Project Number: 55119-001

Knowledge and Support Technical Assistance (KSTA)

August 2021

# Accelerating Innovation in Transport

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Asian Development Bank

#### **ABBREVIATIONS**

ADB – Asian Development Bank

CO<sub>2</sub> – carbon dioxide

COVID-19 – coronavirus disease

DMC – developing member country
ITS – intelligent transport system
SDG – Sustainable Development Goals

TA – technical assistance

TASF – Technical Assistance Special Fund

#### **NOTE**

In this report, "\$" refers to United States dollars.

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# KNOWLEDGE AND SUPPORT TECHNICAL ASSISTANCE AT A GLANCE

| 1. | Basic Data                     | TEDGE AND SOFFORT TECH                      | HOAL ASSISTANCE          | Project Number      | : 55119-001    |
|----|--------------------------------|---|--------------------------|---------------------|----------------|
| •• | Project Name                   | Accelerating Innovation in Transport        | Department/Division      | SDCC/SDSC-TRA       |                |
|    | i roject name                  | 7.000lorating innovation in Transport       | Bepartment/Bivision      | 0000/0000 111/      | •              |
|    | Nature of Activity<br>Modality | Capacity Development, Policy Advice Regular | Executing Agency         | Asian Developme     | nt Bank        |
|    | Country                        | Regional                                    |                          |                     |                |
| 2. | Sector                         | Subsector(s)                                |                          | ADB Financing       | g (\$ million) |
| 1  | Transport                      | Transport policies and institutional dev    | elopment                 |                     | 0.50           |
|    |                                | Urban public transport                      |                          |                     | 0.25           |
|    |                                | ·   |                          | Total               | 0.75           |
| 3  | <b>Operational Priorities</b>  |   | Climate Change Inform    | ation               |                |
| 1  |                                | poverty and reducing inequalities           | GHG Reductions (tons p   |                     | 0.000          |
|    | -                              |   | Climate Change impact of |                     | Low            |
| 1  | Accelerating progress          |   | puot 0                   |                     |                |
| 1  |                                | ge, building climate and disaster           | ADB Financing            |                     |                |
| ,  |                                | cing environmental sustainability           | Adaptation (\$ million)  |                     | 0.00           |
| 1  | Making cities more live        | able  | Mitigation (\$ million)  |                     | 0.00           |
|    |                                |   | 3 ( , ,                  |                     |                |
|    |                                |   | Cofinancing              |                     |                |
|    |                                |   | Adaptation (\$ million)  |                     | 0.00           |
|    |                                |   | Mitigation (\$ million)  |                     | 0.00           |
|    | 0                              |   | , ,                      |                     | 0.00           |
|    | Sustainable Develop            | ment Goals                                  | Gender Equity and Main   |                     |                |
|    | SDG 1.1<br>SDG 5.1             |   | Some gender elements (   | SGE)                | 1              |
|    | SDG 5.1<br>SDG 10.3            |   | Poverty Targeting        |                     |                |
|    | SDG 10.3<br>SDG 11.2           |   | Geographic Targeting     |                     | 1              |
| 4. | Risk Categorization            | Complex                                     | Geographic rangeling     |                     | •              |
|    |                                | •   |                          |                     |                |
| 5. | Safeguard Categoriza           | ation Safeguard Policy Statement doe        | s not apply              |                     |                |
| 6. | Financing                      |   |                          |                     |                |
|    | Modality and Sources           | s   |                          | Amount (\$ million) |                |
|    | ADB                            |   |                          |                     | 0.75           |
|    |                                | port technical assistance: Technical Ass    | istance                  |                     | 0.75           |
|    | Special Fund                   |   |                          |                     |                |
|    | Cofinancing                    |   |                          |                     | 1.00           |
|    |                                | ogy Fund (Full ADB Administration)          |                          |                     | 1.00           |
|    | Counterpart                    |   |                          |                     | 0.00           |
|    | None                           |   |                          |                     | 0.00           |
|    | Total                          |   |                          |                     | 1.75           |
|    |                                |   |                          |                     |                |
|    | Currency of ADB Fina           | incing: US Dollar                           |                          |                     |                |

#### I. INTRODUCTION

- 1. The knowledge and support technical assistance (TA) will deliver assistance to operations departments and developing member countries (DMCs) through knowledge products and project identification to enable the Asian Development Bank (ADB) to strengthen innovation in its transport assistance and meet the emerging requests from its DMCs. The TA will focus on technical and information innovation. Technical innovation will focus on electric mobility to decarbonize transport, artificial intelligence, and shared mobility. Information innovation will focus on transport system management such as intelligent transport systems (ITS), transport information systems, passenger information system, travel demand management, and freight and logistics information services. The TA will help prepare an innovative future lending pipeline and embed the latest technical and operations innovation in sector assistance. The TA will raise awareness of emerging technologies and use of data and information to provide more efficient transport sector support for ADB's clients. The TA is aligned with Strategy 2030 operational priorities 1, 2, 3, and 4; relevant Sustainable Development Goals (SDG); and the Paris Agreement on climate change.
- 2. The TA is included in the 2021 Management-approved results-based work plan of the Sustainable Development and Climate Change Department and in the transport sector work plan, 2021–2022.<sup>1</sup>

#### II. ISSUES

- 3. Transport is at a crossroad in its development. Not since the mechanical innovations of the steam train or the internal combustion engine has transport been on the cusp of innovations that can revolutionize the sector. The information age can transform accessibility and mobility. The TA will ensure ADB remains at the forefront of any sector innovations, and thus able to support DMC and private sector clients with the latest technical, policy, and operational knowledge and solutions. Given the range of needs and capacity of DMCs a differentiated approach will be taken in terms of assessing and applying transport sector innovations to countries with different transport needs and requirements.
- 4. Since the 1960s, the focus has been on building transport infrastructure networks, which has ensured that transport has been able to largely fulfill its role as an enabler of development. The emerging requirements are for improved accessibility and operations of transport systems to enhance efficiencies. ADB's client DMCs, through the large number of engineer graduates and increasingly competent contracting entities, are capable of designing and building much of the transport infrastructure. However, DMCs are increasingly seeking help in the policy, planning, operations, management, monitoring, and reporting of more complex multimodal transport systems and services. ADB requires the TA to ensure it can continue to support its clients and provide a detailed understanding of the latest innovations and operational efficiencies.
- 5. The transport sector has traditionally been a large part of ADB assistance, accounting for 25% of project approvals with an average of \$4.4 billion investment per year between 2010 and 2019.<sup>2</sup> To ensure ADB continues to offer relevant and value-added support in this important sector, ADB must strengthen its knowledge and use of innovations that are influencing the future of transport. The sector support is expected to maintain current lending levels while shifting to more programmatic support, as well as in addressing the externalities such as congestion, road crashes,

<sup>&</sup>lt;sup>1</sup> The TA first appeared in the business opportunities section of ADB's website on 22 June 2021.

<sup>&</sup>lt;sup>2</sup> ADB. 2021. ADB Annual Report 2020. Manila.

air quality, and carbon dioxide (CO<sub>2</sub>) emissions. The TA will ensure the sector maintains its large portfolio while embracing new technical and information innovations.

- 6. Strategy 2030 and the seven operational priorities have given a thematic focus to ADB corporate objectives and focus areas. <sup>3</sup> ADB is committed to support DMCs meet their commitments to the SDG and the Paris Agreement. While infrastructure sectors remain a focus for ADB, sector assistance must align with these strategic objectives and fully support sustainable development while addressing the negative externalities. This will require a shift in the type and scope of ADB's transport sector assistance, which has traditionally been dominated by large infrastructure that was required to meet physical gaps in the transport network, to one that supports operational efficiencies and embraces new innovations. The TA will ensure ADB remains relevant and able to offer value-added support to its clients and do so in focus areas such as poverty, climate change, and gender, with information innovations providing more robust assessment of the sector's role and impact.
- 7. Strategy 2030 includes the need for a differentiated approach for clients at different stages of development. The more traditional road construction support is still relevant in many of ADB's lower income DMCs, as well as in small island developing states and fragile and conflict-affected situation countries. This type of support should and will continue. In those DMCs reaching or already in middle-income levels, the demands for assistance focus on new technologies and innovations in operational practices. DMC clients are dealing with complex transport issues. They are facilitating the increased travel demand resulting from continued and growing economic development, and at the same time dealing with the negative externalities such as congestion, vehicle emissions, road safety, and inefficient transport systems.
- 8. The TA will enable ADB transport operations to address the recommendations from the recent Independent Evaluation Department's sector assessment and achieve greater impact at the scale required.<sup>4</sup> The report highlighted the need to focus in key areas of road maintenance, road safety, climate change, and urban transport using suitable lending modalities. Information innovations can allow suitable policy and programs to transform the type of support ADB can provide. The TA will enable ADB to build on other activities such as the Asian Transport Outlook to undertake policy dialogue with DMCs based on improved transport information databases, using data to drive innovation in areas such as road asset management, road safety, urban transport (including non-motorized transport), rail system operations, and water-borne transport. The TA will allow ADB to measure the externalities and report back on the sector's impacts on growth, emissions, and operational efficiencies, many of which are aligned with the SDGs, such as 3.6 on road safety, 3.9 on air quality, 7.3 on energy efficiency and e-mobility, 9.1 on rural accessibility, 11.2 on urban accessibility, and 13 on climate change. For ADB to provide support on SDGs and the Paris Agreement, we need to move beyond infrastructure projects to system transformation and operational reform.
- 9. International travel expediated the spread of the coronavirus disease (COVID-19). The subsequent travel restrictions and lockdowns have had significant impact on the sector, notably in passenger-based air travel and public transport systems. ADB prepared an assessment of the COVID-19 impacts to assist our DMCs in the various stages of lockdown and recovery. COVID-19 also demonstrated the need to pandemic-proof our transport systems and, in the

<sup>&</sup>lt;sup>3</sup> ADB. 2018. <u>Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific.</u> Manila.

<sup>&</sup>lt;sup>4</sup> ADB. 2020. <u>Sector-wide Evaluation: ADB Support for Transport.</u> Manila.

<sup>&</sup>lt;sup>5</sup> ADB. 2020. COVID-19 and Transport in Asia and the Pacific: Guidance Note. Manila.

uptake of information innovations, to enable swift and decisive action on any future pandemics.

10. The use of technical and information innovations has the ability to align future transport operations with Strategy 2030.

#### III. THE TECHNICAL ASSISTANCE

### A. Impact and Outcome

- 11. The TA is aligned with the following impact: Investments in green, sustainable, resilient, and inclusive quality infrastructure promoted (footnote 3). The TA will have the following outcome: innovation in transport sector assistance in selected DMCs increased.<sup>6</sup> This will be achieved through two outputs: (i) technical innovation initiatives in DMCs developed and implemented, and (ii) information innovation initiatives in DMCs developed and implemented.
- 12. Innovation for decarbonizing the transport sector is a key focus of the TA. Building on the ADB report on e-mobility options for developing member countries, ADB, through the TA, will mainstream the support into its technical and financial assistance in those DMCs and private sector clients that the report identified as priorities. There is great scope for the rapid uptake of innovative e-mobility technologies and for the wholesale decarbonization, initial support will focus on those DMCs that are more advanced in terms of enabling policy and with lower carbon power generation grid factors. The growth in electric and plug-in hybrid cars is rapid: in 2017, there were 3 million vehicles; in 2020, there were 4.5 million, or 5% of global passenger car sales; by 2030s, this is expected to reach 20% of global vehicles sales. How can this transformative innovation for decarbonization be rolled out to all DMCs and help mitigate CO<sub>2</sub> emissions in the transport sector?
- 13. However, electric passenger cars are only part of the solution. With Asia's heavy dependence on two- and three-wheelers, as well as public transport in urban areas, there is a range of e-mobility solutions. The People's Republic of China dominates the electric two-wheeler market with a vehicle stock estimated at 200 million to 230 million units. In 2017, there were nearly 400,000 electric buses operating worldwide, with 99% of the total in the People's Republic of China. In freight vehicles, electric trucks circulate in small numbers; it is expected that after 2025, light- and medium-duty electric trucks could start to penetrate and transform the market (with heavy-duty trucks to follow later). With Asia a leading area for e-mobility, ADB must embrace this innovative technology and support all DMCs in its widescale uptake and work with private sector clients in system development.
- 14. ADB DMCs and private sector clients are increasingly seeking help from ADB in areas of transport operational efficiencies such as in urban transport system management, ITS, rail system operations, and road asset management, as well as in the broader institutional governance, policy, and planning of transport systems. Innovations in the use of data and technologies can significantly impact how ADB provides support and support operations departments in due

<sup>&</sup>lt;sup>6</sup> The design and monitoring framework is in Appendix 1.

<sup>&</sup>lt;sup>7</sup> J. Grutter and K. Kim. 2019. *E-Mobility Options for ADB Developing Member Countries*. *ADB Sustainable Development Working Paper Series*. No. 60. Manila: ADB.

<sup>&</sup>lt;sup>8</sup> McKinsey and Company. 2018. <u>The Global Electric-Vehicle Market Is Amped Up and on the Rise.</u> New York.

<sup>9</sup> IEA. 2017. Global EV Outlook 2017. Paris. Total 2-wheeler sales worldwide in 2017.

<sup>&</sup>lt;sup>10</sup> Bloomberg New Energy Finance. 2018. <u>Electric Buses in Cities: Driving Towards Cleaner Air and Lower CO<sub>2</sub></u>. New York.

<sup>&</sup>lt;sup>11</sup> McKinsey and Company. 2017. What's Sparking Electric-Vehicle Adoption in the Truck Industry? New York.

diligence on advanced technologies as part of project preparation. Road network asset management programs can be monitored via satellite imagery and coupled with accelerometers to measure road condition to prioritize maintenance activities, monitor, and report on work carried out. The improved governance that data innovations can provide can revolutionize the road asset management program in many DMCs. Urban transport systems can utilize data and information innovations to increase operational efficiencies and throughput on space constrained transport systems. Passenger information apps can provide real time information on route options, travel times, and links to payment systems. Rail transport can be transformed using information management systems to better plan services and monitor costs and operations. The logistics and freight operations at both local and international levels also can benefit significantly from information innovations to better match demand to supply. Selected DMCs will be used as demonstration pilots for information innovations.

# B. Outputs, Methods, and Activities

- 15. Output 1: Technical innovation initiatives in developing member countries developed and implemented. Technical innovations will allow the transport sector to address large and rapidly growing emissions. The uptake of and transition to e-mobility can dramatically reduce CO<sub>2</sub> emissions from the sector, as well as address local emissions such as particulate matter, sulfur dioxide, and nitrogen oxide. The TA will provide policy support, project design support, and program development in selected DMCs on e-mobility solutions to transition to zero emission transport systems, including e-vehicle road maps. The TA will also explore possible support in artificial intelligence, shared mobility, and emerging areas of technical innovation in transport, including non-motorized and water-borne transport.
- 16. Output 2: Information innovation initiatives in developing member countries developed and implemented. The TA will prepare various forms of information innovations that will help operations departments strengthen assistance to selected DMCs. Improved data collection and analysis will be used to facilitate enhanced dialogue with client DMCs. The data will be used to identify and develop focus areas of support that address the broader externalities, in addition to infrastructure project support. The information innovations will be used to support the development of sector action plans and programs that address SDGs and Paris Agreement relating to the transport sector. The TA will use innovative information systems to develop a pipeline of technically-advanced assistance in intelligent urban transport system, traffic management, rail network operations, passenger information systems, transport system monitoring, travel demand management, and reporting systems.
- 17. This TA will support focus areas of Strategy 2030 through improved data, policy dialogue, enhanced country partnership strategy, and assistance pipeline development. The main direction of the information innovation activities will be supporting operations departments operations towards Strategy 2030 through knowledge support, project development, and implementation support. The new TA will support technical and information innovation in all transport subsectors in policy advice and program and project development and implementation: urban transport, railways (urban and regional), roads (regional and rural), aviation and port, and new technologies for e-mobility and smart transport.
- 18. The TA will provide direct support to operations departments in the following subsectors: intelligent urban transport, e-mobility, data collection and analysis, and new technology. The TA will also include capacity-building activities and knowledge support of staff and clients.

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<sup>&</sup>lt;sup>12</sup> DMCs will be selected by the enabling environment and the electric grid factor.

### C. Cost and Financing

- 19. The TA is estimated to cost \$1,750,000 of which (i) \$750,000 will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF) (\$250,000 from TASF 7 and \$500,000 from TASF-other sources), and (ii) \$1,000,000 will be financed on a grant basis by the High-Level Technology Fund<sup>13</sup> and administered by ADB. The key expenditure items are listed in Appendix 2.
- 20. The use of the High-Level Technology Fund will follow the plan submitted and approved by the fund's steering committee, following the fund's implementation guidelines. Expenses eligible under the fund include consulting services, goods, works for project identification, development, and implementation (including surveys, conferences, seminars, workshops, travel, per diem, remuneration, resource persons, reports, communications, publications, pilot activities, capacity development, and research and policy advice).

#### D. Implementation Arrangements

- 21. ADB will administer the TA and will be the executing agency. The Transport Sector Group under the Sector Advisory Service Cluster of ADB's Sustainable Development and Climate Change Department will implement the TA and be accountable for the outputs. It will carry out TA administration and supervision, implementation oversight, and communication with consultants and stakeholders, in close coordination with operations departments and other sector and thematic groups.
- 22. Under the TA, experienced international and national individuals will be recruited to provide high-quality innovation technical services through a competitive selection. Such services will support operations departments' activities, including policy dialogue with focus on DMCs, and assist project teams with expert support based on specific technical and information innovation needs. The TA will closely coordinate with operations departments and resident missions to select DMCs for inclusion in the TA. A coordination group will be established for this purpose. The TA will work with current ADB assistance and collaboration, for example, in key areas of support such as the Delhi region in India or e-mobility in those DMCs where the grid factor and policies are conducive.
- 23. Implementation arrangements are summarized in the table.

**Implementation Arrangements** 

| Aspects                          | Arrangements  |                                      |             |  |
|----------------------------------|---|--------------------------------------|-------------|--|
| Indicative implementation period | August 2021-D                                       | ecember 2024                         |             |  |
| Executing agency                 | ADB   |                                      |             |  |
| Implementing agency              | Sustainable De                                      | velopment and Climate Change Departm | ent, Sector |  |
|                                  | Advisory Service Cluster, Transport Sector Group    |                                      |             |  |
| Consultants                      | To be selected and engaged by ADB                   |                                      |             |  |
|                                  | Firm: QCBS  | E-mobility technical innovation      | \$660,000   |  |
|                                  | solutions (45 person-months,                        |                                      |             |  |
|                                  | international and national team                     |                                      |             |  |
|                                  | members)  |                                      |             |  |
|                                  | Individual: International transport innovation      |                                      | \$77,000    |  |
|                                  | Competitive expert (3 person-months, international) |                                      |             |  |
|                                  | selection   |                                      |             |  |

<sup>&</sup>lt;sup>13</sup> Financing partner: the Government of Japan.

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| Aspects      | Arrangements   |  |           |
|--------------|--|--|-----------|
|              | Firm: QCBS   | Transport data management, strategy, and policy specialists (40 personmonths, international and national team members) | \$520,000 |
|              | Individual: Intelligent urban transport specialist (3 \$6  |  |           |
|              | Competitive person-months, international)  |  |           |
|              | selection  |  |           |
| Disbursement | Disbursement of TA resources will follow ADB's <i>Technical Assistance Disbursement Handbook</i> (2020, as amended from time to time). |  |           |

ADB = Asian Development Bank, QCBS = quality- and cost-based selection, TA = technical assistance. Source: ADB.

- 24. **Consulting services.** ADB will engage the consultants following the ADB Procurement Policy (2017, as amended from time to time) and its associated staff instructions.<sup>14</sup>
- 25. **Social media and websites.** The proposed TA will use participating sector groups' and thematic groups' communication and dissemination channels (websites, social media, and networking) and ADB's knowledge dissemination channels such as the DevAsia and Asian Development Blog to demonstrate the TA activities and identify experts.<sup>15</sup>

#### IV. THE PRESIDENT'S DECISION

26. The President, acting under the authority delegated by the Board, has approved (i) the Asian Development Bank (ADB) administering a portion of technical assistance not exceeding the equivalent of \$1,000,000 to be financed on a grant basis by the High-Level Technology Fund; and (ii) ADB providing the balance not exceeding the equivalent of \$750,000 on a grant basis for Accelerating Innovation in Transport, and hereby reports this action to the Board.

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<sup>&</sup>lt;sup>14</sup> Terms of reference for consultants (accessible from the list of linked documents in Appendix 3).

<sup>15</sup> Development Asia. Asian Development Blog.

# **DESIGN AND MONITORING FRAMEWORK**

Impact the TA is Aligned with
Investments in green, sustainable, resilient, and inclusive quality infrastructure promoted (ADB Strategy 2030)<sup>a</sup>

| Results Chain   | Performance Indicators  | Data Sources and<br>Reporting Mechanisms   | Risks and Critical<br>Assumptions   |
|---|---|--|---|
| Outcome Innovation in transport assistance in selected DMCs increased         | a. By 2024, at least five of ADB transport assistance projects include technical and information innovation in selected DMCs approved (2020 baseline: 0)  | a. ADB project<br>documents  | A: DMCs become increasingly receptive to innovation approaches and assistance.                    |
| Outputs 1. Technical innovation initiatives in DMCs developed and implemented | 1a. By 2024, at least five sector assistance support to DMCs include e-mobility solutions (2020 baseline: 0) (OP 3.1.5)   | 1a. Project concept papers   | R: Uncertainty related to the COVID-19 pandemic restricts DMCs' ability to support TA activities. |
|   | 1b. By 2024, at least 120 participants (with at least 40% women) reported having meaningful discussions during eight meetings on AI and shared mobility (2020 baseline: 0) (OP3.1.2)  | 1b. Minutes of meetings, feedback forms, and/or back-to-office reports                             |   |
|   | 1c. By 2024, at least 75% of 120 number of participants (with at least 40% women) reported gaining knowledge from eight knowledge-sharing events on e-mobility, AI, and shared mobility held (2020 baseline: 0) (OP 2.3.1; OP3.1.2) | 1c. Post event evaluation reports  |   |
| 2. Information innovation initiatives in DMCs developed and implemented       | 2a. By 2024, at least five site visits logged for the Asian Transport Outlook (2020 baseline: 0)  | 2a. Asian Transport Outlook report site user statistics  |   |
| ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,                                       | 2b. By 2024, at least two sector assistance supported in project design and program development to DMCs include intelligent urban transport solutions (2020 baseline: 0) (OP4.3.1)  | 2b. Transport sector<br>groups project databases<br>and consultant's quarterly<br>progress reports |   |

## **Key Activities with Milestones**

- 1. Technical innovation initiatives in DMCs developed and implemented
- 1.1 Identify target DMCs receptive to e-mobility solutions (2021).
- 1.2 Conduct dialogue with DMCs on e-mobility policy, interest with AI and shared mobility, and uptake strategy (2021–2022).
- 1.3 Consult with operations departments to identify and define the scope of e-mobility support for project and program development, preparation, and implementation (2022–2024).
- 1.4 Conduct workshops to raise awareness and showcase good practices of e-mobility development in country policies and practices (2021–2022).
- 1.5 Deliver project and/or program support based on needs of operations department teams (2022–2024).

#### 2. Information innovation initiatives in DMCs developed and implemented

- 2.1 Raise awareness of Asian Transport Outlook, including workshop and/or seminars, outreach to DMCs, use of data in CPS, and sector assistance (2021–2022).
- 2.2 Utilize Asian Transport Outlook indicators in ADB Key Indicators report (2021–2024).
- 2.3 Develop and/or collate knowledge and capacity-building materials (2021–2022).
- 2.4 Identify potential information innovation knowledge partners and develop knowledge and capacity-building partnerships (2021–2022).
- 2.5 Implement capacity-building programs (2022–2023).
- 2.6 Develop knowledge products (2022–2024).
- 2.7 Conduct dialogue with DMCs on the development of intelligent urban transport systems (2021–2022).
- 2.8 Consult with operations departments to identify and define the scope of ITS support for project development, preparation, and implementation (2022–2024).
- 2.9 Develop information innovation approaches to support Group of 20 quality infrastructure principles (2022–2024).
- 2.10 Deliver project and/or program support based on needs of operations departments teams (2022–2024).

#### **TA Management Activities**

Coordination teams created with SDCC and operations departments to ensure crosscutting implementation and focused support in the delivery of the TA. Consultants hired to support the innovation approaches being proposed and to help embed these in operations department project support.

#### Inputs

ADB: \$750,000

High-Level Technology Fund: \$1,000,000

A = assumption, ADB = Asian Development Bank, AI = artificial intelligence, COVID-19 = coronavirus disease, CPS = country partnership strategy, DMC = developing member country, DMF = design and monitoring framework, ITS = intelligent transport system, OP = operational priority, R = risk, SDCC = Sustainable Development and Climate Change Department, TA = technical assistance.

<sup>a</sup> ADB. 2018. <u>Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific.</u> Manila.

## **Contribution to Strategy 2030 Operational Priorities:**

The expected values and methodological details for all OP indicators to which this TA will contribute results are detailed in Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 3 of the TA report). In addition to the OP indicators tagged in the DMF, this TA will contribute results for:

OP1.3.3 Measures for increased inclusiveness supported in implementation. (3)

OP4.2.1 Measures to improve regulatory, legal and institutional environment for better planning supported in implementation. (3)

Source: ADB.

# COST ESTIMATES AND FINANCING PLAN (\$'000)

|  |                  | Amount           |
|--|------------------|------------------|
| _  |                  | High-Level       |
| Item   | ADB <sup>a</sup> | Technology Fundb |
| A. Consultants   |                  |                  |
| <ol> <li>Remuneration and per diem</li> </ol>                  |                  |                  |
| a. International consultants                                   | 340.0            | 455.0            |
| b. National consultants  | 155.0            | 155.0            |
| Out-of-pocket expenditures                                     |                  |                  |
| a. International and local travel                              | 25.0             | 30.0             |
| b. Surveys   | 35.0             | 40.0             |
| c. Training, seminars, and conferences <sup>c</sup>            | 22.0             | 37.0             |
| d. Reports and communications                                  | 5.0              | 5.0              |
| e. Miscellaneous administration and support costs <sup>d</sup> | 10.0             | 10.0             |
| B. Training, seminars, and conferences c                       |                  |                  |
| 1. Facilitators  | 5.0              | 15.0             |
| 2. Venue rental and related facilities                         | 15.0             | 25.0             |
| 3. Participants  | 20.0             | 25.0             |
| 4. Representation  | 3.0              | 3.0              |
| C. Studies, Surveys, and Reports                               | 20.0             | 30.0             |
| D. Miscellaneous Administration and Support Costs <sup>d</sup> | 20.0             | 30.0             |
| E. Contingencies   | 75.0             | 140.0            |
| Total  | 750.0            | 1,000.0          |

ADB = Asian Development Bank, TA = technical assistance.

Note: The TA is estimated to cost \$1,750,000, of which contributions from ADB and the High-Level Technology Fund are presented in the table.

Source: ADB estimates.

<sup>&</sup>lt;sup>a</sup> Financed by ADB's Technical Assistance Special Fund (\$250,000 from TASF 7 and \$500,000 from TASF-other sources.

<sup>&</sup>lt;sup>b</sup> Financing partner: the Government of Japan. Administered by the Asian Development Bank.

<sup>&</sup>lt;sup>c</sup> Includes honorarium and travel cost for resource persons and facilitators, participants' travel cost, and ADB staff travel costs as resource persons and/or speakers, logistical costs and representation expenses to cover alcoholic and nonalcoholic beverages, conference materials, and conference related service providers.

<sup>&</sup>lt;sup>d</sup> Includes costs related to non-consulting services under the TA such as translation and interpretation services, printing services, and Microsoft Office 365E software license.

LIST OF LINKED DOCUMENTS
<a href="http://www.adb.org/Documents/LinkedDocs/?id=55119-001-TAReport">http://www.adb.org/Documents/LinkedDocs/?id=55119-001-TAReport</a>

- 1. Terms of Reference for Consultants
- 2. Contribution to Strategy 2030 Operational Priorities