different sensors Living Murcia (*Vivir Murcia*), Enjoy Murcia (*Disfrutar Murcia*) and Municipal Services (*Servicios Municipales*), creating a basic infrastructure for the provision of innovative services.

²²⁰ eSmartCity.es (2020), *MiMurcia: Tu Ayuntamiento inteligente, cercano, abierto e innovador en red*. <https://www.esmartcity.es/comunicaciones/ficha-proyecto-mimurcia-tu-ayuntamiento-inteligente-cercano-abierto-innovador-red>

The proactive CRM is part of the municipal services that, through a web 2.0 model, allows the access to personalised municipal services and content based on the user's profile and lifestyle, with the ultimate goal of getting citizens actively involved in improving the smart and sustainable life in the city in the areas of communication, administrative resolution and efficiency, open and transparent information, and sustainable environment, through different channels linked to different points of interconnection (face-to-face offices, call centres, web portals, social networks, applications and extranet). The platform is therefore the main virtual meeting point between citizens and their municipal professionals, and also between citizens themselves, facilitating the creation of relationships that contribute to increasing social cohesion.²²¹

The CRM is expected to be sized to serve around 450,000 information consumers and it includes the following services: Citizen Portal, Virtual Communities, Participation Portal, Collaboration Portal, User and Profiling (User and Identity Management and Adaptive Personalisation, including a new Personal Services component), Alerts and Notifications System, Collaboration and Interactive Training Platform, Open Data Portal, Communication Component (two-way messaging), Integration Components (Social Networks, Websites of Interest, Smart City Platform).

The aim of the Living Murcia sensor is to improve the attractiveness and living conditions of the city centre and its districts, as well as the interaction of citizens with the city. This includes improving the intermodality of public transport, reducing parking time in the city, intelligent parking, and parking for people with reduced mobility, and intelligent pedestrian crossings. Also, efficient lighting in the centre, noise mapping of the city, intelligent selective waste collection, promotion of commerce in the centre and profiling of users and tourists.

²²¹ Ciudades e islas inteligentes. Agenda Digital para España. (n.d.). *Mimurcia, tu ayuntamiento inteligente, cercano, abierto e innovador. Dossier informativo. II Convocatoria de Ciudades Inteligentes de la Agenda Digital para España.*

Moreover, the Enjoy Murcia sensor includes actions to encourage citizens to improve their lifestyle, making it healthier by choosing outdoor activities and promoting the use of green areas, guaranteeing their management and safety. A specific focus is put on Murcia's parks and gardens: irrigation automation systems, efficient lighting, surveillance and security, improvement of the city's wireless network and environmental monitoring. The Business Intelligence Platform, instead, allows the analysis of all the information collected and the management of the indicators, by then making the data available to the Municipality through reports and dashboards. Indeed, the CEUS is an intelligence layer that provides the local administration with a decision-making mechanism that is modular in design and includes a control room, a crisis room, a holistic viewer, and the definition of action plans in response to events. This is made possible by hundreds of sensors that collect information from the city in real time supporting decision making in order to make life easier for citizens by providing them with better services.

From the point of view of governance and management, the CEUS is an interesting innovative tool that supports an integrated approach to local governance, since it makes it possible to create, maintain and standardise the workflows that make up the management of the city within a defined structure that also facilitates synergetic cooperation between the various departments involved, favouring the definition of specific decision-making processes capable of simplifying administrative procedures through automation.²²² The design of the control room includes, among others, a foyer-showcase area to display the technology to visitors for information purposes and to support citizens in using public digital services.

Interoperability is one of the target elements that makes this project accessible and understandable to citizens, because without shared and synergic collection and analysis of data, truly effective actions would not be implemented. In addition, the Autonomous Community of the Region of Murcia (CARM) is developing an inter-institutional cooperation

²²² Guillén Parra, J., Martínez Márquez, J., Skarmeta Gómez, A. F., & Martínez Navarro, J. A. (2019, September 20). eSmartCity.es. *CEUS: Centro Único de Seguimiento de La Estrategia de Ciudad Inteligente «Smart Murcia»*. <https://www.esmartcity.es/comunicaciones/comunicacion-ceus-centro-unico-seguimiento-estrategia-ciudad-inteligente-smart-murcia>

initiative in the Region of Murcia, called *FOro Regional de Colaboración entre las Administraciones* (FORCA), to provide a regional open data service in which any regional public entity that wishes to participate can participate and MiMurcia will contribute improving interoperability between different public bodies and services.

According to the interviewee, Marisol Navarro Hernandez, a programmer and management technician at the CEUS of the Community of Murcia, although much has been done to promote and facilitate access to digital services for citizens, many functionalities remain rather scattered, with the risk of confusing users, who end up not using the tools provided or using them inadequately. Moreover, the CEUS is able to collect a large amount of data, but it is not yet able to make full use of it. In fact, while some data is used to improve the performance of certain services and the quality of life and liveability in the city (e.g. traffic monitoring, air quality monitoring, monitoring of available parking spaces, etc.), a large amount of data is not analysed and thus not used.

Moreover, according to the information collected to a questionnaire provided to the Municipality of Murcia, in the person of Juan Antonio Martínez Navarro, head of the smart city office, the scale of the project has required a great effort and coordination by the Municipal Services, that were not prepared for a project of this scale. It also required very well-trained staff in the various technologies to be able not only to carry out the project successfully, but also to manage and maintain it afterwards. Specific training was provided by external stakeholders to integrate the skills of the municipality's internal staff.

The MiMurcia project has also meant a change in the organisation of Murcia City Council. Both the IT Service and the Smart City Office are now cornerstones in the good management of technological innovations. They also provide digital support to other departments providing digital services and expertise.

The change in the organisational structure and the work of the Smart City Office has been and continues to be fundamental to the successful implementation of technology-based projects. The Municipality of Murcia is still trying to attract new European funds to make the impacts of the project sustainable in the long-term and to maintain the technological system implemented.

3.4.3 Case Study 2: the SME4SmartCities project

The need to adopt innovative solutions to promote sustainable and efficient urban living in a smart city context requires a key role for key technological actors, responsible for providing new tools for the development of the city. This chapter focuses on the SME4SMARTCITIES project to examine the role of small and medium-sized enterprises (SMEs) within the smart city ecosystem and the dynamics of their collaboration with local authorities.

This study takes into consideration the Quadruple Helix (QH) framework to reflect on the collaborative mechanism of stakeholders within the smart city initiative of Murcia.

Considering the role of SMEs in the context of smart city is an integral part of the analysis of the QH actors' contribution to local development, as the identification of key stakeholders is crucial to plan and deliver an effective stakeholder management to meet the objective of the smart city's project.²²³ Indeed, local governments need to surround themselves with strategic stakeholders in order to implement successful strategies in a smart city context, where, among other things, different skills and expertise are needed depending on the level of technological innovation required. The collaboration between local governments and stakeholders can support the creation of a strong ecosystem within which all the actors of the QH framework play a necessary and irreplaceable role.²²⁴

Local territories with their urban development policies, indeed, constitute a potential testing and validating environment for new technological solutions. The literature shows how open and user-driven innovation ecosystems can be closely aligned with the interests and needs of cities and their stakeholders, including citizens and businesses, bridging the gap between short-term urban development priorities and long-term technological research and experimentation. In such a framework, innovative procurement policies are needed to align technology development with societal challenges while fostering sustainable collaborative

²²³ S. R. S. Dawood, *The use of quadruple helix model in smart cities development: evidence from Bandar Cassia township in Penang, Malaysia*, in *Theoretical & Empirical Researches in Urban Management* 18(2): 78-78–100, 2023.

²²⁴ F. Appio, M. Lima, & S. Paroutis, *Understanding Smart Cities: Innovation Ecosystems, Technological Advancement, and Societal Challenges*, in *Technological Forecasting and Social Change* 142: 1-14, 2019.

partnerships.²²⁵ For this reason, the relationship between SMEs and local authorities becomes instrumental for the success of smart city projects, together with the involvement of citizens within the planning processes of innovative solutions and this case study intends to investigate the topic from this perspective.²²⁶

SME4SMARTCITIES - *Mediterranean SME working together to make cities smarter*²²⁷ is an EU funded project, framed within the ENI CBC Med Programme²²⁸, the largest initiative for the Cross-Border Cooperation (CBC) in the Mediterranean implemented under the European Neighbourhood Instrument (ENI). The Mediterranean Sea Basin Programme brings together the coastal territories of 14 countries in view of fostering fair, equitable development on both sides of the Mediterranean. Through calls for proposals, ENI CBC Med finances cooperation projects for a more competitive, innovative, inclusive and sustainable Mediterranean area. SME4SMARTCITIES project intended to strengthen the collaboration between Mediterranean SMEs and cities around the Smart City sector with a total project budget of € 2.491.299,47 and an EU contribution of € 2.242.169,53, corresponding to the 90%. The project started in September 2019 and ended in September 2023.

The project was led by CEEIM - *Centro Europeo de Empresas e Innovacion de Murcia*²²⁹, the Business Innovation Centre of Murcia with the joint effort of its international partnership which included European Business and Innovation Centre (BIC EURONOVA) in Málaga (Spain), FILSE Financial Agency of Liguria Region (Italy), Tel Aviv University (Israel) and Municipality of Kfar Saba (Israel). Specifically, CEEIM is a non-profit foundation dedicated to entrepreneurship and business formation, with a particular focus on technology-based start-ups. Recognized as a certified EU Business Innovation Center, CEEIM assists innovative enterprises by facilitating

²²⁵ H. Schaffers, N. Komninos, M. Pallot, B. Trousse, M. Nilsson, and A. Oliveira, *Smart Cities and the Future Internet: Towards Cooperation Frameworks for Open Innovation*, in *The Future Internet, Lecture Notes in Computer Science*, eds. J. Domingue, A. Galis, A. Gavras, T. Zahariadis, D. Lambert, F. Cleary, P. Daras, et al. Berlin, Heidelberg: Springer Berlin Heidelberg, 431–46, 2011. doi:[10.1007/978-3-642-20898-0_31](https://doi.org/10.1007/978-3-642-20898-0_31).

²²⁶ G.V. Pereira, M.A. Cunha, T.J. Lampoltshammer, P. Parycek, M.G. Testa, *Increasing collaboration and participation in smart city governance: a cross-case analysis of smart city initiatives*, *Information Technology for Development* 23(3): 526-553, 2017.

²²⁷ Project website: <https://www.enicbcmed.eu/projects/sme4smartcities>

²²⁸ <https://www.enicbcmed.eu>

²²⁹ CEEIM web page: <https://www.cceim.es/en/>

access to relevant technological knowledge, market insights, management guidance, and funding opportunities. It offers office spaces, shared services, and mentoring in business, technical matters, and financing to foster their growth.

The most interesting element of this project lies on the ability to involve innovative SMEs as main actors in the definition of the smart city initiative, with the main objective of triggering a valuable process of reflection on the best solution to implement efficient products and services to respond to the needs of the city in a more efficient, smart, and sustainable way, thus contributing to the creation of public value. Following this main objective, SMEs had the chance to improve their competitiveness and internationalization opportunities, as well as their capability to leverage their innovation potential and to create new knowledge resulting from cross-border cooperation processes. In this way, the cities, through the use of Public Procurement and public-private partnerships, were engaged as front-runners of innovation.

The international framework of the project, which provides a direct opportunity for networking and know-how exchange for local SMEs, was the ambitious part of the project, which placed the local area in a wider dimension by raising its development objectives and providing new market opportunities and business competitiveness.

During the secondment period in Murcia within the TRUST project, the researcher conducted two in-depth interviews: one with the project manager of the project from CEEIM, and one with the head of the IT section of the Murcian Institute of Social Action (IMAS).

On the one hand, CEEIM led the project with its pool of experts in entrepreneurship to guide and support SMEs to position themselves with innovative solutions in the international market of smart cities and transnational business cooperation with a specific capacity training program. In addition, it coordinated an open call for the selection of a group of SMEs that received up to € 60,000 in financial support to design pilot solutions to major urban challenges faced by Mediterranean cities participating in the project.

Through an in-depth interview with the project manager and an extensive analysis of the project documentation, the following research questions could be addressed: (a) What internal and external factors contributed positively to the project management process? (b) What factors, internal and external, had a negative impact on the management of the project? (c) What strategies were used to coordinate all stakeholders in the co-creation

process and what challenges were faced? (d) How was the participatory process conducted to involve citizens and external actors?

On the other hand, IMAS contributed significantly to the definition of the pilot project in the municipality of Murcia by identifying the specific societal need that the Smart City solution should address for the benefit of the local community. The in-depth interview with the head of the IT department sought to answer the following research questions:

a) How was the social need to be addressed by the project identified?

b) How have you sought to create synergies between the objectives of this project and other projects already underway?

These research questions have been developed considering the complexity of the project partnership management and the specificities of a cross-border project, with a particular focus on the added value of the involvement of SMEs in the Smart City implementation process and the collaborative contribution of different actors.

Before analysing the main elements that are relevant for the purpose of this research, an overview of the project is presented, considering the main steps and outcomes that characterized it.

The partnership launched a call for proposals for sub-grants aiming to support SMEs in developing innovative and technological solutions to major urban challenges faced by Mediterranean cities participating in the project. The call consisted in a two-steps process: the first phase consisted in a pre-selection of 49 innovative SMEs to be engaged in a training programme on how to develop new smart city products and services according to the needs of the local territories, on how to improve their competitiveness and internationalization capacities, and enhance their skills to reach public procurement opportunities.

As a result of the activities carried out in the project, a web platform has been developed with tools and resources available to the public, with a private section dedicated to the beneficiaries SMEs, with an online course on Smart Cities using an e-learning methodology and an e-coaching and e-assessment service for businesses with experts from the partner organisations.

A primary phase of needs analysis and co-reflection on the specificities of the local territories was carried out to explain to the SMEs the social and economic context of the project territories, in order to develop innovative solutions that respond to the real needs of

the communities. The project also included exchange webinars and workshops to raise awareness among civil servants and local authorities of the potential solutions that smart cities can offer. In addition, SMEs participated in entrepreneurial missions to Italy, Spain and Israel, which aimed to support co-creation and co-innovation of proposals for the second application phase of the call with a cross-border cooperation approach between SMEs to match respective skills. The last phase consisted in combining the competences of SMEs to submit innovative and technological solutions to address the Mediterranean urban challenges identified by the project in each participating region.

Eighteen innovative co-created pilot solutions were presented, with seven of them chosen for implementation, each receiving a sub-grant of between 30 and 40 thousand euros. Monitoring workshops were used as a tool to engage the SMEs and stakeholders and through specific facilitation strategies some insights and useful tips were shared to provide testimonies and mutual support for the implementation of the pilot projects.

The Spanish partners CEEIM and BIC EURONOVA²³⁰, together with the municipalities of the Region of Murcia, identified urban mobility as the main issue to be addressed by SMEs through a technological solution specifically aimed at facilitating the intelligent use and monitoring of parking spaces for people with reduced mobility, to be implemented for testing in the municipalities of Murcia, Cartagena, Molina de Segura and Yecla. The SMEs co-creation activities led to the development of a total of three project proposals and two were selected as the best fitting innovative solutions: PARK4DIS and QUICK.

Park4Dis® was the pilot project implemented in the Municipality of Murcia developed by a consortium of SMEs and focused on assisting people with reduced mobility or disability to improve their autonomy and inclusion. IMAS played a strategic role in individuating the pilot project to be implemented in the municipality of Murcia. Indeed, although the Institute was not an official partner in the project, it contributed providing useful information and data on the most pressing needs to which the Smart City initiative could respond. Building on a previous project coordinated by IMAS, the *TERE - Tarjeta de Estacionamiento Registro*

²³⁰ BIC EURONOVA web page: www.bic.es

Electrónico (Electronic Parking Card Register) project, the Institute identified the SME4SMARTCITIES project as a suitable financial and technological pool to continue the actions already initiated, favoring a valuable synergetic use of funding and guaranteeing the prosecution of needed actions. Specifically, the TERE project was designed to adapt local government actions in the field of parking to the new European legislation²³¹, which recommends Member States to implement a parking card for individuals with disabilities based on a standardized Community model, allowing cardholders access to parking facilities in any Member State in accordance with the national rules in force.

In Spain, the Royal Legislative Decree 6/2015, of 30 October²³², attributes in its article 7 to the municipalities the competence to regulate, by means of municipal traffic ordinance, the equitable distribution of parking spaces on urban roads, paying special attention to the needs of people with disabilities who have reduced mobility and who use vehicles, in order to favour their social integration. Subsequently, Law 19/2001, of 19 December, on the reform of the articulated text of the Law on Traffic, Circulation of Motor Vehicles and Road Safety, imposed on the Municipalities the obligation to grant a parking card for disabled people with serious mobility problems, valid throughout the national territory, considering the Recommendation of the Council of the European Union. With the Decree no. 64/2007, of 27 April, the Region of Murcia regulates the legal regime applicable to the parking cards for people with disabilities and with the Law 4/2017, of 27 June on universal accessibility of the Region of Murcia, and the subsequent Decree 4/2018, of 24 January 2018, the reserved parking spaces, the beneficiaries, the scope of application and the responsibilities of the public administrations have been established.²³³

²³¹ Council Recommendation of 4 June 1998 on a parking card for people with disabilities (OJ L 167 12.06.1998, p. 25, ELI: <http://data.europa.eu/eli/reco/1998/376/oj>)

²³² Real Decreto Legislativo 6/2015, de 30 de octubre, por el que se aprueba el texto refundido de la Ley sobre Tráfico, Circulación de Vehículos a Motor y Seguridad Vial.
<https://www.boe.es/buscar/act.php?id=BOE-A-2015-11722>

²³³ Decreto n.o 4/2018, de 24 de enero, por el que se regula la tarjeta de estacionamiento para personas con discapacidad en la Región de Murcia.
<https://imasonline.blog/wp-content/uploads/2018/03/20180202-decreto-4-2018-de-tere.pdf>

The solution designed through the project and available in more than 250 cities in a total of 10 countries, consists in a transversal and interurban tool that operates in two ways: on the one hand, it assists disabled people with a web/app (Park4Dis® People²³⁴) by providing them with remote access to information about dedicated parking spaces monitored by sensors, allowing them to check whether these spaces are free or occupied; on the other hand, the service also provides a management system (Park4Dis® Admin) to enable public entities and service management contractors to monitor the status of the service and, at the same time to comply with state and regional laws collaborating in the paradigm shift from Smart City to Smart Human City, which is being promoted by Fundación ONCE²³⁵, which formally supports this social project.²³⁶ The Smart Human City is an urban strategy paradigm that considers the urban territory as a complex and dynamic system aimed at ensuring the well-being of all its citizens promoting the principles of equality and flexibility in accessing and using public services, also with the support of ICT technologies (Information and Communication Technology). A specific focus is put on universal accessibility, as a transversal element that called for a general adaptation of the urban environment to guarantee safety and autonomy to all.²³⁷

In this way, Park4Dis® smart city's solution demonstrates to comply with European and regional legislation, integrating and adding value to the already existing parking card system and facilitating the use of this service by people with disabilities and the monitoring by the relevant public structures. Indeed, the app does not replace the technological infrastructure already in use, but it integrates it using users' data collected through the municipal register of parking cards. This synergy provides a cross-checking data system which makes it possible to avoid duplication of effort, to automate some administrative processes

²³⁴ Video presentation of the SME4SMARTCITIES Park4Dis Solution:

<https://www.enicbcmmed.eu/sme4smartcities-park4dis-solution-tool-support-people-eu-disability-card-park>

²³⁵ Fundación ONCE web page: <http://www.once.es>

²³⁶ SME4SMARTCITIES, *Deliverable 6.2 support services for innovative and technological SMEs manual. Guidelines for an effective support to the smes in developing of new products & services under a demand-driven approach*,

²³⁷ Universidad de Salamanca, Servicio de Información sobre Discapacidad, *Fundación Once e Ilunion impulsan el concepto Smart Human City*, 2018.

<https://sid-inico.usal.es/noticias/fundacion-once-e-ilunion-impulsan-el-concepto-smart-human-city-2/>

while maintaining control over parking cards for disabled citizens to avoid malfunctions and inappropriate use, and to reduce administrative time for citizens.

It was also the result of a technological collaboration between IMAS, which made available its acquired expertise and the results of a previous project, and the expertise of the SMEs involved in the project.

In line with the data collected through the analysis of project documentation and reports, policy statements and the interviews conducted, it has been possible to highlight some useful elements from which to develop a coherent framework of reflection to be incorporated into the final model of local governance. The elements of analysis have been organised into categories from both a project management point of view and a human-centered approach through a content analysis.²³⁸

The first phase of the project aimed to analyse the current situation in order to identify the main needs of the local communities, collecting data through surveys and using a database already available to the municipality to identify the most urgent social needs. Through the support of IMAS, it was possible to start reflecting on synergetic actions with other ones already in force to individuate the specific pilot project to be implemented. This collaboration proved useful in giving continuity to other project and governance actions by reinforcing the need to involve external actors to define and develop objectives that would have a wider scope than the project itself for long-term impacts. At the same time, during the first phase, the project explored the needs of SMEs in relation to their need to connect with municipalities and identify the areas of training or knowledge they would like to improve in order to effectively engage with smart city initiatives.

This strategy of assessing the most effective objectives to be pursued by the project aimed to meet societal needs while providing SMEs with a valuable opportunity to develop their knowledge, skills, and business competitiveness. This focus on mutual interests encouraged the active involvement of all stakeholders throughout the project.

²³⁸ G. Losito, *L'analisi del contenuto nella ricerca sociale*, 4. ed. Milano: Angeli, 2002.

The most challenging peculiarity of this project consisted in the international cooperation partnership and in the provision of a networking of external actors to support the SMEs in the implementation of their innovative technological solutions. The demand-driven approach of the project did not correspond to an efficient mapping of all actors involved in urban policy governance and their respective responsibilities during the initial phase. In this way, the SMEs could have had a support network of actors to rely on in order to overcome possible obstacles in the development and implementation of their innovative solutions for the city. This approach could also ensure the active involvement of all stakeholders throughout the project.

The strategy of workshops and entrepreneurial missions in each country partner reinforced the exchange of knowledge and favoured the creation of SMEs consortia for the co-creation of innovative solutions to be presented to the call for pilot projects. The SMEs were assisted by support organisations involved in the project, both as partners and technology developers, even if their contribution was more noticeable in the final part of the pilot project implementation. According to the SMEs, extending the time between the entrepreneurial missions and the call for proposals deadline would have been beneficial for allowing further exchanges among SMEs regarding the scope of their collaboration, leading to stronger proposals.

The role of the municipalities and political representatives since the initial phase is considered crucial for the overall smooth running of the project. Increased involvement of public authorities would have provided SMEs with the necessary support to achieve better results and ensure that the needs of local communities were met. The project manager indicated that having a municipal representative from the beginning would have been advantageous for coordinating diverse stakeholders, each with varying work rhythms, organizational structures, cultures, and languages. The lack of such coordination, indeed, negatively impacted project management on some occasions, leading to delays and misunderstandings.

Among the internal factors that had a positive impact on project management and stakeholders' management was the presence of two key contact points. The first contact point was a local representative in each country, responsible for facilitating administrative and legal aspects of project management and for collecting the necessary documentation from each

partner. The second contact point was a product development coach in each local territory. This coach was tasked with managing the municipalities' needs, linking them to the SMEs' work, and coordinating the SMEs during each technical phase to ensure the proper development of the smart city solution. In Murcia, this role proved especially valuable, as the pilot project was implemented across four different municipalities with which the product development coach already had established communication, thereby facilitating smoother interactions.

Beyond the more technical aspects of developing project activities, such a differentiated partnership, in order to work, needs to be able to establish quite strong links and fruitful and continuous interactions. The project was developed during COVID19, which had a strong negative impact on the collaborative part of the project, where face-to-face meetings and workshops were replaced by digital tools to support overall project coordination. Despite this, good communication between the partners proved to be very useful in this respect, even though the lack of a cultural mediator to deal with aspects related to the language, customs and cultural traditions of the countries involved had an impact on the progress of the project at some stages, affecting mutual understanding and thus the project timetable.

According to the project manager, it would probably have been useful to have had a liaison person to mediate relations between the different countries, taking into account cultural and linguistic differences, as well as the internal context of each country and any conditions to be taken into account or that might hinder the project in any way. In addition, this figure would have relieved CEEIM of a part of the work not foreseen by the project management and would have relieved the partner of a part of the work not foreseen by the project management and linked to external factors of a current political-cultural nature.

Creo que es un proyecto que, por un lado, tiene la ventaja de poner en contacto a muchas partes, pero, por otro, también conlleva complicaciones, como que tantos stakeholders están involucrados y son de diferentes países. Al final, hay mucha gente colaborando junta y unas funcionan mejor y otras peor. Además, en cada territorio hay un tipo de problema,

*unos más fáciles y otros más complicados. Son tantos actores diferentes.*²³⁹

Regarding legal and financial aspects, the SMEs had faced some issues related to the formalisation of contracts and intellectual property, leading to some delays in the implementation of the technological solution in the pilot actions. These aspects, which were not directly dependent on the internal project management, caused delays that were not initially foreseen. Also because of these delays, once the pilot action has been tested and the project has been completed, it is difficult to think about continuing it beyond the project itself.

Although the main focus of this project was on SMEs to strengthen their capacity to respond to the needs of local communities by establishing strong links with local authorities for the implementation of smart solutions, the local communities were involved more or less directly in a participatory process.

In Murcia, the citizens were not directly involved in the project, but a kind of participatory approach was used in the design phase of the technological solutions, according to the needs analysis previously carried out. The Public Social Institute of Murcia, IMAS, was identified by the municipality as a good intermediary organisation through which to involve citizens to gather their needs and feedback during the testing of the pilot solution. IMAS coordinates this part, involving civic associations and volunteers to find citizens with reduced mobility to test the smart city solution and provide feedback to the technological consortium for improvement and monitoring.

The outcomes of SME4SMARTCITIES project and its insights are beneficial both for SMEs and public authorities. In addition to the smart city solutions implemented, the project generated positive outcomes for SMEs as they had the opportunity to work directly with the cities, to get to know and to start an effective and long-term collaboration beyond the project. Moreover, they gained more visibility at EU level and more possibilities to keep up co-

²³⁹ Antonio Fuentes Cano, CEEIM, Project Manager, interview 10/07/2024. Translation: *"I think it is a project that on the one hand has the advantage of bringing many parties together, but on the other hand it also brings complications because there are so many stakeholders involved, and they are from different countries. In the end, there are a lot of people working together and some work better than others. Also, each area has a different type of problem, some easier and some more complicated. There are so many different players."*

developing innovative solutions with international partners. From the point of view of local governance authorities, the project serves as an initial, strategic effort to encourage public authorities to address urban challenges through Public Procurement of Innovative solutions.

The collaborative network established among Mediterranean SMEs within the smart city sector could be the basis for the development of future project proposals within the framework of Interreg NEXT MED or other EU-funded program calls for projects.

3.5 Comparison of case studies 1 and 2: outcomes, challenges and lessons learned

A shared view among researchers considers the smart city initiative as a strategy to improve the quality of life in an urban context, opening the way to a public value management approach that goes beyond the mere creation of economic value or the provision of services and the general optimisation of the urban system. Indeed, within this approach, the Smart City initiative is considered as an integrated system in which the typical smart city domains (natural environment, economy, infrastructures, governance, people and communities) are inextricably linked to technology, management/organisation and governance structure, and the policy and decision-making process within which it takes place.²⁴⁰ As stated in the holistic assessment framework proposed by Castelnovo W. et al. (2016), the role of ICTs is seen as pervasive and instrumental for smart city governance and public value generation, but the really crucial element to foster social innovation is the human one, specifically the process of citizen engagement to coproduce public value.²⁴¹

The public value management paradigm provides a new conceptual framework within which local leaders can operate when approaching smart city delivery to ensure the most

²⁴⁰ H. Chourabi, T. Nam, S. Walker, J.R. Gil-Garcia, S. Mellouli, K. Nahon, T.A. Pardo, H.J. Scholl, *Understanding Smart Cities: An Integrative Framework*. Paper presented at the 45th Hawaii International Conference on System Sciences, (2289–2297), 2012. <https://doi.org/10.1109/HICSS.2012.615>

²⁴¹ W. Castelnovo, G. Misuraca, and A. Savoldelli, *Smart Cities Governance: The Need for a Holistic Approach to Assessing Urban Participatory Policy Making*, in *Social Science Computer Review* 34(6): 724–39, 2016. doi:[10.1177/0894439315611103](https://doi.org/10.1177/0894439315611103).

appropriate use of public resources (optimisation) and to gain legitimacy and trust by being accountable to the public as custodians of public data that must be used to generate public value, which is the ultimate goal of smart city's governance.²⁴² For this reason, it is interesting to examine how public value management fits into the broader framework of project management in a smart city context.

The data collected through MiMurcia and SME4SMARTCITIES projects' documentation and interviews was analysed in the light of the literature on the human-centred approach in a smart city context. The information obtained was used to define a set of criteria that describe the main characteristics that a smart city governance model should have in order to be human-centred. For each criterion, preliminary indicators were constructed as a hypothetical reference framework to elaborate more specific indicators in an *ad hoc* project context starting from considering some governance dimensions from which the criteria have been developed.

The scheme proposed by Leclercq and Rijshouwer to describe the characteristics of the right to a smart city was used as a starting point to conceptualise the criteria of citizens' participation, and considering the questions related to each aspect as a useful trace to delineate preliminary indicators.²⁴³

Figure 3.4. *Operationalization of 'Right to the Smart City'-aspects: engagement, empowerment, and emancipation*

²⁴² E. Cosgrave, T. Tryfonas, and T. Crick, *The Smart City from a Public Value Perspective*, Stockholm, Sweden, 2014. doi:[10.2991/ict4s-14.2014.45](https://doi.org/10.2991/ict4s-14.2014.45).

²⁴³ E. M. Leclercq, E. A. Rijshouwer, *Enabling citizens' Right to the Smart City through the co-creation of digital platforms*, *Urban Transformations*, 4(1), Springer Nature Journals, 2022. <https://doi.org/10.1186/s42854-022-00030-y>

Characteristics of the Right to the Smart City	Aspects	Related questions
Engagement	Involvement	<i>How does the project/process allow for active and meaningful participation?</i>
	Openness	<i>How is the project/process open to anyone? Does it support open-endedness?</i>
Empowerment	Inclusivity	<i>Who is invited to participate?</i>
	Agency	<i>How does a process contribute to stakeholders' individual and/or collective ability to act?</i>
	Decision-making power	<i>To what degree do stakeholders have a decisive say?</i>
	Self-reliance	<i>How does a process contribute to stakeholders' individual and/or collective opportunity to generate value according to their needs and concerns?</i>
Emancipation	Empowering intermediaries	<i>Are there any experts/professionals involved to support stakeholders' involvement?</i>
	Representation	<i>Do all stakeholders have an equal opportunity to be represented?</i>
	Recognition	<i>Are all stakeholders equally recognized and valued for their efforts?</i>
	Redistribution	<i>Are means equally distributed to allow citizens to participate?</i>

Source: Leclercq, E. M., & Rijshouwer, E. A. (2022, p.8)

The following tool could be used both to design a project management strategy and to assess it by checking if and to what extent a project is able to promote a participatory urban design process and concretely support the exercise of the right to the city in the urban context of the Smart City initiative. It is designed as a checklist to facilitate understanding and adaptability to local and project contexts, allowing for modification and improvement of the preliminary indicators proposed.

Table 3.2. Checklist on the human-centred approach's assessment in a Smart City project management strategy

Criteria for defining a human-centred approach in a smart city PM strategy	Definition	Preliminary indicators
<i>Public Value Management Generation</i>	Public value-based approach to PM in the definition of policy and public investments: ability to create public value for citizens by providing services that efficiently meet the needs of users and are oriented towards the development of well-being, including through the implementation of inclusive bottom-up processes of problems and needs definition.	- Preliminary phase of in-depth context analysis (definition of problems and needs) - Users satisfaction surveys - Users feedback response time

	It focuses on value creation rather than service delivery. It is based on: - performing efficiently; - being accountable; - being responsive to public needs; - gaining trust.²⁴⁴	- Number of public suggestions implemented in the smart city initiative - Accessibility audits conducted for public spaces - Number of accessible public facilities and services developed - Availability of information in multiple languages and formats - Resources' optimisation plan - Public dataset - Public reporting plan - Effective communication - Increased scrutiny from social media
<i>Administrative capacity (capacity-building)</i>	The extent to which an authorising environment (intended as the set of networks of different stakeholders who can collaborate or not for the purpose) enables innovation, the specific capabilities required for effective implementation (including infrastructure, resources and talent), and the recognition of the value and acceptance of these innovations by the community to which the smart city policy is addressed.²⁴⁵ This requires new capacities, agility, stability, cooperation, collaboration, and an innovative mindset. Developing these capacities requires time, effort, education, rethinking organisational structures, and investment in internal and external human resources.²⁴⁶	- Dedicated unit and effort - Internal consensus around the strategy adopted - Number of training programs for city staff in smart city technologies and practices and to adequately understand the specific local context - Percentage of staff with relevant smart city certifications - Time and budget allocated to continuous staff training - Mix of public and private resources²⁴⁷
<i>Multi-stakeholders participation and inter-sectoral collaboration in decision-making process</i>	Multi-stakeholders participation is a valuable option to deal with new critical and complex issues related to human smart city governance (such as privacy, freedom of expression, ethics, fairness, and data protection). The involvement of the affected and concerned parties could	- Quadruple Helix Model implemented in all the phases of the PM - Equal representation of all stakeholders

²⁴⁴ Cosgrave et al. (2014).

²⁴⁵ M. Andrews, L. Pritchett and M. Woolcock, *Building state capability: Evidence, analysis, action*, first edition, Oxford University Press, 2017.

²⁴⁶ McBride, K., Hammerschmid, G., & Cingolani, L. (2022). *Policy Brief: Human Centric Smart Cities - Redefining the smart city*. <https://doi.org/10.13140/RG.2.2.23464.44801>

²⁴⁷ Gasco-Hernandez, M., Nasi, G., Cucciniello, M., & Hiedemann, A. M. (2022). The role of organizational capacity to foster digital transformation in local governments: The case of three European smart cities. *Urban Governance*, 2(2), 236–246. <https://doi.org/10.1016/i.ugi.2022.09.005>

	support to get workable solutions that allow sustainable development for the city.²⁴⁸ Development of new innovation ecosystem inclusive of all stakeholders (government and public sector, civil society, academia and universities, industry, and business)²⁴⁹ to enhance effective, informed, and insightful dialogue that can be translated into action.	- Number of cross-departmental collaboration projects - Participation in regular inter-departmental meetings - Success stories of effective collaboration between departments
<i>Citizen participation</i>	Incorporation of participatory strategies into the local governance model to ensure the co-creation with citizens in the initiation, design, implementation, and evaluation phases, using participation system facilitation and information system facilitation.²⁵⁰ It also includes a specific focus on social inclusion: the ICTs should enhance the social inclusion of target disadvantaged groups that are traditionally excluded from their benefits, facilitate their participation and engagement, and increase their quality of life.²⁵¹	- Implementation of participatory mechanism/tools - Number of residents actively participating in smart city projects - Equal representation of all citizens' groups - A specific methodology to promote social inclusion is an integral part of the PM - Degree of citizens' decision-making power - Increase in the participation rate of disadvantaged groups - Presence of empowering intermediaries - Open-endedness and inclusivity - Digital education offer - Public engagement in co-creation workshops or events - Use of digital platforms for public participation - Number of public meetings and consultations held - Participation rates in engagement activities - Quality of feedback received from residents

²⁴⁸ M. Hemmati, *Multistakeholder Processes for Governance and Sustainability: Beyond Deadlock and Conflict*, Routledge, 2002

²⁴⁹ *Ibidem*.

²⁵⁰ E. M. Leclercq, E. A. Rijshouwer, *Enabling citizens' right to the smart city through the co-creation of digital platforms*, in *Urban Transformations Journal*, 2022.

²⁵¹ European Commission, Joint Research Centre, *ICT-enabled social innovation: Evidence & prospective*, Publications Office, 2017. <https://data.europa.eu/doi/10.2760/494727>

<i>Supportive of innovation and entrepreneurial attractiveness</i>	Capacity to improve public services aimed at making the city more attractive for investing and developing entrepreneurial initiatives to drive innovation.	- Number of start-ups supported or incubated in the city - Patents filed for innovations originating from the city - Investment capital attracted to local start-ups and innovation hubs - Growth in the number of companies providing innovative systems to support smart city
<i>Data governance strategy (project context, data identification, data collection, data sharing and management, and data use and legacy)²⁵²</i>	Data governed from a human-centred perspective, respecting human-centred values and the rights of individuals by implementing strategies that take into account citizens' control and ownership of their data, such as data trusts / policies oriented towards citizen data ownership / data sovereignty / data privacy policies that democratise data governance and redistribute the value created by data. ²⁵³	- Compliance with data protection regulations - Public trust and perception of data security - Data security incidents reported - Data privacy incidents reported - Data sharing agreements with external organizations - Percentage of data sets available to the public - Percentage of local development policies and actions designed on the basis of the collected data
<i>Asset management</i>	Implementation of a strategy to monitor the knowledge production to assess the city's performance and to develop the basis for the enhancement of current interventions and the development of future ones. ²⁵⁴	- A knowledge management and capitalisation system is in place - Production of public materials for the dissemination and sharing of the knowledge generated
<i>Sustainability of human, financial, economic, and technological resources' sustainability²⁵⁵</i>	Sustainability plan to allocate available resources and measure their efficiency and effectiveness. It also promotes the long-term sustainability of available resources, the ability to attract new	A resources planning management system is in place to guarantee resources' optimisation.

²⁵² K. Paskaleva, J. Evans, C. Martin, T. Linjordet, D. Yang, A. Karvonen, *Data Governance in the Sustainable Smart City*, Informatics, 4(4), 41, 2017. <https://doi.org/10.3390/informatics4040041>

²⁵³ M. Micheli, M. Ponti, M. Craglia, A. Berti Suman, *Emerging models of data governance in the age of datafication*, Big Data & Society, 7(2), 2020. <https://doi.org/10.1177/2053951720948087>

²⁵⁴ W. Castelnovo, G. Misuraca, A. Savoldelli, *Smart Cities Governance: The Need for a Holistic Approach to Assessing Urban Participatory Policy Making*, Social Science Computer Review, 34(6), 724–739, 2016. <https://doi.org/10.1177/0894439315611103>

²⁵⁵ *Ivi.*, p.10.

	investment and manage change, and the capability to generate social innovations in a self-sustainable way.	
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Source: Elaboration of the author

The proposed checklist for assessing the human-centred approach in the project management of a smart city initiative includes the following criteria, namely:

1. “Public value generation”. It aims to assess if the project is able to respond to citizens’ needs by creating social value, rather than only to deliver services by addressing social objectives such as economic growth, employment, social inclusion, and well-being. This means that the PM structure should be able to guarantee long-term impacts of the actions implemented. Key variables that could be monitored to this end should focus on measuring an efficient performance, accountability, responsiveness and citizens’ satisfaction and trust through inclusive bottom-up processes;
2. “Administrative capacity (capacity building)”. It aims to assess the required adaptable capabilities of the local governance administrative bodies (intended as the actors involved in facilitating the implementation of the smart city initiative), to enable innovation and, at the same time, being able to evolve in accordance with changing needs and technologies to remain responsive to the community. Key variables to monitor this dimension should measure the effort and investment made in acquiring the set of capabilities needed to build an innovative mindset.
3. “Multi-stakeholders’ participation and intersectoral collaboration in decision-making process”. It aims to evaluate the innovation ecosystem and the interactions among all stakeholders within the quadruple helix, with the objective of translating the unique expertise of each actor into collaborative actions. Key variables that need to be monitored are related to the representation of all the actors of the QH in the decision-making process and cross-sectors actions and partnerships.
4. “Citizens’ participation”. It aims to assess the involvement and engagement of citizens into participatory co-creation strategy within all the phases of the smart city initiative. Through this dimension, a specific focus is also put on social inclusion, intended as the potential role of ICTs to enhance the social inclusion of disadvantaged groups within the framework of local governance. Key variables that should be monitored are related to bottom-up

actions, the equal representation of all social groups, citizens' decision-making power and the involvement and engagement of usually disadvantaged social groups.

5. "Supportive of innovation and entrepreneurial attractiveness". It aims to assess the capacity of the smart city initiative to attract new investment in other innovative solutions and entrepreneurial initiatives to drive innovation beyond the framework of the project. Key variables to monitor this dimension are related to investments, actions and projects linked to the development of new innovative solutions and entrepreneurship in the smart city sector and relates sectors.
6. "Data governance strategy. This includes data identification, data collection, data sharing and management, and data use and legacy in the context of the project. The aim is to assess the effectiveness of the policy in terms of citizens' ownership of their data and privacy, citizens' data sovereignty and the democratic redistribution of the value created by data. Key variables to be monitored are related to security and legality aspects in the use of citizens' data, and local policies and actions developed from data governance.
7. "Asset management". It aims to assess knowledge production in the context of a smart city in order to support the development of a foresight strategy to provide the basis for future innovative actions. Key variables that should be monitored are related to knowledge management and capitalization system and the production of scientific and dissemination materials.
8. "Sustainability of human, financial, economic, and technological resources". It aims at assessing the efficiency of resources management with a long-term approach. Key variables to be monitored are related to cost efficiency of the services provided and the planning and optimization of the use of resources.

The comparative analysis of the two projects cannot ignore the most important feature of the context of the smart city within they are developed: the data. It is interesting to ask how citizens' data are collected, analysed and used for the purposes of the technological solutions to be implemented and the social impact to be achieved in the local context, and what, if any, data governance strategy is developed around their management.

From a human-centred perspective, a data management strategy within a local governance model should consider the citizens as the main reference user, the primary

beneficiary of the results, tangible and intangible, obtained through data analysis. In doing so, should be put particular attention on the respect of human-centred values and the rights of individuals by implementing strategies that consider citizens' control and ownership of their data, that democratise data governance and redistribute the value created by data.²⁵⁶

In accordance with this approach, the interview with IMAS, as part of the SME4SMARTCITIES project, raised a key issue regarding the use of data by government authorities for local development purposes. The digitisation of the application process to request the parking card for disabled people went hand in hand with the digitisation of population data. This was done to develop an automated system that monitors and verifies the accuracy of the information provided by citizens, ensuring that parking cards are issued only to those who meet the specific requirements. In this way, the citizens are aware that the data they provide will be used to ensure the efficiency of the procedure and the correct provision of a public service, but this is part of a process at the request of citizens. Once the whole system is digitised and automated, the next step should be to be able to use citizen data proactively.

This means using available data not only for statistical purposes or to provide services on demand, but to adapt policies and government actions according to the available data and to provide services to citizens automatically, without having to ask for them, and anticipating a social need. Such approach can be called 'proactive data-driven service delivery' and could be the human-centred expression of using citizen data in smart cities. Strong collaboration between different departments within the local authority is needed to facilitate the identification process of potential services delivery that may involve different sectors and to develop effective proactive measures, according to the data available.

The visit to the CEUS, as part of the MiMurcia project analysis, raised another key issue regarding data governance for local development purposes. The development of technological systems for data collection, such as urban sensors, video surveillance systems, etc., should be closely aligned with data analysis strategies to find effective correspondences

²⁵⁶ M. Micheli, M. Ponti, M. Craglia, A. Berti Suman, *Emerging models of data governance in the age of datafication*, Big Data & Society, 7(2), 2020. <https://doi.org/10.1177/2053951720948087>

with the work of internal local government departments. This alignment should ensure that only the necessary data is collected and properly analysed, avoiding the accumulation of excessive data, and missed opportunities to use valuable insights to design local development policies and actions. This holistic approach puts a specific focus on smart city governance. It could help to overcome the misconception that smart cities are ICT-enabled cities and give way to the overlooked role of ICT-enabled city governance, which involves using information and communication technologies to streamline and enhance government administrative processes, improve public service interactions between governments, citizens and other stakeholders, promote citizen engagement, and ensure inclusiveness and equal opportunities for all.²⁵⁷

Therefore, ICT-enabled city governance can be seen as an integrated framework in which human factors are also central to the operation and performance of smart cities.²⁵⁸ ICT technologies, together with the social infrastructure, such intellectual and social capital and social innovation²⁵⁹, are the drivers for ensuring active and engaged communities with smart city initiatives, alongside the development of pure urban competitiveness.²⁶⁰

Regarding citizens participation, the projects analysed show how these criteria can take different forms in a smart city context, with a more or less direct degree of active involvement in the design and implementation phases of a project, depending on the type of technology being developed and its ultimate purpose, and the way in which citizens' data will be used.

In the case of the MiMurcia project, citizens are involved by providing an online consultation system that allows them to send feedback and complaints. Additionally, the

²⁵⁷ G. Misuraca, *Theoretical framework and key principles towards the development of a policy assessment framework for ICT-enabled governance at city level*, Seville: European Commission JRC-IPTS, 2010.

²⁵⁸ H. Chourabi, T. Nam, S. Walker, J.R. Gil-Garcia, S. Mellouli, K. Nahon, J.R. Scholl, *Understanding smart cities: An integrative framework*, Paper presented at the 45th Hawaii International Conference on System Sciences, Maui, HI (pp. 2289–2297), 2012.

²⁵⁹ V. Albino, U. Berardi, R.M. Dangelico, *Smart cities: Definitions, dimensions, performance, and initiatives*, *Journal of Urban Technology*, 22, 3–21, 2015.

²⁶⁰ T. Nam, T.A. Pardo, *Conceptualizing smart city with dimensions of technology, people, and institutions*, In *Proceedings of the 12th Annual International Conference on Digital Government Research*, College Park, MD, pp. 282–291. New York, USA: ACM Press, 2011b, June 12–15.

municipality allows users to customize their navigation within municipal digital services based on their individual profiles. This approach is seen as a way to actively engage citizens in enhancing the quality of life in the community and facilitate communication between municipal bodies and citizens and between citizens.

In the case of the SME4SMARTCITIES project, the involvement of civil society in the project took place through IMAS as an intermediary organisation that linked the needs of citizens with the SMEs in charge of developing the smart solutions and other stakeholders.²⁶¹ The feedback of some users was used to develop and refine the smart city solution. Therefore, the citizens did not directly contribute to the definition of the final purpose of the technological solution, since, as we have seen, priority was given to the continuation and sustainability of project and governance actions already underway and implemented by a previous and complementary project. However, in this case, the involvement of citizens was proved to be crucial. In particular citizens with disabilities, in the testing phase of the tool developed by SMEs, as direct users.

In both cases, citizens are therefore entrusted with a mainly consultative role in two distinct phases: 1. the identification of the most urgent needs to which the smart city initiative can respond (either through direct consultation or through the analysis of primary and secondary data already available to the public authorities), 2. the monitoring of the quality of the services provided and their development based on user feedback.

Starting from this analysis, it is interesting to introduce the concept of the Public-Private-People-Partnership (4P) approach, which represent an emerging solution to co-create, explore, experiment and validate innovative solutions involving stakeholders from different disciplines.²⁶² In particular, the 4P approach seeks to overcome some of the

²⁶¹ M. Roman, and F. Katharina, *Facilitating the Participation of Civil Society in Regional Planning: Implementing Quadruple Helix Model in Finnish Regions*, in *Land Use Policy* 112: 105864, 2002.
doi:[10.1016/j.landusepol.2021.105864](https://doi.org/10.1016/j.landusepol.2021.105864).

²⁶² L. Perjo, *Public-Private-People Partnerships – a New Concept to Bring Public and Private Actors and Citizens Together*, in *Nordregio News* 4, People and Cities, 2016
<https://nordregio.org/nordregio-magazine/issues/people-and-cities/public-private-people-partnerships-a-new-concept-to-bring-public-and-private-actors-and-citizens-together/>.

challenges of the public-private partnership related to the limits of transparency and the possibility of public input in a formalised negotiations process where private interest may prevail over local communities' needs and interests. Indeed, it is recognised that binding agreements between public and private entities typically establish development principles at the outset of a project, while public participation processes often take place at a later stage with a top-down approach.

Conversely, the 4P approach involves the local communities ("people") in partnerships alongside public and private actors, with the aim of addressing issues of exclusion and transparency. There is no single, unambiguous definition of this model and for this it can be adapted to different contexts and projects. The 4P approach seems interesting from a human-centred perspective, as it places citizens at the centre of an integral decision-making and project management process, creating a network of interdependent relationships.

Since smart city solutions aim to improve the quality of life of citizens, the right to a smart city makes these solutions the common property of the people who use them or to whom they are directed. This is where the 4P approach comes in, to underline the importance of citizens by directly involving citizens' associations or other representative bodies in the design, testing and monitoring phases of innovative solutions.

As the projects analysed showed, the effectiveness of an innovative solution goes hand in hand with the involvement and participation of the citizens for whom the innovative solution is designed or on whom it will have an impact. The 4P approach also underlines how this can foster a collaborative arrangement that could motivate all stakeholders to work together towards common goals with shared responsibility throughout the project.

Chapter 4: Decentralised development cooperation to empower local governance: cases 3 and 4

The Sustainable Development Goals (SDGs), adopted by the United Nations in 2015, highlight and promote the importance of decentralised development cooperation (DDC) as a strategic approach to localise the 2030 Development Agenda. By supporting the exchange of knowledge and good practices, not only countries, but also local entities in charge of supporting the implementation of the SDGs can benefit from DDC to strengthen their local governance strategies while, at the same time, being active promoters of a sustainable change.

The European Union acknowledges the essential role of local and regional governments (LRGs) in development cooperation and achieving global commitments, highlighting their significance in implementing the SDGs, as underscored in the European Consensus on Development²⁶³, adopted in May 2017 as part of its response to the UN 2030 Agenda for Sustainable Development, and the EC Communication "A sustainable European future"²⁶⁴. To this end, the European Union is committed in promoting reforms to empower these authorities, thereby reinforcing the collaboration with local and sub-national authorities, particularly through decentralized cooperation initiatives.

As stated by the OECD, the DDC plays a crucial role in localizing the Sustainable Development Goals (SDGs) in both OECD and partner countries. The DDC's focus on SDGs guides its geographical priorities, with its principle of reciprocity facilitating global

²⁶³ European Commission, *The new European consensus on development 'Our world, our dignity, our future', Joint statement by the Council and the representatives of the governments of the member states meeting within the Council, the European Parliament and the European Commission*, 2017.

https://international-partnerships.ec.europa.eu/document/download/6134a7a4-3fcf-46c2-b43a-664459e08f51_en?filename=european-consensus-on-development-final-20170626_en.pdf

²⁶⁴ European Commission, *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Next steps for a sustainable European future. European action for sustainability*, 2016.

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2016%3A739%3AFIN>

collaboration among LRGs to tackle SDG challenges. Through the territorial partnership model, DDC manages SDG complexities effectively, ensuring coherence across government levels.

OECD regions and cities participate in DDC to both support and learn from their counterparts in partner countries. This collaboration involves the exchange of best practices, capacity-building, knowledge sharing, and institutional strengthening, particularly in developing indicators and monitoring systems. Over the past decade, DDC has broadened its sectoral focus, aligning itself with global challenges while addressing specific local needs and priorities.²⁶⁵

4.1 Methodology

This chapter aims to analyse the added value and positive impact of DDC projects on local governance. Given that there is limited evidence of DDC's effective impact on institutions and stakeholders in both promoting and partner countries from a national perspective, the project-level evaluation proposed here aims to assess the impact from a local level in order to facilitate the identification of successes, failures, areas for improvement, and necessary adjustments from a project management perspective.

The case studies analysed in this chapter are the following:

- Case-study 3

REBUILD: Research and Education Building Urban Institutions for Local Development

- Case-study 4

MUDAR: Mozambique Integrated Urban Development by Actions and Relationships

²⁶⁵ OECD, *Reshaping Decentralised Development Co-operation: The Key Role of Cities and Regions for the 2030 Agenda*, OECD Publishing, Paris, 2018. <http://dx.doi.org/10.1787/9789264302914-en>

In the cases 3 and 4 the author was directly involved in the external evaluation of both projects collaborating with the agency in charge of it, Disamis srl. Some results of the external evaluations have been interpreted in the light of the purposes of this research without changing their specific contribution.

The REBUILD and MUDAR projects, specifically, offered an interesting perspective on governance decentralisation, local authorities' capacity and the role of international cooperation.

This analysis includes a qualitative assessment of "return on investment", understood as the profit that local governance actors achieve from implementing projects within the framework of the DCC, encompass social, cultural, and political advantages, along with economic benefits. Specifically, the analysis of these two case studies intends to consider the improvement of local governance in terms of quality and coverage of service delivery and capacity building evolution. Moreover, from this analysis will be also interesting to evaluate how the Twin Transition may affect local development in different local contexts, and what are the main obstacles and challenges that may arise and that cannot be addressed by standardised solution strategies.

The methodology foreseen relies on a set of quantitative, qualitative and mixed methods of collection and analysis. A desk review of the literature was used to understand in depth the local context of reference of the project within the national framework and its evolution in recent years. This phase allows for a critical reflection of the project in question, taking into account crucial social, economic and political aspects that may directly or indirectly affect its implementation. In addition to secondary data, primary data were collected through the following techniques: questionnaires and semi-structured online interviews to municipalities' project managers; unstructured online individual and group interviews with members of the Project Management Unit (hereafter 'PMU'); direct observations; online meetings and e-mail exchanges.

Starting from projects' theory of change, a Contribution Analysis was used to empirically assess if and how the projects have contributed to actual outcomes.

The analysis may leave out potentially important elements obtainable from additional interviews to other key stakeholders and field observations and, in general, from a more

triangulated research design. Despite such limitations, the rigour of the analysis and interpretation of the available data is highlighted.

4.2 Case Study 3: REBUILD project

Since the end of Gaddafi regime, Libya has undergone a complex transformation of local governance structures and bodies in order to create a political and institutional framework capable of responding to all the national and local issues facing the country.

In 2012, the National Transitional Council (NTC) promulgated Law 59 to provide Libya with a more structured system of local governance by initiating a process of decentralization of political power and a process of internal democratic transformation in order to gain international confidence.

Today Libya is an Observer country in the Union for Mediterranean (UfM), an inter-governmental organization that promotes cooperation and dialogue in the Euro-Mediterranean region²⁶⁶, and since 2016 the European Committee of the Regions (CoR) aims to help Libyan cities join the international community and it has been mobilizing partnerships and expertise from the UfM's partners to support Libya's local authorities in providing an effective local management of resources and services. This international cooperation platform, known as the *Nicosia Initiative (NI)*, has activated many synergies and different actions related to capacity building and local governance have been implemented by the EU Public Administration Facility, the Flemish Government, ULGC Africa, the Federation of Moroccan Municipalities and other implementing partners, catalyzing support to Libya in areas identified as critical by Libyan local administrations.

In 2021, the Libyan Minister of Local Governance (MoLG) adopted the Resolution No.1500 which provides for a unified organizational structure of Municipalities to strengthen decentralized governance and thus implement a system of coordination between the Municipalities, the civil society, and the central government. In this framework, the NI has

²⁶⁶ The Union for the Mediterranean brings together the 28 member states of the EU and 15 Mediterranean states. Libya is not a member of the Union for the Mediterranean.

started a new phase with a shift from incremental to more structural support for local authorities and civil servants to foster social economic and institutional development through city and peer-to-peer diplomacy approaches.

Also, the United Nations Development Programme (UNDP) in Libya²⁶⁷ has been supporting national and local institutions towards resilience and peacebuilding across Libya and adopted a new strategic programme for 2023 to 2025²⁶⁸ in line with Libya's new national priorities and complementing other investments. The UNDP in Libya intends to strengthen its support to the Ministry of Local Government in the implementation and management of the decentralization process, contributing to the strengthening of local governance capacities of Municipalities, and the development of a system of democratic participation of citizens at the local level, with a special focus on youth and women.

REBUILD project builds on the experience gained through the NI, where all the partners of the project have been involved, and it aims to provide Libya with a competent decentralized governance structure, in synergy with the Local Administration Law No. 59 of 2012, capable of taking on the roles, responsibilities and challenges that Municipalities should be addressing at the local level, and to ensure the implementation of a strategic governance vision and the development of a strong local apparatus for the delivery of public services.

Indeed, local institutions are quite recent, and they do not have enough experience, they are characterized by historical lack of political culture and managerial skills in a framework that is still struggling to acquire an efficient and strategic planning local governance's model. Moreover, the Law No. 59 seems to be only partially implemented, within a legislative framework which is seen still fragile and unstable. The delay in applying local governance reforms appears to have caused organizational and regulatory issues, affected both the internal structure and functioning of municipalities. This has also weakened their ability to coordinate with other local and national institutions, such as ministries.

²⁶⁷ The UNDP is the United Nations global development network advocating for sustainable development and inclusive economic growth, and it started to work in Libya in 1976.

²⁶⁸ Executive Board of the UNDP, the United Nations Population Fund and the United Nations Office for Project Services, *Country programme document for Libya (2023-2025)*, 2022.

Available at: <https://www.undp.org/libya/publications/undp-libya-country-programme-document-2023-2025>

Nevertheless, key problems facing Libyan Municipalities at local and national level (regarding representativeness and accountability, transparency, human rights, migration pressure, economic depression, gender equality, corruption, youth unemployment, political vision, exploitation of the environment) can be managed by solid political bodies capable of managing complexity with efficient expertise and a democratic system of governance.

The project contributes to the improvement of the capacity of the 10 partner municipalities to design, implement and evaluate local public policies. The partners (co-applicants) are ten Libyan Municipalities (Azzawiya, Benghazi, Beni Walid, Gharyan, Sabha, Sirte, Tobruk, Tripoli Centre, Zintan, and Zliten), two European local authorities (the Autonomous Province of Trento (coordinator) and the Autonomous Region Friuli Venezia Giulia) and an affiliated body, the International Cooperation Centre.

Unlike other actions carried out on the initiative of international actors, which were developed with external design and management, in the REBUILD project, for the first time, Libyan Municipalities are fully-fledged partners (co-applicants) in an EU-funded project, not only as beneficiaries of the project. This means that they have a responsibility not only in the implementation of the project activities, but also in the quality of the project as a whole. Therefore, their interest towards a sustainable long-term impact of the participatory process embedded in the strategy is to be considered a key assumption of REBUILD. Overall, the project intends to activate “an endogenous, sustainable, decentralized, continuing learning system through the permanent exchange between Universities and Municipalities and among Municipalities from different areas of the country and from abroad for a knowledge transfer cooperation and cross-fertilization process able to sustain the development of local authorities’ capacity and expertise”.²⁶⁹

The project intends to: support the decentralization process in Libya and to improve the living conditions of the people in Libya; contribute to the development of qualitative local public services in Libya; strengthen the capacities of Libyan municipalities to design, implement and assess equitable, sustainable, inclusive and resilient local public policies;

²⁶⁹ Source: project’s document ‘*Annex I_Description of the action*’.

improve the capacities of Libyan municipalities to: design, implement and assess equitable, sustainable, inclusive and resilient local public policies; become a representative and accountable political and administrative reference for the people of their territories; set and test a sustainable learning framework on local development and local governance.

The action is built around three main pillars, based on a flexible and adaptable structure aimed at allowing the challenges and risks that may arise during the implementation phase to be managed: 1. implementation of an adaptive and sustainable training curriculum tailored to the need of Libyan Municipalities; 2. establishment of a community of practices based on an exchange program among Libyan and with foreign local authorities; 3. experimentation of pilot projects in the fishery and waste management sectors. With a total budget of €4.47 million, the project foresees the following Work Packages:

WP1. Project governance, networking, curriculum validation and sustainability;

WP2. Curriculum delivered to 10 Libyan Municipalities: Training of Trainers (TOT) and courses to municipalities;

WP3. Building a “Community of practices” on territorial sustainable development;

WP4. Pilot Projects Implementation.

Employees, managers, directors, and political representatives (mayors, members of the Municipal Councils) of 10 pilot Libyan municipalities are the main target group of the project, together with lecturers and academic officers from involved Libyan universities. Final beneficiaries of the project are the inhabitants of the 10 municipalities involved. For this research, it is interesting to examine how the capacity building of local authorities has been supported by providing specific training in collaboration with another helix of the QH, the universities, and what is the potential of a community of practice in promoting local development.

In order to explore the implementation process of the project, the document review was complemented by a qualitative analysis of the interview notes of the municipal project managers. In interpreting the findings, the primary perspective considered is that of the municipalities, which provides a valuable but limited view essential for understanding how REBUILD was perceived as a capacity-building opportunity. This approach is considered in order to understand whether and to what extent the project has contributed to strengthening

local governance, and then to provide a solid basis for an effective local development strategy.

To achieve this, the factors influencing the effectiveness of the project were grouped into three categories: the municipal context, the preparation and organisation of training for municipalities, and the delivery and management of this training. Each category contributes to a broader reflection on general aspects that can be considered to analyse the role of this kind of partnerships for sustainable cities in fostering the capacity building of local government's institutions and then in reinforcing local governance.

Regarding the municipal context, many new employees have been recently hired by municipalities with the institutional reform of local governance, and lots of them are lacking competencies and expertise, due to their young age or different background. The relocation of some offices and the parallel transfer of employees from the national level to the municipalities appears to have very negative influences, such as a lack of specialized skills and a general lack of qualified human resources in many areas (including the financial one), which has somehow worsened with the recruitment of new and less experienced employees; for these reasons, municipalities have a continuous need for training courses in order to qualify all municipal staff, including second-line managers.

For many municipalities, this situation results in having numerous low responsibility level employees, who needs to learn from their supervisors before being autonomous, and few intermediate level employees and first line managers, who must do both basic tasks and advanced ones.

In some cases, a good handover from more experienced employees has taken place (either through learning by doing and through more structured tutoring and internal training activities); however, in general, the re-organization of municipal duties transferred by ministries (sanitation, transportation, construction, etc.) is still fragmented: internal procedures, such as those regarding staffing as well as technical and financial reporting, are not always executed and in some cases they are not in place at all.

Additionally, in some cases procedures to regularize the status of employees were not completed, and salaries, bonuses and incentives did not arrive regularly, undermining the attitude of employees.

In this context, it is difficult for newcomers to adapt or learn, thus resulting in a scarce (or suboptimal) productivity of the whole organization. For all these reasons, the municipalities, had very high expectations regarding the training of their staff members through REBUILD.

The peculiarity of this project is that the municipal staff trainers, with their academic background, were previously trained to be able to transfer their knowledge and competencies to local officials in the most relevant areas of local government, following a “training for trainers” approach.

It is interesting to note that some project managers were involved in the designing of the training cycles and even in the selection of university trainers, as trainers, teachers, or human resources experts themselves. In this way, not only was their expertise valorised, but by taking their perspective into account, it was possible to adapt the structure and content of the training to the specific characteristics of the municipality.

The availability and motivation with selected participants from municipalities to participate in the training were evaluated to the end of guaranteeing professional commitment, also including the possibility to acquire an international training certificate. Despite this incentive and the provision of training during working hours, not all the participants attended the courses diligently and some employees asked for a reimbursement for training because the time spent in training usually meant extra workload to catch up once back at the desk. Moreover, some participants found difficult to attend the sessions in periods of heavy workload and this is particularly true for people with higher responsibilities, especially for second line managers, who rarely can count on the presence of first line managers for delegating tasks.

The presence of both unexperienced new employees and “old” experienced ones is considered strategical for leveraging the dialogic mechanism of the training, but it seems difficult to delegate the work of the experienced ones during the training sessions. This opens up an interesting reflection on the commitment required for a process of internal capacity building. The logistical organisation, the content and the professionalism of the trainers are certainly crucial aspects to ensure the success and effectiveness of training courses for public officials, but special attention should be paid to the users of the courses. Guaranteeing certain incentives for participation can be a useful tool, as can recognising the additional effort

required as part of a relationship of trust and growth between the institution, on the one hand, and the staff on the other.

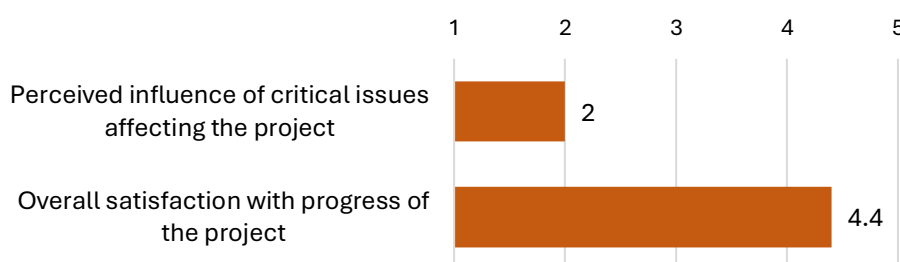
From the university's perspective, the trainers involved are experts, highly skilled both theoretically and technically in their fields. However, this expertise often felled short in non-academic settings, where it's more beneficial and desirable to nurture the existing skills of adult learners in an engaging and practical manner rather than merely delivering new concepts and methodologies in a traditional, lecture-style format. Additionally, the training materials, such as the training kit with slides, guides, and auxiliary resources like checklists and tests, sometimes failed to meet the needs of professional adult education, giving the impression of a university course rather than a capacity-building workshop.

This evidence underlines that the quality and effectiveness of a capacity building training project depend both on the trainers and on the municipality context to be truly effective on local governance in the long-term. The presence of the academic partners enriched the quality of the training, and it reinforced the relationships between local authorities and universities. This result can be considered as a kind of return on investment, as these synergies could be the basis for future collaborative actions for mutual beneficial interests, reinforcing the role of the QH at the local level.²⁷⁰

The influence of internal and external factors was assessed through the questionnaire administered to municipalities project managers. In general, responses indicated a low *perceived influence of critical issues on project advancement* (2 out of 5), with a high overall satisfaction (4,4 out of 5) with project progress (fig. 5). Only 4 municipalities perceived an intermediate influence (3 out of 5), but even in such cases, their judgement on the progress of the project was very positive (4 out of 5).

Figure 4.1. Average municipal project managers' judgement on the influence of critical issues and on their overall satisfaction with the progress of the project (N=10)

²⁷⁰ C. Rinaldi, A. Cavicchi, F. Spigarelli, L. Lacchè, & A. Rubens, *Universities and smart specialisation strategy*, International Journal of Sustainability in Higher Education, 19(3), 2018.



In addition to the perception of project managers, the actual *schedule performance* was assessed to see whether it negatively reflected contextual factors. As shown in table 1, at the overall level, the schedule variance and the Schedule Performance Index indicate a moderate delay: the schedule variance (i.e. the difference between earned value and planned value²⁷¹) indicates that, as at December 2023, the project has completed 16% less of what it should, while the Schedule Performance Index (the ratio between the values) indicates that 70% of the planned progress has been achieved.

Table 4.1. Percentage values of Earned Value Analysis measures by key project component

Project component / key output	Planned Value at 12/2023	Earned Value at 12/2023	Schedule Variance	Schedule Performance Index
Design of the contents of the training curriculum for Libyan municipalities	70%	60%	-10%	86%
Implementation of the training of university trainers based on the training curriculum	70%	70%	0%	100%
Design of specific arrangements and plans for the training of municipal staff	90%	70%	-20%	78%
Implementation of the training for municipal staff	60%	45%	-15%	75%
Design of exchanges / visits for the creation of a community of practices for local development	85%	60%	-25%	71%
Implementation of exchanges / visits for the creation of a community of practices	75%	50%	-25%	67%
Design of a pilot project in the environmental protection and water quality sectors	35%	10%	-25%	29%

²⁷¹ In project management, 'Earned Value' is a synonym for 'planned units of work actually accomplished to date' while 'Planned Value' is a synonym for 'planned units of work that should be accomplished to date'.

Implementation of a pilot project in the environmental protection and water quality sectors	25%	10%	-15%	40%
Design of a pilot project in the fishery sector	50%	40%	-10%	80%
Implementation of a pilot project in the fishery sector	50%	40%	-10%	80%
<i>Project average</i>	61%	46%	-16%	70%

Among the project components, pilot projects are those more behind schedule. The pilot project in the environmental protection and water quality sectors had a remarkably low SPI both at the design and implementation level (respectively equal to 29% and 40%); in this case, the level of advancement was calculated taking into consideration the fact that the initial sector (waste management) was changed afterwards for strategic and feasibility reasons (this is why the planned values are lower, thus turning out in a relatively positive SPI value). Regarding the pilot project in the fishery sector, the delay was due to the postponement of the field missions (because of the limited mobility in the country and of the aftermaths of the flooding occurred in September 2023) and to the lack of updated administrative sectorial data. On the training and community of practice side, the implementation of visits / exchanges and of training of municipalities are the components with higher schedule variance: financial and logistical problems (also deriving from the block of international bank transfers happened in 2022) had determined the postponement of the second summer school and the delay of training courses to municipal staff.

Given the political, financial, and logistical difficulties faced by partners during implementation, the moderate delays observed suggest that the project responded well to the factors affecting its efficiency, demonstrating a good level of resilience and adaptability, which was also confirmed by the perceptions of the municipal project managers and their positive assessment on the project progress. Unforeseen circumstances that have caused setbacks and slowdowns were managed and did not have a significant impact on the overall scope of the project, nor did they cause any scope creep or negative attitude towards the project. Indeed, the change of focus of the pilot project on environmental protection and water quality demonstrates a proactive approach to mitigating the influence of emerging challenges.

Also, the quality of key project outputs and the relative non-financial costs (e.g. such as time, effort, or other intangible costs, like opportunity costs) was assessed through the questionnaire for project managers. Respondents were asked to assign a rating between 1 (very low quality / very low non-financial costs) and 5 (very high quality / very high non-financial costs) to 10 elements, namely the design and the implementation of the training curriculum for Libyan municipalities, the design and the implementation the training of municipal staff, the design and the implementation of exchanges / visits for the creation of a community of practices for local development as well as the design and the implementation of a pilot project in the environmental protection and water quality sectors and in the fishery sector.

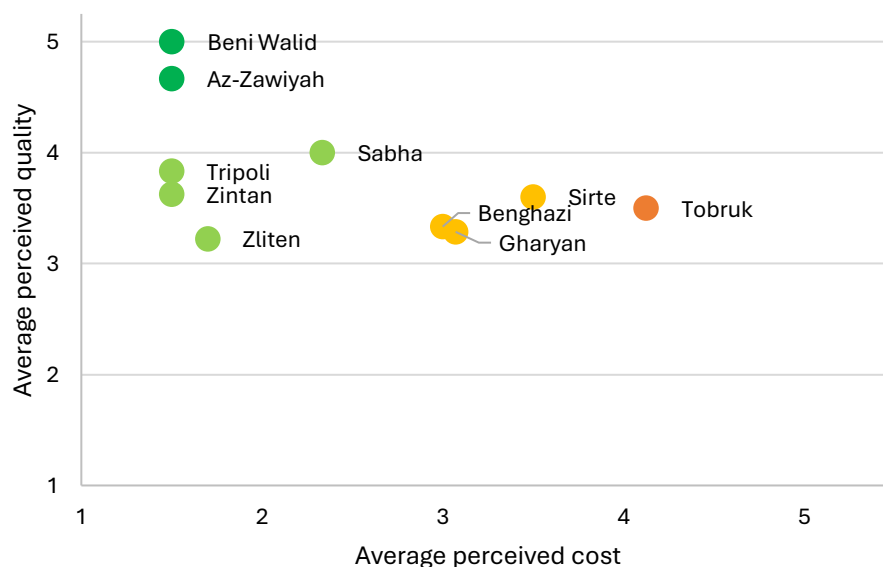
As can be seen in table 2, the level of non-financial costs perceived is middle-low, with an average value of 1,9, while the level of quality perceived is middle-high, with an average value of 3,8. The value variance gives an indication of the net perceived value of a project component or key project output: a positive value variance suggests that the perceived quality exceeds the perceived non-financial costs.

Table 4.2. Average municipal project managers' judgements on the project in terms of non-financial costs and quality and relative perceived cost-effectiveness measures by municipality (N=10)

Municipality	Perceived non-financial costs on average (AC)	Perceived quality on average (EQ)	Value Variance (EQ-AC)	Value for Cost Index (EQ/AC)
<i>Az-Zawiyah</i>	1,0	4,7	3,7	4,7
<i>Benghazi</i>	2,5	3,3	0,8	1,3
<i>Beni Walid</i>	1,0	5,0	4,0	5,0
<i>Gharyan</i>	2,6	3,3	0,7	1,3
<i>Sabha</i>	1,8	4,0	2,2	2,2
<i>Sirte</i>	3,0	3,6	0,6	1,2
<i>Tobruk</i>	3,6	3,5	-0,1	1,0
<i>Tripoli</i>	1,0	3,8	2,8	3,8
<i>Zintan</i>	1,0	3,6	2,6	3,6
<i>Zliten</i>	1,2	3,2	2,0	2,7
Project average	1,9	3,8	1,9	2,7

In this case, the average value variance (1,9) suggests a good cost-effectiveness, which is indeed confirmed by the Value for Cost Index (a measure which is analogous to the concept of value for money), equal to 2,7 out of 5. Nevertheless, there are some differences between cities, which are detectable looking at figure 2. The diagram illustrates three groups of municipalities: a first group is formed by Beni Walid and Az-Zawiyah and is characterized a very high perceived quality and a low perceived cost; a second group is formed by Sabha, Tripoli, Zintan and Zliten and is characterized by a moderately high perceived quality and a low / moderately low perceived cost; a third group is formed by Benghazi, Gharyan, Sirte and Tobruk and is characterized by an intermediate / moderately high perceived quality and an intermediate / moderately high perceived cost. The municipality of Tobruk, in particular, is the only partner with a negative average value variance (-0,13), which indicates that the perceived non-financial costs occurred within the municipality slightly outweigh the perceived quality of the project, suggesting the perception of a relatively worse cost-effectiveness.

Figure 4.2. Joint representation of the average municipal project managers' judgements on project quality and cost by municipality (N=10)



At the overall level, the performance measures calculated through the Earned Value Analysis pass the 100% threshold in two cases out of three (fig. 2). Apart from the value of the Schedule Performance Index discussed above, the Value for Cost Index as well as the Cost Performance Index (i.e. the ratio between the earned value and the perceived non-financial cost) are very higher than 100, respectively indicating a positive situation in terms of *cost-effectiveness* and *cost-efficiency*.

Figure 4.3. Project overall Earned Value Analysis average measures

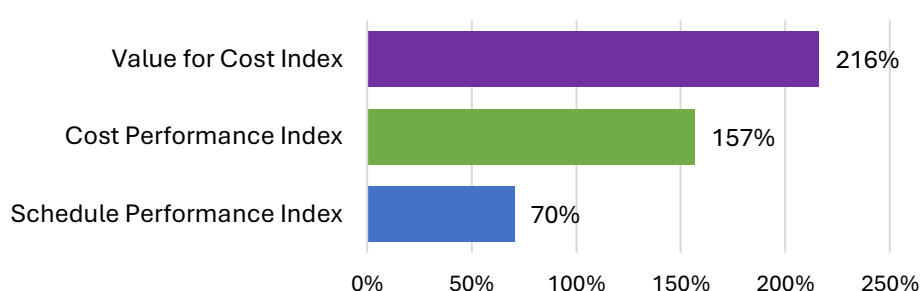
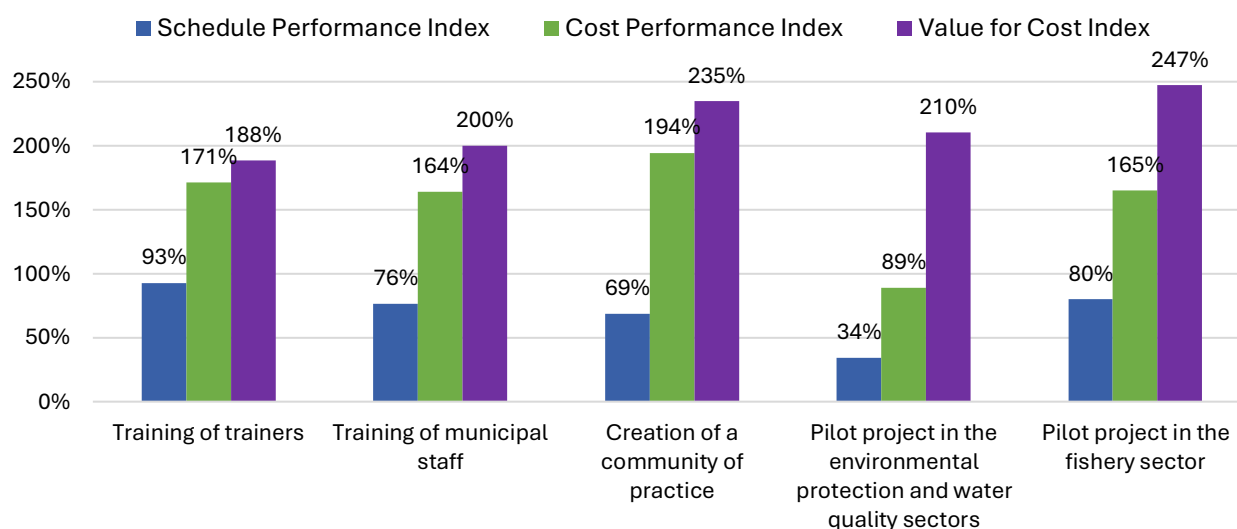


Figure 3 illustrates such measures for each macro-component of the project, showing a relatively high value for cost also in relation to the pilot project in the environmental protection and water quality sectors. However, it should be noted that such high value is partially due to the fact that the implementation of this component was experienced more delays than the other ones (in fact, its CPI and a SPI are less than 100%) thus entailing smaller non-financial costs to municipalities compared to other actions and, consequently, a higher ratio between perceived quality and perceived costs. For the other four macro-components, the performances were similar: slightly negative schedule performance and very positive cost and value for cost performances.

Figure 4.4. Project Earned Value Analysis average measures by key project components



Project components / key project outputs were scored on a scale from 1 to 5 based on the extent to which they fulfilled quality standards such as: evidence of formal quality, namely the presence of structural and organizational quality aspects like systematic planning and management, comprehensiveness and clarity, precision; evidence of substantive quality, namely the presence of content quality aspects like thoroughness, credibility, and thematic depth; evidence of stakeholder ownership, namely the presence of engagement and commitment aspects like active participation, consensus-building, and strategic alignment; evidence of technical feasibility, namely the presence of practicality and viability aspects like resource availability, sustainability of methods, and realistic implementation planning. As shown below (table 3), the most frequent rating is 4 out of 5, and there are only few 3 and a couple of 5; the total quality checklist score is 62 out of 80, with a total average score of 4 out of 5. The criterion of substantive quality is the most positive one, especially with regards to the training of municipal staff and the creation a community of practice. Technical practicability, on the other hand, is the criterion with a relatively lower rate, due to intermediate grades given to the training of municipal staff and to pilot projects.

Table 4.3. Quality Checklist scores based on document review for each key project macro-component

<i>Project component / key project output</i>	<i>Evidence of formal quality</i>	<i>Evidence of substantive quality</i>	<i>Evidence of stakeholder ownership</i>	<i>Evidence of technical practicability</i>	Quality Checklist total score
<i>Training of trainers</i>	4	4	3	4	15 / 20
<i>Training of municipal staff</i>	4	5	4	3	16 / 20
<i>Creation of a community of practice</i>	3	5	4	4	16 / 20
<i>Pilot projects</i>	4	4	4	3	15 / 20
Project average	3,75	4,5	3,75	3,5	62 / 80 (4 out of 5)

At the time of the analysis the project was still running, so, in order to evaluate to what extent the project achieved the expected result, it was considered the improved knowledge and skills for local development of target municipalities.

From this perspective, *key process indicators* assessed as at December 2023 regard the number of municipalities that validated the training curriculum, the number of signed agreements for implementation of the training curriculum between municipalities and universities and the number of participants to the training courses organized by Libyan universities, disaggregated by gender and age. The value of such indicators is shown in table 4.

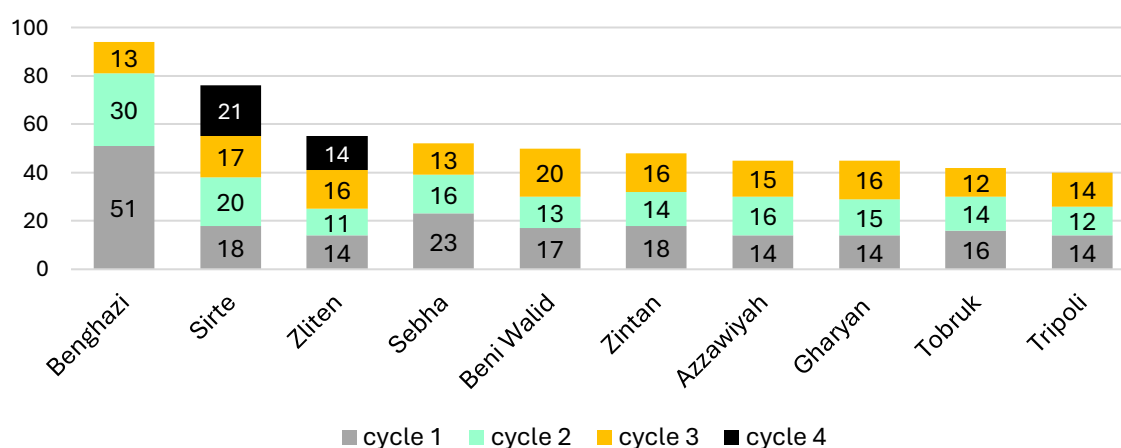
Table 4.4. Key process indicators of the project at December 2023

Key process indicator assessed	Value at 31/12/23
Number of municipalities that validate the training curriculum	10 (100%)
Number of signed agreements for implementation of the training curriculum between municipalities and universities	10 (100%)
Number of participants to the training courses organized by Libyan Universities, disaggregated by gender and age	Tot 545 Female: 160 (29%) Male: 385 (71%)
Number of univocal ²⁷² participants to the training courses organized by Libyan Universities, disaggregated by gender and age	Tot 489 Female: 148 (30%) Male: 341 (70%)

²⁷² The term 'univocal' is used to denote the list of training participants wherein each participant is counted only once, regardless of multiple attendances at the training sessions.

Analysing project records, it is possible to gain an *overview of the characteristics of participants to the training courses for municipalities* updated to December 2023. Looking at the map (fig. 9), it can be seen that the distribution of participants has been quite homogenous (around 8% for each city), apart from Benghazi²⁷³ (19%) and Sirte (12%), which recorded higher numbers. Municipalities participated to the three training cycles implemented in full of around the same number of participants each time (fig. 10). The fourth cycle, in fact, as at the end of December 2023 was not completed yet, and this is why available data regard only Sirte and Zliten.

Figure 4.5. Distribution of training participants per cycle and municipality as at December 2023 (N=545)



Among participants, there are a noteworthy amount who participated to more than one cycle, experiencing the project as an educational pathway. Out of 489 univocal participants as at December 2023, 46 has participated to 2 cycles and 5 to 3 cycles,

²⁷³ The high number recorded in Benghazi should be read taking in consideration that, during the first 2 cycles, a good number of participants of this municipality has attended only one module or two, not the whole cycle.

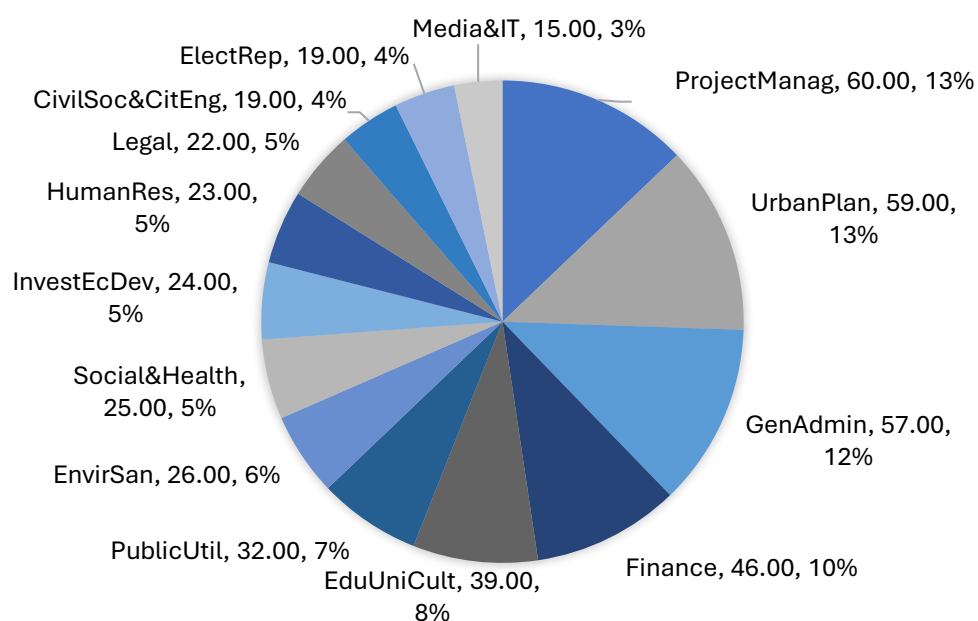
representing 10% of total. Beni Walid, Zliten and Sirte are the municipalities with a higher number of cycles per participant.

In terms of professional area of reference, training participants account for 14 sectorial categories (fig. 12). The four most represented ones are project management (13%), urban planning (13%) and general administration (12%), followed by finance (10%). Other categories vary from 3% to 8% and are related to education, university, and culture (8%), public utilities (7%), environment and sanitation (6%), social affairs and health (5%), investment and economic development (5%), human resources (5%), legal affairs (5%), civil society and citizen engagement (4%), elected representative (4%), media and information technology (3%). The prevalence of sectors was found unevenly among different cycles, but in all three cycles there was a balanced presence of specialistic and cross-cutting backgrounds.

To illustrate the association between municipalities and areas, a statistical procedure²⁷⁴ was executed to show the categories in a bidimensional diagram, thus providing and approximated depiction on their relations on a graph.

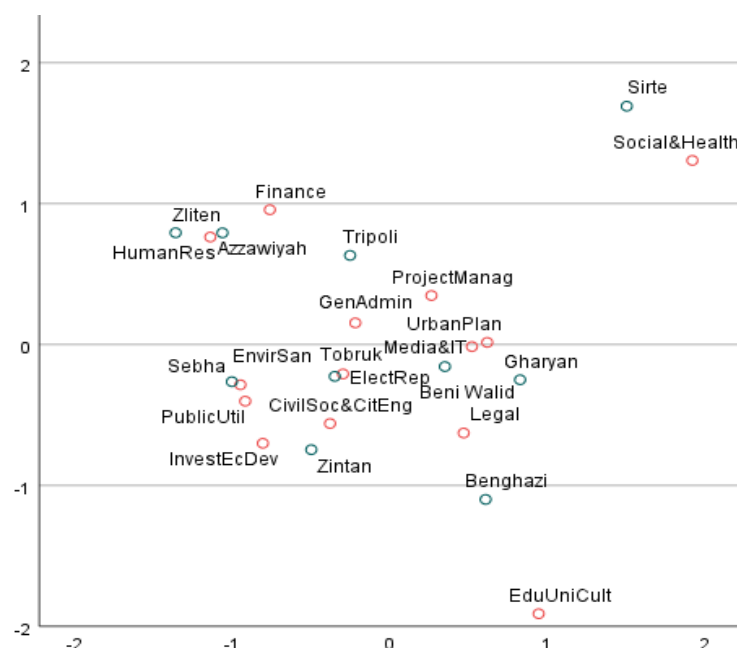
²⁷⁴ The statistical procedure used is multiple correspondence analysis (MCA), a data analysis technique for nominal categorical data, used to detect and represent underlying structures in a data set.

Figure 4.6. Distribution of univocal training participants by area as at December 2023



As shown in the map (fig. 7), noticeable associations can be found between the category of social affairs and health and Sirte, between the category of education, university and culture and Benghazi, as well as between the category of human resources and Azzawiya. However, apart from such cases, no specific pattern between sector and municipality seems to emerge from this exploratory analysis.

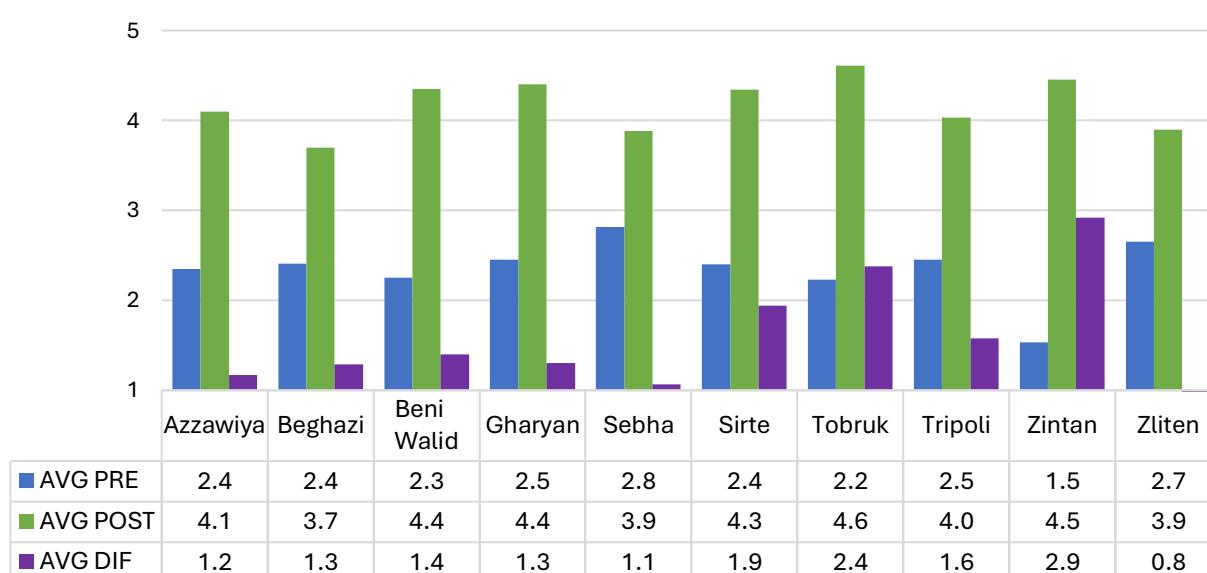
Figure 4.7. Joint map of the distribution of univocal training participants by municipality and by area as at December 2023 (N=489)



The role of participants was also analysed, with the aim of understanding the level of responsibility pertaining their job in the municipality. Reported roles varied from operative ones, such as employee, accountant, and teacher to higher responsibility functions, such as director, head of department, member of the council. A middle level was assigned to those holding intermediate responsibility positions in the municipality, such as office managers and engineers. Most people who joined the training had a lower responsibility level in the municipality (53%) and a good portion of the other half is represented by participants with a higher responsibility level (28%). Besides the prevalence of higher responsibility levels within the category of elected representatives (which is expected to nature of the category), it can be noted that many other sectors have a noticeable amount of participants holding higher responsibilities (especially investment and economic development, social affairs and health and human resources), while the intermediate levels of responsibility are underrepresented across most sectors (especially in HR), except project management (43%) and, secondarily, urban planning and legal affairs (both at 27%).

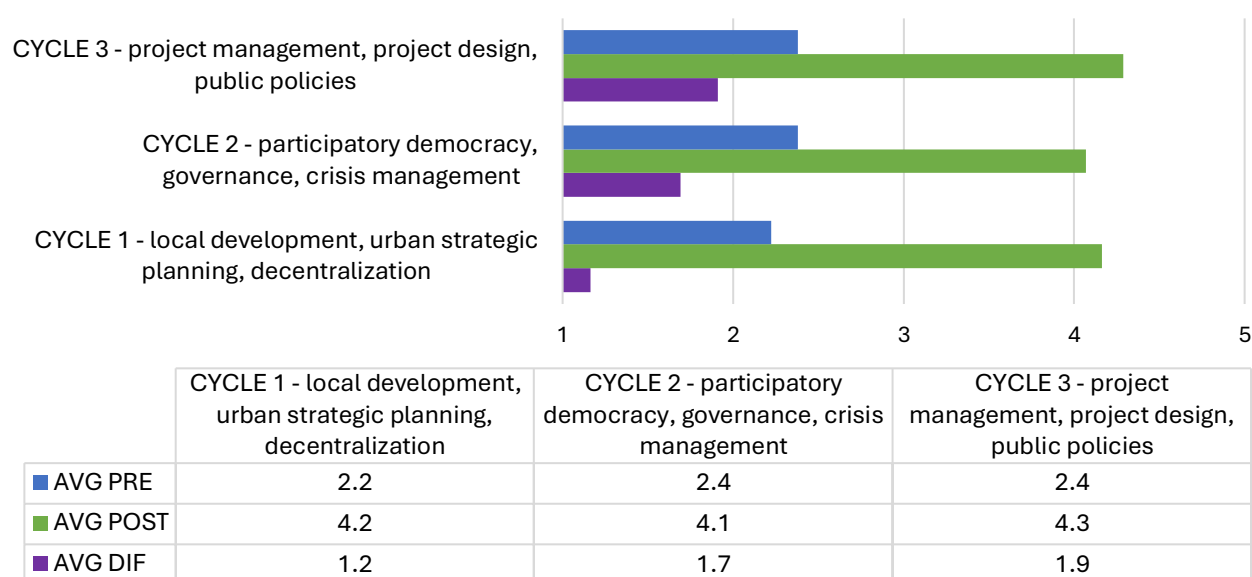
For evaluating the effectiveness of the training to municipalities, the *key outcome indicator* assessed regards the *pre-post variation of mean test scores of municipality training participants*, operationalised through the self-assessment instrument administered before and after the training of cycle 1, cycle 2 and cycle 3. As indicated by figure 16, on average, the difference between pre and post scores were positive for all municipalities, ranging from +0,8 (Zliten) to +2,9 (Zintan) and recording a mean value of +1,6, with a mean baseline of 2,4 and achieved mean value of 4,2. Smallest improvements were found in municipalities with highest baselines (e.g. Zliten, Sebha).

Figure 4.8. Pre and post-training average self-assessment score of training participants of the 1st, 2nd and 3rd training cycles by municipality



Improvements seem to increase passing from the first cycle, to the second and third cycle as well as the baseline scores, suggesting a cumulative learning effect (fig. 17).

Figure 4.9. Pre and post-training average self-assessment score of training participants by training cycle



The expected result regarding the improved knowledge and skills in local development of target municipalities was assessed examining a set of key process indicators and one key outcome indicator. In terms of process, to date the project has validated the training curriculum and signed the agreements for the implementation of such training with all municipalities and universities involved. Furthermore, a total of 545 participants from municipalities have joined the three training course cycles (of which 489 were univocal), each city representing a variety of sectors, with a quite diverse mix of professional backgrounds and responsibility levels. In terms of outcome, the comparison between self-assessment average score of municipality training participants before and after the training suggests that *the project is being effective in improving local development knowledge and skills*. Despite this finding being corroborated by the interviews done with municipalities project managers, it still needs further confirmation and interpretation, especially with regards to other related results such as increased awareness (knowledge gaps included) and acquired capacity to put such learnings in practice on a daily basis, apart from pilot projects (e.g. by developing and maintaining administrative databases regarding internal staff and statistics about citizens' satisfaction).

From a human-centred approach, an interesting cross-cutting issue relates to the gender dimension. Indeed, REBUILD made a special effort to promote women's participation in local governance and two project managers, one from the municipality of Tobruk and the other from the municipality of Sirte, were women. The interviews with them raised various considerations related to the gender issue, which are analysed here from three main perspectives in order to then develop a broader reflection for the final framework of integrated local governance: women's participation in training courses, women's professional legitimacy, and proactivity towards women's participation.

In the participating municipalities there was a prevalence of male officials, therefore the participation of women in training courses was affected by this objective contextual limit. As shown in table 7, apart from Azzawiyah and Tripoli, the difference between male and female participants is very high and reflects a similar situation noticeable also in women representativeness among REBUILD project manager assistants and media officers. In some cases, PMs involved women from other offices to ensure a minimum quota, but in some cases other factors, such as time constraints, seem to influence their participation. In fact, many women allegedly expressed their reluctance to attend afternoon sessions due to cultural and social values that discourage them to go out alone after a certain time before the evening. The preference for training during regular working hours in the morning or in the early afternoon is also due to the priority given to home and family responsibilities during the evening hours.

Table 4.5. Distribution of univocal training participants by gender as at December 2023 (N=489)

	Azzawiyah الزاوية	Benghazi بنغازي	Beni Walid بنى وليد	Gharyan غريان	Sebha سبها	Sirte سرت	Tobruk طبرق	Tripoli طرابلس	Zintan الزنتان	Zliten زليتن
female	37%	26%	1%	23%	19%	25%	15%	33%	0%	0%
male	63%	74%	99%	77%	81%	75%	85%	67%	100%	100%
difference	27%	48%	97%	53%	63%	50%	71%	33%	100%	100%

For women, the possibility to participate in social and public life at the local level seems to be often restricted by the attitudes of those with more power within local authorities. Indeed, according to the PMs interviewed, the situations seemed to differ based on personal sensitivity and conceptions towards the role of women in society and labour: for example, in contexts where mayors were favorable to the participation of women, women feel safe, supported and treated with dignity; on the contrary, where interest for the work done by women was not shown and their role seems "hidden", women did not feel at ease in the working context, neither legitimated to participate in public initiatives or training.

The interviewees affirmed also that women with prominent public roles, or visible in the public sphere, can suffer in social relationships or be victims of acts of intimidation, public offenses and other types of attacks and violence, with the consequent probability to see reduced their personal legitimacy to act and work in a public context. They reported some occasions during the project in which women were excluded or they preferred to be excluded from photos, eventually covering their faces so that they would not be recognizable in the pictures, thus preventing them *"to negatively influence the project"*. Considering the social norms of Libyan society, women usually accept this condition and avoid not socially approved behaviors, so as not to damage the name or image of the family / tribe; indeed, the damage to the image suffered by a person can directly affect the community to which she belongs.

In this perspective, interviewed project managers shared two suggestions. Firstly, REBUILD should be leveraged to develop successful ideas that can contribute to change society's perception and foster a broader acceptance of women occupying prominent professional positions; this should also be an occasion for mitigating reticent and concerned attitudes associated with women's visibility in public images and in social media. Furthermore, an important improvement would be the change of the vocabulary around the gender issue in the professional context; for example, using the expression "gender equality" does not seem effective in encouraging stakeholders to work on this topic, as it could be interpreted differently, eventually putting some kind of pressure on cultural values. A sensitive reflection is needed regarding the vocabulary used during training courses and, more in general, about how to treat common prejudices and stereotypes among male participants, who in many

cases are reluctant to address the gender issue. In any case, all kinds of effort on this topic should be owned and appropriately managed by Libyan partners in consideration of the social and legal norms of the country.

Training courses also had the merit of having triggered an interesting collaborative dynamic between women officials from the various municipalities regarding the gender issue and how to promote cultural change through collaborative planning of specific training activities. One piece of evidence of such potentiality was the informal group dedicated to the gender issue within the REBUILD project born after an altercation during project activities between one of the interviewees and a male project officer.

"With the other PMs we hold brainstorming meetings to reflect together on how we can intervene and raise awareness about the gender issue in the context of work and in society in general. I propose to analyze Rebuild 1 strategies and impacts and exploit the results to make a Rebuild 2." (PM of Sirte)

The two interviewees seem determined to wisely valorize their professional position as project managers to contribute to a broader process of empowering women and of changing the perception of the role of women in public organizations and in civil society. Indeed, despite having witnessed some incidents and episodes of gender inequality during the training courses, they appear not discouraged; on the contrary, their words suggest high awareness about the need to pay attention to the gender issue and a strong motivation to encourage other women to personally contribute, showcasing abilities with merit, and dedicating skills to serve the local government for the betterment of society, also through project like REBUILD, in which they firmly believe.

In general, REBUILD demonstrated an high potential to positively contribute to raise awareness over the gender dimension in local governance, to empower professional women and to enhance female participation in the process of local governance development. The project seems to be enough flexible to allow a planning of training courses based on women's needs and preferences.

According to the information collected, a sensitive reflection should be conducted to properly deal with the gender issue during the training courses, in order to verify the sensitivity of the trainers themselves on the topic.

The collaborative sharing initiative that emerged between the women project managers during the implementation of REBUILD is a valuable lesson in how to consider collaboration between women from different communities in order to strengthen women's participation and perception, and then contribute to local governance in the local area.

Indeed, it results to be crucial to empower all stakeholders, including women and men, to understand the recent changes in governance and adapt accordingly. This will enable equal and full participation in the system through ongoing capacity building efforts.²⁷⁵ For this reason, the implementation of a comprehensive gender capacity building framework to address the issues should be an essential asset of an integrated local governance framework, including skills, competencies, abilities, roles, responsibilities and relationships and more arenas including human, technical, financial, administrative, and legal skills. This set of activities should be aligned with a gender sensitization and advocacy activity integrated in the local governance system to foster institutional alliances and linkages, stakeholders' awareness and continuous research and documentation attitude to anticipate social changes. This positive attitudinal change could enhance women's contribution in economic and social local arenas.

In conclusion, the REBUILD project has demonstrated its ability to create a framework of coherent initiatives designed to accompany and support the process of decentralisation and local governance's development in Libya.

The municipalities, which are the most important and closest public institutions with which civil society is in contact and through which the voice of the Libyan people can have a concrete space of expression and participation, were deeply engaged in the process, achieving positive results, and showing to be a symbol of trust in alternatives to national fragmentation and instability. The effort of local institutions in developing themselves to face transformative challenges with means and approaches is recognized and promoted at the European and international, also thanks to supportive institutional allies from Italy.

²⁷⁵ N. Jabeen, L. M. Z. Iqbal, *Gender and local governance in Pakistan: promoting participation through capacity building*, in *South Asian Studies, A Research Journal of South Asian Studies*, Vol. 25, No. 2, July-December 2010, pp. 255-281.

The analysis highlighted that REBUILD is a very relevant and coherent initiative, which, in spite of some difficulties, efficiently and effectively supported Libyan local authorities in terms of governance, providing space for dialogue and exchange as well as resources and expertise for technical capacity building and institutional capacity development. The project had a great potential to build a solid network of local institutions capable to gain more legitimacy and accountability towards both central institutions and local communities, while also strengthening democracy, equality, and peace in the country.

Despite this, late and insufficient allocations of central government budget to municipalities were seen as important financial constraints and limits to local government capacity to undertake activities for an adequate institutional performance, also with respect to economic strategic planning, which is still left to the Ministry of Economy, despite this competence has been decreed to become part of the municipality remit. Furthermore, the scarcity of financial appropriations also has an impact on administrative development and training activities.

While each institution has its one peculiar context, needs and circumstances, the political situation at the national level remains volatile, and the aftermaths of the war crises (e.g. destruction of buildings and of already frail infrastructure system) pose noteworthy obstacles to municipalities.

All considered, it seems useful to the end of this research to underline the importance to ensure a deep integration between university side and municipality in the development and realisation of capacity building training activities to municipalities. The complementary effort could enhance a bidirectional learning process while also allowing theoretical concepts and methodologies to be grounded in professional practice thanks to learners' tacit knowledge and implicit competencies; in this light, one-to-one training / tutoring and focused technical assistance for municipal offices could be seen as possible options to experiment for the future.

The intense efforts of local authorities to foster decentralisation and internal capacity building should be well communicated to the local community, informing the civil society about the activities undertaken to improve services for citizens and local governance administration. This could be a first step for increasing citizens' trust for local institutions and eventually engaging local communities in participatory process (e.g. implementing a

simplified study on citizen satisfaction using creative and context-specific and culturally sensitive methods, eventually on specific topics such as those of the pilot projects or any other topic where municipalities and citizens have chances to interact directly, also during public events and meetings).

A specific effort to enhance internal understanding, awareness and interiorization, apart from institutional and political sensitization, is crucial to ensure that the whole local governance system is involved in this transition and that all actors are both beneficiaries and collaborators.

4.3 Case Study 4: MUDAR project

MUDAR - Mozambique Integrated Urban Development by Actions and Relationships: Empowering Local Governance is a three-years long decentralised cooperation project between two local authorities: the Autonomous Province of Trento (PAT), in Italy, and the Conselho Municipal da Beira (CMB), in Mozambique. The MUDAR project, financed by the European Union through the call for proposals *EuropeAid/171273/DH/ACT/Multi 4 - Local Authorities: Partnerships for sustainable cities 2021*, aims to promote integrated urban development and enhanced local governance in order to improve the living conditions of the population of Beira, Mozambique, in line with the 2030 Agenda for Sustainable Development.

The partnership is composed of:

- The Autonomous Province of Trento (PAT), leading partner – Part of the Trentino Alto Adige region, it is in the north-eastern Alpine area and has a population of about 550,000 inhabitants;
- The Municipality of Beira (CMB) – The city is located on the Indian Ocean coast in the central part of the country; it is the second largest city in Mozambique and the capital of the province of Sofala;
- Consorzio Associazioni con il Mozambico (CAM), implementing entity – Italian association set up to coordinate a community cooperation programme on the link between Trentino and Mozambique, operating in particular in the Province of Sofala;

- IFAPA of Beira – It is a public national institution dedicated to training and capacity building of public sector employees in Mozambique;
- Centro per la Cooperazione Internazionale (CCI), affiliated entity – Italian association engaged in analysis, information, training and promotion of knowledge on issues of international cooperation, European affairs, peace and human rights;
- University of Trento (UNITRENTO) – Italian academic institution;
- Zambeze University (UNIZAMBESE) – Mozambican academic institution.

With a total budget of €2.93 million and three Work Packages²⁷⁶ (WPs), the project intends to ensure that: Council Members, General Directors and technical staff of the CMB have acquired or expanded their theoretical-practical knowledge on inclusive and sustainable urban management, local governance and the Macuti pilot project; communities of practice on territorial sustainable development congregating CMB, Bairro Macuti residents and local/international partners are capable and motivated to address common challenges faced at local level; a pilot- project aimed to enable a resilient, inclusive and sustainable territory is timely developed and approved by CMB for the Macuti neighborhood; resilient and safe spaces, urban regeneration, green infrastructures and recycling solid waste collection interventions are successfully implemented in Macuti neighborhood; project experience related to the integrated urban design interventions in Macuti neighborhood is duly systematized and disseminated; innovative e-governance solutions (using ICT) are developed for the CMB and associate entities; local government and private sector partnerships and other initiatives related to innovation and job creation are fostered.

Target groups of the project include: city councilors and managers of CMB; administrative and technical staff of CMB's Departments; micro, small and medium enterprises (MSMEs) of circular economy in Beira; community-based organizations; citizens of

²⁷⁶ The first WP is related to the training and in the fields of inclusive and sustainable urban management and local governance; the second WP is related to the participatory design and implementation of an environmental pilot project in the Macuti neighborhood; the third WP is related to innovative digital solutions and public-private partnerships (PPPs).

the Macuti neighborhood; trainers of IFAPA, Universidade Zambeze. Final beneficiaries of the project are all staff and representatives of CMB (approximately 400 people) and all citizens and sectors of Beira, including the private sector (over 696,000 people).

The project focuses on Beira, the capital of Sofala Province and one of the largest cities in Mozambique, with a population of 696,515²⁷⁷ (based on 2020 estimates). Beira is divided into planned areas, which house 45.45% of the city's population and have better infrastructure, and unplanned areas, where 50.46% of residents live in poor conditions, making them more vulnerable to flooding and climate change. The remaining 4.10% of the population live in rural areas.

Beira's economy is heavily dependent on the informal sector, which accounts for 40% of urban households nationwide. The impact of Covid-19, along with the devastation of Cyclone Idai in 2019 and Cyclone Eloise in 2021, has worsened socio-economic conditions and access to basic services, particularly in vulnerable neighbourhoods²⁷⁸.

Beira Municipality is governed by the Conselho Municipal da Beira (CMB), which is a relatively young institution established at the end of the 90s.²⁷⁹ After the death of Mayor Simango in February 2021, CMB is undergoing a consolidation process. A long-term development strategy and policy of CMB for further institutional and urban developments was initially articulated in the Masterplan Beira 2035 (*Plano Director Beira Mozambique 2035*), then in a 10-year plan (*Plano Estratégico de Desenvolvimento Municipal da Cidade da Beira - PECB*), currently under revision.

The CMB today struggles with limited financial and technical resources to provide for the needs of these citizens and it is committed to improving sustainable development, but significant challenges remain.

²⁷⁷ Instituto Nacional de Estatística (INE), CENSO - Mozambique 2017.

²⁷⁸ Relatório Final Do Inquérito Ao Orçamento Familiar (IOF) 2014/15 (Final Report of the Family Budget Survey 2014/15), in Un-Habitat

(The Initiative on Financing for Resilient and Green Urban Global Solutions, FRUGS) (2020)

²⁷⁹ Lei n° 2/97, Feb. 18th.

A general improvement of environmental protection system and a clear climate change adaptation strategy are cross-cutting urgencies to favor Beira's local development²⁸⁰ and to incorporate the goals outlined under Mozambique's National Adaptation Plan of Action.²⁸¹ Environmental powers are primarily held by the State, with local government playing a supporting role. Currently, formal mechanisms for cooperation between the State and municipalities on local territory preservation are not well-defined.²⁸²

For this reason, the capacity building training activities promoted within the framework of MUDAR was evaluated as very relevant to increase the knowledge of local administrators about the public-private partnerships (PPPs) as useful tools to bridge the gap between those actors interested in a technical understanding of resilience-building and efficient climate adaptation and other local socio-political actors with diverse interests and priorities.²⁸³ Moreover, technical assessments underlined the need for improvement of Beira's hydraulic capacity, drainage infrastructure, coastal protection, green infrastructures, and land use and patterns²⁸⁴ to cope with adverse climate events and flood hazard.²⁸⁵

Considering that it is not easy to manage the complexity of all the factors that may have an impact on the development of a strategic plan for the city and that interact with each

²⁸⁰ P. Muradás, M. Puig, O. Ruiz, & J. M. Solé, *Mainstreaming climate adaptation in Mozambican urban water, sanitation, and drainage sector*. In N. Ogué, D. Ayal, L. Adeleke, & I. Da Silva (Eds.), *African handbook of climate change adaptation*, 2631–2652. Springer International Publishing, 2021. DOI: https://doi.org/10.1007/978-3-030-45106-6_132

²⁸¹ 1) improving of early warning systems, 2) incorporating climate resilience into development planning across sectors, 3) promoting of public education, and 4) exploring avenues for mitigating disaster risk. *Estratégia Nacional de Adaptação e Mitigação de Mudanças Climáticas 2013-2025*, November 2012.

²⁸² Decree 33/06 outlines the transfer of responsibilities to municipalities for planning and implementing investments, as well as managing facilities for municipal drainage systems and the treatment of urban wastewater and surface water. The division of responsibility between national and municipal government entities for the management of flood mitigation infrastructure remains unclear. UN Habitat, S. Segerlin & N. Cannizzaro, *Financing for Resilient and Green Urban Solutions in Beira, Mozambique*, 2020.

²⁸³ It is worth noticing that Beira is governed by the opposition (MDM), which competes with the ruling national Frelimo Party, the Mozambican Liberation Front (Frente de Libertação de Moçambique), which has governed Mozambique since independence from Portugal (1975).

²⁸⁴ Deltares & Witteveen+Bos, *Masterplan Beira Mozambique*, in cooperation with Urban Design Wissing, VandenBroek Consulting, and Nirás Moçambique LDA, November 2013.

²⁸⁵ P. Sayers, Y. Li, G. Galloway, E. Penning-Rowsell, F. Shen, K. Wen, Y. Chen, T. Le Quesne, *Flood Risk Management: A Strategic Approach*, Paris, UNESCO, 2013.

other²⁸⁶, a multi-objective evaluation was used to have a broader understanding of the local context.

Public documentation on the progress of urban development plans shows that there is room for improvement towards an integrated and coordinated vision on urban development. In this perspective, the partnership supported by MUDAR project is coherent with the purpose of enhancing human resources' capacities, good governance, and quality services delivery to citizens, while collecting useful data for a multidisciplinary approach.²⁸⁷

According to Beira Masterplan 2035, water and solid waste management and public infrastructure are key assets to improve the quality of life in the Municipality of Beira, while increasing the city's recognition as an industrial and coastal hub, nationally and internationally. The elaboration of an urban development plan using an integrated and joint approach is considered an urgent priority to face the insufficient basic infrastructures and services, to anticipate on the rapid growth of the urban population and the fast expansion of Beira, and to address the challenges related to improving the living conditions of its citizens.

The integrated plan should take into account the rehabilitation of the urban transport network and the accessibility to the city. This is to ensure that the transport system balances transportation costs and the functional and spatial division between industrial and residential areas, all from a livability perspective. Assessment research highlighted the introduction of a central water management information system for monitoring water quality and the entire water treatment process as the key resolution²⁸⁸ as well as the improvement of the waste collection service coverage²⁸⁹. MUDAR project is very relevant for all these assets, especially with regard to the implementation of pilot intervention in Macuti neighborhood, which could pave the way for replicable initiatives in near neighborhoods. In parallel, the sensitization of

²⁸⁶ van Berchum, E. C., van Ledden, M., Timmermans, J. S., Kwakkel, J. H., and Jonkman, S. N.: *Rapid flood risk screening model for compound flood events in Beira, Mozambique*, Nat. Hazards Earth Syst. Sci., 20, 2633–2646, <https://doi.org/10.5194/nhess-20-2633-2020>, 2020.

²⁸⁷ Project's documentation.

²⁸⁸ R. Doornewaard, *Thirst? The future availability of drinking water in Beira, Mozambique*, Environmental Science, 2015.

²⁸⁹ Beira Masterplan 2035.

the population²⁹⁰, whose aim is also to guarantee the sustainability of the actions, could amplify the impact of the pilot project.

In order to develop a coherent and effective integrated local development plan, the questionnaire submitted to MUDAR partners, as well as the analysis of latest academic and technical research, national and local programme reports and related documentation, allowed the identification of local governance and institutional capacity as the most urgent need to be addressed by the Municipality of Beira and to which MUDAR project can contribute.

Indeed, the internal government structure has faced challenges adapting to recent administrative reforms, which have introduced parallel provincial-level structures, creating the need for clearer delineation of competencies and improved coordination in the distribution of donor resources.²⁹¹ Enhancing financial administration capacities and revenue collection would reduce the reliance on external financing instruments for the CMB²⁹² with benefits in terms of planning adequate local development policies and programs, maintaining public infrastructures and guaranteeing access to municipal services. Investments in records and information management technology and enforcement mechanisms to track, monitor, and log economic activities and levy taxes and fees, as well as the formalization of informal markets are the main individuated resolutions to support the fiscal capacity.²⁹³

The reinforcement of the knowledge of PPPs (Public Private Partnership) was considered another asset to enhance the cooperation between public and private stakeholders and among and between strategic local stakeholders to better manage daily operations.²⁹⁴ In this sense, MUDAR project, through theoretical-practical activities and its community of practices was considered very relevant in elevating the knowledge on sustainable development²⁹⁵ and contributing to strengthening the cooperation between

²⁹⁰ Project's documentation.

²⁹¹ J. Schubert, Maintaining a city against nature: climate adaptation in Beira, in Buildings and cities, Urban adaptation: disrupting imaginaries and practices' collection, February 2024.

²⁹² Law 1/2008, the Law of Municipal Finance, defines the financial, budgetary and wealth regimes of the municipalities and reformulates the Municipal Tax System instituted initially by the Law 11/97. Associação de Comercio e Industria; Deloitte; USAID, Legal Framework for Tax in Mozambique, December 2011.

²⁹³ Beira Masterplan 2035.

²⁹⁴ Beira Masterplan 2035 and project's documentation.

²⁹⁵ Need/priority acquired by project documentation and questionnaires submitted to project's partners.

different departments of the CMB on all planning levels, in order to harmonize the internal structure and to be develop a truly integrated urban development plans and based on an efficient use of local resources.

The factors influencing the efficiency of the project

To explore the implementation process of the project, the document review was enriched with a qualitative analysis of partners' open-ended answers to a questionnaire. The coding of the text was aimed at enucleating perceived influencing elements, through an inductive content analysis. In the analysis, the subjective points of view of respondents were aggregated for each project partner, not to overrepresent those organizations which answered with multiple respondents. Therefore, for the quantification, elements which were identified only once among respondents of an organization were considered present in the same way as those identified multiple times, in order to give importance to minority voices as well.

The findings include 13 facilitating elements, 13 hindering elements, plus 3 elements which could not be categorized in either group, being nuanced (i.e. partners' technical opinions, project area coverage, stakeholders' political dynamics). Most elements concern properties at the partners' and stakeholders' level, with a few other properties referring to the overall project level and staff level as well. As displayed in table 2 (on the right side), while almost all facilitating elements are evenly distributed between staff, partners' and stakeholders' levels, hindering elements have a net bimodal distribution, occurring either at the partners' level (52%) and at the project level (42%). Looking at the left side of the table, it is evident that at the staff and at the stakeholders' levels there are almost only facilitating elements, while at the partners' level there are elements almost equally in both groups; at the project level, instead, most elements are hindering ones.

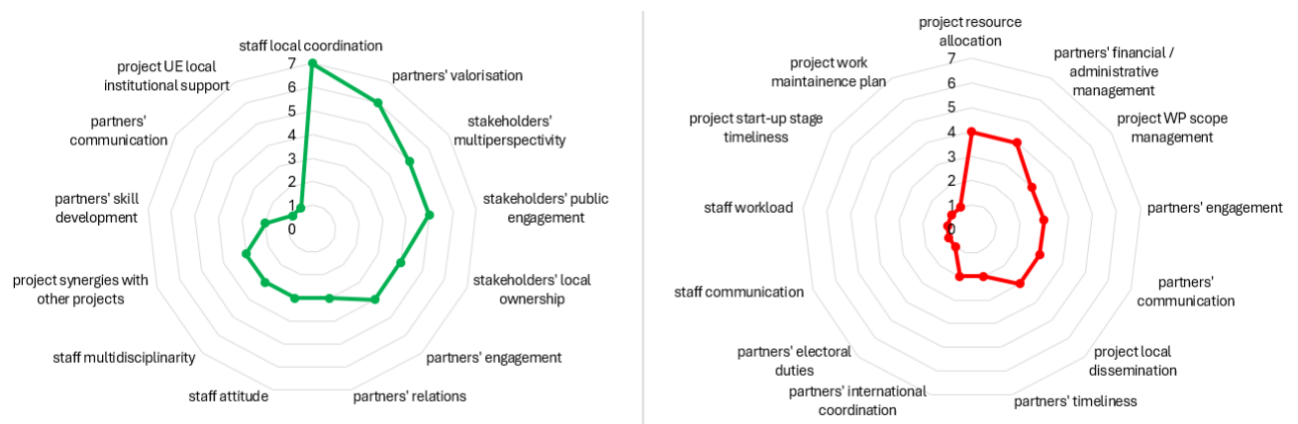
Table 4.6. Distributions of partners' perceptions about influencing elements by level of analysis (N=82)

	Staff level	Partners' level	Stakeh. level	Project level	Total	Staff level	Partners' level	Stakeh. level	Project level	Total
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facilitating elements	87%	47%	93%	22%	57%	28%	34%	30%	9%	100%
mixed elements	0%	9%	7%	11%	7%	0%	50%	17%	33%	100%
hindering elements	13%	44%	0%	67%	35%	7%	52%	0%	41%	100%
Total	100%	100%	100%	100%	100%	18%	41%	18%	22%	100%

The graphs in figure 4 show the distribution of facilitating elements (on the left side) and hindering elements (on the right side) between project partners. The 7 concentric polygons represent the possible number of partners for which each element occurs, illustrating the relative degree of agreement.

Figure 1.10. Distributions of partners' perceptions about facilitating elements (N=47) and hindering elements (N=29)



As noticeable by the sizes of the geometric areas formed by the numeric values, facilitating elements have a wider degree of agreement compared to hindering ones, with the most frequent one even being shared by all partners. Among hindering ones, on the contrary, the most frequent one is shared only by 4 partners out of 7; moreover, there are five hindering elements expressed by only one partner.

Regarding the facilitating elements, staff local coordination provided by CAM was unanimously seen as essential for managing activities and relations between different

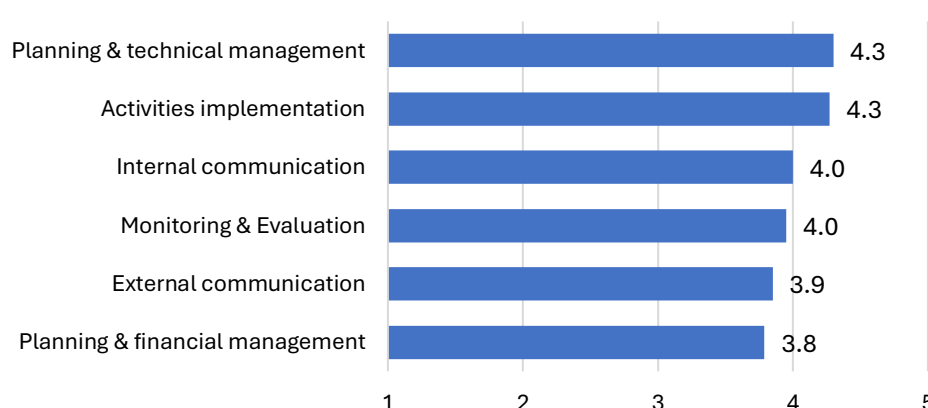
organizations and actors. The composite nature of the partnership, in fact, despite being potentially challenging, is leveraged by the project, which highlights all specific contributions through the different work packages, thus permitting the partners' valorization in terms of knowledge, competencies and missions. Such diversity, moreover, was largely appreciated, since it gave the opportunity to look at Beira's problems and opportunities from different point of views, fostering stakeholders' multiperspectivity on themes such as local governance, urban strategic planning, and waste management. Other widely reported positive aspects are related to the participatory approach which undergirds MUDAR: partners deemed very useful the efforts put in the stakeholders' public engagement, realized through bottom-up initiatives involving public officials, local leaders, youngsters, and other citizenry actors, as well as the creation of different participatory committees, because it consolidated their local ownership and buy-in. Partners' engagement, in terms of collaboration and ongoing dialogue, was also seen positively by some, together with partners' relations, including some previous ones at the local and international levels, which were already solid and were strengthened by the project. Besides, synergies with other projects are also considered beneficial, fostering MUDAR external coherence. On another side, the project was perceived as enhanced by two features of the local staff, its multidisciplinary and attitude, being proactive, collaborative, and enthusiastic. Other elements, namely partners' skill development, partners' communication and the EU institutional support at the local level, were perceived as facilitating ones by a few respondents.

Regarding the hindering elements, project resource allocation was quite widely considered a negative aspect, especially in relation to the pilot project in Macuti (which is perceived to require much higher costs). The financial and administrative management, in fact, resulted to be one of the aspect most often deemed negatively, e.g. in the application of the contract procedures for European Union external action (PRAG) in which the Municipality of Beira was involved. Multiple partners, moreover, shed a light on the project WPs scope management, mostly about the digitalization pillar, which for technical reasons was subject to variations, as well as in relation to the pilot project, which also experienced some changes compared to the plan, thus affecting project timeliness, already conditioned by delays in economic and legal procedures regarding fundings (e.g. the project start-up stage which was influenced by the municipality elections).

Another shared negative aspect is the perception of some partners' engagement, somehow seen as inconstant and weak, and leading to a not propoitive stance within the partnership. Alongside such engagement problem, partners' communication is also viewed as troublesome in some cases, both between partners (including partners' international coordination) and within partners (i.e. staff communication), particularly when people involved in different work packages have knowledge gaps regarding other streams of activities, occasionally due to the staff workload. According to some partners who reflected upon project local dissemination, outward communication too, despite being part of its strategy, seems to have room for improvement and appears to be important for building bottom-up community support for a project work maintenance plan, needed for assuring sustainability to outputs of the pilot project.

Ratings given at the individual project dimensions confirm the positive judgement of partners, especially to the planning and technical management and to the implementation of activities (fig. 6) and reflect the more nuanced judgement on the external communication and on the planning and financial management, which anyway is positive, with no respondent average rating lesser than 3,5.

Figure 4.11. Average partner respondents' satisfaction about the different project dimensions (N=23)



The comments of participants to the online workshop done with PAT, CAM and CCI, furthermore, allowed to better discuss some factors that influenced MUDAR in its first half. Considering the state of the art of the project, the emerging picture was reassuring:

institutional, political and cultural challenges confronted since the start of the project seems to have been identified, analyzed and faced with mitigation measures, while also learning lessons from them (for example, pertaining the modularity of training courses, which have been redesigned ongoing in terms of content to correspond to emerging knowledge needs).

In addition, the evaluation visit made during the summer school of April 2024 in Trento suggests that an important positive influencing factor was linked to the relationships built, also at the personal level, between Mozambican and Italian partners. The observed group dynamics, in fact, indicated an increasing level of trust between CMB, IFAPA and the Italian counterparts, as well as an improved sense making and alignment towards the project goals.

The application of a participatory approach was investigated in multiple ways, in order to firstly understand the meaning of such project feature in the partnership and, secondly, to examine how it was embedded in the actual project design and implementation.

The average project partners' judgement on the extent to which the project was effectively promoting the active participation of its stakeholders, collected through the questionnaire, records values around 4 on a scale from 1 (minimum) to 5 (maximum), with participation of citizens and local institutions at the top (having almost the same rating), followed by civil society organizations, which receive the only low rating (2 out of 5) among all responses (fig. 8). The mean value of respondents, in fact, range from 3 to 5, with an overall average value of 4,2, indicating that the project is perceived to be effectively promoting a participatory approach with regard to its stakeholders.

Taking in consideration project documentation as well as observations and discussions during workshop and interviews, there is adequate evidence to argue that MUDAR is thoroughly applying a participatory approach in realizing its actions through the use of participatory methods as a strategic asset of PM. This strategy responded to the identified need of involving the population in decision-making participative processes through a bottom-

up approach, and, at the same time, promoting the importance of the institutions among the citizens, civil society organizations, and CMB staff themselves.²⁹⁶

The population was involved in the pilot project, the aim of which was to improve the living conditions in Macuti, to ensure a good implementation and the ownership of the project by the local community (residents, local businesses, community leaders and stakeholders). First of all, qualitative and quantitative data was collected and systematized to then outline the main characteristics to elaborate three possible intervention scenarios to be presented to the CMB for starting the co-creation phase. The assessment phase of the characterisation of the neighborhood area was possible thanks to the distribution of questionnaires (800) and qualitative interviews (200) to the population. Further 100 interviews were also conducted with civil society, political and technical authorities in order to gain an in-depth understanding of the area's issues and gather useful information for project purposes. This overall technical picture of the current situation in the neighborhood was useful to bring out the strengths and weaknesses of the area and thus intervene on the key issues, in line with the population's requests. It gave the opportunity to exchange ideas and solutions and arrive to compromises which strengthen the local ownership (e.g. regarding the different options for the coastal drainage basins of Macuti).

Important for the success of the project was to ensure the interconnection between the main project objectives (capacity building, pilot project, digitization). Monthly, semestral, and annual narrative reports show that project partners and stakeholders, thanks to three committees created (institutional, technical and local), collaborated in a community-based manner. In this regard, among the interlinking aspects we can highlight the creation of two support committees having the task of ensuring participative decision-making during the project and the creation of a Community of Practice (CoP):

²⁹⁶ Ibidem.

1. Comité Municipal de Acompanhamento, formed by 3 municipal departments (Building, Urban Management, Agropecuaria), 2 municipal directorates (Coastal Protection and Roads and Bridges) and a participatory company dealing with Urban Sanitation (SASB);

2. Comité Local de Acompanhamento, composed of 20 representatives of the Macuti neighbourhood.

It was organised a study visit in Maputo with the aim of learning about virtuous experiences of participatory urban planning and regeneration processes. It represented a fundamental activity to the creation of the aforementioned committees, giving to MUDAR staff the possibility to come into contact with organisations that contributed to the creation of similar neighborhood committees to manage decision-making processes. This contributed to the creation of a CoP, a set of people, organisations and bodies that share a theme and a goal and who come together to improve and learn from each other. The CoP was a key component for strengthening the capacity of local administrators.

Moreover, Community Based Organizations and Citizens of the Macuti neighborhood (approx. 25.000 inhabitants, in Posto Administrativo Central, Cidade da Beira) were involved at different levels in a participatory decision-making process. The project, through the involvement of representatives of local associations and the population of the Macuti neighborhood (both planned and unplanned area), aimed to promote an improvement in the quality of life of people, especially those most vulnerable (women and children), through pilot interventions on Resilience, Urban Regeneration, Green infrastructures and Recycling Solid Waste Collection, in order to create a more inclusive environment, attentive to the often unheeded needs of the population. The community was involved through consultations, interviews and moments of community sharing, to express their needs concerning urban planning, spaces and the quality of life in Macuti.

As, the behaviour of many citizens was considered to be often the cause of problems of urban decay such as the accumulation of rubbish in areas not designated for it (for instance close to drainage canals), the occupation of unbuildable land, etc, awareness campaigns were used as tools to sensitize citizens on environmental issues and urban management, in order to improve individual practices for the collective good.

The questionnaire submitted to MUDAR partners highlighted the need of extending the partners' network in Italy, in the EU, and other countries. The need to widen the communities of practices and to share insights to be replicated in other local contexts with regard to training activities for local authorities and for the creation of job opportunities falls under CoP creation can open the way to a knowledge sharing mechanism aimed at involving different stakeholders in a valuable process of replication of best practices and development of new networks for local development and decentralized cooperation.

4.4 Comparison of case studies 3 and 4: outcomes, challenges and lessons learned

In order to jointly consider experiences emerging from the two case studies, an interpretative comparison of key themes was used. Indeed, it was possible to categorise the main characteristics of both projects into a few common basic features (criteria) that support the analysis and definition of a human-centred approach in a DDC project management strategy.

These criteria are: 1. Strengthening human resources and institutional capacities, 2. Supporting decentralisation, 3. Improving public services, 4. Improving public infrastructures, 4. Strengthening relations between local government institutions, 5. Strengthening relations between local government institutions and the European context, 6. Fostering trust in local government institutions and trust between citizens.

For each project, the action and/or strategy corresponding to each criterion has been reported in order to consider the approach used for a broader interpretation. The criteria identified aim to define a general framework of potentially crucial aspects to be included in a DDC project management strategy, in order not to overlook a human-centred approach.

Table 4.7. *Checklist on the human-centred approach's assessment in a Decentralised Development Cooperation project management strategy*

Criteria for defining a human-centred	REBUILD	MUDAR
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approach in a DDC PM strategy		
<i>Strengthening the skills of human resources and institutional capacity</i>	The Training for Trainers (ToT) addressed Libyan Universities' lecturers focusing on the following subjects: Promoting sustainable and inclusive local development; Promoting democracy through local governments; Tools for action; Leading and managing people; Promoting social economic development; Improving performance; Services delivery. The curriculum covered the same topics of MUDAR except for those related to <u>democracy</u> and <u>performance</u>, which were specific of REBUILD. Training delivered from Universities' lecturers to Libyan municipalities The curriculum articulated the ToT training subjects.	The Training of Trainers (ToT) addressed IFAPA focusing on the following subjects: Promoting sustainable and inclusive local development; Tools for action; Leading and managing people; Promoting social economic development; Services delivery. The curriculum covered the same topics of REBUILD. Training delivered from IFAPA to the representatives of the Municipality of Beira The curriculum articulated the ToT training subjects, also including a focus on the field of finance and procurement.
<i>Supporting decentralisation</i>	To support the decentralisation process, REBUILD focused on the involvement of ten local municipalities and Libyan Universities. Private sector, civil society and citizens were not directly involved.	To support the decentralisation process, MUDAR focused on the involvement of all the actors of the QH, including private sector, civil society, and citizens.
<i>Improving public services</i>	Pilot interventions With the aim of improving population's health and sanitation, environmental protection, as well as the quality and sustainability of fishing products.	Pilot interventions With the aim of improving population's health and sanitation, environmental protection, as well as the accessibility and efficiency of public administration.
<i>Improving public infrastructures</i>	Pilot interventions On environmental protection and water quality and fishery management systems.	Pilot interventions On waste management systems and e-governance information and communication technologies.
<i>Strengthening relations between local government institutions</i>	Community of Practice (CoP) on territorial sustainable development, with an inter-municipal focus and a horizontal perspective. It included field visits and exchanges. Summer School on local governance and development strategies targeted at municipalities representatives. It included field visits and exchanges. Consortium between Libyan Universities	Community of Practice (CoP) on territorial sustainable development, with an intra-municipal focus and a horizontal perspective. It included field visits and exchanges. Summer School on local governance and development strategies targeted at CMB Department's staff and representatives. It included field visits and exchanges.
<i>Strengthening relations between local government</i>	Training Exchange programme among Libyan and European authorities Community of Practice (CoP)	Training Exchange programme among Mozambique and Italian LAs for the sharing of knowledge and practices.

<i>institutions and the European context</i>	Focused on international exchanges aimed at creating international cooperation partnerships. Nicosia Initiative	Community of Practice (CoP) Focused on international exchanges aimed at creating international cooperation partnerships.
<i>Fostering trust in local government institutions and trust between citizens</i>	Universities Direct involvement of universities as the main education institutions in the country. No national training institution was involved. Indirect citizens' involvement.	IFAPA Direct involvement of the national institution dedicated to training and capacity building of public sector. Participatory decision-making process Community Based Organizations and Citizens of the Macuti neighbourhood (both planned and unplanned area) were involved through consultations, interviews, moments of community sharing and awareness campaigns.

The continuous training approach, combined with a community of practice strategy, facilitated the exchange of experience and knowledge both locally and with international partners. This strategy, based on a thorough analysis of the local context, supports the development of a coherent and sustainable medium-term strategy. As a result, it strengthened local governance and enabled public authorities to effectively address existing and emerging challenges in their territories. The main training target groups were directors, heads of office and high-profile technicians, departments of urban management, infrastructure and urbanisation, human resources and institutional development.

The pilot projects were used as strategic tool to test the acquired competencies gained through the training and further develop them in a more practical terms, but also to further cooperation between territories and create new basis for future shared projects. In the definition of pilot projects, the involvement of actors, including external ones, was crucial to ensure direct access to transversal and specific experiences and thus to expertise.

The role of academic institutions, as part of the QH, assumed a strategic role in supporting the decentralization process by providing professional training and knowledge to local authorities on a permanent basis. On the other hand, universities had the opportunity to carry out specific research through an applied approach and to cooperate with other universities, collecting data on the field to be analysed for research progress. Moreover, they could work in close cooperation with the municipalities toward the recognition of the training curriculum at local and national level.

The EU partners benefit from the exchange actions by capitalizing on their own practices through exchanges of experience and they can strengthen their capacities by drawing inspirations from the innovations implement in foreign local territories. This mutual benefit was considered valuable to build and strengthen networks in international cooperation arena. These strategies allowed local governments to develop a specific vision of internal governance for local development, contributing to the definition of internal tools to support a local foresight strategy aimed at being prepared to anticipate and face the challenges of the digital and green transition.

4.5 Limits of the analysis

The approach used in this study has laid the foundations for future action research²⁹⁷. In fact, the main outcome of this research is an action plan based on the combination of direct field observations of the phenomenon and critical inquiry. Such action plan, to which these case studies contribute, is not a model, as it has not been tested (limit), rather it can be considered both as the result of field observation and as a preliminary, essential starting point for carrying out an action research. Based on the lessons learnt through the present study, future research should aim to empirically validate or refine the action plan.²⁹⁸

Moreover, considering the available resources for the analysis of each case-study, it was not feasible to conduct an in-depth assessment of each project dimension. Moreover, it is important to emphasise that this research does not claim to provide exhaustive evaluations of the projects selected as case studies, instead it focuses on analysing some of their most interesting peculiarities, reflecting on their weaknesses and strengths. Only the most pertinent elements were considered, delving into one or more specific dimensions related to

²⁹⁷ M. Snyder, *In the footsteps of Kurt Lewin: Practical theorizing, action research, and the psychology of social action*, Journal of Social Issues, 65(1), 225-245, 2009.

²⁹⁸ University of Newcastle, and L. Mathieson, *Synergies in Critical Reflective Practice and Science: Science as Reflection and Reflection as Science*, Journal of University Teaching and Learning Practice 13(2): 46–59, 2016. doi:[10.53761/1.13.2.4](https://doi.org/10.53761/1.13.2.4).

local governance. Each of these dimensions contributed to the development of the final action plan proposed in the following chapters.

While the limited data and information might exclude other potentially critical elements, these constraints do not undermine the present findings. Additional interviews, meetings, direct observations, and a more triangulated research design could certainly enrich the analysis. Nevertheless, the findings and the final action plan remain a credible analysis.

To enhance the rigor and validity of the study, future research should aim to address these limitations incorporating more diverse data sources, conducting longitudinal studies, and applying more rigorous triangulation techniques will provide deeper insights and validate the proposed action plan empirically.

In conclusion, this study provides a structured and reflective analysis of local governance practices, offering a preliminary action plan that serves as both a result of current observations and a guide for future empirical studies.

Chapter 5. Designing an Integrated Governance Model for local development in Twin Transition: key insights

The aim of this final chapter is to present a proposal for an integrated governance framework tailored to the challenges of the green and digital transition, developed from the synthesis and reflective elaboration of the contributions gathered from the analysis of the case studies presented in the previous chapters.

This framework aims to move beyond the straightforward application of European directives or technical innovations, by adopting an approach that is adaptable to the specific needs and characteristics of local communities. Although the green and digital transition is widely discussed across different levels, from regulatory frameworks to practical applications, and European directives provide a harmonised policy structure to guide Member States and local governments, when implemented at the local level, these frameworks often encounter socio-economic, cultural and environmental conditions that may require significant contextual adaptation. Although at European level the green and digital transition is defined and considered as a single transition package, at local level it is more difficult to make them go hand in hand, as economic interests can take precedence over social ones. A multidisciplinary approach draws on the strengths and expertise of different disciplines can combine their results more effectively, but disciplinary boundaries, and sometimes hierarchies, could remain intact. The purpose of this integrated governance framework is to provide a management strategy to local governments where diverse perspectives (academic, technical, societal) are integrated to co-create solutions tailored to local needs in a constant adaptation process to the challenges posed by the Twin Transition. Through transdisciplinarity, this framework focuses on involving all stakeholders, including local communities, businesses, civil society, and policymakers to integrate solid sources of knowledge into the decision-making process in a holistic manner. By emphasizing the co-creation of new knowledge and shared goals across sectors, it aims to meet the needs of local communities for continuous improvement of the governance system.

This proposed framework does not claim to be a fully-fledged model, as it has not been validated, rather, it is preliminary structure grounded in validated elements from the local

projects examined in the case studies. As such, it serves as a starting point upon which an ad hoc model can be constructed, one that respects the specificities of a given territory, with a particular focus on socio-cultural factors. Addressing these dimensions is crucial to ensure that the green and digital transition is inclusive, adaptable and responsive to the social realities of local communities.

This framework is not intended as a set of tools for merely adapting to European directives; such resources are already widely available to local authorities in the form of handbooks and toolkits. Instead, it aims to reverse the perspective by equipping local actors with a tool to prioritize the needs of their communities while pursuing the objectives of the green and digital transition. The ultimate goal is to place community interests at the forefront, ensuring a transition that aligns with local priorities rather than enforcing change at any cost.

The research questions guiding this investigation have been the following ones:

1. How can SSHs contribute to promoting an integrated governance model for local development embedding twin digital and green transition?
2. What is the role of project management in fostering the contribution of SSH to local development?

The framework presented here is the result of a reflective process based on the data collected to address these research questions, attempting to provide answers without losing sight of the complexity of the context in which the analysis is embedded.

SSHs have served as both as an understanding approach and a guiding compass to enable a social interpretation of local territorial peculiarities. Through SSHs, the essential elements of the framework have been identified, ensuring that a human-centered approach remains an integral and cross-cutting aspect of the Twin Transition process. Project management has been considered as an instrumental and interpretative tool which serves both as a structured methodology that facilitates the effective design and implementation of local development initiatives, and as a lens through which the specific needs and dynamics of each local context can be integrated into the green and digital transition process, ensuring efficiency, effectiveness, adaptability and inclusion.

The framework proposed in this chapter aims to support local governance processes by adopting an integrated local perspective, with the primary goal of providing a community-led tool to local innovators. This approach proposes a reversal of the traditional perspective

of local governance actions, offering cognitive resources that can enhance local governments' transition strategies. It enables local actors to interpret EU demands through a local lens, without losing focus on local priorities. Indeed, it is becoming increasingly common for local actors to use European objectives as decision-making criteria for defining local actions to be undertaken and, in doing so, there is a risk that the real needs of local communities will be minimised or not prioritised. At the same time, however, there is a trend in the opposite direction: European development policies increasingly aim at harnessing, soliciting and using the knowledge and initiative of local actors and communities.

This framework serves as an intermediary tool between local governments and the European entities that finance or regulate public interventions for the green and digital transition. Local actors need reliable knowledge and expertise to develop and sustain their own strategies for change, particularly when interacting with European stakeholders. They face diverse, complex social and economic needs, which require access to a robust network of expertise and sources of knowledge that is closely connected to local communities.

This shift in perspective introduces new methodological challenges for local decision-making, especially in the design, management, monitoring, and adaptation phases of local development initiatives that are part of a framework related to European priorities and goals.

This framework aims to provide the basis for the construction of a local governance model capable of avoiding the phenomenon of “mission drift”, whereby local actors deviate from their strategy in order to meet the expectations of supra-local funders, and instead favour a policy “drift mechanism”, i.e. ensuring that local actors use supra-local policies in an instrumental way, bending them to meet their own local needs and objectives.

The actions undertaken within the integrated model should have the final goal of achieving public value as their core objective. Public value has been described as “a multidimensional construct, a reflection of collectively expressed, politically mediated preferences consumed by the citizenry created not just through ‘outcomes’ but also through processes which may generate trust or fairness”.²⁹⁹ This means that local authorities in charge

²⁹⁹ J. O’Flynn, *From New Public Management to Public Value: paradigmatic change and managerial implications*, Australian Journal of Public Administration, vol. 66, no. 3, pp. 353–366, 2007.

of manage the governance system must seek to create value beyond the traditional service approach and to increase the efficiency of local development initiatives by investing in the best value in the longer term using a public value-based approach to PM. The definition of policy and public investments for local development requires to consider the through-life implications of projects and programs including their end-of-life transferability and adaptability potentialities. In this scenario, public value is used both as an aid to judgment by local governments when deciding which initiatives to undertake, as an assessment tool to gauge the success of local development strategies and related investments.

5.1 Integrated local governance framework: essential components and elements

The process of identifying the main components and elements of the integrated local governance framework is guided by the place-based approach outlined in Chapter 1 and the insights collected from the analysis of the case studies in Chapter 3 and Chapter 4. The aim is to provide strategic pillars that can be used to work on and reinforce the uniqueness of each local area.

Given that the transition poses unprecedented challenges to local governance and that the context could highly drives and impact governance's initiatives, it is likely that governance structures in the era of green and digital transition will necessarily operate in complex, often difficult contexts. Therefore, the likelihood of success - understood as the relevance, efficiency and effectiveness of governance's initiatives - seems to be directly proportional to the expertise and commitment invested in thoroughly addressing these local contexts, recognizing the demanding nature of such interventions.³⁰⁰

These efforts demand the commitment of numerous actors, making the formation of robust networks a cornerstone of the integrated governance model.

³⁰⁰ A. Stroppiana, *Progettare in contesti difficili: una nuova lettura del quadro logico*, Milano: F. Angeli, 2009.

As the analysis of the case studies has shown, there is one constant element common to all case studies and that is the importance attached to the need to assign precise roles to all the stakeholders involved from the initial design phase of a given initiative. As the SME4SMARTCITIES project has shown, an initial clear mapping of stakeholders is necessary, otherwise it is not possible to follow a coherent process, with the risk of excluding valuable collaborations, duplicate efforts and neglect useful expertise for the purposes of a local initiative. All case studies analysed provide interesting evidence, highlighting the potential of involving multiple actors in the governance system, and the risks of underestimating or ignoring significant contributions. For this reason, the quadruple helix model has been chosen as the most efficient model able to provide a solid and effective foundation for achieving the desired local development, fostering innovation, and identifying new paths forward by establishing a structured coalition of complementary actors at the local level.

In order to ensure optimal coordination between QH actors, the social sciences and humanities basin are used as a glue serving as a transversal constant to support the actions of each actor within the QH that underpins integrated local governance. SSHs' sensibility ensures that all stakeholders work within a human-centered framework and that human-centered values are consistently upheld and applied within local development initiatives too, through a responsibility management within the governance framework. Integrated local governance provides a structured mechanism for collaboration, enabling all stakeholders in the quadruple helix model to pursue their own interests in coordination with those of others, guided by shared values for the common good. So, SSHs serves as both the glue and guarantor, helping to maintain a balanced alignment of these interests.

Using SSHs as a framework to interpret and guide the actions of QH's stakeholders is part of a transdisciplinary research mechanism that goes beyond traditional disciplinary boundaries to address complex issues. By integrating both scientific and practical knowledge and by actively involving stakeholders from outside the academic community, the aim is to create a complex structural system of interdependent relationships to solve complex problems. The challenges posed by the Twin Transition cannot be effectively tackled from a single disciplinary perspective. Only a process of constant dialogue between scientific research, the expertise of diverse stakeholders, and the needs of local communities can generate new knowledge, and thus fostering innovation and local development.

This mechanism includes:

- Co-production of knowledge: involving different stakeholders in society to build a common understanding of the challenges posed by the Twin Transition;
- Solutions-oriented focus: the results of the SSHs are oriented towards the dynamics of the real world and are used for synergetic cooperation with other QH's actors in order to develop practical solutions;
- Integration of knowledge and expertise: working together combining different methodologies and perspectives to develop a foresight strategy to be ready to explore and understand future scenarios.

Current mechanisms for designing policies and projects and evaluating outcomes often fail to ensure that the right experts and skills are systematically involved in implementing a human-centered approach. By involving stakeholders at various levels, this transdisciplinary approach helps to ensure that solutions are inclusive, context-sensitive, and more likely to be embraced by the local communities they are intended to benefit.

While the integration of SSHs can be approached as a horizontal element, it is also essential to clarify the specific types of scientific contributions and perspectives expected from these disciplines.³⁰¹ To facilitate this process, and without underestimating the complexity of the Twin Transition context in which integrated governance operates, the contribution of SSHs to each stakeholder of the QH model (public authorities, industry, academia, and civil society) has been considered. Indeed, the substantial role of SSHs is to act as catalysts to synthesize the contributions that each actor in the QH can make to the governance process. This cross-cutting role of SSHs creates a holistic framework of bottom-up synergies that puts all actors on the same level and makes their contribution equally necessary.

The macro-areas of SSH's contributions have been classify as follows:

- Process-to-Policy Translation

³⁰¹ J. Stier, P. Dobers, *Quadruple Helix Co-creation in SSH – Experiences, Considerations, Lessons Learned*, Dalarna University, Sweden Södertörn University, Sweden, 2017.
https://docs.wixstatic.com/ugd/35d470_c5d9991a014944869436acca08120fab.pdf?index=true

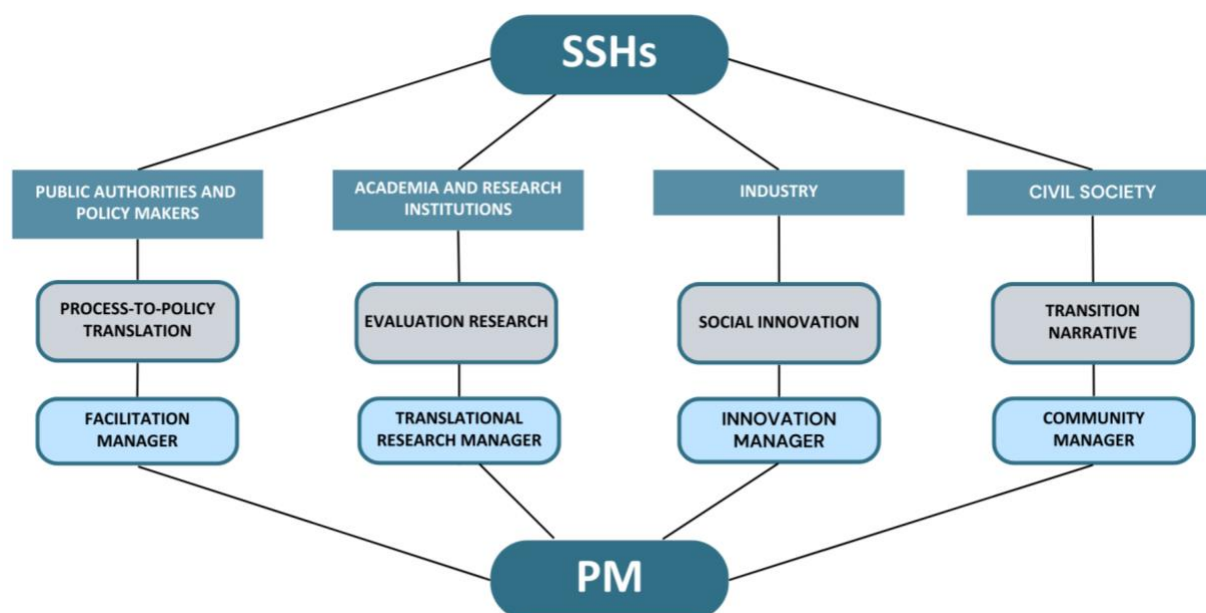
- Evaluation Research
- Social Innovation
- Transition Narrative

Each identified contribution is linked to project management in order to ensure the effective application of SSHs' results. Indeed, each SSHs' contribution corresponds to a management process that requires structured methods and specific techniques to be implemented within the broader governance framework. PM acts as facilitation and mediation tool to bring knowledge and expertise to the local level. It plays a bridging, facilitating and brokering role with a citizen end-user perspective where the community's needs remain central across all the phases.

As all case studies outlined, in particular REBUILD and MUDAR, the presence of specific project management figures is essential, both to build trust between stakeholders and to ensure and facilitate the smooth running of the operational phases. To this aim, key PM figures have been introduced for each dimension and they are called upon to work together to ensure that the dimensions dialogue with each other and coordinate their activities. As found through the case studies analysis, the human dimension plays a predominant role in the management of the stakeholders' network, on which the effectiveness of the actions implemented and the sustainability in the long term of the results obtained depend. For this reason, the PM figures introduced have also the role of facilitating and mediating human relations at different levels for an effective stakeholder management, that is the process designed to identify, analyse and develop strategies to improve the relationship with the various stakeholders. Understanding the needs, issues and motivations of all stakeholders and developing different strategies to win their support are strategic elements to elevate the governance framework and its performance over time. The success or failure of a local development initiative is heavily shaped by the expectations and perceptions of its stakeholders and relies on the ability and commitment of project managers to effectively manage these relationships.

This direct connection between SSHs and PM has the aim of generating social return on investment within the governance framework and funded projects for local development, and to create solid basis for a sense-making approach to local governance.

Figure 5.1. SSHs and PM: interrelations



Source: elaboration of the Author

In relation to public authorities and policy makers, SSHs are called upon to collect and analyse data to assess the specificities of the local context and its capacity to respond to the pressing changes of the Twin Transition. Social scientists are actively involved in the processes of experimentation, evaluation and re-planning of local Twin Transition policies and they are called to integrate in the analysis qualitative and quantitative information about citizens' opinions, attitudes (beliefs, fears, desires), and behaviour, going beyond data related to digital innovation and environment. This type of data is not additional but should be systematically incorporated into the pathway leading from the process (of experimentation, evaluation, and reprogramming) to the actual policy (implementation phase). This data integration should follow a specific process in such a way as to make the governance decision-making process 1) more relevant to people's needs; 2) more understood by people by creating awareness and sensitivity; 3) more manageable. In this framework, this mechanism is aimed at supporting

the translation of analysed data into coherent political initiatives and public policies (*Process-To-Policy Translation*). To this end, the figure of a *Facilitation Manager* coming from the local government structure could enable an assessment of the capacity of the governance system to take up research results by facilitating the process of feeding them back into society through targeted policies and actions. The Facilitation Manager is called to facilitate the dialogue with the local community opening specific spaces of citizens' participation and co-creation.

The role of SSHs in mediating the contribution of science and research institutions concerns the process of making visible social research findings by translating them into concrete actions. *Evaluation Research* is the most evident scientific field of SSHs in which research findings can be translated into recommendations for new strategic actions to be taken. The evaluation of change outcomes and a robust assessment of the impact of interventions allow the exploration of different meanings attributed to research findings and the construction of a shared sense (*sense-making*). Moreover, the evaluation allows to see things that can be hardly noticeable from the inside, providing an external point of view to go deeper and to gain well-informed unbiased representation of different perspectives and voices from the stakeholders. This dimension provides an opportunity to stop and reflect and ensure the sustainability of governance actions by providing a permanent monitoring mechanism to adapt actions to the current status of the local territory. The introduction of a *Translational Research Manager* from academia and research fields can strengthen this process by supporting the translation of evaluation research findings into strategic initiatives aimed at local development. This figure is familiar with the most appropriate mechanisms for bridging the field of governance with the world of research, and with the appropriate tools for making evaluation results comprehensible and usable for reprogramming governance.

When it comes to industry (business), the value of SSHs' research is often underestimated, but SSHs can play the most important role in promoting *Social Innovation*. The latter is about finding new solutions and new methodologies to social problems as a key to developing innovative initiatives in social policies and services. The focus is on collective needs as a starting point for maximising human and environmental well-being according to practices of equity and social justice, and to navigate place specificities to shape socio-technical system through transformative activities. These initiatives are crucial to respond to

the growing demand for social care, aiming at a structural impact for a relevant and long-term transformation.³⁰² The figure of an *Innovation Manager* from the business field can support the re-organisation of productive and social relations posing a prominent attention to the human dimension and individuals (relational capital), trying to distribute this complexity to local business and local consumers, in order to generate shared values for the sustainable transformation of the society.

In relation to civil society, the SSHs take on the task of interpreting the complexities of transition to agree on common goals through a common understanding. This is possible by promoting a new and understandable narrative specifically aimed at citizenship. The *Transition Narrative* facilitates the engagement of local communities in local development processes. In this regard, the introduction of a *Community Manager* can promote the engagement of citizens through specific participative strategies aimed at making them active agents of change and not just end users and beneficiaries. The Community Manager could come from a local district committee, civic group or association and acts as a direct spokesperson for citizens' demands bringing citizens' views into the decision-making process. Through the introduction of this figure is also possible to protect participatory governance processes from misleading narratives for private gain.

The introduction of these figures is the strategic asset of this framework. Facilitation Manager, Translational Research Manager, Innovation Manager, and Community Manager serve as *liaison managers* in their respective role between the local governance system and the stakeholders of the QH. They have a dual role: on the one hand, they act as direct interlocutors and spokespersons for the interests of the stakeholders of the area they come from; on the other hand, they facilitate a horizontal co-creation process that empowers all stakeholders to actively contribute to local development as agents of change. Moreover, as noted in the analysis of REBUILD and SME4SMARTCITIES case studies, *liaison managers* can play a crucial role in managing cultural barriers that can have a significant impact within the

³⁰² R. Murray, J. Caulier Grice, and G. Mulgan, *Il Libro Bianco Sulla Innovazione Sociale. Come Progettare, Sviluppare e Far Crescere l'innovazione Sociale*, eds. A. Giordano and A. Arvidsson, NESTA National Endowment for Science Technology and the Arts, 2011.

governance system or between it and external stakeholders. In this sense, the managers are called upon to bring different worlds and needs into dialogue with great sensitivity and care for human relations.

The co-creation process is complex and rarely happens spontaneously. Collaboration and co-creation are often hindered by differences in organizational culture, operational logic, and ideological disagreements among the actors involved. This structure provides the local governance system with access to knowledge, data, expertise, and resources that are not automatically internalised within the system. Additionally, this mechanism is based on integrated relationships: each level within the governance system communicates with the others, creating a platform of dialogue and a network of interrelated processes and outcomes. None of the levels can operate independently or rely solely on unidirectional actions. These interdependencies enhance the effectiveness of strategies aimed at adapting to territorial specificities, meeting social needs, and implementing the changes necessary to harness the potential of the Twin Transition mobilising different competences.

These mutual relationships involve parties that can be influenced by differences in power, status, resources, and motivation to cooperate. For this reason, a balance of give-and-take should be assured by establishing a sense of trust, respect and mutuality as well as a set of shared meanings.³⁰³ All the parties should feel to be involved in symmetrical relationships that can facilitate co-creation and impact-driven actions. In doing so, the stakeholders can explore a mindset of risk-taking and pro-activeness at the same time within the network as accepting responsibility. Such relationships take time to develop and must be nurtured over time.

The knowledge and data generated by the governance network of stakeholders converges in project management. PM is intended as the application of knowledge, professional and personal skills, methods, techniques and tools to project management

³⁰³ D.B. Pedersen, J. F. Grønvad, R. Hvidtfeldt, *Analysing co-creation in theory and in practice - A systemic review of the SSH impact literature*, Aalborg University, Denmark, 2017.
https://docs.wixstatic.com/ugd/35d470_1d36ad453b884646899f6196b45cac7e.pdf

activities in order to meet the requirements of a certain action, project or initiative within established goals³⁰⁴ of time, budget and scope.³⁰⁵

A set of tools and structured procedures is developed to integrate the efforts gathered into a specific process aimed at promoting local development. This consistent intersection with project management ensures the natural involvement of all QH actors in the design, implementation, monitoring and evaluation phases of the actions that are undertaken. The strength of this framework lies in its ability to guarantee the sustainability of the results obtained. The flow of interrelations facilitates a permanent monitoring mechanism from the beginning to the end of a certain action. Considering the challenging demands of the Twin Transition and the lack of competence on the part of some local governance bodies to deal with certain challenges, the rigorous monitoring of each actor allows for flexibility and a strong capacity of adaptability. This shared responsibility strengthens the sustainability of local actions by fostering the impact of the activities beyond their end date, the economic and financial feasibility of investing in complementary actions, the awareness and trust of civil society and the consequent motivation to support the initiatives.

In order to guarantee a permanent shared effort to improve the quality of the interventions and an effective integration of SSHs' contributions to local governance, it is used a preventive and collaborative process aimed at finding useful solutions and integrating the insights from the stakeholders to keep the initiative within the quality standards. The aim is to reproduce, at each stage, the continuous improvement cycle introduced by Deming PDCA, that is a Plan-Do-Check-Adapt scheme, where:

- *Plan* is the phase in which scope, objectives, and strategies of a certain initiative are identified.
- *Do* is the phase in which the scope is assigned to specific actors in charge of implementing the plan.

³⁰⁴ E. Mastrofini, *Guida alle conoscenze di gestione di progetti. Griglia di riferimento per i responsabili di progetto e per gli altri ruoli professionali di project management*, FrancoAngeli, Milano, 7^{ed}, 2024.

³⁰⁵ Scope is the description of the all the work that needs to be accomplished to deliver a result (product or service). Scope also defines the boundaries of the project and defines what the project will deliver and what it will not deliver.

- *Check* is the phase where the scope is verified by ensuring that all the work is done according to the specifications.
- *Adapt* phase allows for modification to the scope according to the approved scope changes between the stakeholders.

After experimenting and adapting, stakeholders should be able to re-plan actions in a continuous cycle of learning and improvement with innovative approaches, that means rethinking narratives and, if necessary, objectives, recognising collective resources and implementing new actions. This flexible mechanism will ensure that the system is able to respond nimbly to the challenges of the Twin Transition without losing sight of the main objective, which is local development for the benefit of the local community, rather than mere technical and administrative adaptation to EU rules. These four steps can be repeated over and over as part of a never-ending cycle of continual learning and improvement.

According to this mechanism, an integrated local governance model developed from this framework can be considered successful if:

- It adopts a proximity perspective, i.e. if every action is calibrated from the point of view of local actors;
- It increases the space for cooperation between different actors and representatives of different social groups in the local community;
- It triggers processes of knowledge exchange (*distributed social learning*);
- It designs actions aimed at local development by taking into account, from time to time, the changes in the local area with a view to forecasting causal hypotheses (*foresight culture*);
- it provides for a structured monitoring mechanism by the actors involved in order to be able to redirect actions if necessary;
- It increases the ability to make the results of actions visible to local communities (*restitution*);
- It increases public value creation within the local community.

A successful framework develops a strong capacity for envisioning, conceived as a forward-looking, deliberative process aimed at exploring and shaping the future in response

to evolving needs and contexts, especially in complex and uncertain circumstances such as those that characterise the Twin Transition. It involves the continuous development and application of actionable knowledge by different actors, fostering anticipation, evaluation, and learning throughout the decision-making process. This dynamic process engages individuals, organisations, administrations, and innovation communities, using a range of skills competencies, methods, and practices to generate collectively created knowledge at each stage. As a participatory process, it actively involves stakeholders in contributing their collective intelligence and diverse perspectives, enabling the co-creation of a shared vision for the future.

Starting from this framework, it is possible to develop transition pathways and governance roadmaps to better understand what needs to change and what roles, competences and responsibilities may be needed to achieve local development in the Twin Transition era.

5.2 Defining the roles and responsibilities of different stakeholders within the model

To define the role of each QH stakeholder in each phase of the PDCA, we have used the RACI matrix, where RACI stands for Responsible, Accountable, Consult, and Inform. In this way, each stakeholder's position is known, and the roles can be clearly defined as everyone has some process role in each phase, with specific responsibilities, authority and accountability. This guarantees to avoid future conflicts and misunderstandings and to bridge SSH's contributions and stakeholders' competencies directly into the design, implementation, monitoring and evaluations phases of the local governance process.

In detail:

- *Responsible* (R): is the stakeholder who will complete the task or activity. The R is responsible for execution;
- *Accountable* (A): is the stakeholder with authority and veto power. The A is accountable for the completion of each task;

- *Consult (C)*: the consulting role is typically assigned to subject matter experts that must be consulted prior to a final decision or action. This is a two-way communication, in which input and expertise from the consult role is required;
- *Inform (I)*: is the stakeholder who needs to be informed and up to date on the progress of a certain action. This stakeholder may be required to take action as a result of the outcome; however, this is mostly a one-way communication.

For each dimension, specific roles have been assigned to each QH's stakeholder according to coherent logic based on the analysis of the case studies in the previous chapter and the insights collected. In the scheme, the *liaison managers* must guarantee the balance of "participatory power" in terms of decision-making contribution of each stakeholder, on the one hand, and safeguarded interests of each stakeholder on the other.

The presence of two mediators is strategic to bridge the typical gaps of an exclusively top-down or bottom-up process. Through two-way communication and interaction, a mechanism of interdependence and co-responsibility is fostered, which puts the governance system and the local community on an efficient operational footing. Indeed, the Facilitation Manager, from the local authority, enhances a top-down dialogue, while the Community Manager, from the local community, supports a bottom-up interaction.

The Innovation Manager is commissioned to promote social innovation by coordinating companies in the design and/or financing of innovative solutions to promote local development, using internal or external funds. The Translational Research Manager is in charge of coordinating SSH's experts who act as evaluators of the governance operations and their outcomes. By studying and analysing local context, they are called to be a sort of advisory group in order to align the actions to local needs and changes over time.

This approach is aimed at having all the expertise and inputs of each stakeholder at each stage of the process, ensuring that actions are planned, and possibly replanned, in a participatory way. Moreover, it makes the SSH component a compulsory requirement for an effective local governance structure which is supported and assessed with the contribution of experts with the appropriate knowledge.

Table 5.1. Distribution of QH stakeholders' roles and responsibilities

	LIASON MANAGER	QH STAKEHOLDERS	(RE) PLAN	DO	CHECK	ADAPT
PROCESS-TO-POLICY TRANSLATION	FACILITATION MANAGER	Public Authorities and policy Makers	A/R	R	A	R
		Academia and Research Institutions	R	A	R	A
		Industry	C	I	C	I
		Civil society	C	I	C	I
EVALUATION RESEARCH	TRANSLATIONAL RESEARCH MANAGER	Public Authorities and policy Makers	A	A/R	A	A/R
		Academia and Research Institutions	R	R	R	R
		Industry	I	C	C	I
		Civil society	I	C	C	I
SOCIAL INNOVATION	INNOVATION MANAGER	Public Authorities and policy Makers	A	A	A	R
		Academia and Research Institutions	C	C	C	C
		Industry	R	R	R	A/R
		Civil society	C	C	C	C
TRANSITION NARRATIVE	COMMUNITY MANAGER	Public Authorities and policy Makers	A	A/R	A/R	A/R
		Academia and Research Institutions	R	R	R	R
		Industry	C	C	I	C
		Civil society	R	R	R	R

Source: elaboration of the Author

In the Process-To-Policy Translation, the public authorities are responsible for the planning phase, which aims to individualise the social spheres of interest in which the governance structure is called upon to act. This reconnaissance is based on social evidence from the local community, which intervenes as a consultant, as does industry, which is also a key consultative actor in the control phase. Academia and research institutions are responsible for the planning phase, as they are called upon to structure the context analysis and the data collection processes and the translational strategy. Based on the results of the check-phase conducted by academia and research institutions to verify if the process-to-policy translation is aligned with planned actions, public authorities are responsible for the adapt-phase to adjust their policies and initiatives accordingly.

Academia and research institutions are responsible of the planning and implementation process of the Evaluation Research, commissioned by policy makers who are accountable of this action. Research stakeholders are called to structure an evaluative process aimed at analysed change outcomes and assessing the impact of the interventions promoted

by local governance. In this case, industry and civil society act as consultants in the do-phase and in the check-phase to contribute to the evaluation by sharing information, knowledge and data. According to the final results of the evaluation, public authorities should adjust the scope of their actions to pursue an effective local development.

To promote Social Innovation, industry is responsible for designing and implementing new solutions that respond to local needs, in close collaboration with research stakeholders and civil society, who act as consultants to share evidence-based data on the social needs and transition challenges faced by local community. Public authorities are then called to use these innovative solutions as integral instruments to support actions aimed at social innovation.

Civil society actors are responsible for the plan-phase of the Transition Narrative, together with research actors, with whom they share strategies and tools to change and adapt the transition narrative to the understanding of the local community. This process requires specific methods to be applied in different social sectors, with the consultative support of industry. As one of the main protagonists of the Twin Transition, industry should also change its narrative in order to clearly communicate its efforts and the results obtained to citizens. Once citizens understand the potential of the Twin Transition, they can become active agents of change, not just passive recipients, but rather contributors capable of both receiving and shaping the positive impacts of transition. Public authorities are called upon to promote and, in turn, use these transition narratives in decision-making processes in order to gain the trust of the local community and their active involvement in the Twin Transition for local development.

The moves from local government towards civil society, academia and research institutions, and business and from social and project-based participation towards governance, creates new spaces for mainstreaming and upscaling the concept of participation to that of active citizenship. This approach links participation across political, research, social and business domains offering new opportunities to share the methods for strengthening participation across boundaries and different sectors. For instance, those who have developed participatory methods for planning, monitoring, evaluation or consultation are able to link them to the new governance agenda.

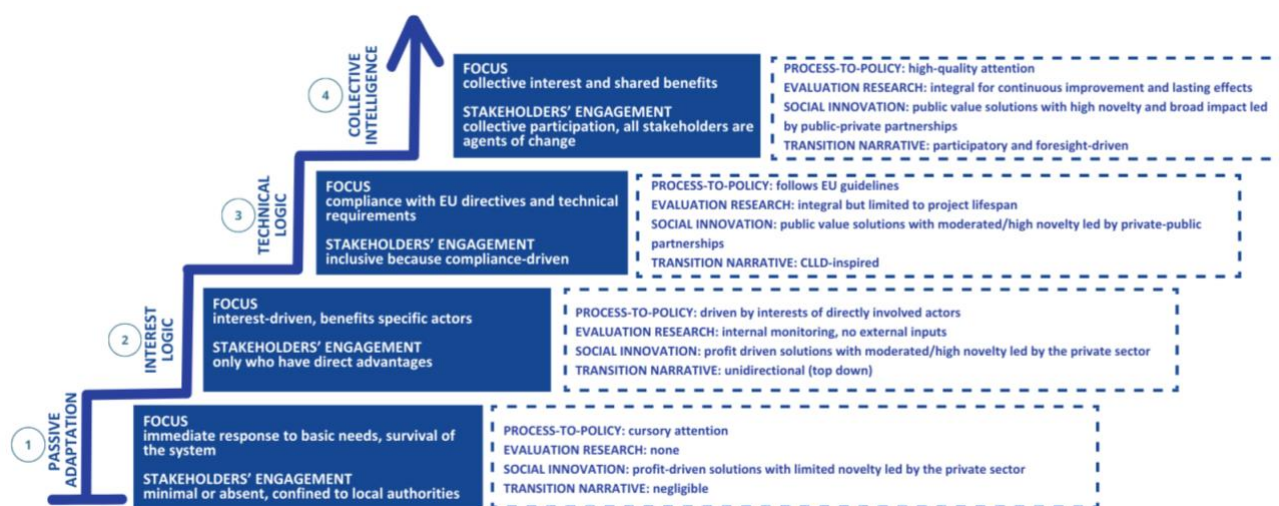
The framework proposes broad forms of engagement of the stakeholders of the society in policy formulation and decision making in local development arenas. The local level

is the best place to institutionalise these interactions as it is where the concerns of the ‘grassroots’ intersect more directly with the governance system.

As integrated governance progress is measured from lower to higher levels of stakeholder’s participation, participatory processes become increasingly complex, requiring a broader range of skills, knowledge, expertise, leaderships, and management capabilities. The issue of limited participatory skills across these levels is a crucial point to be faced to enhance integrated governance.

Starting from the roles’ distribution it is possible to construct a ladder to evaluate the extent of integration within the local governance system. The integration is assessed considering the “governance posture”, understood as the type of approach used to promote local development. Each type of “posture” corresponds to a different degree of stakeholders’ participation and consequently a different degree of governance integration, from high (4) to low (1). This scheme views the highest level of integration as the greatest capacity of the governance system to involve all stakeholders of the QH and to systemise the knowledge and expertise of each to promote local development.

Figure 5.2. Ladder of integrated local governance for local development



Source: elaboration of the author

The lowest level of integration (1) corresponds to the governance posture here defined as *passive adaptation*. In this case the governance system is not able at all to integrate the human capital at disposal, and it follows a logic of action in response to manifest needs,

excluding any action based on a logic of collective reflection. Social Innovation is not among the priorities and the local development strategy within the framework of the Twin Transition aims exclusively at the survival of the system providing basic services. In this case, local authorities pose a cursory attention to the Process-To-Policy Translation dimension and decision making is mainly confined to the local authorities' spaces. No attention is given to evaluation research, as the prevalence of an attitude of immediate reaction to current problems reduces the scope for a rational reprogramming. Social innovation becomes evident only if it is directly linked to the identified needs and is mostly related to profit-driven solutions with limited novelty led by the private sector. No particular attention is given to Transition Narrative.

When some needs become more persistent the necessity-driven approach is no longer sufficient. Over time, it may become evident that this passive governance posture is not bringing real benefits to local development resulting in a persistent inability of the system to develop adequate capacity to meet the challenges of the transition and the consequent dissatisfaction of the local community. By recognising the need for specific support for specific needs and beginning to emerge from institutional isolation, the governance system is more likely to move to the next level.

The second level of integration (2) is defined *interest logic*. In this case, the governance system still addresses manifest needs but is able to involve actors who directly benefit from the decision-making process. This governance posture does not necessarily consider the beneficiaries of a strategy as a whole but prioritizes those who can derive the most immediate advantages, even at the expense of other stakeholders. Participation efforts are driven solely by a logic of interest. At this stage, the Process-To-Policy Translation dimension is used to identify and analyse the key interests of directly involved actors. Local policies are then shaped to address the main Twin Transition challenges faced by only a limited number of stakeholders. These same actors are responsible for the monitoring process, which consists of an internal control without any other external contributions. The Social Innovation dimension is driven by a logic of interest, and the solutions created bring moderate/high novelty led by the private sector. In this case, there is a risk that initiatives, ostensibly promoted for collective purposes, may instead conceal profit-driven motives offering no real benefit to local communities due to a lack of joint planning. Transition Narrative actions are undertaken on a

unidirectional basis (top-down approach), focusing only on actions that align with the interests of involved actors, with little or no genuine effort to involve the wider community.

As the governance system matures, it becomes clear that addressing only the immediate interests of specific stakeholders leads to fragmentation and the exclusion of broader societal needs. This limited scope may hinder long-term progress and risk perpetuating inequalities within the community. Stakeholders who were initially prioritised may begin to demand more structured and equitable solutions, while those previously excluded may amplify their voices, calling for greater inclusion in decision-making processes. Recognizing these challenges, the governance system evolves by adopting a more structured, rules-based approach that aligns with external frameworks, particularly those established by higher-level authorities such as the European Union. The need to secure external funding and comply with technical requirements becomes a catalyst for the system to embrace co-design mechanisms and involve a wider array of stakeholders. This transition involves a shift in focus from short-term, interest-driven decision-making to the implementation of standardised procedures aimed at meeting broader policy objectives.

The *technical logic* governance posture corresponds to the third level of integration (3). At this stage, the success of the governance system relies mainly on the implementation of EU policies and directives. The system tries to involve all stakeholders and establish co-design mechanisms as an integral part of the compliance with European objectives and directives. However, it does not fully consider the specific needs and peculiarities of the local territory as it is strictly focused on technical procedures. The priority is to address the EU's political and technical-administrative requirements as the funder of Twin Transition, by following a top-down approach. All stakeholders are involved as part of the envisaged funding criteria for EU local development projects and not as key stakeholders of the governance system. The Process-To-Policy dimension follows the guidelines provided by the EU in order to better meet the Twin Transition's objectives and align local policies accordingly. The Evaluation Research is an integral part of the technical management required by the EU to ensure the quality of the governance, but there is no mechanism to ensure its effectiveness beyond the life of a specific initiative, nor a guaranty that adaptive strategic actions will follow the evaluation phase. The Transition Narrative dimension follows a participatory approach of a similar, if not equal, nature to the CLLD approach promoted by the EU. Through public-

private partnerships, it supports bottom-up participative strategies to translate local development objectives into concrete actions, aimed also at Social Innovation, through the expertise of several stakeholders and a specific focus on citizens' needs and engagement. While the governance system may still face challenges in fully adapting these procedures to local peculiarities, this stage marks a critical step toward creating a more inclusive and technically informed approach to local development.

Over time, the governance system begins to recognize the limitations of a rigid, compliance-driven approach focused primarily on meeting external requirements. While the *Technical Logic* level has succeeded in aligning local initiatives with broader EU policies and ensuring stakeholder involvement, it has often done so without fully considering the unique needs, strengths, and aspirations of the local territory. This top-down orientation can result in solutions that lack long-term relevance or fail to generate meaningful engagement from the community. The turning point arises when local actors, empowered by their growing experience with collaborative frameworks, start advocating for a more dynamic and context-sensitive approach. Stakeholders begin to see the value of integrating diverse perspectives and co-creating solutions that balance local needs with broader policy goals. This shift is driven by a shared recognition that sustainable development requires not just compliance but innovation, trust, and active participation at all levels.

In response, the governance system evolves toward *Collective Intelligence*, which indicates the most advanced state of integration of the governance model. In this case, the system prioritizes a form of local development based on collective interest, conceived as shared benefits, goals, and priorities arising from interconnected and interdependent interests to achieve sustainable local development. It is not merely the aggregation of individual interests but rather a cohesive alignment of diverse perspectives, needs, and contributions which co-exist to benefit all stakeholders collectively involving a deeper commitment of all. For this reason, the system is highly sensitive to the transformative power of collective participation, which addresses local needs by promoting a dynamic balance, where stakeholders' knowledge and experience dialogue and interact systematically to enhance Transition Narrative. By aligning diverse interests, and leveraging local knowledge and capabilities as strengths, this governance posture drives ongoing change and is able to achieve new equilibriums. At this stage, EU policies and directives are not the starting points,

but milestones to align local development to a broader framework with a European vision. EU directives are interpreted in the light of local needs and not vice versa, as the local territory recognises its intrinsic peculiarities as strengths and tools to be an active actor in the EU Twin Transition and not just a local beneficiary. According to this perspective, each stakeholder is an agent of change, and an attentive management of the needs and contributions of local communities is the primary pre-requisite for a high-quality Policy-To-Process Translation dimension. All stakeholders are interested in creating public value and advancing socially impactful investments at the local level, for this reason Evaluation Research is used here as the main tool for continuous improvement of the governance system. Through the collection of evaluative data from all stakeholders, this stage uses a sense-making approach to achieve improvement effects that last well beyond the duration of a single initiative and support a re-programming process of policies and procedures by enabling the governance system to adapt dynamically and build on lessons learned. By prioritizing shared responsibilities and the common good, the system establishes a participatory approach that drives ongoing innovation and progress toward transformative change demonstrating to be the most effective in promoting a human-centered approach. It leverages the potential of SSHs as an interpretative lens for understanding the local context, while employing project management as a forward-looking tool to enhance the coordination of shared responsibilities, foster a foresight-driven attitude, and pursue the common good.

Box 2. Cross-cutting issue: gender

The interviews conducted with female project managers of the case studies analysed raised various reflections related to the gender issue. It is useful to highlight them as they underline the importance of dedicating specific attention and efforts to the participation and engagement of women in local governance when creating an integrated governance model.

Participation of women in career development opportunities

The REBUILD project, with its strong focus on capacity building training for local government staff, raised an important issue related to women's participation in professional development opportunities. The cultural aspects that characterised the REBUILD project make certain dynamics specific to the Libyan context, but they can be generalised in terms of the

ease of access to training opportunities for women working in the governance system. Women often have different social roles that require specific responsibilities outside the workplace, which means that they bear a heavier burden than men when it comes to investing in their professional growth. Therefore, not only should opportunities for professional development and training be guaranteed to all without gender discrimination, but their implementation should also take into account the culture and social values of the local context. This approach would facilitate women's access to such opportunities and related participation in the governance system with the possibility of holding top positions.

Women's professional legitimization

For women, the possibility to participate in social and public life at the local governance level seems to be often restricted by the attitudes of those with more power within local authorities. Indeed, according to the PMs interviewed, the situations seem to differ based on personal sensitivity and conceptions towards the role of women in society and labour: for example, in contexts where mayors are favorable to the participation of women, women feel safe, supported and treated with dignity; on the contrary, where interest for the work done by women is not shown and their role seems "hidden", women do not feel at ease in the working context, neither legitimated to participate in public initiatives or training. The interviewees affirmed also that women with prominent public roles, or visible in the public sphere, can suffer in social relationships or be victims of acts of intimidation, public offenses and other types of attacks and violence, with the consequent probability to see reduced their personal legitimacy to act and work in a public context. Considering the social norms typical of some contexts, women may be forced to accept this condition and avoid not socially approved behaviors, so as not to damage their position.

The structure of the collective intelligence governance posture has a high potential to positively contribute to raise awareness, to empower professional women and to enhance female participation in the process of local governance development, contributing to change society's perception and foster a broader acceptance of women occupying prominent

professional positions, also mitigating reticent and concerned attitudes associated with women's visibility in the governance system.³⁰⁶

This framework of integrated local governance proposes a layered approach that provides valuable insights into the evolution of governance capacity and the potential role of collective action in promoting sustainable development in the Twin Transition era. Although the structure of the proposed system may appear complex, it is important to remember that complex challenges, like the ones posed by the Twin Transition, cannot be met with superficial answers. The peculiarity of this system lies precisely in its ability, if effectively organised, to promote rigorous governance. Rigour, which is not rigidity, makes it possible to maintain a firm, coherent and recognisable style of operation, following a logic shared by all the actors involved which can have a positive impact on any project or initiative related to local development.³⁰⁷

For further research, it could be interesting to test this scheme and adjust its elements, also considering the possibility of integrating it in local territories outside the EU or, in general, where external funding or centralised directives are less influential. Moreover, this framework could be improved by delving into how local culture, historical governance practices, or economic structures influence the feasibility of achieving the Collective Intelligence stage and, in doing so, strengthening the foresight capacity of the governance system.

³⁰⁶ An important improvement would be the change of the vocabulary around the gender issue in the professional context without putting some kind of pressure on cultural values. Training courses can trigger interesting collaborative dynamics between women officials from the various municipalities regarding the gender issue and how to promote cultural change through collaborative planning of specific training activities. One piece of evidence of such potentiality is the informal group dedicated to the gender issue within the REBUILD project born after an altercation during project activities between one of the interviewees and a male project officer. *"With the other PMs we hold brainstorming meetings to reflect together on how we can intervene and raise awareness about the gender issue in the context of work and in society in general. I propose to analyze Rebuild 1 strategies and impacts and exploit the results to make a Rebuild 2"* (PM of the Municipality of Sirte).

³⁰⁷ The concept of "rigour" associated with coherent and recognisable management within this framework was developed from the direct interview with the REBUILD project manager Stefano Rossi, who stated the following: "I learnt that to manage complex projects, relationships and activities, it is very helpful to be rigorous, not in the sense of being rigid, but in the sense of having a style and a way of making consistent decisions and following a logic that is shared with the team. Sometimes it was not my personal logic, but it was shared and I almost always found myself in it".

Conclusions

The reflection undertaken through this research has revolved around a complex question: *How can SSHs contribute to promoting an integrated governance model for local development embedding twin digital and green transition? And what is the role of project management in fostering the contribution of SSH to local development?*

The objective of the study was to develop a systemic framework of integrated governance model for local development in the Twin Transition era, based on the analysis of four case studies. Around this object of investigation, the combination of an approach and a tool has driven the analysis and provided some novelty to the dissertation: social sciences and humanities (SSHs) as an approach, and project management (PM) as a tool. This intertwining of SSHs and PM made learning, experimentation, and adjustment crucial and interesting to be applied to the Twin Transition era.

To develop the framework, the research used SSHs to interpret the needs and expectations of the potential stakeholders involved in the governance system and to guide their actions within it. By bringing into the system the perspective and contribution of different and complementary disciplines, a human-centred approach was proposed not only as a key to understanding local development phenomena, but also as a guiding principle for the work of local governance. Going beyond traditional disciplinary boundaries, the aim was to address complex issues by promoting a process that combines theoretical research and scientific evidence with practical knowledge and applied research. The PM, instead, acted as a bridge, translating research findings into actionable initiatives to be promoted at the local level. Having identified patterns and mechanisms of change through the contributions of SSHs, PM introduced technical strategies to trigger reflexive planning and adapt the governance system accordingly.

Finally, this thesis addressed the research questions through the elaboration of a framework with key elements to support an integrated local governance model aimed at local development in the Twin Transition era using all the elements and insights collected from the theoretical and applied research. The aim was to propose an adaptive, flexible framework intended as a set of tools for equipping local actors with a new vision to prioritise the needs of their communities while pursuing the objectives of the green and digital transition. The

ultimate goal was to place community interests at the forefront, ensuring a transition that aligns with local priorities rather than enforcing change at any cost.

The concept of local development has emerged as a crucial yet complex dimension of local governance within the framework of the European Union (EU). Its inherently flexible and multidisciplinary nature allows adaptation to varied territorial, social, and economic contexts, showing its capacity to adapt to changing circumstances and emerging challenges. However, this adaptability also underscores significant theoretical and practical challenges, including defining standardised approaches, evaluating impacts, and ensuring inclusive outcomes, highlighting both its potential and its limitations.

The European Union's commitment to the Twin Transition, encompassing the green and digital transformations, provided the contextual framework for the analysis within which develop an integrated local governance framework to promote local development. The concept of Twin Transition reflects the EU's ambition to lead global efforts in transforming economies and societies to address pressing climate, technological, and demographic challenges, all of which have a direct impact at the local level. The EU's policy framework embodies a cohesive vision for aligning economic growth with environmental sustainability and social inclusion. The European Green Deal stands as the EU's hallmark strategy for achieving climate neutrality by 2050, while the Digital Decade Compass outlines ambitious 2030 targets for building secure, trustworthy, and resilient digital infrastructure to mitigate risks associated with digitalisation, such as inequality, disinformation, and security threats.

Although the EU frames the two transitions as simultaneous and interlinked, the analysis underscored their distinct dynamics and challenges, particularly for local governance. While they are mutually reinforcing, they also require tailored strategies to address their unique demands. Adopting a human-centered approach, the analysis highlighted the need to balance the benefits of digitalisation and environmental sustainability with their societal implications emphasising the importance of integrating these transformations into local development strategies to foster innovation, equity, and resilience across all territories posing a particular attention on social dimension.

The study investigated the EU approach to local development examining different policies, in particular the Territorial Approach to Local Development (TALD), the Territorial Agenda 2030, and Territorial and Local Development Strategies, the Urban Agenda and Urban

Sustainable Development Strategies (SUD). These policies' framework introduces a specific definition of local development by understanding "local" not just as the designation of a particular scale but putting a specific focus on "how" and "by whom" development is promoted.

EU Cohesion Policy stands out as a cornerstone of local development and its multi-level governance model fosters collaboration among stakeholders at all levels, underscoring civil society's critical role as both a beneficiary and a driver of change. Such participatory approach makes possible that local development strategies are tailored to regional needs and grounded in the principles of place-based development and integrated territorial planning. In the 2021-2027 framework the introduction of the policy objective "Europe closer to citizens" has marked a strengthening in supporting locally-led strategies and sustainable urban development while directly addressing citizen needs. This reflects the EU's recognition that inclusive local governance is essential for achieving the Twin Transition and reducing regional disparities.

The EU approach emphasises subsidiarity, solidarity, and a place-based framework. By advocating tailored solutions, it aims to address regional disparities while fostering innovation and multi-level collaboration. However, the research has critically examined how these principles can be effectively translated into practice not to merely understand the Twin Transition as a set of technological or environmental shifts to foster local development. Moreover, tensions within the EU's sustainability agenda were addressed, particularly in relation to the risk of commodifying environmental goals at the expense of genuine local development. This is why the present research addressed these tensions through a paradigm shift that places social equity at the heart of local development policy, to ensure that local development not only drives environmental and economic progress, but also broader societal well-being and fairness.

The interplay between the Territorial Agenda 2030 and TALD provides a promising framework for achieving this balance, together with the Urban Agenda and SUD strategies, but greater emphasis on multi-level cooperation and cross-sectoral integration is necessary to ensure alignment with local needs. Tools such as the Territorial Investment (ITI) and the Community-Led Local Development (CLLD) operationalise these strategies by fostering participatory governance approaches and multi-fund coordination.

However, this study identifies gaps in their implementation, particularly in empowering local authorities to address emerging inequalities linked to the Twin Transition. Strengthening such tools with more flexible funding mechanisms and clearer guidelines for stakeholder engagement would enhance their efficacy. Indeed, the success of these strategies often depends on the ability of local authorities to mobilise diverse partnerships, integrate resources, and align with wider EU policies while remaining attuned to the specific needs of local communities. Capacity building, administrative support, and participatory governance are therefore essential for the structural transformation of local areas. The engagement of local stakeholders in decision-making processes and the equitable distribution of benefits are considered key assets to ensuring that local development serves as a catalyst for broader social and economic transformation.

The analysis highlighted the need for enhanced participatory governance, the empowerment of local authorities, and capacity-building at the local level to overcome sectoral fragmentation and foster multi-scalar collaboration among diverse stakeholders. The Twin Transition demands a systemic transformation that integrates social equity and community engagement into governance strategies. By framing local development within a human-centered approach, the results underscored the importance of equitable benefit distribution and active citizen participation as drivers of innovation, resilience, and cohesion to unlock synergies between the green and digital agendas while addressing their inherent complexities.

It is therefore important to understand the synergies and tensions within the Twin Transition and its implications for local development and to emphasise the active role of local authorities and communities in shaping a governance model that combines environmental sustainability, digital innovation, and social inclusion into an integrated framework.

Starting from the theoretical analysis of the European approach to local development, the research proposed the analysis of four different case studies: MiMurcia, SME4SMARTCITIES, REBUILD, and MUDAR.

The case studies examined have shown that the green and digital transition poses unprecedented challenges to local territories, requiring specific organisational structures, processes and skills and requiring a systemic transformation of the governance apparatus. Achieving a systemic transformation requires critical mass and coordinated efforts for action

in order to be ready to take different scenarios into account to provide better decision-making. However, the traditional compartmentalized structure of local administrations often clashes with the growing need for integrated and prompt responses to the interconnected challenges faced. Cultural barriers within public administrations can obstruct the essential collaborative efforts. These barriers include fragmented process ownership, difficulties in information sharing, lack of specific knowledge and expertise, competition over resources, lack of mutual trust, fears of losing authority, and minimal incentives to foster cooperation.

The MiMurcia and SME4SMARTCITIES projects were analysed to individuate strategic approaches in local governance to leverage the smart city initiative and to discover how smart city can contribute to promote local development. The interdisciplinary frameworks used in these projects and the contributions of different stakeholders have highlighted the potential of a human-centred approach in a smart city context to foster local development, without compromising the well-being of local communities by focusing solely on digital transformation. These initiatives underscored the importance of collaborative governance models in smart cities initiatives, engaging multiple stakeholders, specifically the ones of the quadruple helix model (QHM), public authorities and policy makers, academia and research institutions, industry and business, and civil society. The specific role of enterprises proved to be crucial in providing evidence-oriented support sharing technological knowledge and expertise. This type of collaboration has also proved beneficial for companies, which, with access to citizens' data and the support of local authorities, can boost their internal growth by designing and testing new technological solutions contributing to local development.

From the analysis of the strategies used to manage the data collected on citizens' needs, behaviours and expectations, it emerged that considering citizens as the main reference users and primary beneficiaries of tangible and intangible results can better validate participatory mechanisms for co-creation processes. Particular attention should be paid to human-centred values and individual rights that guarantee data ownership, a democratic system of data governance and the redistribution of the value created. In this way, the smart city initiative can be a valid tool for promoting social acceptance of the Twin Transition potential and for implementing an integrated governance model aimed at sustainable local development. The human-centered approach was also identified as strategic to anticipate social needs through a 'proactive data-driven service delivery' approach and to promote a

participatory urban design process through digital technologies, concretely supporting the exercise of the right to the city in the local context.

The most important insight from these case studies on smart city initiatives is the proposal of the Public-Private-People-Partnership (4P) approach to involve local communities ("people") in partnerships alongside public and private actors. The case studies demonstrated that this approach can place citizens at the centre of an integral decision-making and project management process, creating a network of interdependent relationships. This could empower the right to the smart city of the citizens by involving citizens' associations or other representative bodies in the design, testing and monitoring phases of innovative solutions. The 4P approach also underlined how this mechanism can foster a collaborative arrangement that could motivate all stakeholders to work together towards common goals with shared responsibility within the local governance framework.

The REBUILD and MUDAR projects were analysed to explore the potential role of Decentralised Development Cooperation (DDC) in strengthening local governance. The case studies provided different perspectives on local development, projecting local governance into an international context of decentralised cooperation, but both identified knowledge exchange as a promising tool to support institutional capacity building and the overall development of the local governance system. The evaluation of the projects showed that, through effective management of international partnerships and communities of practice, it is possible to trigger virtuous mechanisms of mutual support and learning. Indeed, international partnerships can provide useful human and financial resources to strengthen the governance system, and the community of practice initiative can multiply the results, thereby increasing the impact of local development policies.

The other side of the DDC showed the negative impact that funding limitations, lack of coordination among stakeholders, and logistical constraints can obstacle positive results in the long-term. These challenges suggested the need for adaptive and flexible strategies to be adapted to local contexts, together with the introduction of specific liaison figures to manage potential conflicts and cultural misunderstandings. The integration of a human-centred approach through the implementation of specific community-led strategies in the management process of the projects was identified as a strategic asset to strengthen trust and to make the efforts of the local governance visible in order to empower citizens as potential

active agents of change. In this endeavour, both projects witnessed how local authorities alone could not exploit the full potential of decentralised cooperation. A network of stakeholders is the key to success in identifying the most appropriate local vision to support the institutional capacity to implement a foresight strategy aimed at being prepared to anticipate and address the challenges of the Twin Transition. In these two case studies, the role of universities in supporting local authorities by providing specific knowledge and expertise was central. Highlighting the huge potential for universities and research institutions to contribute to local development has expanded the network of stakeholders on which a local governance model should rely to unlock its full potential. This form of cooperation can be considered as a kind of return on investment: academic institutions, as part of the QH, assume a strategic role in supporting the decentralisation process by providing professional training and knowledge to local authorities on a permanent basis; on the other hand, universities have the opportunity to carry out specific research through an applied approach collecting data for the progress of the research.

From the synthesis and reflective elaboration of the contributions gathered from the theoretical analysis and the exploration of the case studies, it was possible to elaborate an integrated governance framework for local development tailored to the challenges of the green and digital transitions. By leveraging SSHs as a guiding lens and PM as both a methodology and interpretative tool, the framework ensures inclusivity, and effectiveness, providing a management strategy tool to local governments where diverse perspectives (academic, technical, societal) are integrated to co-create solutions in a constant adaptation process. SSHs supported the identification of the main components and elements of the integrated local governance framework, and their sensibility ensures that a human-centered approach remains as an integral and cross-cutting aspect through a responsibility management within the governance framework. PM was used as a pivotal instrumental and interpretative tool to translate SSHs' contributions into actionable strategies aimed at facilitating the effective design and implementation of local development initiatives. It also acts as a lens through which the specific needs and dynamics of each local context can be integrated into the green and digital transition process. Playing a bridging, facilitating and brokering role, it guarantees an active engagement of all stakeholders throughout the governance process using specific participatory mechanisms.

It does not claim to be a real model, as it has not been validated, but rather a starting point from which an ad hoc model can be constructed that respects the specificities of a given territory, with particular emphasis on socio-cultural factors. It advocates for a shift in perspective, enabling local actors to interpret EU policies through a local lens, minimizing "mission drift" while enhancing the ability to adapt supra-local priorities to local realities. For this purpose, the framework fosters co-creation, multi-stakeholder involvement, and knowledge integration, with public value's generation as the core objective.

From the analysis, it emerged that local actors need reliable knowledge and expertise to develop and sustain their own strategies for change as they face diverse, complex social and economic needs, which require access to a robust governance network. The Quadruple Helix (QH) model has been chosen as the most efficient in guaranteeing the integration of solid sources of knowledge into the decision-making process in a holistic manner. Indeed, the collaboration among public authorities, industry, academia, and civil society can foster the co-production of knowledge, solutions-oriented focus, and integration of expertise to address the complexities of the Twin Transition.

The SSHs helped in synthesizing the contributions that each actor of the QH can make to the governance process to create a holistic framework of bottom-up synergies that puts all actors on the same level and makes their contribution equally necessary. The macro-areas of SSH's contributions have been classified as Process-to-Policy Translation, Evaluation Research, Social Innovation, and Transition Narrative. PM acts as facilitation and mediation tool to bring knowledge and expertise to the local level. To this aim, the framework introduced PM figures (Facilitation Manager, Translational Research Manager, Innovation Manager, and Community Manager) as a strategic asset in order to facilitate and mediate human relations at different levels. Serving as *liaison managers* in their respective role between the local governance system and the stakeholders of the QH, they act as direct interlocutors and spokespersons for the interests of the stakeholders of the area they come from, they facilitate a horizontal co-creation process that empowers all stakeholders to actively contribute to local development as agents of change, and they are called to manage potential cultural barriers. This structure provides the local governance system with access to knowledge, data, expertise, and resources that are not automatically internalised within the system creating a network of

interdependence to harness the potential of the Twin Transition mobilising different competences.

This direct connection between SSHs and PM has the aim of generating social return on investment within the governance framework and funded projects for local development, and to create solid basis for a sense-making approach to local governance. To keep the governance performance within the quality standards, the framework proposes a set of stages for a continuous learning and improvement cycle introduced by Deming PDCA, that is a Plan-Do-Check-Adapt scheme. For each phase, specific roles and responsibilities have been assigned to the QH actors using the RACI matrix (Responsible, Accountable, Consult, and Inform) to interpret the insights collected from the case studies. The liaison managers are called to balance the power and safeguard the interests of the stakeholders bridging the typical gaps of an exclusively top-down or bottom-up process. A mechanism of interdependence and co-responsibility is fostered, which puts the governance system and the local community on an efficient operational footing. This participatory and integrated approach lays a solid foundation for navigating the complexities of the green and digital transitions while driving sustainable local development.

Through the elaboration of a Ladder of Integrated Local Governance, the thesis proposed a scheme able to evaluate the extend of integration of the governance model considering the level of stakeholders' participation as the main criteria. Moving from less integrated stage to the highest one (1. passive adaptation; 2. interest logic; 3. technical logic; 4. collective intelligence), the model highlights how governance systems need to move from addressing basic needs through profit-driven solutions and a logic of mere interest or compliance with EU directives to fostering a dynamic, participatory and innovation-driven approach based on collective intelligence. The highest level of integration demonstrates the ability of a governance system to engage all stakeholders of the QH systemising diverse knowledge, expertise and perspectives to effectively promote local development. Crucially, this evolution requires not only technical compliance with external frameworks, such as EU policies, but also the ability to adapt these frameworks to local needs and strengths. Collective intelligence represents the pinnacle of this integration where stakeholders jointly define priorities, share responsibilities and align efforts to create public value built on the transformative power of collective participation. By prioritising human-centered approaches,

promoting transformative innovation, and ensuring continuous evaluation, this governance posture effectively addresses the complexities of the twin green and digital transitions. These combined elements foster a foresight-driven attitude, enabling the governance system to anticipate challenges, adapt proactively, and work toward the common good. The framework's unique strength lies in its ability, when well-organised, to foster rigorous yet adaptable governance based on participatory foresight.

This study has established a foundation for future action research by developing an integrated local governance framework that combines field observations with critical inquiry. While the study's scope may have left out other important aspects, this limitation does not diminish the reliability of the findings. Instead, it serves as both a synthesis of observed findings and an initial framework for further action research. Additional methods, such as more interviews, direct observations, and a triangulated research design, could strengthen the analysis. Building on insights from this study, future research should aim to empirically validate or refine the framework, in a continuous attempt of generating an ongoing process to make it better, more understandable and affordable for local communities. Future research could explore practical applications of this framework, assessing its adaptability to local contexts beyond the EU or in regions where external funding and centralised directives play a less significant role. Additionally, it would be valuable to examine how factors such as local culture, historical governance practices, or economic conditions influence the potential to achieve the "collective Intelligence" stage. Investigating these aspects could further refine the framework, enhancing its ability to build governance systems with stronger foresight capacity, capable of navigating the complexities of sustainable development and the Twin Transition effectively.

In sum, this thesis has demonstrated that SSHs' perspectives can be a strategic lens of interpretation of these changing and challenging times to exploiting the potentialities of the Twin Transition always nurturing a critical understanding on social needs and values. The complementary supportive contribution of farsighted and visionary PM strategies is the missing piece to trigger and facilitate a translational mechanism able to analyse the context, planning effectively, monitoring and evaluating carefully, readjusting strategies according to changes in society and re-planning, again, and again if necessary. Local governance is an alive system in a continuous cycle of social, economic and political transformation and it needs to

be empowered with living strategies. The challenges posed by the green and digital transition are constantly changing, social needs are changing with them and vice versa, which is why this framework should remain a living thing, a living system for navigating the uncertainty, studying and understanding the present with an eye to the near future. Is it complex? Yes, but there are no simple solutions to complex phenomena.

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