



# Urban freight transport projects in Poland and Norway – comparative analysis

## Results of work package 1

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# Agenda

- Introduction
- Objectives of WP1
- Work plan
- Results



# Introduction

## Work Package 1

WP title	<b>Comparative analysis of activities for more environmental friendly urban freight transport (UFT) systems in Norway and Poland</b>
WP leader (name/title)	Stanisław Iwan, PhD.
Start date	1.04.2013
End date	28.02.2014

# Objective

<b>Objective</b>	<b>The analysis and comparison of functioning of urban freight transport (UFT) systems and identification of activities (projects, implementations) directed on environmental friendly UFT in Norway and in Poland.</b>
Interdependence with other work packages	WP1 is the basis of future work. During it the inception report will be prepared, which show the present situation at the area of development of more environmental friendly urban freight transport systems in Polish and Norwegian cities and regions. It will be the basis of all other WP's.



# Work plan

Tasks	Description	Status
1.1	Establishment of surveys methodology, schedules, requirements	Finished
1.2	Realisation of the surveys in Poland and Norway	Finished
1.3	Comparison analysis of results	Finished

# Work plan

WPs	Tasks	2013							2014		
		1 June	2 July	3 August	4 September	5 October	6 November	7 December	8 January	9 February	10 March
WP1	Establishment of surveys methodology, schedules, requirements Z. 1.1		D1.1.1								
	Realisation of the surveys in Poland and Norway Z. 1.2			M1.2.1				D1.2.1/M1.2.2			
	Comparison analysis of results Z. 1.3								D1.3.1		

# Approach and methods

The analysis was divided into two parts:

- realisation of the surveys in Poland and Norway – responsibility: MUS for the analysis in Poland, TOI for the analysis in Norway;
- comparison analysis of results – responsibility: MUS with the support of TOI.

# Approach and methods

Method	Description	Knowledge sources
<b>documentary analysis</b>	this method will allow to explore and assess the knowledge about present activities at the area of environmental friendly urban freight transport (like projects, implementations, solutions) in Norway and Poland	<ul style="list-style-type: none"> <li>documents and deliverables prepared under the projects</li> <li>projects web-sites</li> <li>data from the project operators and promoters</li> <li>public media</li> <li>experiences of the GRASS partners</li> <li>other available sources</li> </ul>
<b>marketing research methods such as surveys, structured and in-depth interviews</b>	this group of methods allows to get the knowledge regarding the projects (realized in the past, during realization or planned) in chosen cities	<ul style="list-style-type: none"> <li>the questionnaire</li> </ul>
<b>comparative analysis</b>	this method will be used for comparing the present activities in the area of environmentally friendly urban freight transport utilization in Norway and Poland	<ul style="list-style-type: none"> <li>the data achieved during the task 1.2</li> </ul>



# Survey

The basis of the survey realization will be the questionnaire prepared as Excel sheet, presented below.



The separate questionnaire has to be prepared for each analysed project.

The questionnaire is divided into two parts:

- **project description** – includes the major information regarding the analysed project,
- **involved cities** – this sheet has to be duplicated for each city involved in analysed project.



# Survey questionnaires

**The project description**

a) Name of the project:

b) Current status:  finished  ongoing  planned

c) Duration:

d) Developed by:  public authorities  
 public-private partnership  
 private sector

e) Partners involved:

f) Objectives:

g) Description:

h) Results achieved:  
*If possible, please specify qualitative and quantitative results (e.g. % energy savings achieved, % reduction of UFT in city centres, etc)*

the environmental benefits:

the economic benefits:

the social benefits:

i) The major outputs of the project:

j) Main successes of the project:

**Difficulties**

a) What difficulties encountered by the problem and how were they overcome?

Technical difficulties:

Financial difficulties:

Political difficulties:

Partnership difficulties:

Other difficulties:

**Finances**



a) The total cost of project:

b) The finance source:  
*Short describe below*

External funding  Co-financing  Other

**Dissemination**

The source of the information (e.g. project website)

*For each involved city fill the separate sheet*

a) Name of the city/municipality:

b) Population:

c) Number of employed persons:

d) Regional GDP per capita:

e) Area (km2):

g) Description of the city:

h) Description of the transport infrastructures:

i) Description of the problems solved by the project:

Problem	Solution
<input type="text"/>	<input type="text"/>

# Results

- **68** initiatives in Poland
- **11** initiatives in Norway

Analysis was focused on urban freight transport initiatives

# Quantitative analysis



# Results – the tables

Project name	City name	Project status	Duration	Project initiator	Number of partners	Total budget	Sources of finance	Type of measures: (hard/soft/mix) – (push/pull/mix)

City	Description				Number of ongoing projects	Number of finished projects	Number of planned projects	Total
	Population	Number of employees	GDP per capita:	Area				

# General numbers

- **Poland:**
  - area – **312 679** km<sup>2</sup>,
  - the total **population** in the 2nd quarter of 2013 – **38 502 396** people,
  - the population **density** – **123,137** persons per square kilometre.
- **Norway:**
  - area – 385 252 km<sup>2</sup>
  - the total **population** at the beginning of the 3rd quarter of 2013 – **5 096 300** people,
  - the population **density** – **13,228** persons per square kilometre.

# Cities in Poland

According to the data from the Polish Central Statistical Office, currently in Poland there are **913** cities, of which ([www.stat.gov.pl](http://www.stat.gov.pl) – 01.01.2014):

- **7** have populations exceeding 400 000 inhabitants (Warszawa, Kraków, Łódź, Wrocław, Poznań, Gdańsk, Szczecin),
- **10** cities with populations from 200 000 to 399 999,
- **22** cities with populations from 100 000 to 199 999,
- **72** cities with populations from 40 000 to 99 999,
- **112** cities with populations from 20 000 to 39 999,
- **186** cities with populations from 10 000 to 19 999,
- **181** cities with populations from 5 000 to 9 999,
- **218** cities with populations from 2 500 to 4 999,
- **105** cities with populations below 2 500 inhabitants.

# Cities in Norway

According to the data from the Norwegian Statistical Office, in Norway there are **97** cities with populations exceeding 10,000 ([www.ssb.no](http://www.ssb.no) – 20.02.2014):

- **1** city with a population exceeding 400 000 people,
- **1** city with a population from 200 000 to 399 999,
- **3** cities with populations from 100 000 to 199 999,
- **12** cities with populations from 40 000 to 99 999,
- **17** cities with populations from 20 000 to 39 999,
- **22** cities with populations from 10 000 to 19 999,
- **28** cities with populations from 5 000 to 9 999,
- **9** cities with populations from 2 500 to 4 999,
- **4** cities with populations below 2 500 inhabitants.



# Comparison of numeric data regarding both countries



Country:		Poland	Norway
<b>Total number of projects</b>		68	11
<b>Cities</b>	total number	913	97
	total number of inhabitants	23,339,550	3,146 026
	mean number of inhabitants	25,676	34,572
	mean area (km <sup>2</sup> )	23.75	50.02
	mean population density	1081.09	691.16
<b>Ratios</b>	number of project per number of cities	0.07	0.11
	number of project per 1 million of city inhabitants	2.91	3.50
	number of projects per mean population density	0.063	0.016

# Comparison of projects broken down acc. to status and category



Country:		Poland	Norway	
Projects	in total		<b>68</b>	<b>11</b>
	as per status	finished	16	5
		ongoing	50	6
		planned	2	-
	as per category	push	56	5
		pull	5	1
		push&pull	7	5
		hard	1	4
		soft	65	6
mix	2	1		

# Qualitative analysis

# The initiatives categories

- Time windows for deliveries;
- Access restrictions;
- Special zones and parking spaces for delivery vehicles (unloading bays);
- Charge systems for vehicles entering the city centre;
- Early/night deliveries;
- Noise protection;
- Special urban planning conditions;
- Weight-in-motion pre-selection system;
- Alternative delivering systems.

# The initiatives categories

Measure type	Poland		Norway	
	no.	cities	no.	cities
Time windows for delivering	19	Bielsko-Biała, Chorzów, Częstochowa, Gdynia, Gorzów Wielkopolski, Grudziądz, Jelenia Góra, Kielce, Kraków, Legnica, Łódź, Opole, Poznań, Rzeszów, Sosnowiec, Toruń, Warszawa, Włocławek, Żory		
Access restrictions	27	Bielsko-Biała, Bytom, Chełm, Gdańsk (2), Gdynia, Gliwice, Gorzów Wielkopolski, Grudziądz, Jelenia Góra, Kielce, Konin, Kraków, Legnica, Łódź, Opole, Poznań, Przemyśl, Rzeszów, Sosnowiec, Suwałki, Świętochłowice, Toruń (2), Warszawa, Włocławek	3	Oslo, Kragerø, Bergen
Special zones and parking spaces for delivery vehicles	3	Gdańsk, Szczecin, Żory		
Charge systems for vehicles entering the city centre	2	Częstochowa, Poznań		
Early/night deliveries	2	Kraków, Włocławek	1	Oslo
Noise protection	4	Bielsko-Biała, Kielce, Opole, Rzeszów		
Special urban planning conditions	1	Gdańsk		
Weight-in-motion pre-selection system	2	Gdynia, Kraków		
Alternative delivering systems	1	Szczecin	1	Trondheim
Promotion of environmentally friendly UFT	1	Szczecin	1	Oslo
Establishing the Freight Quality Partnership	1	Szczecin		
Urban Consolidation Centres			1	Oslo
Utilization of electric vehicles			2	Oslo, Stavanger
Strategic planning (local freight transport plans)			1	Oslo
Other actions:	4	Bydgoszcz (LAKS Local Accountability for Kyoto Goals), Kraków (Civitas/Caravel II), Katowice (SUM – Sustainable Urban Mobility), Poznań (SUGAR)	1	Oslo (STRAIGHTSOL)
<b>Total</b>	<b>68</b>		<b>11</b>	

# The qualitative results

- In **Poland**, major measures concentrate on **organisational solutions based on restrictions** (restricted traffic zones and time windows for deliveries. In the case of the analysed Norwegian cities, restricted traffic zones were implemented in three of them.
- The solutions implemented in **Norway** are the **bigger focused on hard measures** (application of electric vehicles, measures taken under the STRAIGHTSOL project, CO<sub>2</sub> free mail deliveries, customer adapted waste management with electric vehicles).
- In **Polish** cities there are **no measures** focused directly on implementing solutions based on alternative energy!

# The qualitative results

- The analysed **Polish** projects were usually initiated by **local self-governments**. The only exceptions are the projects: **SUGAR** (*implemented by the Institute of Logistics and Warehousing in Poznań*) and **C-LIEGE** (*initiated and implemented by the Maritime University in Szczecin*).
- In **Norway**, though, the major part of the initiatives was taken by **institutions other than self-governments**. In that regard, the major part was played by the **Institute of Transport Economics** (Transportøkonomisk Institutt) based in Oslo.

# The qualitative results

- The financial sources of the projects implemented in **Poland** usually include own **funds of the local or regional administration units** (except EU's financial instrument LIFE, Sixth Framework Programme, Seventh Framework Programme, European Regional Development Fund, Intelligent Energy Europe).
- In the case of the **Norwegian** projects, the most frequently used source of financing was **Norwegian Regional Research Fund as well as the communes' own funds**. The STRAIGHTSOL project, in turn, was financed under the Seventh Framework Programme.



# The final results

# General problem during analysis

## Lack of data regarding the UFT system functioning

*(like: the problems in UFT, number of deliveries, van routes, the impact of the activities etc.)*

# General conclusions

- Despite a considerable number of analysed **Polish** projects compared to **Norway**, it must be stated that in view of the number of cities in both countries, **there should be proportionally more initiatives of that kind in Poland.**
- The initiatives taken up in **Norway** more often are focused directly on implementing solutions that facilitate **reduction in pollutants emissions**, like alternative energy sources.
- In **Poland** there are virtually **no projects** that promote application of alternative fuel vehicles in UFT.

# General conclusions

- Therefore, it is necessary to **increase activity in the area of implementing alternative sources of energy and promoting environmentally friendly vehicles.**
- Currently there are more and more proposals of this type, including:
  - freight vehicles fuelled by:
    - natural gas,
    - bio-fuels,
    - fuel cells using "solar" hydrogen or methanol,
    - electric and hybrid drive,
  - freight bike transport,
  - inland water transport,
  - rail transport.

# General conclusions

- One of the key problems in UFT is the **heterogeneity** of the environment of its operation, resulting from **varied expectations of stakeholders**.
- Different interest groups have **different priorities and goals**, which translates into different perception of the notions of transport and cargo distribution effectiveness in urban areas.
- The major conclusion drawn from the said analysis is therefore the **need to intensify activities aimed at better cooperation between urban freight transport stakeholders**.

# General conclusions

The solution:

## Freight Quality Partnership

**Freight Quality Partnership** is a kind of an understanding between territorial administration units and other stakeholders, specifying the manner of cooperation in order to solve specified problems connected with freight transport.

# Thank you for the attention



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