# Co-producing Local Knowledge in Urban Commons: Leveraging Digital and Social Tools to Document Commoning Practice

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**Rationale:** Urban common spaces play a crucial role in fostering social cohesion and urban resilience. However, their dynamic nature requires new methods of impact assessment that go beyond traditional design audits. Effective regeneration of these spaces depends on understanding of the interactions between governance processes and residents' everyday practices.

**Research Gap:** Current knowledge production models often treat end-users as passive recipients of pre-defined solutions, neglecting the perspectives of marginalized groups and specific local contexts. Existing urban indicator systems rarely incorporate residents' situated, bottom-up knowledge of commons creation and management.

**Research Aims:** This study reviews methodologies for co-producing local knowledge, shifting communities from informants to active contributors. The focus is on operationalizing participatory mapping techniques that capture demographic diversity in the use of urban spaces.

**Methods:** A transdisciplinary approach was employed, combining literature review with findings from case studies in selected European cities. One of the tools analyzed is the PPGIS ReliefMaps+ platform, which allows the collection of spatial and narrative data on residents' experiences. The methodology also includes crowdsourcing data from social media to analyze temporal trends in space usage. The Social Interaction Framework was applied to systematically document collective behaviors and barriers to inclusion.

**Expected Results:** The research is expected to produce validated participatory mapping protocols applicable in diverse local contexts. A geodatabase integrating quantitative and qualitative data on perceptions of the commons by different demographic groups will be developed. The analysis will demonstrate how specific design and management features influence the sense of safety and belonging among older adults, youth, and migrants. The ultimate outcome will be the strengthening of local observer networks' capacities, enabling continuous, evidence-based monitoring of urban regeneration.