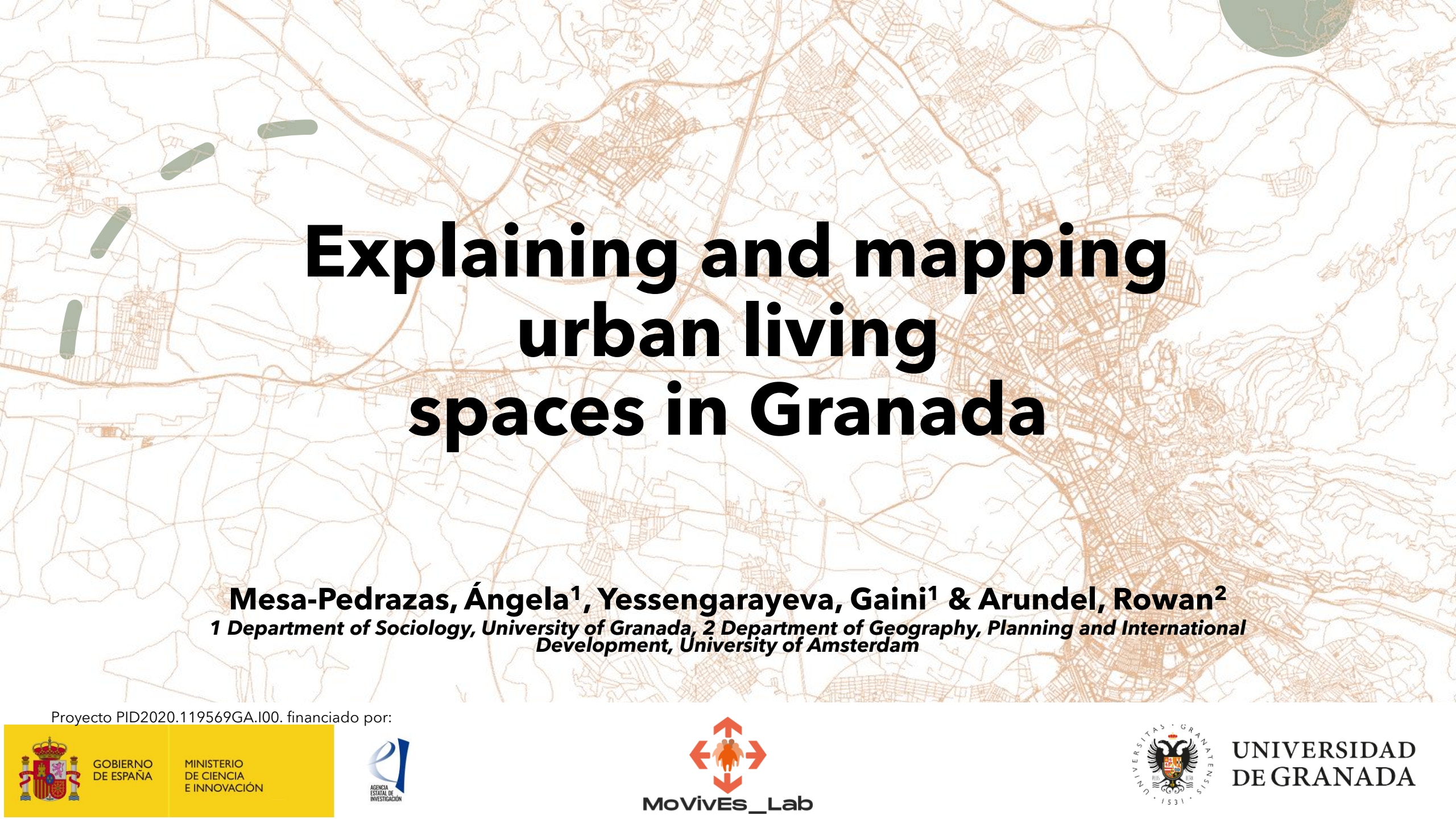




Explaining and mapping urban living spaces in Granada

Mesa-Pedrazas, Ángela¹, Yessengarayeva, Gaini¹ & Arundel, Rowan²

1 Department of Sociology, University of Granada, 2 Department of Geography, Planning and International Development, University of Amsterdam

Proyecto PID2020.119569GA.I00. financiado por:



GOBIERNO
DE ESPAÑA

MINISTERIO
DE CIENCIA
E INNOVACIÓN



UNIVERSIDAD
DE GRANADA



1. The Survey

Previous studies

Quantitative Approaches:

- **Mobility Surveys**

Key for understanding large-scale spatial patterns. Applied widely in urban and transport planning (e.g., Macedo et al., 2022; Padilla-Pozo et al., 2023).

Limitations: high cost, complexity, and limited contextual specificity.

- **Activity Diaries**

Capture daily routines and spatial behaviours in temporal contexts (e.g., Axhausen et al., 2002; Wang & Li, 2016).

Offer real-time insight, reducing memory bias.

Previous studies

- **GPS, Biometric Devices & Big Data**

Automatically record geolocated activity (e.g., Bu et al., 2021; Lucas, 2020).

Pros: High precision and volume.

Cons: Ethical concerns, opacity of data sources, limited replicability.

Previous studies

Qualitative Techniques:

- **Mobile Ethnographies**

Immersive methods where researchers accompany participants (e.g., Jiron & Carrasco, 2020; Vannini & Scott, 2020).

Strengths: Participant-centred, affective insights.

Challenges: High researcher adaptability required.

- **Social Network Mapping & Sociograms**

Visualise relational aspects of spatial practice (e.g., Ohnmacht, 2006; Carrasco et al., 2008).

Previous studies

Qualitative Techniques:

- **In-depth Interviews & Mental Maps**

Explore emotional, symbolic, and sensory dimensions of lived-in space (e.g., Jirón, 2007; Carrasco et al., 2008).

Mixed Methods:

- Combine spatial analysis, surveys, ethnography, and digital tracking for a holistic view (e.g., Arranz-López & Soria-Lara, 2022; Villanueva et al., 2012; Christensen et al., 2011).
- Suitable for studying both objective behaviours and subjective meanings in everyday mobility.

Sources for Spain, Andalusia and Granada

INE

- *"2020-2021 Population Mobility Studies Based on Mobile Phone Data"*

IECA

- *"2011 Social Survey: Mobility in Urban Regions of Andalusia"*
- *"2020 Social Survey: Habits and Living Conditions of the Andalusian Population During the State of Alarm"*

IDR-UGR

- *"2008 Population, Households and Housing in the Metropolitan Area and the City of Granada"*

Survey design

- **Residence & Trajectory**

- Approximate location and year of arrival at current home – key to understanding spatial habits and attachment.

- **Daily Mobility**

- Weekday vs. weekend movement patterns, including purpose, origin, destination, and transport mode.

- **Spatial Perceptions**

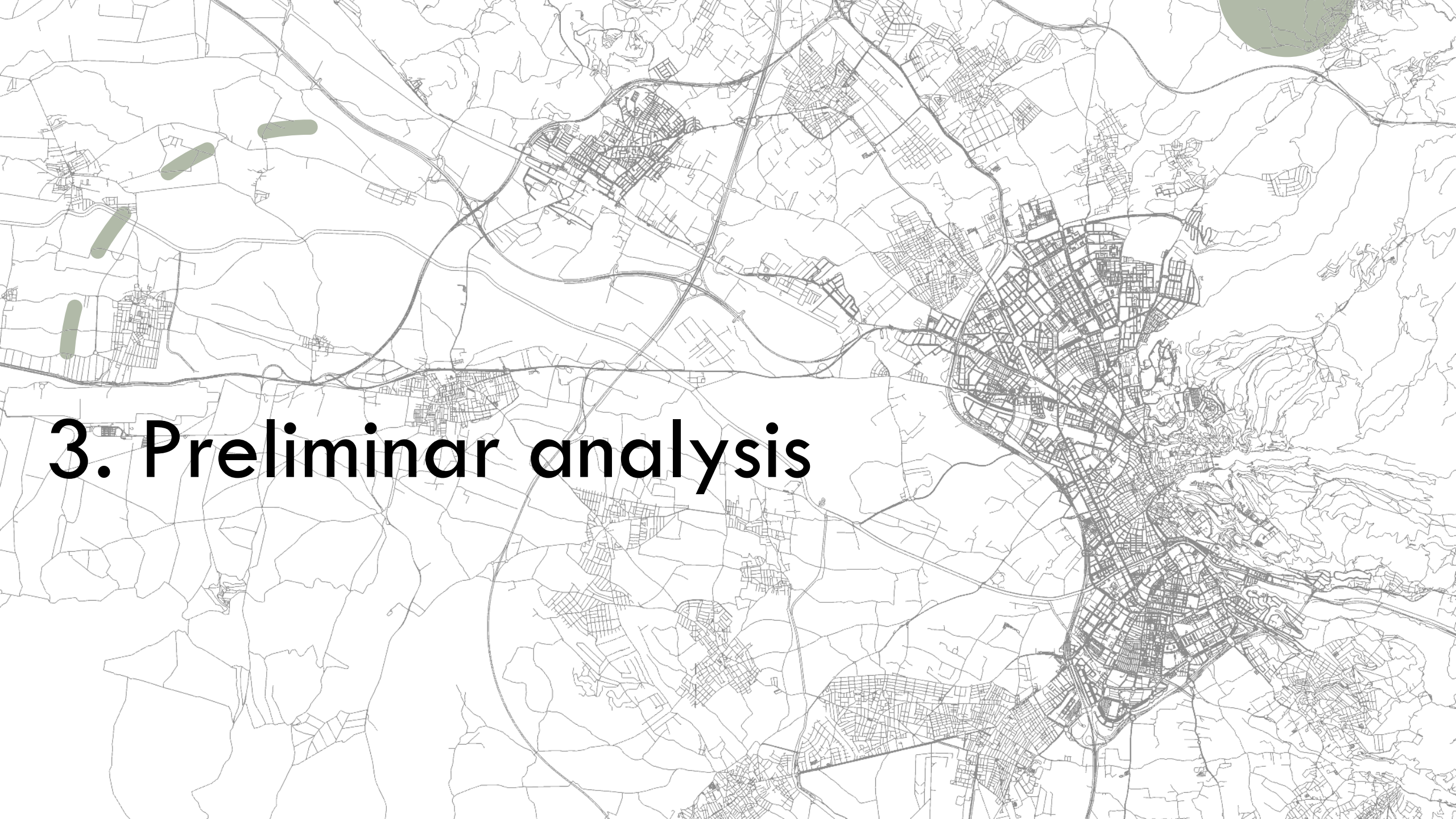
- Subjective connections: meaningful places, and spaces linked to fear, insecurity, or stress.

- **Sociodemographic Profile**

- Age, sex, origin, marital status, household setup, education, employment, income, and vehicles.

Technical data

- Fieldwork carried out in spring / summer 2023.
- Non-probability, multistage sampling, stratified by clusters (districts of the city of Granada), simple random sampling of the secondary sampling units (census tracks) and sampling by age and sex quotas.
- $n = 377$ (close to the $n = 384$ theoretical sampling size).
- Double data collection: questionnaire with LimeSurvey and locations in Google MyMaps (double interviewer strategy).

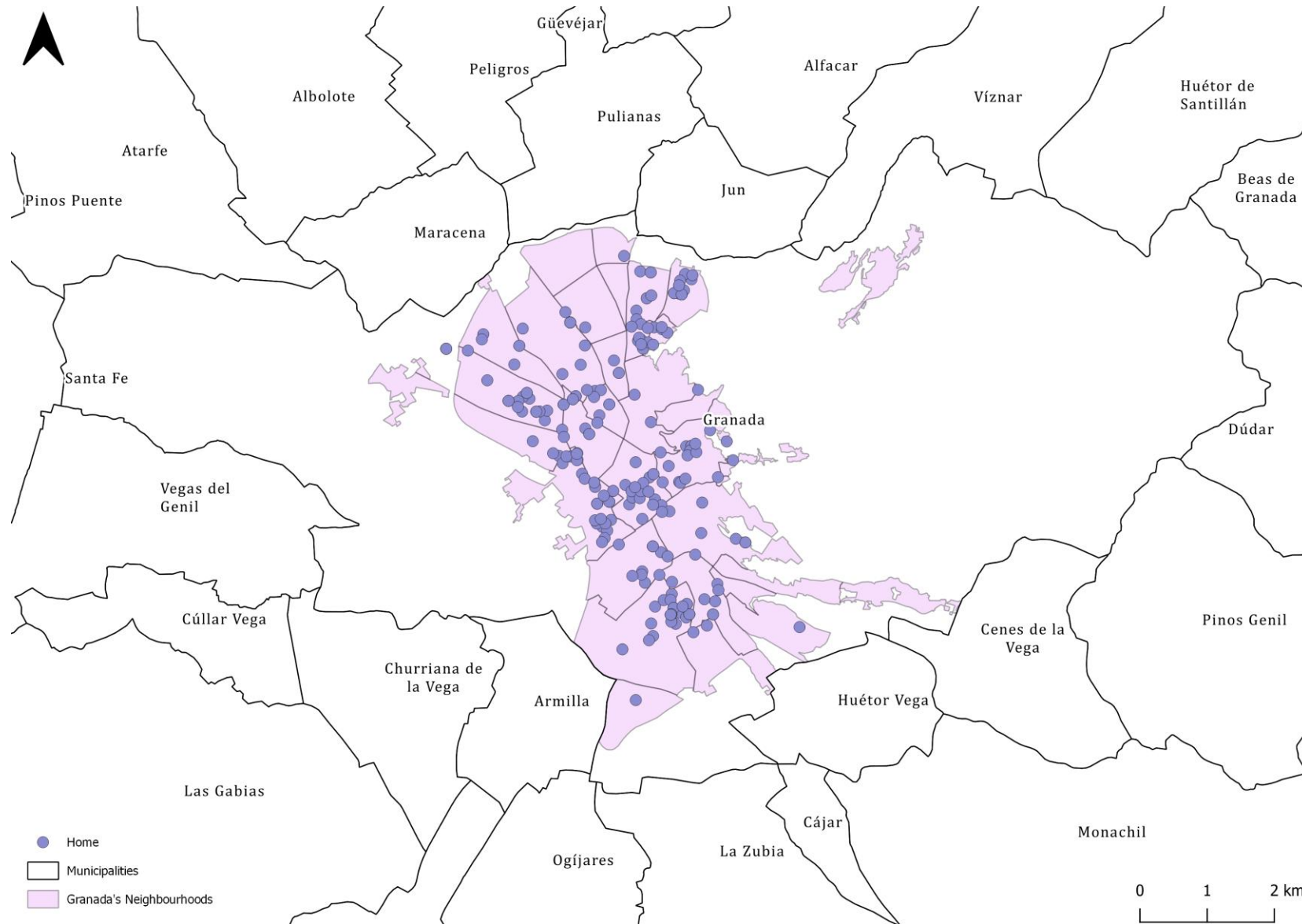
A topographic map of a region with a river and several towns. The map is rendered in a light gray line-art style. Overlaid on the map are several thick, dark green brush strokes. One large, semi-circular stroke is in the top right corner. A series of four smaller, parallel strokes are on the left side, following a diagonal path. The text '3. Preliminar analysis' is centered in the lower half of the image.

3. Preliminar analysis

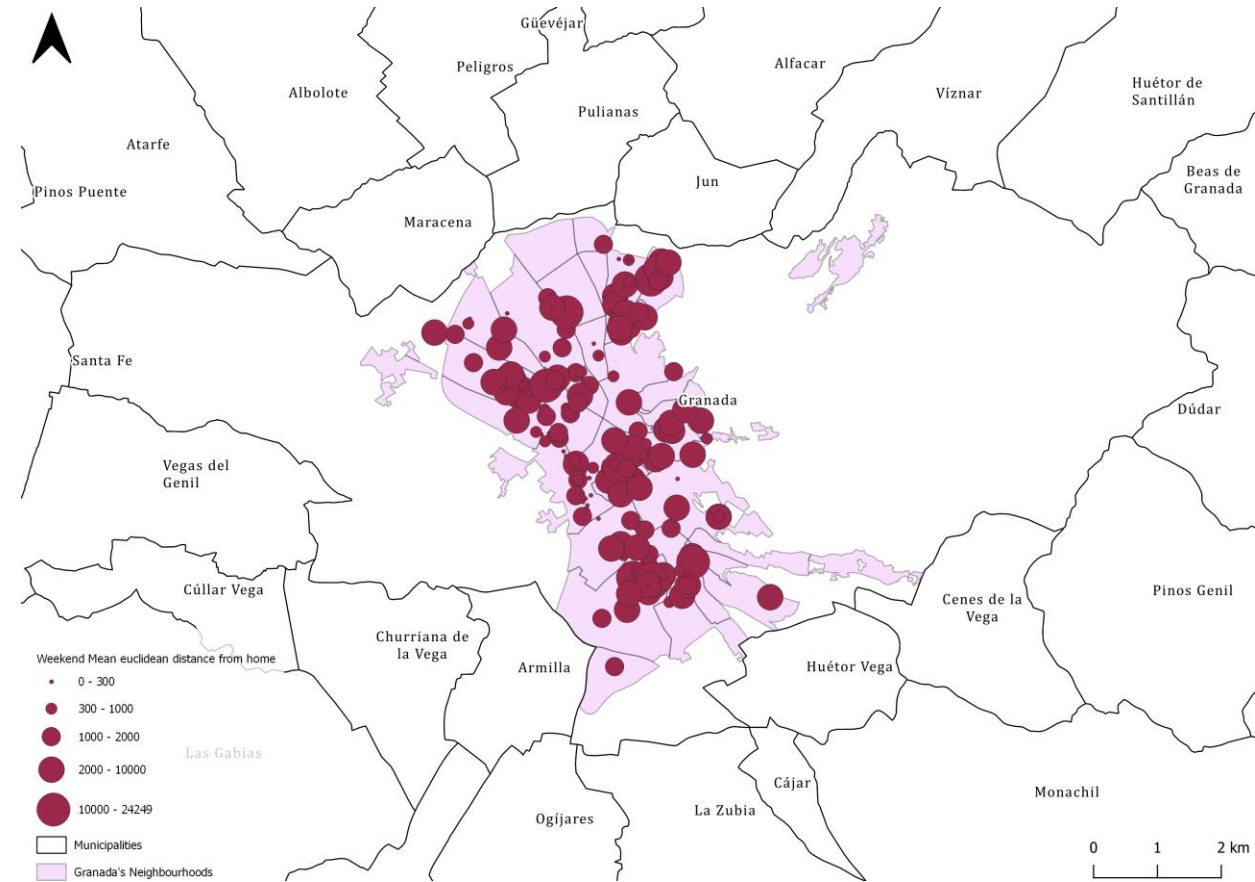
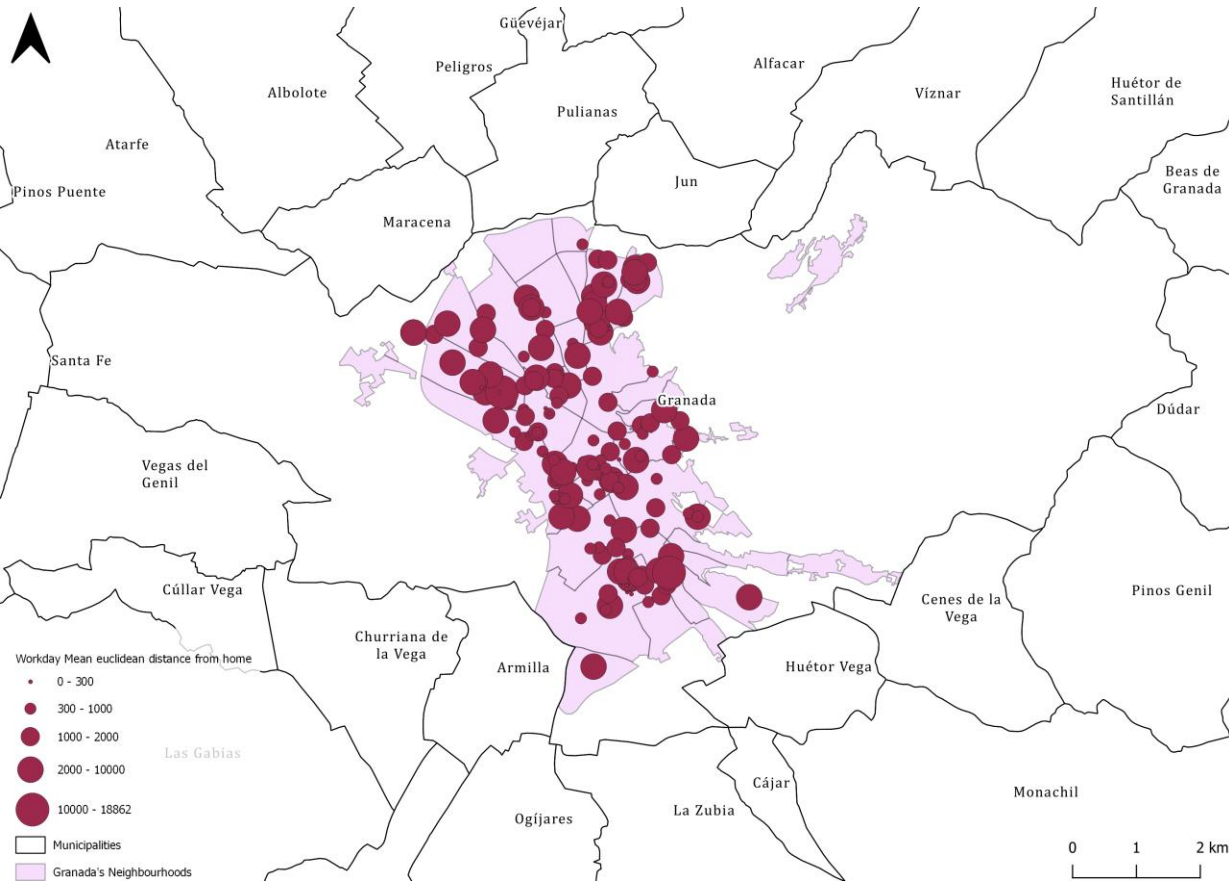
Main objective and research question example

- Analyse the concentration/dispersion of living spaces according to socio-demographic and socio-economic characteristics.
- Do mobility patterns between different neighbourhoods reflect socio-economic segregation?

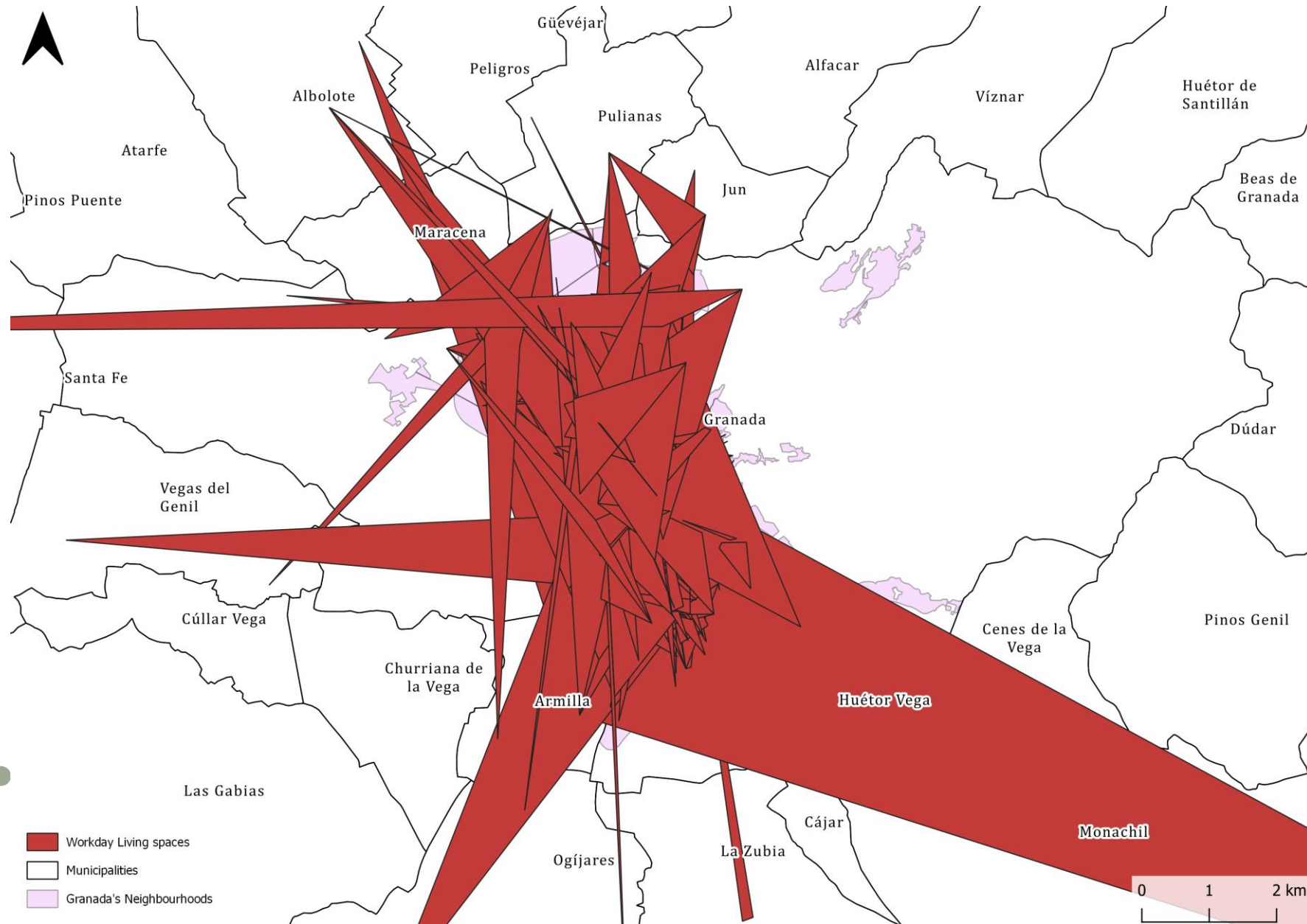
Analysis of daily mobility patterns



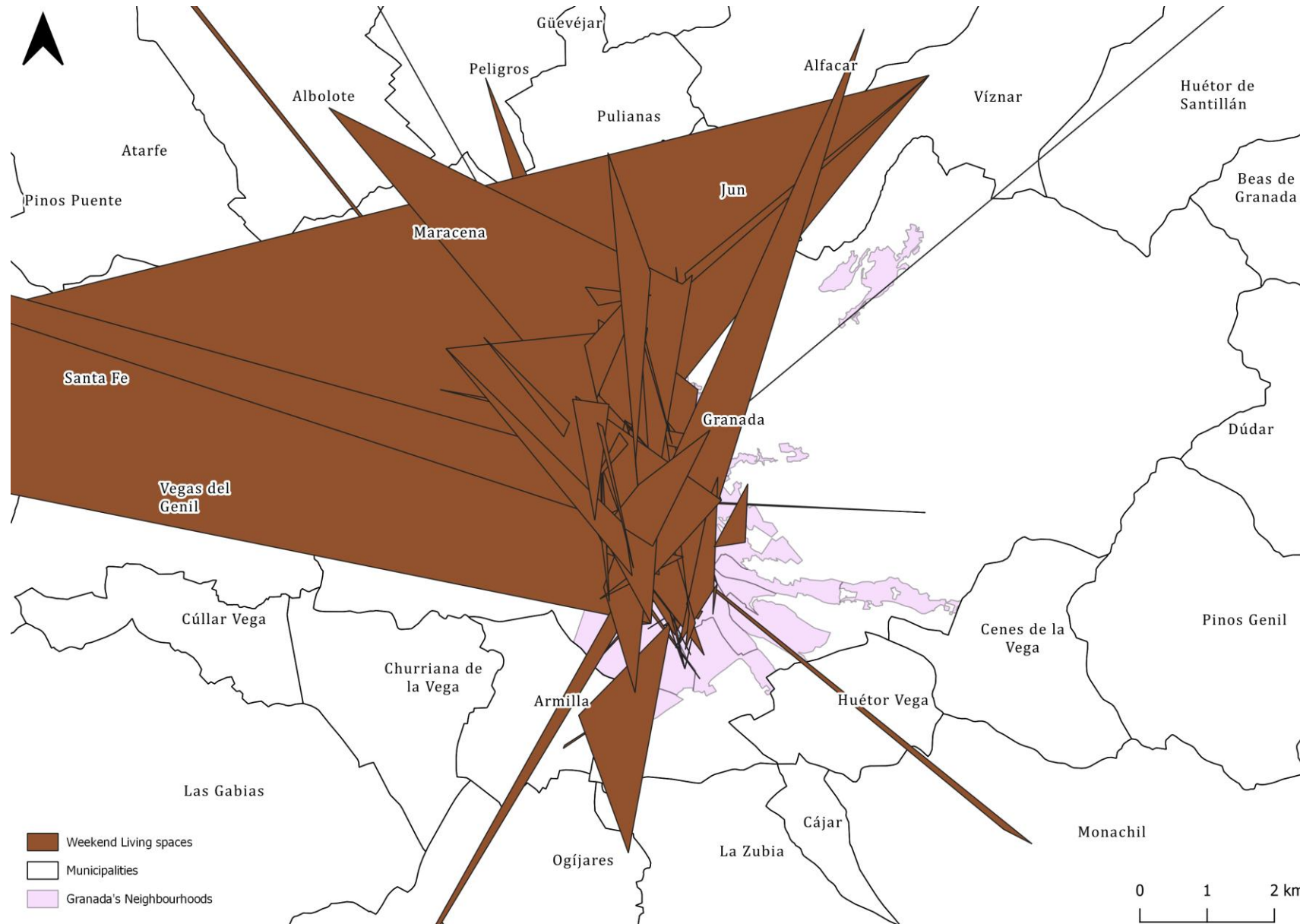
Analysis of daily mobility patterns



Analysis of daily mobility patterns



Analysis of daily mobility patterns



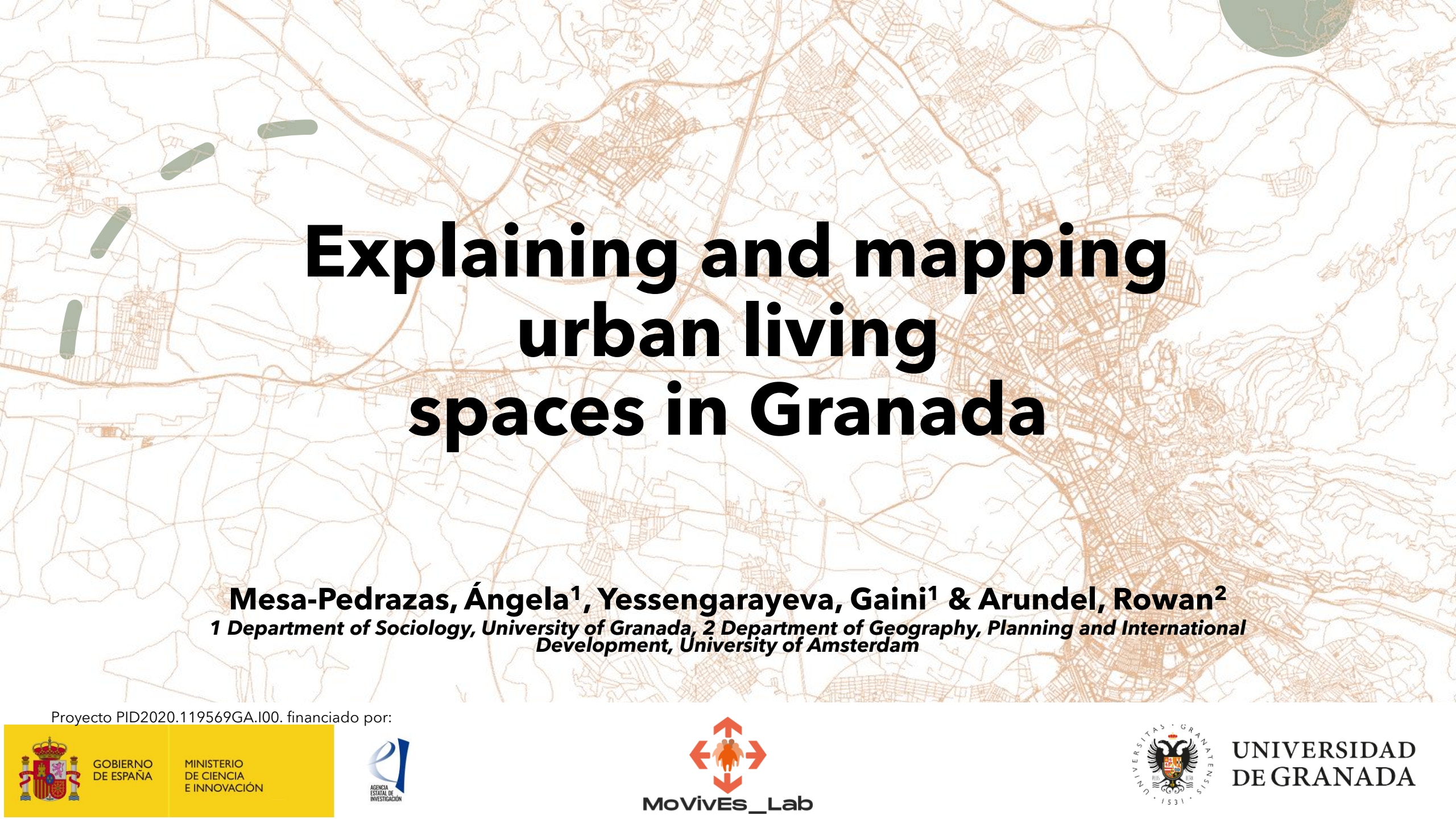
A detailed topographic map of a region, likely in the Alps, showing a dense network of roads, railways, and mountainous terrain. The map is rendered in a light, sketchy style. Overlaid on the map are several thick, dark green brush strokes: a large semi-circle in the top right corner, and a series of five parallel, slightly curved strokes on the left side, suggesting a path or a specific geographical feature.

4. Indicators and next steps

Measuring and modelling living spaces as a proxy for their social construction

- Indicators for descriptive and explanatory analysis
 - -Mean Euclidean distance from home
 - -Total area
 - -Total perimeter
 - -Total number of locations
 - -Actual distance travelled
 - -Estimated time for each movement

All this can be cross-referenced with the other variables, the main theoretical interest in age, sex, household size and composition, difference between workday day and weekend, and moving goal, as well as socio-economic status, which is key to exploring mobility segregation.



Explaining and mapping urban living spaces in Granada

Mesa-Pedrazas, Ángela¹, Yessengarayeva, Gaini¹ & Arundel, Rowan²

1 Department of Sociology, University of Granada, 2 Department of Geography, Planning and International Development, University of Amsterdam

Proyecto PID2020.119569GA.I00. financiado por:



GOBIERNO
DE ESPAÑA

MINISTERIO
DE CIENCIA
E INNOVACIÓN



UNIVERSIDAD
DE GRANADA