**In order to save time and effort later on, and to get the best results from this process, please answer the following questions:**

1. **What is your research question(s)?**

What are the **ideal values, quality values of the urban spaces, and space values as perceived by the residents** in Mass Housing State-Initiated Neighborhoods (**MHSINs**) constructed by state initiatives or other public planning bodies in countries of the European Union during the 1950-1980 period?

1. **Why is the research question important? You may mention other literature in the field, and the expected contribution of your research.**

Currently, the MHSIN neighborhoods are viewed either as part of the history of neighborhood construction in Europe or as a legacy of modernist architecture. The ideals upon which these neighborhoods were designed are seemingly irrelevant today. In spite of this, our argument is that, contrary to contemporary views, MHSIN neighborhoods retain significant value to this day. This became evident during the COVID-19 pandemic when people were restricted to their homes or limited in their movements within their neighborhoods. In these neighborhoods, the valuable spaces of the area were intuitively revealed—what we will call "**transparent places**"—because they are not yet known or properly defined.

To understand what are these values, we propose a study that will add two additional areas of knowledge to the existing research: We will examine the spatial-values of these neighborhoods objectively using both qualitative and quantitative evaluation tools (existing ones and those we will develop specifically), and we will develop a technological application that allows all residents to engage with their neighborhood and present their perceptions. In this way, we will uncover the current qualities and sub-qualities of the MHSIN. This research will contribute to science by developing a comprehensive methodology for neighborhood evaluation in **three areas: ideological, spatial quality, and residents' perceptions**, both in general and specifically for MHSIN. This will also benefit residents and planners by identifying qualities that should be developed and preserved in neighborhood planning and renewal processes.

1. **What are your hypotheses?**
2. The MHSIN neighborhoods were developed in accordance with equality values, anti-urbanism, and a sense of community. Spatially, these values are expressed through the orientation of buildings towards the courtyards rather than streets, minimal motorized traffic within the neighborhood (if any), a prevalence of identical buildings or apartments of similar size, and the placement of public buildings at the center of the neighborhood, connected to key pedestrian pathways or shared central spaces. We hypothesize that the main neighborhood models that will be found include the Zeilenbau (row house model), the open plan model, a hierarchical model based on a central thoroughfare with secondary pathways, as well as hierarchical model with a central courtyard and secondary courtyards.
3. The MHSIN neighborhoods possess high spatial qualities, such as open spaces, appropriate distances between buildings, walkability, a strong sense of security in the open spaces, visibility of internal and external green spaces, a feeling of privacy, diversity, air quality, and more. Some of these qualities can be evaluated using existing tools, while for others, there are currently lack of adequate tools or neighborhood-level methodologies for proper evaluation.
4. Residents of MHSIN neighborhoods possess profound knowledge, understanding, and feelings about the spatial aspects of their neighborhoods, but they struggle to express these insights. As a result, this valuable information does not reach researchers, planners or to the planning process.
5. **Overarching Hypothesis**: By using advanced technologies, **AI and GIS**, it is possible to bridge the gaps and connect different bodies of knowledge and various data outputs, to create a unified language that links textual, qualitative, objective, and spatial data, ultimately contributing to a spatial whole that is greater than its parts.
6. **What is the proposed methodology? Why was it selected?**

For each of the three areas of knowledge (ideological, spatial, and human), an independent methodology will be developed. The key is to integrate these data sources into a single **Big Data platform**, encoded uniformly and spatially. We will utilize technological capabilities to aggregate vast amounts of data from multiple fields and to create interfaces between them.

1. **Methodology for the Ideological Domain:** Content analysis of state-produced videos combined with the use of AI tools to discover texts about MHSIN and extract the ideological values that guided the planners. Data collection and aggregation into Digital Twin and GIS maps.
2. **Methodology for Evaluating the Built Environment:** Use of existing tools and development of additional new tools to measure the qualities of the built environment in MHSIN, based on GIS. Utilizing AI and GIS to develop an **innovative neighborhood-scale methodology** to evaluate spatial quality. Data collection and aggregation into Digital Twin and GIS maps.
3. **Methodology for the Human Domain:** Development of an **innovative-App** allowing each resident to upload their perceptions and feelings about their neighborhood. Data collection, aggregation, and analysis into Digital Twin and GIS maps.
4. **Overarching Development Methodology:** Developing a new technological methodology for neighborhood evaluation by coding all data into a unified language and creating a flexible, dynamic data platform that is capable of cross-referencing and data integrations at a single click.
5. **What are the main steps that will be involved in conducting your research?**
6. **Preliminary Stage:** Preparation of the research foundation
7. Formulation of criteria for selecting sample neighborhoods from dozens of MHSIN neighborhoods in the European Union.
8. Development of a multidisciplinary template for data aggregation on MHSIN neighborhoods (based on the template developed for CA18137 MCMH-EU).
9. **Conducting the Research on Sample Neighborhoods:** Simultaneously in alignment with the three sub-goals.

**Objective 1** in the field Historical-Ideological Research:

Data aggregation regarding the ideology that guided the planners. As a result, a mapping of the historical ideological values of MHSIN neighborhoods and an understanding of the relationship between these values, the planning typology, and the cultural context will be developed.

* 1. Exposure of the precedents, theories, and ideas of the sample neighborhoods
  2. A comparative analysis of the values and planning models used by different planners in their respective places, times, and cultures, as well as an examination of existing spatial differences (if any).
  3. Integrating data into the **Digital-Twin** using GIS: on the map comprehensively and for specific areas and pathways.

**Objective 2** in the field of Evaluating and Measuring the Built Environment:

Develop an Innovative Technology-Driven Methodology, GIS+AI, for Assessing the Spatial Quality of MHSIN Neighborhoods and Their Sub-Areas, and the Development of New Evaluation Tools: As a result of this research, it will be possible to determine the spatial characteristics of MHSIN neighborhoods in relation to planning typology, climate, and culture.

2.1 Literature review to identify qualities and tools for evaluating the built environment – both, textual and AI-based.

2.2 Evaluating and measuring various qualities of the built environment using existing tools (based on GIS).

2.3 Development of new tools for evaluating and measuring additional qualities (based on GIS).

2.4 A quality assessment of the MHSIN based on the template data.

2.5 Developing an **innovative methodology** for neighborhood quality evaluation in general and specifically for MHSIN.

2.6 Data aggregation, general comparative evaluation, and drawing conclusions

**Objective 3** in the field of Evaluating Space Based on Residents' Perceptions:

The development of a technological tool to enable public participation in the discovery of neighborhood values.

3.1 A literature review will be conducted to examine tools for public participation and to explore methods for transferring information from these tools to decision-makers.

3.2 Development of an innovative application for collecting data and identifying residents' perceptions as well as their preferences regarding the open spaces of the MHSINs.

3.3 Developing a methodology for analyzing, evaluating, and assimilating residents' desires for the development of the built environment.based on insights gathered from the App.

1. **Implementation of the Overarching Objective (4)**

**Developing an innovative, flexible, dynamic, and synergistic methodology:** This methodology will be able to aggregate, analyze, code, and map all disciplinary data, as well as analyze the interfaces between them. To **address the current research gaps**, it will be necessary to develop a comprehensive Big Data platform that is flexible, dynamic, and synergistic, enabling a variety of analyses and interfaces to be developed.

* 1. Development of a **Three-Disciplinary** **Methodology**
  2. Establish a **platform for Triple Polyphony** data and analysis, in which statistics and cross-sectional analyses of various information will be used to address the main research question and derived questions.