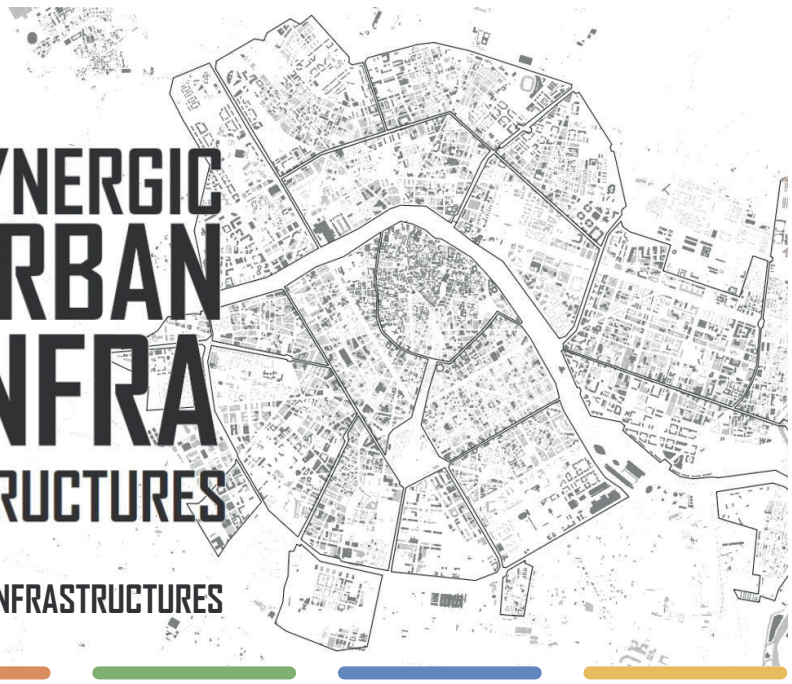
VLC SYNERGIC URBAN INFRA STRUCTURES



VALENCIA SUMMER SCHOOL ON SYNERGIC URBAN INFRASTRUCTURES

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2.4_HOUSING INFRASTRUCTURE: PRINCIPLES, DIAGNOSIS AND TOOLBOX IN VALENCIA

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2.4.1. Introducing the housing infrastructure

Housing infrastructure is an integrated, essential, and significant part of the urban development. It is and always have been reacting on and interacting with the ongoing economic, ecological, and societal trends and challenges of each period of the city.

As an introduction, the first part of the online lecture on housing infrastructure given by the authors, provided insights into the different housing typologies, structures and their urban planning and architectural characteristics, how the different historical development phases have shaped our cities, and the respective social, political, and economic contexts and framework conditions. Learning from historic city development, it can be concluded the benefits of small-scale development approaches based of an iterative development. This 'cell by cell' - developments are rather more sustainable than instant large-scale interventions.

In the second part of the lecture, the most important urban challenges and resulting conflicts were summarized to create an idea of the influences and demands on the housing infrastructure today and in the future. Looking at the urban challenges coming with the growing urbanization and the effects of the climate crisis, some current urban design approaches were introduced. It is to be highlighted that all of these concepts are strongly connected to the other urban infrastructures, such as the compact, mixed-used, and blue-green city or the concept of cities for people. In terms of solutions, new housing concepts with community-based strategies were introduced as alternative form of producing housing - focusing on co-living and co-creation. These new approaches reflect the shift on housing production as today people are actively shaping their city by participating in housing with their personal values. Still there is the strong need of new planning instruments to support such new forms of housing.

After the lecture, there was the impression that the students were already highly aware of the ongoing urban trends, especially of gentrification, the rising housing cost, and the effects of climate change. The interest on new types of the production of housing was high and broadly used by the students in the development of the following tasks.

2.4.2. Valencia case study

Workflow, process, and teamwork

The group of the TU Berlin consisted of six students, mostly Master students of Urban planning (Lea Marcella Fast, Christoph Hoppenstedt, Olesia Sakhareva), two Master students of Urban design (Hannah Berner, Dilara Ucar) and one Bachelor student of Architecture (Liva Roze). As they came from different degrees and some of them were Erasmus students from other universities, they had different focal points and perspectives on topics and also different access methods to participate in the collective development of task 1.

For their process of working, they decided to use a hybrid format, having some appointments online but also in person meetings in the TU Berlin, sometimes watching the online lectures together.

Spatial analysis of Valencia

As none of the students has ever developed a project in the city of Valencia before, it was from a professional perspective a completely new city and case study for them. In the beginning of task 1 the students analyzed the current situation of the housing infrastructure of Valencia by doing internet research and by using the provided housing infrastructure dossier. The main result from this analysis was the general inaccessibility of housing due to e.g. the rise of rents and the lack of protected housing supply.

This was followed by the analysis of the spatial structure of the city using satellite pictures from goggle maps and a figure-ground plan of the city. From this, they defined three different typologies depending on their urban character and their associated type of housing (Figure 2.4.1). The multi-family housing is differentiated between historic multi-family houses that are defining the street frontage through their closed block character (red) and modern multi-family houses with free position on the site (orange). The third typology includes single-family houses (green). Collecting this information of Valencia as a first step helped them to get an integrated understanding for the next analysis step concerning the study area or pilot site.

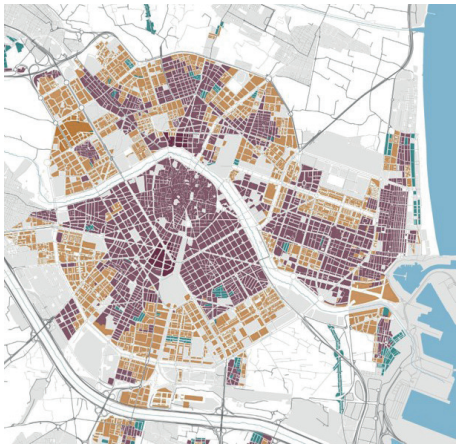

Figure 2.4.1: Housing typologies of Valencia (source: Hernandez Aja et al., 2022)

Spatial analysis of the site

Until the first mid-review the students worked on a general understanding of the case study area, its role in the urban fabric and its functions. The students decided to analyze the case study starting by its built structure and the housing typologies, dividing between single-family houses and multi-family complexes (Figure 2.4.2).

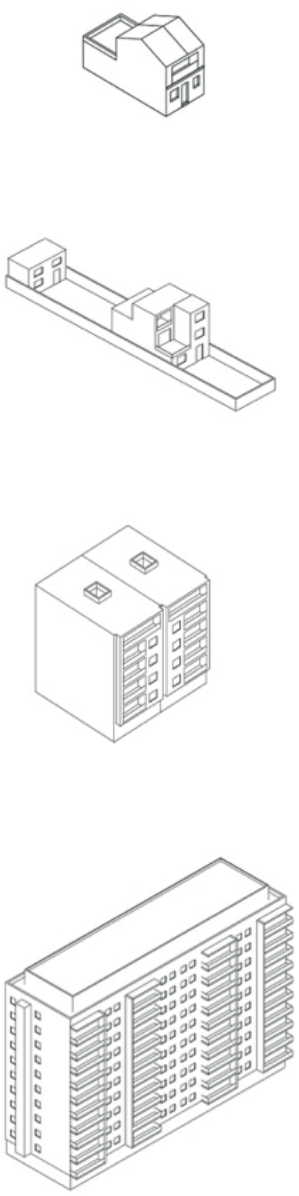

Figure 2.4.2: Single-family houses without backyards; Single-family houses with backyards; Multi-family complex (4-6 stories); Multi-family complex (7 and more stories)

This was followed by a strategic analysis of different topics. They looked at the different types and the conditions of the public space such as the central square on the main street of the Nazaret district. As they elaborated the topic of vacancy as an overall issue in some parts of Valencia, they also investigated the site on this. At last, they marked the urban borders that are formed by natural elements like the Turia riverbed but also are artificial like the wall that separates the harbor from the site (Figure 2.4.3).

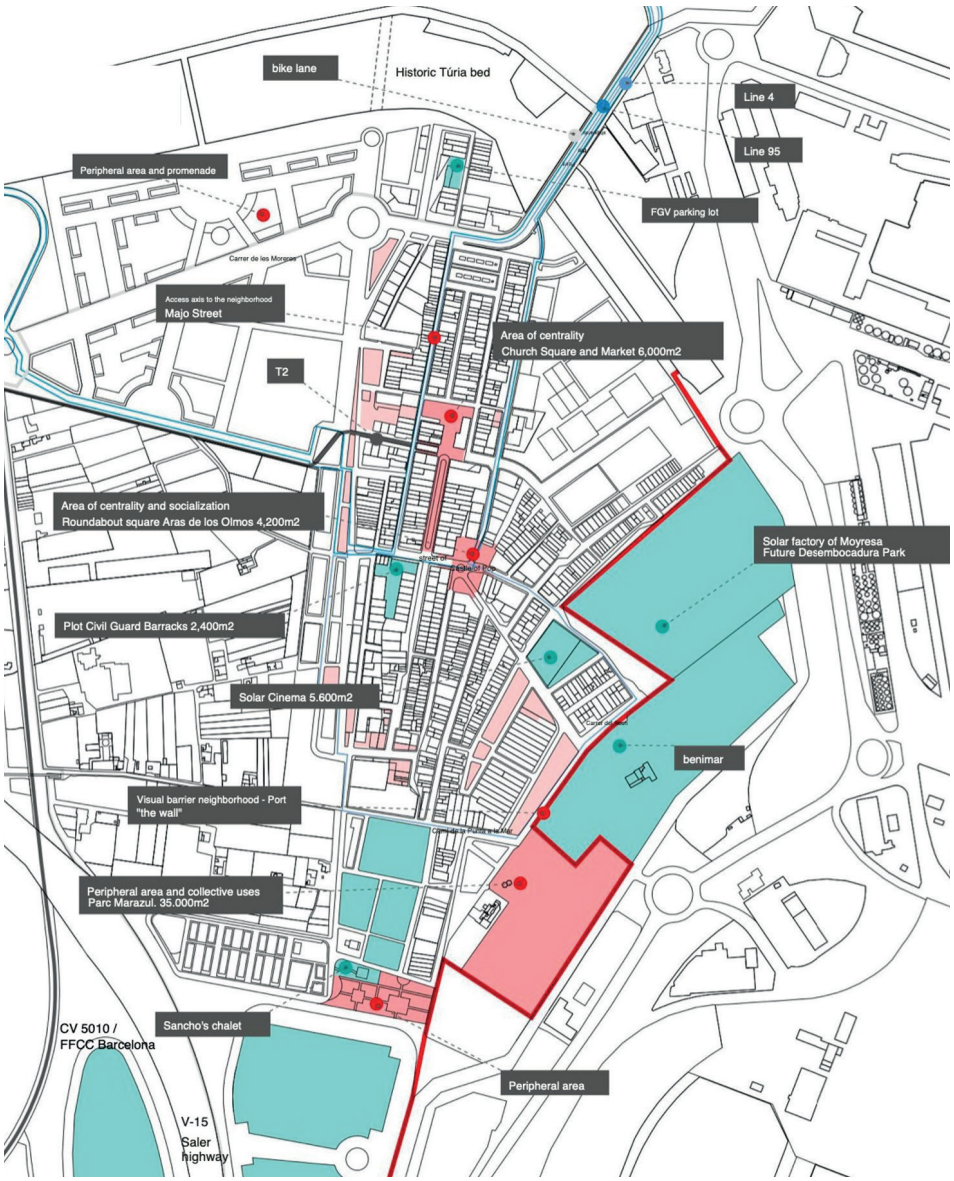

Figure 2.4.3: Analysis of the existing public space (source: Fast, Hoppenstedt, Sakhareva, Berner, Ucar, Roze, 2023)

Coming from the evaluated characteristics at that point, the group decided to divide the site in three sub-areas depending on their urban character and their functions: the northern part as the 'Harbour and Industry', 'Nazaret' and last the 'Surrounding Brownfields'.

For the mid review the students created a vision for the area within the city of Valencia as the summary of the work that they have developed so far. As part of this vision, the students developed some principles for new Housing focusing on mixed-use, social, and inclusive aspects. For the next step after the mid-review – the creation of the toolbox – they collected some questions around the topic of how to deal with gentrification and eviction, the protection of existing built and social structures, the right amount of density, and the creation of community bonds and connections.

Also, after the mid review, the students adjusted their process and their division of the site. Firstly, they decided to define four instead of the former three sub-areas of the site: El Grau in the north, Las Moreras, Nazaret and the Brown fields in the south (la Huerta). Again, they analyzed these four sub-areas from the perspective of the following topics: public spaces and green areas, borders and connections, housing typologies, and functions and usages (Figure 2.4.4). As a result, and to define the housing infrastructure toolbox, they identified the key problems of each sub-area. The issues of disconnection from the city and disintegration into the surrounding urban context were identified as overarching problems. In the area of Nazaret, as the only established larger neighborhood on the site, there are also problems concerning social structures, the state of the existing housing stock but also the increasing rents.

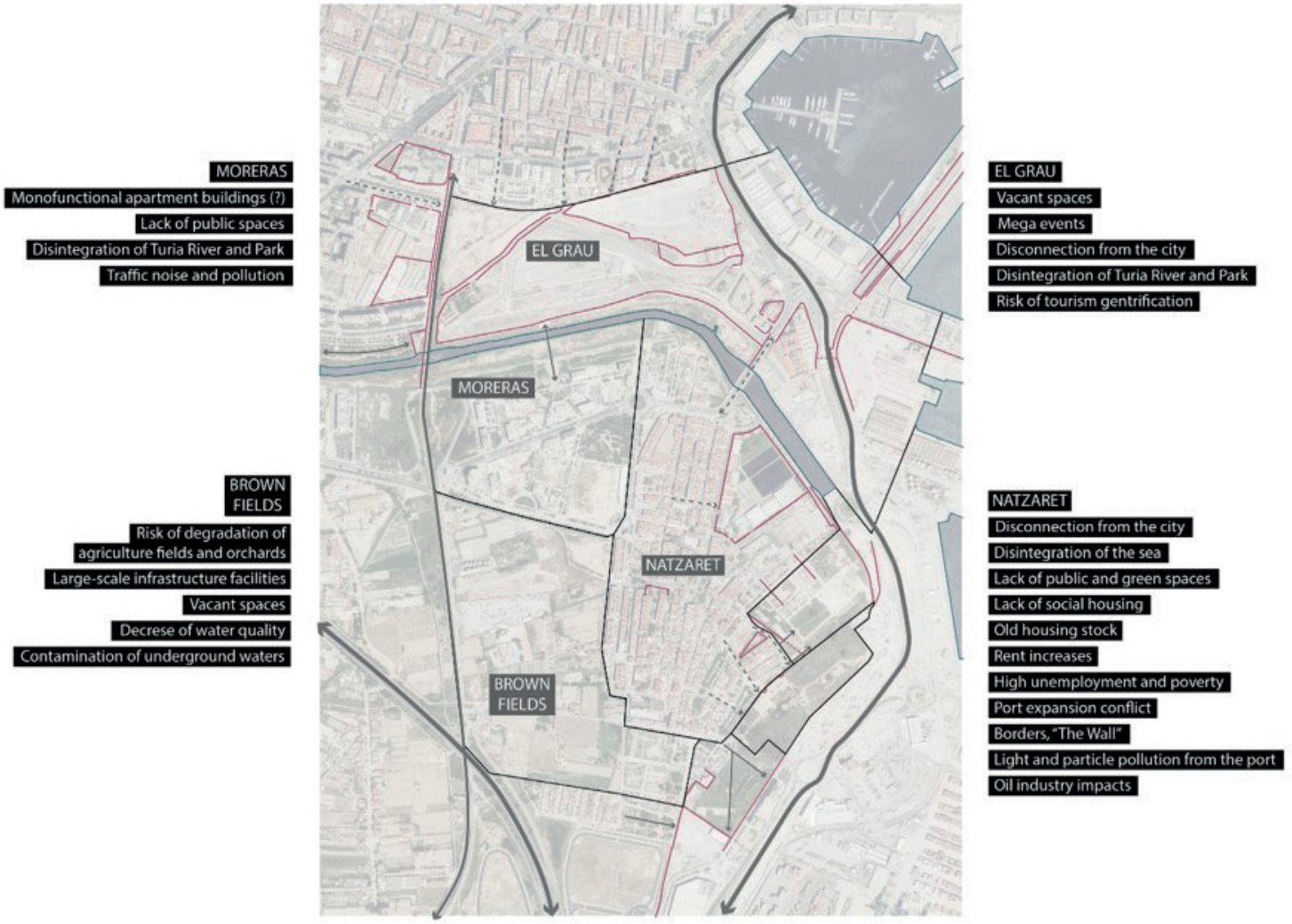

Figure 2.4.4: Definition of the key problems of each sub-area (source: Fast, Hoppenstedt, Sakhareva, Berner, Ucar, Roze, 2023)

Topics and solutions in the housing Infrastructure Toolbox

In the process of developing the housing infrastructure toolbox, the students first defined principles out of the identified key problems e.g. *connecting through housing.* Then they applied these principles on the case study area. This led to a broad collection of spatial and procedural tools e.g. *implementing cooperative housing* (procedural tool). To organize the tools the students sorted the tools by their place of action: policies and laws, spatial tools, community-based tools, and tools for process design / procedural tools (Figure 2.4.5). Then the tools were selected and applied on each sub-area including the resulting action from that tool. Some of the tools just apply to one area, for example the *Protection of existing built structures* (spatial tool) only concerns the structures of Nazaret. Some other tools apply to all the sub-areas such as *Elaborating new financial models* (policies & laws) or *Small cell development* (procedural tool).

Figure 2.4.5: Toolbox for the housing infrastructure (source: Fast, Hoppenstedt, Sakhareva, Berner, Ucar, Roze, 2023)

Potential synergies

As a last step, and in preparation of task 2, the proposed housing infrastructure tools were analyzed regarding their interconnection and interfaces with the other urban infrastructures addressed in then course (from the smallest to the biggest overlap: energy infrastructure (e.g. community-based infrastructures), blue green infrastructure (e.g. climate adaption on public spaces), mobility infrastructure (e.g. new bridges to surrounding neighborhoods) and its largest interconnection with the social infrastructure (e.g. support structures for communities).

Reflections on task 1

As urban planners and architects, the students were familiar with the kind of methods that they were asked to use in task 1. The analysis of the housing infrastructure was very comparable to their regular seminars. Still there was the challenge to do this by using only satellite images and google street view.

There was a high awareness between the students on the topics of housing and renting cost, gentrification, and eviction, perhaps because these are also current and concerning issues in the urban development of Berlin.