

## International Brochure

itpworld.net



#### Welcome to ITP

ITP is a UK-based sustainable urban transport consultancy. We have a 25-year track record of working with clients in the UK and overseas to provide creative and deliverable solutions to the urban transport challenges they face. Our work includes transport planning, public transport reform, e-mobility, decarbonisation, strategic planning, data analysis and economics.

Our clients include development partners, national and city governments, and the private sector, and we have experience in over 60 countries on six continents. We pride ourselves on partnering with our clients throughout the journey, ensuring that our work translates into deliverable results and local strong ownership to drive real world change.

Since 2020, ITP is part of the Royal HaskoningDHV family, helping us to diversify our technical offer and access a local presence in 25 countries around the world, including in Latin America.

#### What makes us different?

ITP's reputation is for innovation and original thinking, offering creative solutions to the transport challenges our clients face.

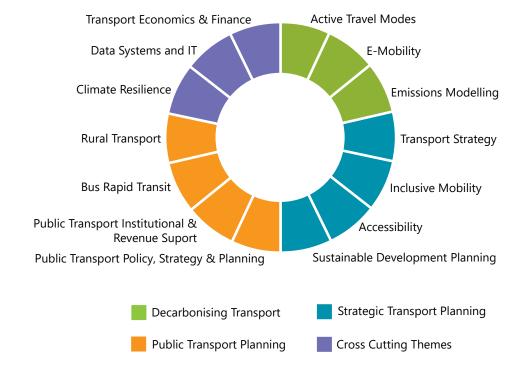
Our focus is on practical, deliverable, and lasting solutions that improve people's lives. We work from the principle that transport reforms must be driven by local needs and take pride in our curiosity to carefully understand the local context and work with local stakeholders.

We recognise the importance of local ownership and mutual learning to lasting change. This partnership approach means that skills transfer and institutional capacity building are as much part of our work as strategy development and infrastructure design.

Urban transport can transform cities and the quality of life of citizens. Our driving inspiration is to make this happen.

### Technical areas

Our technical areas of advice and input for multiple phases of project planning and operation include:





### Creative solutions for urban mobility in Latin America

From BRT to bicycle lanes, the Latin America region has provided much best practice to the global urban transport community. Yet in a context of climate change, growing citizen expectations and a post-pandemic world, the world's urban transport networks now need to rise to new challenges which require fresh thinking and revised strategies.

ITP's experience, tools and partnership-based approach make us perfectly positioned to support governments, donors and private sector in Latin America and the Caribbean. With regional experience and international perspectives, our offer includes:

- Public transport planning and improvement: Developing urban transport systems for a multi-modal world.
- **Decarbonising transport**: Creative solutions to the policy, governance and operational challenges of e-mobility deployment (particularly e-buses).
- Strategic transport planning: Policy and strategy development for a city and system-level approach.
- Resilience: Strategic, data driven investment approaches to mitigating the impacts of climate change.



### Portfolio of services

- Policy and Strategy Development
- Economic Appraisal
- Scheme Design
- Institutional Reform
- Modelling and Forecasting

- Audit, Monitoring and Evaluation
- Stakeholder Engagement
- Public Consultation
- Research
- Air Quality and Climate Change

## Decarbonising Transport

Rapid decarbonisation is the challenge of our generation, and transport is among the largest emitters and most challenging to decarbonise.

Many of Latin America's cities have been global leaders in showing that e-buses can be deployed at scale. Yet an urgent need remains for creative solutions to overcome policy, funding, financing and technology barriers to transitioning other fleets - not least the regions dominant paratransit sector.

From e-bus route selection to funding and financing models, ITP brings experience of applying strategic analysis to e-mobility challenges facing urban transport decision-makers. Together with Royal HaskoningDHV we also bring expertise in energy, charging and grid infrastructure aspects.





## **Decarbonising Central Asia**

ITP has been appointed by the World Bank to lead an exploratory analysis to understand the policies and future pathways that Central Asian countries (Kazakhstan, Uzbekistan, Turkmenistan, Tajikistan, and the Kyrgyz Republic) could employ to decarbonize their transport networks.

The assignment is developing country-specific profiles of existing connectivity, pricing, standards and emissions, together with assessment of local decarbonisation ambitions. Based upon this, we are developing proposals which demonstrate the steps necessary to achieve NDCs and the resulting impacts, costs, and benefits. Measures and pathways will be rooted in international experiences and national policy reviews. A link-based model and a fleet and emissions model (TESSE) will enable future GHG reductions to be understood within the individual context of the region, and allow for a prioritization of policy interventions for each country.

## TESSE: ITP's Strategic Transport Fleet and Emissions Model

TESSE is ITP's fleet and emissions model, used to model the impact of green policy interventions at a national or city level upon long-term carbon emissions to support decision making and policy prioritisation. It was developed by ITP and has been deployed on World Bank studies in Romania, Egypt, Kenya, Ethiopia, the Eastern Caucuses and Central Asia.

The model includes a wide range of policies including intelligent traffic signals, speed restrictions, fleet renewal, road user charging, green shipping, logistics consolidation, NMT, Urban PT and travel demand management. It is comprehensive across vehicle segments and use cases (passenger & freight demand) and considers socio-economic future technology and fleet projections.



Client:



**Location**: Central Asia

**Associated Consultants:** 





**Pro Mobility** 

Project Contact:
David Brenig-Jones
David.Brenig-Jones@itpworld.net



## **Electric Mobility Development in the Philippines**

Urban population growth in Metro Manila continues at a very high rate in terms of both internal growth and in migration. Assuming the current trend of population growth continues until 2035, the population of Metro Manila and adjoining provinces would be more than 38 million. The current infrastructure gaps present opportunities to introduce innovative solutions and, with the right business model, attract private investment.

ITP lead a technical assistance project to support the World Bank in its promotion of low-carbon mobility and clean energy transition in the Philippines through the growth of the electric mobility sector. The objective was to develop a clear roadmap and associate policy recommendations to promote electric vehicle adoption and develop pilot schemes for electric buses.

The study informed policy development and technology deployment through:

- Analysing policy, regulatory, supply and demand related factors affecting e-Mobility deployment for buses, jeepneys, three-wheelers and taxis.
- Identifying the gaps and barriers in the e-vehicle ecosystem.
- Investigating the likely entry-point of electric vehicles in the Philippines.
- Developing policy recommendations to accelerate e-mobility deployment at a national level.
- Developing investment package options to support the deployment of e-mobility at a city level.



#### Client:



Location:

Manilla, Philippines

**Associated Consultants:** 

University of Philippines pManifold

Shenzhen Bus Group

Project Contact:
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## **Delivering Electric Vehicle Enabled Building**

Due to the rapid increase of electric vehicles in Scotland, the Government is considering a change in the building regulation to facilitate EV adoption.

The project sought to explore the costs of installation of charge points and associated infrastructure in the car parks of a range of different types of buildings at different stages of their lifecycle, in different locations and the economic impact of the installation of such infrastructure.

The study aimed to understand the potential issues and costs that may vary by areas such as urban centres, rural areas and remote islands. ITP supported the lead partner of this project in carrying out the research work.

The project team from ITP provided the following services:

- Co-principal investigator of this research study.
- Developed an understanding of the key barrier and opportunities for private suppliers of EV chargers in publicly accessible buildings.
- Developed an understanding of the cost variability of installing EV chargers at a building site at various stages of its life cycle.
- Extensive consultations with private sector charging infrastructure providers, local authorities, and academics.



Client:

climate change

**Location:** Scotland, UK

**Associated Consultants:** Wood Group Ltd.
Strathclyde University

Project Contact:

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## **E-Mobility Solutions for Almaty**

Almaty is Kazakhstan's largest city and main commercial centre, with a population of over 2 million. Despite its tree lined streets and pioneering urban realm projects, cold winters and its location at the Trans-Ili Alatau mountain range make the city prone to poor air quality, with the city frequently covered by a layer of toxic smog.

While e-mobility is still in its infancy, ITP has been working with World Bank and the Almaty Akimat (City Hall) to understand the potential for e-mobility to improve urban quality of life and reduce GHG emissions. Our team has been providing technical advisory services to the World Bank to help them to understand the suitability of different electric bus technologies for the local geographical conditions, and to understand the market potential for private electric vehicles among Kazakhstani consumers. Key

Project deliverables include:

#### Electric bus potential

- Assessment the e-bus ecosystem in Almaty, from transport and energy grid perspectives.
- Modeling the suitability of e-bus technologies considering local topographical and climatic conditions
- Assessment of the high level potential for In Motion Charging as a locally suitable solution to use the existing trolleybus network as the basis for e-mobility expansion.

#### Private EV market potential

 Supported the bank in the development and analysis of a Stated Preference (SP) survey into consumer demand elasticities.



#### Client:



Location:

Almaty, Kazakhstan

**Associated Consultants:** RHDHV Netherlands pManifold

Project Contact:
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## **Delhi Transport Corporation Institutional Review**

The Delhi Transport Corporation (DTC) is a stateowned bus operator with a fleet strength of 3,700 Compressed Natural Gas buses. The agency is an independent public transport operator and has been operating bus services since its inception in 1970.

It is currently transitioning into a Gross Cost Contract (GCC) operating model where it concessions part of its bus operation to the private sector. It is also transitioning its fleet to Electric Buses by the phased introduction of 1,800 electric buses.

The World Bank appointed Integrated Transport Planning to assess DTC's current Institutional and functional form and investigate how that would need to be reformed given that DTC is gradually transitioning into a management role from an operator.

The study focused on a few critical area:

- Institutional structure and functional form of DTC and how that would change in the future.
- DTC's financial status and how that can be improved to instil financial stability.
- Improving DTC's human resourcec capability
- How to improve business process efficiencies by the introduction of technologies such as Business Intelligence (BI) tools; and
- Capacity building requirements to address the skill gaps for GCC management and electric bus operation.

To conclude, the team produced short (two years) and medium (six years) term strategic action plans to help DTC to navigate the transition towards electric vehicles.



Client:



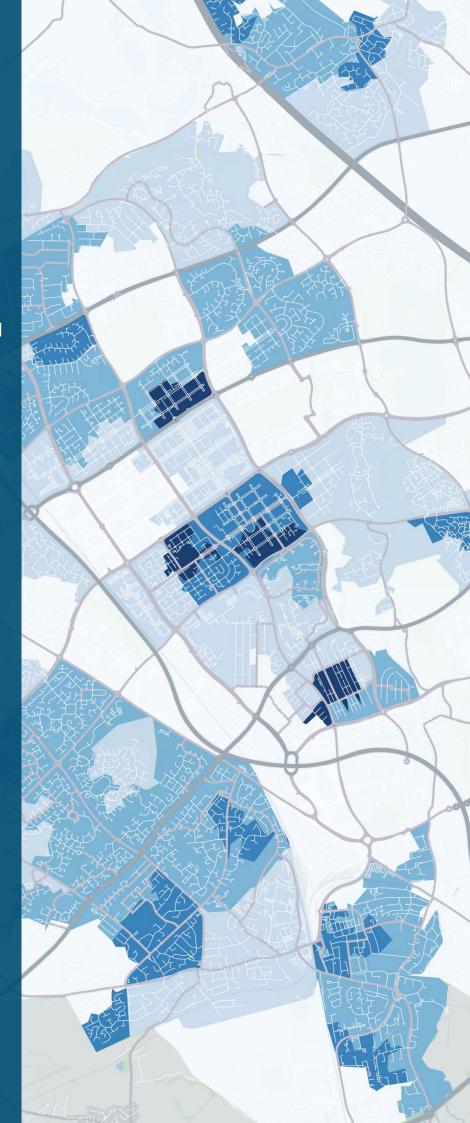
**Location:**New Delhi, India

Project Contact:
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## Strategic Transport Planning

As the region embraces multimodality and the post-pandemic world, there is a need for a more integrated approach to planning our cities and their transport systems. It means looking beyond goes beyond than individual routes, modes and pieces of infrastructure to develop policies and strategies that make linkages between modes, and between transport and the city more broadly.

From multi-modal transport planning in Georgia to public transport funding mechanisms in Mexico City, ITP brings experience of strategic analysis and plan-building at city level, engaging closely stakeholders to understand their needs and perspectives.



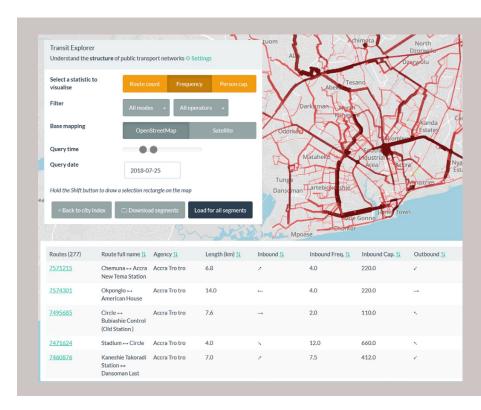


## Strategic Transport Planning in Mexico

ITP has a history of supporting Mexico City on strategic transport planning challenges, including data, transport financing and traffic management.

ITP led a team which, working with SETRAVI (today SEMOVI), created the first GTFS feed for Mexico City, providing a data source for early journey planning apps and transport decision makers to manage transport in this city of over 9 million people. ITP deployed localised versions of 'GTFS Editor' and 'TransitWand' open-source software tools, and developed a real-time Disruption Tracker tool to help the city's transport agencies publicly communicate service disruptions.

ITP was later contracted by the UK FCDO (Foreign Ministry) as part of their Future Cities Programme, as part of a PWC-led consortium. With an overall role to provide strategic technical advice on transport governanance, planning and project identification, ITP provided specific guidance to SEMOVI in addressing traffic congestion through traffic management policies. Building on our implementation experience in our home city of Nottingham, ITP explored with SEMOVI the potential for a Workplace Parking Levy (WPL) as a 'win-win' solution to incentivise sustainable journeys to work and to fund public transport improvements.



#### Transit Explorer: ITP's Data-Driven Network Analysis Tool

Transit Explorer is our userfriendly, web-based interactive tool for network analysis, which is particularly useful to support the process of public transport planning and reform.

Using industry-standard GTFS timetable data, the tool offers a level of interactivity and ease-of-use not found in traditional workflows. For example, users can draw a box around an area of interest and see the routes that serve it, their capacities and destinations that can be reached.



## **Open Transport Development in Dhaka**

ITP provided capacity-building support and advice with the integration of open data and ICT into the city authority's existing transport planning and management activities.

The project was supported by World Bank in relation to the implementation of Dhaka BRT and enabled colleagues in Dhaka to take greater ownership and control over the city's data management and transport planning.

As well as covering the use of open source software tools and using them to create a valid GTFS feed for the city, the project involved ITP sharing knowledge on accessibility modelling and mapping techniques.

These utilised a GTFS feed created through the study and combined it with the open source "Transport Analyst" tool that ITP helped to develop.

A key focus of this work involved the mapping of women's public transport accessibility in the City, when factors such as cost and antisocial behaviour are taken into account. ITP also set up a basic Transport Data Hub, using shared Dropbox folders.

All data and reports relating to previous studies have been incorporated into this hub, which is shared between DTCA and other transport and land use planning agencies in the city.

Throughout the project, ITP provided the following:

- Project management.
- Open transport data and transport data management.
- Accessibility modelling in the context of strategic transport planning.
- · Capacity building and in-country training.



Client:



Location:

Dhaka, Bangladesh

**Associated Consultants:** 

Conveyal

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# Greater Cairo Region Mobility Assessment and Public Transport Improvement Study

This study identified and prioritised investments and policies to improve public transport and mobility across the Greater Cairo Region, a growing and congested megacity of 20 million people.

Investments include BRT, integrated corridor management, bus sector reform, public transport interchange improvements, digitisation of transport management, parking management, women's safety improvements, e-ticketing, urban traffic management, inner-city streetscape improvements, and walking/cycling improvements.

ITP project team undertook the following:

- City-wide data collection.
- Develop a 4-steps Cube transport model.
- Mobility assessment, with a focus on barriers experienced by women and marginalised groups.

- Assessment of the gap between supply and demand today and in the future with new mass transit.
- Stakeholder engagement.
- Project identification, development and prioritisation.
- Social, environmental, GHG, economic appraisal.
- Implementation road map with institutional and regulatory reform.
- Digitisation plan for transport data management.
- Capacity building with local transport authority.

Each measure was developed within the assessment framework of supporting sustainable urban growth, improve transport for women, improve transport for the poor and marginalised, strengthen transport management and operators, support a liveable city environment and importantly be deliverable.



Client:



**Location:**Cairo, Egypt

Associated Consultants: Transport for Cairo CitMe InfraOne

Project Contact:

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## **Traffic Impact Assessments in Tbilisi**

Funded by GIZ, ITP was appointed to work with Tbilisi Municipality Transport and Urban Development Agency (TUDA) to assist in the preparation of Traffic Impact Assessments (The Assessment) for the Urban Development Projects (UDP) developed on more than 5,000 sq.m. of land.

ITP supported TUDA in:

- Drafting/improving the Assessment methodology and practice for all functional uses (commercial, residential).
- Preparation of policy/regulation/law suggestions on local and state levels to propose steps for how the ecosystem could be improved.
- Training relevant stakeholders. The project involved a series of workshops with TUDA staff

and the application of international, best practice to the Georgia context, requiring a deep review of current institutional and regulatory structures.

Throughout the project ITP provided the following services:

- · Policy analysis.
- An international benchmarking process.
- Stakeholder consultation with local professionals and stakeholders.
- Consensus building.
- Policy development for transport in Tbilisi and identifying issues with policy implementation currently.
- Training and capacity building.



#### Client:



Location:

Tbilisi, Georgia

**Associated Consultants:** 

Dr Kristina Gauce

Project Contact:
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## Public Transport Planning and Reform

From BRT to business models, Latin America has often led the way in public transport transformations. Systems such as Transmilenio and Metrobus have driven growth and transformed quality of life for millions of citizens.

Yet two decades of experience, the aftermath of the pandemic and growing citizen expectations now call for a focus on multi-modality and inclusivity in future public transport programmes – often in the context of constrained budgets.

From new BRT lines in the Philippines to modal assessment in Ukraine, ITP brings experience of supporting cities around the world to develop and new ideas for public transport from a starting point of stakeholder needs and with funding constraints.





## Kyiv Troyeshina Rapid Transit Study

ITP led the technical, financial and economic feasibility assessment of options for the TRT (Troyeshina Rapid Transit) project. The route provides an orbital route around the northeast of the city through Petrivka, Syrec, Solomianskyi, connecting the Troyeshina residential area to the rest of the city.

The project developed the VISUM model for the city to analyse alternative rapid transit modes and alignments to ensure connectivity and deliverability. Various options for crossing the Dnipro river were considered and evaluated using multi criteria analysis. The project identified the potential for Transit Orientated Development (TOD) to both internalise trips and to potentially part fund the project.

The project undertook a series of services within the assignment:

- Assessment of travel demand patterns.
- Transport model updates.
- Transit oriented development planning.
- Greenhouse gas and localised emission modelling.
- Financial and economic analysis.
- Social and environmental risk screening.
- Travel demand management policies.

The preferred option, and that supported by Kyiv Mayor, was a heavy metro line. The project was undertaken in a partnership arrangement with the World Bank Client and Kyiv City Government.



Client:



**Location:** Kyiv, Ukraine

**Associated Consultants:** 

EGIS International EGIS Ukraine David Lock Associates

Project Contact:
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## **Entry Points for Urban Transport Reform in Cap Haitien**

ITP, together with CPCS, was commissioned by the World Bank to assess the urban transport market in Cap Haitien, Haiti, and to identify operating models and investment entry points for quality improvement and fleet renewal. The work brought together ITP's previous experience in the Haitian urban transport sector and collaborative approach with local partners, Government of Haiti's Central Implementing Unit, and tap-tap unions. As part of the study, ITP:

- Provided an analytical diagnostic assessment on the urban transport sector, including fleet sizes, operating models, services, operational and financial basis. This focused on minibuses, Tap Taps and the rapidly growing moto taxis sector.
- Conducted a survey of passenger journeys and journey experiences of public transport to inform user reform priorities.
- Developed a cooperative-based reform action plan for the transit operation. The reform plan was built on:

- Assessment of the current operational and financial issues and opportunities.
- Assessment of regulatory bottlenecks and changes required.
- Assessment of the potential for introducing technologies such as GPS tracking system, cashless payment and other ITS technologies to improve the operation.
- Assessment of the needs for an inclusive transit system that creates a better environment for vulnerable people (women, children and people with limited abilities).
- An appreciation of the institutional and regulatory enforcement realities in the current Haitian context.
- Provided a strategic assessment of potential entry points for introducing electric vehicles in the city focused on battery swapping for electric two and three-wheelers, subject to local energy supply capacity constraints and carbon intensity issues being addressed.



Client:



Location:

Haiti

**Associated Consultants:** CPCS

Project Contact:
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## Sarajevo Public Transport Strategy

This project analysed the Sarajevo public transport network to deliver a comprehensive Public Transport Strategy for Canton Sarajevo, identifying opportunities for, and constraints to, improving the network for the benefit of the city and users. It also helped Canton Sarajevo in decision making for urban transport investments and planning.

The focus was on identifying short-term and longerterm measures that both improved the level of service offered and the efficiency of operations. The project analysed the existing public transport network to identify shortcomings in the levels of service to users in terms of accessibility.

The balance between transport modes, and between public and private provision, was investigated both in terms of appropriate network coverage and financial efficiency in provision. During the project ITP provided the following services:

- Ethnographic study of existing public transport network.
- Workshops with stakeholders.
- Analysis of collated data, including detailed visualisations of the current and proposed network, and the performance of the network including patronage, speed and service frequencies.
- Produced recommendations for short term, readily implementable improvements to enact direct change.
- Produced initial recommendations for long term strategic improvements.



#### Client:



#### Location:

Sarajevo, Bosnia & Herzegovina

#### **Associated Consultants:**

 $\mathsf{PwC}$ 

University of Sarajevo

Project Contact:
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# Cross-Cutting Themes

Ensuring that all transport infrastructure and services are designed and operated in a way that takes into account economic efficiency, resilience and equality is one of our key objectives. We specialise in the appraisal of these issues at all stages of the project lifecycle.

By using a mixture of bespoke and off the shelf appraisal tools, we are able to assess the economic viability of transport investments across all modes, focusing on active modes and public transport. By using the results of appraisals to inform project development, we are able to ensure value for money for our clients, and avoid unnecessary or inappropriate investments.

We have a strong capability in increasing the resilience of transport networks to the effects of natural disasters and climate change. We are able to advise clients on the planning, design and operation of transport networks, by modelling risks, proposing mitigations and appraising the effectiveness of packages of investment.





### Niue National Infrastructure Investment Plan

ITP was appointed by the Pacific Regional Infrastructure Facility, to lead support the Government of Niue to develop a National Infrastructure Investment Plan (NIIP). The NIIP was an integrated, multi-sector strategy to identify future investment requirements and develop a prioritised programme of investments.

The NIIP covered all infrastructure sectors, including transport, water and sanitation, telecoms, solid waste management and energy. Niue is exposed to a range of threats including climate change and natural disasters. Key issues for the NIIP included strengthening the resilience of the island to the impacts of natural disasters, providing affordable solutions that can be easily implemented, protecting a fragile environment and supporting the

Government in its efforts to increase the penetration of renewable energy.

The project team provided:

- Support to prepare the Niue National Infrastructure Investment Plan 2030.
- Infrastructure planning including prioritisation and sequencing of projects.
- National budgets and coordination of funding support from development partners.
- Identification of funding modalities including the private sector and Public-Private Partnership.
- Capacity development support (where needed), including tools, manuals and soft copies which will facilitate updating, reviewing and monitoring and evaluation.



#### Client:



#### Location:

Niue

Project Contact:
James Reeves
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# Greener Transport Connectivity for Eastern Area Partnership Countries, Phase 1 & 2

ITP developed a €105 billion decarbonisation and international connectivity strategy for Eastern Europe and the South Caucasus (Armenia, Azerbaijan, Belarus, Georgia, Moldova, Ukraine).

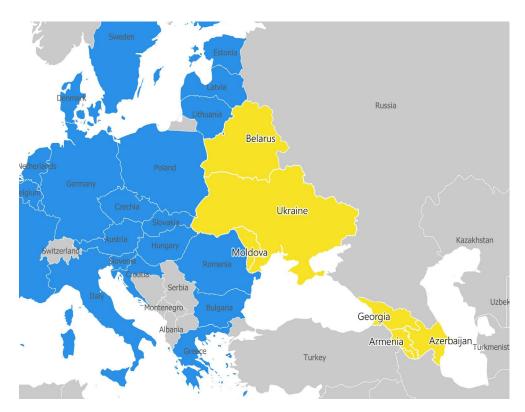
#### During the project ITP:

- Assessed the strategic transport network, capacity, level of service and movement barriers.
- Reviewed national policies, Stakeholder consultation.
- Developed and costed connectivity and green transport policy interventions.
- Undertook 4-step network modelling & emissions modelling.
- Economic appraisal and project prioritisation.

- Identified innovative financing mechanisms including climate finance.
- Developed guidelines for EAP governments to access climate financing.
- Developed interactive model visualisation tool.

ITP's novel approach combined a continent scale Cube model with our in-house fleet and emissions model to develop and appraise policy combinations related to fleet efficiency, demand reduction and mode shift.

A breath of realistic financing opportunities were identified for each country including climate funds and private sector participation. To help non-modellers to use the results an open source model visualisation tool was developed (<a href="http://www.greenconnectivity.net/map/">http://www.greenconnectivity.net/map/</a>).



#### Client:



#### Location:

Belarus, Ukraine, Moldova, Azerbaijan, Armenia, Georgia

#### **Associated Consultants:**

CitiME: Alberto Brignone Lorant Tavasszy Colin Caine Robin Kaenzig

#### **Project Contact:**

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## Tirana Urban Mobility Data Management Strategy

ITP were appointed as part of GIZs support to the Municipality of Tirana to improve their sustainable urban mobility network. The work undertaken by ITP focused specifically on the mobility data environment in the city.

The purpose of the data strategy was to strengthen the capacities of stakeholders and institutions towards more data-based planning and decision-making. Additionally, the Data Strategy aimed to empower Tirana's Transport Department, and other vital stakeholders at the Municipality of Tirana, to strengthen the role of data within the daily business of managing transport in the city.

The plan developed a number of approaches, focusing upon identifying and recording data assets, managing the analytical skills of department staff,

and sharing data externally with other stakeholders and the public.

ITP created the data strategy through status-quo analysis, stakeholder consultation and international best practice and provided a series of objectives and reccomendations to drive the strategy.

ITP's project team provied the following services through the project.

- A review of existing policies and strategies.
- Undertaking stakeholder interviews and workshops.
- Best practice research.
- Creation of strategy documents with reccomendations and objectives to achieve the strategy.



#### Client:



#### Location:

Tirana, Albania

Project Contact:

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# Indonesia Incorporating Natural Hazards into the Planning and Operation of Urban Mass Transit

ITP was appointed by the World Bank to support the Indonesian Government to develop national technical guidelines on incorporating natural disaster and climate resilience for the Indonesia Mass Transit Program (IMTP).

In addition, ITP was also tasked with building capacity amongst the staff in the Ministry of Transportation (MOT) and Ministry of Public Works and Housing (PUPR); and supporting the IMTP pilot areas (Bandung and Medan) to develop resilient urban mobility diagnostics and investment priorities to prepare for disaster and climate change effects.

The project team undertook a series of tasks:

- Disaster risk profile identification and analysis.
- Hazard characterisation to identify hazards and characterise magnitude and likelihood.

- Vulnerability assessment to assess exposure and vulnerability of mass transit systems to hazards.
- Impact assessment to analyse and identify the most critically impact parts of the mass transit system for resilience prioritisation.
- Develop resilience standards and criteria.
- Undertake stakeholder engagement through a series of workshops.
- Develop resilience investment options.
- Recommend investment prioritisation of resilience measures.

The study was funded through the Work Bank Program for Mainstreaming Disaster Risk Management in Indonesia, and is supported by the Global Facility for Disaster Reduction and Recovery (GFDRR).



Client:



Location:

Bandung & Medan, Indonesia

**Associated Consultants:** 

Universitas Indonesia Finnish Consulting Group

Project Contact:
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## Contact

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