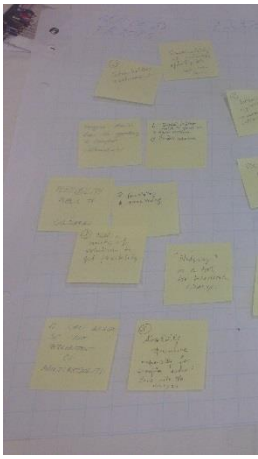
INTERREGIONAL THEMATIC WORKSHOP ‘BEST PRACTICE IN LOW EMISSION AND GREEN TRANSPORT’

Karlskrona, Sweden

8 March 2017

SUMMARY REPORT



28.03.2017

TABLE OF CONTENTS

INTRODUCTION 3

AGENDA OF THE WORKSHOP 4

THE PRESENTED GOOD PRACTICE SOLUTIONS IN LOW EMISSION AND GREEN TRANSPORT IN THE FIVE PROJECT PARTNER AREAS 5

1. HVO100 – a fossil free fuel and its distribution network in south-eastern Sweden 5
2. TWIST – 'Transport with a Social Target' project 6
3. Green solutions for public transport in Cluj-Napoca 7
4. Efficient vehicles in the promotion of sustainable energy development of Andalusia 8
5. Experiences and further plans in mobility development in Miskolc 9

HIGHLIGHTS FROM THE GROUP WORK 10

THE STAKEHOLDER PERCEPTION OF THE WORKSHOP. LESSONS LEARNED 14

ITW WORKSHOP EVALUATION QUESTIONNAIRE 15

INTRODUCTION

Many of Europe's urban areas are facing a series of environmental challenges resulting mainly in congestion and air pollution. Sustainable urban mobility can be the starting point for more environment friendly measures, also in combination with ICT- based solutions.

In that regard, the TRAM project fosters the development of a competitive, resource-efficient and low carbon-oriented European transport system by improving the efficacy of regional and local policies on urban mobility in five geographical areas of the European Union. The strengthened urban dimension of regional and local policymaking is expected to facilitate the shift to low carbon economy – in line with the guidelines set out in the EU Transport White Paper, the Urban Agenda and the EU 2020 strategy

One of the instruments for the mutual learning process are so called interregional thematic workshops, which focus on three improvement areas of sustainable urban mobility: transport policies; ITS for urban areas; and low emission and green transport. In combination with study visits to the sites of good practice in sustainable mobility, the interregional thematic workshops are meant to help exchange the experience and gather a wide palette of solutions which can – transformed from good to best practice - feasibly be incorporated in the mobility policies of the project partners.

Region Blekinge held the first in the series of interregional thematic workshops. Arranged on 8th of March 2017, the whole-day event gathered representatives of the five project partner organisations, sustainable mobility experts from five EU countries as well as stakeholders from the south-eastern part of Sweden that deal with sustainable mobility issues in their policy, research and business life. The workshop featured:

- five presentations featuring local/regional good practice in sustainable mobility from the partner areas, followed by questions and answers;
- group work to identify, inter alia, key success factors and adoption/replication pre-requisites for the presented good practices;
- panel discussion to wrap up and exchange highlights form the group work;
- evaluation of the workshop quality via questionnaire forms filled in by the participants (22 responses received).

Conclusions from the workshop in Karlskrona will be used in designing and conducting the follow-up workshops in the other partner locations, to optimise their value added for the interregional learning process.

AGENDA OF THE WORKSHOP

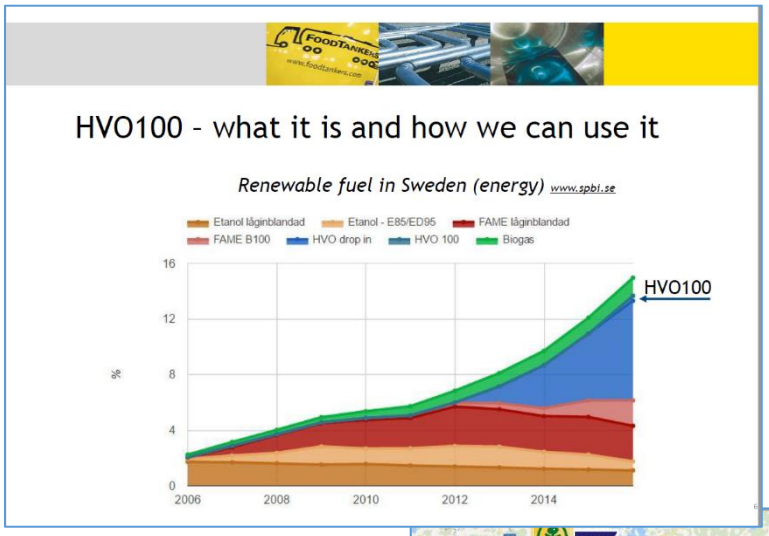
Time	Item
9:30	Welcome by Region Blekinge, TRAM project partner **Wiktor Szydarowski, Region Blekinge**
9:45	Presentation of the participants
10:00	Introduction to the day by Marche Region, Italy, TRAM Lead Partner. Aims and expected results of the TRAM project **Simone Franceschini, Isfort – Lead Partner expert**
10:15	Presentations of good practice solutions in low emission and green transport in the five project partner areas 1. HVO100 – a fossil free fuel and its distribution network in south-eastern Sweden **Tomas Petterson, CEO, Food Tankers** 2. Twist – 'Transport with a Social Target' Project **Renato De Leone, University of Camerino**
11:00	Coffee break
11:30	Cont. presentations on good practice solutions 3. Green solutions for public transport in Cluj-Napoca **Gabriel Lupsa, Technical engineer of the Cluj Public Transport Company** 4. Efficient vehicles in the promotion of sustainable energy development of Andalusia **Gema Cantero, Andalusian Energy Agency** 5. Experiences and further plans in mobility development in Miskolc **István Nagy, project manager Miskolc Holding Plc**.
12:30	Networking lunch
13:30	Group work supervised by TRAM project's Interregional Team of Regional Experts (ITRE). Criteria for best practice and adaptability/replicability potential of the presented solutions
14:30	Coffee break
15:00	Panel discussion: success factors and missing opportunities for deployment of low emission and green transport solutions identified through the group work by the ITRE experts Q&A
16:00	Wrapping up of the day **Wiktor Szydarowski, Region Blekinge**

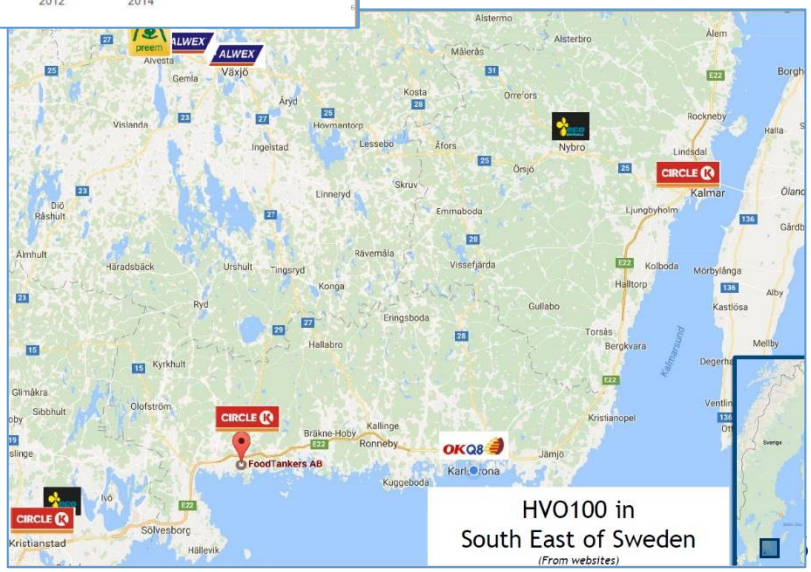
THE PRESENTED GOOD PRACTICE SOLUTIONS IN LOW EMISSION AND GREEN TRANSPORT IN THE FIVE PROJECT PARTNER AREAS

1. HVO100 – a fossil free fuel and its distribution network in south-eastern Sweden

A Blekinge-based enterprise of FoodTankers offers a so called mobile pipeline connecting the local food manufacturing industries. It has a vision to be the most respectable logistic company in Europe for transporting liquid food products. In the designed and implemented sustainability chain of business measures, embracing economic, environmental and social responsibility aspects, the company took an initiative to use an innovative fuel in the transport operations in the Nordic countries.

HVO 100, a hydro-treated vegetable oil, is a fossil-free fuel built on hydrocarbon and allows for 90% CO2 reduction. Beneficially priced against diesel, it does not require any truck conversion and fully complies with the country's plan to become independent on fossil fuels by 2030. The fuel station distribution network in SE Sweden allows the company to offer attractive services to the customers, yet, with the fuel solution much dependent on the policy frameworks (tax exemption, biofuel quotas, distribution network outside Sweden, pricing) and the availability of raw material.

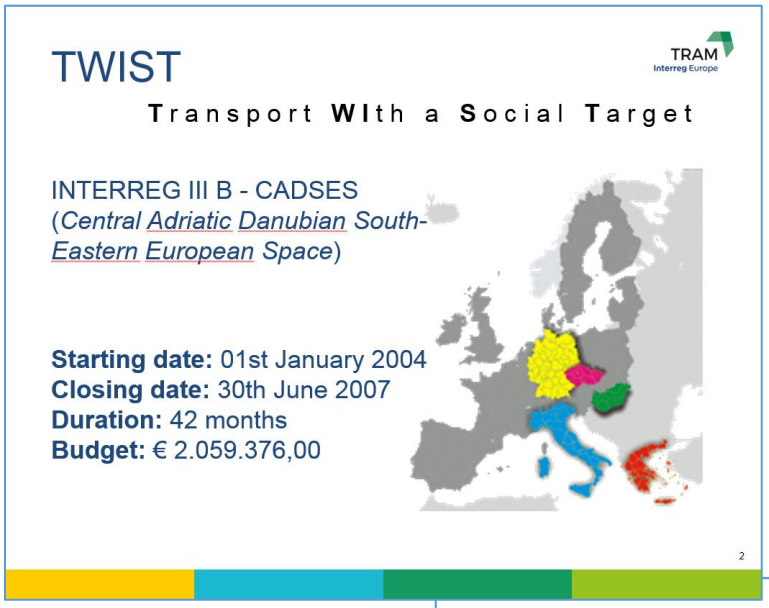


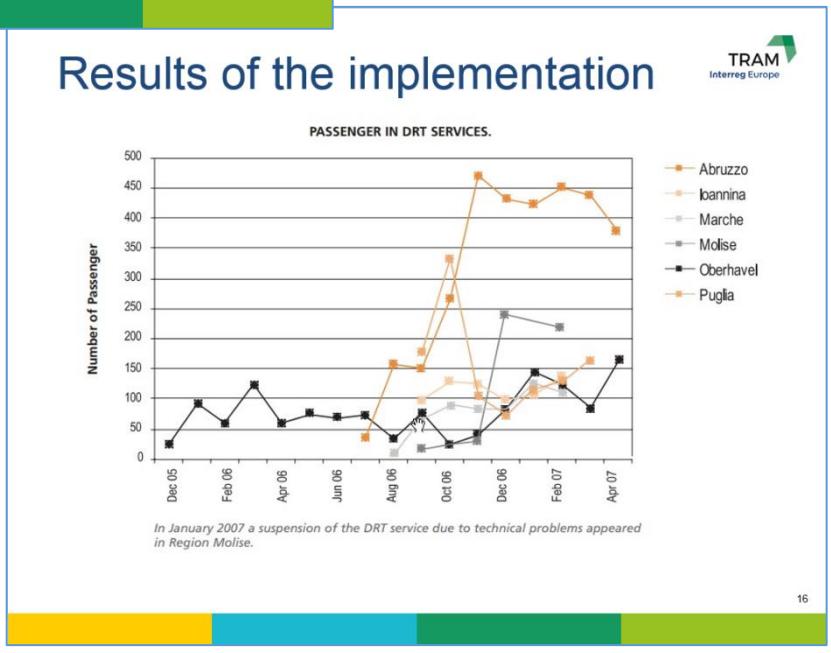


2. TWIST – 'Transport with a Social Target' project

The INTERREG IIIB CADSES project lasted until June 2007 and was dedicated to the promotion of mobility in underprivileged areas through demonstrating a Demand Responsive Transport (DRT) approach. The purpose was to provide tailor-made mobility services for the local population (mostly elderly people) in the remote and urban areas, to reduce their social and economic exclusion and improve the life quality.

The reorganisation of the local public transport system by redeveloping the bus connection network and introducing the flexible DRT services (with help of ICT tools to coordinate the resources and detect hidden or latent mobility requests) allowed for a better freedom of routing, timing and vehicle assignment, albeit with potential higher cost than in case of the conventional bus transport. Still, with the growing maturity of the DRT, acceptable subsidy levels and commercial viability can be achieved.

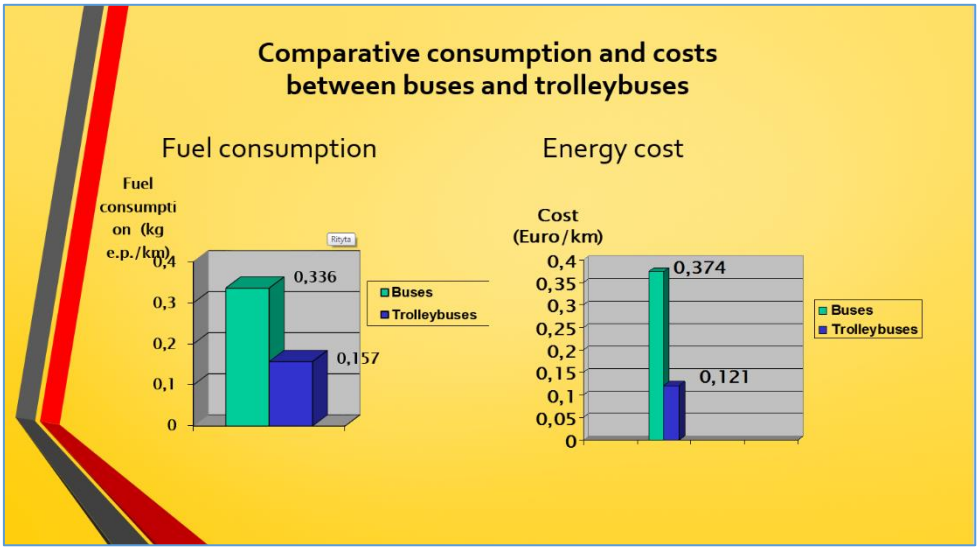




3. Green solutions for public transport in Cluj-Napoca

With the diesel-driven buses standing for 61% of public transport operations in 2007, the city authorities took decision to promote electric transport for better mobility and climate benefits (cleaner air in the valley-located settlement area). Technical conversion of buses to trolleybuses, parallel to the acquisition of modern trams and modernisation of tram lines helped decrease fuel consumption and energy cost, and mitigated traffic noise levels.

The city authorities plan to complement these measures with an ambitious electric transport strategy, expected to extend the public acceptance and outreach of tram/trolleybus transport into the inner city and suburban areas through e.g. designing dedicated lanes for public transport, construction of electric power stations with photovoltaic panels for electric traction and prioritizing public transport intersections.



4. Efficient vehicles in the promotion of sustainable energy development of Andalusia

REDEJA (Energy Management Network of the Andalusian Regional Government) has been a pioneer tool in Spain to boost sustainable energy principles in the Andalusian government, bringing an economic saving of 53.9 million euros. One of its action areas is the sustainable mobility and energy saving and efficiency in infrastructure related to transport through studies, plans, audits and demonstration projects (e.g. to replace a courier and parcel fleet with electric vehicles).

One of the most representative projects consisted in the renewal of the public bus fleet from diesel to CNG-driven, which helped Seville achieve the top-rank position among the Spanish cities with the highest share of CNG buses (50%). Another one helped invest in the urban zero emission public transport line in the city of Cordoba. The acquired three electric vehicles for public passenger transport service were adjusted to narrow inner-city streets and gained public acceptance for quality, contributing to climate goals.

5. Experiences and further plans in mobility development in Miskolc

The city of Miskolc witnesses several mobility challenges associated e.g. with the decreasing share of public transport in the modal split, high air and noise pollution levels, outdated and unattractive public transport vehicles, low satisfaction rate of passengers and long duration of trips.

The local authority took an effort to develop the rail-guided public transport of high capacity as an important cornerstone of the city's transport strategy. The Green Arrow project helped refurbish the rail track and extend the tram line to connect to the so far uncovered residential areas in the far-western district of Miskolc. Apart from acquiring modern tram vehicles, the project invested in GPS-based real time information for passengers, overall improving the service quality (comfort on-board, safety) and decreasing the traffic externalities.

The future city mobility plans envisage a wide range of actions to boost the urban mobility, incl. education and communication activities as well as short-term and long-term infrastructure projects.

HIGHLIGHTS FROM THE GROUP WORK

The adaptability/replicability potential of the presented good practice cases from the five partner areas was judged based on five guiding questions (inserted in the tables below).

GOOD PRACTICE #1: HVO100 – a fossil free fuel and its distribution network in south-eastern Sweden
Q1: What is the potential impact of the practice on the environmental, social and economic dimensions of your context?
HVO100 is a biofuel solution which can reduce CO2 emissions by about 90%. HVO100 is compatible with current diesel engines and the current filling stations, therefore it does not require new infrastructures for final distribution. HVO100 is today mainly used in trucks, but it can be used – without any technical limitations – to fuel cars. Production costs are higher than traditional fuel, and it does not seem that costs are going to sink, therefore the shift to HVO100 may represent a cost for users and/or public authorities.
Q2: Which are success factors which need to be replicated to a have a successful implementation of this practice in your context?
The practice presents a business model based focused on the provision of bio-based fuel. HVO100 has higher production cost compared to traditional diesel. Key success factor is the presence of policy schemes which require a quota of fuel from bioproducts. HVO100 is competitive even in comparison to electric vehicles for long-range trips; it is therefore a solution for rural areas with low density mobility needs. Attention to sustainability is another key factor to be present. Today, HVO100 and traditional diesel have the same final price (because of current tax exemption for HVO100) and performance. Final users indicate that the use of HVO100 is a matter of environmental responsibility.
Q3: Can you identify the elements, including the policy framework, which need to be adapted/modified to your context?
Long-term stable incentive scheme for alternative fuels is essential because of the high investment cost required by setting up a production plant. Private investors shall have a clear outlook about future incentive schemes before investing in the process. Production cost highly depends on price of raw materials, which today come essentially from the *slaughterhouse waste*. Since slaughter wastes are local, transferability of the practice is also depending on the competitive pressure coming from other industries interested in the slaughter by-products. Knowing the value chain of the *slaughterhouse wastes* is essential because it is very dependent on the specific context. Because of scarcity of raw materials, a high demand of HVO100 may lead to increased production costs. With the on-going level of mobility, widespread diffusion of HVO100 is not feasible because of the limitations in the production capacity. HVO100 is therefore a part of future sustainability mobility in which both the diffusion of electric mobility and mobility management practices are key factors to reduce the overall demand of HVO100. Car producers claim that the use HVO100 may lead in warranty break, even if it seems that there are no evidences of failure because of HVO100. Therefore, the diffusion of this fuel also depends on the quality of relationship with the car industry, because car producers might adopt different policies and strategies to sustain or to discourage the use of HVO100.
Q4: Would the adoption of the practice improve the policy instruments in your context?

Replicability of HVO100 follows a top-down dynamic, because long-term policy support is the first element to be settled. Political guidance, which identifies long-term political goals for alternative fuels, is therefore essential to provide a stable framework for private investors which are interested in such technology.

GOOD PRACTICE #2: The TWIST project – Transport with a Social Target
Q1: What is the potential impact of the practice on the environmental, social and economic dimensions of your context?
During the group work all the people from different regions agreed that DRT (Demand Responsive Transport) system can be implemented. The social impact of the TWIST project was the focus on aging problems (elderly people who live rural areas) and along with this comes the reduction of the social and economic exclusion. To educate the local population about the advantages of the change throughout the process is also very important.
Q2: Which are success factors which need to be replicated to a have a successful implementation of this practice in your context?
In the TWIST project the main success factor is **flexibility**, offering a more flexible service in public transport. Everyone must have the opportunity in daily travel for transport vehicle alternatives. DRT system must be the alternative of private cars. DRT could be a part of the solutions that lead to a more sustainable transport system but it is important to see the whole picture and think on system level. DRT can increase the percentage of multimodality in case the whole public transport network become more attractive and competitive to private cars. There is a need for variety of solutions to get flexibility.
Q3: Can you identify the elements, including the policy framework, which need to be adapted/modified to your context?
The most important element that should be identified about policy framework are the procurement processes. It is a big priority to focus on the demands of the public it can be an issue there are too many needs although the system can be successful if it follows a bottom up dynamic. Besides educating the locals, also communication campaigns should be implemented for raising awareness and to impact behavioural changes in mobility patterns.
Q4: Would the adoption of the practice improve the policy instruments in your context?
In policy frameworks, there should be an average balance between advantages (discounts) and disadvantages (fees), for example if the drive to the inner city is going to be possible after the payment of a fee can increase the percentage of public transport services especially the demand for DRT. To reach flexibility it might be necessary with changed financial systems that leads to changing the policy instruments.

GOOD PRACTICE #3: Fixed rail and cable electric transport – trams and trolley busses (based on presentations from Cluj-Napoca and Miskolc)
Q1: What is the potential impact of the practice on the environmental, social and economic dimensions of your context?
Since the development of the infrastructure needs a relatively high initial investment, at first there is usually a significant resistance from policymakers against introducing such means of transport. Being a fixed rail type of transport needing overhead cables, there is usually a resistance from the public as well as city architects and urban planners as well. On the other hand, since technology for electric busses does not offer the most appropriate solution for all situations, it was and can also be an alternative for green electric transport in city agglomerations, especially if the electricity driving the rolling stock or trolleys comes from renewable sources. Still, it is essential to have a wider perspective, to see the big picture and all possible implications, both on the short as well as on the long term.
Q2: Which are success factors which need to be replicated to a have a successful implementation of this practice in your context?
Probably the most important element for the success of such modes of transport is the political commitment to prioritise electric transport. There also needs to strike a balance between economic and environmental aspects to make it a political and environmental win-win. It is also essential to have a good media management to achieve a wide-ranging local support for the initiatives and improve the image of trams and trolley busses, shift public opinion and the mentality of people. There needs to be an involvement of the public from the very early stages to have a social engagement and a sense of ownership for the idea. Since the initial investment in infrastructure can be considerable, it is useful to have EU subsidies for developing it. To be embraced by the wider public, it is important to break down barriers and make these modes of transport a viable option, to make them attractive and acceptable by being faster than cars (prioritisation of trams and other forms of public transport through regulations – showing political commitment). The pressure of the local public opinion on policymakers is also essential to start inducing changes.
Q3: Can you identify the elements, including the policy framework, which need to be adapted/modified to your context?
EU subsidies are necessary because of the large-scale investments. The reluctance to overhead wires also needs to be overcome. The solution might be the adoption of inductive charging technologies or busses which can connect to overhead wires for charging but also have certain autonomy on batteries.
Q4: Would the adoption of the practice improve the policy instruments in your context?
Firstly, policymakers should rethink the way they intend to sell the concept of fixed-track electric transport. After the public has embraced the specific solutions proposed, new regulations and incentives can be developed, having in mind to ensure the right balance between them.

GOOD PRACTICE #4: Replacing diesel buses with low carbon alternatives as electric or CNG (based on presentations from Cluj-Napoca, Andalusia and Miskolc)
Q1: What is the potential impact of the practice on the environmental, social and economic dimensions of your context?
Replacing diesel buses with either CNG or electric buses can significantly improve the **environmental** dimension of sustainability. Both CNG and electric buses will reduce both CO2 and other air pollution emissions significantly. Electric buses, though, are better in that they are more efficient and can reduce the CO2 emissions to zero if renewably sourced electricity is used. Both CNG and electric buses improve the **social** situation through the reduced air pollution and improved health effects. And electric buses are very silent which would increase quality of life through reduced noise. Electric buses have also been proven in Swedish demonstration projects to be both technically comparable and **economically** preferable already today, given that a total cost for an 8-10-year procurement period is considered. The initial investments and practical issues around electric buses (e.g. battery recycling, charging systems, etc.) could be a hinder still, though. In all, this means that CNG could be an intermediate solution as a step towards electric buses but this could risk that a costly investment into a CNG infrastructure must be replaced with another high investment into electric buses within a few years. Given the urgency of the transition to renewably sourced energy and transport that the Paris agreement emphasises the strategy with CNG buses as an intermediate step could also delay the progress too much.
Q2: Which are success factors which need to be replicated to a have a successful implementation of this practice in your context?
CNG buses and even more so electric buses are new technologies that both travellers and decision makers are unfamiliar with. Therefore, there is a need for successful demonstration pilot case projects in the local contexts. There is also a general need for education and training around the need for and the positive opportunities around a move towards sustainable mobility. Economic incentives will be necessary but are not enough to shift behaviour. Role models and influencers through social media are also important and non-economic incentives like access to zero emission zones could add benefits for these more sustainable alternatives. Electric buses also have the benefit of emission-free and silent drive inside buildings.
Q3: Can you identify the elements, including the policy framework, which need to be adapted/modified to your context?
This was not thoroughly discussed but important elements that should be identified about policy framework are the procurement processes and a quick start of pilot case projects that will be able to demonstrate the new technologies in the local contexts.
Q4: Would the adoption of the practice improve the policy instruments in your context?
Yes. It is likely that the ability to reach a low carbon future in time would be significantly improved by introducing policy instruments supporting electric buses and to some extent also by introducing policy instrument supporting CNG buses.

THE STAKEHOLDER PERCEPTION OF THE WORKSHOP. LESSONS LEARNED

The questionnaire forms distributed among the participants were helpful in assessing the leverage quality of the sessions (presentations, group work, panel discussion) and formulate conclusions for the future editions of the interregional thematic workshops.

In general, the respondents agree that the interregional thematic workshop was interesting and well organised, that the stakeholders actively participated in the programme, and that the aims for the workshop were reached. Still, a suggestion was made to better identify and explain the goals at the beginning of the workshop so that they are clearer to the participants.

For the presentations, the respondents would rather incline with the statements that the presented practices are real/actual and would be useful for implementation in their regions. Also, that it was possible to identify the key success factors allowing for replicability to other contexts. These, in turn, vary between the partner territories (Italy, Spain, Sweden, Hungary and Romania), which implies that often the difficulties encountered do not resemble the ones witnessed in the country of the respondent. An idea could be to for the next occasion involve an Interreg Europe learning platform expert for low carbon priority to lift up the learning process from the stakeholder to the EU level.

However, some comments were raised on the better structuring of the presentations, e.g. to give some guiding indications to the speaker prior to the meeting – e.g. on including a section on the difficulties and key success factors as perceived by the owner/promoter of the good practice case. This would help pursue a learning path towards the transfer of knowledge, information and key success factors as the subjective observations by the good practice owner/promoter could be referred to in the group discussion and then would be assessed by the ITRE experts for their adaptability/replication potential. A specific idea in that respect is to better align the presentations to the context by referring to four aspects: (1) challenges; (2) solutions adopted; (3) results; (4) implications.

In connection to that, pre-screening of the presentations by the ITRE experts prior to the event was found helpful in getting a better clarity (focus, language, length).

For the group work, there was a common opinion on the active involvement of the participants, with the visible facilitating role of the ITRE experts. on the other hand, the limited number of workshop participants (just over 30 persons) could have determined that the respondents varied in their perception of to what extent the working groups showed a mix of people from different locations.

On the other hand, one of the suggestions in that regard dwelled on possibility to decrease the number of participants in each working group for more lively discussion.

Regarding the panel discussion, the respondents were rather cautious in agreeing to the universal usability of the identified key success factors in the regions/cities and on whether solutions were found for the presented missing opportunities. The latter statement was sometimes found difficult to decipher.

ITW WORKSHOP EVALUATION QUESTIONNAIRE

YOUR NAME:	
YOUR ORGANIZATION:	
ITW TOPIC	
LOCATION AND DATE:	
GOALS:	

01. OVERALL EVALUATION

To what extent do you agree with these statements? (Rate from 5 (highly agree) to 1 (highly disagree)).

- ☐ The ITW was well organized.
- ☐ The stakeholders actively participated the programs during the ITW.
- ☐ The aims set out for this ITW were reached.

Do you have any suggestions for the further ITWs?

Please, briefly report your answers on page 2.

02.. EVALUATION OF THE PRESENTATIONS

To what extent do you agree with these statements? (Rate from 5 (highly agree) to 1 (highly disagree)).

Statements / Questions	1st pres.	2nd pres.	3rd pres.	4th pres.	5th pres.
The practice is useful to be implemented in your region.					
The difficulties that you would encounter are similar to the ones that have been studied.					
You can identify the key success factors which can explain the successful replicability to other contexts.					
Suggested good practices are actual					

May you suggest a different way to solve the difficulties, that hasn't already been mentioned?
Please, briefly report your answers on page 2, and identify the presentation you are referring to.

03. GROUP WORK

To what extent do you agree with these statements? (Rate from 5 (highly agree) to 1 (highly disagree)).

- ☐ People participated actively in the group work.
- ☐ The working groups were mixed with people from different locations.
- ☐ The experts facilitated the participation in the group work.

Other: Do you have any suggestion for the furthers ITWs group works?

Please, briefly report your answers on page 2.

04. PANEL DISCUSSION

To what extent do you agree with these statements? (Rate from 5 (highly agree) to 1 (highly disagree)).

- People participated actively in the panel discussion.
- Suggested key success factors can be generally useful in the regions / cities
- Solutions have been found for the presented missing opportunities

Other: Do you have any suggestion for the furthers ITWs panel discussion?

Please, briefly report your answers on page 2.

05. Please, briefly report your rates and include any comments and suggestions you may have.