Urban Freight Platform
Research, Education, Impact

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Background for forming the UFP

**Why**
- To develop cutting-edge research combining skills from various disciplines
- To improve links between Scandinavian researchers in this field
- To provide a focus for engagement with wider academic and other communities at a European and global level
- To make urban freight research accessible to a wider public

**How**
- Builds on the individual initiatives taking place in University of Gothenburg and Chalmers
- Support from VREF, University of Gothenburg, Chalmers

**When**
- Established Early 2014
Local and national connections

• Involvement of researchers from multiple disciplines in Chalmers and Gothenburg University
  • Logistics & Transportation
  • Business, Economics and Law
  • Architecture
  • Signals and Systems

• Involvement in education and research projects
  • Linköping University
  • KTH Stockholm
  • Lund University
  • Jönköping International Business School

• Member of national round table on urban mobility
International connections

• CoE MetroFreight and SUFS
• European Automotive Research Partners Association (EARPA)
• Co-authored publications with researchers from UK, The Netherlands, France, USA, Brazil, India, Colombia
• International conferences and committees
  • WCTR: SIG Urban Goods Movement
  • TRB: Standing Committee on Urban Freight
  • I-NUF 2015, 2017
  • ILS 2016: Demand forecasting for urban freight
  • International Conference on City Logistics
  • International Sustainable Transport Summit (Yichang, China & Santiago, Chile)
Research 2016/2017

- Publications
  - 17 peer-review articles
  - 12 conference articles
  - Guest edited 3 Special Issues
  - Presentations at 35+ conferences
- Projects (finalised)
  - Off-peak (Vinnova)
  - Dencity, pre-study (Vinnova)
  - Suburban logistics, pre-study (Vinnova)
  - SEVS3 for autonomous drive (DriveSweden)
- Researcher visits
  - Quan Yuan, University of Southern California, USA
  - Paola Andrea Cruz Daraviña, University de los Andes, Colombia
  - Grażyna Chaberek-Karwacka, University of Gdansk, Poland
  - Heleen Buldeo-Rai, VUB, Belgium
  - Laura Palacios, Ecole des Mines, France
  - Miguel Jaller, University of California, Davis
  - Cathy Macharis, VUB Brussels
Exploring the relationship between urban form and freight trip generation

- Collaboration between Architecture (Jorge Gil) and Logistics at Chalmers
- Result of a workshop organized by UFP
Exploring the relationship between urban form and freight trip generation

Research questions:

1. Which urban form characteristics influence the location of different establishment types?
2. Which urban form characteristics contribute to Freight Trip Generation?
3. Can we estimate numbers of establishments and freight trips in a planned location?
Theoretical foundation: Business model innovation, Sustainability.

Research area:
- Multi-stakeholder development of innovations for urban freight.

Current research topics:
- Business models for sustainable technologies (e.g. EVs, smart grids).
- The role of policy in relation to business model innovation.
- Municipal actors in innovation processes.
Use of fossil fuels in relation to total amount of energy used in different industries 1983 to 2014.
(Source: Energiindikatorer 2016 p. 15, Statistics Sweden.)
Stakeholder centered business model development for UCC
Course Sustainable Transportation

- International MSc students

- Interdisciplinary
  - Supply Chain Management
  - Energy Systems
  - Infrastructure Engineering
  - etc.

- Holistic: Passenger & Freight
  - Fuels and drivelines
  - Transport modes and modal shift
  - Policy measures

- Case study on urban logistics
  - Technology
  - Policy
  - Management
Key lessons

- Construction: 28%
- Transport: 19%
- Services: 27%
- Retailer: 11%
- HoReCa: 10%
- Waste: 5%

Bar chart showing external costs in various categories:

- BAU network
- Time
- Weight
- 0-Emissions
- OHD
- UCC

Legend:
- Climate
- Air pollution
- Congestion
- Accidents
- Noise
Experiences so far

Research
• Resource for freight data collection

Education
• Appropriate showcase for teaching sustainable development
  • Technology
  • Policy
  • Services

Impact
• Increased awareness in non-freight disciplines
Thank you!

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