STORM

Smart freight TranspOrt and logistics research Methodologies

Assessment of new needs and knowledge/analysis gaps

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006700.

STORM

Summary

This report has the objective of identifying trends, knowledge needs, policy analysis needs and the potential roles and possibilities for new modelling for freight transport in the EU.

A literature review of developments in freight transport was conducted, together with an online survey and expert interviews. In terms of the outputs and insight of freight transport modelling, this review has found some important areas where information and insights are lacking:

- Plausible projections of how the different aspects of change in logistics will drive structural change in logistics.
- Scenario simulations that are based on the interlinked system changes of new digitalised logistics structures and zero-carbon energy in freight transport.
- Policy package simulations that will deliver sustainability: since freight transport is facing non-marginal change, models that can represent processes of structural change will be needed to assess potential points of influence on transport system changes.

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Summary

- Reflecting the changes in freight transport and new data structures, models of freight transport are changing too. ABMs of transport decision making, and movements are an active field of development. Models of new market structures in logistics and of low carbon freight transport systems are being developed, using GPS/AIS data and ‘big data’ analytics.
- The modelling approaches to sustainability transitions offer general concepts for addressing structural and system change. This implies that what is required are clearer ideas of possible changes ahead in freight transport, to enable problem definitions that can be addressed by the approaches discussed here.
- These views of future changes can be developed through qualitative techniques of foresight and scenario development with stakeholders, with many opportunities for using quantitative models as a part of such processes to develop combined qualitative and quantitative analyses.

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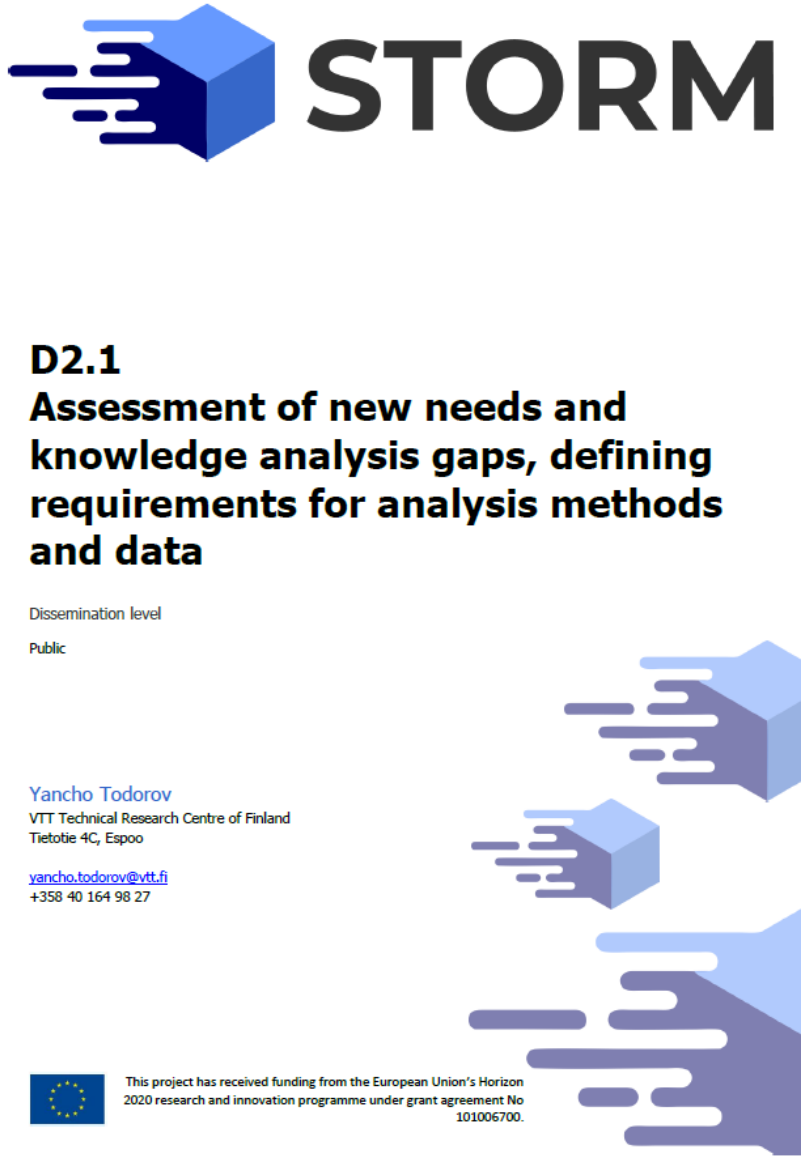

D2.1
Assessment of new needs and knowledge analysis gaps, defining requirements for analysis methods and data

Dissemination level

Public

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006700.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 945098.