Mobilitetslab Stor- Trondheim 5th VREF Conference on Urban Freight 2023: Göteborg, Sweden

Understanding freight distribution for a university campus in a data-diverse environment

(Abstract no. 43)

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Background

- "Campus Unification" Project provides an opportunity for green mobility
- Restricted vehicular movement
- Priority to pedestrians, bicyclists,

and public transit



Data Collections (3 sources)

A. Vehicle observation survey (General observations (Freight observations



Small Truck













- "Unintentional" impact on freight
- Objective: map the freight

landscape for data-driven

planning

Mapping the existing condition



Service truck

Semitrailer

Van



B. <u>Stakeholders interview: NTNU logistics team</u>



NTNU Logistics has a fleet of vehicles for internal transport (ca. 30% of all NTNU vehicles)

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Access to driving e-logs: show start/final stop locations and route taken (but no intermediate stops)

C. <u>Visual mapping: freight delivery locations</u>



Formal

Informal





Preliminary Results

• Ca. 20% of vehicles entering campus are considered freight

(average of 14 freight vehicles per hour during data collection)

- Vans are the primary freight vehicle
- Service vehicles make up a large percentage of freight vehicles
- Informal delivery locations must be determined by observations
- Temporary construction vehicles and parking must be considered,

particularly with long-term campus development/construction plans

Future Steps

• Further data collection on demand side: order and inventory

history data

• Further data collection on delivery locations: individual buildings

observations and interviews (particularly informal locations)

- Explore driving e-log data for pick up and drop off locations
- Develop recommendations for freight delivery on campus

• Explore opportunities for a digital twin

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