



TRANSFORM

INVITATION TO EXPRESS INTEREST

Joint Statements of
Demand for Zero Emission
Urban Transport Solutions



Introduction

This document has been prepared as part of the EU-sponsored TRANSFORM project¹. Its objective is to invite ambitious European cities that are seeking zero emission urban transport solutions to join us in communicating collective messages to the market. Several 'Joint Statements of Demand' have been prepared by the TRANSFORM consortium and the final versions will include the names of those cities that express interest. The remainder of the document provides the context and logic for the proposed joint communication.

The main aim of the TRANSFORM project is to mobilise the procurement power of city authorities and major companies to help accelerate progress towards sustainable zero emission transport systems in European cities. One approach to mobilise such procurement power is to develop Joint Statements of Demand that demonstrate a common need for new solutions. These can then be communicated to potential solution providers (through a process known as 'market sounding') with the aim of creating a dialogue that will result in new solutions becoming available to city authorities and their suppliers. This is known as innovation procurement².

THE BUYER/SUPPLIER PARADOX

There is a common 'Catch-22' that hampers the commercialisation of more environmentally-friendly technologies. This requires new products or services that are not yet commercially available or only available at excessive cost. Because they are not available, customers don't ask for them; and because there is no demand, innovative companies do not invest in bringing new solutions to the market.

Each of the three cities involved in the TRANSFORM project has identified specific unmet needs related to their sustainable transport and mobility challenges. They have also launched unilateral market sounding initiatives aimed at identifying, and eventually procuring, new solutions that will address these specific needs. See www.transform-europe.eu for more details and pending case studies of these individual innovation procurement projects. This document is aimed at encouraging other cities that are interested in a progressive move toward zero emission urban transport to lend their support to the broad communication of Joint Statements of Demand.

Joint Statements of Demand offer an aggregated means of communicating common unmet needs to the market in a way that demonstrates scale and replicability. They are not about joint procurement but are aimed at convincing innovative businesses that there is substantial customer demand for new solutions to address these unmet needs.

This document includes three Statements of Demand for solutions that have been highlighted either by the city authorities that are participating in the TRANSFORM project or through stakeholder workshops and consultations, namely:

1. Zero emission urban deliveries to city authorities (proposed by Rotterdam City Council)
2. Zero emission public transport in historical cities (proposed by the City Council of Avila)
3. Zero emission capable minibuses for social care transport (proposed by Birmingham City Council)

In each case, city authorities (by operating in a cooperative manner) have the collective power to create a lead market for new solutions through their procurement functions and these can subsequently be adopted by others in the wider city transport arena. Of course, in order to be sustainable and replicable, solutions also need to be economically viable and aimed at improving the quality and/or efficiency of public services.

We believe these unmet needs are common to many other cities across Europe and we therefore invite other city authorities to join this TRANSFORM initiative by confirming your interest in supporting the joint communication of unmet needs for zero emission urban transport solutions. A list of cities that express interest will be included in the final version of the document that is communicated to the market and may lead to a future collaborative action under Horizon 2020.

To express interest in the Joint Statements of Demand please send an email to: ashley.stewart@optimat.co.uk indicating which of the Joint Statements you wish to support. Each of the Joint Statements also has a coordinator who can provide more information on their specific interest. The final version of the documents will include the names of those city authorities that have expressed interest in each of the Joint Statements.

¹The TRANSFORM project is a Coordination Action supported by the 7th EU Framework Programme for research and technological development. It involves three major European cities (Barcelona, Birmingham and Rotterdam) along with other stakeholders that represent both the innovation community and major companies that have a strong commitment to reducing the impacts of climate change.

²'Innovation Procurement' is a way of buying goods and services that stimulates the supply chain to invest in developing better and more innovative solutions to meet the unmet needs of an organisation

The Power of Collective Action and Leadership

Air quality is a challenge common in cities, so too is congestion; consequently there is a growing awareness that urban traffic emissions are having a significant impact on public health and the environment. There is increasing pressure on city authorities to improve air quality and noise levels in towns and cities. Additionally, accessibility for residents, visitors and the delivery of goods and services is becoming more difficult with consequential economic and social impacts. Yet, despite these concerns practical and affordable solutions are slow to present themselves and the problems of urban pollution, congestion and climate change continue to get worse. The current situation is clearly unsustainable.

A TRANSFORM research report³ indicates that there is extensive evidence of city authorities using their regulatory powers to reduce the impact of urban transport emissions and also participating in demonstration projects. However, there is much less evidence of city authorities using their procurement power to achieve their transport emission reduction objectives.

This Invitation to Express Interest in Joint Statements of Demand is aimed at city authorities that wish to demonstrate leadership in a progressive transformation towards zero emission transport in their cities. Their direct sphere of 'procurement-related' influence is considerable and includes three main options:

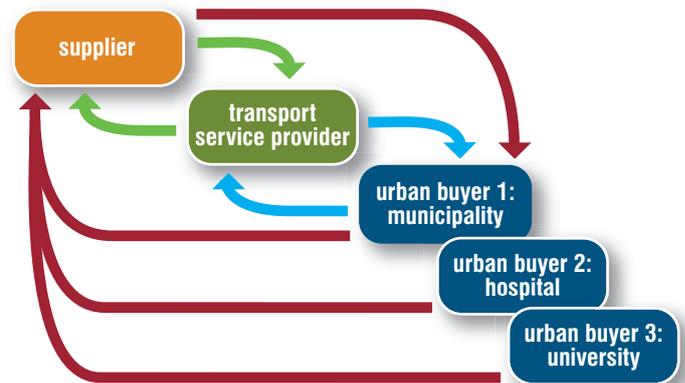
1. Progressive move towards zero emission vehicles within their own fleet
2. Procurement of transport services in a way that requires suppliers to move towards the use of zero emission vehicles
3. Procurement of other goods and services in a way that both reduces their embedded transport emissions (towards zero) and traffic congestion in the city

Creating a 'lead market' for new solutions to these challenges will also have an indirect enabling impact on other organisations in the city (both public and private) that are either transport-intensive themselves and/or have a transport-intensive supply chain.

Most city authorities are taking steps towards greening their own fleet (Option 1) but are encountering barriers related to availability of zero emission vehicles and investment in re-fuelling infrastructure. They are also increasingly using service-based contracts and partnerships with the private sector to reduce the overall cost of their operations. This may include the contracting out of public services such as social transport (Option 2) and long term contracts for the maintenance of transport infrastructure in the city (Option 3).

The concept of using procurement to reduce the embedded transport impact of service providers can also be extended to the procurement of goods that are then

delivered to the point of consumption in the city (Option 3). It can therefore be seen that an enlightened, outcome-based approach to the procurement of goods and services can have a very high leverage effect on the procurement behaviour of private sector suppliers and logistics businesses. The impact can be further multiplied by encouraging similar procurement behaviour by other significant urban buyers (e.g. hospitals, universities) in addition to the city authority or municipality, as illustrated below.



Clearly, such a model could also be extended to the private and consumer sectors (e.g. retailers) if the right vehicles and infrastructure are available.

An important issue in the procurement of outcome-based solutions is the use of standards to assess competing options. One of the activities of the TRANSFORM project has therefore been to support the development of a standard methodology⁴ for defining and assessing the sustainability of low and zero emission vehicles. This will be used as an assessment tool for potential solutions to the Joint Statements of Demand.

The following three Statements of Demand have been prepared by individual cities that are already active in cooperative initiative for progressive developments in urban transport vehicles and logistics solutions towards their goal of zero emission urban transport.

We hope that other cities will be sufficiently motivated to express interest in one or more of the following Joint Statements of Demand. This will be important as a list of cities that support the communication of the unmet need(s) is essential to convince innovative suppliers that there is a genuine unmet need and commitment to work collaboratively with potential suppliers to help bring innovative new solutions to the market.

Depending on the response, from cities and the supply chain, it is likely that there will be opportunities to participate in future collaborative actions under Horizon 2020 - perhaps through the new instruments (i.e. PPI/PCP) that are aimed at supporting collaboration between public procurers to address important societal challenges.

³ Demand Side Measures in Practice for Environmentally Friendly Vehicles, CENEX Report to the TRANSFORM Project, May 2014

⁴ Innovation Procurement Standards for Sustainable Mobility, CENEX Report to the 2nd TRANSFORM Workshop, Barcelona, October 2014

Zero Emission Urban Deliveries to City Authorities

This Joint Statement of Demand has been developed by Rotterdam City Council

Context

The economic value of public procurement in Europe has been estimated at 3.5% of GDP and this creates a huge transport footprint for the delivery of goods & services. Rotterdam City Council has recognised the potential impact of using the procurement function to reduce the embedded transport emissions of urban deliveries to its own operational activities and those of its service suppliers. It is also leading a city-wide campaign with other major stakeholders known as 'Zero Emission Urban Deliveries 2020' using a 'Green Deal' approach that favours those suppliers who are able to support a progressive move towards this goal. Thus, a market can be developed for zero emission transport solutions by mobilising demand for zero emission deliveries. Rotterdam and Amsterdam City Councils have both started to quantify the impacts of their delivery footprint on city emissions and congestion.

City authorities and other inner city organisations that have transport-intensive supply chains therefore have the collective power to mobilise investment in zero emission vehicles by their suppliers and/or suppliers of logistics and transport services. They can also collaborate to reduce delivery transport volume, and associated congestion in cities, by developing new business models that encourage consolidation of delivery logistics. For example, urban consolidation centres could be used to decouple the inner city component of the delivery (which could be electrified) from the regional component.

Unmet Need

European cities have a common need for zero emission vehicles that can be procured by the logistics and transport service companies that deliver their purchased goods to the point of consumption within the city. They also need new [shared logistics] business models that enable major buyers and suppliers within the city to take advantage of opportunities that will reduce both the negative transport impacts and cost of the deliveries.

Cities that have expressed interest in this Joint Statement of Demand include:

ROTTERDAM

<list of other cities>



Further details of this Joint Statement of Demand can be obtained from the coordinator:
Jos Streng at jma.streng@Rotterdam.nl

Joint Statement of Demand No 2

Zero Emission Public Transport in Historical Cities

This Joint Statement of Demand has been developed by the City Council of Avila

Context

Like many other European cities with historic centres, the Spanish city of Avila, has encountered barriers to the implementation of effective and low-emission transport to meet the needs of its citizens. There are a number of features of historical cities that complicate and restrict transport options. This creates or makes worse a number of problems such as congestion, noise and air pollution and limits mobility for elderly people and those with disabilities who rely on public transport services to remain active and independent. The following are typical of the barriers to mobility faced by historical cities.

- Air pollution from traffic volume and stationary traffic made worse by poor air circulation in narrow streets
- Streets that are narrow and may be paved with cobblestones leading to high levels of noise and vibration from traffic
- Insufficient space for standard sized buses and accessible bus stops
- Access to the historical districts are often via steep streets that are difficult for the elderly and disabled, especially in bad weather conditions
- Parking on narrow streets and a reluctance to use public transport restricts traffic flow
- Range of weather conditions from snow and ice to high summer temperatures

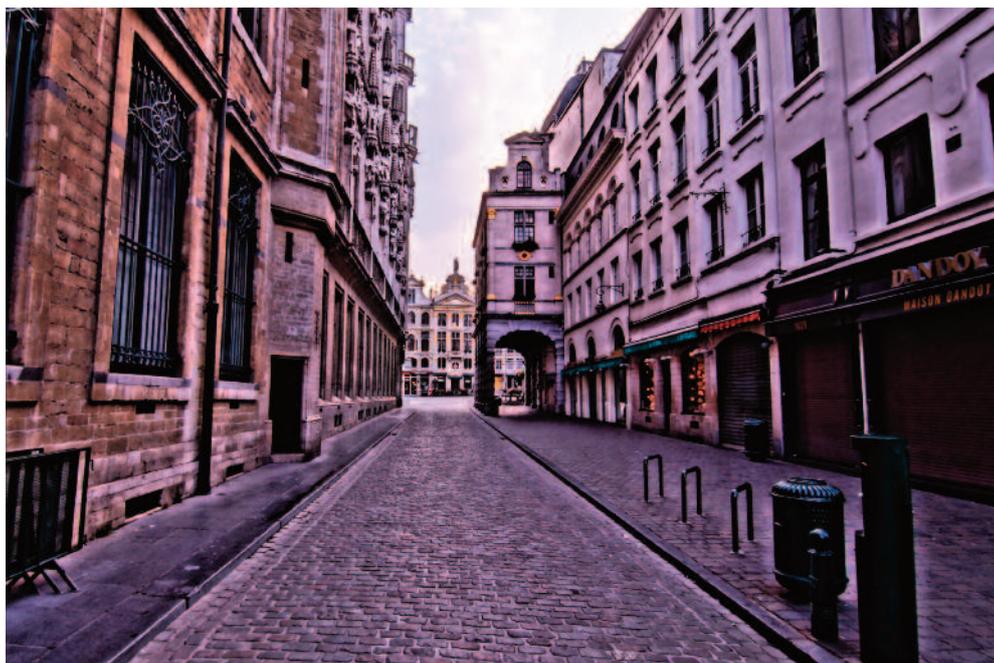
Unmet Need

European historical cities have a common need for innovative public transport solutions that facilitate mobility for citizens and visitors, particularly those with disabilities, within and around historic city centres. Of specific interest are low-emission buses adapted to the requirements of historical cities and that offer a route to zero-emission mobility in the future. In addition, the solutions need to be affordable, reliable and offer accessible mobility in a wide range of climatic conditions.

Cities that have expressed interest in this Joint Statement of Demand include:

AVILA

<list of other cities>



Further details of this Joint Statement of Demand can be obtained from the coordinator: Miguel Ortiz Pajares at miguel.ortiz@cdti.es

Zero Emission Capable Minibuses for Social Care Transport

This Joint Statement of Demand has been developed by Birmingham City Council

Context

Birmingham is the 2nd largest city in the UK and has the ambition to be one of the most sustainable cities in Europe. In 2013, it established the Green Commission; a multi-stakeholder group that is jointly committed to realising a common vision of a 60% reduction in CO2 emissions by 2027 across the whole city. In order to support the city-wide goal, the Council is in the process of greening its entire fleet and has put in place a forward plan for developing the low/zero emission infrastructure to support this transition.

Birmingham has a specific need for low emission vehicles to transport around 800 elderly or vulnerable adults per day to their day care or learning locations. A detailed 'market sounding prospectus' (see www.transform-europe.eu) has been launched by Birmingham City Council to assess the potential for the supply of low carbon minibuses that meets their specific service requirements and technical specification. As part of this process, the City Council is also interested in exploring ideas and initiatives on other ways of supplying vehicles or transportation services that will lead to their ultimate objective: zero emission transportation that is safe, comfortable, efficient and value for money.

Local authorities and other public funded organisations dominate the market for minibuses sales and therefore City Authorities and their partners are in a strong position to create a 'lead market' for zero emission minibuses. For example, there are around 100,000 minibuses in the UK of which some 40% are owned by local authorities, education establishments, community transport organisations and local bus companies. All of these organisations fall within the wider sphere of influence of city authorities that have a commitment to reduce transport emissions in the city.

Unmet Need

European cities have a common need for zero emission minibuses both for the direct use of the City Authorities and for those who supply transport-related services on their behalf. It is recognised that there is also an 'unmet need' on the vehicle manufacturer side where market size is key to gaining low to zero carbon minibuses sooner. Whilst bringing costs down through the economic scale of demand, recognition also needs to be given to the need for scale of market infrastructure required, which includes market conditions to enable vehicle manufacturers to respond to visible demand through government green fuel tariffs and/or subsidies. Another need is for national and EU funding programmes to recognise minibuses as a priority green vehicle sector and to visibly invest in the low/zero carbon re-fuelling infrastructure that will reduce the innovation risk for potential suppliers of greener minibuses.

Cities that have expressed interest in this Joint Statement of Demand include:

BIRMINGHAM

<list of other cities>



Further details of this Joint Statement of Demand can be obtained from the coordinator: Sylvia Broadley at Sylvia.Broadley@birmingham.gov.uk