→ Position

Access Creates Value

A case for funding public transport

→ Berlin, Germany
© ESB Professional

Access is the core product of public transport systems. It drives productivity and produces efficiencies, cuts household costs, strengthens local economies, and delivers environmental and social benefits. We must shift from viewing public transport as a cost centre – and recognise that it drives long-term wealth creation as a smart investment in our local economies. Explore global case studies that demonstrate this value and the tools that authorities can deploy to reinject the value-created back into our local networks.

Recommendations

Public transport generates value through access. And public transport authorities have the tools at their disposal to capture that value to fund operational expenses, as well as to help advocate for and advance public transport in a wider landscape of constrained public budgets.

→ Operational expenses should be considered as an investment in local economies especially when focusing on the proper running and maintenance of cities' systems as well as capital expenses when used to renew and refurbish current assets to ensure the affordability of the system.

→ Transport authorities and public transport operators should collect, measure and provide up-to-date information on the value/wealth created through mapping accessibility/connectivity to have a clear understanding of the value generated within local territories.

→ Oslo, Norway
© Ruter

→ Public transport operators should invest in capacity building and competences in appraisal and evaluation to make the case for adequate quantifying and communication of value generation.

→ The sector should actively communicate to all its stakeholders on the value generated by public transport, providing ground towards a dream to achieve or a nightmare to avoid.

→ Public transport authorities and operators should assess how to recapture the value generated through the deployment of tools and instruments required (e.g. betterment taxes, TOD, etc).

TABLE OF CONTENTS

04
Introduction

06
A landscape of constrained resources

07
Public transport creates access

08
Access generates value

09 Public transport impacts can be massive if we consider multiplier effects

10 Households benefitting from access are wealthier

11 Companies benefitting from access are more successful

14 Communities benefitting from access can generate revenues

16 Translating metrics into storytelling

17
Channelling the value created towards funding operational expenses

19
Recommendations

Introduction

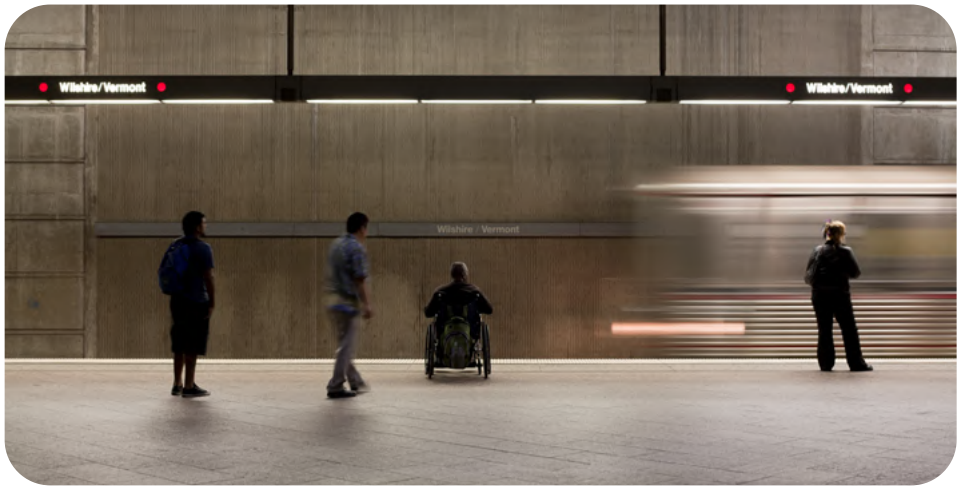
National budgets must deal with competing demands on resources, be it social obligations and/or infrastructure investments or defence requirements. Reduction in budgets for public transport, however, must be viewed not as just reduction of budgetary support towards public transport but also from the perspective of regional development, inducing economic growth and bringing communities together. It is one of the smartest and most impactful investments that governments can make. Yet, despite strong political consensus around inclusive and sustainable mobility, funding for day-to-day operations and asset renewal often falls short, disconnected from the real economic and social value public transport delivers.

Public transport is a strategic investment, not a cost.

This underinvestment arises not due to the failure of public transport to generate social and economic returns on investment, but from the failure to clearly measure and demonstrate such value generated by public transport. **Access, the combination of accessibility and connectivity that transit systems provide, is its core product.** It drives productivity and produces efficiencies, reduces household costs, strengthens local economies, and delivers environmental and social benefits. Yet, these positive impacts are rarely captured in fiscal or pricing policies deployed by competent local entities[1].

Access, the combination of accessibility and connectivity that transit systems provide, is its core product.

At a time of growing demand, rising costs and budget constraints, this disconnect between perception and the reality of value and access can be challenging. Without adequate investment, systems risk decline triggering a vicious cycle of sub-optimal quality and consequential declining ridership.



→ Los Angeles
© LA Metro

This UITP Position outlines the following points:

- Highlighting public transport funding trends based on the 2024 UITP Global Economic Outlook.
- Demonstrating how public transport generates value through creating access.
- Deploying tools that allow public transport authorities (PTAs) to capture the value created by enhancing access within a local territory through the delivery of public transport.

The case is clear, investing in public transport is investing in individual well-being, social/territorial cohesion and sustainable development. However, above all, it is about **unlocking real economic opportunities for households, companies and communities that can be traced and recaptured to sustain the industry.** This Position aims to provide arguments to support our case, providing insights and data from worldwide literature reviews.

→ Warsaw, Poland
© Mateusz

A landscape of constrained resources

Public transport funding is facing considerable challenges such as a rise in costs, and climate and social targets demand more investment. The UITP Global Economic Outlook 2024 shows that traditional revenue streams, such as fares and subsidies, are stagnant, while operating costs are rising, thus threatening sustainable mobility and a modal shift[2].

The five key trends that set the tone to understand the current funding context:

- **Slow ridership recovery post-COVID-19:** 57% of survey respondents report passenger volumes remain below pre-pandemic levels.
- **Fare stagnation:** Average farebox recovery is just 46%, deepening reliance on subsidies.
- **Costs outpace revenues:** 41% of respondents reported a moderate increase in revenue (between 2% and 5%) while 23% reported a stagnation (<2%). All respondents reported cost increases between 2%-10%.
- **Budgets depend on public funds:** As pandemic-era support declines while demand grows, budget will increase between 2%-5% for 33% of respondents, between 6%-10% for 13% and more than 10% for 21%.
- **Short-term focus on capital programmes for mobility infrastructure:** Around 70% of transit agencies responding to the survey declare having capital programmes under a five-year window, with only 42% considering investments beyond, limiting long-term mass transit developments.

46%
average farebox recovery, deepening reliance on subsidies

The role of fiscal constraints is a common feature worldwide. These are due to limits set on public sector borrowing, high existing tax levels and slow economic growth. Therefore, the more important trends can be summarised as follows: firstly, financing day-to-day operations has become difficult for some public transport operators (PTO) as farebox revenue fails to keep pace with costs (often due to political considerations to keep fares low) and frequent delays in compensation paid to PTOs. Secondly, investment levels are below the necessary capital requirements to attain Green Deal goals.

Disinvestment in public transport is still a major risk today.

Changing trends in geopolitical conditions and international trade are not making these challenges any easier. If anything, they will make the situation worse. The impact of the recent US tariff measures is inducing a new order with deep implications on national budgets. Considering these challenges, there is an urgent need for everyone involved in public transport to understand how it generates value to society and how this can be clearly evidenced.

Public transport creates access

Public transport's daily operations generate access, which in turn creates real monetary value for households, companies and communities. These are visible to households through lower mobility budgets, enabling increased consumption for other purposes, including leisure, education or health. For companies, this takes the shape of lower transaction costs, matching to customers and higher sales, which directly impacts activity and margins. For communities, this appears through better social and environmental outcomes such as cleaner air, more space, etc. This value propels equitable, inclusive and sustainable growth, thus fulfilling larger public policy goals[3].

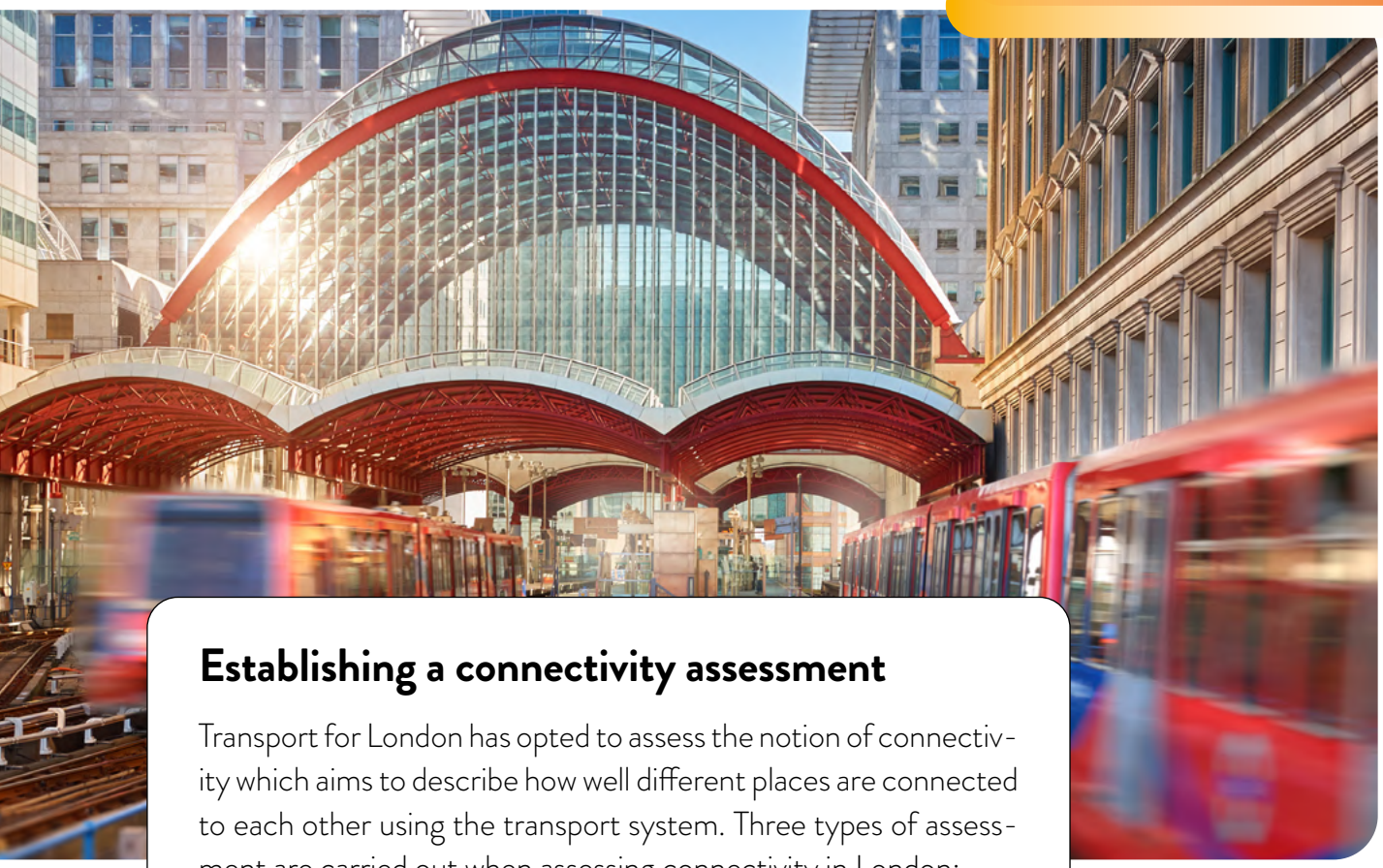
Avoid
Shift
Improve

A key framework for net zero transport

The notion of inclusiveness and a universal system is embedded in the **Four A's framework** which highlight the concepts of Accessibility, Availability, Affordability, and Acceptability[4] Trying to find an equilibrium between all four concepts can be tricky in terms of ensuring that all decisions remain faithful to the **'Avoid, Shift, Improve framework'** for net zero transport[5].

To simplify the discussion, the scope of this Position will exclusively focus on the notion of **'access'[6].** This concept is defined as *'the measure of the capacity of a location to be reached from, or to be reached by, different locations'*[7]. With this concept, the capacity and arrangement of transport infrastructure are key elements in determining access. In the public transport sector, the concept of **accessibility** means how easy it is for individuals to physically access a public transport network, and in turn, the places it connects, through **connectivity**. Hence, measuring how accessible a public transport system is should be considered as a priority for local authorities, because it enables the identification of under- and over-served areas, the design of effective transport policies and the unlocking of new sources of revenue.

→ Groningen, Netherlands
© UITP



→ London, UK
© tilialucida

Establishing a connectivity assessment

Transport for London has opted to assess the notion of connectivity which aims to describe how well different places are connected to each other using the transport system. Three types of assessment are carried out when assessing connectivity in London:

→ **Public Transport access level measure:** rating a selected place based on how close it is to PT and the frequency of service.

→ **Travel time mapping:** how far can you travel in a given amount of time.

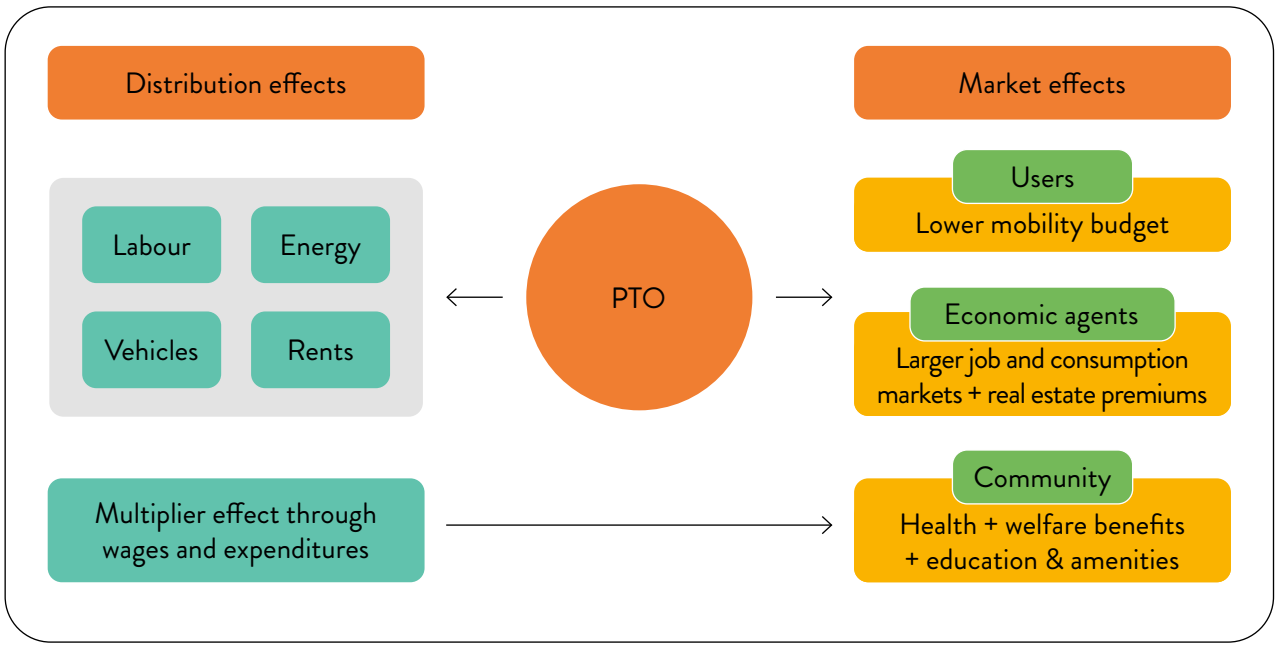
→ **Catchment analysis:** describing the type and number of places available within a range of travel time.

Each of these methodologies have additional sub-components which provide a complete picture for the city of London. These assessments can either be carried out for London's current context or using future scenarios.

Access generates value

To generate access, PTOs incur expenditure on labour, energy, asset/component construction, supply and replacements, wages and potentially other purchases. In turn, public transport passengers, companies and communities consume the access generated by the PTO, reaping direct economic outputs, as well as other extra-financial outcomes. The following chart maps these economic effects.

Figure 1: The value generation framework



Public transport impacts can be massive if we consider multiplier effects

Public transport is a major economic engine. To deliver access, operators purchase labour, energy, vehicles and services, thus injecting billions of monetary values into local economies through wages, supplier contracts and taxes. These flows create multiplier effects across sectors.

- In Barcelona, the total estimated economic impact of the local operator to its suppliers is equivalent to €849.8 million and €1.7 billion when indirect and induced effects are included[8].
- In 2023, Milan's operator (ATM)[9] distributed more than €457.6 million to suppliers, €480.8 million in payroll, and major fleet investments (€330 million for e-buses, €368 million for rail)[10].
- In 2023-24, the Victoria department of Transit and Planning engaged 89 consultancies with a total expenditure of 23,6 million AUS[11], hence sustaining local and national intellectual services.
- Transport for London (TfL) consumes 1.5 TWh of energy annually with costs amounting to £341.8 million in the year 2024/25[12], feeding local utilities.
- In Berlin, Deutsche Bahn, including its subsidiary S-Bahn Berlin, is the largest employer in the transport sector with around 27,400 employees, while Berliner Verkehrsbetriebe (BVG) the local public transport operator employs about 16,500 people[13].
- Ancillary revenues typically account for 5–10% of operator income, supporting local advertising & retail activities.

Thanks to this structure, direct and indirect economic **spillovers are typically five times higher** than the initial money invested in the industry[14]. Despite a projected growth of $295.09 billion by 2025, current expenditure in the industry is insufficient to reach sustainable development goals. Nonetheless, this allows us to imagine the massive impact that our industry has in the societies it serves.

Households benefitting from access are wealthier

Households that consume access created by public transport spend less money on mobility than households who depend on other, more expensive mobility modes. A key component in the planning of a city can be deeply rooted in the distribution of different types of households across the city based on their socio-economic backgrounds.

Moreover, macroeconomic conditions have a major impact on transport demand. In Spain's 2008 crisis, dense urban areas were more resilient because residents spent less on transport. Between 2007 and 2013, transport spending halved for the richest quintile but stayed constant for the poorest, even as welfare budgets, GDP and tax revenues declined[15]. Time savings are also a major benefit of efficient transit. Metro Bahia, Brazil, cut commuting times by up to two hours daily, saving 18 days/year. Meanwhile in the UK, data shows a 1% faster link reduces on average employment deprivation by 0.91%. Similarly, better access to jobs and health services especially lifts peri-rural areas, reducing inequality and boosting workforce participation[16].

Metro Bahia, Brazil, cut commuting times by up to two hours daily, saving 18 days/year.

UITP estimated household mobility budgets to be 9-15% of total household expenditure[17] but the gap between car and transit is stark. In the United States, households with an income lower than $25,000 who owned at least one vehicle spent 38% of their after-tax income on transport, while households in the same income tier who used transit spent only 5%[18] Similar contrasts exist in the Netherlands (€400 vs. €17/month)[19] and South Africa (16% of the household budgets)[20], proving that affordable transit is a key lever for equity and economic resilience.

Spending on mobility for primarily car users vs public transport users as percentage of total household expenditure

38% vs 5%
USA

€400 vs €17/month
Netherlands

16%
South Africa

→ Johannesburg, South Africa
© Jacques Nel

Companies benefitting from access are more successful

Proximity to public transport boosts business performance by reducing transaction costs, improving talent recruitment and expanding customer reach, thus driving higher sales. These direct impacts can positively influence a country's GDP. This, in turn, has spillover effects to the local and regional level, as well as the national level in some cases.

The catchment area close to stations is a key point to focus on, alongside land-use policies and instruments. A key policy which has been gaining traction is Transit Oriented Development. The city of Chicago saw station areas outperform the region, adding 11,000 jobs, resulting in a 1.36% growth despite the 2008–09 recession[22], while other suburban areas witnessed a loss up to 5.25%[23]. Interviews with Chicago's key companies demonstrated that proximity to transit stations provided better talent access, hence better company results, which explains location choices. The city of Washington hosts 65% of new office space, 50% of new multifamily rental housing and 25% of affordable housing close to metro stations. Over half of the region's 240,000 businesses and more than 70% of its 2.5 million jobs lie within 0.5 miles of transit[24].

In Dublin, it was estimated 10,000 new jobs emerged along Luas corridors, with catchment population rising from 21% to 26% (2011–2022)[21].

Percentage increase in property prices close to metros

13-14%
Bogotá

5-10%
Seoul

16.5%
Kolkata

Finally, urban value depends heavily on public transport service levels, not just infrastructure investment. The city of Cincinnati, United States, showed a drop in land price along the light rail line when service levels dropped below a train every 15 minutes[25]. Some companies monetise this access by offering bonuses or premiums for locations near transit, especially in real estate close to the rail modes, but not exclusively. Bus Rapid Transit systems also boost property values, by 13–14% in Bogotá and 5–10% in Seoul. In Kolkata, India, metro proximity increased property prices by 16.5%, showing similar effects in developing country contexts[26].

Public Transit increases companies' sales and margins. According to the American Public Transportation Association, every $10 million in operating expenditures in public transportation in the United States yields $32 million in increased business sales[27].

$10 million in operating expenditures in public transportation in the United States yields $32 million in increased business sales[27].

New York demonstrates the value of public transport through Congestion Charging

Since January 2025, New York City implemented congestion charging in Manhattan South by deploying a Congestion Relief Zone, with tolls of $9 during peak hours and $2.25 overnight.

Already the benefits are being assessed with over 3 million entries avoided in the first two months, and creating positive feedback effects in the areas outside the CBD. Traffic speeds, especially on the bridges were between 5-30% faster. These changes have also impacted travel times, saving estimated between $500 million to $1.3 billion annually.

Furthermore, positive impacts are being quantified with attendance to Broadway shows increasing up to 20%, restaurants reservation is up to 5%, retail sales were up 1.5%.

Importantly, $15 billion in revenue will be allocated to public transport improvements.

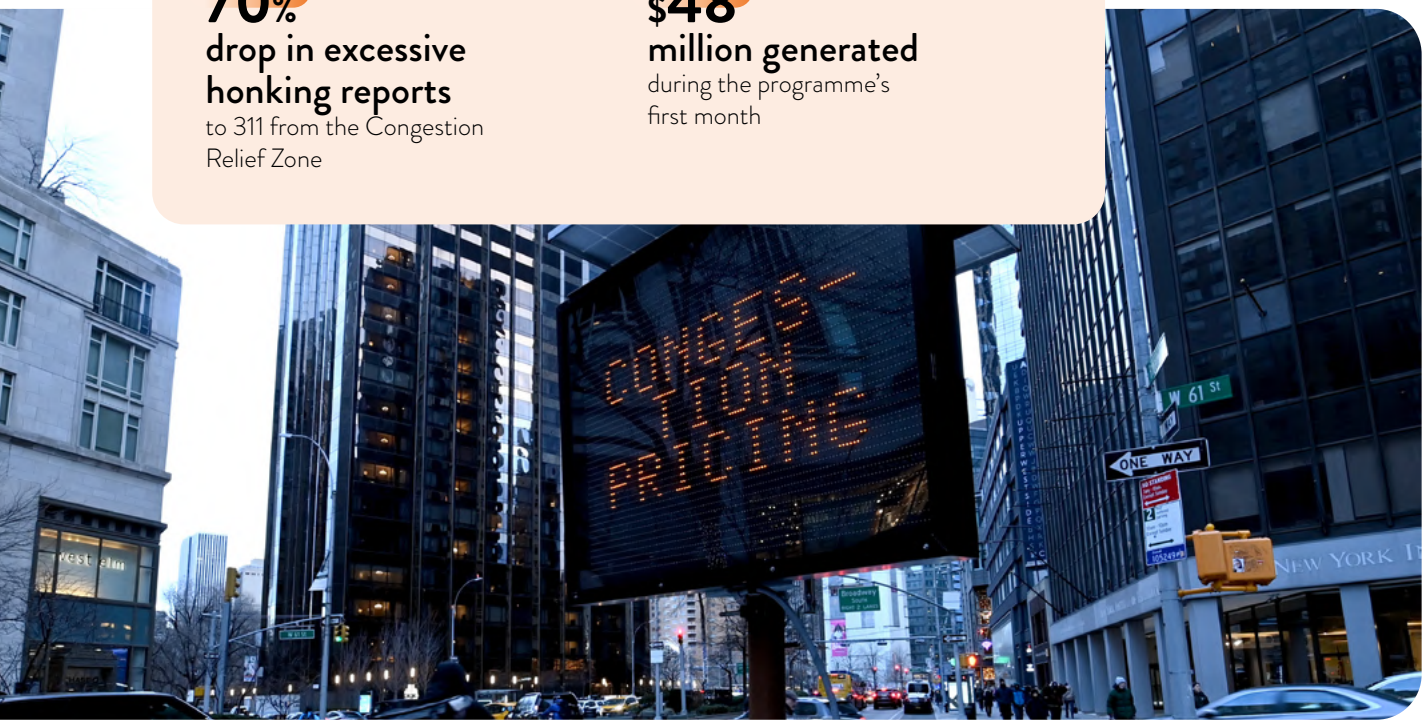
Congestion Relief is working

60,000
fewer vehicles
entering the Congestion Relief Zone every day

4%
more pedestrians
walking in the Congestion Relief Zone

70%
drop in excessive honking reports
to 311 from the Congestion Relief Zone

$48
million generated
during the programme's first month



→ New York, USA
© Marc A. Hermann/ MTA

Transit Oriented Development in India's National Capital Region

Implementation of Transit Oriented Development (TOD) and Value Capture Financing (VCF) are mandates under India's National Metro Rail Policy of 2017. The National Capital Region Transport Corporation (NCRTC) is working on operationalising these aspects for the Namo Bharat Regional Corridors in India's National Capital Region. Significant increase in value of land and assets due to implementation of the Delhi-Meerut corridor (82km) has been established with government notified 'Circle Rates' of lands increasing up to 25% in the project catchment.

→ New Delhi, India
© National Capital Region Transport Corporation

To capture a portion of this value, the State Government has notified 'Special Amenity Fees' which would be levied on upcoming developments throughout the beneficiary cities of Ghaziabad and Meerut. Revenues from 'Special Amenity Fees' would be utilised solely for the financial sustainability of the 'Special Amenity' – Namo Bharat Regional Transit project. Further, leveraging improved transit accessibility, the local authorities have also allowed for the sale of additional development rights (F.A.R.) in the TOD Zones. 50% of the revenue from the sale of these development rights would be shared with NCRTC towards transit financial sustainability.

Accessibility as a concept is also guiding urban planning around the Namo Bharat project. The 'TOD Zones' of the project have been indicated as part of the statutory city Masterplans – where additional development rights and mixed land use would be permissible. Accordingly, Zonal Development Plans are currently under preparation for the entire influence zone of the transit corridor. Further, two new Greenfield cities are now being developed within/close to the influence zone of the corridor. Such an approach would enable planned densification in proximity to transit stations and contribute towards transit accessibility and enhance ridership of the transit network.

Communities benefitting from access can generate revenues

Communities benefit from better transport through avoided costs and generated revenues, creating major positive externalities for individuals, local economies and the wider national economy, especially at a time of tight budgets and labour markets.

In terms of indirect benefits, the savings produced have long been recognised and quantified[28]. Barcelona's operator estimates savings of €706.5 million between external social and environmental costs, in which social savings are €559.7 million (79% of the total), public health savings are €116.1 million (16% of the total) and environmental savings are €30.7 million (4% of the total)[29]. In Washington DC, public transport is considered to be 20 times safer than driving, saving the region $950 million a year in collision costs and avoiding nearly 30 deaths and over 2,500 injuries[30]. Similar results were drawn from the deployment of the T5 tram line in Paris, France which remarkably reduced road-related heavy injuries (-66% vs -34%) and deaths (-72% vs -48%) in its corridor. Additional savings include a carbon balance of -1,200 to -2,200 $tCO_2eq/year$[31].

In Washington DC, public transport is considered to be 20 times safer than driving.

The emission reduction study identified that in eight years of operation, Metro Bahia helped to reduce the following amount of other pollutants (in tonnes): 62.9 tonnes CO_2 (linked to nausea and fainting), 106 tonnes CH_4 (causes irritation, headaches, organ damage), 4.2 tonnes NO_x (affects airways and oxygenation), 0.7 tonnes particulate matter (triggers respiratory and cardiovascular diseases), and 3.2 tonnes N_2O (can cause mood swings, memory issues and heart problems)[32].

New mechanisms can translate the externalities produced into revenues, for instance access to carbon credit markets can be tapped by providing low-carbon access to cities.

Today, public transport saves around 170 million tonnes of oil and around 550 million tonnes of CO_{2e} at its €77/tonne price of January 2025, this would equate to €42.3 billion of potential additional revenue for the industry[33].

Shenzhen's Carbon Market and its mechanisms

Shenzhen's approach illustrates how public transport can participate in carbon markets through a city-level carbon inclusive mechanism embedded in broader climate and urban governance frameworks. Rather than treating public transport as a standalone offset project, Shenzhen integrates low-carbon travel behaviours into its carbon inclusive system. Within this framework, Shenzhen Bus Group contributed to the development of the city's first low-carbon public transport carbon inclusive methodology, officially released by the municipal environmental authority. The methodology provides a standardised and regulator-approved approach to quantifying emission reductions from bus and metro travel at the individual level. Carbon accounting is operationalized through a dedicated digital platform linking travel behaviour, emission reduction calculation, credit issuance and exchange, enabling public transport–related reductions to be recognised within the local carbon market mechanism.

From Shenzhen Bus Group's perspective, the key impact lies in establishing a clear and compliant pathway for a public transport operator to engage with carbon market instruments. The mechanism enables the climate value generated by daily public transport operations to be formally recognised within an official framework, without relying on project-based offset schemes. It also supports the integration of carbon considerations into routine service management and user engagement, reinforcing low-carbon travel choices while maintaining regulatory and data governance discipline. Overall, the experience shows how carbon market participation can complement electrification and service improvement efforts, strengthening the sustainability narrative of public transport from an operator's standpoint.

Shenzhen, China ←

Translating metrics into storytelling

Operators and public transport authorities have a long history of collecting data to guide projects and policies. The dependence on relevant and timely data was traditionally covered through the use and deployment of surveys. There is a myriad of different approaches and data collection ranging from the sophisticated ones (O/D matrices, household, mobility surveys, etc) carried out every 5 to 10 years, to more generic ones like annual satisfaction surveys. The main challenge today is the processing of vast data to ensure relevance for demonstrating value creation.

The key challenge for PTAs and PTOs can be summarised in three main aspects; firstly, identifying the suitable data to build the narrative required. Secondly, shifting towards a data-oriented approach to monitor developments and finally, ensuring the use of appropriate KPIs to provide evidence for value creation.

Building on the work carried by UITP through the assessment of multiple ex-post analysis, academic research or consulting reports, a range of 35-40 indicators were identified showcasing the different areas of where value produced was quantified[34].

The range of methodologies utilised included appraisals, modelling and mapping assessments, using popular tools such as Input-Output tables (I/O), Benefit to Cost Ratio (BCR) and Wider Economic Benefits (WEB). From the review carried out by UITP, in most cases those tools were used in combination with survey and institutional sources. These KPIs were ranked based on different objectives:

→ Singapore, Singapore
© PTC

→ Significance for budgeting.

→ Importance in quantifying value.

→ Sensitivity for building advocacy messaging.

The outcome shows a different solution based on the audience and purposes identified, as seen in the table below. Public opinion, elected officials and experts were highlighted as the three main influencers in decision-making. While the list is not exhaustive, anyone explaining the value of public transport will need to consider the specific concerns.

Table 1: Stakeholder perspectives on the value of public transport

Public Opinion	Elected Officials	Experts
Access to daily life.	PT has direct impact to society.	Better use of public space.
Travel time savings.	PT has direct impact to economy.	Reduce congestion.
Allows social inclusion.	Add value to properties and businesses.	Reduce emissions.
Affordability.		Reduce accidents.
Public contribution to PT.		Improve health.

Channelling the value created towards funding operational expenses

This Position has demonstrated that public transport operations generate economic value for consumers, businesses, and communities, thus sustaining local economies. Given this substantial value, it is sensible that a part of this value is captured and recycled into public transport to enable the society of the future to experience these benefits.

As of today, many users pay flat, regressive fares that ignore their willingness to pay, leaving heavy users undercharged and light users overburdened. Companies and real estate actors gain from higher land values, sales and productivity, but taxation, aside from cases like France's Versement Mobilité or the UK's Mayoral Levy, remains the only recapture tool, and fiscal policies are general and ineffective in getting back what is ascribable to public transport access.

The status quo is characterised by governments with limited tools to capture the value created by public transport.

The case for communities is even more complex, as positive externalities, such as reduced congestion, emissions and improved accessibility, are rarely monetised and green finance remains underused despite its vast potential. Overall, mechanisms to measure this value for reinvestment into the system remain inadequate.

The following tools enable this value to be recaptured in ways that are fair and in line with the pursuit of public policy results:

Table 2: Categorisation of value defined by stakeholder, tool, and definition

Stakeholder	Tool	Definition
Users	Revenue-Based Fares	Higher-income households pay more for transport passes, while lower-income households pay less.
Non-Users	Congestion pricing	Public transport non-users pay for less traffic and pollution on roads through congestion charging.
	Parking fares	Non-users pay for the use of parking spaces. Revenues are collected by the municipality.
	Tourist levies	Tourists are charged a small percentage on the hotel room which is collected by the municipality.
Companies	Progressive earmarked taxation	Companies benefitting from public transport pay higher taxes than those without access. This extra revenue funds operations.
	Land value capture: Business rate supplement	Flat contribution levied on companies that benefit from infrastructure developments in their vicinity.
	Land value capture: Infrastructure levy	Tax on landowners whose property development increases demands from public services.
	Land value capture: Land readjustment	Pooling fragmented land for joint development, with owners transferring a portion for public use[35].
	Working parking levy	Employer charge per workplace parking space in areas serviced by public transit to encourage sustainable commuting and fund public transport.
Community	Carbon pricing	Economic strategy to internalise the environmental cost of carbon emissions by assigning them a price.
	Green bonds	Fixed-income instruments funding eco-friendly projects, attracting investors seeking returns and impact.

→ Berlin, Germany
© 360b

As a general trend, the reliance on general taxation and fare users is the most used tool for funding a public transport operation. Trends at macro level show a shift towards progressive, access-based models that internalise the value created by transit infrastructure. Locally, examples like Bogotá's infrastructure levy demonstrate a growing political will to adopt these tools, although farebox revenues remain dominant despite their volatility and regressiveness. The UITP Global Economic Outlook 2024 identifies as its main priorities the stabilisation of costs, followed by the need to identify new market possibilities, and increase fare revenues. However, the development of non-fare revenues did not foresee many changes, except for advertising and retail/in-stations revenues which were expected to grow[36].

Access is a powerful argument in justifying the deployment of funding instruments, as it is a measure of the unearned benefits generated by public transport. A key bottleneck lies in the political appetite of leadership and citizens. For instance, the deployment of land value tools would require local entities to have access to decentralised competences and fiscal powers, including an updated cadastre or such type of land registry, an ability to cover real estate risk or price fluctuations, etc. The ability to absorb such additional costs is also a key prerequisite, requiring calibration, trial and error, and political savviness.

Recommendations

→ Operational expenses should be considered as an investment in local economies especially when focusing on the proper running and maintenance of cities' systems as well as capital expenses when used to renew and refurbish current assets to ensure the affordability of the system.

→ Transport authorities and public transport operators should collect, measure and provide up-to-date information on the value/wealth created through mapping accessibility/connectivity to have a clear understanding of the value generated within local territories.

→ Public transport operators should invest in capacity building and competences in appraisal and evaluation to make the case for adequate quantifying and communicate the value generation.

→ The sector should actively communicate to all its stakeholders on the value generated by public transport, providing ground towards a dream to achieve or a nightmare to avoid.

→ Public transport authorities and operators should assess how to recapture the value generated through the deployment of tools and instruments required (e.g. betterment taxes, TOD, etc).

→ Barcelona, Spain
© Janis Smits

References

1 EIT Urban Mobility (2024) 'Costs and Benefits of the Urban Mobility Transition, Barcelona', EIT Urban Mobility.

2 UITP (2024) 'UITP Global Economic Outlook'.

3 Georges D and Moody (2018) 'Urban Rapid Transit as an Opportunity for Sustainable and Inclusive Development' (p.21), In Pulido D et al Editors (2018) 'The Urban Rail Development Handbook', Washington DC, World Bank.

4 Gravet N and Linton C (2022) 'Equitable Future Mobility, Ensuring a just transition to net zero transport', Arup and Urban Transport Group.

5 Ibid.

6 For more information see Annex 1, How accessibility is measured – a review.

7 Rodrigue, JP (2024) 'Geography of Transport Systems', Routledge.

8 Pinyana E & Amat O (2021) 'Estudi d'impacte econòmic, social i mediambiental, El cas de TMB'.

[9] Azienda Trasporti Milanesi S.p. (2026) 'Governance and Organization: The Staff and Azienda Trasporti Milanesi' (2023) 'Relazione Annuale Integrata 2023', Grupo ATM.

[10] Including Copenhagen and Thessaloniki's metros.

[11] Victoria State Government (2024) 'Annual Report 2023-2024', Department of Transport and Planning.

[12] Transport for London (2021) 'At the Heart of a Greener London', 'Corporate Environment Plan 2021' and Transport for London (2022) Energy use estimates, FOI request detail.

[13] Berlin Business Location Centre (2025), 'Berlin's Top 200 – The largest employers in Berlin'.

[14] UITP (2020) 'Public Transport: Moving Europe Forward', EU Position.

[15] Cascajo R et al (2018) 'Impacts of the economic crisis on household transport expenditure and public transport policy: Evidence from the Spanish case', Transport Policy, Volume 65, 2018, Pages 40-50, ISSN 0967-070X.

[16] Local Government Association (2024) 'How Local transport influences economic inclusion'.

[17] UITP (2024) 'UITP Global Economic Outlook'.

[18] Bureau of Transportation Statistics (2023) 'The Household cost of Transportation: Is it affordable'.

→ London, UK
© Joe Dunckley

[19] Krabbennorg L and Durand A (Aug 2024) Affordable mobility? An exploration of mobility prices, household spending on transport and affordability issues, Ministry of Infrastructure and Water Management.

[20] Knipe, M. & Krygsman, S., 2024, 'The opportunity cost of household transport expenditure in South Africa', Journal of Transport and Supply Chain Management 18(0), a1081.

[21] Government of Ireland (Jun 2023) Opportunities for Transport Orientated Development (TOD) in Major Urban Centres - Dublin Study; Department of Housing, Local Government and Heritage; Department of Transport.

[22] Hendrick R, Luby M and Terzakis J (2011) The Great Recession's Impact on the City of Chicago's Budget, Municipal Finance Journal, Vol 32 No 1.

[23] Metropolitan Planning Council (2018) Transit Means Business.

[24] FreddieMac (Sep 2019) Proximity to a Metro Rail Station and Its Impact on Washington, DC Metropolitan House Prices: Amenity or Not? Economic & Housing Research Insight.

[25] Demeropolis T and Wetterich, C (30 Dec 2016) Streetcar triggers millions in development along line: DATABASE, Cincinnati Business Courier.

[26] Munshi, T. (2020). Accessibility, Infrastructure Provision and Residential Land Value: Modelling the Relation Using Geographic Weighted Regression in the City of Rajkot, India. Sustainability, 12(20), 8615.

[27] APTA (Aug 2025), 2025 Public Transportation Fact Book, 76th Edition.

[28] UITP (May 2020) Cities for People: Public Transport for Better Lives, Policy Brief.

[29] Pinyana E & Amat O (2021).

[30] Fehr & Peers (2024) Benefits of Transit Study Technical report, Washington Metropolitan Area Transit Authority.

[31] Fontaine L (Sep 2015) Operation and safety of tramways in interaction with public space Analysis and Outcomes Detailed Report, TU1103 Action final report.

[32] WayCarbon & CCR Metrô Bahia. (2023). Projeto Economia de Baixo Carbono: Impactos da Operação do Sistema Metroviário de Salvador e Lauro de Freitas. CCR Metrô Bahia.

[33] UITP (2025). Doubling the Market Share of Public Transport Worldwide by 2025. United Nations Partnerships for SDGs and De Vries J (Apr 2025) Environmental Prices Handbook 2024: EU27 version Methodical justification of key indicators used for the valuation of emissions and the environmental impact, CE Delft.

[34] UITP (2023). Global Urban Mobility Indicators 2023. International Association of Public Transport.

[35] OECD/Lincoln Institute of Land Policy, PKU-Lincoln Institute Center (2022), Global Compendium of Land Value Capture Policies, OECD Regional Development Studies, OECD Publishing, Paris.

[36] UITP (2024) UITP Global Economic Outlook.

→ Amsterdam, Netherlands
© Martijn Stoof

This is an official publication of UITP, the International Association of Public Transport. UITP has more than 2,000 member companies in 100 countries throughout the world and represents the interests of key players in this sector. Its membership includes transport authorities, operators, both private and public, in all modes of collective passenger transport, and the industry. UITP addresses the economic, technical, organisation and management aspects of passenger transport, as well as the development of policy for mobility and public transport worldwide.

This publication was prepared by the UITP Transport Economics & Finance Committee. A special thanks to Rafael Alatriste-Gamba, Transdev; Ismael Uruen Pueyo, Transports Metropolitans de Barcelona; and Matthew Shepherd, Frontier Economics. We wish to thank all Committee members, UITP members, and key experts for their insights, participation, and sharing of case studies.

UITP ADVANCING PUBLIC TRANSPORT

Legal deposit: D/2026/0105/05 - Rue Sainte-Marie 6, B-1080 Brussels, Belgium | Tel +32 (0)2 673 61 00 | info@uitp.org | **www.uitp.org**