



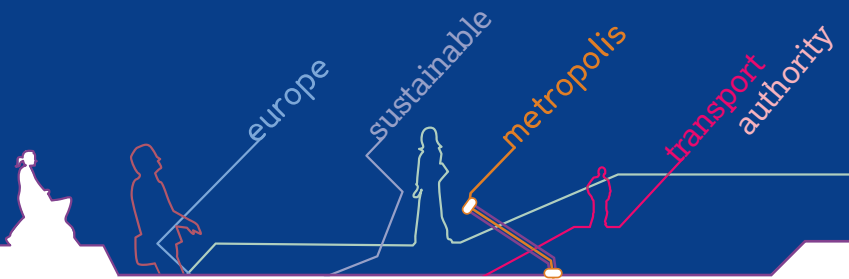
EMTA

European Metropolitan Transport Authorities

TAABEL

Innovative Funding Solutions for Public Transport

Survey results



November 2017

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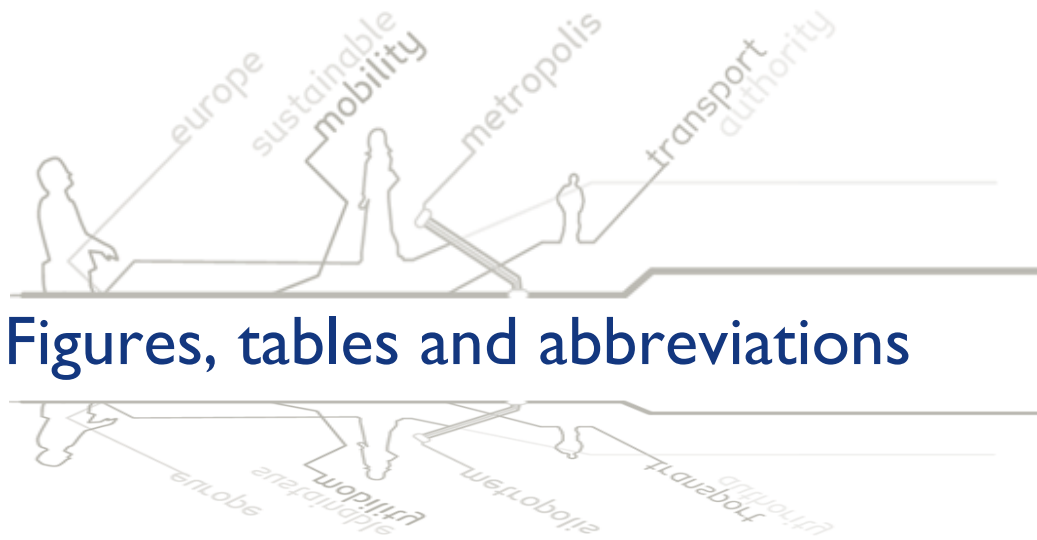
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HSE Randstadrail The Hague





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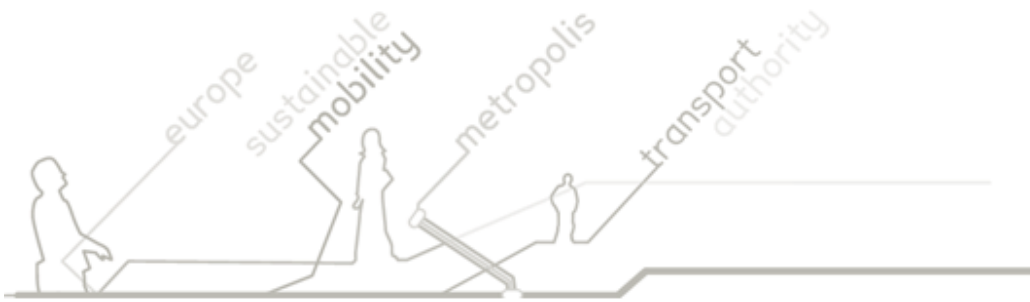
Abbreviations

AGMA	Association of Greater Manchester Authorities
AMB	Àrea Metropolitana de Barcelona
ATM	Autoritat del Transport Metropolità
BKK	Budapesti Közlekedési Központ
BMR	Barcelona Metropolitan Region
BRT	Bus Rapid Transit
CAPEX	Capital expenditures
CIL	Community Infrastructure Levy
DRAM	Development Rights Auction Model
EMTA	European Metropolitan Transport Authorities
ESGM	Evaluation Studies of Generated Mobility
GBP	Great British Pounds
GMFTF	Greater Manchester Transport Fund
GLA	Greater London Authority
IdF	Île-de-France
IdFM	Île-de-France Mobilités
LVC	Land Value Capture
MaaS	Mobility as a Service
MCIL	Mayoral Community Infrastructure Levy
MTR	Mass Transit Railway
OPEX	Operational expenditures
PPP	Public-Private Partnership
PTA	Public Transport Authority
PTO	Public Transport Operator
SAD	Special Assessment District
STIF	Syndicat des Transports d'Île-de-France
TfL	Transport for London
TICPE	Taxe Intérieure de Consommation sur les Produits Énergétiques
UK	United Kingdom
US	United States
VAT	Value Added Tax

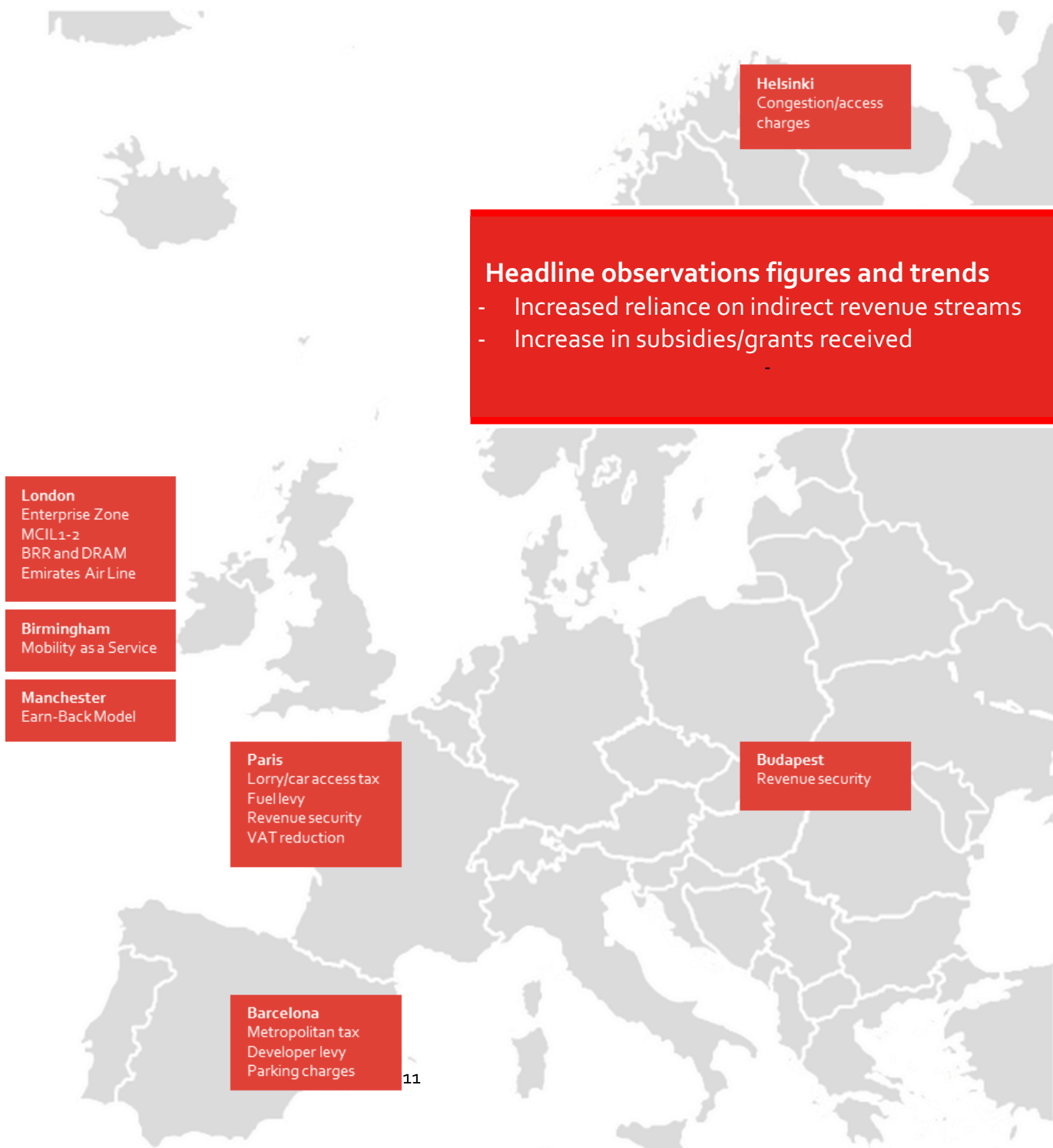




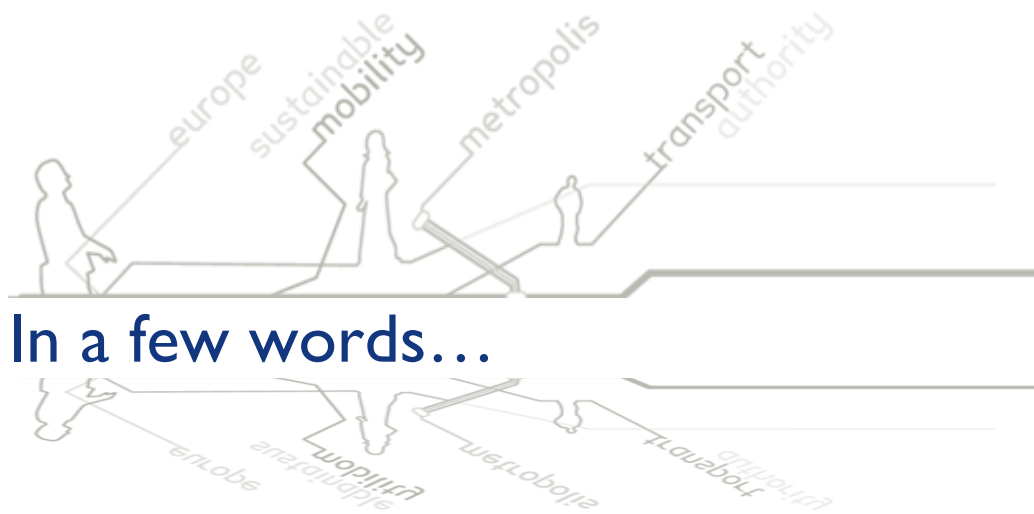
*Tram Amsterdam
Photo: Wilko Wieffering*



In short...







In a few words...

The benefits that public transportation provides to a city and its dwellers are numerous. In short, it offers mobility to those who do not have access to private transport and an alternative to private transport users, helps reducing congestion in and around the city while simultaneously improving air quality and helps in creating additional jobs and enabling trade. However, an increase during the last decade in demand for transportation services, in terms of ridership, coverage and quality expectations, has caused a subsequent increase in operational costs. Traditionally, PTAs rely on local or national government support in the form of subsidies to cover operational deficits. However, this reliance places PTAs in a risky situation, as budget cuts reduce funding needed to provide sufficient and high standard public transportation services.

Against this background, *EMTA Workgroup Funding, Finance and Regeneration* is dedicated to tackle this issue. It has retained *RebelGroup* advisors to investigate innovative funding sources used to cover recurring costs of operating and maintaining public transportation services and assets through the dissemination of a survey to EMTA's member PTAs.

Survey questions revolved around five key areas: (1) inventory of current state of PTA funding structure and sources, (2) inventory of innovative models already experimented/implemented by PTAs, (3) inventory of plans under consideration/development by PTAs, (4) enabling conditions and mechanisms and (5) open inventory and document additions.

Based on the above outline, the survey was then drafted in three thematic sections: (1) existing situation, (2) recently piloted funding solutions and (3) funding solutions still on the drawing board.

15 of the 26 member PTAs have responded to this survey. Survey results have shown an increasing trend in indirect revenue streams as a proportion of total revenues received by PTAs: *7 percentage points in a 4-year period*. A deeper analysis of this increase furtherly revealed an increasing trend in the proportion of subsidies/grants received by PTAs as a proportion of indirect revenues received by PTAs: *7 percentage points in the same 4-year period*.

Qualitatively, *EMTA Workgroup Funding Finance and Regeneration* and *RebelGroup* reviewed the funding solutions received in order to identify common themes that are assessed to be **innovative**

(as opposed to traditional, fare/subsidy funding approaches), **impactful** (making a real impact or having the potential to make a real impact) and **replicable** (with the potential of being repeated successfully by other PTAs). The solutions have been grouped into four key themes:

- **Generic value capture**

Solutions capturing (part of) the economic benefits of improved public transport services accruing to the broader urban economy.

Enterprise Zone Northern Line Extension, London: an enterprise zone which features imposition of specific business tax rates on businesses located in the zone;

AMB Metropolitan Tax, Barcelona: a surcharge on land/property in the 18 municipalities in support of public transportation services;

Mayoral Community Infrastructure Levy, London: a charge on commercial developers undertaking new developments that would benefit from the Crossrail rail link;

Business Rates Retention, London: a taxation by government on businesses on the basis of occupation of buildings with the Greater London Authority;

Public Transport Financing Act of 2015, Barcelona: establishment of economic activity taxes in order to fund public transport system costs; and

Earn-Back Model, Manchester: an agreed approach with the UK government, allowing Greater Manchester to retain a portion of additional tax revenue generated as a result of local investment in infrastructure.

- **Targeted value capture**

Solutions very specifically capturing (part of) economic value generated by realisation of new residential areas, shopping malls, other commercial properties, etc.

Land Value Capture: DRAM Proposals, London: a model where land owners in designated urban zones in which infrastructure/service expansion projects are planned have the option to pool in their land rights for auctioning off, develop the land and pay a zonal CIL;

Naming rights Emirates Air Line, London: an arrangement where the cable car across the Thames would be known as the Emirates Air Line, providing it with exposure and name recognition in exchange for covering a portion of the establishment and operational costs; and

Developer Levy, Barcelona: a requirement for conducting mobility studies for new developments that would generate over 5,000 journeys/day, for the respective developers to cover the operational deficit of the transport services in proportion to the increase in demand for such service for 10 years;



- **Private-to-public value capture**

Solutions typically aimed at discouraging private car use in order to reduce congestion and/or environmental impact, with the incidental additional benefit of capturing (part of those) funds to cover public transport expenditure.

Lorry and car access tax, Paris/IdF: a potential of levying taxes on lorries and access tolls (solution not implemented);

Fuel levy, Barcelona: a plan for an increase in fuel prices, earmarked towards funding/financing public transportation (on the drawing board);

Parking charges, Barcelona: a plan for levying a parking tax on businesses in order to reduce congestion (on the drawing board);

Congestion/access charges, Helsinki: a study on road pricing with proceeds earmarked for financing and funding public transportation according to a pre-set ratio of 2/3 and 1/3, respectively (on the drawing board); and

Fuel levy, Paris: a tax on the importation, production or exportation of fuel products, whose proceeds are transferred to the PTA, up to €100m/year.

- **Other innovative solutions**

Solutions exploring new economic opportunities, general tax charges, etc.

Mobility as a Service, Birmingham: the embedment of public transport services into integrated and seamless travel solutions;

Revenue security enhancements, Budapest: introduction of automated fare collection to raise the fare receipt base;

Revenue security enhancements, Paris/IdF: legislation enabling strict enforcement of fare collection; and

VAT reduction to go to public transportation, Paris/IdF: a reduction from 10% to 5.5% in VAT on public transport fare, with the reduction to be retained for the purposes of funding (solution not implemented).





CAF Tram Budapest centre
Source: BKK





I Why this survey?

1.1 Context of this survey

EMTA Workgroup Funding, Finance and Regeneration, in June 2017, was requested to report to the November EMTA General Meeting on “state-of-the-art funding opportunities, chances and risks” of new and innovative ways to enlarge the funding capacity of the associated public transport authorities.

The aim of the report was to investigate innovative funding sources which are used to cover the recurrent costs of operating and maintaining public transportation services and assets.

The General Meeting also requested that the report accounts for the rich diversity of cultural and political contexts in which EMTA’s PTA members operate.

The General Meeting’s stated purpose was to inform EMTA members on common denominators in the application of novel funding approach and to allow the transferral of knowledge and experience on the subject between members.

Figure 1 – About EMTA



About EMTA

The Association of European Metropolitan Transport Authorities (EMTA) was created in 1998 so as to form a venue for exchange of information and best practices between the public transport authorities responsible for planning, integrating and financing public transport services in the larger European cities. Nineteen years after its creation, it now brings together 26 such authorities, responsible for improving the mobility conditions of some 85 million European city dwellers.

EMTA Workgroup Funding, Finance and Regeneration retained RebelGroup advisors to support this inquiry, per the following activities:

1. "A brief description of the state of play in terms of on what resources and decentralisation/devolution agreements individual members currently depend on and draw their funding from.
2. Identification of opportunities PTA's envisage to broaden the fund resourcing scope and conditions that will make these come in reach of their funding capacity (e.g. PPP's, private-public funding alliance)"

The survey has been carried out over the period September-November 2017.

Figure 2 – About RebelGroup

REBEL

About RebelGroup

RebelGroup (Rotterdam, Antwerp, Washington DC, Johannesburg, Manila, Jakarta) helps public and private organizations bridge the gap between their infrastructure and service needs and financial resources, by focusing on optimization of public service concessions, PPPs and transaction processes, innovative capital financing, project delivery strategies, efficient management, and performance improvement. With over 15 years of extensive experience in infrastructure and transportation finance from the simplest of deals to more complicated arrangements, Rebels thrive on their ability to craft tailored and innovative solutions to client challenges. No change without a Rebel.

1.2 Contents of this survey

This survey report document broadly comprises the following elements:

- Survey and EMTA/RebelGroup background information;
- Survey approach and survey contents;
- Survey population (PTAs) and survey response rate;
- Trends and figures derived from quantitative survey results;
- Qualitative observations and cases on novel funding solutions; and
- Annex comprising full survey and coded survey responses.





2 What was surveyed?

2.1 The economic and environmental cases for public transportation

The economic case and environmental case for public transportation remain uncontested.

Public transportation delivers numerous, interrelated benefits to its users and to cities in and around which it is provided, including:

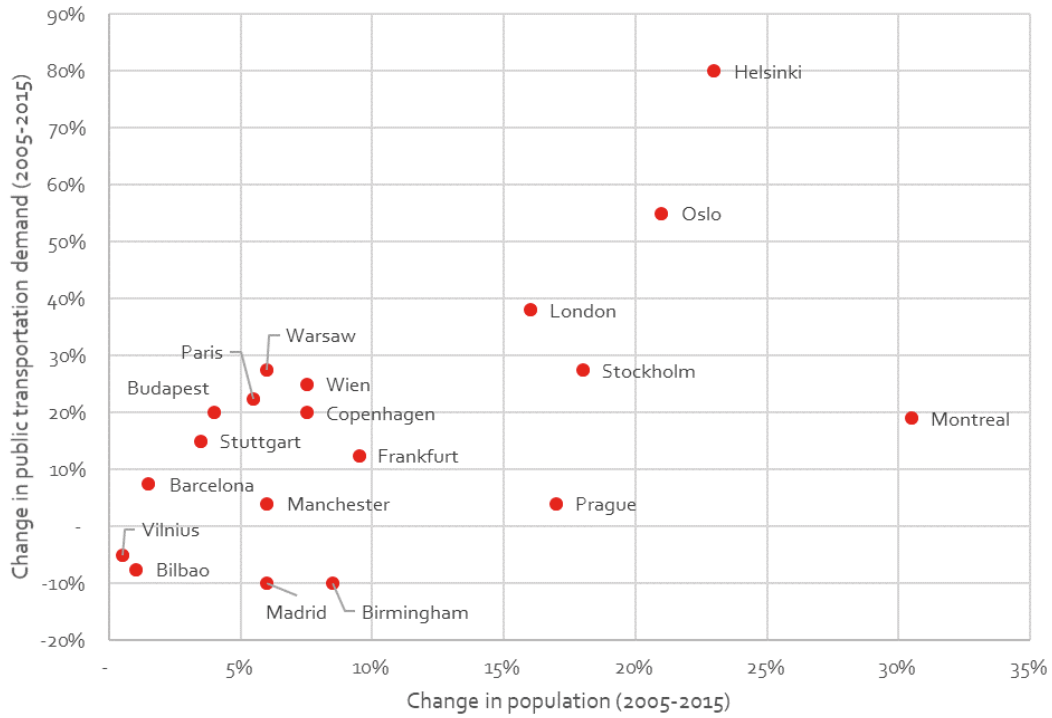
- It offers mobility for individuals that do not have access to private transportation modes;
- It provides cities and its dwellers with a more efficient alternative to the parking activity and fuel use related to moving around by private car;
- It helps to reduce congestion into and within cities;
- It enables better land use and urban development planning;
- It helps cities to tackle environmental challenges by improving air quality and reducing carbon emissions; and
- It creates additional jobs by giving employers a wider access to labour pools and enabling trade.

Efficiency and agglomeration benefits abound. As such, public transportation is, undisputedly, an important enabler of economic growth.

2.2 The ongoing scramble for funding

The last decade has witnessed ever – more than proportional - increasing demand for public transportation services, in the form of increased expectations from consumers on the quality and augmented areal reach of public transportation services provided by PTAs.

Figure 3 – Change in public transport demand vs change in population



Source: EMTA

The funding challenges related to investment in public transportation assets and operation costs have grown in lockstep with these rising demand and expectation levels.

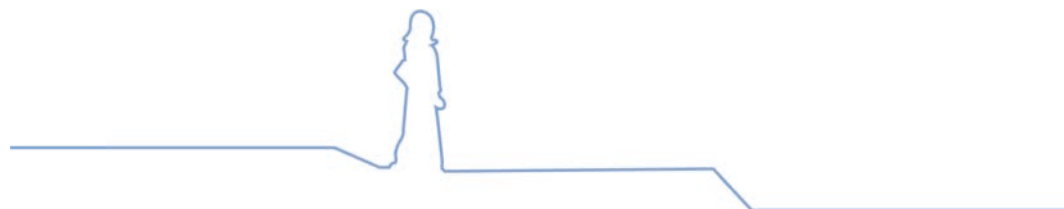
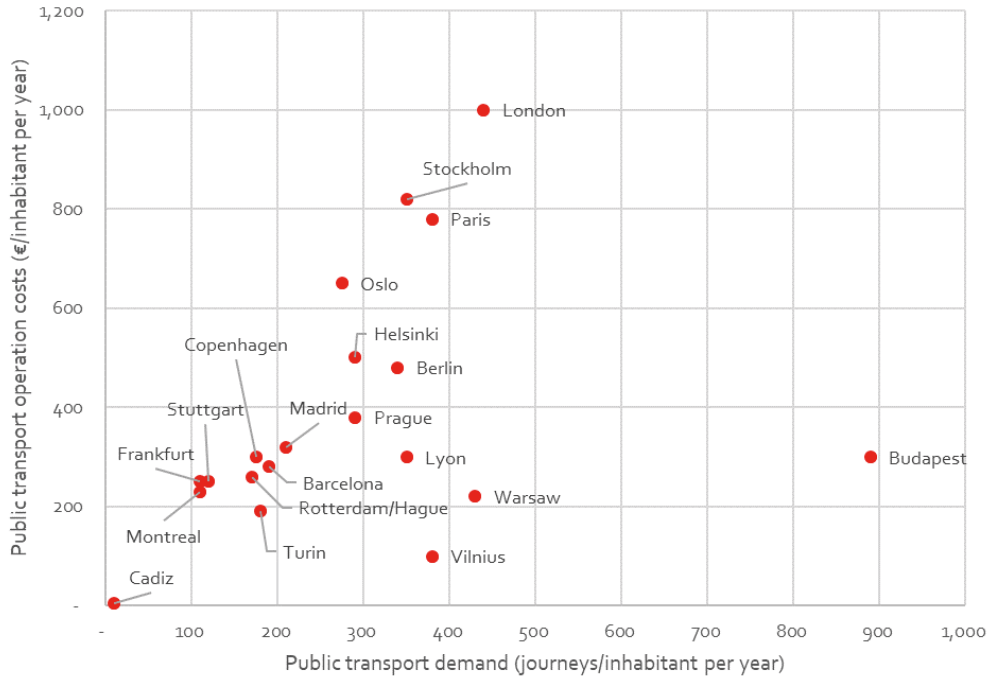


Figure 4 – Public transport operation costs vs public transport demand



Source: EMTA

Figure 3 shows that 12 out of the 19 surveyed cities have witnessed a sharper increase in public transport demand than the increase in population in the past decade. Such increase in demand for public transportation has subsequently led to an increase in public transport operational expenditures.

Figure 4 shows the relationship linking higher demand for public transport to a rise in its operational costs per inhabitant. Linking the conclusions drawn from both figures, it can be shown that the last decade has experienced a rise in demand for public transportation, which in turn led to a rise in its operational costs. This fact has naturally caused difficulties in securing funding to cover such costs.

PTAs have traditionally relied on local or national government support in the form of subsidies to bridge gaps between fare revenues and funds required to cover the costs of service provision. The most common source of these subsidies is the general local or national government budget.

This reliance on subsidy funding puts public transport systems in a difficult spot, as budget pressures and budget cuts continuously (threaten to) reduce the availability of subsidy – and therewith reduce the funding needed to provide sufficient quantity and quality of public transportation services.

Against this background, EMTA aims to support its member PTAs in the matter of expanding their capability to attract new resources – to make public transportation services across the continent



more resilient against financial pressures and cutbacks. In accordance with the mission handed to it by the EMTA General Meeting, *EMTA Workgroup Funding, Finance and Regeneration* is dedicated to tackle this issue, through dissemination of this survey.

Figure 5 – Defining funding

Funding for operational expenses

In this report, in line with the terms of reference set for this survey by EMTA, funding is defined as the provision of funds to cover operational expenses of public transportation – which include, without limitation, employee salaries, utility expenditures, administrative expenditures, maintenance expenditures aimed to maintain the functionality of existing infrastructure and rolling stock, operational control systems / software, fare collection operation system / software, tax expenditures, levies and information / customers communication services.

2.3 Surveying current and novel funding approaches

Survey questions were designed to revolve around five key areas which ultimately formed the basis of the selected questions that will be included (for more detail refer to the annex of this document):

1. **Inventory of current state of PTA funding structure and sources;**
How and from which sources do PTAs currently fund expenditure on public transportation?
2. **Inventory of innovative models already experimented / implemented by PTAs;**
Have PTAs over the course of recent years implemented new, innovative approaches to source more funding?
3. **Inventory of plans under consideration / development by PTAs;**
Which other plans or concepts are currently "on the drawing board"?
4. **Enabling conditions and mechanisms;**
In light of the substantial variety in context between the PTAs surveyed: do specific solutions or approaches come with necessary cultural, institutional, political or legal/regulatory enablers?
5. **Open inventory and document additions.**
PTAs were encouraged to enclose additional observations, documentation and/or data.

Based on this, the survey was drafted into three thematic sections (also for more detail refer to the annex of this document):

1. **Existing situation**, which looks at funding structure and solutions implemented from the very recent past up to the present day;
2. **Recently piloted funding solutions**, which looks at solutions currently being piloted and experimented; and
3. **Funding solutions still on the drawing board**, which looks at innovation strategies and solutions currently being conceptualised, planned, or under development.





Manchester Metrolink

Source: TfGM



3 Which trends and figures were found?

3.1 Increased reliance on indirect revenue streams

Survey results have shown an increasing trend in indirect revenue streams, as a proportion of total revenues received by PTAs, dedicated to fund operational expenses incurred by authorities.

For the purposes of this report, indirect revenue streams are funding sources that do not originate from public transport operations. Such streams include, without being exhaustive, subsidies, grants, tax exemptions, cross-utility funding, fuel taxes, vehicle taxes, parking fees and fines, employer taxes, land and/or property taxes, tourism taxes and congestion charging levies.

Even though such increasing dependency varies across the EMTA membership, mainly due to the differences in organisational and funding structure that each authority follows in its parent city, the average proportion of indirect revenue streams with respect to total revenues received within such authorities has risen by 7 percentage points between 2012 and 2016.

Figure 6 – Direct and indirect revenue streams

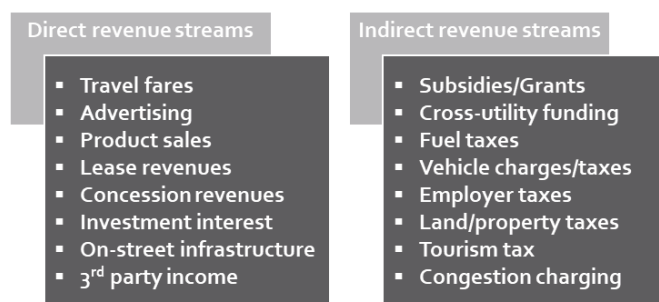
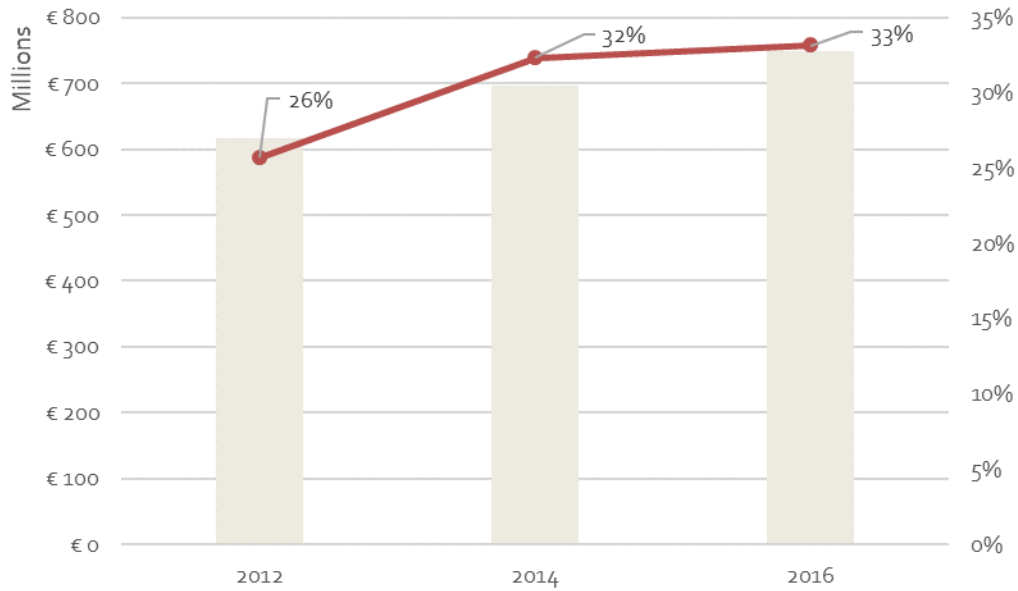


Figure 7 – Average proportion of indirect revenue streams (in €; % of total revenues)



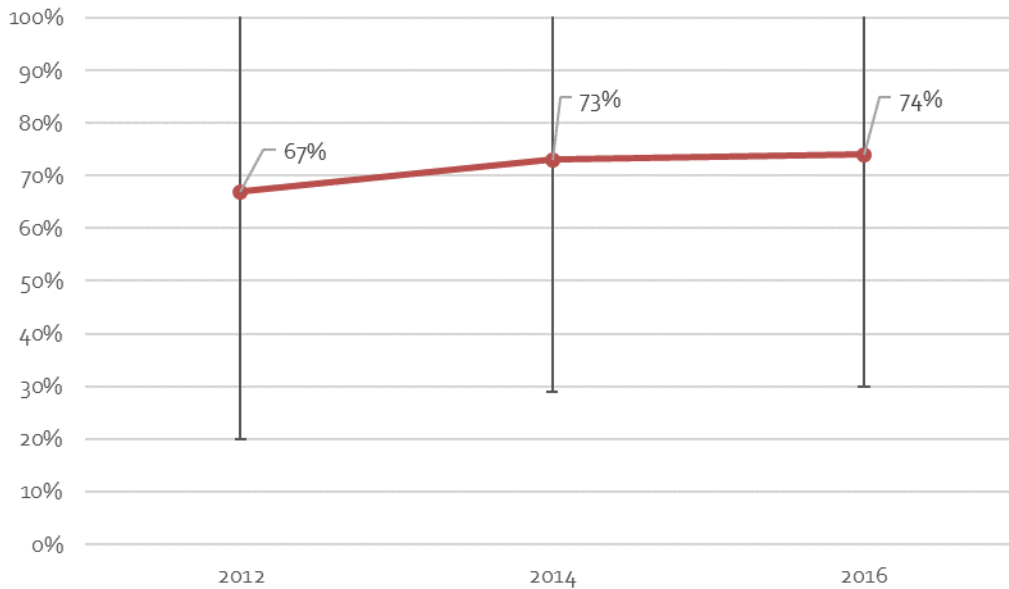
The above graph clearly highlights this increasing trend. The reason behind such increase could be attributed to the inadequacy to meet rising costs by operational revenues alone, which forced authorities to increase their reliance on receiving and/or generating indirect revenues to maintain financial stability.

3.2 Increase in subsidies/grants received

Furthermore, a deeper analysis on the increase of indirect revenue streams has shown an increasing trend in the proportion of subsidies/grants received by PTAs with respect to the indirect revenues received over the same time span.



Figure 8 – Proportion of subsidies with respect to indirect revenues



The above graph shows a slower but continued increase in the proportion of subsidies received with respect to indirect revenues; the reason behind which can be attributed to the authorities' reliance on traditional funding methods to meet the increase in operational costs

3.3 What can we conclude?

In conclusion, the main trends that have been identified reflect to:

- An increase in indirect revenue streams, as a proportion to total revenues received; and
- An increase in subsidies/grants, as a proportion to indirect revenues received.

After coupling both facts together, it can be observed that there exists a gap between direct revenues and operational expenses, which led to an increased reliance on indirect revenue streams to offset the deficit. Such reliance, on average, is particularly focused towards receiving subsidies/grants to bridge the gap between operational revenues and expenses.

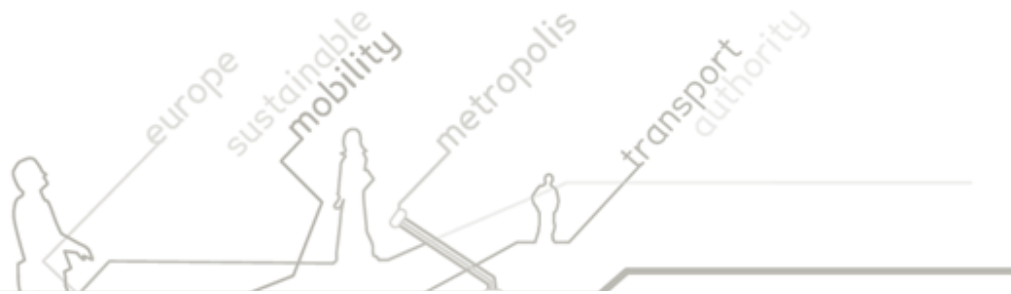
As such, the need to conceptualise and develop novel funding solutions to offset such trends within EMTA's member PTAs is becoming ever more a necessity.



Rotterdam Blaak Station

ABEL





4 What type of **funding** solutions were found?

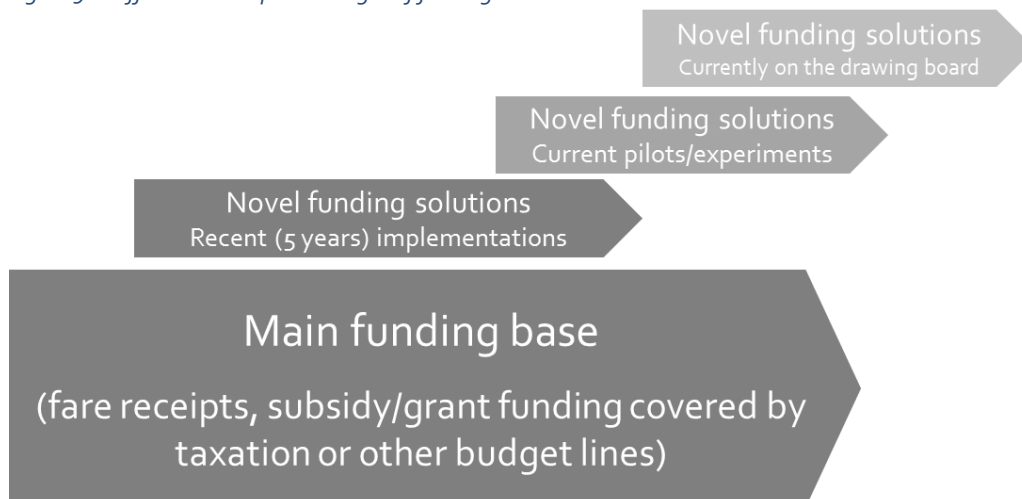


4.1 Finding solutions that are innovative, impactful and replicable

In qualitative terms, the main focus of this survey has been on funding solutions, sources, approaches and concepts that can be characterized as follows:

- Implemented in the past 5 years (recent implementations);
- Currently being experimented (pilots); and/or
- Currently on the drawing board (concepts).

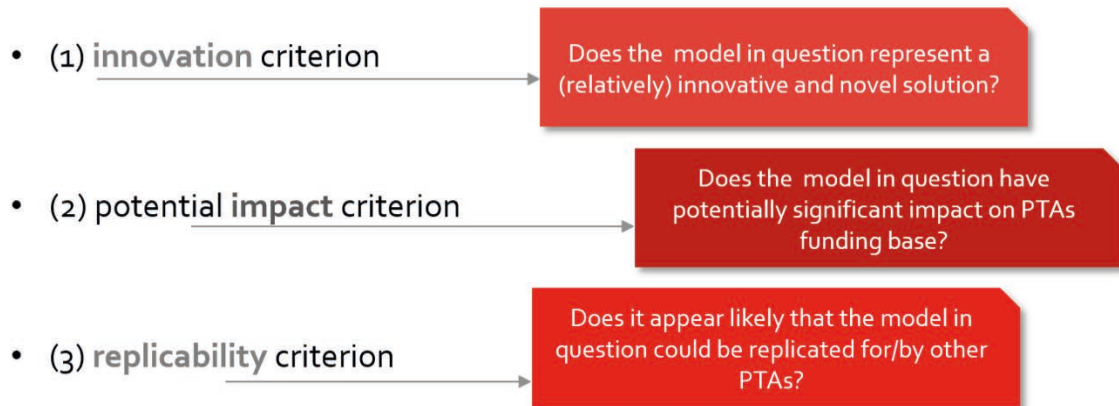
Figure 9 – Different development stages of funding solutions



Source: RebelGroup

The resulting selection of funding solutions represent innovations *on-top-of* the main funding base of the PTAs. As observed and as illustrated above, the principal funding sources for public transport service provision continue to be a mix of fare revenues and general government subsidies/grants.

Figure 10 – Focusing on innovation, impact and replicability



Source: RebelGroup

A review of the results was undertaken in order to identify common themes that *EMTA Workgroup Funding, Finance and Regeneration* and *RebelGroup* assessed to be *innovative* (as opposed to traditional, fare/subsidy funding approaches), *impactful* (making a real impact or having the potential to make a real impact) and *replicable* (with the potential of being repeated successfully by other PTAs).

4.2 Strategic directions in which solutions were sought and found

From survey responses received from the member PTAs, solutions that meet the criteria of innovation, impact and replicability have been grouped into the below four key themes, which will be detailed in the following section of this report.

- **Generic value capture**

Solutions capturing (part of) the economic benefits of improved public transport services accruing to the broader urban economy.

- **Targeted value capture**

Solutions very specifically capturing (part of) economic value generated by realisation of new residential areas, shopping malls, other commercial properties, etc.

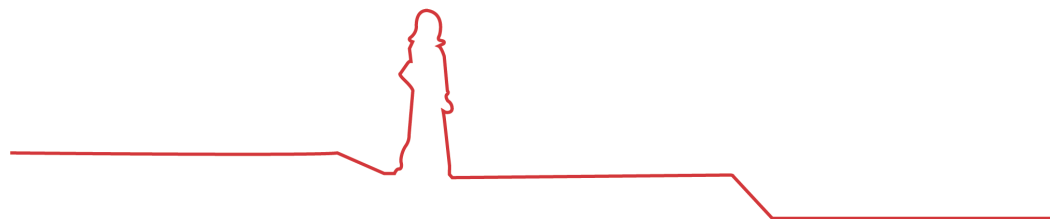
- **Private-to-public value capture**

Solutions typically aimed at discouraging private car use in order to reduce congestion and/or environmental impact, with the incidental additional benefit of capturing (part of those) funds to cover public transport expenditure.

- **Other innovative solutions**

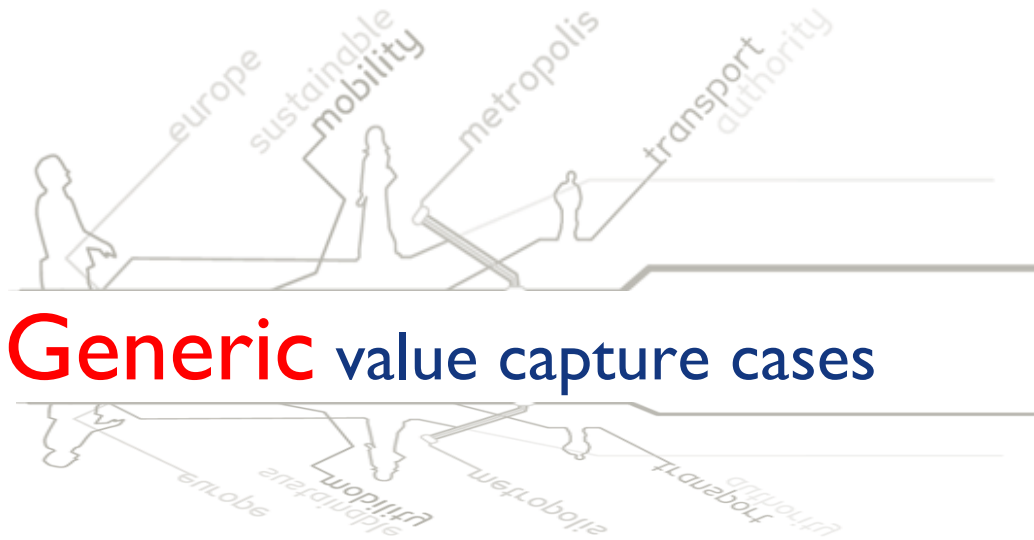
Solutions exploring new economic opportunities, general tax charges, etc.

For surveyed cases (in particular those that are long-term, value capture oriented), close attention is given to the extent to which funding is earmarked for the specific purpose of covering public transportation expenditure.





Rotterdam CS
Photo: Jannes Linders



5 Generic value capture cases

5.1 Defining generic value capture

Value capture is a public funding mechanism that is defined as capturing of an economic benefit, *in the form of financial value*.

In this report, we distinguish between generic value capture (this chapter) and targeted value capture (next chapter):

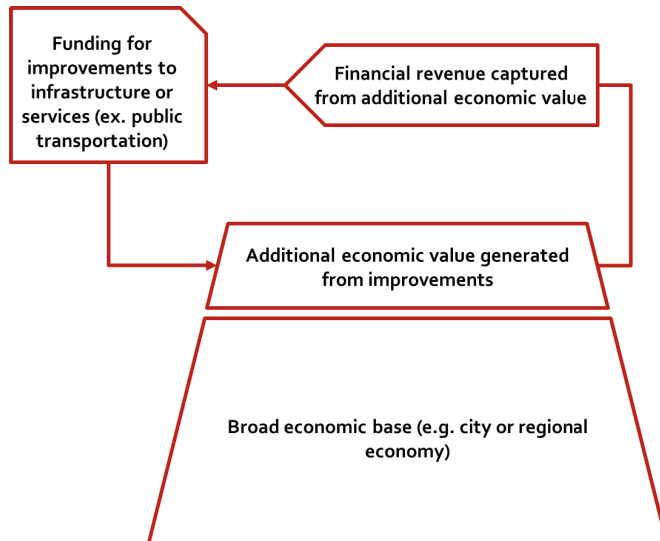
- In the case of *generic value capture*, financial revenues are drawn from a very broad and generic economic base – for example through imposition of a general land/property tax or business tax surcharge in a large urban area. Importantly, extraction of such financial revenues are determined based on i.e. justified by the close relationship to investments or improvements that generate additional economic value.
- In the case of *targeted value capture*, financial revenues are drawn from a very specific economic activity – for example through the imposition of a property-specific tax, fee or equivalent on a newly developed commercial property.

Survey responses from a number of PTAs included cases of generic value capture solutions put in place or currently being prepared to generate additional funding for public transport – meaning solutions whereby financial revenue was captured from a broader economic base, *closely linked to* the creation of additional economic value by public transport infrastructure/service improvements.

This principle is illustrated in the figure below.

As suggested in the figure, to be relevant for this survey revenues extracted through value capture need to be earmarked as funds for meeting public transportation expenditure by PTAs, by local or regional/national authorities, or by public transport operators themselves.

Figure 11 – Generic value capture through/for public transport



Source: RebelGroup

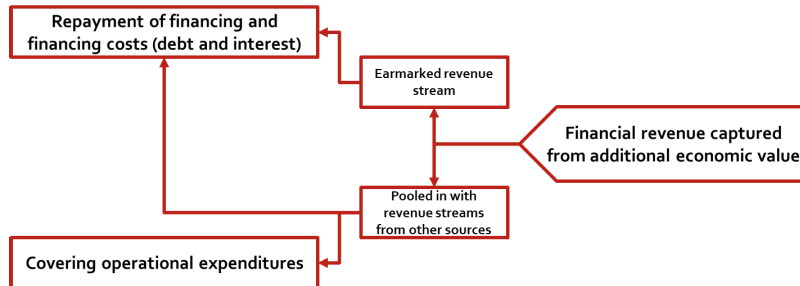
5.2 Value capture for financing or funding

Most sources typically view value capture as legalised tools helping governments to carry the financial burden of financing private or public infrastructure assets. In this view, longer-term financial revenues from a value capture mechanism could for example be used to (partly) repay debt from a loan and to pay interest costs. In fact, putting in place value capture and earmarking the long-term revenue stream from this for repayment of finance and payment of financing costs can enable more/better-priced private finance to be used for funding project investments.

But if not earmarked in this way, funds available through long-term value capture may also serve to cover recurrent operating expenditure – *even if* the relevant authority, operator or government entity has simultaneous commitments to financiers linked to the original financing of related infrastructure assets. The availability of additional funding, if not earmarked, simply adds to the long term pooled liquidity of the PTAs – from which they can fund both operating expenditure as well as payment commitments to financiers.



Figure 12 – Earmarking and long-term liquidity



Source: RebelGroup

This survey report therefore treats value capture solutions used for raising funding related to investment projects as potentially also relevant for funding of recurrent operating expenditure.

5.3 Examples of generic value capture found in this survey

Survey responses included the following examples of generic value capture solutions.

Table 1 – Enterprise Zone Northern Line Extension, London (brief)

Enterprise Zone Northern Line Extension, London
Status: IMPLEMENTED
To support the Northern Line Underground extension of the London Underground, TfL proposed an Enterprise Zone which features imposition of specific business tax rates on businesses located in the Enterprise Zone and deemed to derive commercial benefit from the extension. The resulting revenue is solely used for funding requirements related to the extension. A substantial stakeholder effort was carried out in order to provide explanation and gather support for the necessity of the Enterprise Zone.

Source: Survey

Table 2 – AMB Metropolitan Tax, Barcelona (brief)

AMB Metropolitan Tax, Barcelona
Status: IMPLEMENTED
In 2010, the Parliament of Catalonia adopted a Metropolitan Tax specifically dedicated to raise funds in support of public transport services provided by the Metropolitan Area of Barcelona. The tax is imposed as a surcharge on land/property, paid by citizens with land/property residing in the 18 municipalities (also referred to a tariff zone 1) within the first metropolitan ring or tariff zone. The taxable base is the sum of land and construction/property value insofar as citizens hold the concession for the land/property, a real land right, a usufruct right or an ownership right.

Source: Survey

Table 3 – Mayoral Community Infrastructure Levy, London (brief)

Mayoral Community Infrastructure Levy, London
Status: IMPLEMENTED
<p>In 2012, the Mayor of London introduced the first Mayoral Community Infrastructure Levy (MCIL₁) in order to fund the Crossrail rail link (with MCIL₁ due for replacement by MCIL₂ in the course of 2019). The MCIL charges commercial developers undertaking new developments in the area on a basis of set rates per unit of floor space being developed.</p>

Source: Survey

Table 4 – Business Rates Retention, London (brief)

Business Rates Retention , London
Status: IMPLEMENTED
<p>Introduced to London by the Greater London Authority (GLA) in 2013/2014 and expanded in 2016, business rates involve taxation by government of businesses on the basis of occupation of buildings within the GLA area. One of the key elements of Transport for London (TfL) funding, the retention of business rates by GLA was set at 20% and by local authorities at 30%. GLAs retention rate was increased to 37% in 2016, simultaneous to the shifting of the responsibility of funding the new Crossrail rail link to GLA. Whilst retention of business rates provides GLA and local authorities with an additional source of funds, it also exposes them to a certain amount of uncertainty related to London property market trends.</p>

Source: Survey

Table 5 – Public Transport Financing Act of 2015, Barcelona (brief)

Public Transport Financing Act of 2015, Barcelona
Status: UNDER DEVELOPMENT
<p>In 2015 Barcelona through the Public Transport Financing Act established economic activity taxes with the express purpose of funding public transport system costs. The law put in place the following taxes: a surcharge of medium-sized and large commercial properties in areas with high-intensity public transport, congestion and pollution taxes levied on users of arterial roads, pollution taxes through levies on short-stay car parking fees, surcharges on land/property taxes as further determined by local financial legislation, surcharges on vehicle registration costs, and special levies linked to organization of large events within the urban perimeter. Earmarking of taxes is explicitly done through percentage-wise allocation towards funding of public transport expenditure.</p>

Source: Survey

5.4 Other examples of generic value capture mechanisms

A selection of other examples of generic value capture approaches, not found among the survey responses, are listed below in addition – drawing mostly from US experience where value capture is a solution often employed successfully in order to attract additional funding for public transit projects.

Table 6 – Tax increment (brief)

Tax increment (brief)	
Used where:	United States
<p>Tax increment concerns the leveraging of expected future increases in property or other tax revenue due to the realization of specific public investment projects or services e.g. in public transit. As opposed to levying another tax rate or surcharge on the currently existing taxable base, tax increment approaches are based on the expected future growth of the taxable base (e.g. property values) due to the realization of additional public infrastructure or services – without necessarily adding to rates or surcharges.</p> <p>Most typically, tax increment projections are incorporated in (local/regional) governments’ financial planning in order to underpin financing and therefore repayment and interest commitments on large infrastructure/asset-related investment projects. However without explicit earmarking the same increment ends up in the wider pool of municipal or regional funds which also supports expenditure on public transport operating costs (directly or via operators contracted via public transport concessions).</p> <p>Tax increment financing is a common practice in the US, whereby projected tax revenue increases resulting from new infrastructure or assets (“increments”) are pledged for the purpose of attracting long term financing to fund up-front investments in new infrastructure or other assets. Such pledging of uncertain future revenue increases, it should be noted, amounts to underwriting of these commitments by public/government guarantee.</p>	

Source: RebelGroup

Table 7 – Sales Tax Districts (brief)

Sales Tax Districts	
Used where:	United States
<p>Sales Tax Districts are found in the US as districts within which retail and commercial enterprises are subject to a special sales tax whose use is earmarked for the funding of the public transport operations.</p>	

Source: RebelGroup

The most important factor differentiating between the various generic value capture approaches is: from which point in the chain of *economic* events (which in the case of generic value capture related to public transportation starts from improvement in public transportation infrastructure or services) is financial value extracted.

How governments choose this 'extraction point' depends typically on what is possible in their specific institutional, legal and regulatory environments. However the 'ease' of extraction of financial revenue from specific economic sources, geographic areas, classes of economic entities (private individuals or commercial businesses) also plays a role.

5.5 Case review: Earn-Back Model, Manchester

The below table comprises a more detailed case review of the Manchester Earn-Back Model as an instructive example of a generic value capture solution.

Table 8 – Earn-Back Model, Manchester (long brief)

Earn-Back Model, Manchester
Status: IMPLEMENTED
<p>The Earn-Back Model is an agreed approach with the UK government that allows Greater Manchester to retain a greater proportion of additional tax revenue generated as a result of local investment in infrastructure.</p> <p>This strategy was preceded by a proposal in 2008 to implement congestion charging on vehicles entering the area bounded by the M60 motorway. Implementing congestion charging would enable Manchester to make a bid for £1.5 billion investment through the government's Transport Innovation Fund (TIF), which will be used for public transport improvements, such as adding a Bus Rapid Transit (BRT) system, completing the tram system and adding extra carriages to already crowded trains. Future income generated from congestion charging would have been used to repay the loan. However, the proposal was rejected in a region-wide referendum, which left authorities searching for alternative schemes to finance public transport investments.</p> <p>In 2009, the Association of Greater Manchester Authorities³ (AGMA) announced the creation of a Greater Manchester Transport Fund (GMTF), which is a funding agreement with the UK government where funding from local taxes, government grants and user revenues was pooled in a single pot of allocated funding for transport initiatives. The amount of £1.5 billion was allocated to 15 public transport projects in the region, including:</p> <ul style="list-style-type: none"> - the Manchester Airport Metrolink extension; - the Oldham-Rochdale Metrolink extension; - the Metrolink Second City Crossing; - a range of bus priority measures, including a guided busway from Leigh to the city centre; - new roads and improvements across the city region; - multiple new interchanges in district town centres; and - rail station improvements.

³ Association of Greater Manchester Authorities has been superseded by Greater Manchester Combined Authority as of 1 April 2011.

The aim of the Transport Fund was to generate an additional £1.3 billion of gross value added per year by 2021, and is considered an alternative to the congestion charging proposal. The Transport Fund enabled the city region to invest in improving the public transport network.

In 2014, the Greater Manchester City Deal was signed. This agreement, also referred to as the devolution agreement, represents a major transfer of power and responsibilities from central government to Greater Manchester, and sets a roadmap that transfers functions and access to resources. The devolution agreement led to Greater Manchester having greater influence and control over public spending; one aspect of which was the creation of a revolving infrastructure fund, which builds on the transport fund established in 2009, by allowing Greater Manchester to “earn back” a portion of the business rates, a form of tax charges to occupiers of most types of non-domestic property, such as shops, offices, factories, warehouses, etc.

The Earn-Back Model uses a formula, dependent on changes in tax revenues over time at the Greater Manchester level, to provide a revenue stream to Greater Manchester through the retention of a portion of the business rates that would be otherwise directed to the central government. The retention is only possible if gross value added increase results from local investment in infrastructure, and has a potential of generating £900 million over a period of 30 years. It is subject to gateway reviews, conducted at 5 year intervals, to evaluate investments made and implemented and to ensure that interventions have had a positive effect on economic growth in the region.

This model provides long-term funding opportunities and sets a funding structure and program in place, which forces rationalisation and prioritisation of projects based on positive economic effect rather than local political agendas and aspirations. Additionally, this model creates a platform for attracting funding from sources such as national government grants, commercial financiers and international financial institutions.

Up until 2017, Greater Manchester has used the Earn-Back Model to finance the construction of the Trafford Park Line, a 5.5km Metrolink extension, due to be completed in 2020/2021, and the development of the A6 MARR which enhances the city region road network.

Subsequently, the adoption of the Earn-Back Model led many other local authorities to propose similar models to be implemented in their respective regions, which caused the National Treasury to revise the approach and put in place a panel to review proposals and propose better-placed methodologies for ex-ante assessments and intermediate gateway reviews.

Currently, Greater Manchester are developing a second iteration of the Transport Fund, named Transport Fund 2. Its aim is to form a case to broaden the scope of government funding as more responsibilities are being devolved to the region. Greater Manchester are investigating more mechanisms to contribute to the Transport Fund 2, most notable of which are mechanisms revolving around land value capture.

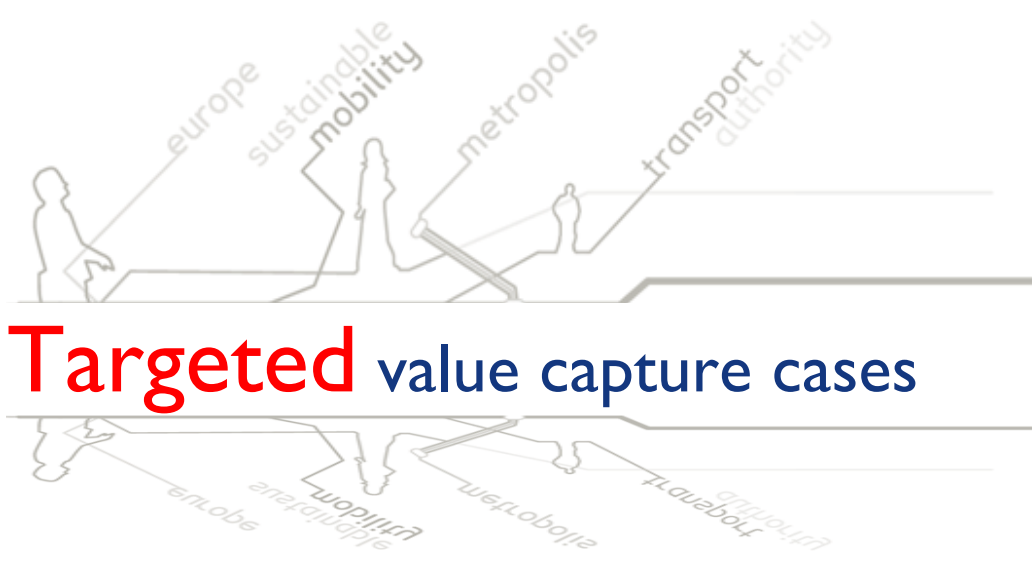
In conclusion, the concept and methods of earn-back funding are still a work-in-progress across the UK. Perhaps the most significant lesson from Greater Manchester’s experience to date is the importance of putting in place a fund as a catalytic structure that rationalises authorities’ funding planning and would accommodate the blending of different funding sources and approaches.

Source: Survey and follow-through interview



Metrostation Rotterdam



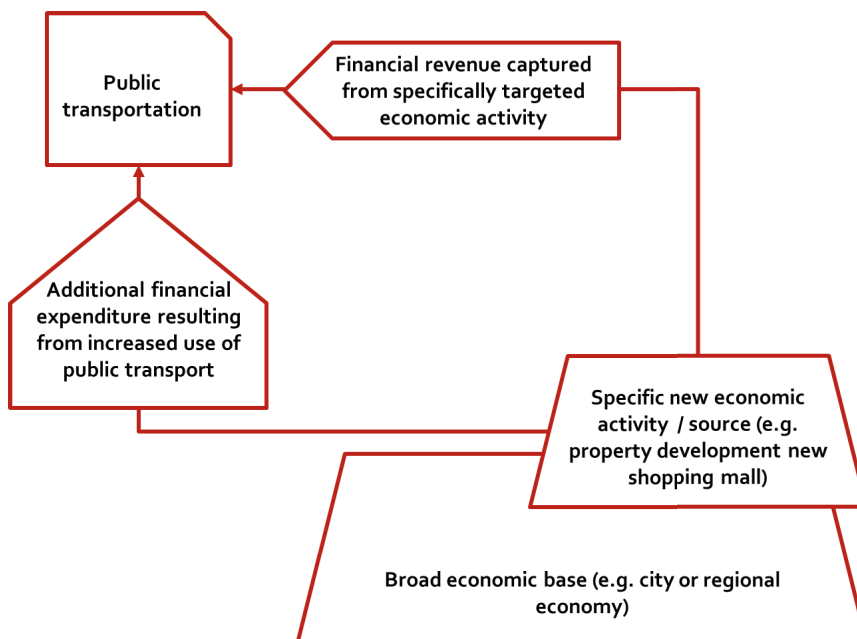


6 Targeted value capture cases

6.1 Defining targeted value capture

The previous chapter of this survey report has defined *targeted value capture* as an approach whereby financial revenues are drawn from specific economic activities and sources (in contrast to extracting revenues from the 'broader' regional or national economic base, from large groups of businesses or individuals, etc. in *generic value capture*).

Figure 13 – Generic value capture through/for public transport



Source: RebelGroup

The most clear-cut examples of such an approach are value capture mechanisms targeted to capture value from particular property or area developments which demonstrably lead to increased use of public transportation – and therefore to increased costs related to public transportation use.

This principle is illustrated in the figure above.

Alternatively, value capture mechanisms can also be targeted to capture a portion of the increase in specific property or area developments as a result of investments to new public transportation infrastructure assets – which can be used to cover operational costs related to such assets.

6.2 Examples of targeted value capture found in this survey

Survey responses included the following examples of targeted value capture solutions.

Table 9 – Land Value Capture: proposals, London (brief)

Land Value Capture: DRAM proposals, London
Status: ON THE DRAWING BOARD
<p>More targeted at the realization and direct beneficiaries of new infrastructure and services are Land Value Capture (LVC) proposals currently considered by TfL – notably a so-called Development Rights Auction Model (DRAM). In the DRAM model, land owners in designated urban zones linked to planned infrastructure/service expansion projects, will be provided three options:</p> <ul style="list-style-type: none"> • Pool their land alongside land of other owners in a designated zone for auctioning off the pooled land rights for the zone to commercial property developers. Auction proceeds up to the reserve price (set at the current value without development) of the land would accrue fully to the owners. Proceeds in excess of the reserve price are shared between authorities (with authorities’ share used as funding for infra/service expansion costs) and land owners according to a pre-set ratio (e.g. 50/50). • Or: develop the land themselves and pay a zonal Community Infrastructure Levy (CIL) to ‘compensate’ authorities for the costs related to the extra infrastructure and/or service. • Or: do not undertake autonomous or pooled development. <p>As such, DRAM requires a combination of urban planning and transport planning functions working together across functional and administrative divides on integrated planning of new transport infrastructure/services. This includes designating of specific zones for transported-related, commercial property development. It also requires close coordination between local and metropolitan/regional authorities to avoid double charging of transport infra/service charges, coordinated award of planning and development consents to developers, etc.</p>

Source: Survey

Table 10 – Naming rights Emirates Air Line, London (brief)

Naming rights Emirates Air Line, London	
Status:	IMPLEMENTED
<p>Another well-known example of capturing value directly from the beneficiary is the cable car across the Thames in London, was built as part of the preparatory works for the London 2012 Olympics. TfL and Emirates Airlines agreed on a Naming Rights arrangement whereby the system would be known as the Emirates Air Line – and importantly, would feature as such on the Tube Map. The exposure and name recognition resulting from this agreement represented substantial commercial value for Emirates Airlines - which agreed to a 10 year contract with TfL receiving sums over GBP 36m per annum and covering a substantial portion of the costs related to the establishment and operation of the Cable Car.</p>	

Source: Survey

6.3 Other examples of targeted value capture mechanisms

Other examples of targeted value capture approaches, not found among the survey responses, are included in the following fiches.

Table 11 – Special assessment districts (brief)

Special Assessment Districts	
Used where:	United States
<p>We include here the concept of Special Assessment Districts (SADs) within which charges are calculated against all properties directly benefiting from the ongoing use and/or operation of specific public investments.</p> <p>While the London DRAM model highlighted above represents a distinctly zonal and transport-related version of this (with price setting determined by auction rather than an authority's "discretionary" decision to tax), the original SAD model used in the US can be broader e.g. also concerning dam construction, whereby a watershed area would be defined as the SAD within which properties would be required to pay for realization of the dam.</p> <p>While not concerning transport infrastructure, the SAD is an interesting model as it points to the possibility of justification of targeted value capture across larger geographical areas, not simply within administrative boundaries of singular urban or regional authorities. This is a concept specifically relevant for authorities seeking to establish intercity transport systems and services, whereby studies and assessments can provide justification for specific single or differentiated zonal levies along the corridor of the new system/service.</p>	

Source: RebelGroup



Table 12 – Exactions / impact fees (brief)

Exactions / impact fees	
Used where:	United States
<p>Used in the US, exactions and impact fees are in line with the constitutional idea that anything taken from citizens or businesses by States needs to be compensated for.</p> <p>Exactions can concern a wide range of impositions, e.g. specific conditions on easements for public right of way – to be incorporated into land title deeds related to commercial development planning. Impact fees on the other hand are fees imposed by local governments on private developers or other businesses or citizens to cover the cost of provision of public services (in this context: public transportation services) or investment in new/additional infrastructure or assets related to a new development.</p>	

Source: RebelGroup

Table 13 – Station-linked development (brief)

Station-linked development	
Used where:	Global
<p>Station-linked development refers to integrated development of stations and commercial property adjacent to or layered over station buildings and infrastructure. PTOs or PTAs will undertake such development through subsidiaries tasked with commercial development, and/or engage with private property development groups. Thus, it is possible for PTOs to capture the value surplus arising from a new station in the form of rental and lease payments related to economic activity in hospitality, retail, business/office use, etc. A variant to station-linked development is (for some jurisdictions) the sale of leasing out of air rights related to development above stations or infrastructure.</p> <p>Many excellent examples of station-linked development exist, from decades-old to quite recent. Some notable examples include Stratford Railway Station and Shopping Centre near London (UK) which was redeveloped for the 2012 London Olympic Games, Hong Kong’s MTR metro system stations where aboveground commercial property pays for substantial new investment programs, Tokyo’s unique combinations of substantial underground and aboveground retail with metro (Tokyu Group) and rail (JR) stations, etc.</p>	

Source: RebelGroup



Table 14 – Station-linked development (brief)

Station naming rights	
Used where:	Global (with particular use in US)
<p>Referencing in some ways the Emirates Air Line in London where an airline paid substantial amounts for the right to lend its name to a cable car across the river Thames, the monetization of station naming rights can prove useful sources of additional funding for governments and PTAs. Cases in the US can be found in Philadelphia, Las Vegas, and in the future cities like New York, Boston and Los Angeles. It is important to notice that not only private developers take an interest in buying naming rights; semi-public institutions like universities and hospitals have also been found to take a keen interest in the opportunity to link their names to nearby newly built transit stations.</p>	

Source: RebelGroup

6.4 Case review: Developer Levy, Barcelona

The below table comprises a more detailed case review of the Developer Levy Model as an instructive example of a generic value capture solution.

Table 15 – Developer Levy, Barcelona (long brief)

Developer Levy, Barcelona	
Status:	IMPLEMENTED
<p>Barcelona’s Developer Levy Model is a product of the Catalan Decree no. 344/2006 on Evaluation Studies of Generated Mobility (ESGM) regarding new land developments in the Barcelona Metropolitan Region (BMR). The main objective of the evaluation studies is to define measures and necessary actions to ensure that the incremental mobility generated due to new developments follows guidelines characterised by the multitude of more sustainable means of transportation, which aligns well with the mobility shift promoted by the Catalan Mobility Law 9/2003.</p> <p>Catalonia’s Mobility Law of 2003 recognises the individual’s right to accessibility in safe and adequate conditions of mobility, with the lowest possible environmental impact. The law also highlights the fact that applying these principles to workers’ mobility and access to the workplace would depend on actions of all stakeholders, and is therefore viewed as a shared responsibility between the public sector, the private sector and the workforce.</p> <p>Catalan Decree 344/2006 requires new land developments and mobility-generating implementations that results in over 5,000 journeys per day to evaluate the impact through conducting a mobility study. Such studies are intended to assess the potential increase of movements/trips caused by the new developments, the respective activities these developments generate and the absorption capacity of the road / transportation services and systems. These systems also include walking and cycling.</p>	



The mobility study includes a funding plan to cover the additional costs generated by the increase in mobility due to the new development. The funding plan includes estimates for urban developments, along with infrastructure assets (or upgrading of existing assets) that connect the main transportation network, consisting of pedestrians, bicycles, roads and public transport) to the new development. The mobility study is then reviewed by the public transport authority, Autoritat del Transport Metropolità (ATM).

Additionally, the Decree carries an added obligation by the developers to meet part of the implementation costs of the consequent increase in delivering public transport services. Based on the mobility study, developers of lands or areas generating mobility are required to fund the PTA for the operating deficit of the transport service (road, public transport, etc.) in proportion to the increase in demand for such service, for 10 years. The fee is a one-time fixed sum payable upfront.

In certain situations, in case the mobility study requires a new transit station to be developed, developers are required to finance the civil engineering and building works required to ensure accessibility for people with limited mobility to use the new asset.

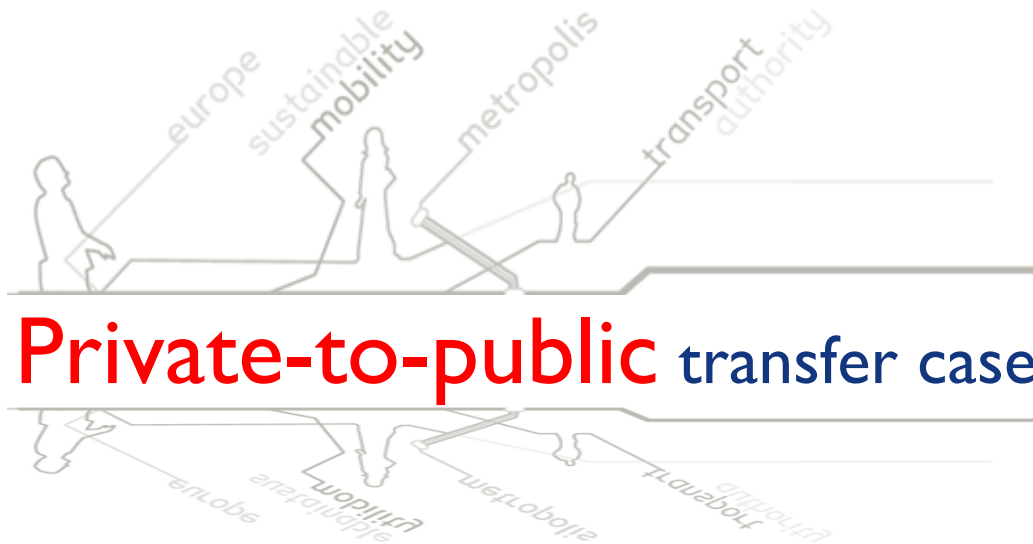
Development projects between 2007 and 2009 have added 30 million square meters of new land use, 86,000 new housing units and generated 3.1 million trips per day. In accordance with the requirements of the Catalan Decree 344/2006, these developments have also led to:

- 360,000 new bicycle parking spaces;
- 125,000 new car parking spaces (off-street parking);
- 55,000 new motorcycle parking spaces (off-street parking);;
- 108 kilometres of pedestrian and traffic-free streets
- 110 kilometres of bicycle paths;
- 70 new bus services; and
- € 48 million addition to the public transport fund by property developers alone

This Decree and its corresponding obligations and responsibility has been well received by the public in general, and developers in particular. The PTA is presently reviewing the requirements of the Decree. It is studying to substitute the upfront fee marked to cover operational deficits for a 10-year period to an indefinite yearly charge. Such substitution will only be applicable to commercial developments, and would introduce a more sustainable funding mechanism to cover the additional operational expenditure resulting from new developments.

Source: Survey and follow-through interview





7 Private-to-public transfer cases

7.1 Defining private-to-public transfers

Private-to-public transfers refer to the transfer of revenues collected from private transport users (cars or lorries/trucks) towards use for covering the cost of public transport service provision.

It is already quite common in countries and cities around the globe to put in place levies and charges on vehicle value, fuel usage or inner city accessibility for private transportation. Such levies and charges are put in place for different reasons, from simple revenue generation, to congestion reduction, to environmental alleviation (especially noise level control and air quality improvements).

Most often, levies and charges on private transport are therewith put in place *to discourage* the use of private car use – either indirectly encouraging the use of public transport use, shifting the location of economic activity to new urban growth areas, etc. – with the incidental additional benefit of capturing additional financial revenue.

Figure 14 – Private-to-public transfers



Source: RebelGroup

Less often, however, are returns from such levies and charges ring-fenced i.e. earmarked for covering specific costs related to public transport.

Where such earmarking formula is part of the arrangement, we speak of private-to-public transfers as illustrated above, and the novel/innovative aspect of the approach is in fact the public transportation expenditure earmarking.

7.2 Examples of private-to-public transfers found in this survey

Survey responses included the following examples of private-to-public transfer solutions.

Table 16 – Lorry/car access tax, Paris/IdF (brief)

Lorry and car access tax, Paris/IdF
Status: NOT IMPLEMENTED
<p>Ile-de-France-Mobilités (formerly STIF), the PTA for Paris and the surrounding Ile-de-France region, in 2015 experienced a funding setback when travel pass prices were harmonized. To offset the decrease in funding, it reviewed the potential of levying taxes on lorries and access tolls (akin to a congestion charge for the more central parts of the Parisian conurbation). The concept was not adopted or further pursued as most of the local authorities in the relevant areas rejected the notion as it would in part amount to additional taxation of comparatively lower-income households.</p>

Source: Survey

Table 17 – Fuel levy, Barcelona (brief)

Fuel levy, Barcelona
Status: ON THE DRAWING BOARD
<p>In Barcelona authorities are currently reviewing the possibility of a one-centime increase in the fuel price as a possible means to raise additional revenue with the specific purpose of funding/financing public transportation in the metropolitan area.</p>

Source: Survey

Table 18 – Parking charges, Barcelona (brief)

Parking charges, Barcelona
Status: ON THE DRAWING BOARD
<p>ATM as the PTA for Barcelona is reviewing a parking tax levied on businesses in order to reduce congestion. It is unclear from the survey response whether this particular proposal would, when implemented, result in a revenue stream earmarked for funding of public transportation expenditure. However it represents a useful example of private-to-public transfer as a means to reduce congestion from private transportation whilst raising additional funding (potentially) to be used for public transportation expenditure.</p>

Source: Survey

Table 19 – Congestion/access charges, Helsinki (brief)

Congestion/access charges, Helsinki
Status: ON THE DRAWING BOARD
<p>The Helsinki Region Transport System Plan for 2015 included a study of road pricing with the proceeds for such road pricing to be used for funding of public transportation expenditure – with distribution between infrastructure and operations according to a pre-set ratio (2/3 and 1/3).</p>

Source: Survey

7.3 Case review: Fuel Levy, Paris

Table 20 – Fuel Levy, Paris (long brief)

Fuel Levy, Paris
Status: IMPLEMENTED
<p>The travel pass price harmonization mentioned above has left IdFM, as PTA for Paris and the surrounding region since 2016, in a substantial drop in fare revenues. In search of way to combat funding reduction, and in accordance with the polluter pays principle, IdFM, since 2017, benefits from a levy on fuel products sold in the wider capital region – which is the result of high-level political agreement between Parisian authorities and national government legislators.</p> <p>The fuel levy is called <i>Taxe intérieure de consommation sur les produits énergétiques</i> (TICPE), and is calculated on bulk volumes of fuel products and not on price. The levy has been supported by Article 24 of the 2017 Finance Act.</p> <p>The TICPE applies on the importation, production or exportation of fuel products, with the exception of natural gas (which is associated with a specific tax) and solid fuels (e.g. coal, peat). As such, it also applies</p>

to biofuels, albeit with differing taxation levels. A number of activities benefit from exemptions (partial or total) from the fuel levy, listed below:

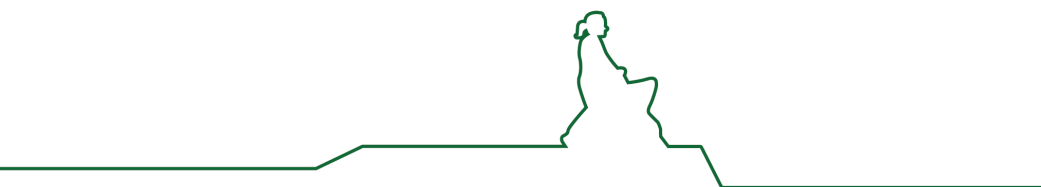
- Aviation (in case of international flights);
- Vessels (inclusive of fishing, exclusive of recreational activities) and waterway transport;
- Taxis;
- Rural ambulance service providers;
- Public transport;
- Road freight transport; and
- Agriculture

As of January 2017, IdFM can decide, to increase the TICPE applicable to fuels sold to final consumers in the Île-de-France region, up to a total limit of €100m per year. Additional revenues (i.e. incremental revenues over the €100M limit) would go to the central government. Formerly, regions had the right to adjust the rate for the portion of the TICPE that would be allocated to them; however, they are still entitled to increase the domestic consumption tax on fuel sold to end consumers if the revenues are entirely allocated to funding sustainable transport or rail infrastructure assets.

IdFM set its rate for 2017 in a method to generate €100m in revenues, and views a similar strategy for the short term. Coupled with the public authorities' encouragement of more sustainable means of transport, the fuel levy will naturally incentivize a shift from private transport to public transport, cycling or carpooling. Therefore, IdFM is expecting a decline of revenues generated from the fuel levy on the longer term.

Public acceptance was negative, at first: while organizations representing the interests of travellers resisted in principle the raising of additional taxes, they were persuaded by the evident need to compensate for the impacts of travel pass price harmonization in order to ensure continued quality of service of public transportation in and around the city.

Source: Survey





8 Other solutions



8.1 Other solutions

This section highlights a number of other solutions which do not fall under any of the preceding parts of this survey report, in the following order:

- Marketing and product innovation;
- Revenue-security improvements; and
- Miscellaneous solutions.

8.2 Marketing and product innovation

Table 21 – Mobility as a Service, Birmingham

Mobility as a Service, Birmingham
Status: PILOT
<p>A Mobility as a Service (MaaS) pilot is currently run by the West Midlands Combined Authority. Whilst MaaS is still in its infancy stages - not just in Birmingham but everywhere in the world -, the implicated better embedding of public transport services into integrated and seamless travel is generally expected to lead to an increase in public transport usage. This in turn would result in an increase in funds available from fare receipts. On the other hand, the consequent growth in demand for public transport might also lead to higher infrastructure cost, especially when the transport system has to cater for such increase in demand whilst being close to reaching its network capacity limits. This solution would therefore only work if the current transport network is capable of meeting this increase in demand without the need for major expansions/upgrades in service fleet and infrastructure.</p>

Source: Survey



8.3 Revenue security improvement

Table 22 – Revenue security enhancements, Budapest (brief)

Revenue security enhancements, Budapest
Status: IMPLEMENTED
<p>BKK as the Budapest PTA has undertaken a project to raise the fare receipts base by the introduction of automated fare collection and enhancing revenue security. Components of the project have included introduction of online sales, installation of automated gates and validators, reduction of fraud by elimination of paper tickets, handheld validators used by ticket conductors on buses, and other measures. This case speaks to a very powerful theme: inadequate revenue security due to outdated or faulty fare collection systems and approaches results in substantial losses of funds from fare receipts. Often, relatively straightforward changes in fare collection system and approaches result in substantial improvements in fare collection rates.</p>

Source: Survey

Table 23 – Fare evasion reductions, Paris/IdF (brief)

Revenue security enhancement, Paris/IdF
Status: IMPLEMENTED
<p>For Paris and Ile-de-France, fare evasion was reduced substantially through: better legislation enabling stricter enforcement of fare collection and by penalizing of fare evasion, public campaigns against fare evasion, making fines on fare evasion paperless and more easy to process, experimentation with new inspection methods (undercover inspectors, pre-announced roving, and implementation of a single fare which reduced scope for out-of-zone fare evasion). Operators are also contracted by IdFM as the PTA on the basis of targets vis-à-vis fare evasion reduction.</p>

Source: Survey

8.4 Tax-related

Table 24 – VAT reduction for public transportation, Paris/IdF (brief)

VAT reduction to go to public transportation (Paris/IdF)
Status: NOT IMPLEMENTED
<p>IdFM as the PTA for Paris and the surrounding region has also considered proposing a reduction in VAT on public transport fare (from 10% to 5.5%) – with the reduction to be retained by the public transportations system for purpose of funding expenditure. However national government did not accept the proposition which consequently did not result in (attempts at) legislation of the same.</p>

Source: Survey



ANNEX Format of this survey



Introduction

1. About this survey

This is a survey aimed at providing the **European Metropolitan Transport Authorities (“EMTA”)** and its members with an overview of existing funding conditions and solutions of public transport systems – and to review some of the funding solutions that have been tested and piloted in the recent past, were recently implemented, or are still under development. This review will enable EMTA to disseminate ideas and concepts regarding additional novel funding opportunities to its members.

For the purpose of this survey, the term “funding” is defined as the provision of funds to cover operational expenses (OPEX); contrary to the term “financing”, which is defined as a time-limited resource to conduct (or: accomplish) a specific scheme (development, construction, retrofitting, etc.), known as a capital expenditure (CAPEX).

Our understanding of the operational expenses are those expenditures that a public transport system incurs to run an existing transport system, which include, but are not limited to, employee salaries, utility expenditures (electricity, water, gas, internet, data, communications, etc.), administrative expenditures (overhead), maintenance expenditures, aiming to maintain the functionality of existing infrastructure and rolling stock, operation control systems and/or software, fare collection operation system and/or software, specific taxes and/or levies, and information and customer communication services. Further clarifications on these definitions, used cases, and terms are made available in the annexed paper “Funding and Financing Public Transport” of the EMTA working group.

The survey is carried out with the support of **RebelGroup (“Rebel”)** from The Netherlands, a financial-economic advisory firm specialized in transport, infrastructure and PPPs.



2. Context

A well-functioning public transport system is viewed as one of the necessary conditions to enable economic growth and competitiveness of cities and metropolises. However, as most of our cities grow and densify in population, we face the increasingly daunting challenge of bringing people together across greater distances through urban areas where competition for the division of public space is rising to new levels.

Meeting this challenge through public transport service provision, while maintaining an overall *financially sustainable* system, continues to be the key to build cities of the future. EMTA believes that, by using this survey to identify new and promising funding instruments and concepts to cover the recurrent costs of public transport services, it can help its members to rise to the challenge.

3. Structure

The survey will collect information from you as EMTA members in 3 main sections:

- Existing situation
which looks at funding structure and solutions implemented from the very recent past up to the present day
- Recently piloted funding solutions
which looks at solutions currently being piloted or experimented
- Funding solutions still on the drawing board
which looks at innovation strategies and solutions currently being conceptualized, planned, or under development

The goal of the survey is not to benchmark either previous or current 'performance' of EMTA members against one another, but instead to leverage on the information provided by you to develop novel funding models that solves financial challenges and can be applied across EMTA member's transport system.



4. Identification

So let's get started. Based on our review of your survey response, we may want to follow up with you for further elaboration of certain concepts and contributions included in it. We therefore request you to fill out here below your organisation's contact person along with his/her contact details.

4. Contact person details?	
Full name:	
Division/department:	
Function:	
Telephone number:	
Email address:	



Part 1 – Existing situation

5. EMTA barometer check

Refer to the table annexed to the survey. This table is an extract from the 2015 EMTA Barometer.

5. In case there have been notable changes from the 2015 statistics (greater than 5%) in the 'core' city population, PTA area population, or PTA surface area (e.g. through addition), kindly fill in the updated information below in the corresponding row.

5. Notably changes compared to 2015 EMTA Barometer?	
Main city population	
PTA area population	
PTA surface (km ²)	

6. Present situation (status quo):

The aim of this question is to gain an understanding of the organisational structure of your PTA and to understand risk allocations and relationships between the PTA and its operators and/or contractors.

6. Briefly describe the organisational model that is applicable in your public transit system.

Note that the description should ideally provide an understanding of:

- Ownership status of the existing public transport operators in your system (e.g. private ownership or franchise, in-house operator as if part of the municipal administration owning the full share, semi-public or mixed form of ownership, etc.)
- The direct ownership of the public transport network, (tracks, rolling stock and stations, workshops and strategic assets)

Answer:

Note that the description should ideally provide an understanding of:

- *Ownership status of the existing public transport operators in your system (e.g. private ownership or franchise, in-house operator as if part of the municipal administration owning the full share, semi-public or mixed form of ownership, etc.)*
- *The direct ownership of the public transport network (tracks, rolling stock and stations, workshops and strategic assets)*



7. Public transport modalities

Does your public transportation system include (Y/N):

Public transport modalities	Y/N
Metro rail	
Tram (light rail)	
Railway	
Regular bus	
Bus Rapid Transit (BRT)	
Trolleybus	
Ferry	
Other	

Note: In case "Other" is applicable, kindly specify the form of public transportation and provide description, if deemed necessary.

Other	Description



8. Current funding structure

The aim of this question is to check for trends and patterns in the revenue streams of the transport authorities to help pinpoint any deficiencies and to provide invaluable insight for potential funding sources.

Please state your past and current funding sources for the years 2012, 2014, and 2016, along with the total revenue earned for these years, and the percentage contribution of each revenue stream (*Please use the empty rows to fill in funding components that are not already present in the following table*).

EMTA and RebelGroup will use the data provided therein **strictly** for the purpose of this survey and will treat the same with the **utmost confidentiality**.

8. Revenue Streams	2012 (€)	2012 (%)	2014 (€)	2014 (%)	2016 (€)	2016 (%)
<i>Direct Revenues from</i>						
Travel fares						
Advertising						
Product sales						
Lease revenues						
Freight transport						
Concession revenues						
<i>Indirect Revenues from</i>						
Government subsidies						
Tax exemptions						
Cross-utility funding						
Fuel taxes						
Vehicle taxes						
Parking fees						
Employer taxes*						
Land/property taxes						
Tourism tax						
Congestion charging						
Total revenue (€)		100%		100%		100%

*Examples : Versement de transport (France) ; Work Place Levy (Nottingham, UK)

9. New funding solutions implemented during the last 5 years

Provide a brief description of new and innovative funding solutions implemented in the past 5 years (2012 to 2016, included), preferably along the outline described below.

Feel free to attach additional documents to your survey response that illustrate this further, labelled to this specific question.

Funding solution:

- *Official/Working name:*
 - *Date of implementation and current status (ongoing, under review, expanding, etc.):*

 - *Brief description (approx. 100 words, ideally should also include characteristics [public/private], necessary conditions for success):*

 - *Designated target population to obtain funds from:*

 - *Impact of solution in terms of funding (Earnings from implementing solution, earning characteristics [one-time/recurring, fare/non-fare, stable/volatile, etc.])*

 - *Relevant information on the internet (provide hyperlink):*
-
- *Other notable issues (history of how the solution was conceived and implemented, current status of solution [ongoing, under review, expanding, etc., if not used anymore, why not?]*

 - *Complementary actions and/or regulatory, legal, and/or statutory requirements needed or realised to implement such solution:*

 - *Public acceptance of implemented solution:*

10. Estimates on fare revenue lost (Free response)

The aim of this section is to gain an understanding on potential revenues lost. Based on the inputs given, strategic solutions targeted to mitigate such losses can have a potential in providing additional revenues to cover operational expenditures. For the purposes of this question, fare evasion refers to the act of using any form of public transportation having deliberately not purchased the required ticket intended to travel (also known as dodging).

Do you have an **estimate percentage** (of the total fare revenue) of fare revenue lost due to fare evasion (or dodging) for the years 2012 and/or 2013? If so, how does it compare to the estimate of recent years (2015 and/or 2016)?

EMTA and RebelGroup will use the data provided therein **strictly** for the purpose of this survey and will treat the same with the **utmost confidentiality**.

Revenue loss	Recent past (%)	Present (%)
Fare evasion		

If necessary/applicable, please provide clarification here, or feel free to attach additional documents to your survey response that illustrate this further, labelled to this specific question):



Part 2 – Recently piloted funding solutions

The aim of this section is to learn more about new funding solutions that are currently being experimented or piloted by you, and to inquire on the innovative process behind harnessing those new ideas and plans targeted towards generating additional funding.

11. How to promote innovation in PTA funding

Provide a description on how you promote innovation and new ideas and strategies related to finding novel funding solutions at your organisation. Kindly include in the description an overview of the structure of harnessing and managing such innovation. Feel free to attach additional documents to your survey response that illustrate this further, labelled to this specific question.

Answer:



Recall: the term “funding” is defined as the provision of funds to cover operational expenses (OPEX); contrary to the term “financing”, which is defined as a time-limited resource to conduct (or: accomplish) a specific scheme (development, construction, retrofitting, etc.), known as a capital expenditure (CAPEX).

12. Ongoing pilots on new funding OR funding/financing solutions

As some opportunities aim to provide PTAs with simultaneous funding and financing solutions, EMTA does not wish to exclude any pilots aimed at providing its member PTAs with the means to cover both capital expenditures and operational expenditures (please refer to the case studies of Greater Manchester and Nottingham under EMTA’s knowledge paper “Funding and Financing Public Transport”). As such:

12. Provide a brief description of ongoing pilots of experimental **funding** or **funding/financing** solutions, preferably along the outline described below.

The description should ideally include the status of the solutions (e.g. active, inactive), results and impacts (e.g. on funding sources, financing sources, revenue mix, financial stability and consistency, expected trends on financials, supply/demand, etc.), success factors, and lessons learned (where applicable).

Feel free to attach additional documents to your survey response that illustrate this further, labelled to this specific question.

(continued on next page)



Pilot solution:

- *Official/Working name:*
- *Date of implementation and current status (active, inactive):*

Solution dedicated solely for funding **Mixed funding/financing solution**

- *Brief description (approx. 100 words, ideally should also include characteristics [public/private], necessary conditions for success):*

- *Designated target population to obtain funds from:*
- *Impact of solution on funding sources, financing sources, revenue mix, financial stability and consistency, expected trends on financial, supply/demand, etc.*
- *Relevant information on the internet (provide hyperlink):*

-
- *Other notable issues (history of how the solution was conceived and implemented, if pilot solution is currently inactive, why so?)*

- *Complementary actions and/or regulatory, legal, and/or statutory requirements needed or implemented to implement such solution:*



Part 3 - Funding solutions still on the drawing board

The aim of this section is to review funding solutions that have not yet been developed further than as a concept - let alone piloted or implemented by your organisation - and to learn about the innovative thinking process behind developing such a funding solution or mechanism.

13. Funding or funding/financing solutions and concepts under development

As some opportunities aim to provide PTAs with simultaneous funding and financing solutions, EMTA does not wish to exclude any concept under development aimed at providing its member PTAs with the means to cover both capital expenditures and operational expenditures (please refer to the case study of the London Crossrail under EMTA's knowledge paper "Funding and Financing Public Transport"). As such:

13. Provide a brief description of concepts that are currently being developed in your organisation aimed at providing the means to cover either **operational** or **operational/capital** expenses.

Note that the description should ideally include the origin of such plans (developed in-house, adapted from models from other member PTAs, adapted from models from non-member PTAs), enabling conditions (regarding legislation, regulation, urban development conditions, transit development conditions, etc.) that could have influenced the development of these concepts, and contractual and governance arrangements that could prove supportive in unlocking additional funding and/or financing potential (PPPs, value capture, etc.)

(continued on next page)



Solution under development:

- *Official/Working name:*

Solution dedicated solely for funding Mixed funding/financing solution

- *Brief description (approx. 100 words, ideally should also include characteristics [public/private], necessary conditions for success):*

- *Designated target population to obtain funds from:*

- *Expected impact of solution on funding sources, financing sources, revenue mix, financial stability and consistency, expected trends on financial, supply/demand, etc.*

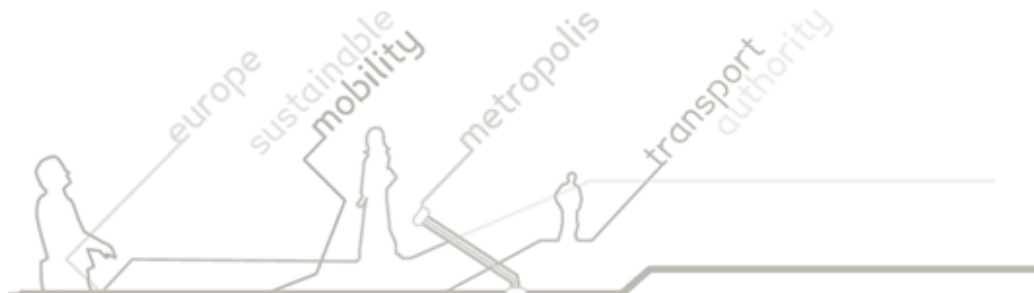
- *Relevant information on the internet (provide hyperlink):*

- *Other notable issues (history of how the solution was conceived and implemented, if pilot solution is currently inactive, why so?)*

- *Complementary actions and/or regulatory, legal, and/or statutory requirements needed to implement such solution:*

- *Expected public acceptance of implemented solution:*





Who was surveyed and who responded?



Twenty-six PTAs received this survey mid-September

The survey was disseminated on September 5, 2017 to twenty-six EMTA member PTAs (in alphabetical order):

- **Amsterdam:** Vervoerregio Amsterdam
- **Barcelona:** Autoritat del Transport Metropolità (ATM)
- **Berlin:** Verkehrsverbund Berlin Brandenburg (VBB)
- **Bilbao:** Consorcio de Transportes de Bizkaia (CTB)
- **Birmingham:** West Midlands Integrated Transport Authority (WMITA)
- **Budapest:** Budapesti Közlekedési Központ (BKK)
- **Cadiz:** Consorcio Metropolitano de Transportes de la Bahía de Cadiz (CMTBC)
- **Copenhagen:** Trafikselskabet Movia (Movia)
- **Frankfurt:** Rhein-Main Verkehrsverbund (RMV)
- **Helsinki:** Helsinki Region Transport (HSL)
- **London:** Transport for London (TfL)
- **Lyon:** Syndicat des Transports de l'Agglomération Lyonnaise (SYTRAL)
- **Madrid:** Consorcio Regional de Transportes de Madrid (CRTM)
- **Manchester:** Transport for Greater Manchester (TfGM)
- **Montreal:** Autorité régionale de transport métropolitain (ARMT)
- **Oslo:** Ruter AS (Ruter)
- **Palma de Mallorca:** Consorci de Transportes de Mallorca (CTM)
- **Paris:** Île-de-France Mobilités
- **Prague:** Prague Transit Authority (ROPID)
- **Rotterdam / the Hague:** Metropoolregio Rotterdam The Hague (MRDH)
- **Stockholm:** AB Storstockholms Lokaltrafik (SL)
- **Stuttgart:** Verband Region Stuttgart (VRS)
- **Turin:** Agenzia per la Mobilità Metropolitana (AMMT)
- **Vienna:** Verkehrsverbund Ost Region (VOR)
- **Vilnius:** Susisiekimo Paslaugos (MESP)
- **Warsaw:** Zarząd Transportu Miejskiego (ZTM)

Fifteen PTAs filled out and returned this survey by end of October

As of October 26, 2017; the survey had a response rate of 58%. A detailed (per survey component) breakdown of the responses is included in the table below.

Table 25 – Breakdown of response rates

# ²	Question	Type	Response (nos.)	Response (%)
1-4	<i>(general informational/data queries)</i>			
Existing situation				
5	Notable changes from 2015 EMTA Barometer	Quantitative (closed)	15	100%
6	Description of organisational model	Qualitative (open)	15	100%
7	Selection of public transport modalities	Qualitative (closed)	15	100%
8	Review of current funding structure and trends	Quantitative (closed)	14	93%
9	Description of new and innovative funding solutions implemented in the past 5 years	Qualitative (open)	7	47%
10	Estimate of fare revenue lost	Quantitative (closed)	5	33%
Recently piloted funding solutions				
11	Description of how to promote innovation	Qualitative (open)	7	47%
12	Description of ongoing funding or funding/financing pilots	Qualitative (open)	2	13%
Funding solutions still on the drawing board				
13	Description of funding or funding/financing concepts	Qualitative (open)	7	47%

As can be deduced from the above table, the survey witnessed higher response rates for closed qualitative and quantitative questions (100% and 76%, respectively) than open qualitative questions (51%).

² "#” refers to the question number in the funding survey.





*Tram Amsterdam
Photo: Wilko Wieffering*





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