



Transport
Innovation
Deployment
for Europe



GUIDELINES FOR IMPLEMENTERS

Metropolitan public transport authorities

TIDE is a Coordination Action funded by the European Commission's DG Research and Innovation under the 7th Framework Programme for Research and Development.



What is it about?

Verkehrsverbund Berlin Brandenburg (VBB), Germany

Since 1999, Verkehrsverbund Berlin Brandenburg (VBB) provides unitary tariff, marketing and information in two German federal states — Berlin and Brandenburg. In total, it serves an area of over 30 000 km² with over 6 million inhabitants.

VBB is a limited liability company co-owned by two regions, four cities and fourteen counties.

VBB is directly responsible for regional railway transport organisation and integration, whereas the cities and counties remain independent in their planning for all other modes of transport.

Thanks to the great performance of VBB, Berlin has a very low indicator of car ownership — only 328 cars per 1000 inhabitants.



VBB ticket machine, Alexanderplatz railway station in Berlin

Source: *Tupungato*

Characteristics

Metropolitan public transport authorities (MPTAs) are key partners for passengers, who commute or travel within modern metropolitan areas. Passengers are often crossing many administrative borders, but ideally they should have one Authority providing all necessary information as well as tickets.

MPTAs may have a different scope of activities between countries, including financing models and decision making schemes, but in all cases they are the cooperation platform between different local authorities to provide quality public transport. Furthermore, efficient management of the public transport system requires some key competences to be gathered at one point, in order to support local authorities in managing transport systems.

Key benefits

MPTAs increase the quality of public transport by providing:

- better information: all information is available from one source;
- more intuitive ticketing: a single ticket for all transport subsystems;
- better network design: different subsystems interfaces are coordinated;
- lower management costs: key competences are gathered in a single organisation.

Check list

City size	No restrictions — although if there are few territorial units engaged it may require a transparent revenue sharing system.
Costs	<ul style="list-style-type: none"> • Additional costs for initial phase. • Depends on the scale of the transport system and the scope of tasks (in Budapest, the public transport authority also manages parking in the city); some tasks (i.e. marketing research, ticket control) may be subcontracted.
Implementation time	<ul style="list-style-type: none"> • Preparation phase: up to twelve months. • Implementation phase may require stronger political support.
Stakeholders involved	<ul style="list-style-type: none"> • Local authorities. • Other local authorities if the body should service bigger areas. • Experts, including the academic sector. • Operators. • Trade Unions. • Media (for targeted communication to public).

“Establishing the Board of Municipal Transportation in 1992 made it possible to have contracting services by competing operators. The contracts outlined in detail the scope of their responsibilities as well as the related fines for failing to carry them out. Moreover, it allowed for a thorough quality control of the services provided.”

**Prof. Olgierd Wyszomirski,
Director of ZKM Gdynia
(public transport authority),
Poland.**



In Gdynia, Poland, the public transport authority ZKM has constituted a crucial element of the regulated market competition scheme for 20 years

Source: University of Gdansk

Benefits & Costs

Verkehrsverbund Rhein Ruhr (VRR), Germany

When Verkehrsverbund Rhein Ruhr (VRR) was created in the metropolitan area of Düsseldorf, Dortmund and Essen in 1980, authorities feared huge revenue loss due to the introduction of integrated ticketing. In fact revenue increased in 1980, as the number of passengers grew.

Nevertheless, the creation of most German transport associations has been possible due to government grants — otherwise the risk of revenue loss was too high for local authorities to bear.



The creation of Verkehrsverbund Rhein Ruhr in Germany generated an increase in income even in the first year

Photo source: Michał Wolański

Benefits

The benefits of a MPTA include more competitive public transport thanks to:

- better information: all information is available from a single source and passengers do not have to contact different authorities or operators in different cities;
- more intuitive ticketing: a single ticket for all transport subsystems makes purchase easier and enables better knowledge of prices for potential customers;
- better network design: different subsystems interface better due to centralised coordination or planning.

Also some organisational benefits are possible such as:

- lower management costs — key competences may be gathered in one organisation;
- lower network costs — the most efficient mode of transport can be used (for instance extra capacity of trains instead of buses).

Costs

The potential costs of a MPTA include:

- potential revenue decrease especially in the short term, after introducing integrated ticketing;
- increased costs of administration if some functions are doubled;
- possibility of suburbanization stimulated by low cost of tickets for long-distance commuters.

Users & Stakeholders

Users and target groups

MPTAs deliver extra quality to all passenger travelling within a metropolitan area, notably by using different transport modes or crossing borders between different local authorities.

Passengers no longer have to worry about different ticketing or systems and access information in a number of different places.

Key stakeholders for implementation

Key stakeholders for a MPTA implementation are local authorities responsible for transport organisation (cities, communes, counties, regions etc.), that have to work together in order to create a common transport system.

Usually, working together means finding consensus on common spending, and in many cases also on financing.

In order to facilitate cooperation, getting government support is strongly recommended, notably to help remove legal barriers and to design a viable funding framework.

Precise cost allocation in the area of Gdynia, Poland

In order to keep costs down, Public Transport Authority in the city of Gdynia makes detailed tariff structure research at all suburban lines and employs its operators through competitive tendering.

Upstream funding in France

In France MPTAs such as the metropolitan area of Lille, organise and design the entire public transport network in comprehensive way. They are fully financed from the State (and not local communities') budget.



Hamburger Hochbahn bus

Source: Tupungato

Assessing the potential for your city

Organisation and management of public transport in Stockholm, Sweden

Public transport in Stockholm has a long tradition of competitive public transport markets. Storstockholms Lokaltrafik (SL) is the organisation managing all of land-based public transport modes in the metropolitan area of Stockholm. It procures the services and ensures that the contracted operators running these services keep to their agreements. It also owns public transport infrastructure, including the bus depot and light rail-rolling stock.

Since 1993, all SL bus and train services have been tendered, bringing local and global public transport operators to the Swedish market. SL is governed politically by the Greater Stockholm County Council.

In comparison to the area serviced by SL, it is a relatively small organisation with just over 500 employees. Its main tasks include planning, purchasing, administration, development and marketing of the public transport service in the County of Stockholm.

Thanks to its focus on sustainability, SL plays an important role in delivering sustainable services, taking into account economic, environmental and social issues.

Is this something for us?

MPTAs can be a useful administrative model in Metropolitan areas if one or more of the following situations exist:

- there is no effective integration between transport modes in a city, for instance people commuting within a city do not use railways, there are different tickets for different bus or tram operators;
- many people are commuting from outside the cities' borders, which requires using different operators, purchasing different tickets, searching for information in different sources, etc.;
- transport networks are improperly connected: bus lines do not feed railway lines, timetables are not coordinated etc.

Pre-assessing the costs and benefits

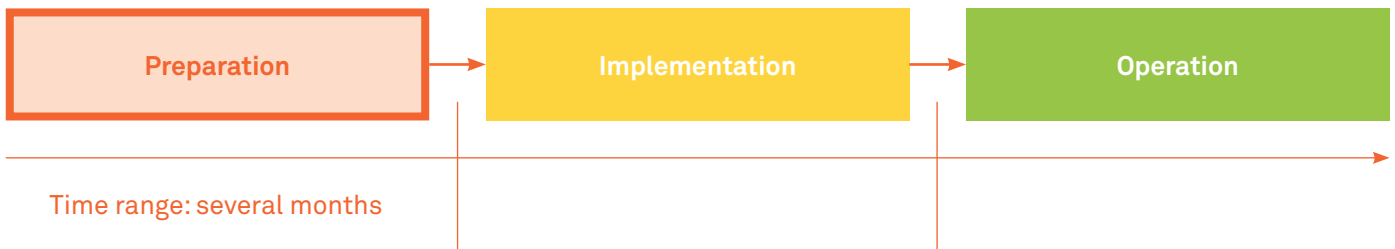
MPTA creation includes costs of quality improvement to transform the transport system from urban to metropolitan and a potential for revenue decrease in the short term. Quality improvement can easily be estimated, whereas the latter is much more uncertain. Both costs vary between cities, depending on the pre-existing set up of local transport systems and networks.

Benefits may include lower costs due to an increase in the use of rail. Much of the benefits are linked to sustainable growth of the urban agglomeration, thereby exceeding direct benefits to the transport system. In particular better connections between areas with high levels of employment opportunities, retail and business centers and areas with high levels of unemployment may be achieved.



From plan to reality

Preparation



The preparation phase for a MPTA includes a legal analysis and mapping of the feasibility of the project as well as designing an initial framework for the future organisation, notably to guarantee a clear plan to fund the transport system.

Key aspects at this stage

Legal analysis of a MPTA should include:

- identifying all local authorities responsible for public transport funding and management in the given area;
- encouraging them to cooperate: some government grants or full upstream financing (see France case study below) may be necessary;
- establishing the proper legal framework: the following may be considered depending on local circumstances:
 - civil law contract between two entities, based on provision of services against fee (see Gdynia case study below);
 - statutory partnerships between local authorities;
 - voluntary partnerships between local authorities;
 - limited liability companies co-owned by local authorities or (rarely) operators.

At the same time, an organisational framework must be designed. This includes:

- decision-making rules: operational decisions must be done by properly empowered full time management body and strategic decisions by a proper political body (such as a general assembly or the mayor). There must be clear division between both decision making bodies;
- funding scheme: a scheme for income estimation may be necessary; some rules for spending are essential:
 - which services will be delivered in house and which are going to be tendered;
 - rules of co-financing (for example the financial input may be related to the number of inhabitants, transport services supply or real deficit of given services);
- general design of the organisation: the new functions should be correlated with the internal structure of the authority, including staffing.

Success factors and barriers at this stage

The key factors at this stage are related to funding. Proper funding must be provided for the network, with adequate projections of future costs. Depending on the goals and the initial state of the transport network costs may decrease or increase.

Legal issues may be key barriers. There could even be a lack of cooperation or financing possibilities in some case. In cases of false intentions it could be exaggerated.

Verkehrs- und Tarifverbund Stuttgart (VVS), Germany

VVS is a MPTA for the area of Stuttgart, in Germany. It is responsible for integration between transport modes and the railway organisation. It was created by the authorities in 1977, so that only VVS can apply for federal grants for urban railway projects.

Metropolitan Transport Association of Gdańsk, Poland

The Metropolitan Transport Association of Gdańsk was established in 2007 in order to integrate three separate urban public transport systems and two railway operators. The cities were encouraged to cooperate by a grant, provided by the regional authority.

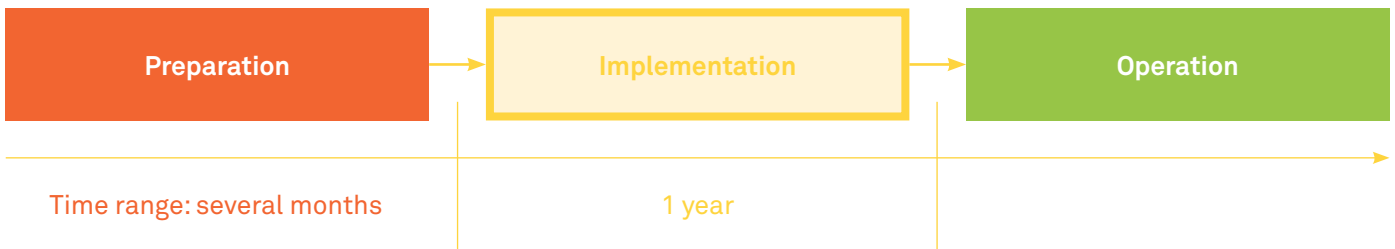
Ready for implementation? ✓	
Is there appropriate legal form for a MPTA available in your country?	
Are all relevant local authorities willing to cooperate?	
Are the decision rules fair and acceptable for all partners?	
Are operational decisions at possibly professional (not political) level?	
Have you found proper settlement schemes?	



Bus in Gdańsk, Poland
Source: Tupungato

From plan to reality

Implementation



Implementation of a MPTA requires recruiting appropriate and trained staff, designing public transport lines, tariffs, distribution, information and detailing preparation for all procedures.

Key aspects at this stage

The key aspect at this stage is switching from separate to integrated marketing. This should include:

- redesigning the transport network, aiming at providing an optimum offer using all available transport modes to complement each other. Redesigning may require gathering necessary data and detailed scenario analysis;
- designing an integrated tariff: this should be attractive and should provide a planned fare box ratio based on income; this should also encourage sustainable behaviour in terms of choosing home location; an exclusive or additional integrated tariff may be considered;
- finding proper distribution channels: new tickets must be available in many places, but distribution costs should be under control; modern technologies, such as credit card payments and mobile phones should be considered in order to make chosen solutions future proof;
- providing proper information; this should include:
 - integrated on-board and at-stops information, such as maps, timetables, pricelists;
 - internet webpage and mobile application for timetable information, including search and integrated real-time tracking.
- providing sufficient and properly qualified staff.

Success factors and barriers at this stage:

Although modern marketing includes many 'P's', such as Product, Place, Price, Promotion and Process, the key success factor at this stage of MPTA's implementation are People.

The MPTA's staff should include a proper mix of people with different professional backgrounds, preferably specialists and not politicians.

A mix between people with experience in public transport and people with other skills and competences is recommended; the first provide detailed knowledge and contacts, the latter, modern marketing knowledge.

It is also important that employees should not have the same background in terms of past employment, notably all from one city administration or public transport operator. Otherwise, the organisation may be informally dependent on one of the above.

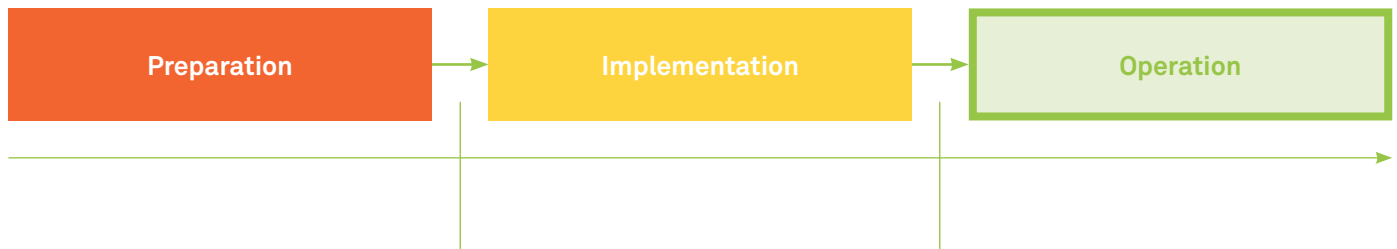


In the Netherlands some integration functions are performed by the government; this allowed for countrywide integration and ticketing

Photo source: Michał Wolański

From plan to reality

Operation



At the operation phase a MPTA should aim to extend its geographical and functional scope of activities as well as continuously improve the services.

Key aspects at this stage

When operating, a MPTA should establish a proper marketing information system, in order to supply the partners with all necessary data, as well as make well informed decisions supported with strong, objective arguments. The data should be comparable between years, to enable a robust monitoring of progress.

The organisation should be able to react flexibly to changing circumstances. Therefore some procedures may need to be renegotiated.

It is also important, that new functions are introduced, such as park & ride operations, integration between road infrastructure and public transport management, cycling infrastructure and other facilities.

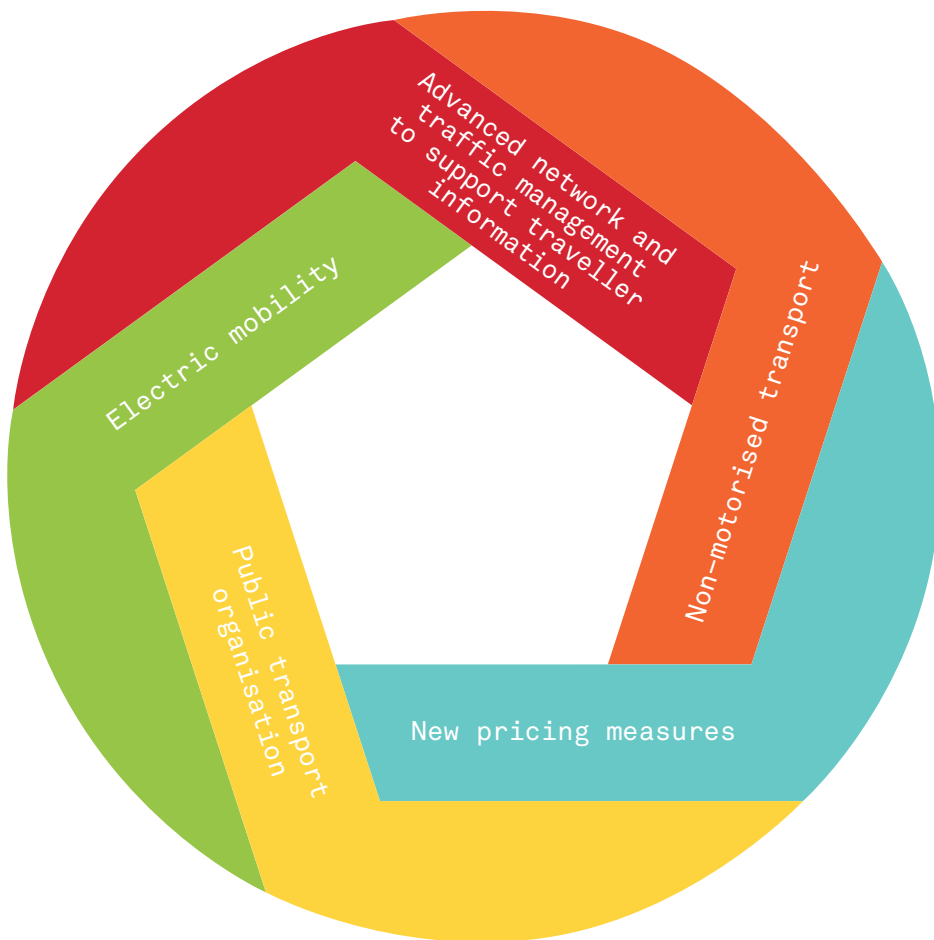
Success factors and barriers at this stage

A MPTA — as a multi-actor organisation — must be fully transparent and professional. In order to achieve transparency and ensure that all parties are treated in a fair way, all decisions must be justified by data/evidence. A marketing information system is therefore a key success factor.

Potential barriers to operational success include political influences on the organisation and changing political circumstances that may lead to decreased funding for operations.

Hamburger Verkehrsverbund, Hamburg, Germany

The Hamburger Verkehrsverbund is the oldest MPTA in Germany, created in 1965. The company still exists, due to good cooperation between partners, allowing them given level of independence, with appropriate coordination at the association level.



Further information & contacts

Further information

- **SPUTNIC project on strategies for public transport in cities:**
www.sputnicproject.eu
- **Website of transport authority in Budapest:**
www.bkk.hu
- **Website of London transport authority:**
www.tfl.gov.uk
- **Website of organisation managing all of land-based public transport modes in the metropolitan area of Stockholm:**
www.sl.se
- **Website of public transport authority in Copenhagen metropolitan area:**
www.moviatrafik.dk

Further TIDE training on this measure:

Webinars and e-learning courses

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UNIwersYTET GDAŃSKI

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About TIDE — Transport Innovation Deployment for Europe

The European TIDE project aims to foster a more favourable climate for cities and regions to integrate innovations in their urban mobility policies. This should lead to increased acceptance and take-up of new urban transport solutions and technologies. TIDE will help cities and regions to address common challenges in a collaborative and integrated way.

Why should you care about innovation?

On several occasions, European cities have indicated that innovation can help to tackle challenges resulting from the economic crisis. Innovation can save costs as well as contribute to reaching urban policy goals. Still, cities lack resources to conclude a full innovation cycle.

Innovative ideas usually start in one or just a few places before they reach wider coverage. TIDE will help cities and regions across Europe to shorten the path towards the implementation of innovative measures by showing that it is not necessary to re-invent the wheel and much more effective to exchange on innovation and transfer successful solutions from one European region to another. TIDE thus offers a cost-efficient way of spreading innovation throughout Europe

Our mission — Guided by your needs!

TIDE will enhance the broad take-up of 15 innovative urban transport and mobility measures throughout Europe and will make a visible contribution to establishing them as mainstream measures. The TIDE partnership is making a range of new and feasible solutions more easily accessible, to address key challenges of urban transport such as energy efficiency, decarbonisation, demographic change, safety, access for all, and new economic and financial conditions.

TIDE focuses on fostering awareness, advancing expertise via tried and new tools, practical work with cities, and costs and benefits. The needs of practitioners in European cities are thereby a guiding principle. TIDE is actively supporting 15 committed cities to develop implementation scenarios for innovative urban transport measures, setting the example to an even wider group of take-up candidates. These measures cover the following five TIDE themes: new pricing measures, non-motorised transport, advanced network and traffic management to support traveller information, electric mobility, and public transport organisation.

The TIDE innovative transport measures

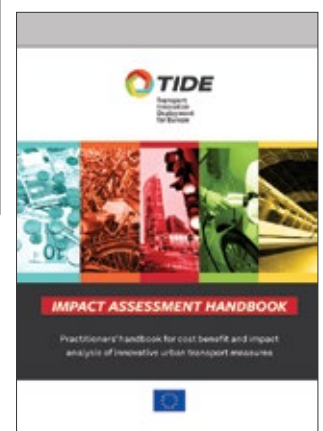
TIDE covers fifteen innovative measures across the five TIDE–themes.

<p>New pricing measures</p>	<ul style="list-style-type: none"> • Road user charging in urban areas • Parking charge policies • Efficient and convenient pricing and charging for multimodal trips
<p>Non–motorised transport</p>	<ul style="list-style-type: none"> • Bicycle parking schemes • Creating people–friendly streets and public spaces • Fast cycling lanes
<p>Advanced network and traffic management to support traveller information</p>	<ul style="list-style-type: none"> • Open data server for applications–based traveller information • User–friendly human machine interface for traveller information • Advanced priority systems for public transport
<p>Electric mobility</p>	<ul style="list-style-type: none"> • Clean city logistics • Financing schemes for charging stations • Inductive charging for public transport
<p>Public transport organisation</p>	<ul style="list-style-type: none"> • Creation of public transport management bodies for metropolitan areas • Contracting of services focused on improving passenger satisfaction and efficiency • Marketing research as optimisation tool in public transport

The **TIDE Innovation Toolbox** brochure highlights these fifteen inspiring transport measures and illustrates them with good practice examples, listing characteristics and benefits, key aspects for implementation, and useful references.

The **TIDE Practitioner Handbooks** on Transferability and Impact Assessment provide methods and examples to help understand the local potential for innovative measures in urban transport.

The **Guidelines for Implementers** are ten individual implementation guideline brochures addressing the full implementation process of ten of the fifteen TIDE innovative measures, as well as their costs and benefits, stakeholders to be involved, etc., illustrated with good practice examples.





The mission of the TIDE project

is to enhance the broad transfer and take-up of 15 innovative urban transport and mobility measures throughout Europe and to make a visible contribution to establish them as mainstream measures.

TIDE focuses on 15 innovative measures in five thematic clusters: financing models and pricing measures, non-motorised transport, network and traffic management to support traveller information, electric vehicles and public transport organisation. Sustainable Urban Mobility Plans are a horizontal topic to integrate the cluster activities.

The TIDE team

The TIDE consortium is composed of a variety of experts in the field of urban transport, bringing in the knowledge of the academic sector, the experience of cities, the expertise of consultants and the multiplier effect of European networks.



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