

The Global Facility to Decarbonize Transport GFDT

Supporting Countries in their Decarbonization Initiatives



WORLD BANK GROUP



INFRASTRUCTURE
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Basic Information

Umbrella Name

Global Facility to Decarbonize Transport (GFDT)

Umbrella Managing BU and collaborating BUs.

Managing BU: Transport Global Knowledge Unit (ITRGK)

Collaborating BUs: Transport GP; Climate Change Group; Environment GP; Urban, Resilience and Land GP; Social GP; Water GP; Energy and Extractives GP; Digital Development GP; Macro, Trade, and Investment GP

Umbrella Program Manager (UPM) Name and Title

TBD, ITRGK

Fundraising Initiative Note (FIN)

FIN # 1600

Sector/Theme & Geographic Scope

Transport, Global

Target Umbrella size

US\$200m

Target anchor MDTF size

US\$200m

Target Umbrella Donors

Australia, China, Denmark, Germany, Gulf States, Korea; Japan, Netherlands, Norway, Saudi Arabia, Sweden, UK, and the US; Private Sector.

Target anchor MDTF donors

Australia, China, Denmark, Germany, Gulf States, Korea; Japan, Netherlands, Norway, Saudi Arabia, Sweden, UK, and the US; Private Sector.

Target establishment FY and quarter

FY21 Q3

Planned End Disbursement Date of the anchor MDTF

FY31 Q3



Why is the World Bank launching a new Multi-Donor Trust Fund?

The impending climate change crisis makes the decarbonization of the transport sector one of the most pressing development challenges of our time. No scenario to stabilize climate change around the 1.5°C target above pre-industrial temperatures, internationally agreed as the maximum acceptable amount of warming, is feasible without an aggressive approach to decarbonizing transport,¹ which will require mitigation and adaptation. The demand for mobility is continuing to grow as economies develop and urbanize, and as populations and incomes increase. With the world population projected to reach 8.5 billion by 2030,² annual passenger traffic is expected to grow by 50 percent, while global freight volume is expected to grow by 70 percent, over the same period. But emissions from the transport sector currently comprise approximately 24 percent of total energy-related Green House Gas (GHG) emissions. Transport sector emissions have also grown faster than those of almost any other sector over the past 50 years. They are predicted to increase by 60 percent by 2050,³ if no action is taken.

The impact of climate change is already clearly visible, in the increased frequency and the severity of climate induced events. Direct damage to transport infrastructure from natural disasters costs about US\$15 billion annually.⁴ That damage results in death and impoverish-

ment, impairs recovery efforts and health care, and disrupts economies. As one example, between 1990 and 2019,⁵ there have been over 1000 climate-induced disasters in the South Asia region, one of the regions expected to be most impacted. Collectively, these events affected over 1.68 billion people, killed an estimated 267,000 and caused over US\$127 billion in damages. The study also noted that 800 million people in the region (or 44 percent of the total population) live in locations that are expected to become moderate or severe climate hotspots by 2050 without climate action. The predicted implications are that 62 million people will be pushed below the extreme poverty line by 2030. By the same date, floods alone are predicted to cost an estimated US\$215 billion annually.

Transport emissions (Particulate Matter 2.5 (PM_{2.5}) and Particulate Matter 10 (PM₁₀), Nitrogen Oxides (NO_x), Sulphur Dioxide (SO₂), Carbon Monoxide (CO), and others), also have an impact on health locally. The transport sector is the

biggest global contributor to the emissions of fine particulate matter, strongly linked to increasing the incidence of respiratory and cardiopulmonary diseases and many forms of cancer. The transport sector is also the main contributor of CO emissions, which reduces the amount of oxygen reaching the body's organs and tissues, thereby exacerbating heart conditions. The World Health Organization's (WHO) most recent "Global Urban Ambient Air Pollution Database" from 2016 estimated that 98 percent of cities in low- and middle-income countries with more than 100,000 inhabitants did not meet WHO air quality guidelines. Localized air pollution was estimated to result in 2.9 million annual premature deaths globally—of which more than 85 percent occurred in low and middle-income countries.

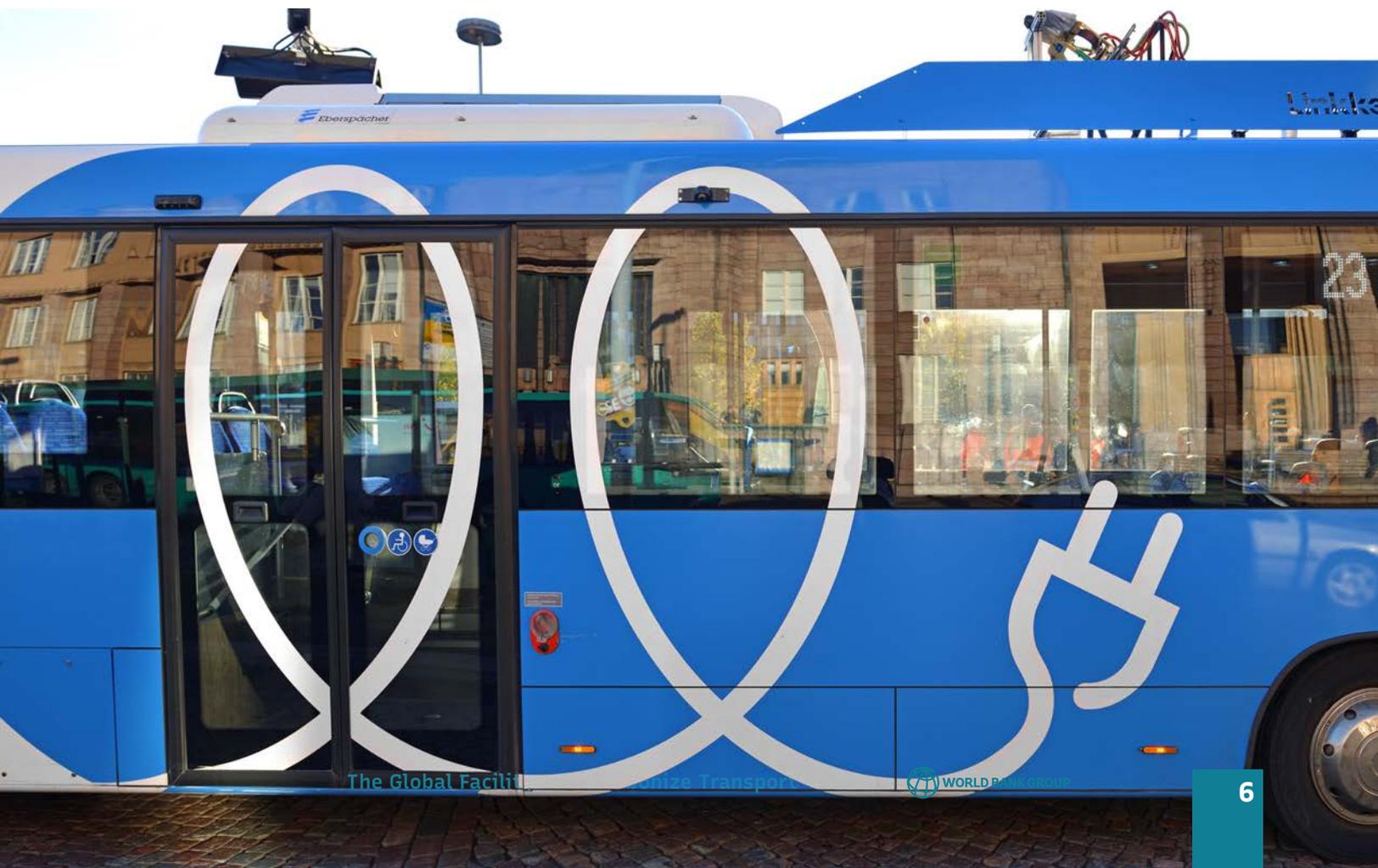
The challenge – and the opportunity – is to reconcile the growing mobility needs of developing economies, with the imperative for climate action and improved resilience.

The challenge – and the opportunity – is to reconcile the growing mobility needs of developing economies, with

the imperative for climate action and improved resilience. Transport and mobility have a central role in the development agenda, facilitating access to employment and educational opportunities, health and social services, and local, regional and global markets. There are also clear links between reducing barriers to transport and alleviating poverty.⁶ What is needed are approaches that reduce the dependence on fossil fuels, without inhibiting growing mobility needs, which are actually two parts of an integrated development agenda.⁷ As one example, increased mobility and emission reduction can be achieved through an integrated approach of improved land management and transport provision that promotes densification along key growth corridors, which are served by resilient high-quality transport services, to stimulate passengers to switch to less emission-intensive modes of transport, and potentially shortens trip lengths.

Developing countries have significant infrastructure investment needs to facilitate development, but investment decisions need to avoid locking countries into a path that is unsustainable, and costly to reverse. It is estimated that governments globally will face an annual transport infrastructure financing gap of US\$244 to US\$944 billion through 2030.⁸ Financing needs challenge the current status quo of dependency on year-to-year budgetary allocations and the ability of multilateral and bilateral official development assistance resources to finance such needs. It is crucial that investment decisions, wherever possible, are made in a manner that seeks to reconcile the integrated development challenge, mentioned above. Infrastructure provision should be undertaken to facilitate, and not impede, climate action and improved resilience. But traditional funding and financing instruments have not been designed to address the high-risk and uncertain investments required to decarbonize the transport sector. This will require creative financial approaches, different instruments and sources, and appropriate risk mitigation strategies to overcome a lack of economic viability in the short to medium term.

There are many initiatives that deliver immediate positive environmental, local economic and welfare benefits. These include investment in high quality public transport, facilitating non-motorized transport, the adoption of cleaner technologies and fuels, new forms of (shared) mobility, policies related to the importation and use of second-hand vehicles, and incentive schemes to facilitate fleet renewal. These interventions have shorter gestation periods and deliver tangible benefits earlier than the necessary but more challenging structural changes, such as increasing the density of cities and transit oriented urban development. But



both short-term and medium-term measures will be needed in a country's integrated climate action plan to facilitate the attainment of carbon neutrality by 2050.

There are viable green and resilient alternatives emerging, what is required is a greater understanding as to their applicability/suitability in a developing country context, the barriers to implementation, and the opportunity to innovate. The introduction of green technologies, resilient infrastructure, and associated policy interventions will require a partnership between the public and private sectors, multilateral and bilateral institutions, and civil society. It will require innovative and appropriate financial solutions, leveraging in commercial finance where possible, to support investments. But crucially, reform will be needed to broaden sources of revenues, improve sector fundamentals, and ensure sound project planning and preparation. Decarbonizing the transport sector will require significant upstream work to assess suitability and applicability of emerging approaches, identify and overcome barriers, and provide the opportunity to innovate. It will require building consensus, the preparation of the country-level strategies and policies, and the necessary project-level preparation to design and implement the scalable pilot interventions.

Countries are now at a critical junction to take advantage of the opportunity for a low-carbon growth trajectory, including transformative technologies and increased resilience in the context of economy recovery and building-back better. This change requires:

- ▶ The pro-active role of many stakeholders to create a win-win ecosystem rather than reactive mobility systems;
- ▶ With new technologies and the challenges for decarbonizing transport, it is critical to rethink how transport can continue delivering on development, propelling prosperity and enabling opportunities;
- ▶ Understanding the financial, institutional, and regulatory incentives that allow technology to do its part is essential, at the country, regional and international level, by considering technology transfer and cooperation; and
- ▶ The effective leveraging of resources from all major development partners, and the private sector, will be needed to have a profound impact on the how the transport sector evolves across the developing world.

Responding to the growing recognition that the world needs to significantly step up its efforts towards sustainable mobility, the World Bank is launching this Call for Funds for a major new multi-donor trust fund, the Global Facility to Decarbonize Transport (GFDT), focused on our client countries. The GFDT is intended to provide the World Bank with a vehicle to deliver catalytic funding to formulate, innovate, and scale up support to client countries to decarbonize transport and build resilience, whilst also meeting growing mobility needs. The GFDT is intended to build on the World Bank's unique comparative advantage to coordinate regional and global action, within and outside of the institution, for the benefit of client countries.



The Global Facility to Decarbonize Transport (GFDT)

The Objective of the GFDT

The objective of the GFDT is to support client countries in the decarbonization⁹ of their transport sector in a manner consistent both with the pursuit of carbon neutrality by 2050 and the development of resilient mobility systems to enable inclusive economic growth and access to opportunities in the developing world. This will require trade-offs and some difficult policy decisions, which will need to be informed by hard evidence. This will be achieved through the provision of support to governments, local authorities, line agencies, and other public and private stakeholders to allow them to make informed decisions as to how they want to approach the imperative to address climate change, embrace the digital transformation, and harness potential opportunities; such as, creating resilient mobility systems that enable inclusive growth amid evolving urbanization and demographic trends.

The GFDT will enable a more strategic approach for the World Bank and potential donors to partner and finance their priorities under the new “Umbrella 2.0” approach. The Bank continually seeks ways to enhance the impact and effectiveness of trust funds, and its new Umbrella 2.0 approach addresses this objective. The Umbrella 2.0 Program is a flexible ap-

proach to trust fund organization and management that enables Development Partners and the Bank to partner and finance mutual priorities. It is the primary way to partner with the World Bank through trust funds and is designed to act as the channel for the vast majority of donor contributions. Umbrella 2.0 Programs provide scale and efficiency for enhanced development impact and effectiveness.

The GFDT will be established as per the Umbrella 2.0 Program and consist of an anchor Multi-Donor Trust Fund. Where a Development Partner’s interests or need is to support a narrower thematic or geographic scope (within the scope of the Anchor MDTF), it can be accommodated through nonbinding “preferencing” in the Administration Agreement (AA). Existing World Bank Transport Trust Funds may remain as stand-alone or become Associated Trust to this new MDTF. Associated Trust Funds support the Umbrella 2.0 Program Development Objective and contribute to the overarching Results Framework of the Umbrella 2.0 Program. They have a thematic and geographic scope that is within the scope of the Anchor MDTF.¹⁰

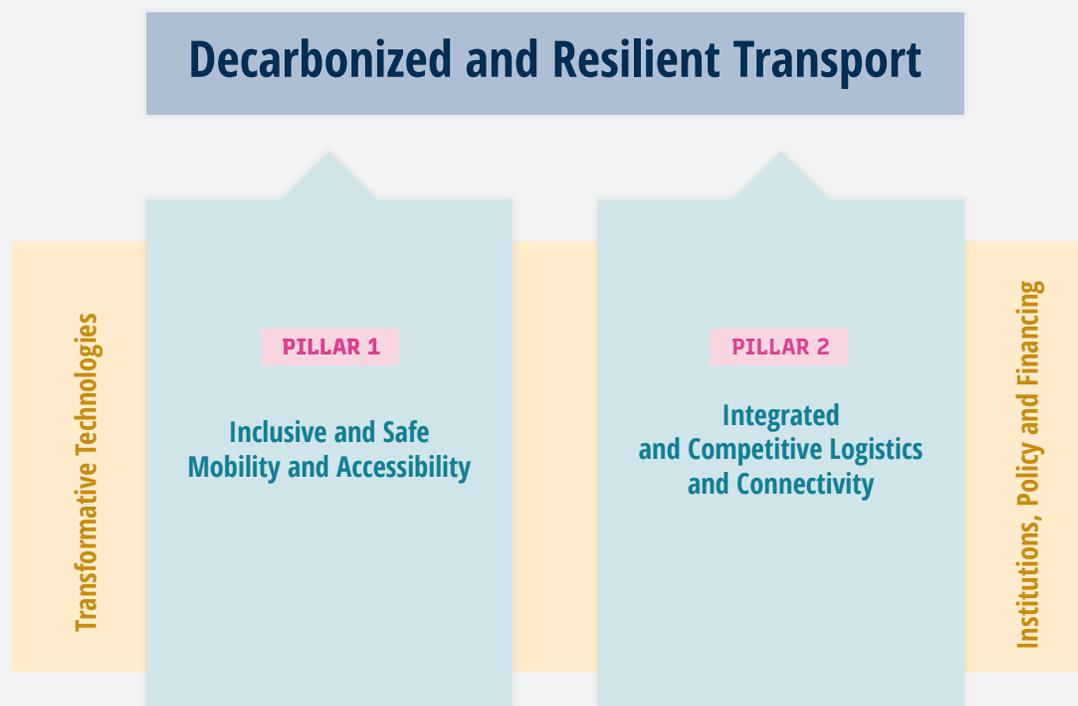
All donor contributions to the Umbrella’s Anchor MDTF will be pooled. In some cases, the World Bank may agree to accept the expression of non-binding contribution preferences related to specific engagement areas, themes or geographic areas, which will be accommodated to the extent possible by the World Bank. If no other options are available, for example due to donors’ legal considerations and budget appropriations preventing them from directly joining the Anchor MDTF, Associated TFs can be established and linked to the Umbrella Program. Since Associated TFs are within the Umbrella Program, they adhere to common governance, reporting, results and visibility arrangements of the Anchor MDTF. The flow of funds to and from the Anchor MDTF or the Associated TFs will be governed by: (a) Administration Agreements between the Bank and donors; and (b) Grant Agreements between the WBG and grant recipients. The World Bank will administer the Anchor MDTF and the Associated TFs in accordance with the terms of the Administration Agreements. The initial duration of the Umbrella’s Anchor MDTF will be 10 years.

The Conceptual Structure

The GFDT has one overarching goal, two distinct pillars, and two cross-cutting themes.

The overarching goal is to support the attainment of *Decarbonized and Resilient Transport* in client countries. Specific interventions are envisaged to cater the two type of transport demand: individuals and freight. In turn, transport systems for individuals and freight define 2 ubiquitous pillars: mobility and access, and logistics and connectivity. Each of these pillars has subsidiary objectives of their own: safety and inclusion in the case of individual transport, as well as integration and competitiveness in the case of freight transport. These pillars are complemented by two cross-cutting themes *Institutions, Policy and Financing* and *Transformative Technologies* provide policy levers and address foundational aspects of the sector (as illustrated in Figure 1). Further detail on the key issues and drivers in each pillar and cross-cutting area is provided in Annex A.

Figure 1. Global Facility to Decarbonize Transport (GFDT)





The specific engagement areas under each pillar are roughly organized to follow the “Avoid-Shift-Improve” planning framework, whilst enhancing resilience. In addition, the framework is being expanded to include those policy and investment programs that support improving the resilience of the sector, addressing key factors that underline the provision of food and critical goods, and understanding how transport services deficiencies has an impact on fragility and the propensity of communities to civil strife. In this regard, transport interventions, both policy and investment under each pillar are envisaged to be designed to consider the need to:

Avoid motorized transport where possible through interventions to eliminate, shorten, or reduce the frequency of trips, creating compact cities and transit oriented urban development. Projects that reduce spatial mismatch or implement “Transit Oriented Development” (TOD), nudge green behaviors for firms and individuals, and enhance the possibilities for teleactivities, such as teleworking or e-shopping associated to low emissions delivery systems fall under this category;

Shift transport demand to less emission-intensive modes of transport, such as public transport and non-motorized modes, and railways and inland waterways. Development of public transport and non-motorized modes of travel for individuals and encouraging modal shift, where possible, for freight fall under this category as these modes compare favorably against low occupancy and road-based alternatives.

Improve the emissions performance of transport, including initiatives aimed at adopting more efficient technologies, promoting the fuel efficiency of transport through technical and operational interventions, and transitioning to low or zero emissions vehicles. This category also includes those interventions that improve the efficiency of the system as a whole such as the use of digital technologies and data analytics to optimize routes, but also technological improvements that structural change the some activities –e-banking, for instance- are performed.



The Egypt Vehicle Scrapping Scheme

The overall objective of the program was to reduce greenhouse gas (GHG) emissions and air pollution associated with the aging fleet of taxi, minibuses, minibuses and buses in Egypt through purchase of Emission Reductions. The Recycling Program established a mechanism through which owners of taxis, minibuses, trailer trucks and buses may voluntarily surrender their vehicles for managed scrapping and recycling, in exchange for financial incentives that may be used towards the purchase of new vehicles from participating vehicle dealers, under a closely monitored process. The intention is that scrapped vehicles will be recycled. Up to date, the scheme has led to the scrapping of 45,000 taxis, and verified emissions reductions of nearly 220,000 tons of carbon dioxide equivalent.

Source: Egypt–Vehicle Scrapping and Recycling Program (English). Washington, D.C.: World Bank Group. <http://documents.worldbank.org/curated/en/324191468037493049/Egypt-Vehicle-Scrapping-and-Recycling-Program>

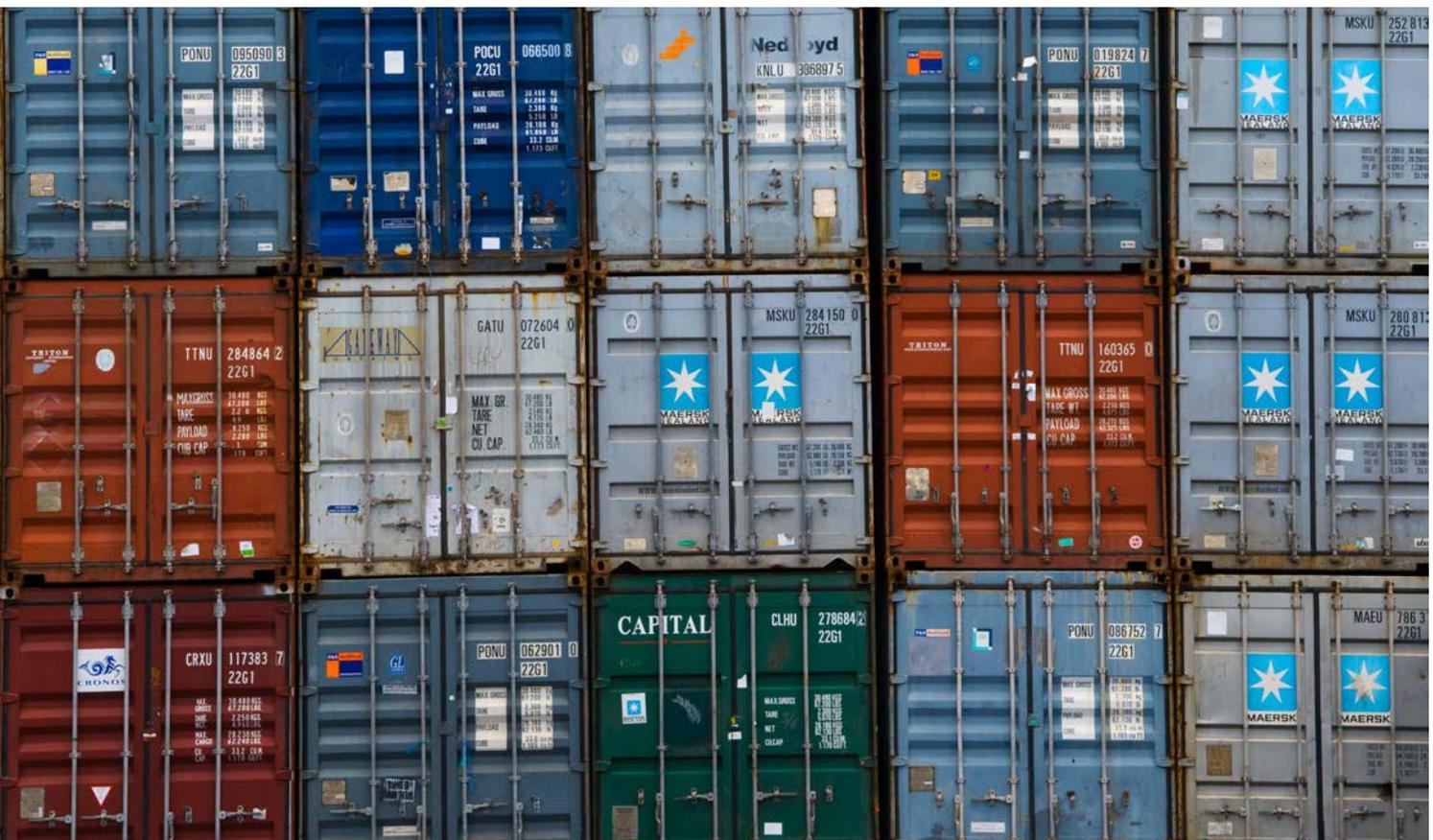
Enhance Resilience of transport systems adopts a life-cycle approach that spans from system planning to engineering and design passing through operations and maintenance, contingency programming, institutional capacity and identifying disaster risk financing mechanisms. This category –consistent with World Bank’s Adaptation and Resilience to Climate and Natural Disasters Strategy – includes:

- ▶ development of network-level thinking to better understand which infrastructure is critical and vulnerable at the network level to reinforce it or build redundancy around it, support urbanization away from the most disaster-prone areas, and design of alternative plans to preserve movement of people and goods in case of disruptions;
- ▶ support of cross-sectoral contingency planning to set in place adequate protocols and reserve funds following an adverse climatic or disaster event, making use of early warning systems, hydrometeorological forecasts, timely evacuations, and develop real-time network systems (for example, sensor systems along transport links); and
- ▶ promotion of the use of innovative technologies for adaptive infrastructure and systems to facilitate and pilot new, cost-effective, and resilient techniques during transport infrastructure planning, design, construction, and maintenance, and for emergency systems.

It is important to note that the different elements are expected to be pursued in parallel as determined to target specific segments of the market for transport services. This specifically means no hierarchy between “avoid,” “shift,” “improve,” or “resilience”. Rather, the mixture of strategic focus in any given client country should be client driven, context dependent, and results focused. One example of a successful project is contained in the text box to the left.

All activities under the pillars are intended to support progress to achieving carbon neutrality – or consistent with incremental gains towards fulfilling the Paris Agreement. They will follow the principles of sustainable mobility, defined in the “Avoid-Shift-Improve” paradigm and will include the adoption of mobility as a system. The practical consequence of reducing the cost of providing mobility while minimizing the carbon footprint requires a focus on issues that demand early action, high positive co-benefits (net short-term gain to investment), considerations of a long-term target defined by sector-specific and cross-sectoral policy frameworks (e.g. pricing policies, land management, international agreements for the marketing of second-hand vehicles) and deep-dive in investment requirements in coordination with the private sector.

The overall structure of GFDT is aligned with the internal strategy of the WB Transport Global Practice. All activities resourced by the GFDT will be fully supported by the technical structural and internal knowledge exchange networks defined by the transport Global Solution Groups (GSGs) and Solution Areas (SAs) (Annex D), and the sector staff in client countries. The funding allocations made by the GFDT will be made in a manner entirely consistent with the annual Work Program Agreements between the Country Units and the regional Transport Units, based on client demand.



The Anticipated Activities

The activities under each of the defined engagement areas are expected to fall into four broad categories, and fully integrated with the operational program of the Transport Global Practice. Implementation is expected to require a combination of Bank-executed (BE) and Recipient-executed (RE) activities:¹¹

Bank Executed Analytical and Advisory Services

These are non-lending activities that help external clients or audiences advance a development objective. The World Bank provides ASA to support the design or implementation of better policies, inform strategies and the development of investment programs and bankable projects, strengthen institutions and build capacity, and contribute to the global development agenda. Outputs would include analytical reports, policy notes, hands-on advice, and knowledge sharing workshops or training programs.

Client Executed Advisory Services and Analytics

These include all activities that involve the definition of national or sector strategies in client countries, and all subsequent project preparation activities. Client Executed outputs include strategy reports, project preparation, design work, safeguard work, and transaction advice to take bankable pilot projects to close.

Provision of co-financing with World Bank lending projects to pilot innovative solutions

The GFDT would, funding permitted, complement the financing provided in the World Bank lending, for those activities that offer substantial and substantive progress towards carbon neutrality and resilience, and which would not otherwise happen without the grant element provided from the GFDT. The grant support required in any pilot project is expected to be modest in comparison to the finance provided from traditional sources of public, or private investment. The intention is to facilitate innovative pilots that are scalable, with some flexibility as to the how at this stage to allow some experimentation and allow subsequent scaling.

Applicable Policies for Activities

All Bank executed trust funded activities are administered and carried out in accordance with the World Bank's policies and procedures for Advisory Services and Analytics products and applicable Administrative policies and procedures. Bank-executed products are included in a Business Unit's management oversight responsibility. All Recipient-executed activities funded through the GFDT would be subject to the World Bank policy framework for any Bank financed Recipient-executed activities, including the Environmental and Social Framework, and the usual fiduciary oversight.

The Beneficiaries of the GFDT

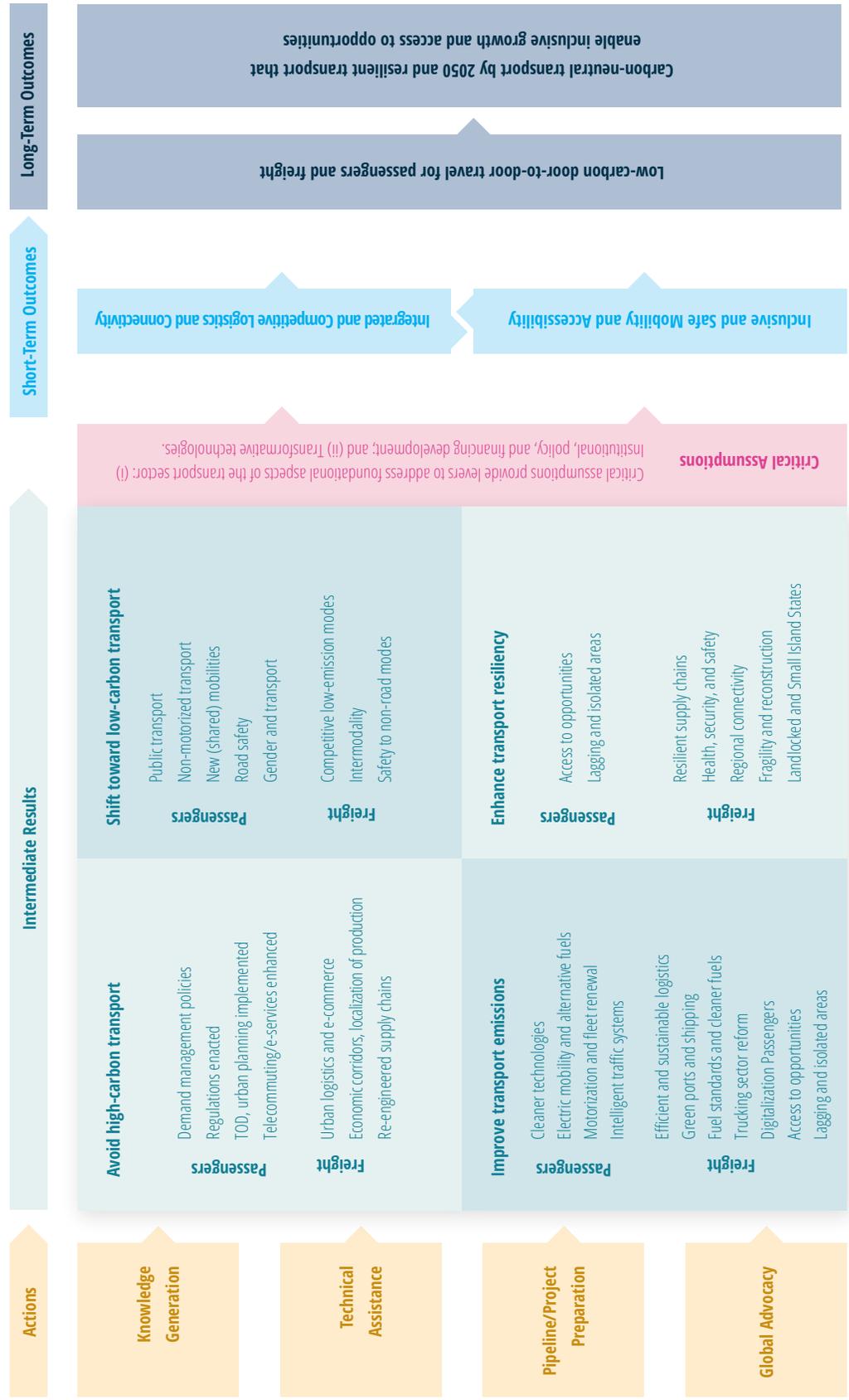
The beneficiaries of the GFDT will include regional and national governments, line agencies, policy and research institutions, the private sector, civil society organizations, and individuals in the World Bank Group's (WBG's) client countries. These entities are expected both to contribute to and benefit from knowledge and experience sharing, policy advice, analytical products providing data and evidence for policy making, funds to pilot innovative approaches, opportunities for learning, and the means of engagement for public outreach and communications. The outputs of the Umbrella will assist the beneficiaries in forming new coalitions for change, in designing and implementing policy and institutional reforms, in adjusting public and private investments and expenditure, and in promoting innovation. The GFDT will also serve as a platform for high-income countries and global organizations to share experiences and good practice relevant to mobility and the megatrends affecting it, and to pursue transformative change in building, protecting and deploying human capital.



The Theory of Change

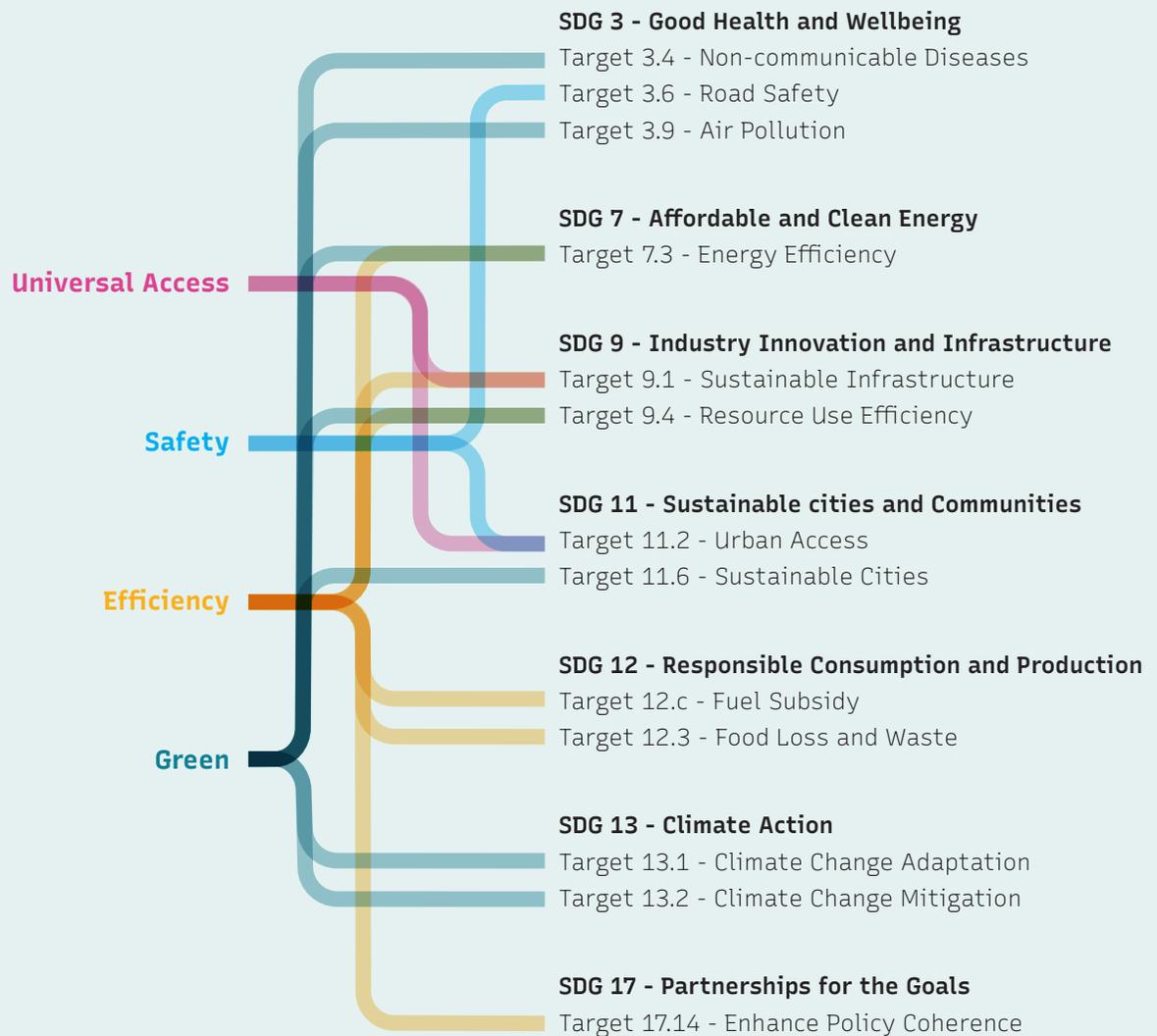
The Theory of Change of the GFDT presents the pathway to the attainment of the objective. The following diagram (Figure 2) illustrates how the key issues and underlying drivers are addressed by the activities under the pillars and engagement areas, and how these lead to key outcomes and ultimately the program's overarching goals and development objective. The outcomes provide direction on results that could be achieved through funding to the Umbrella.¹²

Figure 2. The Theory of Change of the GFDT



The establishment of the GFDT is also closely associated with the Bank's commitment to the achievement of the Sustainable Development Goals (SDGs). Sustainable mobility is fundamental to progress in realizing the promise of the 2030 Agenda for Sustainable Development and in achieving the 17 SDGs. Although there is no SDG exclusively dedicated to transport, transport is directly reflected in targets SDG 3.6 and SDG 11.2, and indirectly linked to many others (Figure 3).

Figure 3: Linkage between Transport and SDGs



Source: Source: Own elaboration.

Affiliation of Sustainable Mobility for All (SuM4All)

Established in 2017 and hosted by the World Bank, Sustainable Mobility for All (SuM4All) is the Bank's main platform for international cooperation on transport and mobility issues.

It brings together over 50 influential public organizations (including regional development banks and UN agencies) and private companies with a shared ambition to advocate for sustainable mobility and contribute with the achievement of the relevant SDGs, inter alia providing a tracking and monitoring framework to support countries in identifying key areas for intervention, progress towards goals and prioritization of efforts. The GFDT Umbrella 2.0 program will partner with SuM4All to create synergies and coordinate in global advocacy agenda and other relevant initiatives.



The Governance and Implementation Arrangements for the GFDT

Introduction

The GFDT will be housed and administered by the World Bank in the Global Knowledge Unit of the Transport Global Practice (ITRKG). The Transport Global Practice seeks to connect people, goods and services to jobs, schools, hospitals, local, regional and international markets. This is attained through the identification of faster, cheaper, safer and more efficient solutions, while mitigating the negative externalities of traffic fatalities, congestion, greenhouse gas emissions, and local air pollution. The Transport Global Practice is a one-stop shop for the full cycle of innovation, cutting-edge knowledge, capacity building, planning, financing and implementation of transport solutions with a current investment portfolio amounting to approximately US\$40 billion in close to 100 countries.

The Transport Global Practice is seen as a trusted partner by client countries, with a substantive physical and technical presence in many countries. The WBG, purely from its reach, has a unique ability to convene state and non-state actors for co-ordination, agreement, and collective action in the sector. Uniquely, the WBG can support the implementation of projects at regional, national, and sub-national level, which can be scaled or replicated to other regions. It, in partnership with other parts of the World Bank Group, has a unique ability to combine commercial, private sector and public financing at sub-national, national and regional levels, to meet the needs of developing countries and transition economies for modern and reliable transport solutions.

The Transport Global Knowledge Unit lies within the Infrastructure Vice-Presidency and is responsible for the strategic leadership of the knowledge program across the transport global practice. It also provides cross-support, technical and policy guidance to the regional operational units. This leadership and support are provided by a number of Global Leads, and Global Solutions Groups (GSG), which shape the agenda around critical policy areas.

The Governance Arrangements

A Partnership Council (PC) is proposed to be established, consistent with the best practice followed by other Umbrella 2.0 TFs. This is intended to provide strategic guidance and direction, and ensure coordination, of the implementation of the anchor trust fund and any associated trust fund(s), and to review progress reports provided by the World Bank based on the results framework for the trust funds under an Umbrella. The PC will comprise representatives from the World Bank, including as Chair, a representative of each Donor contributing to the anchor trust fund, and a representative of each Donor contributing to associated trust fund(s). Each Donor representative may nominate a technical expert to the PC as an observer when needed.

The Partnership Council would meet at least annually, as convened by the Bank. The meetings of the PC may be conducted physically or virtually. The Bank may also agree to hold ad hoc meetings of the PC, at the request of an individual member (s). Further, the Bank may, in consultation with the PC, invite other relevant stakeholders to attend meetings, as considered appropriate.

The World Bank will prepare annual work plans and budgets for each trust fund under an Umbrella and present them during Partnership Council meetings. Donors contributing to a specific trust fund and the Bank will endorse annual work plans and budgets for the said trust fund. It should be noted that only donors contributing to a specific trust fund may endorse or provide inputs to the annual work plans and budgets of that trust fund. Decisions will be made by consensus of the Bank and the donors contributing to a trust fund.



The main beneficiaries of sustainable transport are the majority that must leave their house in order to make an income.

The Implementation Arrangements

A Program Management Team (PMT) will be established at the World Bank to manage the GFDT. The PMT will comprise a program manager and capacity on monitoring & evaluation, knowledge management, communication, partnership and grant management. The PMT will be responsible for the day-to-day management and administration of the Umbrella 2.0 MDTF, as well as any Associated TFs. The PMT will be placed in the Global Knowledge Unit of the Transport Global Practice. The PMT is expected to comprise World Bank Group staff, consultants, as well as donor-funded staff and secondees.

The main roles and responsibilities of the PMT will be, among others:

- ▶ Providing strategic and administrative support to the PC, including organizing meetings, preparing supporting documentation, and identifying priorities for financing;
- ▶ Preparing the business plan for the GFDT;
- ▶ Supporting technical co-ordination;
- ▶ Planning and executing work plans and budgets endorsed by the PC, in close consultation with regional Practice Managers, Technical Lead Specialists and Global Leads within ITRGK as well as in collaboration with other GPs and their TF programs, as relevant; and allocation of TF resources to activities in line with the annual workplans and budgets;
- ▶ Preparing the TF Annual Report, including reporting on results in line with the agreed Results Framework for the umbrella trust funds;
- ▶ Managing communications, conducting outreach and disseminating lessons learned;
- ▶ Monitoring and evaluating the program;
- ▶ Liaising with donors, and establishing and maintaining relevant partnerships, including establishing linkages with other relevant programs within and outside the World Bank;
- ▶ Preparing and implementing a Communications and Visibility Strategy for the umbrella trust funds, including production of relevant communication materials;
- ▶ Ensuring that Umbrella Program activities are consistently aligned with the Bank's policies and processes;
- ▶ Supporting and coordinating with Associated TFs where relevant.

Program Management and Administration (PMA) expenses represent the “cost of doing business” and are necessary to ensure the effective and efficient management and administration of the program. The PMA costs will be tracked separately and charged directly to the trust funds. Any associated TFs under the Umbrella Program will share a percentage of their PMA budget with the Umbrella PMT, following a pro-rata approach based on total amount of resources for each trustee TF associated with the Umbrella. This approach may be adjusted as needed, for example when new contributions are received, or new Associated TFs are established.

The reporting, results measurement, communication and evaluation of the activities supported by the GFDT will be as follows:

The PMTT will develop a business plan for GFDT. This will be developed in coordination with the donors and will contain the annual work plan, and the annual progress report from the previous year, to clearly illustrate the link between lessons learned and the provision of future support.

There will be a single consolidated annual progress report covering all activities financed by all TFs under the Umbrella Program. The format and structure of the progress report will be finalized in consultation with the donors. For associated TFs, the report will include a dedicated chapter within the overall annual report that provides detailed information on progress against the agreed results envisaged for the Associated TF.

GFDT will report against one comprehensive umbrella Results Framework (RF). The RFs for associated TFs will form a “subset” of the overall Umbrella Program level RF, integrated with the umbrella RF at outcome level to the extent possible, and contributing to the development objective of the Anchor TF (Annex B).

An external midterm evaluation of GFDT will be undertaken every three to five years, financed through the Umbrella Program. ToRs for the evaluation will be developed in consultation with the donors and can include attention to specific areas or countries of interest as part of that umbrella program level evaluation. The cost of evaluations is part of the Umbrella Program’s PMA costs.

A **Communication and Visibility Plan (CVP)** will be developed in consultation with participating development partners. It will define the objectives of communications related to the program, the target audience(s), communication activities that will be implemented, how communication success will be measured, and the resources that will be dedicated to communication and visibility. This plan will also describe how existing and new initiatives that become part of the umbrella could keep their own branding and visibility by making explicit reference to the GFDT umbrella.

Core messaging will shape all communications efforts and vehicles, including in stakeholder engagement, online and digital strategy, creative development, and media engagement. The CVP will provide guidance on communication and visibility at the Umbrella Program level, for associated trustees, and at the activity level (including country activities). Preferred contributions and associated TFs included under GFDT will be subject to the branding and visibility provisions embodied in the CVP for the Umbrella Program. The GFDT logo and the Development Partner logos will be used on program outputs and will be made visible and referenced on the GFDT website and Annual Report.

Collaborative Proposal Development

The World Bank staff supporting the various GFDT pillars will collaborate with the relevant global networks and Practices, as well as Bank regional and country teams, and other relevant departments within the World Bank to formulate proposals. These proposals will be consistent with the operational priorities as defined in the Country Partnership Frameworks, and with the overall objective of the GFDT. All proposals will be assessed in relation to their substance, scalability, and benefit, prior to being accepted for inclusion in the GFDT work plan.

Where appropriate, there will be co-management / co-financier responsibilities and roles with other World Bank Group MDTFs, including joint projects teams. The intention would be to facilitate innovation through collaboration and minimize any risk of duplication. Examples include E-mobility activity where Energy Sector Management Assistance Program (ESMAP) can fund work on batteries and charging stations, and GFDT can fund work on infrastructure and policies. In the Urban space, there would be coordination with the Sustainable Urban and Regional Development (SURGE) Umbrella MDTF. In the climate change space, GFDT will collaborate with the Climate Support Facility (CSF) and the Climate Emissions Reduction Facility (CERF).

The Relationship with other Trust Funds

During the last year, the World Bank has been implementing a comprehensive trust fund reform program to increase synergies and avoid duplication. The central innovation of the current phase of trust fund reform is the introduction of the Umbrella Program as a flexible way to align and manage development resources for results at scale — an approach that will result in fewer, larger more strategically aligned trust fund programs. Following these reforms, several umbrella programs are now operationalized in the World Bank with an overarching focus on climate change, including the Sustainable Urban and Regional Development (SURGE) Umbrella, the Climate Support Facility (CSF), the Climate Emissions Reduction Facility (CERF), and The Global Program for the Blue Economy (PROBLUE), among others. GFDT follows this new framework and has systematically engaged other relevant Umbrella Programs to align work programs and to avoid duplication and ensure maximum impact with coordination. Where appropriate, there will be co-management / co-financier responsibilities and roles with other World Bank Group MDTFs, including joint projects teams. The intention would be to facilitate innovation through collaboration and minimize any risk of duplication. Examples include (e.g. E-mobility activity where Energy Sector Management Assistance Program (ESMAP) can fund work on batteries and charging stations, and GFDT can fund work on infrastructure and policies).

GFDT however is the only global multi-donor trust fund focused entirely on transport and the decarbonization and resilience of the sector. Given transport's highly complex nature and variety of modes, a sector-specific focus is greatly needed and helps differentiate GFDT from other programs dealing with climate change. Decarbonizing the transport sector will require significant knowledge generation, analytical work, and co-financing with World Bank lending

projects to pilot innovative solutions. This is because unlike in other sectors, such as energy, policy advocacy and the formulation of country-level strategies and projects, policies and investment programs, have been lagging in the sector. GFDT aims to fill this gap.

The World Bank's Transport Global Practice also manages two other global MDTFs to support the delivery of results for our clients. It is envisaged that the existing global transport MDTFs (the Mobility and Logistics (MOLO) MDTF and the Global Road Safety Facility (GRSF) (Box 1), will remain as standalone programs.

Box 1

The Global Road Safety Facility (GRSF)

The Global Road Safety Facility (GRSF) is a forerunner, and now partner, to the new Global Facility to Decarbonize Transport (GFDT). It is hosted by the Transport Global Practice of the World Bank and operates as global program providing external and internal grants, which advance global research, road safety advocacy, enhance World Bank's Transport GP operations and leverage road safety investments in client countries. GRSF also directly delivers road safety research projects, global and in-country guidance and manuals to enhance road safety knowledge, capacity and delivery. Since its establishment in 2006 GRSF has received or has donor commitments for \$74million in funding and manages 4 ongoing Trust Funds. Current donors and funders of GRSF's road safety work are Bloomberg Philanthropies, UK Aid (DFID and DHSC), CITA, Total Foundation, Government of Japan, and the World Bank.

By addressing three strategic objectives: (i) strengthening global, regional and country capacity to support sustainable reductions in road deaths and

injuries in LMICs; (ii) scaling up global road safety funding, coordination, and advocacy mechanisms to advance global road safety; and (iii) mainstreaming road safety components in all Bank-funded road infrastructure and urban projects, GRSF is delivering sustainable safety results for the World Bank, its clients and donors. By capturing synergies from grant-funded studies, technical assistance and training activities GRSF leverages road safety in Bank-financed projects. In 2019, the Program supported loans of the total value of almost \$4 billion and a leveraging ratio for road safety investments cautiously estimated at 1:40. In addition to mobilizing and guiding World Bank resources, GRSF Grants leveraged almost \$250 million of financial support from counterpart governments and other funders to safe roads investments.

Over 14 years of operation GRSF's impact has expanded to 78 countries, saving many thousands of lives by improving road safety outcomes of World Bank loans, through technical assistance, capacity building, and direct delivery of road safety interventions.

Source: Egypt-Vehicle Scrapping and Recycling Program (English). Washington, D.C.: World Bank Group.
<http://documents.worldbank.org/curated/en/324191468037493049/Egypt-Vehicle-Scrapping-and-Recycling-Program>



The Target Budget, Allocation Methodologies and Risks

The Target Budget

The ambition is to mobilize US\$200 million during a ten-year implementation timeline for the GFDT.

Tentative Allocation Methodologies

Allocation methodologies for donor contributions will be based on the nature of those contributions, likely to be a combination of competitive and direct allocations. For global contributions to the Umbrella's Anchor MDTF, the GFDT PMT will develop annual workplans and budgets per pillar, for regional activities in close coordination with regional Practice Managers and with inputs from Global Leads to ensure client demand orientation and alignment with regional and country strategies, and for global activities with Global Leads in leading roles with input from regional Practice Managers and others. These annual workplans will describe the essential background of the World Bank's work related to the pillar, major features of the relevant operational and knowledge portfolios including the main topics, issues, priorities and cross-sectoral challenges, before proposing how the funds will be used to address concrete challenges. The workplans will provide a description of the proposed allocation modality (competitive and/or direct allocations (Box 2) and will not include a full list of proposed activities, although indicative activities can be listed.

Box 2

Allocation modalities: competitive and direct allocation

Competitive allocations can be a useful mechanism allowing for flexibility to respond to emerging demands and to foster innovative ideas within certain criteria. This can be done through issuing a call for proposals within a certain timeframe or on a rolling basis, announced Bank-wide or through a more targeted distribution list. The GFDT Umbrella Program could apply the competitive allocation modality for specific pillars or a combination of pillars.

Direct allocations can include the allocation of a specified amount to a particular Region or unit – a block grant – or to specific individual activities. A block grant provides flexibility for the managing unit to allocate funds as appropriate, providing opportunities for more operational control and integration with Bank strategies. Individual allocations are used to fund specific areas of potentially high-impact work, aligned with GFDT priorities and objectives or existing funding gaps.

The workplans will be discussed with and reviewed by all relevant parties. This will involve an initial review within ITRGK (relevant thematic/program leads, TF program managers) as well as outside ITRGK (technical leads and practice managers in other GPs and TF Program Managers in these GPs, as relevant). After approval by ITRGK's leadership team, the annual workplans and budgets are shared with the Umbrella's PC for endorsement. For any Associated TFs, separate annual workplans will be formulated by the relevant TF teams, with clear indication which pillar the different components of a workplan are aligned with. For preferred contributions received through the Anchor MDTF, ITRGK will ensure adherence to the agreed preference to the extent possible within the pillar workplans.

The GFDT PMT will develop clear guidance and templates related to the allocation process. The specific focus will be on ensuring the involvement of relevant GPs to maximize the potential cross-sectoral synergies, whilst balancing risk and innovation with the demand for results. The GFDT Umbrella aims to align future allocations with the Bank's budget planning (WPA) process, by making indicative and if relevant notional allocations for the coming FY by February so that funding decisions can be taken into consideration in the WBG resource planning process. At activity/project/grant level, allocation decisions are taken by the Bank, and the standard formats and ADM processes used for ASA and IPF processing will be used.

Risks and Mitigation

The GFDT umbrella program will address a wide range of development challenges in an innovative and high-risk space. It will engage with multiple stakeholders, across multiple sectors, which comes with significant coordination and implementation challenges. A summary of the main risks that the GFDT is expected to face is provided in the table in Annex C, along with proposed mitigation measures.



Annex A

Pillars and Cross-Cutting Themes

Pillar 1

Inclusive and Safe Mobility and Accessibility

Objective

The objective of this pillar is to **promote inclusive and safe mobility and overcome barriers to enable access to jobs, markets, health care, schools, services, and other opportunities, mainly by the bottom 40 percent and other disadvantaged groups.** Among the goals of sustainable mobility is to connect all people and communities to economic and social opportunities, taking into account the needs of different groups, including the poor, those in vulnerable situations, women, children, the elderly, and persons with disabilities, across geographical locations.¹³ This pillar also aims at achieving sustainable reduction in transport deaths, injuries, and risk in low and middle-income countries, with emphasis on the road transport sector.

Mobility and accessibility are two facets of the same coin, which are critical for sustainable economic development and play a large role in developing and preserving human capital.

Why It Matters

Mobility and accessibility are two facets of the same coin,¹⁴ which are critical for sustainable economic development and play a large role in developing and preserving human capital. Limited access to transport in rural and urban areas are key barriers to eradicating poverty while promoting property and sustainable economic de-

velopment. There is clear evidence that transport directly increases people's ability to better themselves and produce more economic and social value.¹⁵ In cities, transport is the element that makes the labor market work. Employees can find jobs if they can leave their house to reach a job in an affordable, safe, and clean mode of transport. Employers for their part can recruit from a larger pool of workers. Reliable transport allows workers to reach their jobs and still have energy to be productive.¹⁶ Long commuting times due to buses stuck in traffic surrounded by cars, hurts workers who arrive late and tired. High costs of transport can price out the poor who cannot leave their house to seek a job or must walk inordinate distances to reach an opportunity. Transport is the bloodline that makes cities work, because it provides access to jobs and other opportunities.

The main beneficiaries of sustainable transport are the majority that must leave their house in order to make an income.¹⁷ In rural areas, where most of the world's poor live, limited access to transport is a key challenge to eradicating poverty and promoting sustainable economic development.¹⁸ In Africa alone, around 450 million people (more than 70 percent of its total rural population) suffer from a lack of accessibility and mobility due to missing transport infrastructure and systems. In urban areas, where an additional two billion people are expected to be living in cities by 2045, the growth in population and vehicles is far outstripping the growth of sustainable urban transport including public and non-motorized transport. Even cities with few cars per thousand inhabitants experience serious traffic congestion. Congestion is regressive because a bus with 40 passengers is slowed down by the cars around it that carry at most 1.2 people per car.

Transport Safety is an integral part of providing mobility and a key developmental as well as humanitarian agenda; addressing crash deaths, injuries, and the economic burden they generate as well as personal traffic safety risks. While the transport safety agenda is dominated by the road safety problem, with 1.35 million lives and over 50 million injuries suffered globally every year, the safety of aviation, railways and maritime sub-sectors require a lot of attention and support through WB projects as well. Transport events cause deaths and trauma generating large costs for LMICs: Road crash deaths and injuries alone cost many LMICs over 5% of their GDP each year and are proven to seriously delay long-term economic growth.

The How

This pillar's objective will be achieved by promoting sustainable transport in developing countries for door-to-door travel in urban and rural areas. Sustainable transport refers primarily to public transport and active mobility (walking and biking). Last mile connectivity can be supplied through feeder buses, walking, biking, and New Mobility such as shared rides –bikes and less so automobiles. This improved door-to-door transport must be a valid alternative to traveling by car to lower the greenhouse gas footprint of transport. Promoting public transport includes building rail- and bus-based mass transit lines that incorporate best practices in project preparation and management plus sustainable operations that are also resilient to climate change and other natural hazards. Public transport in many cities also needs reforms to formalize workers, improve labor standards, and improve service quality while striving for affordability.

Interventions to promote inclusive and safe mobility can be grouped in four categories, depending on whether they help in (i) avoiding the demand for high-carbon modes; (ii) shifting passenger trips towards cleaner transportation alternatives; (iii) improving the means whereby mobility services are offered; and (iv) increasing passenger systems resilience.

- ▶ The first group –avoid–, includes interventions to promote sustainable mobility management of demand for passenger mobility, with a focus on how the built environment, policies, and technologies can help eliminate, shorten, or reduce the frequency of passenger trips. Land use planning and the ideas of transit-oriented development and the 30-minute city are key levers for managing demand for travel. Also, when it comes to technology, digitalization and the rise of telecommuting could have profound impacts on travel demand, particularly in the wake of the Covid-19 pandemic.
- ▶ The second group –shift– considers interventions aiming at making low-carbon modes more attractive in a fare game of competition and substitution among modes. Here the built environment, policies, and technology can shift passenger travel from more carbon-intensive modes of transport such as personal cars or airplanes to less carbon-intensive modes such as intercity rail, public and informal transit, walking, and cycling.
- ▶ The third group –improve– includes efficiency enhancing interventions in passenger transportation systems. Traditional efficiency enhancements interventions such as better route planning, policies to keep a safe and functional fleet (motorization, fleet renewal, scrapping, etc.), are now powered by recent gains in vehicle electrification technology, the potential promise of hydrogen vehicle technology, and the rise of digitalization to improve trip planning, payment, and vehicle routing. All these options combined have renewed interest in efficiency enhancements as ways to improve current transportation systems and with that the passenger system carbo-footprint.
- ▶ The fourth and final group, –resilience– includes interventions that can help manage shocks –let those be from climate events or other events–in way that the system becomes less vulnerable to the shock or able to bounce back quickly. In the context of the pandemic, health and safety protocols have become a prominent part of the transport resilience agenda (Table 3).

Table 1.

GFDT Pillar 1 Inclusive and Safe Mobility and Accessibility: Engagement Areas

Avoid - Managing Demand

- ▶ Demand Management Policies and Regulations
- ▶ TOD, Urban Planning
- ▶ Telecommuting/E-Services

Shift - Modal Competition and Substitution

- ▶ Public Transport
- ▶ Non-motorized Transport
- ▶ New (Shared) Mobilities
- ▶ Road Safety
- ▶ Gender and Transport

Improve - Efficiency

- ▶ Cleaner Technologies, Electric Mobility and Alternative Fuels
- ▶ Motorization and Fleet Renewal
- ▶ Intelligent traffic systems

Enhance Resilience of Systems

- ▶ Urban Accessibility
- ▶ Rural Accessibility, Lagging and Isolated Areas
- ▶ Basic lifeline mobility and connectivity
- ▶ Lifeline financial support

The complexity of delivering effective transport safety solutions requires a more systematic, results-focused approach that recognizes the vulnerability of road users, the multi-sectoral nature of safety and the need to address issues across the transport system. Explicitly, this requires shifting away from fragmented, isolated interventions, particularly the ones focusing on fixing the inevitably fallible road user. The following areas of interventions need to be supported across all transport modes (roads, railways, air, maritime, inland navigation) following Safe System principles.

- ▶ **Strengthening global, regional and country capacity to support sustainable reductions in transport caused deaths and injuries in LMICs.** This should be achieved by supporting the development of global, regional and country strategies, institutions, investments, improved crash data programs and practical tools, sharing rigorously evidence-based knowledge and good practices to maximize sustainable safety outcomes.
- ▶ **Scale-up global, regional and country transport safety funding, coordination & advocacy mechanisms.** Road safety and indeed other transport safety agenda are dramatically under-funded receiving less than one thousandth of the funding of malaria on a per death basis. This may involve cooperation with partners across all sectors to build the strong coalition needed to advance the global road safety agenda.
- ▶ **Assuring safe transport solutions in all World Bank funded infrastructure projects with potential impact on safety.** This can be achieved by ensuring that transport safety considerations are more fully appreciated by client countries and become mandatory in all World Bank-funded infrastructure projects.

The pillar's objective is achieved by the proper planning, design, implementation, operations and maintenance of inclusive, safe and accessible transport systems and services. The context can range from dense urban areas to rural, isolated, or fragile areas.

Pillar 2

Integrated and Competitive Logistics and Connectivity

Objective

The objective of this pillar is to enhance countries integration to regional and global value chains and integration of lagging regions through effective and reliable connectivity and efficient logistics. The approach generally involves a robust strategic assessment of the type and timeline of improvements to the connective infrastructure and enabling environment for logistics services. This is undertaken in parallel with additional assessments of the spatial impacts of those interventions, with a focus on stimulating wider economic benefits and poverty alleviation at the local level, and carefully targeted political economy work to understand what is acceptable in a particular context.

Why It Matters

Preparing for the future requires improving transport's contribution to boosting the competitiveness, productivity and the effectiveness with which countries insert themselves in global value chains. The role transport corridors have in shrinking physical and economic distance, promoting growth through competitiveness and stimulating wider economic development is undeniably vital. Developing and strengthening corridors potentially involves the expansion of waterways, roads, rail, airports and ports. Increased incomes and growing populations mean that transport is more in demand than ever—for tourism, imports and exports, services, economic migration, and jobs. Without modern global and domestic supply chains, and without logistics and multimodal transport, countries have no opportunity to escape poverty and countries cannot benefit from global value chains and economies beyond their borders: even the most thriving economies would struggle.

Reducing the cost of moving goods by improving the efficiency of transport networks and services is central to revive global trade. The rapid increase in trade over the last few decades enabled poor countries to grow faster and begin to catch up with richer countries. Between 1950 and 2018, world trade grew at an average rate of 5.5 percent per annum. A 1 percent increase in global value chain participation, which drove the growth in trade after 1990, is estimated to boost per capita income by more than 1 percent.¹⁹ This convergence led to significant poverty reduction. Today, however, trade on its own right might not be a force for prosperity. Since the global financial crisis of 2008, the growth of trade has been sluggish. The key driving forces behind the recent wave of globalization were lower barriers to trade and investment, and lower transportation and communication costs. As trade negotiations have steadily reduced tariff rates, the contribution of transport costs to total trade costs is rising.²⁰ Therefore, reducing the cost of moving goods by improving the efficiency of transport networks and services is central to revive global trade.

Despite the increased globalization of production and trade, the world today is still far from being a single integrated economy. Landlocked developing countries (LLDC), accounting for about one-fifth of the world's nations, face higher transport costs than coastal countries. Stone (2001)²¹ shows that freight payments as percentage of total imports were 4 times higher in landlocked African countries than in industrial countries. Not only physical and economic distances matter across countries, they are notable within countries and often within cities. In Ethiopia and Nigeria, the cost of moving goods (per unit distance) domestically is estimated to be about 3.5 and 5.3 times higher than in the US, respectively.²²

As a result of the pronounced physical and economic distances across and within countries, the gains from trade are not distributed equally across and within countries. Landlocked countries trade less (on average 30 percent less) than coastal countries and experience weaker growth (on average 1.5 percent lower) than coastal countries.²³ The benefits of Bangladesh's success in apparel export are concentrated in the eastern districts, with 100 percent of exports of ready-made garments being manufactured in Dhaka (the capital city) and Chattogram (the city with the main seaport), while poverty in the southwest, which is poorly connected to the main economic centers, is higher than in most eastern districts.

The How

Integration and competitiveness demand experience and advantages identifying, preparing and implementing regional and multi-country projects. It also involves mobilizing resources to undertake the more strategic analytical work to investigate the potential of disruptive technologies and (near) just-in-time data. Only under these conditions can the integration of network industries (e.g., telecommunications, electricity, transport) can also generate significant economies of scale and scope. Moreover, integration can give rise to network effects: it increases the size of the network and thus expands the number of economic agents that interact with each other or the range of complementary products and services that are available to its members.

Interventions to promote integrated and competitive logistics and connectivity can be grouped in four categories, depending on whether they help in (i) avoiding the demand for high-carbon modes; (ii) shifting cargo movements towards lower-carbon transport modes like railways and inland water transport (IWT); (iii) improving vehicle utilization, route optimization, increasing energy efficiency, and switching to lower carbon energy; and (iv) increasing transport systems resilience.

The *first* group –avoid– includes measures to reverse the growth of freight kilometers traveled or redirect movement through changes in behavioral aspects of shippers, receivers and carriers. Re-engineering of supply chains to use local and multiple providers, change inventory practices, reduce fragmentation of production and even reallocated production closer to customers; are among elements for avoid the polluting mile that can be considered.

Table 2.

GFDT Pillar 2 Integrated and Competitive Logistics and Connectivity: Engagement Areas

Avoid - Managing Demand

- ▶ Urban Logistics and E-Commerce
- ▶ Economic Corridors, localization of production
- ▶ Re-engineered supply chains

Shift - Modal Competition and Substitution

- ▶ Competitive low-emission modes
- ▶ Multimodality
- ▶ Safety to non-Road Modes

Improve - Efficiency

- ▶ Efficient and Sustainable Logistics and Supply Chains
- ▶ Green Logistics
- ▶ Green Ports and Decarbonization of Shipping
- ▶ Fuel standards and cleaner fuels
- ▶ Trucking sector reform
- ▶ Digitalization of Corridors, Ports and Airports

Enhance Resilience of Systems

- ▶ Resilience of Supply Chains
- ▶ Resilience and Adaptation to Climate Events
- ▶ Special protocols to safeguard health and security of transport services
- ▶ Regional Connectivity
- ▶ Fragility and reconstruction
- ▶ Landlocked and Small Island States

The **second** group –shift– considers interventions aiming at enhancing inter-modality and making low-carbon modes more attractive in a fare game of competition and substitution among modes. The built environment (e.g., existing corridor and intermodal infrastructure), policies (e.g., pricing and regulations), and technology can promote the shift of cargo from more carbon-intensive modes of transport (such as fossil fuel-powered trucks) to less carbon-intensive modes (such as rail, waterways and short-sea shipping). For embracing a carbon-neutral future, it is critical that corridors and cargo mobility consider a blend of transport modes and embrace the promotion modal shift towards cleaner lower-emission modes such as railways, inland waterways and short-sea shipping. This complex transition ways from trucking requires strengthening inter-modality, a more systematic integration of freight flows using modern technologies and data platforms; and the systematic development of networks of logistics centers that support consolidation of cargo, linkages to markets, adoption of cleaner fuels when creating centers for clean-fuel provision.

The **third** group –improve– focuses on technological improvements, including traditional ones as well as switching to energy-efficient and low-carbon fuel vehicles/locomotives/vessels/aircrafts as well as network optimizations that can increase vehicle utilization and the speed and reliability of logistics flows.

The **fourth and final** group –resilience– includes interventions that can help manage shocks –let those be from climate events or other events–in way that the system becomes less vulnerable to the shock or able to bounce back quickly. In the context of the pandemic, health and safety protocols have become a prominent part of the transport resilience agenda (Table 4)

In order to reach net zero emission targets, all the above measures will need to be deployed; however, the nature and timing of their application will vary by country. It is also critical to unlock the bottleneck of capacity and governance. Inadequate policies and regulations, uncompetitive logistics service markets, lack of integration and lack of adequate skills are some of the reasons logistics costs, particularly the transport share, are high in most developing countries, cleaner technologies are not adopted and investment in inter-modal platforms is thin. Well-planned investments are needed to make greener modes available and efficient, intermodal platforms and logistics centers available, and –very important—deep-dive in making enabling infrastructure available for modes that use and will use cleaner fuels, for instance electrification of trucking corridors, decarbonization of shipping and green ports, and digitalization of ports and railways.

Cross-Cutting Theme

Institutions, Policy and Financing

Objective

This objective of this cross-cutting theme is to strengthen the institutional, regulatory and financial dimensions of transport provision. This cross-cutting theme touches upon the provision of all transport modes and their interconnection, services, as well as physical infrastructure for passengers and cargo, at the national and subnational level. It also spans on issues such as multi-modality and non-motorized transport, as well on the financial sustainability (sector, agency, and state-owned enterprises), and innovative financing mechanisms.

This cross-cutting theme creates the necessary foundations to all the actions and investments in the transport space. As a cross-cutting issue, sector governance, regulation, funding and financing are the backbone that support the role of transport as a mean to connect markets, create jobs and innovation, and improve human capital.

Why It Matters

The performance of the transport sector is particularly sensitive to the quality of its governance. In fact, the landscape of transport governance is particularly complex when looking at the different actors involved. National and subnational institutions, in many cases with diffuse borders in terms of responsibilities, cohabit with regulated and unregulated transport solutions. Often, transport governance is also impaired by a lack of a sector vision, or when it exists, by a focus on infrastructure rather than on mobility, and disconnected from other developments in the urban and rural space. There is not a unique transport governance structure, even when policy, implementation and oversight functions are clearly recognized in most transport modes. In fact, each transport mode is characterized by its governance structure depending on whether it is necessary to regulate on different dimensions. And even within the same transport mode, governments may follow a different governance structure depending on the development of the sector.

The sector faces a complex regulatory agenda with several goals but limited achievements in some areas. The provision of connectivity as an ultimate objective of transport is confronted to multiple regulations to achieve allocative and productive efficiency, financial and environmental sustainability, including transport decarbonization, safety, gender, and social dimension, among others. The complexity of these regulations and limited institutional capacity is reflected in the many indicators covering the quality of transport infrastructures and services.²⁴ Undoubtedly, the difficulties lay on limited resources. but the multiple layers of governance dictating the agenda does not facilitate the challenge. And while these issues are more notorious in developing countries, more advanced economies also find similar difficulties. There is a risk, for instance, that the lack of a conducive governance and regulatory framework lock-in users into less friendly environmental solutions.

Transport is never short of regulatory challenges. The transport sector combines most if not all the market failures and externalities that call upon regulation and government interventions, namely: assets services with public goods characteristics (no exclusion, no rivalry), with evident externalities (pollution, congestion, network dynamics) and segments of the provision chain that can be characterized as natural monopolies (railways and metro tracks, multi-modal and inter-modal platforms). Therefore, the transport sector is not alien to regulations pertaining third-party access, social pricing and tariff integration, or the direct provision and financing of investment by public funds, among others. However, nowadays, transport systems, their governance and planning are being structurally challenged by the emergence of new business models and new types of transport services rooted in technological developments, the data and digital revolution, and the social behaviors and trends linked to those. In the transport realm, to add to the complexity, regulated and unregulated solutions coexists.

The **effects of regulated and unregulated transport solutions on sector funding is not always clear for policymakers**, and it translates into some trade-off between taxpayers' resources and transport prices. Affordability/competitiveness also adds to the complexity of the sector along with the externalities of any sign coming from the transport solutions. Many good intentioned attempts to fix externalities may also find strong opposition from society if they don't come with some alternative solutions.

Getting sector fundamentals right can also help mobilize commercial financing and innovative solutions, including those to decarbonize transport. Transport infrastructure and services demand important resources to make them financially viable. Insufficient funding is one of the causes of a non-performing transport sector. It also requires lenders, investors and a framework to channel these resources into public or private initiatives (project bond, PPP, SOEs, commercial activities, etc.). Moreover, transport infrastructures are long-lived assets and thus, matching their cash-flows with long-term financing brings some efficiencies. The use of commercial financing can help by bridging the public finance gap along with some incentives and oversight on how these assets are operated. Setting an enabling framework to connect the dots between investors and the government while minimizing the cost of capital.

The success of any transport investment intervention at the regional, national or even project level is contingent upon the institutional, regulatory and governance context. In particular the WB treat transport investment as a system giving equal relevance to improve governance on multiple dimensions (planning, procurement, operation, etc.) and knowledge sharing. The outcome of these activities depends much on the initial conditions of the implementing institution, the regulatory framework and the enabling environment for the private sector to step in, but the goal toward success involves paying attention to all these elements.

Table 3.

GFDT Cross-Cutting Theme Institutions, Policy and Financing: Engagement Areas

Cross-Cutting Theme: Institutions, Policy and Financing

- ▶ Governance and institutions
- ▶ Regulation and competition policy
- ▶ Sector funding and debt management
- ▶ Financing transport / innovative solutions
- ▶ Asset Management

The How

Institutions, policies and regulations are essential for decarbonization of transport with the view of mobility as a system. The identification, implementation and fine-tuning of the appropriate regulations are linked to the sub-sector, region or sub-region and the incentives for consumption and affordability. Moreover, institutions, policy, and financing –as a foundational theme of the transport sector and the decarbonization strategy– should be a structural element of every single operation and decision taken regarding mobility and transport. Notably, each transport solution is characterized by its own governance structure. Ensuring a common ground and the coordination among the different transport solutions, however, is crucial to achieve efficiency, enhance resilience (environmental and financial), and address other agendas in transport. While embedded in each intervention, targeted action to improve institutions, governance and advance policies, sector-wide reforms and even pricing reforms targeting decarbonization of the sector are ends unto itself and can be themes for recovery packages in general as much as for policy loans.

The governance, institutional and financing dimensions of the transport sector cover the following areas: (i) Legal framework and institutional capacity for planning, appraisal, prioritization and selection; (ii) Economic efficiency and value for money; (iii) Affordability, sector and fiscal sustainability; (iv) Procurement; (v) Life cycle cost, contract management; (vi) Frameworks for environmental and social considerations; (vii) Data availability and transparency; (viii) Integrity ; (ix) Regulatory frameworks; and (x) Competition policy issues; (xi) SOEs governance, financial and operational performance; and (xii) Innovative financing for decarbonization; and others (Table 4).

Particularly relevant for GFDT is the understanding of pricing mechanisms, carbon taxes, energy pricing reforms, and making sure that funding and financing with private sector leverage is available and interested in taken the lead in advancing investments in enabling infrastructures for the adoption of newer and cleaner technologies and the use and shift to cleaner of fuels. By getting the governance and sector fundamental rights, this theme will contribute to mobilize commercial finance and develop markets for financing the path to decarbonization.

This cross-cutting theme will build on and from different frameworks developed by the World Bank such as the Infrastructure Sector Assessment Program 2.0, the new launched InfraGov initiative, and the more general frameworks including among others the Public Investment Management Assessment (PIMA), Public Expenditure and Financial Accountability (PEFA).

Cross-cutting Theme

Transformative Technologies

Objective

Transformative Technologies (TT) has emerged as one of the most challenging development issues globally, rapidly transforming the way people move and goods delivered. The objective of this crossing-cut theme is **to shed light on how transformative technologies can benefit and improve the way countries get the best returns out of their transport and mobility decisions**, including grabbing opportunities to leapfrog and accomplish a digital moon shot in the transport sector.

Transformative technologies are bringing exciting changes to the transport sector for both passengers and freight. **The issue of how to realize positive dividends from innovations is closely related to all four pillars and overarching goal.** Effective adoption of new technologies and/or service models may require changes to mobility institutions, policy and financing; Technologies provide new promises for inclusive access and mobility for all; Developing countries can use the opportunities of technologies to leapfrog in the transport sector and enhance the competitiveness, productivity and effectiveness; Technologies also provide new solutions to achieve net zero emissions and enhancing the resilience of both the transport sector and the economy. Therefore, this cross-cutting theme of transformative technologies is an important enabler for all other pillars that will steer the world towards a more secure, inclusive and smarter future through a sustainable transportation network.

Why It Matters

The relationship between users and providers of passenger transport services is becoming anchored in digital platforms that enable ride-sharing; and through which booking, ticketing and payment becomes a simple and transparent option. Moreover, digital platforms normalize the integration of diverse services from public transportation to car and bike rental systems, through to micro-mobility options. Rapid digitization forces transport providers to set-up their own applications to participate in integrated platforms and create a much more dynamic and competitive supply of providers and services that come in and out of the market many times *per day* (making the supply stock dynamic), that do not engage in sunk capital investment (structurally changing the production function) nor necessarily complying with safety and driving regulations and standards developed under traditional models. In freight, the integration of all modes via communication technology, the possibility of “commoditizing” space in containers and barges, the use of semi-autonomous trucks, block chain and the option of remotely monitoring and restricting drivers’ behaviors are four examples of how freight logistics are affected by new technologies. The impact of these changes can only be compared in importance to the introduction of the standardized container after World War II.

Sustainable and smart mobility is a fundamental solution to poverty reduction and shared prosperity as transport networks are the physical, social, and economic network connecting people to opportunities and countries to prosperity. To achieve shared prosperity through the benefit of technology adoption, there is an urgent need to advance the adoption and appropriate deployment of innovative practices and transformative technologies in the transport sector.

Convergence of technological and management innovations in different areas during the past 10 years brings exciting opportunities to the transportation sector. For transport and development practitioners, opportunities for transforming lives are enormous albeit demanding a structural change of existing business models. Modern transport systems are being structurally challenged by new business models and new types of transport services that have flourished by technological developments, data and digital revolution, social behaviors and trends linked. The key technological innovations related to transportation fall into one or more of the following categories: connectivity, digital platforms, automations, integration into legacy systems, and sustainable energy. Artificial Intelligence (AI), 5G tech, Internet of Things (IoT) are affecting the movements of people, goods, and information through the world. Multi-trip planners support the on demand multi-modal choices for a single trip available at the fingertip of a smartphone user.

New mobility services propelled by technological innovations are user-centric and demand-responsive, thus are smarter compared to the legacy system, with the enabling environment created by the open data available. Digital transformation and disruptive technologies are seen in ride sharing and creating new possibilities for doorstep delivery of goods purchased online. Drones are delivering life-line medical packages in remote areas to save lives. Although still in the testing mode, Connected and Autonomous Vehicles (CAV) have moved from laboratories to the city street, providing new options of driverless operation, with the potential to unlock higher safety performance. The number of vehicles powered by electricity from renewable energy sources are growing. Electric Mobility and alternative fuels, as green hydrogen, also offer low-carbon and adaptive mobility to reduce GHG emissions from transport and improve air quality. Digitalization and Internet of Things (IoT) technologies are making ports smarter and more resilient to disruptions and economic shocks.

While these technological and management innovations are very promising, there are still many issues to be addressed. The transport sector is prone to market failures, and technological innovations are not immune to this. How the world manages technological shifts will have profound consequences for the impact on efficiency, congestion and access to social and economic opportunities. The monthly trips served by the shared mobility²⁵ in the New York City grew from 2.4M to more than 20M in just three years, expanding the travel options for travelers, while at the same time indicating the shifting trend from public transport usage to ride sharing that may lead to the unhealthy decline of public transport. Studies showed that shared mobility is one of the biggest contributors to the growing traffic congestion in

Table 4.

GFDT Cross-Cutting Theme Transformative Technologies: Engagement Areas

Cross-Cutting Theme: Transformative Technologies

- ▶ Connected and Autonomous Vehicles, and Drones
- ▶ Smart Infrastructures (smart road, innovative sensors, new facilities)
- ▶ Connected Agencies (policy/regulation for transformative technologies)
- ▶ People-centric Intelligent Transport Systems and Smart City Digital Platforms
- ▶ Data-drive Technologies and Communication Protocols

New York city and San Francisco. However, potential negative impacts can be mitigated and should not deter us from pursuing positive dividends, for example as providers of last mile connectivity. Travel behavior monitoring platforms based on smartphone data and big data analytics also played a critical role in saving lives by providing timely human mobility data to policy makers during COVID-19. Such technology indicated great potential in unlocking low-cost alternatives to the National Household Travel Surveys, which has costed as much as \$10M for the 2001 round. Moreover, embracing the digitalization of transport and integrating disruptive technologies may also be a promising way to adapt to a crisis such as the coronavirus pandemic while laying the foundation for more sustainable urban transport.

The How

To achieve these objectives, this area will preserve a three-prompt framework:

“Why”: Why do transformative technologies in the transport sector matter to development? Why is the participation of government agencies and intergovernmental organizations in the process both critical and beneficial for maximizing positive results? there is a need to explore the social and economic benefits that can result from the adoption of transformative technologies and identify the way that these address key development challenges, such as poverty, inequality, and climate change.

“What”: What is transformative technology and what technologies are available? What makes the adoption of transformative technologies in the transport sector viable for countries from a societal perspective? Characterizing the spatial, social and economic contexts and learning from the existing experiences where policies, projects and interventions have led and can lead to optimal results is critical; and

“How”: How to transform to a more sustainable, inclusive and affordable mobility systems by leveraging trans-

formative technologies and existing global experiences? Defining policy alternatives, interventions and evolution paths is of utmost importance for the program to derive lessons of how things can be done. These demand a multi-disciplinary approach that includes: i) the engineering perspective, by structuring existing knowledge and international experiences in TT, ii) the economics perspective, by examining the economic, social and environmental impacts of these technologies under a development context, and iii) the policy perspective, by providing information to decision-makers on how to better plan, operate, manage and regulate transformative technologies in the transport sector.

Four of the most essential and critical elements in the transport network will form the main pillars in this area: i) Users, ii) Vehicles, iii) Infrastructures and iv) Agencies, which will be aligning with the TT that are shaping and reshaping the landscape of the transport network.

To achieve the objectives, strategies are required that combine the application of technologies and the understanding of behaviors, with good management practices. The Bank has advised dozens of clients in all regions of the world on these challenges and opportunities through its lending, convening power, technical assistance, and other instruments. The Bank is unique in being able to provide sound and unbiased technical advice to clients being independent of commercial interests.



Annex B

Indicative Results Framework²⁶

Overarching Goal Decarbonization and Resilience

- ▶ Percentage of projects undertaking Greenhouse gas emissions analysis
- ▶ Climate co-benefits: financial value of the low-carbon and resilient actions in each activity
- ▶ Projects applying a Shadow Price of Carbon to emissions on the economic analysis
- ▶ Avoided or eliminated greenhouse gas emissions
- ▶ Avoided PM 2.5 emissions
- ▶ Total CO2 emissions reduction
- ▶ Fossil fuel savings
- ▶ Activities undertaking Climate and Disaster Risk Screening: Helps mitigate risks of extreme precipitation and flooding that can affect the performance, durability, and accessibility of road and other transport infrastructure, resulting in temporary or permanent suspension of transport services.
- ▶ Comprehensive Asset Management and maintenance plans in place
- ▶ Project-financed assets under sustainable and resilient maintenance contracts

Pillar 1

Inclusive and Safe Mobility

- ▶ Number of people with enhanced access to transportation services
- ▶ Percentage of accessibility-informed urban transport projects
- ▶ Number of passengers per day using BRT/mass transit system
- ▶ Beneficiaries expressing satisfaction with improved transport conditions
- ▶ Grievances registered and addressed in a timely manner
- ▶ Rail and Urban Projects that are Disability-Inclusive in their design
- ▶ Operations compliant with WB's Gender Tag
- ▶ Percentage of female staff hired in mid-level/managerial positions for project works or maintenance
- ▶ Length of pedestrian/bike paths rehabilitated and improved for NMT
- ▶ Improvement of access conditions in train and public transport stations to encourage ridership
- ▶ Percentage of projects in compliance with Road Safety Transport requirement
- ▶ Reduction of road crashes or fatalities
- ▶ Urban/rural roads constructed or upgraded with climate resilience measures (landslip, rock fall protection, coastal protection, etc)

Pillar 2

Integration and Competitiveness

- ▶ Roads Constructed/Rehabilitated (Transport CRI)
- ▶ Reduction in average travel time
- ▶ Percentage of population benefited with improved transport connectivity
- ▶ Percentage of population with access to the city center within 60-minute commute
- ▶ Percentage of jobs accessible within a 60-minute commute using non-private transport
- ▶ Average processing time spent for customs clearance and border crossing
- ▶ Increased access to markets and trade opportunities
- ▶ Rural Accessibility Index (population living within 2km of an all-season road)
- ▶ Reduction in vehicle operating costs

Cross-Cutting Theme

Institutions, Policy and Financing

- ▶ Institutional Strengthening of Transport and Road Safety agencies
- ▶ Efficiency in Public Expenditure: assets constructed conforming to cost-optimization strategies
- ▶ Enhanced Policy Guidance and oversight of transport programs

Cross-Cutting Theme

Transformative Technologies

- ▶ Use of crowdsourcing technologies for mobility planning/traffic management
- ▶ Adoption of ICT-based border management systems
- ▶ Use of ICT for revenue collection/improved access
- ▶ Use of digitization processes in the logistics value chains

Annex C

GFDT Risks and Mitigation Efforts

RISK FACTOR	COMPLEX PROJECTS
Likelihood Moderate	Interventions in the transport sector are often multi-modal, wide-ranging, cross-sectoral, multi-disciplinary, involving multiple stakeholders and requiring significant resources and expertise. This makes them complex and therefore challenging to successfully implement, presenting the risk of possibly not fully achieving its targeted outcomes.
Impact High	Mitigation World Bank's competitive advantage and institutional strengths lay in addressing complex development challenges. The institution thrives in brokering global knowledge and adapting it to the local context. Nevertheless, it always remains a challenging task to engage in cross-sectoral work and to coordinate with multiple stakeholders. GFDT will therefore encourage project teams to include team members from different sectors and invite cross-sectoral peer-reviewers for program reviews. It will also encourage local partnerships and well-planned stakeholder engagement processes. Additionally, the GFDT team will examine the design of the proposed interventions, to assess whether the proposed interventions are not overly complex and therefore unviable.
RISK FACTOR	FRAGMENTED SUPPORT
Likelihood Moderate	Donor preferencing could undermine and potentially fragment programs and result in critical gaps that affect the ability to deliver higher-level results.
Impact Moderate	Mitigation Donor partners may want to allocate funds towards a specific initiative or program rather than at the Umbrella level. This can partly be mitigated when necessary through non-binding geographic or thematic preferencing in the Administration Agreement, annual update meetings, and highlighting the benefits in terms of efficiencies and reduced transaction costs through consolidation under the Umbrella.
RISK FACTOR	OVERLY AMBITIOUS GOALS AND INDICATORS
Likelihood High	Pressure to report on high-level and ambitious indicators pose the risk to commit to targets that may be not be realistically achievable or attributable and measurable
Impact Low	Mitigation Both internally and externally there is a desire to deliver impressive development results. The higher the level of results however, the more dependent it is on a broader range of exogenous factors and therefore more difficult to link and attribute to GFDT interventions. This may also lead to a bias away from engaging in projects that would deliver results Measuring of certain results may also be very costly and time-consuming. The PMT will therefore weigh for each agreed indicator what the expected achievability and costs are of a specific target. Additionally, targets will be adjusted based upon the GFDT resources made available by donors. Focus will be on demonstrating the results of interventions supported by GFDT and on using indicators that are Specific, Measurable, Attributable, Realistic, and Time-bound.

RISK FACTOR **EXTERNAL CONDITIONS**

Likelihood

Moderate

Impact

High

The success of the program may also depend on external factors outside the program's control. These include global economic conditions, socioeconomic context in client countries, ongoing effects of climate change, lasting impact of the current COVID-19 crisis, prevalence of natural disasters, political and stability concerns, and more.

Mitigation

Annual work planning with the Partnership Council will allow the Bank and Donors to mutually evaluate factors outside control of the program. On an annual basis, the Bank will identify these issues, their potential impacts, and suggest mitigation measures during the GFDT yearly Partnership Council meetings.

RISK FACTOR **FUNDRAISING CONTEXT**

Likelihood

Moderate

Impact

High

Due to the near-term constraints caused by the COVID-19 pandemic, there is a risk of not being able to mobilize funding as per the proposed targets and timelines, thereby potentially limiting the contributions in the initial phase of the program.

Mitigation

In the context of an evolving global health crisis, there is a risk that the significant social and economic effects of the COVID-19 pandemic may compel GFDT donors and recipient countries to shift (part of) their focus. Such risk can be partly mitigated by including pandemic resilience within the scope of the GFDT program and by continuing close consultations with potential donors. It will be important to carefully plan the program and adjust proposed targets according to what realistically can be achieved with the pledged funds.

RISK FACTOR **MULTI-STAKEHOLDERS' INVOLVEMENT**

Likelihood

Low

Impact

High

The involvement of many different stakeholders may hamper efficient coordination and collaboration.

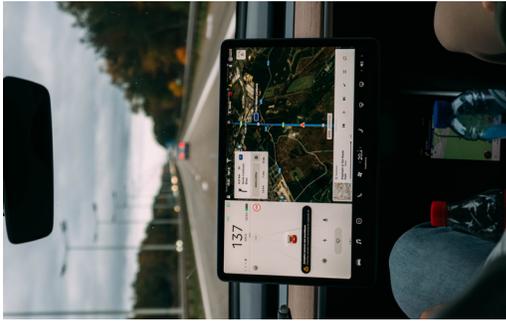
Mitigation

Numerous stakeholders are involved in the transport sector. They may include central governments, municipalities, city agencies, local communities, provincial governments, private entities, NGOs and others.

GFDT will make use of SuM4All and its global consortium of private sector and business association, MDBs, civil society, international organizations, and UN agencies to ensure coordination.

RISK FACTOR	CLIENT COMMITMENT
<p>Likelihood Low</p> <p>Impact High</p>	<p>Government and stakeholders' buy-in and willingness to commit to long-term policy changes and improvements may be limited.</p> <p>Mitigation</p> <p>To achieve its objectives, GFDT will need the ongoing commitment and support of (local) government agencies and other stakeholders to transform practices and adapt to new improved systems. To warrant commitment, GFDT will focus on supporting client-demand driven projects. Throughout the project cycle, Bank teams engage in frequent oversight of project implementation and stay in close touch with country counterparts. This raises opportunities for fine tuning and adjustment through implementation and focus attention on the need to maintain high commitment and focus on results.</p>
RISK FACTOR	CAPACITY CONSTRAINTS
<p>Likelihood High</p> <p>Impact High</p>	<p>Capacity limits of (local) government agencies, especially institutional and human resources, could limit project success.</p> <p>Mitigation</p> <p>Weak capacity of participating government agencies will be addressed by providing training and other resources.</p> <p>GFDT specifically focuses on capacity development through its foundation pillar on Institutions, Policy and Financing, and will make significant funding available for improving client's capacity. Knowledge management activities will also make tools, manuals, online training and lessons learned available as additional resources to clients.</p>
RISK FACTOR	DONOR RESISTANCE TO LEAVING/AMENDING EXISTING TFS
<p>Likelihood High</p>	<p>Folding existing programs and initiatives under a new umbrella structure has not been done before in the World Bank and may create challenges in the early phases of establishing and operationalizing the program</p>
RISK FACTOR	OVERLAP WITH OTHER TFS
<p>Likelihood High</p>	<p>With transport touching on many different sectors (urban, water, climate change, energy), there may be challenges in aligning the priorities of internal stakeholders including other trust funds.</p>

Annex D Global Solution Groups and Solution Areas in the Transport Global Practice



Transport Economics, Policy & Data

Technology, Data, Innovation & New Mobility
Regulation and Policy
Economic, Social & Fiscal Impact of Transport Interventions
Impact Evaluations



Transport Infrastructure Management & Finance

Road Asset Management & Rural Access
Policy, Institutions & Project Preparation (Upstream)
Finance and Funding (Downstream)
Knowledge & Internal Skill Development



Urban Mobility

Mass Transit & Public Transport
New, Active & Inclusive Mobility
Land Use & Transit Oriented Development
Institutions, Finance & TDM



Access To Green, Inclusive & Safe Transport

Road Safety
Green Transport
ES Management & Transport
Transport in FCV



Transport Connectivity & Regional Integration

Aviation
Economic Corridors & Regional Integration
Maritime & IWR Transit / Freight & Logistics
Railways

Endnotes

- 1 As per IPCC research reflecting the consensus views of 830 scientists, engineers, and economists from more than 80 countries and was formally endorsed by the governments of 194 countries—identified many possible pathways to reach carbon neutrality by the end of the century.
- 2 UN 2019 World Population Prospects. Retrieved from: <https://population.un.org/wpp/>
- 3 <https://www.itf-oecd.org/decarbonising-transport-initiative-projects-and-reports> [last accessed 4/29/2019]
- 4 Hallegatte, Stephane, Jun Rentschler, and Julie Rozenberg. 2019. *Lifelines: The Resilient Infrastructure Opportunity*. Sustainable Infrastructure; Washington, DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/31805>
- 5 Mani, Muthukumara S.; Bandyopadhyay, Sushenjit; Chonabayashi, Shun; Markandya, Anil; Mosier, Thomas Michael Rowe. 2018. South Asia's hotspots: The impact of temperature and precipitation changes on living standards. Washington, D.C.: World Bank Group.
- 6 [https://discovery.ucl.ac.uk/id/eprint/1470392/1/transport-poverty\[1\].pdf](https://discovery.ucl.ac.uk/id/eprint/1470392/1/transport-poverty[1].pdf)
- 7 Fay et al. (2015), Decarbonizing Infrastructure
- 8 Lefevre, Benoit, Ahmad Iqbal Chaudhary, Deeba Yavrom, and Aman Srivastava. 2016. “The Trillion Dollar Question II: Tracking Investment Needs in Transport.” April 2016. Working Paper. Washington, DC: World Resources Institute. Pages 2 and 15. https://www.wri.org/sites/default/files/The_Trillion_Dollar_Question_II_Tracking_Investment_Needs_in_Transport_0.pdf
- 9 Here, we define decarbonization as carbon neutrality, which does not imply no emissions. Positive emissions in some sectors and some countries can be offset, to some extent, through natural carbon sinks and negative emissions in other sectors and countries. So decarbonization means zero net emissions of CO₂—as well as the stabilization of emissions of short-lived greenhouse gases such as methane that dissipate in the atmosphere in days, weeks, or decades. This definition follows from: Fay, Marianne, Stephane Hallegatte, Adrien Vogt-Schilb, Julie Rozenberg, Ulf Narloch, and Tom Kerr. 2015. *Decarbonizing Development: Three Steps to a Zero-Carbon Future. Climate Change and Development*. Washington, DC: World Bank. <https://www.worldbank.org/content/dam/Worldbank/document/Climate/dd/decarbonizing-development-report.pdf>
- 10 See World Bank (2020) *Partnering with the World Bank through Trust Funds and Umbrella 2.0 Programs*. Washington D.C.
- 11 Bank-executed trust funds (BETFs) resources cannot be transferred to clients, a recipient government, or to a third party to execute activities for which the Bank is responsible. BETFs financed activities and products can include: Advisory services; technical assistance; a fund's secretariat services and program management, including monitoring, evaluation, and reporting; and non-country specific activities associated with global and regional partnership programs. Recipient-executed trust funds (RETFs) involve funds that the World Bank passes to a third-party recipient to execute under a grant agreement with the World Bank's supervision. They can include investment and assistance co-financed through IDA/IBRD loans and credits; capacity building; policy support and implementation; training; pre-investment feasibility studies; project preparation; project implementation including preparation of bidding documents; and/or preparation of letters of development policy.
- 12 The indicative list to be included in supporting the Results Framework can be found in Annex B
- 13 <https://sum4all.org/priorities/universal-access>
- 14 See Ardila, Arroyo and Peralta, 2019. “Accessibility, Mobility, Pricing and Land Use: reflections from practitioners.” https://www.researchgate.net/publication/341741190_Accessibility_Mobility_Pricing_and_Land_Use_reflections_from_practitioners
- 15 World Bank, “Catalyzing Human Capital Formation Through Better Transportation”, 2019
- 16 Bertaud, Alain. 2018. “Order without Design: How Markets Shape Cities by Alain Bertaud. The MIT Press.
- 17 The pandemic showed that the top echelons can tele-commute thanks to the nature of their jobs coupled to

access to broadband. In client cities of the World Bank, the majority falls in the opposite category that must travel outside of the house in order to reach a job or work in the street selling gadgets, for example. See Arturo Ardila-Gomez. 2020. “With COVID-19, the case for sustainable transport is stronger than ever.” <https://blogs.worldbank.org/transport/covid-19-case-sustainable-transport-stronger-ever>

- 18 SUM4All Global Roadmap of Action for Sustainable Mobility, 2019.
- 19 World Bank. 2020. World Development Report 2020: Trading for Development in the Age of Global Value Chains. Washington, DC: World Bank.
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- 21 Stone, J. I. 2001. Infrastructure Development in Landlocked and Transit Developing Countries: Foreign Aid, Private Investment and the Transport Cost Burden of Landlocked Developing Countries. UNCTAD/LDC/112. Geneva: UNCTAD.
- 22 Atkin, D. and D. Donaldson. 2015. Who’s Getting Globalized? The Size and Implications of Intranational Trade Costs. NBER Working Paper No. 21439. Cambridge, MA.
- 23 Arvis, J. F., G. Raballand, and J. F. Marteau. 2010. The Cost of Being Landlocked: Logistics Costs and Supply Chain Reliability. *Directions in Development*. Washington, DC: World Bank.
- 24 For instance, as documented by the World Economic Forum Global Competitiveness Report, or the different WBG indicators (Logistic Performance Index, Doing Business and Enterprise Survey) among others.
- 25 Also referred as Transportation Network Companies (TNC).
- 26 Indicators will be updated with donor input and reported upon once GFDT receives funding for pillars / activities related to specific indicators.

**The Global Facility
to Decarbonize Transport
(GFDT)**

Supporting Countries in their Decarbonization Initiatives





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