

**1. Title of the Project:** *Urban Construction Logistics Hubs: Decarbonization and Relief of Urban Areas through Consolidated Material Flows.*

**2. Please select one from each column of the following table**

**Topic of the project**

*We are dealing with this ...*

site:

*p.e. ideas to prevent the destruction of a certain building, biological feature, or social context; or ideas to build/grow such a feature*

type: *industrial logistics, construction infra:*

*e.g. cooperative dwellings, suburban office estates, single family houses*

Initiative:

*that works towards new, non-polluting and non-exploitative living patterns, and that is anchored in space (cooperative, NGO, ...)*

**planetary boundary (Stockholm Resilience Center)**

*With our project we want to help fixing ...*

Climate change

*Increased greenhouse gases and aerosols in Earth's atmosphere trap heat that would otherwise escape into space. The climate change planetary boundary assesses the change in the ratio of incoming and outgoing energy of the Earth. More carbon dioxide in the atmosphere and more trapped radiation causes global temperatures to rise and alters climate patterns.*

Freshwater change

*The alteration of freshwater cycles, including rivers and soil moisture, impacts natural functions such as carbon sequestration and biodiversity, and can lead to shifts in precipitation levels.*

Land system change

*The transformation of natural landscapes, such as through deforestation and urbanization, disrupts habitats and biodiversity and diminishes ecological functions like carbon sequestration and moisture recycling.*

Biosphere integrity

*The diversity, extent, and health of living organisms and ecosystems affects the state of the planet by co-regulating the energy balance and chemical cycles on Earth. Disrupting biodiversity threatens this co-regulation and dynamic stability.*

**type of project**

*We want to do this with a ...*

plan

*An urban design proposal on a certain site. As a matter of principle, we avoid land take and the creation of impervious surfaces as well as demolition.*

strategy

*develop a framework or strategy outlining principles and guidelines for the desired change in a given spatial setting*

intervention

*create an intervention in urban space through iteration and reflection that addresses an urbanistic issue. Only BA Thesis, only Summer semester ("Interventionsklasse").*

start-up

*develop an urbanistic business idea, or an idea for a new institution.*

**3. What is the occasion?** Why is your project necessary and why now?

*The construction industry is responsible for approximately 40% of global CO<sub>2</sub> emissions and generates enormous traffic volumes in cities. Construction logistics are currently mostly decentralized and uncoordinated, leading to high noise pollution, particulate matter (Climate Change), and inefficient transport routes.*

*Urban densification: In growing cities, space for construction logistics is becoming increasingly scarce.*

*Resource transition: To enable circular construction (urban mining), material flows (waste and new materials) must be physically consolidated at key nodes.*

*Technological progress: With digital control systems, logistics hubs can now be managed more precisely than ever to minimize impacts on urban areas.*

# EMERGENCY MEASURES THEME REQUEST SHEET

**4. How do you want to accomplish this?** Which scientific or artistic methods do you want to use and with which partners do you want to work?

*Scientific methods:*

*Material flow scenario analysis: Comparison of conventional logistics (direct delivery) vs. consolidated logistics via hubs (last-mile reduction).*

*Site analysis: Identification of potential locations within the city (e.g., brownfields, underused parking areas) that can temporarily serve as hubs without sealing additional land (avoidance of land take).*

*Planning methods: Development of a spatial scheme for "micro-hubs" and their connection to construction sites along the "last mile."*

*Partners: Department of Urban Planning (mobility planning), waste management companies, innovative construction firms, or logistics service providers.*

## 5. Participants:

name	Matrikelnummer	e-Mail	program	semester

**6. Are you open for more Participants?**

yes  no

**7. Sent everything to [info.ud\(at\)ed.tum.de](mailto:info.ud(at)ed.tum.de)**