



WP2: State of the art review and requirements for environmental friendly urban freight transport

**Bjørn Gjerde Johansen, TOI
Paal Brevik Wangsness, TOI**

WP2 milestones

- WP2: State of the art review and requirements for environmental friendly urban freight transport
 - Task 2.1: Analysis and classification of best practices in environmental urban freight transport
 - Task 2.2: Setting the requirements for energy efficient and sustainable urban freight transport in Poland and Norway.
- D2.2.1: The guide for efficient, environmental UFT in Polish and Norwegian cities based on good practices

Task 2.1: Analyses and classification of good practices in environmental urban freight transport



What is a good practice?

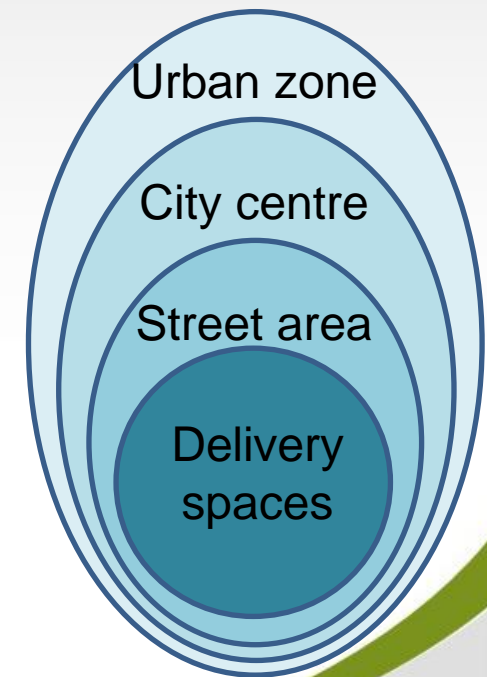
- An implemented UFT measure that improves the current situation **economically, environmentally** and/or **socio-cultural**
 - Business initiative, government initiative or research initiative



Classification of good practices

Urban zone	Urban logistics plan	3
	Urban consolidation centre	3
	Freight quality partnership	2
City centre	Low emission zones	2
	Access restrictions	2
	Distribution plan	1
Street area	Multiple use lane	2
	Optimisation of routes	1
	Environmental friendly vehicles	3
	Intelligent traffic management	2
Delivery spaces	Delivery times	2
	Delivery space booking	2
	Alternative delivery systems	5

Classification used is obtained from GBO L2.1:



Description of good practices

With respect to:

- City in which the measure is implemented
- General description
- Special characteristics
- Main results
- Transferability considerations
- Lessons learned

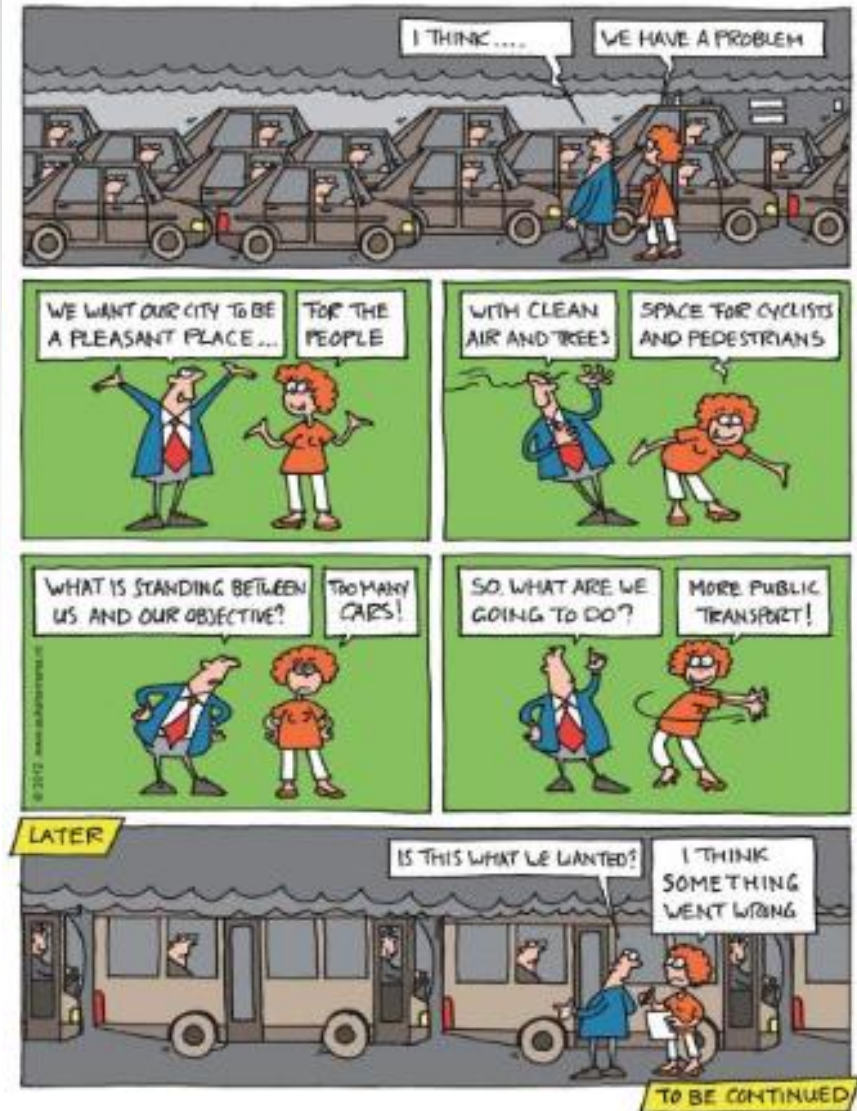


Task 2.2: Setting the requirements for energy efficient and sustainable urban freight transport in Norway and Poland



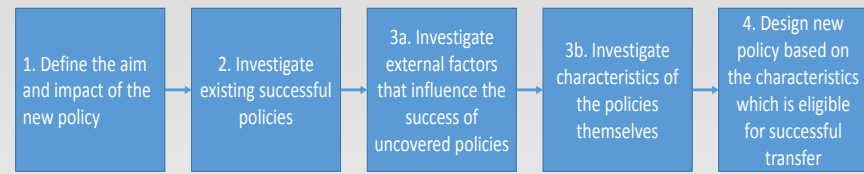
Already lots of good practices, but...

- Problems when it comes to **roll-out, up-scaling** and **transferability** to other cities
 - This undermines the usefulness of identified good practices...
- ... unless **conditions for transferability and adaptability** of measures are identified

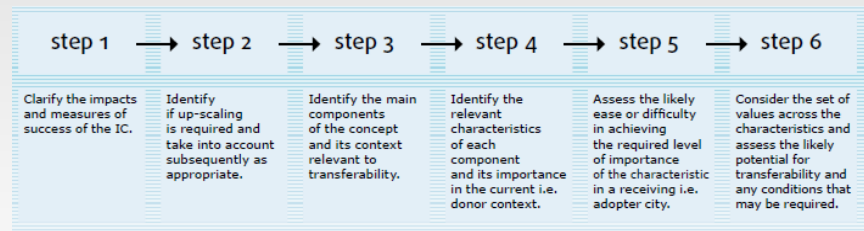


Methodologies for transferability/adaptability

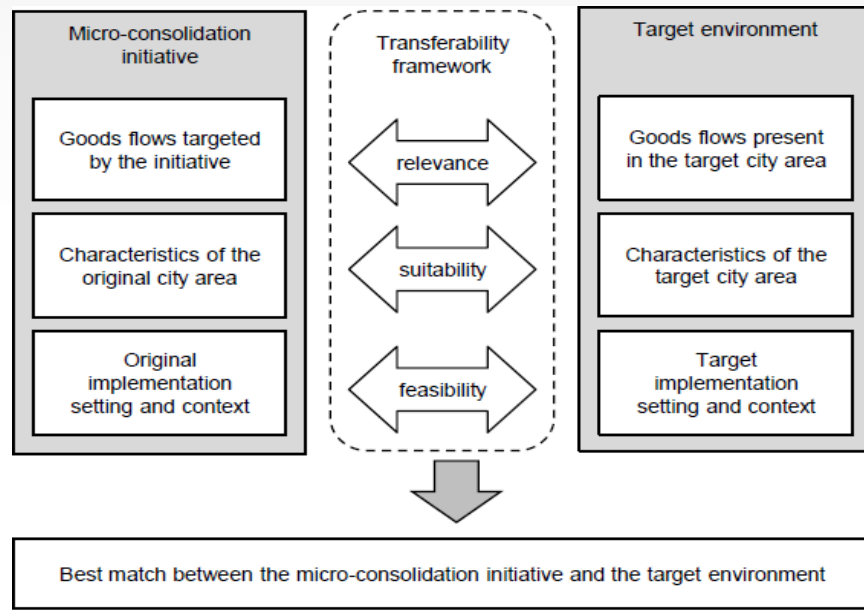
The Alter-Motive four step approach



The NICHES+ transferability methodology

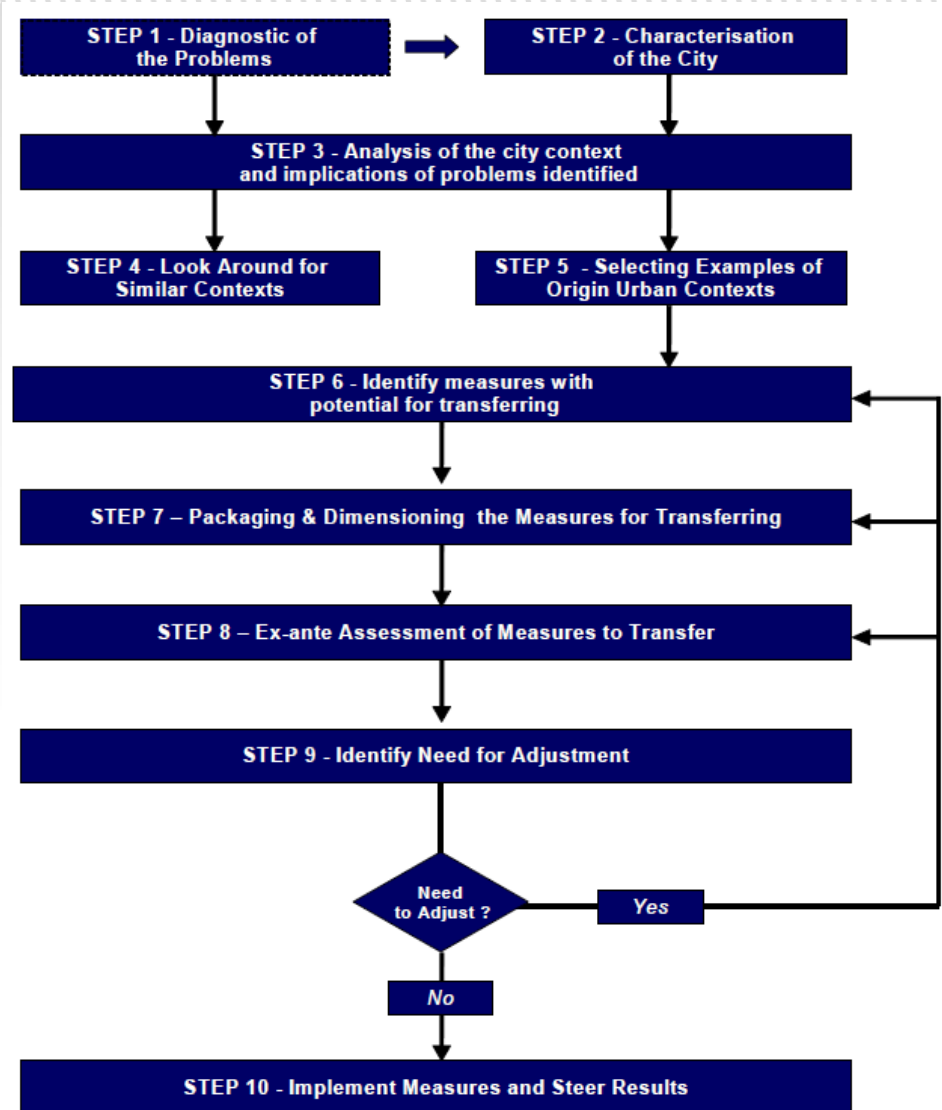


Transferability framework for micro-consolidation schemes



Methodologies for transferability/adaptability

The Meteor Turblog transferability methodology (MTTM)



D2.2.1: The guide for efficient, environmental UFT in Polish and Norwegian cities

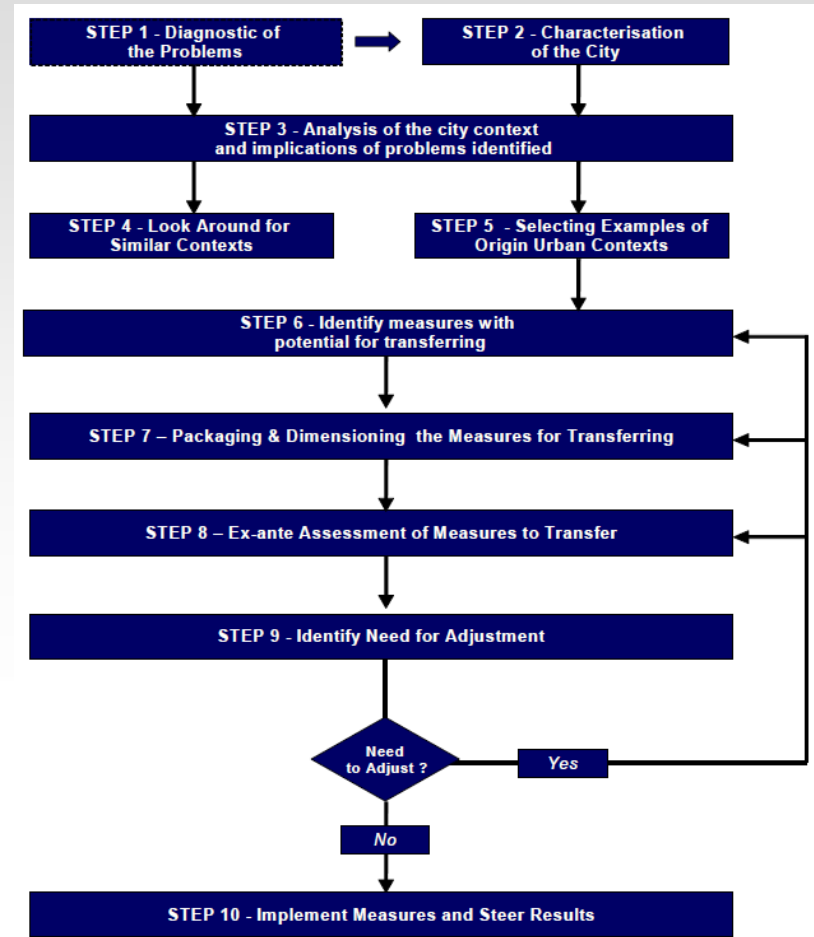


Structure of D2.2.1

- Part I: Guide for adapting and implementing good practices
- Part II: Analysis and classification of existing good practices
- Part III: An example of the methodology described in part I for Oslo



Part I: Guide for adapting and implementing good practices

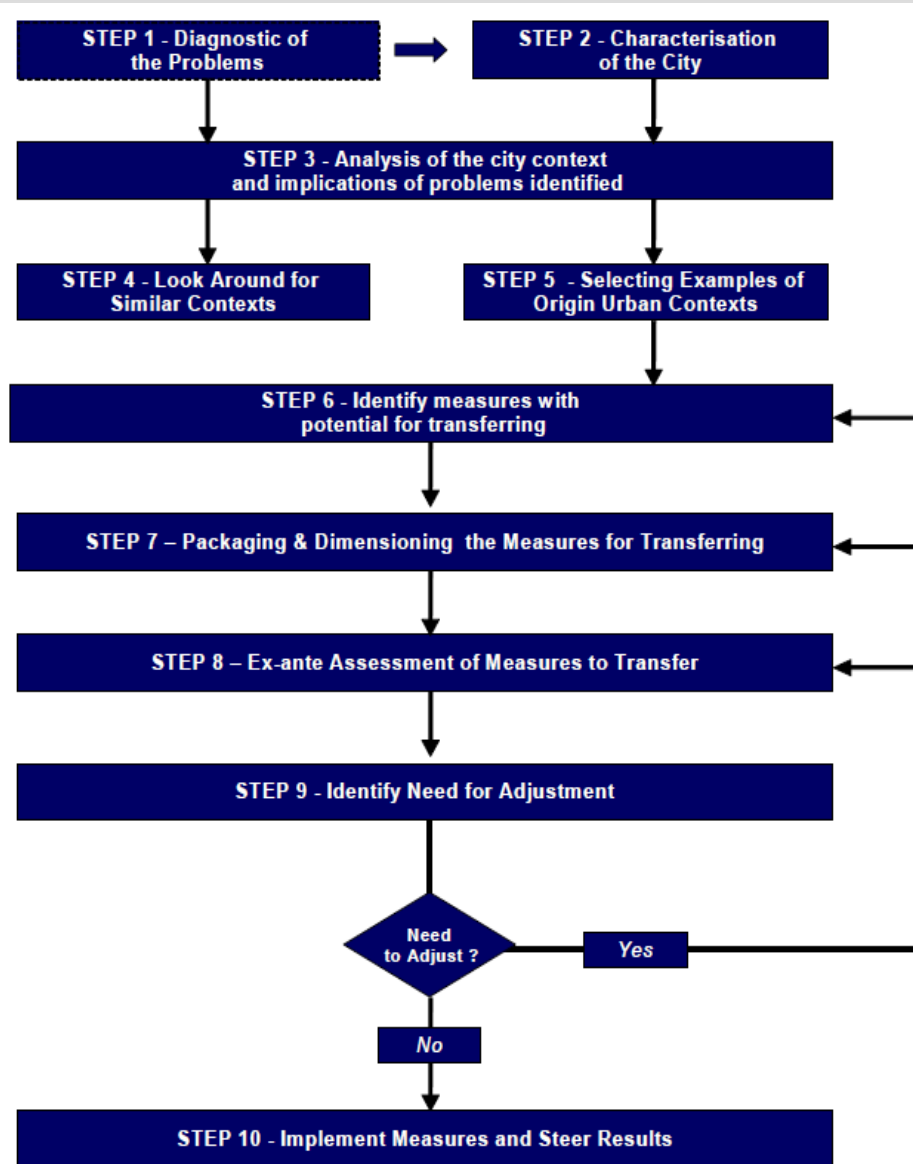


Part II: Analysis and classification of existing good practices

Urban zone	Urban logistics plan	3
	Urban consolidation centre	3
	Freight quality partnership	2
City centre	Low emission zones	2
	Access restrictions	2
	Distribution plan	1
Street area	Multiple use lane	2
	Optimisation of routes	1
	Environmental friendly vehicles	3
	Intelligent traffic management	2
Delivery spaces	Delivery times	2
	Delivery space booking	2
	Alternative delivery systems	5

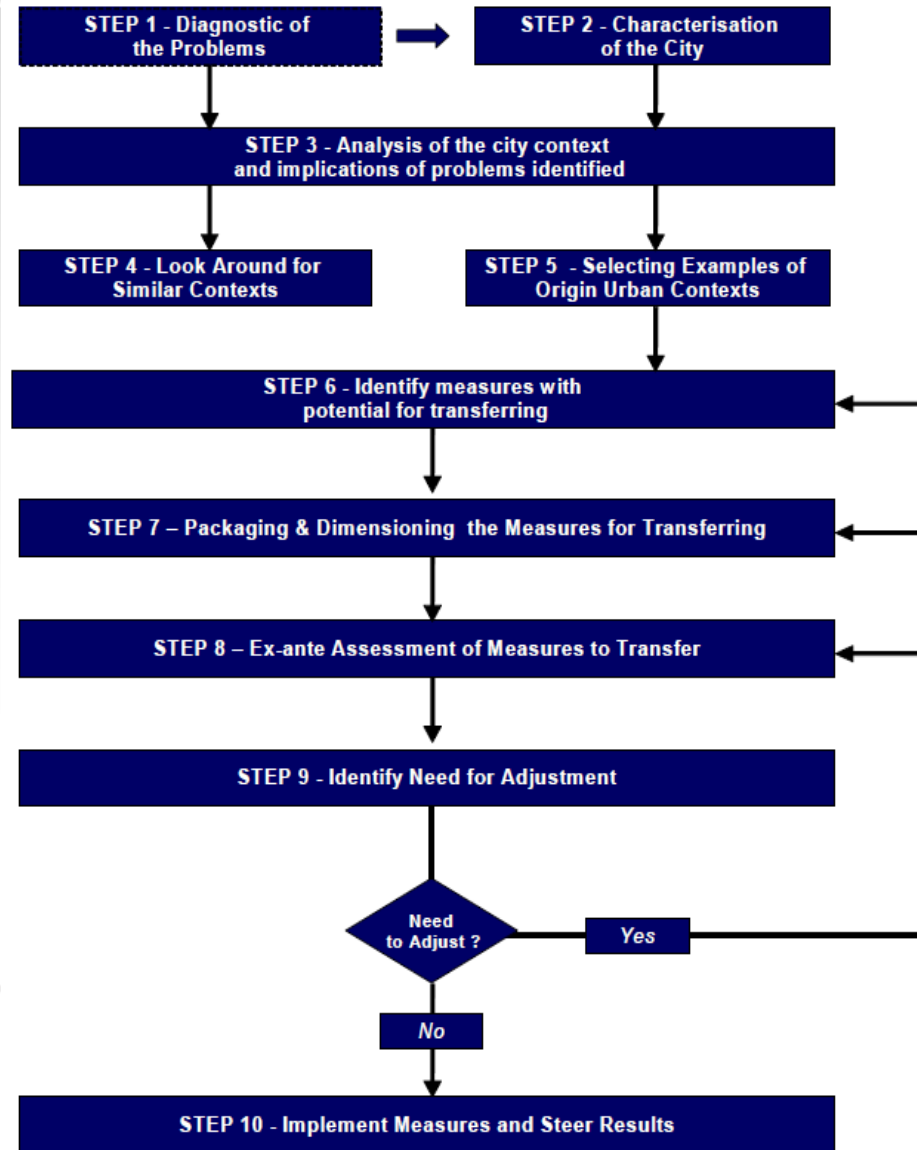
Part III: An example of the methodology described in part I for Oslo

GBO, WP1
TURBLOG
Task 2.1
Selection criteria



Application for Oslo: steps 1 and 2

- GBO, WP1
- TURBLOG
- Task 2.1
- Selection criteria



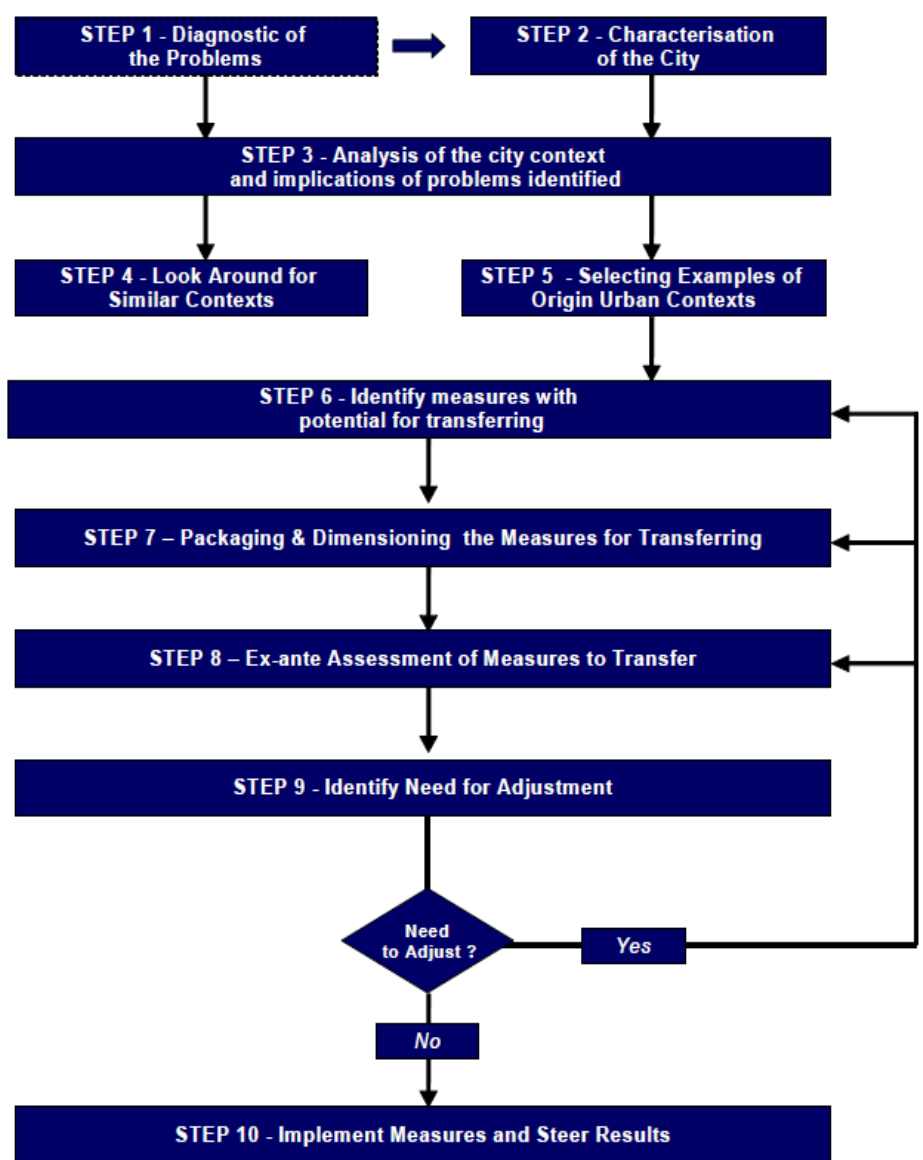
Application for Oslo: steps 1 and 2

- **Identified main problems in Oslo:**
 - **Lack of coordination** between agents in the logistics supply chain
 - **Poor access** to pick-up and drop-off spots
 - **Inefficient receiving** and handling of goods at retailers
 - **Need for improvisation** when there are unforeseen logistical disruptions (e.g. closed stores, lack of parking space)

(Grønn bydistribusjon, 2011)

Application for Oslo: step 3

- GBO, WP1
- TURBLOG
- Task 2.1
- Selection criteria



Main logistics profile for Oslo (within Ring 1)

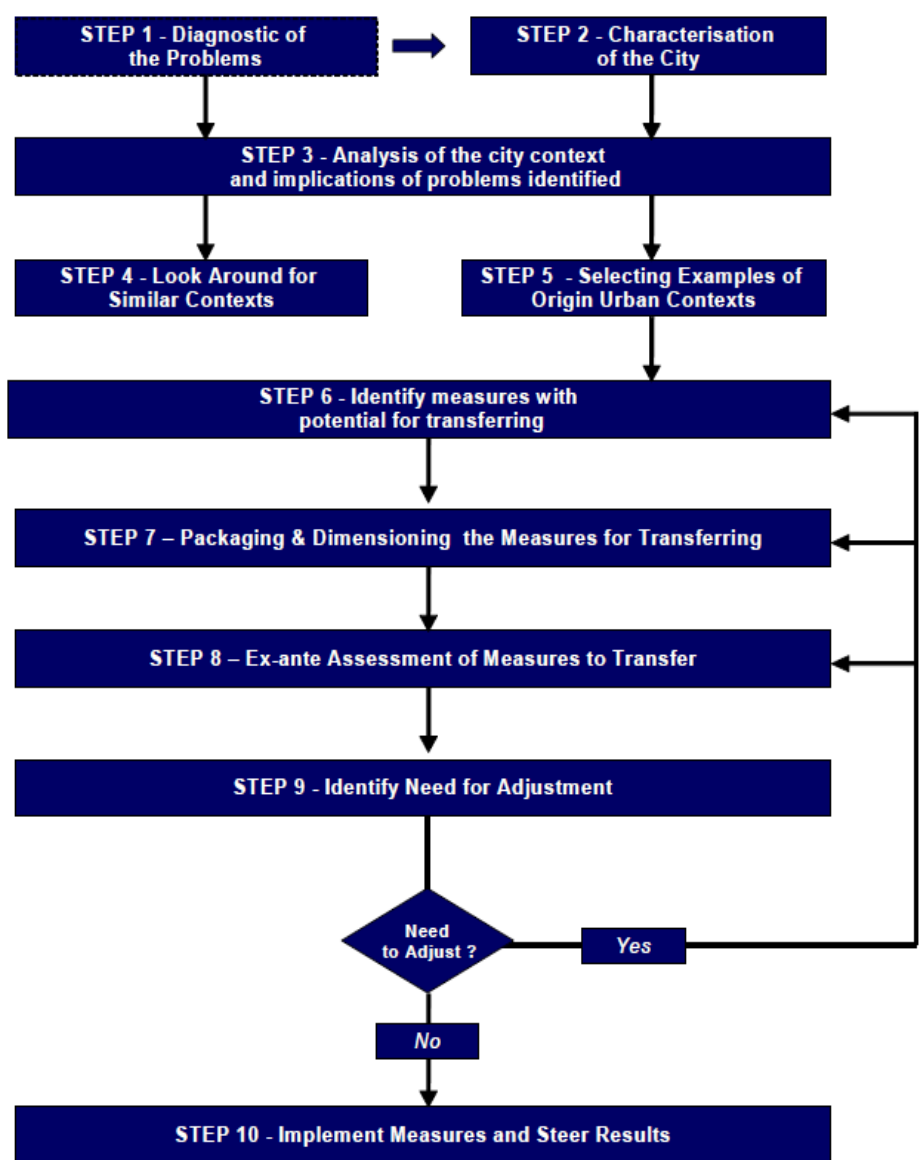
	Classification of characteristics and features	Characteristics of logistic profile C: BUSINESS CENTRE		
City Area features	Commercial density	Low	Medium	High
	Homogeneity	Low	Medium	High
	Logistic acessibility	Bad	Reasonable	Good
	Restrictions applied	Yes	No	
Product Charac-teristics	Easiness of handling	Difficult	Reasonable	Easy
	Special conditions	Special needs	Might have special needs	No special needs
Agent Profile/ Deliver-ies Profile	Urgency of deliveries	Irrelevant	Relevant	Urgent
	Frequency of deliveries	Low	Medium	High
	Amounts to be delivered	Few	Several	Many
	Planned deliveries	No defined routine	Defined routine	

Secondary logistics profile for Oslo (within Ring 1)

	Classification of characteristics and features	Characteristics of logistic profile B: HOTELS, RESTAURANTS, SMALL GROCERY STORES, SMALL NEIGHBOURHOOD MARKETS		
City Area features	Commercial density	Low	Medium	High
	Homogeneity	Low	Medium	High
	Logistic acessibility	Bad	Reasonable	Good
	Restrictions applied	Yes	No	
Product Charac-teristics	Easiness of handling	Difficult	Reasonable	Easy
	Special conditions	Special needs	Might have special needs	No special needs
Agent Profile/ Deliver-ies Profile	Urgency of deliveries	Irrelevant	Relevant	Urgent
	Frequency of deliveries	Low	Medium	High
	Amounts to be delivered	Few	Several	Many
	Planned deliveries	No defined routine	Defined routine	

Application for Oslo: step 4 and 5

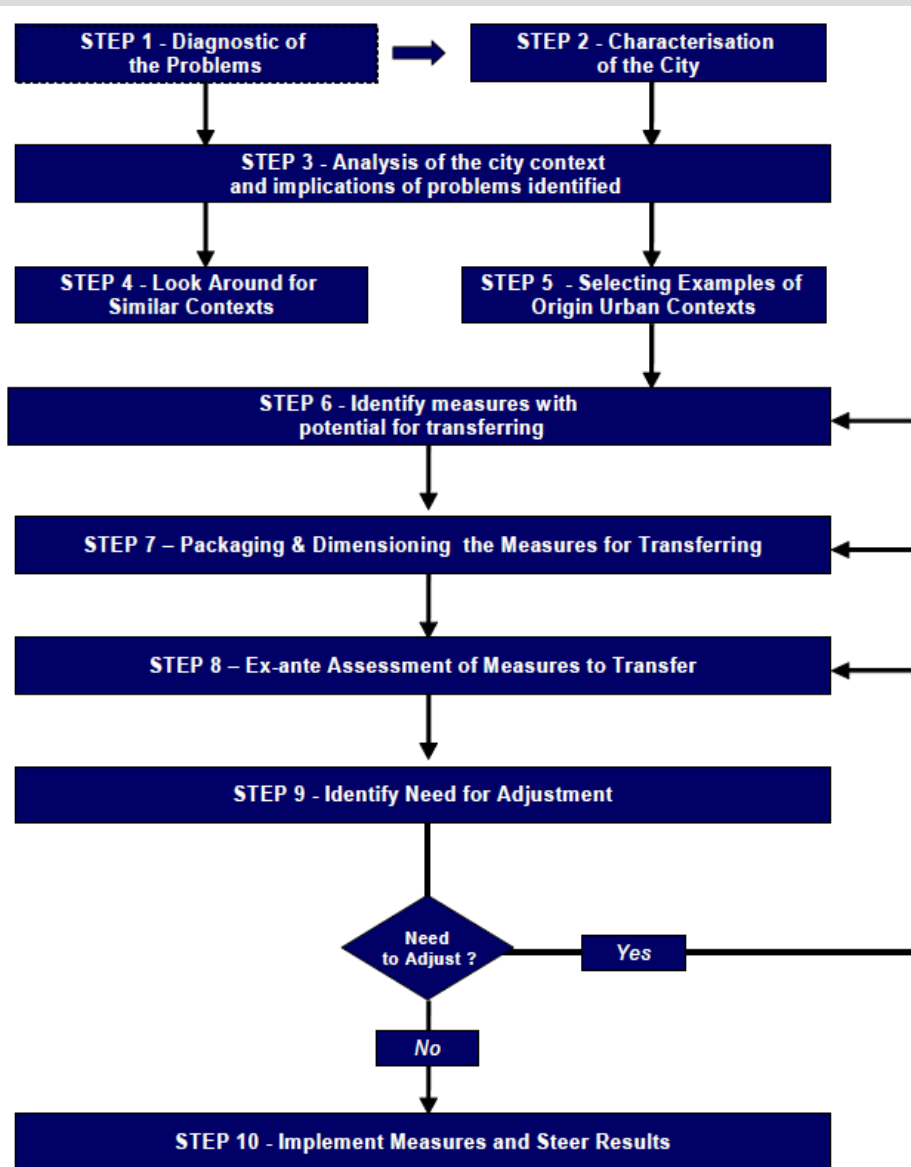
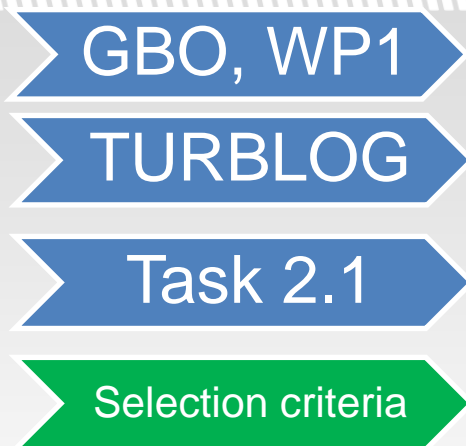
- GBO, WP1
- TURBLOG
- Task 2.1
- Selection criteria



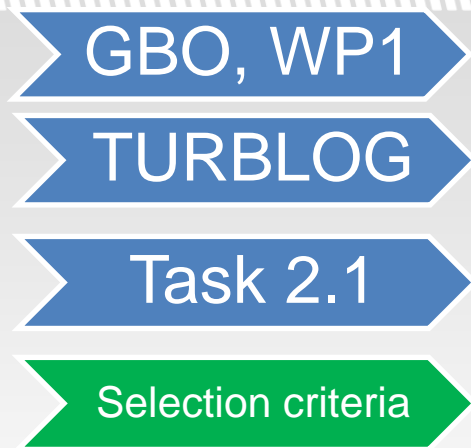
Application for Oslo: step 4 and 5

Urban zone	Urban logistics plan	2
	Urban consolidation centre	6
	Freight quality partnership	4
City centre	Low emission zones	4
	Access restrictions	6
	Distribution plan	1
Street area	Multiple use lane	2
	Optimisation of routes	1
	Environmental friendly vehicles	8
	Intelligent traffic management	1
Delivery spaces	Delivery times	3
	Delivery space booking	2
	Alternative delivery systems	5

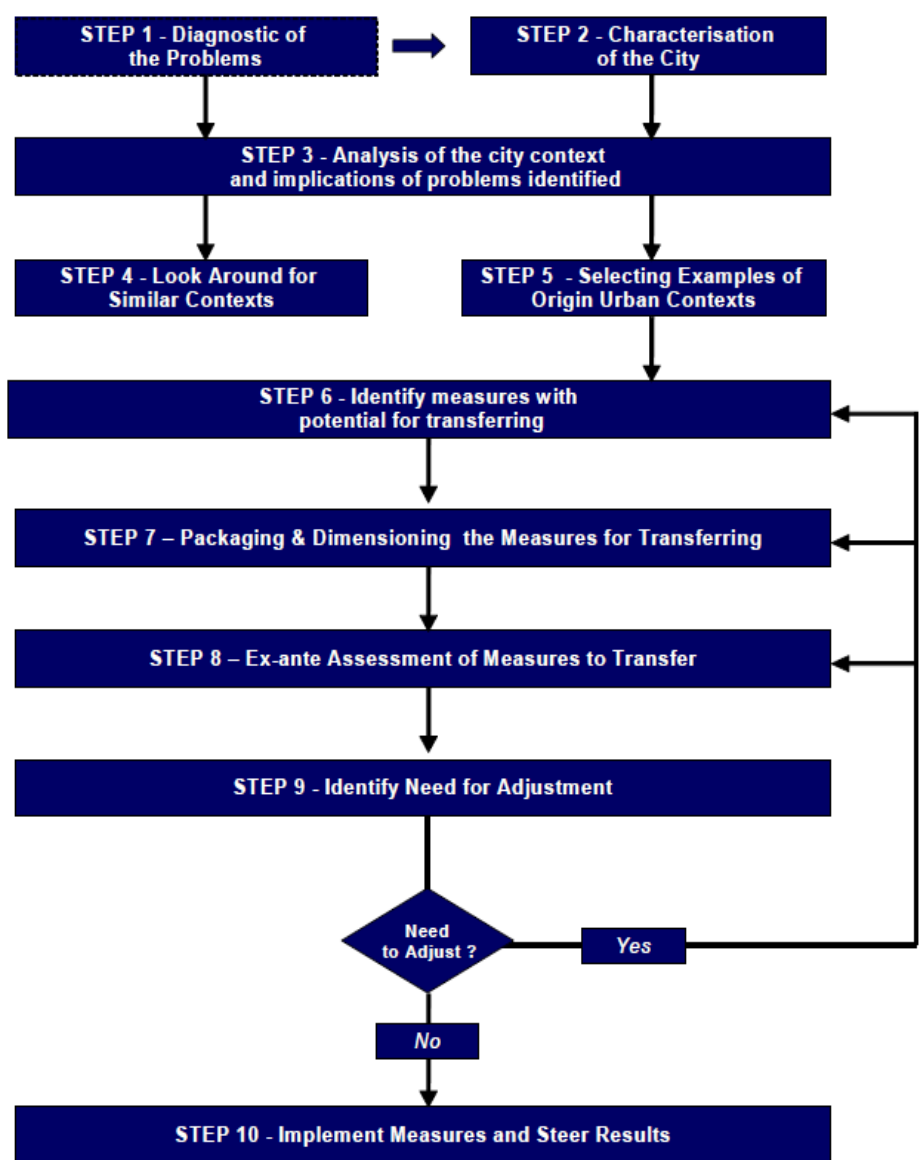
Application for Oslo: step 6



Application for Oslo: step 6



- (1) Whether the city context is relevant for Oslo
- (2) Whether the measures address the main problems for Oslo
- (3) Whether the measures were deemed successful
- (4) Whether the measures were deemed transferable under certain circumstances



Application for Oslo: step 6

La petite Reine in Paris, France	Cargo cycles – electrically powered tricycles
Tokyo, Japan	Shinjuku joint delivery system
New York, USA	Off-hour delivery program
La Rochelle, France	Strategic extension of city logistics plan
Bristol, UK	Freight consolidation scheme
	Access Management and Priority Measures
Burgos, Spain	New goods distribution scheme in Burgos
Sutton, UK	Delivery and servicing plan
Barcelona, Spain	New concepts for good distribution
	Night deliveries
Parma, Italia	Urban Distribution Centre
	Data transmission platform
	Environmental-friendly LCVs
	New regulation on UFT (license to enter city center)
Bordeaux, France	Local delivery spaces

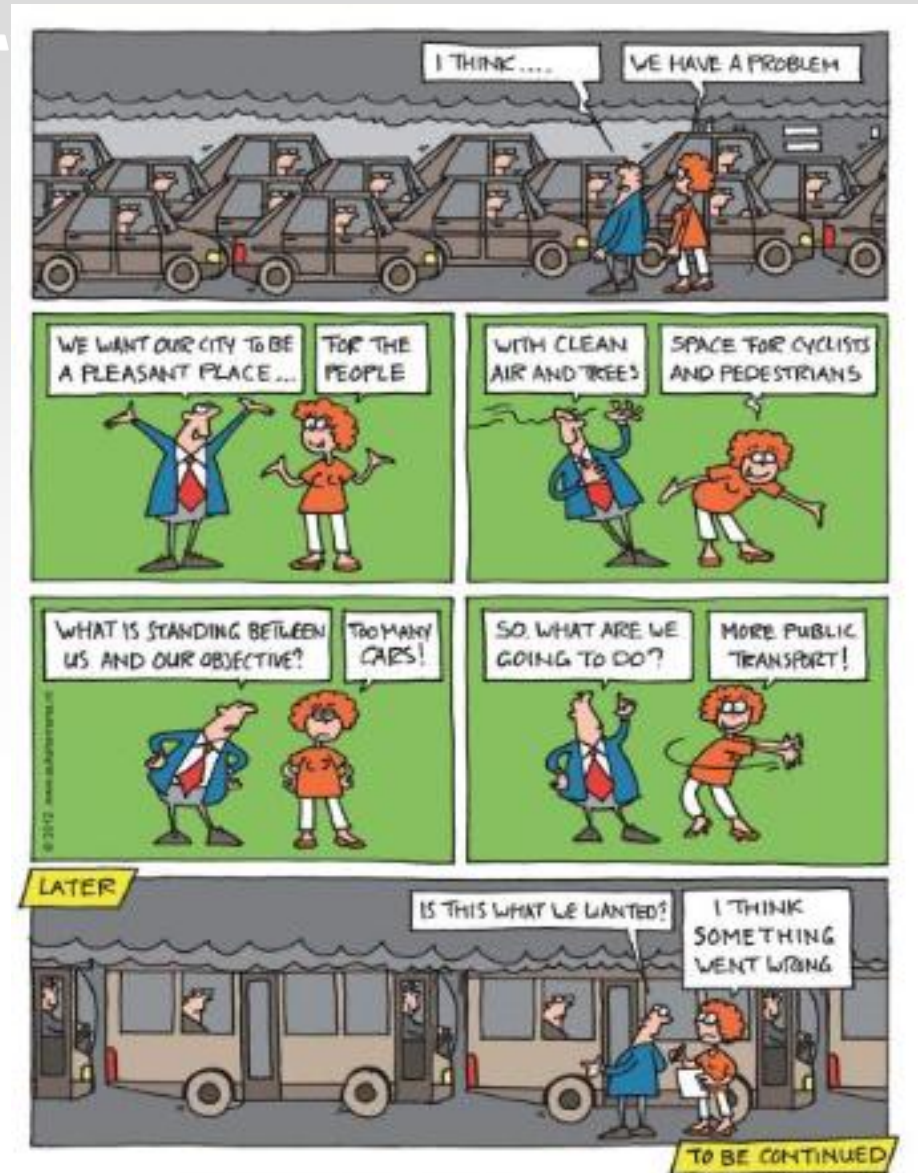
Summary

- Lot of **good practice** collections already exist
- However, they are useless without guidelines for **transferability, adaptability** and **implementation**
- We build on **MTTM**, because it is the most extensive methodology for transferability and adaptability available
- The purpose of the document is to assist decision-makers ...



...to avoid this...

- Inefficient ad hoc solutions
- Previously identified pitfalls



...and achieve this

- Use a transparent and systematic framework
- Identify possible solutions
- Choose and adapt measures from a pre-defined list
- Be aware of undesirable and indirect effects
- Implement solutions as efficient as possible



Lessons learned

- Data is key to successful implementation
 - GRASS WP1 gives insight to UFT problems and city contexts for Polish and Norwegian cities
 - However, more data should be gathered on a micro-level, preferably on street level
- To analyse city context, we recommend the TURBLOG framework of logistics profiles
- The initial list of measures is determinative when it comes to the final package of measures that are going to be implemented
 - The GRASS list of good practices should be the main reference for this
 - However, we recommend that this list is supplemented with more extensive collections of good practices
- For packaging and dimensioning of measures, as well as evaluating the final package of measures, we recommend the STRAIGHTSOL project as the main reference

Thank you for your attention



info@grassproject.eu
www.grassproject.eu

Bjørn Gjerde Johansen, TOI
bgj@toi.no

Paal Brevik Wangsness, TOI
pbw@toi.no