ASIAN INFRASTRUCTURE INVESTMENT BANK

Transport Sector Strategy:
Sustainable and Integrated Transport for Trade and Economic Growth in Asia

1. Background

1.1. Asia is a large and geographically diverse continent, with many landlocked countries. Connectivity infrastructure is therefore crucial for trade and economic growth. While a handful of Asian countries have developed world-class transport systems, the transport infrastructure capacity in most other Asian countries remains far below the levels of developed countries. Increasing urbanization and growing traffic demand will add more pressure on largely inadequate transport systems. Available estimates indicate that the investment need for transport infrastructure to support trade and economic growth in Asia is in the magnitude of USD500-900 billion a year.[1]

1.2. Transport is a system of infrastructure and services that consists of various modes (e.g., road, rail, air, inland waterway and ocean shipping). They serve different passenger and freight transport markets: rural, urban, inter-city and international. Depending on the size and characteristics of the markets, these modes display highly varied economic and financial returns. In addition, the transport sector generates various environmental and social impacts. It is necessary to develop sustainable transport that is financially and economically viable, fiscally responsible, environmentally sustainable and socially acceptable.

1.3. Against this backdrop, the Asian Infrastructure Investment Bank (AIIB) has undertaken a study, working with external consultants and various stakeholders, to put in place a transport sector strategy to guide AIIB's investment choices. The following text articulates the strategy for AIIB to play a catalytic role as a new financier and partner for sustainable transport development in Asia.[2]

1.4. As stated in AIIB's Environmental and Social Framework, the bank supports infrastructure and connectivity to promote economic growth and improve the lives of people in Asia. Consistent with the Sustainable Development Goals, AIIB recognizes the need to address the three dimensions of sustainable development—economic, social and environmental—in a balanced and integrated manner. AIIB subscribes to the principles of sustainable development in the identification, preparation and implementation of projects, as described in its Environmental and Social Policy.

[1] Asian Development Bank. 2017. "Meeting Asia's Infrastructure Needs"; McKinsey & Company. 2016. "Financing Change: How to Mobilize Private-Sector Financing for Sustainable Infrastructure" and "AIIB Transport Sector Study". 2018.
[2] Urban transport will be covered separately in another strategy.

2. AIIB's Comparative Advantages, Market Position and Investment Priority

2.1. AIIB's mandate is to support high-quality and sustainable infrastructure that would enhance connectivity in Asia. AIIB's objective in the transport sector is to finance the development of sustainable and integrated transport systems that promote trade and economic growth in Asia.

2.2. The transport infrastructure market is huge. Multilateral development banks (MDBs) and bilateral financing currently account for around USD20-25 billion in transport projects per year, a relatively small share of the market. AIIB will focus on the market segments suitable for the bank to deliver the best infrastructure development outcomes within its mandate and with its comparative advantages.

2.3. In terms of financial viability, transport infrastructure projects can range widely:

2.3.1. **Low financial viability:** Basic infrastructure with significant social value but little prospect for cost recovery (such as low-traffic volume rural roads), typically financed by governments and MDBs.

2.3.2. **Middle financial viability:** Projects with significant economic return but without sufficient financial return that would attract stand-alone private finance; these are often financed by governments and MDBs. Attracting private finance is possible for many projects in this range if governments and MDBs provide viability gap finance and help mitigate risks, including under public-private partnership (PPP) arrangements.

2.3.3. **High financial viability:** High-traffic volume transport projects with a strong prospect for financial return. If the user charge is set properly, these projects could be financed entirely by the private sector.

2.4. AIIB is a lean MDB with considerable financial resources and a distinctive capacity to mobilize private capital for infrastructure. AIIB also emphasizes financial sustainability and cost recovery of its investments. While AIIB could finance almost all types of transport infrastructure projects with various financing instruments based on its sound banking as provided in Articles 9 and 13 of AIIB's Articles of Agreement, it will focus on the middle range of the transport investment market spectrum. This comprises sovereign-backed and non-sovereign-backed projects that will be financed on a stand-alone basis by governments or state-owned enterprises, or jointly with the private sector, including through PPP arrangements.

2.5. In terms of physical investment, AIIB's key priority is to finance the economically viable trunk and strategic infrastructure projects in the middle range that play a key role in promoting trade and economic growth. Priority projects will include:

2.5.1. **Trunk linkages:** These are projects that provide necessary transport capacity or remove transport bottlenecks between major urban centers or key economic

areas, such as national or provincial highways and railways.[3] The key is to ensure that the infrastructure under consideration is part of the core network and would also further the development of other urban, economic or industrial clusters served by the network. Economic return and financial viability will be the key criteria for the selection and design of projects.

2.5.2. **Cross-border connectivity:** These include road and rail connections serving cross-border traffic. Node infrastructure such as airports, ports, dry ports, multimodal transport hubs and logistics parks that serve international passenger and/or trade flows will also be considered as part of cross-border infrastructure. Developing cross-border infrastructure requires policy coordination between countries. Where possible and necessary, AIIB will work with existing partners—including MDBs—to develop, finance and implement cross-border projects, as well as work on the harmonization of procedures and regulations. To help with the process, AIIB will encourage the use of its Special Fund to support the preparation of cross-border projects, including those in middle-income countries.

2.5.3. **Transport integration:** These are projects that enhance seamless transport across different modes or within a network. For example, inter-city railways need to be well integrated with the urban transport systems through integrated transport hubs, and ports and airports need good road and/or rail connection to the hinterlands. Similarly, certain domestic links can become a crucial part of an international transport network. Such infrastructure can be crucial in completing the whole network and bringing about greater network resilience.

2.5.4. **Upgrading of existing infrastructure:** The capacity of existing infrastructure often falls behind the growth in traffic. Upgrading infrastructure can have high economic return. Such projects will also have the additional benefits of reducing resource intake (such as land), increasing safety, reducing longer-term operating and maintenance costs and opening up opportunities to improve accessibility.

2.6. In addition to the core business areas identified above, AIIB will retain flexibility to finance projects that fall outside of these areas in response to clients' demand and willingness to borrow, provided that the development benefits are significant (e.g., rural roads with high economic benefits). AIIB will also have a presence in the high range of the transport investment spectrum as it can play an important role in risk mitigation and private capital mobilization. This can help expand financing options for member countries and improve member countries' ability to source for suppliers and technologies that meet their needs.

3. AIIB's Approaches

[3] AIIB will also include trunk, passive ICT infrastructure in its consideration, especially cross-border connectivity, in view of the potential of such infrastructure in promoting trade and economic development.

3.1. **Ensuring Economic and Financial Viability:** Economic viability is essential for transport infrastructure to support trade and economic growth. Transport infrastructure projects are location specific, and many are capital intensive. Their benefits come mainly from savings in time and transport operating costs and are sensitive to the level of future traffic. Therefore, it is necessary to adopt rigorous traffic demand forecasts and economic analysis to evaluate the costs and benefits of transport infrastructure investment projects and ensure the selected projects or project designs are economically viable. For the financed projects to be productive, efficient and safe over the project life cycle, AIIB will require sustainable maintenance plans to be built in. Through its analysis, AIIB will ensure that its financed projects are economically sustainable.

3.2. **Mobilizing Private Capital:** As demand for transport investment is large relative to AIIB's financing capacity, mobilizing private capital will be the primary way to help Asia close its transport infrastructure finance gap. AIIB will provide support in three specific areas:

3.2.1. Providing more support for PPPs: Many Asian countries have used PPPs to build and operate transport infrastructure, such as tolled highways, ports and airports. PPPs crowd in private capital and enable fiscally constrained governments to deliver infrastructure. As the success of PPP projects is often influenced by various economic and political factors out of the control of private investors, they often require risk-mitigating instruments. AIIB can provide more support to mitigate noncommercial risks and viability gap financing.

3.2.2. Catalyzing more transactions as an anchor financier: For new investments, the presence of an early anchor financier or signaling of support can create necessary conditions to bring projects to a successful financing closure. AIIB can consider enhancing its approval process to give an in-principle and conditional funding commitment to key projects at an earlier stage of the project preparation cycle. AIIB will identify strategic projects and engage early. AIIB will also invest in suitable financial structures or provide refinancing to existing assets to mobilize private capital toward infrastructure development.

3.2.3. Encouraging the Use of the Special Fund: AIIB will also encourage the use of the Special Fund toward project preparation to help mobilize private capital.

3.3. **Promoting Environmental and Social Sustainability:** Environmental and social sustainability contribute to the long-term viability of infrastructure. Decisions about infrastructure can help to make an economy green and inclusive. AIIB recognizes strategic environmental and social assessments (SESA) as a means of integrating environmental and social considerations into the project identification process. The Bank encourages its clients to undertake strategic, sectoral, or regional assessments, as appropriate, and stands ready to assist clients in achieving their sustainable objectives through the projects it finances. All projects need to minimize environmental and social risks and impacts during implementation and operation, in line with the provisions of AIIB's Environmental and Social Framework and Policy.

3.4. In transport infrastructure, AIIB promotes universal access, equity of opportunity and nondiscrimination, so that women, persons with disabilities, older and younger people and those who are vulnerable are able to benefit from investments AIIB supports in this sector. Stakeholder engagements need to ensure that the voices of these population groups are heard and are taken into account in both the preparation and operational phases of the investments. The occupational health and safety of workers during construction and operation is also a key priority, as is the safety of users in all transport infrastructure financed by AIIB. The bank will prioritize projects that are designed to the appropriate accessibility and safety standards.

3.5. Minimizing environmental impact is an important consideration for transport project design. There are various technological choices. For example, transport carbon emissions can be reduced through "avoid, shift and switch" approaches. Avoiding excessive traffic requires better land use planning.[4] Shifting involves substitution of a transport mode to a lower-carbon mode, such as a shift from automobiles to public transport. Switching pertains to a change of transport energy source from high carbon to low carbon. AIIB will build these considerations into its project selection and work with clients in project design to promote greener technology choices that support "avoid, shift and switch" approaches.

3.6. Given the high population densities in many parts of Asia, rail and high-speed rail can be economically viable for transport corridors serving multiple cities. These projects would serve the travel needs of large populations with lower carbon emissions (shift). For aviation, technologies that reduce emissions, such as more environmentally sustainable airports and greener aviation fuels, would be encouraged. Finally, road infrastructure is a large source of infrastructure demand. AIIB will encourage its road project sponsors to incorporate green considerations and technologies (e.g., reuse of existing materials, vehicle fuel efficiency and switch to electric vehicles). AIIB will learn from other MDBs and partners about their experience in greening transport projects.

3.7. **Developing Strategic Partnerships:** AIIB will work closely with existing and new partners. The bank will work with financing partners, including organizations providing concessionary finance and bilateral aid agencies, to cofinance projects. This will help AIIB build capacity and help clients overcome financing difficulties for large projects. AIIB will participate in and contribute to bilateral and regional dialogues (e.g., Greater Mekong Subregion Economic Co-operation Program, Central Asia Regional Economic Cooperation, Belt and Road Initiative, ASEAN Transport, etc.) to identify projects early. AIIB will also build relationships with commercial banks, institutional investors and infrastructure funds for business development and cofinancing of private sector projects.

3.8. **Embracing Innovative and Proven Technologies:** The need for innovation and future-proofing infrastructure investment is relevant in the context of changing

[4] It must be recognized that the transport sector alone would not be able to reduce carbon emissions if there is no effort to also develop low-carbon land use patterns. Concentration of economic activities along transport corridors through land use planning and management would help reduce transport carbon emissions significantly in many locations.

demand conditions and technologies. For upper-middle and high-income countries where basic transport provision has been met, projects financed by AIIB will come with additional focuses on spreading green transport technologies and uplifting transport productivity. For example, roadside battery charging infrastructure is now being introduced in the European Union.[5] Electric barges and shipping (with lower emissions) are also being introduced in Europe. These will be monitored closely and supported by AIIB where they can be scaled in Asia.

4. Implementation and Results Monitoring

4.1. Some of the approaches promoted in this strategy (including safety, accessibility and gender opportunities) are best monitored with suitable indicators at the project level, which the Bank plans to adopt for relevant projects. Where possible over time, AIIB will seek to develop aggregates of these project level indicators and incorporate them into its sectoral results framework. Measuring greenhouse gas emissions of transport infrastructure is desirable but technically complex, and still faces methodological and practical challenges. AIIB will build such capacity over time and be informed by the lessons learned from other MDBs and ongoing development of methodologies.

4.2. At the portfolio level for the Transport Sector Strategy, AIIB will monitor outputs and outcomes from its investments in the transport sector that reflect the identified priorities. Key indicators are selected on the basis that they are clear, relevant and monitorable, and can be aggregated at the portfolio level (Table 1). These indicators will be revisited and refined as AIIB gains more operational experiences.

Table 1: Results Monitoring Framework for Transport Strategy

	Portfolio Level Output/ Outcome indicators	**Investment amount (USD million)**
Economically viable trunk and strategic infrastructure that promotes trade and economic growth, including: (a) Trunk linkages between major urban centers or key economic areas (b) Cross-border connectivity (c) Transport integration for more complete and/or more resilient transports	Capacity Increase for Links (e.g. road, rail): • Passenger kilometers per annum • Ton kilometers per annum Capacity Increase for Nodes (e.g. port, airport): • Passengers handled per annum • Tons of freight handled per annum	• $ and % of financing aligned to key priority in transport portfolio • $ and % of financing not aligned to priority but to address clients' demands

[5] See European Environment Agency, Electric Vehicles in Europe.

	Portfolio Level Output/ Outcome indicators	Investment amount (USD million)
(d) Upgrade of existing infrastructure		
Mobilizing private capital into transport infrastructure	• Private capital mobilized	• $ and % of financing in private sector projects

5. The above strategy outlines the transport strategic directions and priorities for AIIB in the first few years. As a young organization, AIIB will retain sufficient flexibility in the initial years, financing less complex projects as it builds up its operational capacity. Gradually (over the next two years), AIIB will focus on the co-financing of trunk and strategic infrastructure and rely on partnerships to build the capacity needed for due diligence and policy dialogue. In the medium term (next five years), AIIB will position for success in financing more complex transactions including PPP projects, either by financing government contribution or equity financing with other private financiers. In the long term, AIIB will develop the necessary internal capacity for sector policy and management capacity for due diligence and project supervision, while continuing to remain lean.