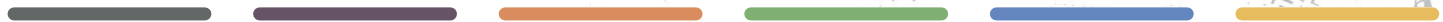


VLC SYNERGIC URBAN INFRA STRUCTURES

VALENCIA SUMMER SCHOOL ON SYNERGIC URBAN INFRASTRUCTURES



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TABLE OF CONTENTS

SECTION 0_FOREWORD	7
SECTION 1_INTRODUCTION	13
• Chapter 1.1. The VLC SUMMER SCHOOL on synergic urban infrastructures Juanjo Galan Polytechnic University of Valencia	15
SECTION 2_URBAN INFRASTRUCTURES: ANALYSIS AND TOOLBOXES	37
• Chapter 2.1. GREEN INFRASTRUCTURES: PRINCIPLES, DIAGNOSIS AND TOOLBOX IN VALENCIA Stefano Salata and Carolina Pacchi Politecnico di Milano	39
• Chapter 2.2. BLUE INFRASTRUCTURES: PRINCIPLES, DIAGNOSIS AND TOOLBOX IN VALENCIA Maciej Lasocki Warsaw University of Technology	53
• Chapter 2.3. SOCIAL INFRASTRUCTURE: PRINCIPLES, DIAGNOSIS AND TOOLBOX IN VALENCIA Mrudhula Koshy Norwegian University of Science and Technology	61
• Chapter 2.4. HOUSING INFRASTRUCTURE: PRINCIPLES, DIAGNOSIS AND TOOLBOX IN VALENCIA Christoph Wessling and Alena Cohrs Technical University of Berlin	67
• Chapter 2.5. MOBILITY INFRASTRUCTURES: PRINCIPLES, DIAGNOSIS AND TOOLBOX IN VALENCIA Christian Larisch and Fabio Bayro Kaiser RWTH Aachen University	73
• Chapter 2.6. ENERGY INFRASTRUCTURES: PRINCIPLES, DIAGNOSIS AND TOOLBOX IN VALENCIA Juanjo Galan Polytechnic University of Valencia.	85

SECTION 3 _ SYNERGY METHODS & TOOLS IN URBAN PLANNING **95**

- **Chapter 3.1. SYNERGY TOOLS: DETECTING, ASSESSING, AND INCREASING SYNERGIES BETWEEN URBAN INFRASTRUCTURES** **97**
Juanjo Galan | Polytechnic University of Valencia. Maciej Lasocki and Kinga Zinowiec-Cieplik | Warsaw University of Technology. Stefano Salata | Politecnico di Milano. Fabio Bayro Kaiser and Christian Larisch | RWTH Aachen University. Mrudhula Koshy | Norwegian University of Science and Technology. Alena Cohrs | Technical University of Berlin. Luis Bosch Roig and Julia Deltoro Soto | Polytechnic University of Valencia. Martina Schretzenmayr | Lecturer, ETH Zurich

SECTION 4 _ SYNERGIC PROPOSALS FOR THE VLC PILOT SITE **125**

- **Chapter 4.1. TEAM 1: VALENCIA WATERMOAIC: Revitalizing Ecosystem through Urban Wetlands** **127**
Summary by Stefano Salata and Carolina Pacchi | Politecnico di Milano
- **Chapter 4.2. TEAM 2: BYE LAZAROTE** **131**
Summary by Kinga Zinowiec-Cieplik | Warsaw University of Technology
- **Chapter 4.3. TEAM 3: SYNERGY SCAPE** **141**
Summary by Christoph Wessling and Alena Cohrs | Technical University of Berlin
- **Chapter 4.4. TEAM 4: THE HAM OF SYNERGIES** **145**
Summary by Mrudhula Koshy | Norwegian University of Science and Technology
- **Chapter 4.5. TEAM 5: RECONNECTION OF LITORAL NEIGHBOURHOODS** **153**
Summary by Fabio Bayro Kaiser and Christian Larisch | RWTH Aachen University
- **Chapter 4.6. TEAM 6: BRING BACK THE SEA TO THE CITY + DOWN THE RIVER WE GO** **157**
Summary by Julia Deltoro Soto, Luis Bosch Roig and Adolfo Vigil de Insausti | Polytechnic University of Valencia

SECTION 5 _ CONCLUSIONS **171**

- **Chapter 5.1. DISCUSSION AND SOME FINAL REFLECTIONS** **173**
Luis Bosch Roig | Polytechnic University of Valencia. Juanjo Galan | Polytechnic University of Valencia. Mrudhula Koshy | Norwegian University of Science and Technology. Stefano Salata | Politecnico di Milano. Maciej Lasocki and Kinga Zinowiec-Cieplik | Warsaw University of Technology. Christoph Wessling and Alena Cohrs | Technical University of Berlin. Fabio Bayro Kaiser, Christian Larisch, Christa Reicher | RWTH Aachen University. Julia Deltoro Soto and Adolfo Vigil de Insausti | Polytechnic University of Valencia

4.5_TEAM 5. RECONNECTION OF LITORAL NEIGHBOURHOODS

Fabio Bayro Kaiser | Research Associate, RTWTH Aachen University
Christian Larisch | Research Associate, RTWTH Aachen University
Christa Reicher | Professor, RTWTH Aachen University

4.5.1. Proposal title: re-connection of the littoral neighbourhoods

The rapid urbanisation of the larger metropolitan area of Valencia, coupled with the dominant presence of the port, has led to the neglect and disconnection of smaller neighbourhoods such as the Littoral Neighbourhoods. Team 5 sought to address these challenges, while aligning with fundamental sustainable development goals and fostering resilient communities within the metropolitan area. This is achieved through the introduction of a multi-dimensional planning methodology. The planning methodology involves analysing the context and understanding different perspectives as a starting point, and proposing in a later stage a comprehensive spatial vision that aims to unlock specific synergies between urban

infrastructures. The vision is then proposed as a responsive and adaptive approach to future uncertainties, whether these be spatial issues or the changing needs of residents.

This chapter outlines the design process by introducing the methodology, considering the context, and elaborating on the spatial vision and the potential synergies it unlocks. Central to the approach is an emphasis on strengthening connections within the littoral neighbourhoods and with the wider metropolitan area of Valencia.

4.5.2. Towards synergetic infrastructures

Team 5 developed a multi-dimensional approach focusing on the infrastructures of

interest to the VLC Summer School, such as green, blue, energy, housing, mobility, and social infrastructure. Furthermore, a systematic assessment is proposed to discuss synergies in the short, medium, and long term. In total, 11 potential indicators of synergies have been identified through different combinations of infrastructures: ecosystem services connected to buildings, infrastructures for accessibility, cooperatives structures, spaces connected to water, multi-modal mobility, mobility spaces with climate adaptation, ecodiversity, sustainable energy traffic, areas of emission, access of green spaces, and social appropriation. As such, the synergies address social, spatial, and environmental issues individually and in combination. The team's methodology ensures a holistic understanding of the challenges and opportunities of thinking about different infrastructures together (Figure 4.5.1).

4. Synergic proposals for the VLC pilot site

4.5_Team 5. Reconnection of littoral neighbourhoods

Fabio Bayro Kaiser + Christian Larisch + Christa Reicher

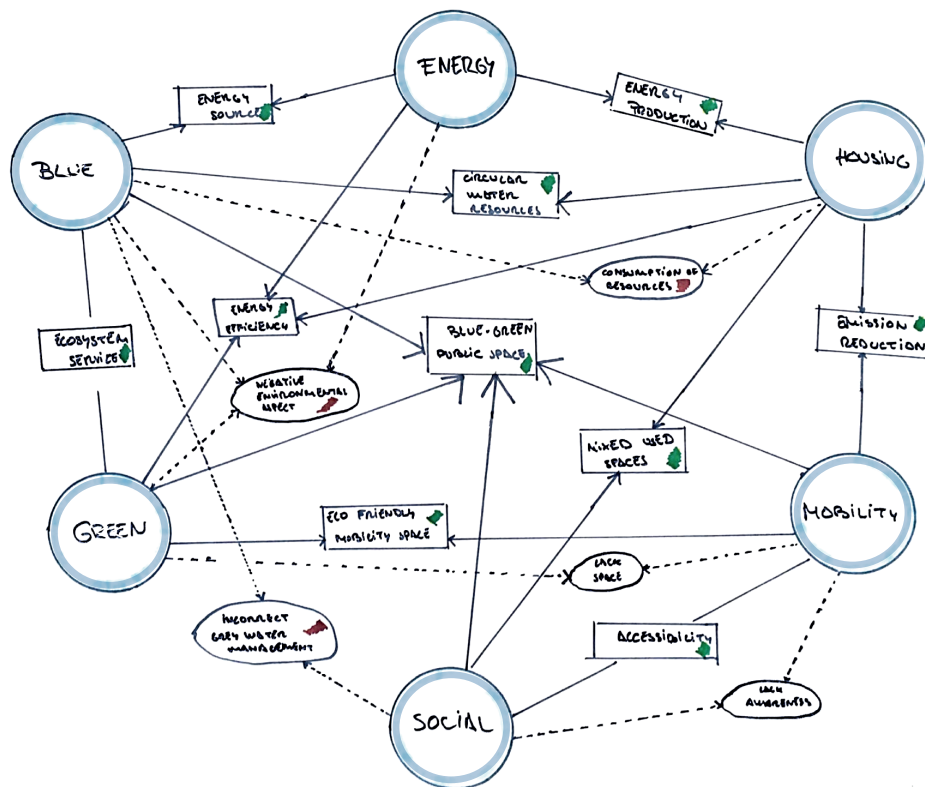


Figure 4.5.1. Towards a multi-dimensional understanding of synergistic infrastructures (source: Team 5: Archiles, Trobbiani, Gerwenat, Hoppenstedt, Posadas, & Szabra, 2023)

4.5.3. Reconnecting the littoral neighbourhoods

The first step taken by Team 5 after defining the methodology was a traditional SWOT analysis of the VLC Summer School pilot site. This was followed by a stakeholder workshop to discuss the preliminary findings and gather different perspectives. Team 5 concluded that the disconnected urban fabric and infrastructure around the site was the main weakness, threatening to further segregate the coastal neighbourhoods spatially and socially. In addition, decay of the urban fabric and loss of identity are identified as potential outcomes of this disconnected situation. The need for new forms of participation and more responsive approaches was also discussed from the residents' perspective. Against this background, the group saw opportunities to counteract such processes through the integrated design of infrastructure and the spatial integration of the littoral neighbourhoods. The main rationale is that their littoral identity could be a potential asset for the larger metropolitan area of Valencia.

4. Synergic proposals for the VLC pilot site

4.5_Team 5. Reconnection of littoral neighbourhoods

Fabio Bayro Kaiser + Christian Larisch + Christa Reicher

The second step was to propose a spatial vision for the pilot site and outline the main strategies, actions, and tools. The core of the spatial vision is to reconnect the coastal neighbourhoods through social, spatial, and environmental links (Figure. 4.5.2). Social connections are achieved through a network of landmarks and cooperative housing structures. Spatial

connections are achieved through mobility hubs and the extension of the city's relationship with the sea. Finally, environmental connections are achieved through environmental justice and the creation of green spaces and the improvement of existing ones. In addition, Team 5 mapped the infrastructures that are key to achieving such connections and visualised them in a

spatial strategy (Figure 4.5.3). The proposal focuses on improving a multi-layered mobility network, designing a network of social hotspots and landmarks, supporting the expansion of green infrastructure as networks, and providing public access to the sea. The latter, seeks to reconsider the dominance of the port in such a potentially valuable public space for the city.

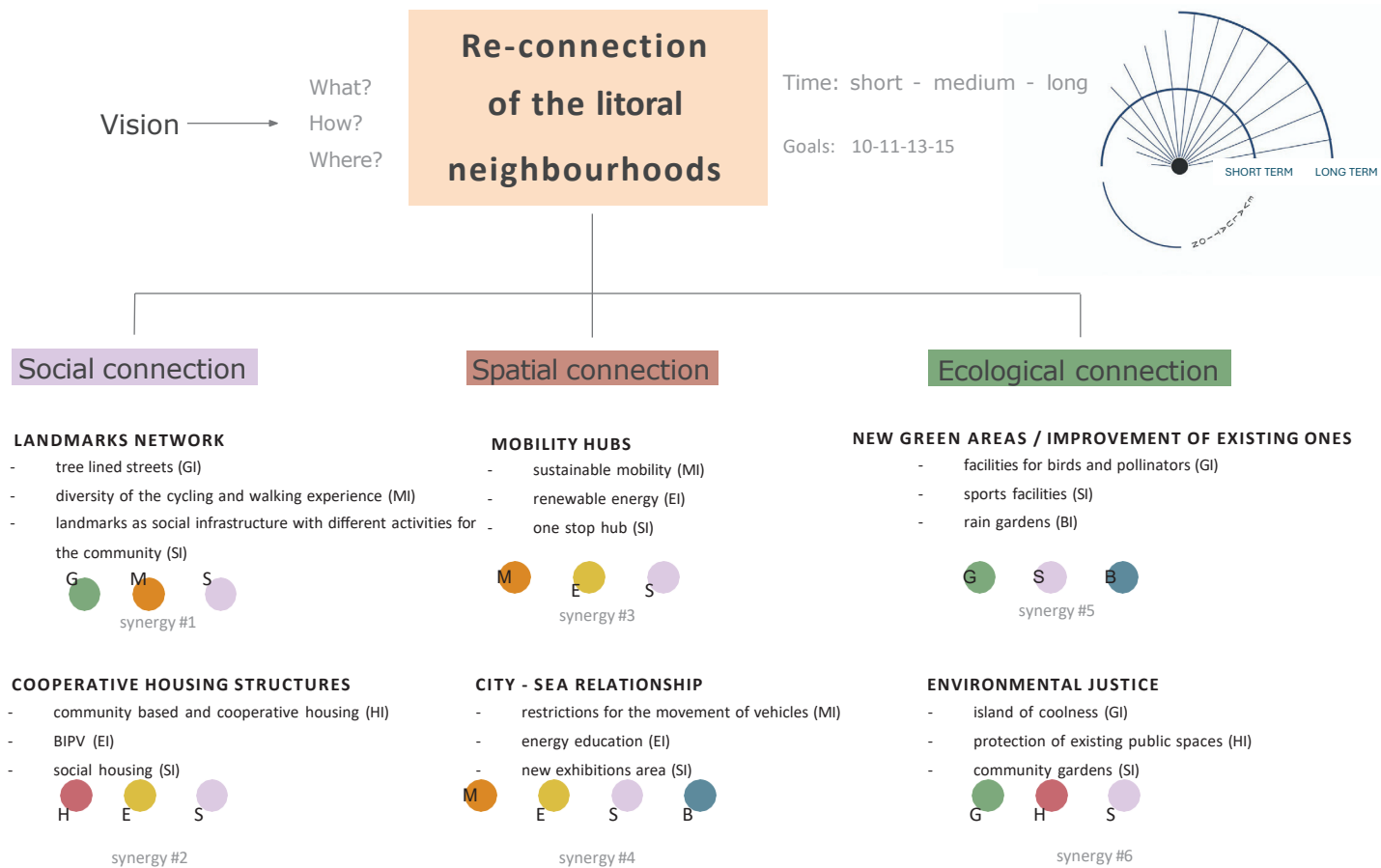


Figure 4.5.2. Reconnecting the littoral neighborhoods through social, spatial, and ecological connections. M: mobility, E: energy, S: social, H: housing, G: green, and B: blue-water (source: Team 5: Archiles, Trobbiani, Gerwenat, Hoppenstedt, Posadas, & Szabra, 2023)

4. Synergic proposals for the VLC pilot site

4.5_Team 5. Reconnection of litoral neighbourhoods

Fabio Bayro Kaiser + Christian Larisch + Christa Reicher

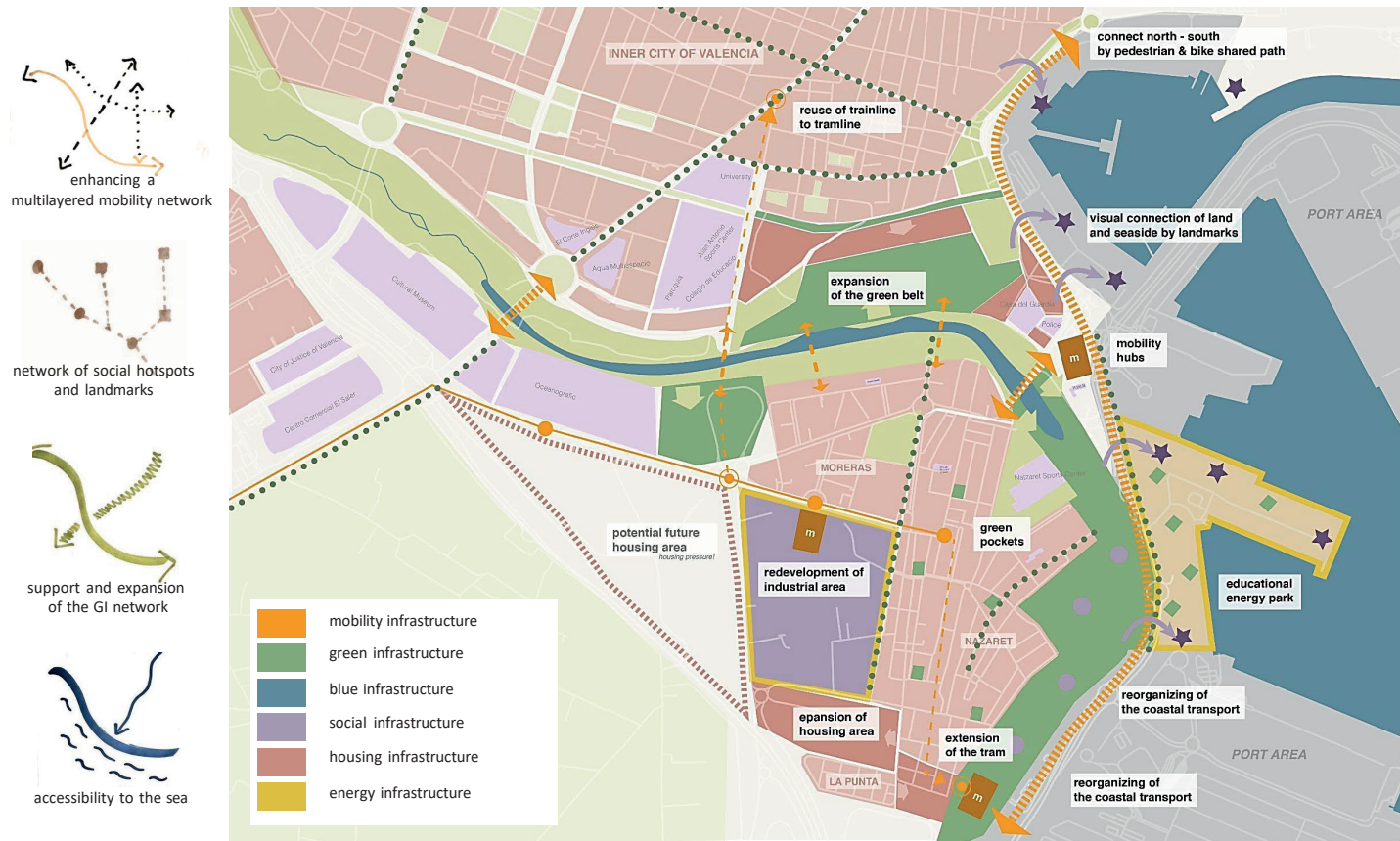


Figure 4.5.3. A multi-layered spatial strategy (source: Team 5: Archiles. Trobbiani, Gerwenat. Hoppenstedt. Posadas, & Szabra, 2023)

The spatial strategy shows a multi-layered approach to infrastructure planning and design. On this basis, Team 5 identified six key synergies through the combination of infrastructures using its multi-dimensional approach. (1) Identity recovery is promoted through the combination of mobility, green, and social infrastructures. (2) Cooperative communities are obtained by combining energy, housing, and social infrastructures. (3) Green mobility is fostered through the combination of mobility, energy, and social infrastructures. (4) Waterfront recovery is achieved through the combination of energy,

mobility, blue, and social infrastructures. (5) Ecosystem services complementarity is increased through the combination of blue, green, and social infrastructures. And (6) environmental justice is accomplished through the combination of housing, green, and social infrastructures. The key insight here is that social infrastructures play a crucial and central role in all synergies.

In addition, the group carried out an assessment of their proposal using their indicator-based evaluation method for synergies (Figure 4.5.4). Due to the limited space of this

summary, only the impact of two synergies will be discussed. Firstly, the recovery of identity can promote public spaces, accessibility of infrastructures, and multimodal mobility. The short-term effect is, obviously, the recovery of identity and the long-term effect is the perception of a new urban scale. Second, the recovery of the waterfront is achieved through the adaptive reuse of existing structures, the renewal of waterfronts, and the support of energy transitions. The short-term effect is the reconnection of the city with the sea, and the long-term effect is the enhancement of the transformation processes of the waterfronts.

4. Synergic proposals for the VLC pilot site

4.5_Team 5. Reconnection of litoral neighbourhoods

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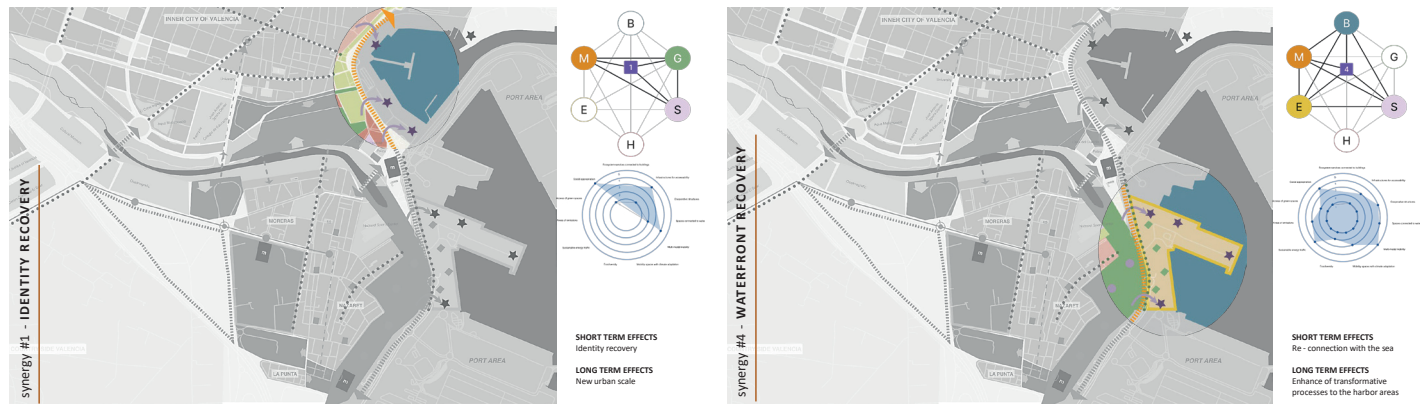


Figure 4.5.4. Synergetic infrastructures impact assessment through indicators-based evaluation (source: Team 5: Archiles, Trobbiani, Gerwenat, Hoppenstedt, Posadas, & Szabra, 2023)

4.5.4. Conclusion

Team 5 argues that by revitalising and reconnecting the littoral neighbourhoods, economic growth, identity recovery, improved quality of life, and increased community participation can be achieved (Figure 4.5.5). This not only contributes to the sustainability of the Valencia metropolitan area, but also promotes resilient spatial and social structures. Moreover, Team 5 suggests that these neighbourhoods are assets rather than burdens, and that similar approaches can be applied to other areas seeking to strengthen their identity and connections within the larger urban fabric. Reflecting on their work, the group's main contribution is the spatial approach to reconnecting the city of Valencia with its waterfront, on the one hand, and the planning and design of synergetic infrastructures, considering their impact over time through an indicator-based evaluation, on the other hand. Finally, through a comprehensive methodology and strategic vision, the group has successfully established a spatial vision for sustainable positive change, ensuring a more vibrant, inclusive, and sustainable future for all residents of the Littoral Neighbourhoods and beyond.

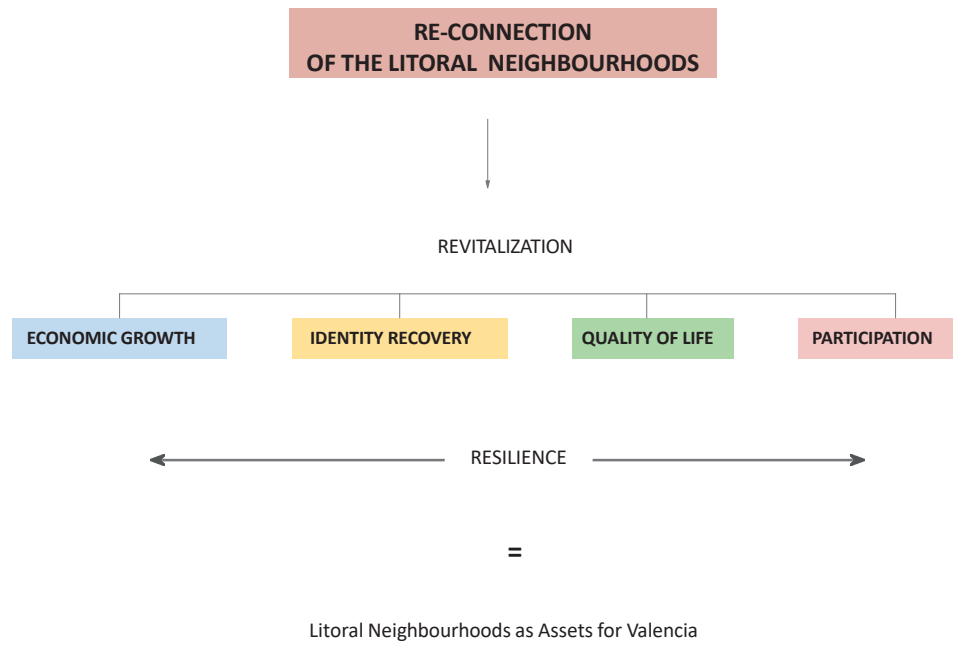


Figure 4.5.5. The littoral neighborhoods as assets (source: Team 5: Archiles, Trobbiani, Gerwenat, Hoppenstedt, Posadas, & Szabra, 2023)

4.5.5. The team and the students' summary

Team 5 was integrated by six master and bachelor students from different ENHANCE universities: Adela Archilés Segarra (UPV), Cecilia Trobbiani (POLIMI), Christiane Gerwenat (RWTH Aachen), Christoph Hoppenstedt (TU Berlin), Genelou Posadas (NTNU) and Mateusz Szabra (Warsaw UT). Their work during the on-site week in Valencia was tutored by Professor Christa Reicher and research associate Fabio Bayro Kaiser (RWTH Aachen University, Chair and Institute of Urban Design at the Faculty of Architecture).

The following paragraphs present a summary prepared by the students at the end of the course.

Re-connection of the Littoral Neighbourhoods: Crafting Synergic Solutions for a Revitalised Valencia

"In Valencia, Spain, we undertook an ambitious initiative to redefine the urban fabric

of the littoral neighbourhoods in the coast of the city, leveraging the power of different synergies grounded in diligent research and empathic community engagement.

Our main goal was not to create a defined master plan, but to create a specific framework for future developments or competitions. This way we will ensure that certain aspects are respected in the future. Such as the heritage of la Huerta, the maritime tradition, the connection to the sea, the opinion of the neighbours and the idea of maintaining what is pre-existing.

Our procedural methodology pivoted around identifying synergies and delineating indicators and actionable strategies to harness these symbioses to the fullest. The central actions defining our framework unearthed in our exploration are:

- Landmarks Network
- Cooperative Communities
- Eco-friendly Mobility
- Cooperative Housing Structures
- Ecosystem Services Complement
- Environmental Justice

Armed with this conceptual framework, we envisioned a host of innovative interventions, including redevelopment of historic spaces, fostering eco-friendly mobility solutions, and establishing green pockets, poised to rejuvenate the neighbourhoods sustainably.

A cornerstone of our strategy is a commitment to longitudinal evaluation, utilising the defined indicators to continuously assess the impacts over time, ensuring the adaptive and successful realisation of our objectives in resonance with the evolving needs and dynamics of the community. This evolutionary approach permits organic growth, wherein strategies are nimble and responsive, adapting to the shifting sands of time and providing a blueprint for a future that is as enduring as it is vibrant.

As we journey forward, we are nurturing a dynamic blueprint where Valencia does not just grow but evolves, with a grounded understanding of its historical richness and a forward-looking lens, crafting a living, breathing cityscape that is harmoniously interconnected, richly diversified, and robustly inclusive".

(source: Team 5: Archiles, Trobbiani, Gerwenat, Hoppenstedt, Posadas, & Szabra, 2023)