

A photograph of two cyclists riding away on a paved path lined with trees. The cyclist on the left is wearing a grey shirt, dark pants, and a black helmet. The cyclist on the right is wearing a black long-sleeved shirt, dark pants, a black helmet, and a light-colored headscarf. Both are carrying backpacks. The path is made of grey paving stones, and there are orange tactile paving tiles on the left side. The background shows more trees and a fence.

# UK PACT

**Accelerating the sustainable  
mobility transition**  
Lessons from UK PACT

---

November 2021



# Accelerating the sustainable mobility transition

Accelerating a modal shift to public and active transport and low emissions mobility is a key challenge cities face in addressing the decarbonisation of transport and delivering wider outcomes for our communities and the planet.

UK PACT and its partners are currently supporting cities across Africa, Asia, and Latin America develop a range of sustainable mobility planning projects to help address the challenges and opportunities in decarbonising the transport sector.

This brief showcases key aspects of sustainable mobility ranging from the benefits it offers to the planet, people and places, to various strategies and approaches for meeting these goals, as well as examples of UK PACT's contribution to these strategies.

## The why

***Delivering sustainable mobility in our cities and towns benefits our planet through decarbonisation and supports important people and place benefits.***

### Planet

**Transport represents 16 per cent of global Greenhouse Gas (GHG) emissions**, making the decarbonisation of the transport sector and delivering sustainable mobility in our cities an urgent area for climate action.

Sustainable mobility is about holistic strategies that reduce the demand for motorised journeys and make public transport, active mobility and low emission modes more attractive. At the same time, sustainable mobility can help deliver much wider economic, environmental and social benefits, which include:

- Inclusive mobility services for women, disabled persons and marginalised groups
- Pathway to zero carbon
- Cleaner air
- Reduced noise pollution
- Resilience to climate and natural environmental shocks and stresses
- Working more closely with nature

As emphasised in **Decarbonising transport: a better, greener Britain**, the sustainable mobility agenda needs to include decarbonising all forms of transport. Key components will comprise increasing cycling and walking, providing zero-emission buses and coaches, decarbonising railways, a zero-emission fleet of cars, vans, motorcycles, and scooters, accelerating maritime decarbonisation, decarbonising how we get our goods, delivering decarbonisation through places and providing future transport that offers more choice.

### People

A vital part of the sustainable mobility agenda is prioritising people-first rather than vehicle-first design - where walking, cycling and public transport are the most logical, efficient, accessible and enjoyable daily travel choices. This can support huge social benefits:

- Gender equality and social inclusion (GESI) in the planning and design of future e-mobility as described in the UK PACT GESI thematic brief
- Active & healthy lifestyles
- Greater employment opportunities
- Reliable mode choices
- Safer communities

### Place

Sustainable mobility has a critical role to play in creating great places. Planning our communities around walking, cycling, and public transport can help deliver:

- Accessible and connected places
- Vibrant communities and economic growth
- Seamless journeys with better first and last mile experience
- Efficient and flexible use of assets
- Reduced need to travel

## The approach

***A comprehensive and holistic approach to sustainable mobility is needed to help redefine travel norms, embrace innovation and put gender equality and social inclusion at the heart of decisions.***

To increase the pace and scale of transport decarbonisation, efforts should focus on redefining travel norms by creating strategies that reduce demand for motorised journeys and make public transport, active travel and low emission modes more attractive for all.

Based on best practice experience in the UK and cities around the world, a successful sustainable mobility strategy should include: strong planning and policy with a focus on public transport and integrated land use planning; as well as active mobility, e-mobility, freight and logistics and embracing future mobility innovations that help meet economic, social and environmental goals.

At the same time, these strategies should include clarity on investment requirements so that transport investments are channelled to the right projects and technologies. In addition, managing transition risks, such as a weak policy and regulatory environment and slow technological development and deployment, will be a key

challenge for partner countries. Identifying and managing transport transition risks will allow them to remain commercially viable as they decarbonise.

To help achieve these ambitions, UK PACT supports sustainable mobility projects that increase awareness, knowledge and capacity in partner countries to enhance public transport electrification, multi-modal and active transport alternatives and the transition towards a low carbon freight sector.

Through the delivery of these projects crossing cutting themes and success factors include:

- Embedding gender equality and social inclusion, by promoting the participation of women, disabled persons and priority groups in the design, planning and implementation of mobility projects, as illustrated in Box 4 of the UK PACT's GESI thematic brief
- Recommending policy and regulatory changes
- Knowledge transfer and training
- Embracing innovation; and
- Bringing multi-sector networks together.



Image:  
© BikeNCity

## Planning & policy: Reshaping the way we plan and move

***A focus on integrated transport and land use planning and policy support public transport as the backbone to daily transport choices.***

Comprehensive and holistic strategy, planning and policy underpin the success of sustainable mobility.

Strategies need to enable public transport and active mobility to be more convenient than private vehicles. This will be the driver of delivering highly accessible places, facilitating healthier lifestyles and supporting behaviour change.

Good planning and policy can help deliver transformative and integrated mobility in partner countries that focuses on quality of life and a new transport hierarchy that priorities sustainable modes.

The focus must be on integrated transport and land use planning and policy that reduces the need to travel – fewer trips, shorter trips, and more trips by sustainable modes. A key goal here is planning for more compact and connected cities and towns. A compact city also helps design with nature, accelerate the pathway to zero-carbon and make places more connected and accessible for all citizens. Transit-oriented development (TOD) is central to this and helps create vibrant 'live, work and play' communities that enable more walking, cycling and public transport use.

At the same time, transport demand management (TDM) is another important tool in reducing travel demand or redistributing this demand by location, mode or time. TDM can include cost-based strategies such as parking fees and road pricing, supply-based strategies such as roadway and parking restrictions, as well as supportive strategies for trip planning assistance and ridesharing.

UK PACT is supporting a wide range of planning and policy projects to deliver sustainable mobility. This includes projects to support a paradigm shift to sustainable modes and help countries along the path to decarbonisation and realising its wider benefits. A key component to success is providing the necessary capacity development and knowledge transfer support and strengthening institutional and legal frameworks.

## Proposing reforms to the public territorial planning in Colombia to comply with the Paris Agreement

In Colombia, Fedesarrollo is bringing multiple stakeholders and government departments together to deliver integrated strategy transport and land use planning. This will enable sustainable mobility to be prioritised and lower private car use, reducing carbon emissions and fostering healthy and active lifestyles. The project is recommending key adjustments to the policy and legal frameworks to support the evolution of open space and multi-modal transport networks.

One of the success factors of the project is the alignment of international best practices for planning instruments with the accomplishment of the goals of the Paris agreement, and local benchmarks of successful sustainability practices within Colombia and its use to inform the recommendations.

## The road to carbon-neutral: visions for Colombia 2050

The Organization for Environmental Education and Protection (OpEPA) and its project partners are helping Colombian local government officials, entrepreneurs, journalists and communities set a long-term vision and building capacity to support Colombia in reducing its emission reductions. The project is enabling behavioural change and incentivising the implementation of low-carbon actions in the energy and transport sectors in line with Colombia's newly launched Long-Term Strategy for Climate Resilience.

The project supports a sustainable and resilient future for Colombians by bringing together stakeholders in the energy and transport sectors to develop a joint approach to achieve carbon neutrality. It will also promote a green recovery by identifying and designing opportunities to overcome the COVID-19 pandemic and its economic impacts while supporting Colombian territories in their transition to a low-carbon economy.

## Active mobility: Beyond motorised transport

***Walking and cycling are the ultimate forms of zero-emission transport and help deliver much wider economic, environmental and social benefits.***

The UK and many other countries have seen an increase in walking and cycling due to the COVID-19 pandemic and are seeking to embed further and encourage active transport. By 2030, the UK aims for half of all journeys in towns and cities being cycled or walked.

Active mobility infrastructure must be safe, well-designed and well-connected. Many governments are promoting active travel by retrofitting existing urban landscapes and developing new walking and cycling routes. Active mobility can also support public transport to improve first and last-mile connections.

To make walking and cycling attractive and accessible to everyone, our cities must fully embed gender equality and social inclusion (GESI) considerations into an inclusive planning approach.

For cycling, despite large appetites from different demographic groups to start cycling, often large percentages of people aged over 65, disabled people, women, people at risk of deprivation and people from ethnic minority groups, never cycle. In [Cycling for everyone: A guide for inclusive cycling in cities and towns](#), tangible actions include: increasing diversity and representation in decision-making, ensuring cycling infrastructure is fully inclusive and addressing personal safety and harassment through better route planning and route choices.

To support this shift in thinking, UK PACT is currently supporting cities in partner countries plan for active mobility to address these challenges and opportunities.

### Strengthening the design of pop-up active mobility infrastructure in Mexico

In Mexico, BikeNCity, a local active mobility consultancy, is delivering a project to help develop healthy communities and mitigate COVID-19 and

#### Box 1. UK Case study: 'Mini-Holland' – Waltham Forest, London

Since 2013, the London Borough of Waltham Forest has been building a new sustainable travel infrastructure, prioritising walking and cycling and making streets safer for everyone. The initiatives have helped tackle key issues around road safety, air quality and public health. The comprehensive approach to active mobility taken in Waltham Forest has resulted in more people walking and cycling and car use has gone down. More information can be found [here](#)

the consequences of climate change in 15 cities. It showcases a 'places for people' approach, including the planning, implementation, operation and evaluation of pop-up cycling and pedestrian infrastructure as well as improvements to public space. Equality, inclusion and education are at the heart of the plans, with training for over a hundred decision-makers from small and medium cities being carried out.

By working with local governments, the project will promote the implementation of pop-up pathways and increase cycling and others sustainable modes of transport in Mexican cities, while reducing poverty and greenhouse gas emissions.

### Planning green mobility corridors in Colombia

Arup is helping formulate concept studies and build local capacity in Colombia to promote the integration of green infrastructure, such as parks, gardens and others, into the Cali-Region cycle network. This will be based on the current conditions of the inter-municipal transportation sector, the existing infrastructure, and the demographic characteristics of the potentially benefited communities.

A key outcome of the project is enhancing the quality of life of Cali Metropolitan region residents and supporting zero-emission transport. To achieve this, it will include conceptual design and pop-up interventions pilots, stakeholders' participatory processes, knowledge transfer schemes, and estimation of emission reduction.



## Enabling e-mobility

***The move to a zero-emission vehicle future will require new thinking and infrastructure, from innovative policies to support uptake, to new charging infrastructure and network upgrades.***

Around the world, advances in technology, including e-mobility, combined with the drive to improve air quality and lower carbon emissions are leading to disruptive changes in the movement of passengers and freight.

The creation of the right enabling environment is at the heart of e-mobility in partner countries. This enabling environment can provide the roadmap to scale up electric vehicle deployment. E-mobility requires holistic strategies to design new business models, create frameworks for charging infrastructure, analyse grid impacts and create procurement models, and tie into city-level transport plans to scale up the use of e-mobility.

Providing equitable access to e-mobility will be one of the biggest issues facing governments. This includes providing access to EV charging for those who can't charge off-street at home. Clear national guidelines on the provision of EV charging infrastructure are needed, clarity about the role

each part of the supply chain will play, and new funding mechanisms to accelerate installation.

UK PACT is currently supporting a wide range of projects across the e-mobility ecosystem:

### **STRAPSA: shifting the transport paradigm for South Africa**

Nelson Mandela University provides capacity and knowledge building to key institutions and decision-makers aiming to increase the uptake of e-mobility in South Africa. This forms an important part of wider efforts to accelerate emission reductions within the transport sector.

Pivotal to the project's success is delivering multi-department capacity-building engagements, webinar learning series covering international references, and creating coordination and reference documents. Early wins for the project include shifting the mindset towards an equitable transition for e-mobility where wider mobility access and vulnerable users are at the heart of planning and how this can assist in the alleviation of poverty and social exclusion.

By empowering key actors and decision makers with the knowledge of emerging technologies within the electric mobility ecosystem, South Africa will move further towards a just and sustainable transition to electric mobility.



Image: UYILO  
vehicle to grid  
© Nelson  
Mandela  
University

## City of Johannesburg electric vehicles readiness support programme, South Africa

The primary target outcomes of this project are two-fold: firstly, to maintain and support the grid and secondly, to reduce the cost of transport for a more inclusive and equitable system.

Sustainable Energy Africa (SEA) grid modelling work is determining the network's capacity for EV charging infrastructure, establishing optimum network locations for charging and estimating the optimum charging behaviours. The project is also developing charging infrastructure ownership models, establishing whether registration of charging infrastructure is necessary and proposing a sensible registration process.

The project is also performing feasibility studies to understand the key drivers for an EV business case in Johannesburg and propose mechanisms for the City of Johannesburg to support EV adoption in private and City-owned fleets.

The project supports Johannesburg city officials to be EV ready with a deep understanding of the city's technical capabilities to provide charging infrastructure, network upgrades and set fair and attractive tariffs.

## Preparing the road to zero-emission urban mobility in Colombian cities: accelerating electric bus adoption

The World Resources Institute (WRI) builds upon ongoing e-bus work in Colombia to help accelerate

and scale e-buses throughout the country. The project is providing detailed technical assistance to three mid-sized Colombian cities; engaging national EV stakeholders; and disseminating key takeaways by creating a Colombia-specific guidebook on how to enable e-bus adoption.

To advance the equitable roll out of e-mobility, the project supports strategies including women in the transportation decision-making process. The project also assesses the gender impacts these strategies, such as different trip types for women and how to electrify them.

## Decarbonising freight and logistics

### *Adopting more efficient, safe and sustainable modes to decarbonise the freight and logistics system.*

The importance of the freight and logistics industry in the sustainable movement of goods and the linkages to the economic and social wellbeing of our cities is rising. The rising volume of freight and logistics and the shocks and disruptions to the industry seen recently through the pandemic are putting pressure on the industry.

The UK has set out key strategies which provide a strong platform for sustainable mobility in the freight and logistics sector:

- Decarbonising the freight system, pioneering new zero-emission technologies with mass-scale demonstrators for Heavy Goods Vehicles (HGVs)



Image: Bus station in Bogotá, Colombia  
© EGT-1

- Increasing amounts of freight will shift from road and air to more sustainable modes, with digital solutions and data
- Sharing optimising efficiency
- The last mile will be decarbonised, and places will have the logistics solutions best suited to their specific needs.

Examples of the work UK PACT supports to decarbonise freight and logistics in Latin America highlight the potential to scale up sustainable freight solutions:

### Steering the Colombian road freight sector towards zero emissions (Giro-Zero)

In this project, the Universidad de los Andes sets out to catalyse truck renewal, and the adoption of low-emission technologies and better environmental practices within the trucking sector in Colombia.

The project involves researching the feasibility of adopting alternative technologies and other green practices within the Colombian road freight transport sector, capacity building through quantitative analysis and analytical modelling, and ensuring two-way knowledge exchange between the project and its key stakeholders.

The GIRO-ZERO project will accelerate vehicle renewal and technologies to reduce the miles run, fuel consumed, and CO<sub>2</sub>e emitted by vehicles operating within the Colombian road freight transport sector.

## Future mobility trends

***Rising trends of future mobility, technological developments and disruptive business models, and other drivers of change such as COVID-19 are changing how people move.***

Partner countries recognise these trends and are working to ensure that city and transport systems are flexible and adaptable to respond. It is crucial that cities adopt a people and place focused approach, rather than a technology for technology's sake approach to the future mobility challenge to achieve economic, social and environmental ambitions.

Future mobility applications should aim to make lower carbon journeys easier. In addition to electric mobility, other examples include:

- Mobility as a Service (MaaS): integrates different forms of transport with information and payment functions into a single mobility service
- Mobility hubs: strategically located integration points offering seamless journeys and integration of innovation
- E-bikes / e-scooters: advances in active mobility options, including share schemes
- Autonomous vehicles (AVs): pilots focused on more dynamic public transport and supporting first/last mile
- Big data: to better understand user mobility needs and tailor solutions.

### A comprehensive roadmap for sustainable mobility in the Bogotá region during and after COVID-19, Colombia

The strategic plan for sustainable mobility for the Bogotá-Region led by ProBogotá Región is helping encourage and integrate sustainable modes.

The project focuses on innovation to help use new big data and digital applications to make sustainable mobility journeys easier and more attractive. For example, the project is supporting the Bogota Region investigate a new Mobility as a Service (MaaS) platform for seamless and integrated journeys.

This transition to a much-needed integrated system for public transport will support the shift towards sustainable technology-based mobility, drive changes in mobility habits and reduce carbon emissions.

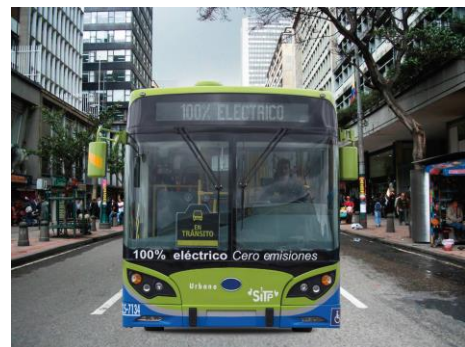


Image: Photomontage, showing possible future electric buses in Bogotá



## Key recommendations

***UK PACT and its partners continue to support sustainable mobility initiatives to deliver planet, people and place benefits.***

This thematic brief has introduced some of the core themes of a holistic and comprehensive approach to sustainable mobility, as well as a range of ongoing projects that UK PACT is supporting for transport decarbonisation. However, the agenda is ever-growing, evolving and complex.

Now is the time to act to support increasing the pace and scale of transport decarbonisation through a multi-pronged approach. Central to this is redefining travel norms by creating strategies that reduce demand for motorised journeys and make public transport, active travel and low emission modes more attractive for all.

UK PACT and its partners deliver capacity building and technology transfer to design and implement policies and strategies driving the transition to low carbon, active and effective transport modes.

### Low-carbon cities and transport in Indonesia

This recently launched programme will promote sustainable transport while helping drive economic development through low-carbon growth. Indonesia-UK PACT has worked closely with government stakeholders to explore opportunities to support Indonesia's transition to low-carbon transport by improving linkages between transport and spatial planning, as well as ensuring inclusivity of public transport means.

The Programme responds to current and upcoming Indonesia's national development plans for urban transportation. UK PACT identified metropolitan areas that can benefit from support to accelerate public transport improvements and contribute to Indonesia's sustainable mobility ambitions

## Acknowledgements

This brief is part of a series developed by Palladium International, which manages the UK PACT Country Programmes component on behalf of the UK Government. This thematic brief was authored by Michael Chadney, who works in the Transport Strategy and Future Mobility practice at Arup. Milimer Morgado, who works in the International Development group at Arup supporting climate change projects, provided research, stakeholder engagement and writing support.

We want to thank Ben Haddock (Low Emissions Mobility, Arup), Susan Claris (Active Mobility, Arup), Jim McNicholas (Team Leader, Palladium) and Alexandra Pinzon (Impact Manager, Palladium), for their editorial review.

Special thank you to Hiten Parmar and Edem Foli (Nelson Mandela University), Jorge Gordillo (BikeNCity), Josh Dippenaar (Sustainable Energy Africa), Margarita Parra (Clean Energy Works), Sarah Cassius (WRI), Bibiana Rodriguez (ProBogotá Región).



Image:  
© Arup

# UK PACT

[www.ukpact.co.uk](http://www.ukpact.co.uk)

*For any enquiries, please get in touch via email at [communications@ukpact.co.uk](mailto:communications@ukpact.co.uk)*