

SELECTION OF POTENTIAL INTERESTING GRADUATION RESEARCH TOPICS

List of potential graduation topics and brainstorm ideas provided by real estate, urban development, urban data and infrastructure consultants.

7-2-2023

01 Urban development

- Trade-offs made in city development: which interest is most important to cover in which development and why?
- Regional cooperation in urban development: how to arrange a cooperation so that urban challenges can be address by a region (collective of multiple municipalities)
- The energy transition and opportunities for area focused solutions
- Climate adaptive cities
- Nature inclusive urban development
- Healthy cities and buildings
- The gap between how inclusive, healthy and sustainable cities and buildings should be build and how we actually build them
- Strategic environment and stakeholder management
- Campus development
- Impact of fragmentation of land use on urban developments

02 Legal and finance

- The impact of changing laws and restrictions on urban development
- New forms of collaboration in (urban) development
- Impact of urbanization and densification trends (high-rise, transformation, floating, etc.) on affordability of housing
- Impact of different land policies

03 Urban data

- Using (urban) data to support the allocation and trade-off of new housing in a region
- Using data and artificial intelligence in urban development
- Using urban data and artificial intelligence to identify potential threats and opportunities of an urban development in an early phase
- Parametric urban design: how can parametric urban design be used to fasten and improve the urban design process?
- Parametric design: how can we benefit from parametric (urban) design in the realization phase of a building?
- Using data to study the actual energy reduction of dwellings after transformation

04 Data and tooling

- Using data and artificial intelligence for the transition towards a sustainable society (cities, buildings, mobility)
- How to use (data) tooling to fasten and improve the process of finding the optimal design with users of technical spaces
- BIM (multiple subtopics)
- Information management and data transition of organizations

05 Circularity and sustainability

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- Circularity and the quantification of circularity
 - Circular tendering
- o6 **Modular buildings, building archetypes and building standardization:**
- Modular dwellings: how to bridge the gap between supply and demand for modular dwellings?
 - Which sectors could benefit, like social housing, from the development of dwelling archetypes?
 - How to create flexible buildings which use fluctuates like refugee housing?
 - How should these archetypes look like in the Dutch housing market and taking into account the challenges of today?
 - Quantifying the added value of standardization of non-residential buildings
- o7 **Housing:**
- New housing types such as collective living and ownership
 - Lack of suitable housing for homeless people: how to address this problem?
 - Split incentives in residential rental market
 - Actual potential and societal gain of dwellings near healthcare institutions
 - Residential demand and the actual residential supply:
 - Are we building for the demand?
 - Does building a different supply impact the demand and how?
- o8 **Construction**
- Cooperation and interests in a construction team: how to arrange a cooperation in a construction team?

This list provides an overview of what might be interesting graduation topics and/ or themes. Of course, this list certainly does not cover all potential interesting topics but might serve as a usefull starting point.