



Final Report

Capacity Building in Sustainable Urban Mobility for Low Income Countries *“Research on demand and success factors for future supply”*

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Abstract	
<p>There is a significant lack of sector-specific literature on capacity building in the field of passenger transport and urban mobility. The report addresses this gap by examining various capacity building activities and their effectiveness for LICs. After defining capacity building, the report identifies six types of stakeholders involved in capacity building (public authorities, international development cooperation agencies, non-profits and NGOs, initiatives and partnerships, universities, and the private sector). A non-exhaustive overview of the different organisations and entities under each type is presented. The report then compiles a catalogue of 14 capacity building formats and lists examples of each related to transport sector.</p> <p>Highly relevant for the international transport community and even more so for transport institutions worldwide, the findings of the report give a detailed response to the question of <i>“who does what where”</i> in terms of capacity building support for transport institutions. One of the main findings has been that capacity building can take different forms and extends well beyond trainings to include different formats that promote expert and peer exchanges such as peer reviews, mentorship programmes, participation in committees and working groups etc.</p> <p>To take funding and budget constraints into account, capacity building activities are categorised by their degree of excludability and rivalry. The authors further suggest analysing capacity building activities based on factors related to the themes of content, target audience and logistics. With these three themes, detailed guidelines to assess capacity building activities are presented. The guidelines provide a useful reference to assess the relative success and effectiveness of capacity building measures, which is especially relevant for the international transport community given the lack of information and strong evidence base on capacity building strategies for transport institutions in LICs.</p>	

Finally, the report introduces capacity needs assessments as a tool to enhance the design, funding, and coordination of capacity building efforts.

The methodology of the research project relied on a literature review, twelve expert interviews with different organisations working on capacity building for transport institutions in Africa and Asia, as well as a multi-stakeholder consultation webinar with 37 transport professionals from LICs, MICs, and HICs.

Keywords	Capacity building, Capacity development, Technical and Vocational Educational Training, Low-Income Countries (LICs), South Asia, Africa, Needs Assessment, International development cooperation
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Abbreviations/Acronyms

AAUMA	African Association of Urban Mobility Authorities
ACE	African Higher Education Centres of Excellence
ADEME	French Agency for Ecological Transition
AFD	French Development Agency
AfDB	African Development Bank
AMA	Accra Metropolitan Assembly
AUF	Agency for Francophone Universities
BMZ	German Federal Ministry for Economic Cooperation and Development
BRT	Bus Rapid Transit
CAPSUT	Capacity Building on Sustainable Urban Transport
CEDAT	College of Engineering, Design, Art and Technology
CEPT	Centre for Environmental Planning and Technology
CEREMA	Centre for Studies and Expertise on Risks, the Environment, Mobility and Urban Planning
CETUD	Executive Council of Urban Transport in Dakar
CFF	Cities Finance Facility
CMOR	Centre of Mobility Research - Ain Shams University
CODATU	Cooperation for the development and improvement of urban mobility in developing countries
COVID-19	Corona Virus
CSR	Corporate Social Responsibility
CTA	Cairo Transport Authority
CTE	Centres of Excellence
DT4A	DigitalTransport4Africa
EAMAU	African School of Architecture and Urban Planning Professions
EBRD	European Bank for Reconstruction and Development
ENIT	Egyptian National Institute of Transport
EPFL	Swiss Federal Institute of Technology Lausanne
ESCAP	Economic Commission for Asia and the Pacific
FCDO	UK Foreign, Commonwealth & Development Office
FGDs	Focus Group Discussions
FIA Foundation	Foundation for the Automobile and Society
FUT	Future Urban Transport



GCAP	Green Cities Action Plan
GHG	Greenhouse Gases
GIS	Geographic Information System
GIZ	German Agency for International Cooperation
HVT	High Volume Transport
ICLEI	Local Governments for Sustainability
IKI	International Climate Initiative
ILO	International Labour Organization
INAU	Togo National Institute of Planning and Urbanism
ITDP	Institute for Transportation & Development Policy
JICA	Japan International Cooperation Agency
LAMATA	Lagos Metropolitan Area Transport Authority
LC-HVT	Low Carbon High Volume Transport
LICs/ LMICS	Low-Income Countries/ Lower-middle-income-countries
LMS	Learning Management System
LSE	London School of Economics
LUTP	Leaders of Urban Transport Planning
MAC	Mobility and Access in African Cities
MDB	Multilateral Development Banks
MENA	Middle East and North Africa
MooC	Mass Open Online Course
MRV	Monitoring, Reporting, and Verification
MYC	MobiliseYourCity
NAMATA	Nairobi Metropolitan Area Transport Authority
NAT	National Authority of Tunnels
NGO	Non-Government Organisation
NMT	Non-motorised transport
ODA	Organisation Development Africa
ODA	Official Development Assistance
PAAPAM	Pan-Africa Action Plan for Active Mobility
PIU	Project Implementation Unit
PTA	Public Transport Authority
PTO	Public Transport Operators
SDC	Swiss Agency for Development and Cooperation



SECO	State Secretariat for Economic Affairs
SEI	Stockholm Environment Institute
SLoCaT	Partnership on Sustainable, Low Carbon Transport
SMART-SUT	Integrated Sustainable Urban Transport Systems for Smart Cities
SSA	Sub-Saharan Africa
SSATP	Sub-Saharan Africa Transport Policy Forum
SUMP	Sustainable Urban Mobility Plan
SUTP	Sustainable Urban Transport Project
TA	Technical Assistance
TDM	Travel Demand Management
TfC	Transport for Cairo
ToT	Training of Trainers
TRECK	Transport Research and Education Centre
TUMI	Transformative Urban Mobility Initiative
TVET	Technical and Vocational Education and Training
UCT	University of Cape Town
UF	Urban Freight
UIC	International Union of Railways
UITP	International Association of Public Transport
UNDAF	United Nations Development Assistance Framework
UNDG	United Nations Development Group
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission of Africa
UNEP	United Nations Environment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNITAR	United Nations Institute for Training and Research
UNSDG	United Nations Sustainable Development Group
VoIP	Voice over Internet Platform
VREF	Volvo Research and Educational Foundations
WRI	World Resources Institute

Executive summary

The research project “Capacity Building in Sustainable Urban Mobility for Low Income Countries – Research on demand and success factors for future supply” is funded by UK-Aid under the High-Volume Transport Applied Research Programme (HVT). It focuses on identifying effective strategies for capacity building in transport institutions, particularly in Africa and South Asia.

What is the added value of this research?

There is a significant lack of sector-specific literature on capacity building in the field of passenger transport and urban mobility. The report addresses this gap by examining various capacity building activities and their effectiveness for LICs. After defining capacity building, the report identifies six types of stakeholders involved in capacity building, while giving a non-exhaustive overview of the different organisations and entities under each type. The report then compiles a catalogue of 14 capacity building formats and lists examples of each related to transport sector.

Highly relevant for the international transport community and even more so for transport institutions, the findings of the report give a detailed response to the question of “*who does what where*” in terms of capacity building for transport institutions.

The methodology of the project relies on a literature review, 12 expert interviews and a multi-stakeholder consultation webinar with 37 experts representing different organisations working on capacity building for transport institutions in LICs.

Mapping: Who does what where?

The mapping chapter lays out six main categories of capacity building stakeholders: (1) Public authorities on the local, national and regional level; (2) international development cooperation agencies such as UN agencies, multilateral development banks and bilateral agencies; (3) non-profits and NGOs such as member-based

associations and non-profit consulting firms and think-tanks; (4) initiatives and partnerships; (5) universities; and (6) private sector companies, training centres and foundations. The chapter shows the current synergies that facilitate the transfer of knowledge and skills between providers and recipients of capacity building support.

Beyond training: A catalogue of activities

The catalogue gives an overview of the various capacity building activities that are carried out by different organisations. The non-exhaustive catalogue describes 14 types of activities, along with relevant examples for each type. The duration of activities ranges from ones, which can take place in under a month such as study tours, workshops, conferences, and trainings, to other types, which can extend over several weeks and months such as peer reviews, mentorship programmes and committee meetings. Other formats such as formal education programmes and scholarships can vary in length and may extend for years. This chapter rectifies the common misconception that capacity building consists only of trainings and expands on this by including peer exchanges, working group meetings, and making knowledge products available as examples of capacity building activities.

Categorising capacity building activities

To take funding and budget constraints into account, capacity building activities are categorised by their degree of excludability and rivalry. Most existing capacity building activities in passenger transport and urban mobility are restricted by capacity constraints (rivalrous) and are not free (excludable). Bearing in mind that donors tend to prefer funding capacity building activities with a wide reach, employing digital tools may support in making capacity building activities more inclusive and less rivalrous.

Analysis of capacity building activities

Chapter 7 identifies analysis factors for capacity building activities, grouped into three themes: The first are content-related indicators such as the thematic focus of the activity and the profile of experts involved. The second set of indicators are related to the target audience such as the profile of the partner institution and the type of incentives the activity offers such as certification and accreditation. Third, are logistics including the duration, the setting, i.e. online, offline or hybrid, the pace, the frequency and the language of the activity.

After this analysis, the chapter compares the typical strengths and weaknesses of the different capacity building activities. While some formats offer opportunities for in-depth coverage of topics, and detailed exchanges between participants, there can be capacity constraints, which limit the number of attendees. This overview can guide both providers and recipients to be mindful of the opportunities and risks each type of capacity building activity poses.

Ingredients to successful capacity building

The answer to what is the most effective capacity building activity is not in choosing a specific format, which scores the highest on a checklist, but rather in choosing a format, which responds to the specifics of the context and its circumstances. The applicability of learnings from capacity building is governed by multiple elements and is not always guaranteed, but efforts can be made to ensure the successful transfer of knowledge and skills. Chapter 8 builds on the analysis factors defined in chapter 7 and suggests recommendations for each type of capacity building activity.

The recommendations focus both on the short-term such as contracting the right experts and choosing a suitable setting, but also on the longer term such as ensuring local ownership, institutionally embedding capacity building in the professional trajectory of employees and establishing cooperation mechanisms to align the efforts of different agencies.

A critical, but overlooked tool: capacity needs assessment

The expert interviews noted the importance of setting clear expectations of capacity building activities prior to conducting them. This is where capacity needs assessments come in. Given that assessment methodologies differ from one organisation to another, chapter 9 gives a broad overview of what capacity needs assessments are, what the different roles played within the process are, and when and how to conduct them. The chapter is guided by general frameworks and transport-specific case studies before breaking down the process into three phases. The first is a pre-assessment phase meant to explore the current situation and verify the project scope and the demand of the partners. The second phase is the assessment, which identifies the needs by analysing the desired and current capacities and discusses improvement activities. Finally, the post-assessment entails communicating the findings and evaluating the process. Chapter 10 summarises best-practice guidelines for undertaking capacity needs assessments.

Way forward

Capacity building in essence is a long-term learning and development exercise, which involves change management. Principles of pedagogy must not be disregarded in the process, and partner involvement and ownership must be ensured. The report guides both the design of capacity building activities, and brings to the table discussions on funding, long-term planning and cross-organisational coordination for a collective and profound impact.

The methodology of the research relied primarily on collecting data from organisations providing capacity building support. Further research focusing on the experience of the transport institutions receiving capacity building support may provide additional insights that could not be fully covered in this report. By doing so, it can be further analysed in which instances transport institutions seek capacity building and what, in their opinions, are the key factors to long-term success.

1. Introduction

Sustainable and efficient transport systems help low-income countries (LICs) grow their economies and healthy communities. Yet too often there is a gap between the desire to transform infrastructure and realising sustainable and efficient passenger transport systems. There are many reasons why change can be slow, and ultimately transport changes are complex, costly and take time. Capacity building is one way to bridge the gap, helping to give policy makers, transport planners and practitioners the skills to localise and implement change.

Yet, there is a strong lack of literature when it comes to sector-specific capacity building, specifically capacity building activities in the field of transport and urban mobility. (1)

1.1 Project background and objectives

This research project “Capacity Building in Sustainable Urban Mobility for Low Income Countries – Research on demand and success factors for future supply” falls under the portfolio of the High Volume Transport Applied Research Programme (HVT) funded by the Foreign, Commonwealth and Development Office (FCDO). HVT has the overarching goal of producing research that can support decision makers to invest in high volume road and rail transport, so that transport in LICs can become more inclusive and sustainable. This goal is especially relevant with regards to the mounting impacts of climate change and rapid urbanisation.

The research produced by HVT, including this research project, specifically focuses on sustainable development issues in Africa and South Asia.

The main objectives of the research are to:

- Gather knowledge and create an evidence base for the most effective strategies of capacity building for transport institutions in LICs;
- Establish a needs assessment methodology to apply the most efficient strategies;
- Develop target-oriented tools and guidance to improve future capacity building in countries and within development agencies.

1.2 Report structure

The approach and overall methodology of data collection of this report is described in Chapter 2.

Chapter 3 establishes an understanding of what capacity building means, distinguishing between the different levels to capacity building as well as differentiating between functional and technical capacities related to the transport and mobility field.

Chapter 4 represents a mapping exercise where the stakeholders involved in capacity building, both transport institutions as well as the organisations and entities providing capacity building support to transport institutions are categorised and introduced.

In a next step, a catalogue giving an overview of the different activities, initiatives, and formats that organisations and entities are offering to transport institutions is provided in Chapter 5.

In Chapter 6, the authors suggest a categorisation model for capacity building activities, before Chapter 7 introduces an analytic framework based on content, target audience and logistics criteria, while also mentioning common strengths and weaknesses of different capacity building formats.

Chapter 8 provides assessment guidelines for capacity building activities following the analytic framework. This chapter summarises the main recommendations put forward by the experts consulted for this research project.

Chapter 9 specifically focuses on what capacity needs assessments are and how to conduct them based on different methodologies used by international organisations.

Chapter 10 provides specific guidelines by the authors that may be used to better plan for and conduct capacity needs assessments.

The conclusions are presented in chapter 11.

2. Approach and methodology

2.1 Approach

The research relied on a combination of literature review and expert consultations along three main phases:

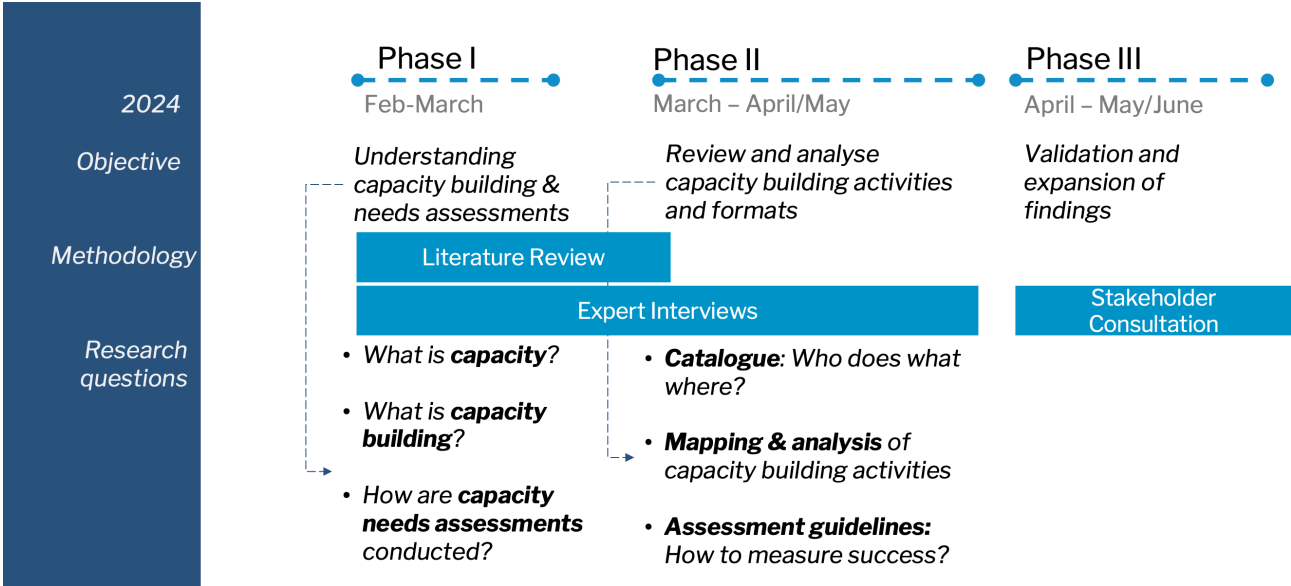


Figure 1 Overview of the research approach (developed by TfC)

2.1.1 Phase I: Understanding capacity building and needs assessment

The first phase of the project built a strong understanding on what capacity means in transport and provided guidance on conducting strategic capacity needs assessments. This was achieved through a literature review of a selection of documents published by international organisations including UN organisations, the World Bank, as well as UK-Aid, and the German International Cooperation Agency (GIZ). Further, experts from GIZ and ICLEI were interviewed during this phase to inquire more on capacity needs assessments and to understand how it is approached by different organisations. This phase concluded with a guidance document on conducting capacity needs assessments.

2.1.2 Phase II: Review and analyse capacity building activities and formats

In this phase, the focus is on capacity building programmes and activities for transport institutions. This implies showcasing the different examples, formats and approaches to capacity building for transport institutions. This phase minds the gap identified between theory and practice through expert interviews. Experts conducting capacity building programmes across LICs for different transport institutions have been consulted. The goal of this phase is to aggregate the different experiences of capacity building providers and based on these interviews recommend best practices for approaching capacity development for transport institutions and how to assess their success.

2.1.3 Phase III: Validation and expansion of findings

In the final phase of the project, a virtual expert workshop was organised to present and discuss the findings collected thus far, and to gather additional feedback from the attendees. Interview partners as well as stakeholders from middle- and high-income countries were also invited to this workshop. The attendees of the workshop, as listed in Table 3, combined experts involved in mobility projects in low-, medium- and high-income countries. The experts represented both capacity building providers such as academic institutions, international development agencies, private sector companies, as well as transport institutions receiving capacity building support.

2.2 Methodology

2.2.1 Literature review: Identification and selection (phase I)

Special attention was given to international organisations and bilateral development agencies providing capacity building as part of their international development cooperation work.

Thus, the authors targeted literature according to certain criteria:

- 1) **Authors:** Literature published by international organisations (the UN organisations), multinational development banks (World Bank, African Development Bank) and bilateral development agencies (GIZ, AfD, JICA).
- 2) **Content:** Literature that 1) gave an understanding of what capacity building, capacity development or capacity enhancement means, especially those covering TVET, and literature discussing 2) how to conduct capacity needs assessments.
- 3) **Sector:** Literature ideally addressing the transport and mobility sector, thus focusing on high-volume passenger transport, and excluding freight and logistics.
- 4) **Publication date:** Literature published within the last 10, or 20 years maximum.
- 5) **Access:** Literature that is publicly available online.

Based on these criteria, the following list of literature sources were considered in our literature review.

Table 1 List of literature sources considered in the literature review by the authors

Publisher	Type of publishing organisation ¹	Title	Publication year	Public link
C40 Cities Finance Facility	International Associations	Capacity Development Plan to Mexico City for the implementation of the Electric Bus and Bicycle Corridor on Eje 8 Sur	2017	Link
GIZ	Bilateral development agency	Supporting Capacity Development: A Guiding Framework for Practitioners	2018	Link

¹ To get an overview of how we classify the different organisations working on capacity building, please refer to section 3.1.3.

GIZ	Bilateral development agency	Cooperation Management for Practitioners: Managing Social Change with Capacity WORKS	2015	Link
HVT	Research programme of bilateral development agency	Capacity building needs assessment and strategy to promote low carbon development in high volume transport	2019	Link
ILO	International organisation	ILO-wide strategy for institutional capacity development	2019	Link
ITDP	International think tank	The Secret Ingredient: Institutional Capacity	2016	Link
ITDP	International think tank	Best Practice in National Support for Urban Transport: Part 2	2016	Link
TUMI	International partnership	A 250k Gap? Building Capacity for The Global Mobility Transition	2020	Link
TUMI	International partnership	Trainings catalogue	2018	Link
UNDG	International organisation	Capacity Assessment Methodology	2009	Link
UN-Habitat	International organisation	Manual: Training Needs Assessment and Training Outcome Evaluation In an Urban Context	2012	Link
UN-Habitat	International organisation	Guide to deliver capacity building using digital tools	2021	Link
UNSDG	International organisation	Capacity Development: UNDAF Companion Guidance	2017	Link
World Bank	Research institute of multinational bank	A Guide to Assessing Needs: Essential Tools for Collecting Information, Making Decisions, and Achieving Development Results	2012	Link
World Bank Institute	Research institute of multinational bank	Capacity Enhancement Indicators: Review of the Literature	2004	Link

2.3 Expert interviews (Phase I and II)

In both phase I and II, a total of 12 interviews were conducted with representatives from universities, training centres, massive open online course (MooC) providers and overall regional experts. Conducting this number of interviews helped the research team achieve a diverse representation of multiple capacity building activities for transport institutions in LICs and LMICs. This sub-chapter describes the selection of the interview partners, and lists the different interviews conducted with representatives from different types of entities providing capacity building support.

2.3.1 Selection criteria

After having identified the different types of actors that are involved in the provision of capacity building programmes and activities in the inception report of this project, the selection of interview partners was developed based on several factors underlying the project scope:

- **Number of interviews:** As per the ToRs, up to 10 interviews should take place, two in phase I and eight in phase II, covering the following:
 - Two representatives from universities;
 - Two representatives from training centres;
 - Two representatives from MooCs;
 - Four regional experts.
- **Target countries and cities:** The scope and aim of this project has been to map and analyse capacity building programmes and initiatives undertaken in the two regions of interest for the HVT programme, namely LICs² in Africa and South Asia.³
- **Geographic balance:** The aim was to speak to a diverse, yet geographically balanced amount of interview partners, while making sure not to speak to more than one organisation from a specific country.
- **Organisational balance:** Given the diverse types of actors providing capacity building programmes and activities, the aim was to capture the insights of diverse actors representing different organisations, while also maintaining the geographic balance previously mentioned.

The expert interviews in phase I and phase II of the research project were carried out between February and March 2024.

The table below gives a chronological overview of the 12 interviews conducted, along with the names of the entities interviewed, and the location of the experts⁴, distinguishing between LICs and LMICs.

² The following are countries classified by the World Bank as Low-Income countries: Afghanistan, Burkina Faso, Burundi, Central African Republic, Chad, Congo, Dem. Rep., Eritrea, Ethiopia, Gambia, Guinea-Bissau, North Korea, Liberia, Madagascar, Malawi, Mali, Mozambique, Niger, Rwanda, Sierra Leone, Somalia, South Sudan, Sudan, Syria, Togo, Uganda, Yemen. (58)

³ Identifying contact persons in Low Income Countries South Asia to interview has proven to be quite challenging, especially since development agencies that were approached typically work in Southeast Asia or India, both of which are classified as MICs.

⁴ Although this was not a specific objective of this report, the project team was able to achieve gender balance in the interviews conducted as well, with 42% of the interviewed experts being female, and 58% male.

Table 2 List of interview partners

#	Type	Entity	Country	LIC/LMIC	Gender
Int. 1	MooC	GIZ/ TUMI (phase I)	Global	both	M
Int. 2	Regional Expert	ICLEI (phase I)	Global	both	F
Int. 3	University	Ain Shams University – CMOR	Egypt	LMIC	M
Int. 4	Regional Expert	MTracs	South Africa	LMIC	M
Int. 5	Training Centres	National Institute of Transport	Egypt	LMIC	F
Int. 6	Regional Expert	ITDP	Uganda	LIC	F
Int. 7	Regional Expert	World Bank	Cote d'Ivoire	LMIC	M
Int. 8	Training Centre	UITP	Global	both	M
Int. 9	University	Kwame Nkrume University - TRECK	Ghana	LMIC	M
Int. 10	University	Makrere University - CEDAT	Uganda	LIC	F
Int. 11	MooC	CODATU	Regional	both	F
Int. 12	Regional Expert	Transitec	Rwanda	LIC	M

In phase I, representatives from GIZ/TUMI were interviewed, who among others, provide capacity building via MooCs. Thus, the authors classified them under the category of MooCs. The second expert interview took place with ICLEI, thus falling under regional experts.

As can be seen in Table 2, the experts consulted in phase II cover the remaining required representatives.

With regards to diversity, the project team was not able to speak to experts based in South Asian LICs, however, some of the experts consulted have undertaken capacity building activities in South Asia.

Although the project scope required up to eight interviews to be undertaken in phase II of the project, 10 expert interviews were conducted. This was due to a high response rate from the experts the authors reached out to.⁵

2.3.2 Format of the expert interviews

As the project scope covers several countries and requires the expertise of local as well as regional and international experts, the research team opted to conduct the interviews online whenever the interview

⁵ With a total of twelve expert interviews consisting of: three representatives from universities; two representatives from training centres; two representatives from MooCs; and five regional experts, the expert interviews conducted exceed the required number of representatives in the TORs.

partners were not based in Egypt. Further, the team made sure to ask for the interview partners' permission to record the online interviews.

Interview partners were approached by an email giving a short description of the research project. To help prepare the call, guiding questions were sent to the interview partners a few days prior.

Interviews were conducted on MS Teams with an average duration of about one hour.

The main findings of the interviews are incorporated in different chapters of the report, whereas the detailed interview notes as well as the guiding questions can be retrieved from the annex.

2.4 Multi-stakeholder consultation webinar

In the third and final phase of the research project, a multi-stakeholder consultation webinar was organised with the aim to present, validate, and expand on the research findings of the team based on the feedback of several groups of stakeholders.

Combining experts from low-, medium- and high-income countries, transport experts from capacity building providing organisations as well as receiving entities, i.e. the transport institutions, were invited to participate in this multi-stakeholder consultation workshop.

Organised on 30th April, 2024, the consultation webinar had the participation of 37 stakeholders representing 32 organisations from 19 countries⁶. In the first half of the webinar, the preliminary research findings were presented. In the second half, participants were assigned into five different virtual breakout rooms based on the type of organisation they represented. The make-up of the breakout rooms can be seen in the table below⁷:

Table 3 Make-up of the stakeholder consultation webinar breakout rooms

#	Type	Entities present in room
BoR 1	Transport institutions	<ol style="list-style-type: none"> Accra Metropolitan Assembly (AMA), Greater Accra Passenger Transport Executive <i>Previously: UK Department of Transport (DoT)</i>, Innovation and Funding; <i>Currently: HVT</i> Netherlands Ministry of Infrastructure, ACTIVE Capacity Building Team, Advisor Sustainable Mobility <i>Previously: Dubai Roads and Transport Authority</i>, Strategic Planning; <i>Currently: WSP</i>
BoR 2	Academia	<ol style="list-style-type: none"> Misr International University (MIU) MTracs University of Cape Town (UCT) University of Cape Town (UCT)
BoR 3	Private sector	<ol style="list-style-type: none"> Rupprecht Consult Transitec SLR Consulting Transport Research Laboratory Organisation Development Africa (ODA)

⁶ Of the 19 countries, 17 were from HIC, 16 from MIC and 4 from LICs.

⁷ It should be noted that some workshop participants left the workshop early and did not actively participate in the breakout rooms.

BoR 4	International development agencies including NGOs	<ol style="list-style-type: none"> 1. CODATU 2. Development Bank for Southern Africa 3. EBRD 4. MobiliseYourCity 5. UITP 6. WRI – Africa Office
BoR 5	International development agencies including NGOs	<ol style="list-style-type: none"> 1. Agora Verkehrswende 2. GIZ/TUMI 3. UIC 4. UITP 5. WRI

All breakout rooms were asked to discuss the following questions:

- Which activities are referred to as capacity building activities within your organisation?
- Which challenges do you encounter related to capacity building? How do you overcome them?
- How do you measure the success of a capacity building activity? Which indicators are usually part of your internal evaluation process?

The findings from the discussions within the breakout rooms have been included in this final report and referenced by (BoR 1) for discussions, which occurred in Breakout Room 1 for example.

Summary notes of the different breakout room discussions as well as the whiteboard notes can be found in the annex of this report.

3. Capacity building

Recognising that international organisations play a vital role in facilitating and providing capacity building activities including technical and vocational training (TVET)⁸ to LICs, a literature review was conducted with a focus on publications made by international organisations. The overarching research question here was: *What is meant by capacity building?*

To answer this question, we start off by defining what is meant by “capacity” (subchapter 3.1), analysing the different approaches/levels to capacity building (subchapter 3.2), categorising the different types of individual capacity gaps in the transport and mobility field (section 3.2.1), as well as presenting the different capacity types of institutions (section 3.2.2), In the following chapter, we map the different organisations and entities providing capacity building support to transport institutions. (chapter 4)

When looking into “capacity building” as a term, it quickly becomes clear that different institutions refer to the concept differently: What started in the discussion as capacity building, has now shifted towards “capacity development” in the framework of the UN institutions, or “capacity enhancement” in the framework of the World Bank. (2) The move away from “building” is largely due to the UNDP’s effort to make clear that project partner countries and cities had capacities prior to the intervention, as “building” connotes that there was no capacity to begin with. (1) In the context of this paper however, capacity building, development and enhancement shall be used synonymously.

What is agreed on beyond the terminology, is the fact that capacity building or development stands for “a complex process of learning, adaptation, and attitudinal change”. (2) This means that inherently, capacity building involves and supports making changes to an existing situation. (3)

3.1 Understanding capacity

The United Nations Development Group (4) provides the following definitions:

- **Capacity:** The ability of people, organisations and society as a whole to manage their affairs successfully.
- **Capacity development:** The process whereby people, organizations and society as a whole unleash, strengthen, create, adapt, and maintain capacity over time, in order to achieve development results.
- **Capacity development support:** Efforts by external individuals or organisations to reinforce, facilitate, and catalyse capacity development.
- **Capacity assessment:** The identification of capacity assets and needs at national and local levels, equivalent to measuring baselines and the progress of (capacity) development indicators.

⁸ Technical and Vocational Education Training (TVET) is “a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life.” (56) As such, TVET is a means to prepare people for occupational fields and for their effective participation in the work force beyond formal education. Thus, it reflects the concept of learning as a lifelong process. (55)

These definitions help us understand that capacity building or development, refers to the process of improving or enhancing the ability of people and organisations/institutions to achieve their desired development results, often through the help of external actors, by means of identifying their existing and needed abilities.

In other words, “capacity” is often referred to as “the ability for proactive management”, recognising “people’s capability to effectively combine and coordinate political will, interests, knowledge, values and financial resources in order to achieve their own change objectives and needs.” (5)

Looking more closely at the term “capacity”, practitioners advise that it is important to further define the following questions (4,2):

- *The capacity of whom to do what?*
- *The capacity to do what how well?*

In the context of this research paper, the “whom” addresses transport institutions, i.e. those institutions on the national, local or regional levels involved in the planning and provision of high volume transport. This includes local authorities, public and private operators as well as industry providers.

With regards to “to do what”, the literature finds that capacities can be grouped into technical and functional capacity. **Technical capacities**, on the one hand, refer to the specific capacities relevant to the sector or area an institution is working in. (4) Zooming in on passenger transport and mobility, these may include, among others, the ability and skills to:

- create Transport Master Plans;
- create and implement Sustainable Urban Mobility Plans (SUMP);
- design and implement Travel Demand Management (TDM) measures including road charging and parking management etc.;
- design and operate public transport networks;
- plan and construct new roads, railway lines etc.;
- plan and construct sidewalks and bike-lanes;
- design and choose fare levels and fare collection systems;
- regulate and license different transport services;
- design and maintain non-farebox revenue channels;
- operate and maintain in-house and/or manage delegated (public) transport services.

Functional capacities, on the other hand, are common capacities across sectors and areas. (4) Examples of functional capacity of an institution may include:

- Regulation;
- Planning;
- Budgeting;
- Financing and funding;
- Procurement;
- Operations and management;
- Asset and risk management;
- Monitoring and evaluation;

- Recruitment and retention;
- Policymaking skills;
- Strategy formulation;
- Communication skills;
- Negotiation skills.

3.2 Different approaches/levels of capacity building

There is a common agreement among practitioners and international organisations that capacity building involves more than improving individual knowledge and skills, i.e. providing trainings to individuals. (2,1) In fact, most authors agree that “institutional weakness constitutes a major constraint on development”. This is because well-qualified and well-trained individuals need “an appropriate environment” (2) that enables and motivates them to apply their acquired knowledge and skills.

Thus, capacities can be categorised into “hard” and “soft” skills. **Hard capacities** are tangible and visible, and can encompass “organisational structures, systems, policies and procedures”, whereas **soft capacities** are intangible and invisible, as they are often of a social or relational nature. These may include “leadership, values, behaviours, commitment, and accountability”. (4)

Further, international organisations identify three analytic levels at which capacity building initiatives and programmes can be targeted:

1. **Individual level:** The focus here lies in developing human resources and building competence, i.e. improving the knowledge, skills and performance of individuals. This can be done via TVET activities including trainings, coaching, knowledge-sharing, experiences, or incentives to boost motivations and improve employee attitudes. (5,4) Actors involved in this level of capacity development activities are individuals and communities of learning. (5)
2. **Organisational/institutional level:** The focus here lies in promoting organisational/institutional learning, improving performance, and increasing flexibility through change management. (5) Examples include activities focusing on strengthening the organisation through “strategies, plans, rules and regulations, partnerships, leadership, organisational politics and power structures, and strengthening organizational systems, processes, and roles and responsibilities”. (4) Actors involved in this level of capacity development activities are government organisations and units, civil society and the private sector. (5)
3. **Society level (enabling environment):** The focus here lies in improving the overall policy and legislative framework in which the organisation/institution is working, so that the society can act as an enabler to the individuals and organisations, as opposed to an obstacle. (4) The Capacity WORKS development cooperation framework by GIZ (5) goes further by emphasizing two sub-sectors of the society level, namely:
 - **Cooperation partnerships:** The focus here lies in “establishing and developing cooperation between organisations to improve coordination and performance, and to establish and develop networks for knowledge-sharing and co-creation” (5). Actors involved in this sub-level of capacity development activities include institutions and organisations across geographical or thematic lines, and networks.

- **Enabling frameworks:** The purpose here lies in developing legal, political, and socioeconomic frameworks that are conducive to improved performance capability (5). Actors involved in this sub-level of capacity development activities include organisations and institutions from the state-level, private sector or civil society who are “involved in developing and negotiating the rules of the frameworks”. (5)

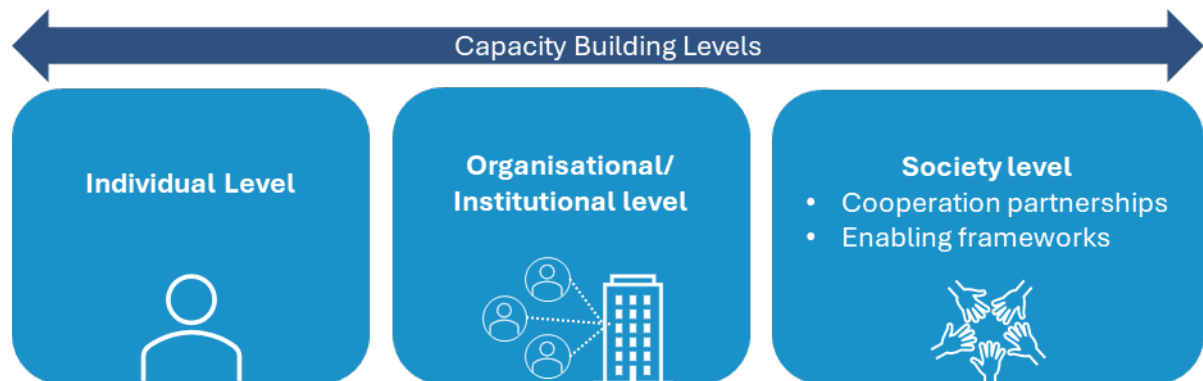


Figure 2 The interrelated and mutually reinforcing levels of capacity development (designed by the authors based on (4,5))

It should be noted that the three levels are interrelated and mutually reinforcing. (4) The figure above is an attempt by the authors to give an overview of the analytic levels of capacity development based on the findings of the literature review.

3.2.1 Individual capacity in the transport and mobility field

Applying the analytic levels of capacity building to transport institutions, the Transformative Urban Mobility Initiative (TUMI) (1) provides an analysis of how transport institutions may face capacity gaps on the individual capacity level due to a disequilibrium in the supply and demand for skill-based labour. Introducing the term *mobility skills imbalance*, the authors propose three sub-levels of individual capacity (1):

- The **staff gap** refers to the difference between the current and desired number of staff available to the transport institution.
- The **knowledge gap** refers to the difference between the current and desired quality of the educational, technical and skills background of the transport institution’s current workforce.
- The **education gap** refers to the difference between the current and desired quantity and quality of academic and non-academic educational programmes available to potential future employees (students) and existing employees of the transport institutions, specifically including:
 - **Gap in sustainable education:** the extent to which the current content of educational programmes aligns with the principles of sustainable mobility.

3.2.2 Institutional capacity in the transport and mobility field

Institutional capacity can be seen as the “secret ingredient” behind why some cities succeed in planning and implementing transport and infrastructure projects, when others do not. (6)

Recognising that there is broad agreement on the general understanding of institutional capacity, but that it “can be difficult to define in specific terms and measurable ways”, the study by Institute for Transport and Development Policy (ITDP) (6) sets out to develop an index consisting of three types of institutional capacity

relevant to the transport and mobility sector. These are: the transport governance capacity, the planning capacity and the technical capacity of a transport institution. The below table gives an overview of the definitions of these capacities as well as the proposed indicators.

Table 4 Institutional capacity index (adapted from (6))

Capacity types of institutions	Definition	Indicator
Transport governance capacity	The degree to which an authority has the clear legal and political authority to plan, finance, and build rapid transit infrastructure across a metropolitan region.	Presence of institutions with clear authority to plan, design, and implement rapid transit projects across metro areas.
Planning capacity	The degree to which the institutions have the proper organization and processes to plan and facilitate projects efficiently and effectively, including financial planning, urban and transport planning, data collection, and project preparation resources.	Presence of well-established mobility plans that guide long-range transport planning.
Technical capacity	The degree to which the institution’s staff (or consultants) have the technical ability to collect, analyse, and use data to plan, design, and engineer infrastructure and/or to structure complicated finance schemes, tendering agreements to achieve goals.	The record of the country in planning and implementing high-quality, well-designed transport infrastructure without major project delays.

4. Stakeholder mapping

This chapter focuses on mapping the different stakeholders involved in capacity building for transport institutions.

Bearing in mind that capacity building is a learning and development process, it should be noted that transport institutions can either work on the development of their capacities by themselves (internally) or by seeking capacity building support externally.

Internal strategy departments typically play a significant role in an entity’s development process, as they plan and designate the institution’s long-term goals and targets, thereby identifying internal capacity needs. In many cases, the Human Resources department is also in charge of assessing the capacities of the current workforce and actively looking into developing them. More specifically, transport institutions often have their own internal training departments with the role of improving the educational journey of staff. Thus, the training departments routinely address capacity gaps and needs, and typically employ in-house trainers who can provide capacity building whenever needed.

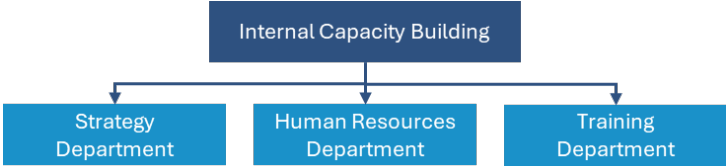


Figure 3 Analytical framework for internal capacity building providers (developed by TfC)

In the case of organising capacity building internally, there are no additional cost implications to the institution. Instead, it is a matter of the (re-)allocation of person hours and days, as the trainers themselves are already paid employees of the transport institution.

Seeking capacity building support externally, on the other hand, has cost implications, as the capacity building support is outsourced.

Based on the literature review conducted in phase I as well as the expert interviews in phase II and the stakeholder consultation workshop in phase III, Figure 4 represents an attempt to identify and broadly categorise the wide variety of capacity building stakeholders.

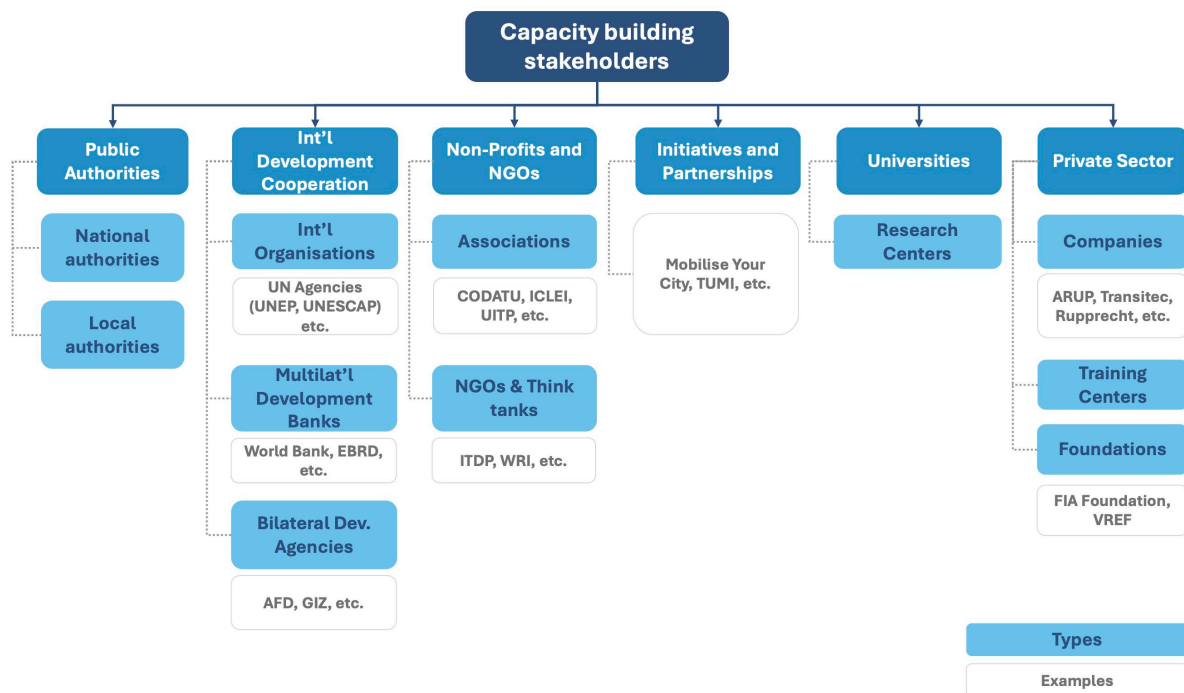


Figure 4 Analytical framework for external capacity building providers in the transport and mobility field (developed by TfC)

This overview, however, is non-exhaustive: There are many entities and organisations providing capacity building based on their different understanding of what capacity building activities can look like. The scope of this research project does not allow for a fully comprehensive overview. The below is merely an attempt to capture some of the different entities under each type of provider, as examples, and to feature some of their activities.

4.1 Public authorities

Public authorities are the transport institutions on the local, national and regional level, representing the targeted recipients of capacity building support. The following overview can slightly vary from one country to another, but the typical functional roles of the entities on the respective governance levels remain consistent across LICs and LMICs.

4.1.1 National Level

On the national level, the focus is on National Ministries with transport-specific mandates. These are typically the Ministries of Transport. As transport and mobility are interdisciplinary fields, other ministries may also be important stakeholders. Some examples include the Ministry of Infrastructure in the case of Rwanda, the Ministry of Interior in the case of Morocco, and the Ministry of Environment in the case of Egypt. Further, some countries designate national entities responsible for specific types of transport. The Land Transport Regulatory Authority (LTRA) in Egypt for example is an authority primarily responsible for land-based transport under the supervision of the Ministry of Transport.

4.1.2 Local level

Depending on the size of the city, city councils/municipalities or (public) transport authorities are responsible for the provision and management of road infrastructure and (public) transport services. Across LICs in Africa, there has been decentralisation processes to make local governments more involved in the

delivery of services to residents. (7) This decentralisation needs to be accompanied with capacity building programmes. Functions of these authorities also include licensing and operating transport services as well as constructing and maintaining roads within their jurisdictions.

With a population of over 10 million, the Lagos Metropolitan Area Transport Authority (LAMATA) was established in 2002 with the responsibility of reforming the transport system of Nigeria's capital city, Lagos. The aim is to create a world-class intermodal integrated transport system for the megacity.

Similarly in 2017, the Nairobi Metropolitan Transport Authority (NaMATA) was established to improve the public transport system in Kenya's capital through the introduction and implementation of different passenger transport projects including BRT, commuter rail and active mobility projects.

4.2 International development cooperation

Comprising international organisations such as the UN agencies, but also multilateral development banks (MDBs) such as the World Bank and bilateral development agencies, international development cooperation actors may provide both financial, but mostly technical assistance (TA) to countries. Capacity building is a common component of TA projects.

For the case of bilateral development agencies, MDBs, and UN institutions, capacity building activities take place within the broader context of international development cooperation. Under this framework, capacity building activities are provided to transport institutions under the umbrella of technical assistance projects. Thus, capacity building efforts typically do not involve cost implications⁹ for the transport institutions, whom in this case, are referred to as project partners and/or beneficiaries.¹⁰

4.2.1 UN agencies

The United Nations System is made up of multiple funds and programmes which can provide capacity building along different scales, themes, and formats. UNEP and UN-Habitat are agencies with a focused mandate to support governments working towards sustainable urban development. For instance, the HVT programme promotes active mobility in Africa through the *Share the Road Programme* in collaboration with UNEP and the Stockholm Environment Institute (SEI), University of York. The one-year project works with partners to enhance the skills of African transport policymakers in implementing the Pan-Africa Action Plan for Active Mobility (PAAPAM) which is an action plan aimed at increasing investment for active mobility in Africa. (8)

Capacity development is one of the core functions of the United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP). UN-ESCAP is committed to developing the technical, managerial and institutional capacities of member states based on identified needs. Examples of capacity building activities include training sessions, workshops and e-learning platforms. For example, ESCAP was one of the implementing partners of the Sustainable Urban Transport Project (SUTP), under which the Capacity Building on Sustainable Urban Transport (CAPSUT) platform was established.

Another example of the activities of UN agencies is the role of the United Nations Institute for Training and Research (UNITAR) in arranging conferences and e-learning courses and exchange opportunities. In 2017,

⁹ Of course, there are indirect costs related to the person days and hours of transport institution staff dedicated to the capacity building. However, the point here is that there are no direct cost implications.

¹⁰ For the purposes of this research report, recipients of capacity building activities shall be interchangeably referred to as partners, beneficiaries, or less often, as clients.

UNITAR collaborated with the Ministry of Transport and the University of Lagos and hosted a two-day regional workshop on road safety in transport systems. (9)

4.2.2 Multilateral development banks

MDBs such as the World Bank, and the European Bank for Reconstruction and Development (EBRD) among others utilise their financial and technical resources to support education and research programmes. In many cases, MDBs finance the implementation of infrastructure projects for sustainable mobility transitions such as building rail services or extending BRT lines. Leapfrogging to sustainable transport projects usually needs to be complemented with institutional reforms and therefore, MDBs allocate funds to train more capable institutions and skilled workforce.

European Bank for Reconstruction and Development (EBRD)

The EBRD's transport sector strategy (2019 – 2024) reflects their investment plans, and their strategy objective which is to promote sustainable transport systems through reforming transport systems. (10) Within the EBRD Green Cities approach, cities identify environmental challenges and connect them with infrastructural investments and policy measures. The Green Cities Action Plan (GCAP) is being developed in more than 40 cities, including Cairo, Alexandria, and Amman.

In Cairo, the Sustainable Urban Transport Loan approved in 2022 involves the rehabilitation and upgrade of Cairo Metro Line 2. Capacity Building within the project includes enhancing the procurement and project management capacity of the beneficiary partner National Authority of Tunnels (NAT). (11)

World Bank – Africa Transport Policy Program (SSATP)

Nine African countries met with the World Bank and the United Nations Economic Commission of Africa (UNECA) in 1987 to set up what would later become the Africa Transport Policy Program (SSATP). It comprises 42 African member countries. SSATP operates on four main pillars: road safety, regional integration, resilient roads, and urban mobility. The urban mobility pillar focuses on three thematic areas: governance, improvement of public transport focusing on paratransit professionalisation and capacity building training courses.

SSATP offers its members knowledge products to expand on the experiences of the different cities and technical assistance to specific needs in member cities. For instance, the Ghanaian authorities were dealing with a lot of municipal fragmentation, so SSATP commissioned a short technical assistance study to define an institutional model that the Ghanaian authorities can then choose from and decide to adopt.

SSATP is the implementation partner on the African continent for the Leaders in Urban Transport Planning developed by the World Bank. Further details on the programme are described in sub-section 5.1.4.

4.2.3 Bilateral development agencies

Bilateral agencies implement projects and programmes that are designed to respond to the specific needs of their partner countries. These agencies operate under the foreign policies of their home governments and focus on different thematic sectors, including infrastructure, transport, and mobility.

French Development Agency (AFD)

AFD's role in capacity building comes in parallel to financing public transport systems in different cities in the Global South. AFD envisions a relationship with project partners which exceeds a beneficiary and financiers' relations where they support their partners in more structural means. AFD has a unit specialised

in organisational development and capacity building which supports project owners in improving their organisational performance. (12) The capacity building can take different forms such as technical support in financing projects, and technical assistance for implementation, and peer-to-peer exchanges.

AFD is the leader of MobiliseYourCity's projects on the African continent. Within this partnership and with the participation of CODATU and the French Centre for Studies and Expertise on Risks, the Environment, Mobility and Urban Planning (CEREMA), AFD is supporting the development of 12 Sustainable Urban Mobility Plans in African cities, five are currently completed. (13) This comes as part of the technical assistance offered to these cities and their national governments.

As a project financier, AFD can top loans for implementing projects, with a subsidy to support institutional capacity building. (14) In Addis Ababa, AFD is financing the [creation of the B2 bus line](#) which would be part of the BRT network in the future. Beside financing the construction, AFD maintains its institutional support towards the transport regulatory authority. AFD also comes as a main funding agency for multiple cooperation projects in which CODATU is the main technical partner and supports the authorities in improving policies and regulation systems. In Angola, CODATU, AFD and the Ministry of Transport in Angola signed a technical cooperation agreement to support Angolan authorities in developing sustainable urban mobility systems. (15)

German Corporation for International Cooperation (GIZ)

GIZ's capacity development efforts in the transport sector can take place following two main approaches: bilateral projects and global initiatives. Bilateral projects last three to six years and integrate capacity development into broader themes like climate change and sustainability. Their activities can span from providing technical policy advice on sustainable mobility and legal reforms, to planning Sustainable Urban Mobility Plans (SUMP). GIZ's projects place particular importance on institutional capacity development and hands-on practical implementation of the knowledge acquired.

Global initiatives like the Transformative Urban Mobility Initiative (TUMI) which is funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by GIZ, offer broader training programmes and their main activities include disseminating resources related to sustainable urban mobility, providing training courses for organisations, and arranging workshops and conferences to increase local and international dialogue.

4.3 Non-profits and NGOs

Non-governmental organisations and non-profits encompass a large share of actors involved in the provision of capacity building support available to countries and transport institutions. Organisations may include member-based associations, but also think tanks and non-profit consulting firms.

4.3.1 Associations

Associations in this context are trade and industry associations focusing on transport and mobility such as the International Association of Public Transport (UITP), the International Union of Railways (UIC) and Local Governments for Sustainability (ICLEI). These associations represent global or regional networks with membership-based agreements that allow members to access different forms of capacity building activities. The members have a common interest and can be government institutions, foundations, companies etc. Members of these associations can benefit from peer learning, different forms of knowledge exchange (such as conferences and workshops) and access to knowledge products provided by their memberships.

CODATU

CODATU is an international NGO created in 1981 to promote sustainable urban mobility in developing countries through fostering research and training programmes in different cities in MICs and LICs. CODATU's members are categorised into five groups: educational and training centres, local governments, companies, individual members, and foundations and associations. They arrange activities to engage their network such as regional meetings for public transport authorities and business clubs for companies.

CODATU organises short conferences to encourage dialogue between experts and encourage peer learning, and technical cooperation where CODATU offers support to beneficiaries such as local governments and transport authorities on different mobility themes (governance, financing, and operations). These cooperation projects can be funded by third-party funders such as AfD which, among other projects, funded a [technical cooperation](#) with the Tunisian Ministry of Transport. CODATU's activities also include organising study visits for different delegations, in a North-South exchange such as the [LAMATA visit to Paris](#), or a South-South exchange, such as the [NAMATA visit](#) in Cape Town.

CODATU invests directly in educational activities such as trainings, MooCs and Master's programmes.

ICLEI

ICLEI is a non-governmental network of cities with the objective of supporting local governments to achieve sustainability across different sectors, including mobility. The membership fee for the cities within the ICLEI network is a minimal funding source for the regional offices, but cities do not fund or cover ICLEI project costs, there are mainly third-party donors that usually fund the projects. An example of a third-party funding source is the International Climate Initiative (IKI). ICLEI works on bridging the gap between experts and cities by facilitating cooperation and informs cities with tools and research to develop their approach towards sustainable mobility.

ICLEI's activities in capacity building projects include the SPARK project in the Philippines where they work on promoting active travel policies through building the capacities of the city and the community on tactical urbanism. ICLEI's role in SPARK entails preparing the technical material needed for implementation and training the governments on adopting these tools to assess their mobility performance.

The International Association of Public Transport (UITP)

UITP is an international membership-based association with 13 offices around the world and more than 1900 members representing transport authorities, operators, industry providers and academia. UITP's capacity building activities are conducted through different channels. The UITP Academy has eight training centres worldwide, with two centres currently in Africa, in Johannesburg and in Dakar, in collaboration with the local transport authorities. The trainings programmes are either open calendar programmes, in-house programmes specifically tailored to certain organisations, or trainings with multi-lateral institutions. UITP also organises conferences and workshops. Knowledge exchange can also take place through peer reviews and working groups.

4.3.2 NGOs and think-tanks

Not-for-profit consultants on the other hand follow an interesting business model, wherein they attempt to provide technical assistance to transport institutions by actively securing funding for developing country partners from international organisations, national governments, foundations, or via private firms' corporate social responsibility (CSR) arm (Int. 2, Int. 6). Thus, donors can be referred to as the clients of not-for-profit consultants, whereas transport institutions are the beneficiaries.

Experts within this category provide their technical expertise as a form of capacity building. This can take different forms and, in most cases, is driven by cross-organisational partnerships which support cities in transitioning their mobility services. This form of knowledge sharing enables governmental agencies in learning from industry practitioners in their local contexts and from a global network of experts.

Institute for Transportation and Development Policy (ITDP)

ITDP is a non-governmental organisation that provides various technical guidance to cities in their transitions to sustainable transport projects. ITDP Africa's partner cities are Egypt, Ethiopia, Kenya, Rwanda, Tanzania, and Uganda. ITDP sustains its activities by bidding for grants and funding from different donors or MDBs (such as IKI, GIZ), and their built-up knowledge of the contexts of the different partner cities allows them to direct these grants into projects where governments need support.

ITDP's scope focuses on guidance and technical support as a form of capacity building. ITDP develops various standards such as the BRT Planning Guideline and the Better Streets Better Cities, beside these widely applicable guidelines, city-tailored guidelines are also developed to provide context-specific guidance. Preparing these documents is complemented by training the relevant transport authorities to apply these recommended processes. This transfer of knowledge can also take place through annual workshops, study tours and trainings.

World Resources Institute (WRI) Ross Center for Sustainable Cities (16)

Transport and mobility are tackled under WRI's Ross Center for Sustainable Cities. Founded in 1982, WRI is a research non-profit organisation with headquarters in Washington D.C. and international offices in Brazil, China, Colombia, Ethiopia, India, Indonesia, Kenya, Mexico, the Netherlands, Turkey, the United Kingdom. Through research, engagement with urban leaders, and global partnerships, WRI aims to enable sustainable and equitable development in cities. With regards to capacity building, WRI offers knowledge and research products in the form of reports, trainings, seminars, but also open data portals. More on this will be presented in the upcoming catalogue chapter.

4.4 Initiatives and partnerships

These international development actors as well as internationally active actors including consultants and associations sometimes pursue formal cooperation models with each other to establish specialised global initiatives and partnerships with a specific mandate related to transport and mobility.

Initiatives are multiple partners uniting in a shared goal to improve urban mobility and benefit from access to trainings and knowledge products.

Mobilise Your City

Mobilise Your City (MYC) is an established leading global partnership for sustainable urban mobility planning. It was launched at COP21 in 2015. The partnership has multiple implementing agencies (AFD, GIZ, ADEME, Cerema, CODATU, EBRD, and Wuppertal Institute) that support cities in diverse urban contexts. MobiliseYourCity supports its cities through four main service areas [1] mobility planning and shifting from car-oriented planning towards human-centric planning, [2] implementation support by allocating financial resources for small scale measures related to active travel, paratransit, and regulatory reforms, [3] capacity building through facilitating knowledge-sharing between local stakeholders and international experts and [4] advocacy activities.

TUMI

TUMI is an implementation initiative formed by Twelve (12) partners and funded by the German Federal Ministry for Economic Cooperation and Development (BMZ). TUMI's partner include MDBs, bilateral agencies, associations, and UN agencies. TUMI's vision is based on three pillars: supporting pilot projects around the world, sharing knowledge regarding modern mobility concepts, and investing in sustainable urban infrastructure. (17)

TUMI's E-Bus Mission Network promotes city-to-city learning for the Global South, facilitating the transition to e-buses. The "Digitalising E-Bus Projects" course covers electric bus fundamentals and management. TUMI also advances digitisation and data availability through its Mobility Data Hub, providing open-source data for African cities, along with technical reports and webinars on YouTube.

4.5 Universities

As mentioned, additional costs befall transport institutions when engaging with external capacity building providers. A sort of supplier-client relationship ensues. This relationship can usually be found between universities, professional training centres, and commercially active consulting firms who offer paid capacity building services including formal education programmes, training services and consulting services to transport institutions.

Education in public transport as a core major is usually housed in disciplines of civil engineering (traffic engineering/traffic planning), or transport economics, if it is present at all. (18) Transport studies can also come in as an application area for data analytics and computer science fields.

In our research paper, we showcase the following two different examples of research centres affiliated to faculties of engineering in their respective universities:

Centre of Mobility Research (CMOR), Cairo

CMOR started unofficially four years ago and was officially registered as a research centre in Ain Shams University two years ago. The nascent research centre started with a funded project on developing a comprehensive framework for identifying traffic crash hotspots using crowdsourced data. CMOR's vision is to address the state of the art of research, but also offer practical solutions for emerging mobility issues.

CMOR's main activities are conducting research (through funded research opportunities) and providing a two to three week training, which can be seen as an unpaid internship programme focusing on transportation software. CMOR also arranges one or two days workshops with visiting professors. CMOR's activities are open to the public but the participants in these activities have usually been students in their third or final year before graduation.

Transport Research and Education Centre, Kumasi (TRECK)

The Transport Research and Education Centre, Kumasi (TRECK) was established at the Kwame Nkrumah University of Science and Technology with funding from the World Bank. This initiative was part of the African Higher Education Centres of Excellence (ACE) programme to boost academic-industry collaboration in West Africa, particularly in civil engineering and related interdisciplinary fields. (19)

Currently, TRECK operates independently on commercial principles, an approach that is unique within the university framework. It is in its first five-year funding cycle, guided by an advisory board composed of industry and donor community members. The programme's academic partners are from Nigeria, Sierra

Leone, Liberia, and Senegal and it also benefits from partner universities in Germany, Switzerland and the USA.

4.6 Private sector

It is worth mentioning that aside from non-profits, traditional consulting companies often also have teams or offer services and activities related to capacity building. Below, a few examples of these companies shall be highlighted based on feedback received during the expert interviews.

4.6.1 Companies

ARUP

Recognising the importance of urban mobility and sustainable transport systems, international consulting firms are increasingly developing their service portfolio to address the needs of transport institutions. ARUP, for example, has a team of transport consultants focusing on both master planning and in-depth consulting services on areas of focus such as funding and climate resilient transport. (20)

Rupprecht Consult

Founded in 1996 in Germany, Rupprecht Consult is a private research and consultancy company, mainly focusing on integrated mobility, collective transport and new technology applications. (21) With regards to capacity building, Rupprecht Consult is often contracted by international donors to support with the design of Sustainable Urban Mobility Plans (SUMP) in LICs and MICs. Additionally, the consulting company has its own e-learning platform called the Mobility Academy.

Transitec

Transitec is an engineering consultancy firm, specialised in mobility since its foundation in 1954. With a specific mandate to foster knowledge-sharing (22), Transitec has, among others, often been contracted by donors such as AFD and other international development agencies to provide the material and experts for study tours, training programmes and MooCs etc. The consulting company was also involved in the gap analysis of TRECK under the World Bank's ACE programme. More about these will be featured in the following catalogue chapter.

4.6.2 Training centres

A training centre is an educational entity that can either be affiliated to the government, therefore sustaining themselves through governmental funding, or an established training centre with a private funding source. These privately managed centres can provide their services to governmental entities.

In Egypt's case - and based on interviews conducted with the former head of the training department in Cairo Transport Authority (CTA) and representatives from the Egyptian National Institute for Transport (ENIT) - training can either be embedded within an operator or a regulator's organisational framework as a specific department committed to enhancing the capacities of its staff, or through a governmental entity with a mandate specific to developing the capacities of the transport agencies' staff. The Egyptian National Institute for Transport holds this mandate.

Egyptian National Institute for Transport (ENIT)

ENIT was established in 1983 under the presidential decree #194 of 1983. It is affiliated to the Ministry of Transport and has the overall mission of improving the academic capacities of (aspiring) transport professionals in Egypt and the wider MENA region. Whereas other training institutes in Egypt, including Wardan Institute (under the National Authority for Tunnels), offer more technical capacity building (in workshops), ENIT's offer is of a more academic nature.

ENIT provides different educational and training programmes for the ministry staff and other agencies affiliated to the Ministry of Transport. Their programmes are also available for interested public attendees such as students or researchers. Individuals from the MENA region have typically also benefited from ENIT's training programmes and diplomas, including participants from Syria, Jordan and KSA. Beside the educational role that the institute plays, it offers consulting services for different governmental agencies in transport planning and engineering.

Regarding their educational services, ENIT provides a Higher Education Programme that consists of five diplomas (two years long) in themes related to transport planning, management, and economics, as well as logistics. Aside from the diplomas, the institute offers different capacity building activities for transport institutions including workshops, seminars, and short courses. The institute is a capacity building resource for the local government's staff. Despite their attempts to offer courses responding to the needs of the entities they target, the currently offered courses lack themes on sustainable mobility (public transport, sustainable urban mobility planning).

4.6.3 Foundations

Foundations are typically non-profit development organisations whose assets are provided by private donors. This model of private philanthropy for sustainable development is targeted towards supporting developing countries across sectors. In this section we showcase two examples of foundations with specific contributions towards urban mobility development.

FIA Foundation

Established in 2001 by the Fédération Internationale de l'Automobile (FIA), the FIA Foundation is a UK-based charity working with international agencies, expert technical partners, civil society organisations and FIA clubs to address road traffic injury, air quality, climate action and youth empowerment. (23)

Volvo Research and Educational Foundations (VREF)

VREF is the collective name of four foundations collaborating to fund research and education in transport, environment, and energy.¹¹ VREF's Future Urban Transport (FUT) – “How to deal with complexity” programme funds research within four thematic programmes: Mobility and Access in African Cities (MAC), Informal and Shared Mobility in Low- and Middle-Income Countries, Walking as Mode of Transport and Urban Freight (UF). (24)

Within the FUT programme, [VREF's next generation scholars' initiative](#) can be considered a format of capacity building realised through funding research and granting awards to scholars in transport. The NextGen Initiative resulted in knowledge exchange through research forums, conferences and workshops,

¹¹ The four VREF foundations are the Volvo Research Foundation, Volvo Educational Foundation, the Dr. Pehr G. Gyllenhammar Foundation, the Håkan Frisinger Foundation for Transport Research. (24)

capacity building short courses targeted towards improving researchers' scientific skills and mentoring junior researchers. VREF also supports the Lee Schipper Memorial Scholarship for sustainable transport and energy efficiency which targets young researchers to expand on topics of sustainable transport.¹²

VREF and SLOCAT launched a Young Leaders in Sustainable Transport Programme in 2019 targeted towards capacity development of young researchers in policy analysis for sustainable transport. The programme is currently in its fourth round. VREF enhances the learning and researching conditions for scholars.

¹² The Scholarship is jointly provided by VREF, WRI and Schipper family.

5. Catalogue of capacity building activities

In this chapter, the aim is to introduce how digitalisation has affected the organisation of capacity building activities, before exploring the different formats of capacity building activities can have. The findings are non-exhaustive and based on the insights collected from the experts that have been consulted.

5.1 Digitalisation of capacity building

With the emergence of the COVID-19 pandemic and the rise of Voice over Internet Platforms (VoIP), capacity building providers have been increasingly incorporating remote/distance-based programmes and initiatives into their service portfolio. Eliminating the need to travel by offering virtual capacity building programmes not only catered to post-pandemic precautions, but also contributes to reducing global greenhouse gas (GHG) emissions and climate change mitigation.

Further, distance-based learning activities can be categorised into synchronous and asynchronous ones. In a **synchronous learning** setting, there is real-time interaction between the instructors and participants. While this guarantees a “personal, social, and collaborative environment with immediate feedback options”, it may not be suitable for those with irregular schedules.

Asynchronous learning settings on the other hand are characterised by self-paced learning activities, as there is no real-time interaction between the instructors and participants. While this flexible arrangement may be cost-effective and highly scalable, it is often less personal and social, and participants need more self-discipline and motivation.

Distance-based learning activities can additionally be ranked based on the degree of immersive learning of participants. The table below gives an overview of the activities differentiating between low, medium and high degrees of immersive learning, as presented by UN-Habitat (25).

Table 5 Digital capacity building methods and focus on immersive learning (adapted from (25))

Low	Medium	High
Web story	Webinar	Virtual workshop
Tool as PDF	Text message course	Remote coaching
Interactive Website	Self-paced online course	Virtual reality simulation
	MooC	
	Instructor-led online course	

Bearing the different advantages and disadvantages of learning formats in mind, capacity building programmes are now often designed with a blended learning setting, i.e. programmes including both in-person as well as distance-based synchronous and asynchronous activities to ensure flexibility for participants while also securing their engagement levels (25).

5.2 Formats of capacity building activities

In this sub-chapter, the aim is to offer an in-depth analysis of a few capacity building case studies conducted in Africa and/or South Asia.¹³ The word cloud below summarises the different formats of capacity building that were highlighted by the interview partners.



Figure 5 Word cloud of the different capacity building formats identified.

¹³ The ToRs had specified offering an analysis of six capacity building activities, however, the expert interviews yielded a higher amount of examples that were interesting to include.

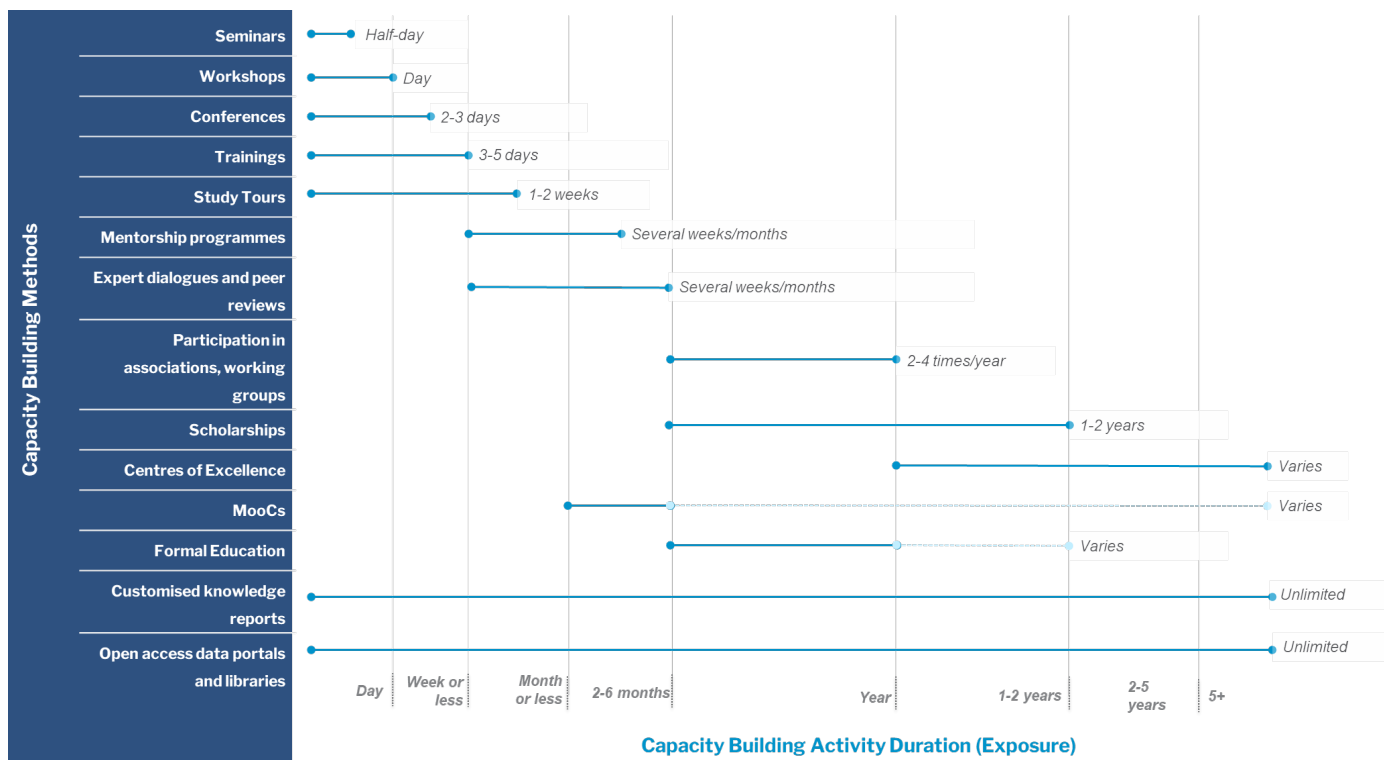


Figure 6 Capacity building activity duration diagram. (developed by TfC)

Figure 6 illustrates the typical duration of different capacity building activities. Formats such as workshops, seminars, trainings, conferences, and study tours usually take less than a month. While activities like scholarships and formal education opportunities can extend up to two years. Knowledge resources such as reports, data portals, and libraries are continuously available, making them an unlimited source of information and capacity building for transport institutions.

In the following, each type of capacity building format identified during the expert interviews will be briefly described, and relevant examples from the urban mobility field will be featured when available. It should be noted that the examples are non-exhaustive, but rather a catalogue of the different real-life cases that were discussed during the expert interviews, and stakeholder consultation webinar, and/or found through the literature review. The list below is ordered based on the usual duration of the different activities (from shortest to longest).

5.2.1 Seminars (webinars)

Seminars are typically one-to-two-hour online events. The objective of seminars is introducing the audience with new concepts and the widescale dissemination of knowledge with different stakeholders. Several organisations upload recordings of their webinars online to make them available for an unlimited amount of time.

WRI and GIZ are examples of entities which launched online webinar series on different knowledge themes in transport within initiatives tackling the lack of mobility data and challenges in transport decarbonisation.

DigitalTransport4Africa (DT4A) Webinar Series

The [DigitalTransport4Africa \(DT4A\) Webinar Series](#) is organised by World Resources Institute (WRI) Africa and WRI Global, with DT4A consortium partners. It aims to facilitate knowledge exchange on public

transport and showcase data initiatives, it focuses on African cities and initiatives by consortium partners. (26)

TUMI E-Bus Mission

The TUMI E-Bus Mission aims to ensure procurement readiness of 100,000 electric buses by 2025. Working in 20 deep dive cities, including Kampala in Uganda, and Nairobi in Kenya, this project has made available more than 50 webinars.¹⁴ The network of global south cities learns from one another through webinars, workshops, trainings, and shared resources to accelerate and facilitate their transition to e-buses. (27)

5.2.2 Workshops

Workshops are longer, in-depth specialised sessions that can take place in a one-day six-hour session or a series of sessions along a week, with a focus on presenting interactive material and engaging the attendees. The objective of workshops is the in-depth transfer of knowledge to a specific group of attendees. In most cases, the workshop attendees are pre-selected to ensure the successful implementation of the workshop objectives.

Paratransit Reform Consultative Forum (Transitec – World Bank)

In 2021, AFD financed a Paratransit and Street Usage Study in Uganda commissioned by the local transport authorities. Transitec and Organisation Development Africa (ODA) arranged a workshop that gathered both industry sector players and public authorities to jointly design an improvement strategy for public transport in Kampala. This form of workshops aims to facilitate the dialogue between different stakeholders to capture their insights and include them in the processes of change.

Rethinking Transport Lab: Rethinking e-mobility in Africa (GIZ)

In 2023, GIZ organised a [three-day workshop](#) for thirty participants focusing on opportunities to accelerate e-mobility in African cities. The objective of the lab is to encourage the exchange between academics, practitioners, and decision makers to discuss e-mobility in Africa.

5.2.3 Conferences

Conferences are two-to-five days events consisting of workshops and panel discussions. They are usually organised under a specific theme with the objective of showcasing projects and case studies that address specific transport challenges.

The following are only examples of the conferences arranged in African cities to address issues of urban transport, encourage opportunities for networking, and highlight successful case studies.

African Transport Research Conference (VREF)

The African Transport Research Conference was organised for the first time in 2024 with the objective of bringing together transport research advancements in Africa. The conference was organised by the Centre

¹⁴ The TUMI E-Bus Mission Webinars are available through this link: https://www.youtube.com/playlist?list=PLH5ymkqZ_8N_5Kpm29MkitF17sP8idHjl

for Transport Studies of the University of Cape Town in partnership with VREF. This conference comes as part of the Mobility and Access in African Cities (MAC) programme within VREF. The conference hosted a space to share and discuss research findings. Within the conference, HVT arranged a one-day event titled “Powering Change: Developing infrastructures in Africa that are resilient, greener and inclusive.” The event included discussions on the role of data, inclusive transport and planning, and developing climate resilient transport in African cities. (28)

MOBILIZE Annual Sustainable Transport Summit (ITDP)

The MOBILIZE summits are usually hosted in cities with best practices in different sectors of transport. The annual ITDP summit brings together transport actors and academics to showcase the implementation of sustainable transport projects. (29) The summit is an opportunity for a peer-to-peer exchange between cities which successfully implemented projects and cities that are still on their way to implementation. In 2018, Dar Es Salam, launched its BRT system and earned the Sustainable Transport Award. It hosted the MOBILIZE summit with the theme of “Making Space for Mobility in Booming Cities”.

5.2.4 Trainings

Trainings extend along several sessions and usually focus on teaching skills or transferring knowledge necessary for a specific type of activity. Training programmes vary in length, with some lasting for one or two days, whereas others may consist of several modules and hence may take participants several weeks or months to complete.

One can differentiate between certified and non-certified trainings. Certified trainings may appear more attractive to potential customers and partners, as certificates symbolise peer-reviewed quality courses. From the provider’s side, they require a lengthy review and certification process, and are thus more resource-intensive to develop.

Further, some organisations offer recurring training programmes as part of their training portfolio, whereas other organisations may offer one-off training courses.

With the overall objective of advancing sustainable mobility in cities, the target audience of trainings is usually public transport officials, or practitioners with the future ability to replicate their learnings with their organisations.

Training Programmes by UITP

UITP offers a large [training portfolio](#) focusing on diverse aspects of public transport. The training programmes address both functional capacities such as marketing and communication, but more so technical capacities focusing on the Fundamentals of Public Transport (more on this below), Planning, Operations and Infrastructure, New Mobility Services, as well as Policy, Planning, Funding and Regulation etc. The training courses are recurring and can follow both an online distance-based learning format, or an in-person classroom-style format.

After the COVID-19 pandemic, UITP has also introduced a Learning Management System (LMS), wherein UITP members can track their learning journeys along a learning path to monitor and benchmark their learning progress.

Public Transport Fundamentals Training Programme by UITP

Recognising that public transport and urban mobility are not always properly covered in formal education programmes, UITP has been offering the Public Transport Fundamentals Training on a recurring basis around the world since 2002. (30)

Targeting professionals who have been in the transport field for less than two years, the learning objective of this three to four week training programme is to present and discuss basic definitions related to the organisation and management of public transport through interactive online sessions at a synchronous pace. Prior to COVID, this training programme was only available in an in-person format conducted over three to five days.

Taking into account professionals' work schedules, the training typically consists of eight interactive online sessions, with two to three taking place each week, and each session taking a maximum of two hours.

UITP Training courses are ISO-certified¹⁵, paid courses, yet in the case of recipients from countries from the Global South, the participation of individuals has often been sponsored by third-party donors. The full portfolio of UITP's training courses can be found [here](#).

Leaders in Urban Transport Planning (LUTP) by the World Bank

Launched in 2012, Leaders in Urban Transport Planning training is a recurring training organised under the auspices of the World Bank. It is a two to three day interactive workshop periodically organised in different parts of the world by collaborating with: 1) financial partners, 2) session hosts, and 3) educational partners.

It is organised as an open-calendar training, i.e. application to this training is not exclusive and participants can register by paying the training fees. The LUTP targets mid to senior level managers and policymakers who occupy or will occupy leadership positions in urban transport planning, governance, management and operations in developing countries.

The training encourages the engagement of participants by incorporating group exercises and case studies from the Harvard Kennedy School Case Programme into the training, as well as site visits. Upon full attendance of the training and participation in the group work, attendees receive a certificate of completion.

Available in four languages including English, the LUTP has reached 2,480 practitioners from 102 countries through 74 different workshops. In LICs, the LUTP has been conducted in Burkina Faso, Cote d'Ivoire, Ethiopia, Mozambique, Senegal and Zambia. (31)

In analytic terms, the LUTP is considered a synchronous, in-person training programme with a recurring frequency.

Training programmes by MobiliseYourCity

MobiliseYourCity capitalises on its extensive network of partners and expanded knowledge of topics related to transitioning to low carbon transport. The MobiliseYourCity training catalogue gathers the different training modules which address the steps in a SUMP cycle. The training materials are distributed along the four stages of producing a SUMP, starting with the preparation and analysis, setting a vision and building scenarios, planning measures and lastly, implementation. Each module is funded and implemented by

¹⁵ Regarding accreditation, all UITP Training Programmes and all related processes are certified with the ISO29990:2010 – the standard for learning services for non-formal education and training.

different partners, for instance, the module on establishing a transport authority is funded by BMZ and designed by Transitec. (32)

Leading Transport Transitions Programme: Executive Education Programme for city leaders Transforming Urban Mobility (TUMI – C40 - LSE)

The Leading Transport Transitions programme is the outcome of a collaborative partnership between TUMI, C40 Cities, and LSE. The programme targets 15-20 high level city leaders through an executive education programme. The programme's objective is to enhance the capacities of decision-makers in the provision of affordable and accessible urban mobility services. The programme is executed in a hybrid format, which kicks off with a short online module on a digital platform followed by three in-person days and site visits in London hosted at LSE. This collaboration utilises the strength of each of the organisations involved by gaining insights from TUMI's experience on urban mobility, C40's global network, and LSE's policy research focus. (33)

5.2.5 Study tours

Study tours are professional trips that could extend to two weeks and are designed to help visiting delegations to learn lessons from the host city through trainings and site visits. Study tours can be arranged in a North-South exchange, where the visiting delegates come from African cities and visit European cities to learn about different transport systems and witness their application. In other cases, study tours can be arranged in South-South exchanges where the delegates visit other African cities to learn about their intramodality solutions or their institutional reforms. Each case has its uniqueness and benefits, this is further discussed in Chapter 6.

The Tools of Urban Planning by AfD, Transitec and Urbaplan

For ten years, Transitec and Urbaplan have been implementing this programme targeting African decision makers to introduce them to emerging concepts in urban mobility. The delegates spend a week in Marseille in AFD's premises and the second week in Lausanne in Transitec's offices. This North-South two-week exchange is oriented towards French speaking delegates and is funded by the French Development Agency (AFD) and the State Secretariat for Economic Affairs (SECO).

5.2.6 Mentorship programmes

Mentorship programmes are structured initiatives matching experienced professionals with less experienced individuals either within or outside the same organization to provide professional guidance, support and promote knowledge and skills transfers.

Leaders in Urban Transport Planning Mentorship Programme (LUTP-M)

The mentorship programme was piloted in 2012 and has been organised by the World Bank. The idea of this mentorship programme is that alumni of the regularly held Leaders in Urban Transport Planning (LUTP) training programme who are willing to work on mobility issues in their cities, with the support of their respective employers, are provided mentorship support for a cycle of four to six months.

The programme, which took place every year for five years in India and was organised in partnership with the Centre for Environmental Planning and Technology (CEPT) University in Ahmedabad, supported 186 alumni who developed and implemented a total of 106 projects. (34)

Following the success of the India mentorship programme, a similar mentorship programme was launched by the World Bank SSATP team for sub-Saharan African alumni members in 2023. Three projects were successfully implemented in the 2023 SSATP cycle.

Rather than supervisors, mentors offer support in terms of providing guidance, references and acting as a soundboard to the project owners, i.e. the LUTP alumni and their employer(s).

5.2.7 Peer reviews

Peer reviews are an opportunity offered to transport institutions to get in touch with and get direct feedback from peers with relevant experience on topics, areas or projects of interest to the transport institution.

UITP Peer Reviews

Addressing transport institutions' need to receive objective strategic feedback, UITP acts as a facilitator and observer to so-called peer reviews. Four to five experts from UITP's extensive membership pool are invited to provide feedback on a transport institutions' upcoming project and/or existing service. (35)

5.2.8 Associations, committees and working groups

Committees and working groups organised under the framework of associations are member-only platforms which offer opportunities to improve the capacities of members. These include opportunities for networking, peer exchange, knowledge-sharing and co-creation between members.

African Association of Urban Mobility Authorities (AAUMA)

SSATP's approach towards trainings and capacity programmes is to create platforms, build institutions and initiate systems that enable more durable and impactful capacity building. An example of this is the establishment of the of Africa Association of Urban Mobility Authorities (AAUMA) platform owned by African authorities, which focuses on their needs. In this format, capacity building is a facilitator for knowledge exchange amongst leading transport authorities (such as LAMATA and CETUD) and new authorities being established. The AAUMA objective is to grow a network of urban transport authorities which can exchange knowledge on the governance of urban mobility systems including the functions of planning, regulating, financing and managing these systems.

CODATU member meetings

CODATU membership consists of five categories or "clubs" including: 1) education and training institutions, 2) local governments and public transport authorities, 3) companies, 4) individuals and 5) foundations and associations. CODATU organises meetings for each "club" about twice a year to offer them a space to meet and work together. In the case of the meetings of the Education and Training institutions, for example, university members discuss doctoral research areas and look for funding thereof.

UITP Committees and Working Groups

UITP offers its 1,900+ members a variety of thematic as well as stakeholder-based committees and working groups that they can join in order to be involved and interact with local, regional, and international peers.

Depending on the regional location the member organisation or company is active in, the stakeholders can become part of regional divisions such as the Africa Division, the MENA Division, the Asia-Pacific Division etc. Members are then invited to attend meetings and events, with the aim of enhancing regional cooperation and knowledge sharing.

Based on the profile of the member, i.e., whether stakeholders are a public transport authority, operator or industry provider, they become eligible to join the UITP's 10+ stakeholder committees including the Bus Committee, Metro Committee, Organising Authorities Committee etc.

Further, based on the members' activities and interests, they may also become members of the 10+ thematic committees including the Cybersecurity Committee, the Design & Culture Committee, the Informal Transport Committee, the Sustainable Development Committee the Transport Economics Committee etc.

Beyond peer exchanges and knowledge sharing, committees and working groups within these committees regularly produce knowledge briefs and policy papers representing their joined interests, and work together.

5.2.9 Scholarships

Scholarships are a form of financial support or sponsorship to which individuals can apply to pursue formal or informal educational opportunities. They are typically awarded based on selection criteria including academic and professional background, diversity and inclusion criteria, and financial need.

Laurent Dauby Scholarship Programme (UITP)

UITP has been offering five junior to mid level professionals under the age of 40 from developing countries the opportunity to receive a one-year scholarship programme to attend and complete a set amount of UITP Training courses for free. (36) With a blended learning setting combining synchronous and asynchronous learning, recipients of the scholarship are required to attend specific numbers of courses to receive the certificate of completion and graduate at the UITP Summit.

Lee Schipper Memorial Scholarship for Sustainable Transport and Energy Efficiency (VREF, WRI, and Schipper Family)

The scholarship's objective is to accelerate the momentum of individual research in the themes of transport policy and energy efficiency. (37) The scholarship encourages research in the different stages of policymaking including data collection and data quality, data analysis (qualitative and quantitative), policy analysis and evaluation, and interdisciplinary comparative analysis. The award of up to US\$10,000 is granted to three researchers, one of whom is specific for a young African researcher based in an African institution.

Rethinking Transport Fellowship Programme (Agora Verkehrswende)

The Agora Fellowship is held for a month in Berlin and offers six young African professionals an experiential learning opportunity in transport decarbonisation. (38) The Agora Fellowship is part of the Rethinking Transport project implemented by Agora Verkehrswende and GIZ. Agora Verkehrswende has eligibility criteria for the selection of the fellows, which depends on their backgrounds, years of experience and their active affiliation to an organisation working in the transport sector in African cities. The fellows engage in

sessions, site visits, participatory activities, and expert-led discussions to develop strategies for transport transformation in their home countries. The cost of these activities in addition to the fellows' travel costs are fully covered by the fellowship organisers.

5.2.10 Joint centres

Joint centres, sometimes referred to as centres of excellence, are legal entities established by two or more organisations to provide knowledge and promote sustainable mobility through joint forces. These centres can have a role in offering trainings and conducting research among other activities.

UITP Centres of Transport Excellence (CTE)

As part of UITP's efforts to advance sustainable mobility in MENA and in Asia-Pacific, two Centres of Transport Excellence (CTEs) have been established with pioneering transport authorities. Based on a long-term cooperation agreement with the local transport authorities, a [MENA Centre for Transport Excellence \(CTE\)](#) was launched in 2011 with the Roads and Transport Authority (RTA) in Dubai, and the [Asia-Pacific Centre for Transport Excellence](#) was set up in 2012 with the Land Transport Authority (LTA) in Singapore.

Both centres have the overall objective of unifying regional efforts to build sustainable transport systems within their respective regions. The CTEs' scope of activities comprises of research projects focused on high priority public transport issues in the regions, as well as organising quality training programmes on public transport and sustainable mobility.

World Bank Africa Centres of Excellence - Transport Research and Education Centre, Kumasi (TRECK)

The Africa Higher Education Centres of Excellence (ACE) Program is a World Bank programme, which ran from 2014 to 2020 with the aim to provide post-graduate education, which would meet the knowledge and skills requirements in priority fields. Organised on a competition-basis, governments would apply for a loan to set up regional research centres with thematic focus areas related to infrastructure: water, energy, transport etc. The idea was to increase government investment in local capacity building. Ghana participated in the second round of the competition in 2018, following which a regional research centre for transport was recommended. Thus, the Regional Transport Research and Education Centre Kumasi (TRECK) was established in 2019 at the College of Engineering, at the Kwame Nkrumah University of Science and Technology, Kumasi, in Ghana.

As an Africa Centre of Excellence (ACE), TRECK's mandate is to: 1) undertake postgraduate education (PhD/MSc) in transportation and integrated logistics, to 2) undertake applied research with industry and to 3) provide professional short courses to industry.

As part of the grant agreement, 30% of its activities including students' enrolment must come from outside Ghana and be female/gender inclusive. The grant period should have been for five years, but due to COVID, it has been extended to 2025. After that, TRECK must financially sustain its activities on its own.

5.2.11 Customised reports

Customised reports provide context-specific guidance to transport institutions. As opposed to general reports and best practice research, such knowledge products aim to specifically address the local conditions and circumstances of transport institutions in their respective cities/countries. These reports can either be directly requested by transport institutions or prepared in an unsolicited manner.

NaMATA BRT Design Framework (ITDP)

NaMATA was established to manage the implementation of an integrated and reliable transport system in Nairobi. In the course of the production of the BRT Design Framework, NaMATA identified five corridors to run a bus rapid transit system. The preparation of this guiding document aims to unify and standardise the specifications for the design of the BRT corridors. The guideline accounts for the local context while presenting the international design components for operating a BRT system. The manual fulfils the need of the local authority to have a guided reference upon which to follow in the case of introducing a new transport system, such as the BRT. (39)

Street Design Manual for Urban Areas in Kenya (ITDP – IKI – World Bank)

ITDP prepares city-specific guidelines and manuals to guide the implementation of transport projects. (Int. 6) The manual was produced collectively by the Ministry of Roads and Transport, UN-Habitat, ITDP, Global Road Safety Fund (GRSF), World Bank and the International Climate Initiative (IKI), with input from the local transport authorities. The guidelines maintain the engagement of authorities and improves their expertise in project supervision. The street design manual for urban areas in Kenya presents an example of customised formats of knowledge products and is a tool to mainstream street designs for sustainable modes of transport. (40)

5.2.12 Formal education

“Formal education is education which is institutionalised, intentional and planned through public organisations and recognised private bodies.” (64) This requires that formal education programmes be acknowledged (certified) by the respective educational authorities, such as higher education councils. Such programmes can take place within but also outside of educational facilities.

MA Transport and Sustainable Mobility in African Cities lead by CODATU

In cooperation with the University of Senghor, based in Alexandria, CODATU had launched a Master’s degree programme hosted by the African School of Architecture and Urban Planning Professions in Lomé, Togo.

The one-year programme consisted of six months of in-person lectures provided by local and international experts, followed by a three to four month internship opportunity at CODATU’s industry member offices in France.

The business model was an innovative one, as students did not need to pay the tuition fees (amounting to 3,800 EUR), these were instead funded by CODATU’s industry members.

Nevertheless, the business model proved to be an administratively challenging one, as securing visas for the students to travel to France to complete their internships was a lengthy and difficult process.

Further, with the onset of the COVID-19 pandemic, it was practically no longer feasible to offer this degree, as the scheme did not allow for e-learning options.

MSc Transport Systems by TRECK

In the framework of the Ghana Urban Mobility and Accessibility Project (GUMAP) by the World Bank, a capacity needs assessment¹⁶ concluded that an MSc in Transport Systems within the Regional Transport Research and Education Centre, Kumasi (TRECK), was needed, as opposed to the MSc Road and Transport Engineering Programme.

Recognising the interdisciplinary nature of transport and the need to improve the knowledge capacities of professionals in transport authorities, this recommendation was based on the need to teach students a systems-based approach to transport. The revamped MSc is able to accommodate students who do not have a technical background in engineering but are qualified and interested in pursuing a career in transport.

Thus, the one-year MSc programme was launched in 2016, as an interdisciplinary one where students can choose between two specialisations, either Infrastructure and Engineering, or Urban Transport and Operations.

5.2.13 Massive open online courses (MooCs)

In essence, Massive Open Online Courses (MooCs) are free online courses that everyone can enrol in and complete. MooCs are an innovative tool designed to make people's educational journeys more accessible and flexible. Not only do participants not have to attend courses in person, but more often than not, MooCs follow an asynchronous pace. This implies that participants can follow the courses flexibly, as course contents are uploaded and educational videos pre-recorded, so that participants can choose when to complete the courses. This setting not only allows for residents in other countries to overcome time-zone differences, but also responds to the need of working adults to be able to work and study, without having to sacrifice time for either.

GIS Essentials by TRECK and VREF

As part of its mandate to promote regional capacities of transport professionals in Africa, particularly in sub-Saharan Africa (SSA), TRECK has ventured into making available a massive open online course (MooC) on the Essentials of GIS for Transport and Logistics.

Funded by the Volvo Research and Educational Fund (VREF), this online course can be attended and completed flexibly following an asynchronous learning pace. The comprehensive and certified online GIS training course includes instructors from universities in Ghana, Tanzania, Alabama, and Texas. No prior knowledge of GIS is needed to attend this course.

¹⁶ This gap analysis was conducted by Transitec through a grant from the Swiss State Secretary for Economic Cooperation (SECO).

Global E-learning Program

In SOLUTIONSPlus, an EU-funded project that proposes innovative approaches to adopting e-mobility, ICLEI was involved in facilitating capacity building through the [Global E-Learning Program](#). This programme provided four online courses from 2021 to 2023. The first course in 2021 expanding over four sessions gave a comprehensive introduction to electric mobility planning and implementation. The second course began to link electric mobility to public transport. The third course expanded on decarbonisation and Intelligent Transport Systems and Mobility as a Service. The last course in 2023 focused on linking electric mobility to paratransit through regulations and operations. The e-courses are designed to include video lectures and self-study material, and virtual live sessions to encourage interactions between participants.

Urban Mobility in Africa (CODATU)

Launched in May 2024 and taking place over five weeks, the MooC on Urban Mobility in Africa is organised by CODATU in collaboration with MobiliseYourCity, AFD and the University of Senghor. Targeting francophone Africa, the MooC is offered in French and is live-streamed and then uploaded on CODATU's Facebook page, so that interested persons may view the videos whenever convenient. The videos feature panel discussions with a dozen transport professionals with experiences in Africa.

Electric Two-and Three Wheelers: Steering the Mobility Revolution (PEM motion – RWTH Aachen – GIZ – TUMI)

This six-week asynchronous course is a first of its kind focusing on the electrification of two-and-three-wheelers in the Global South. The course is developed by TUMI, GIZ, PEM consulting, a German business consultancy focusing on electric mobility products, and RWTH Aachen University a research institute focusing on e-mobility. The course combines theory with practical examples from the electric vehicle industry. It discusses the policies and regulatory landscape related to two and three wheelers and also dives into their technical components and financing models.

Sustainable Urbanisation in Africa: Tools and methods for articulating urban planning and mobility strategies (Urbaplan and Transitec)

Sustainable Urbanisation in Africa is a MooC designed for urban planning and mobility practitioners in French speaking countries in Africa. The course connects the overlapping themes of urban planning and mobility by introducing urban challenges in the African city, the tools of urban planning and how to address the different challenges on various urban scales, from metropolitan to neighbourhood. The online course is available on the African Cities Lab platform and targets urban mobility practitioners and urban planners in Africa. (41,42)

ITDP Learning Hub

ITDP has also launched its platform of MooC courses. The [ITDP Learning Hub](#) offers a number of self-paced, i.e. asynchronous courses, that can be completed free of charge¹⁷. The courses are designed for professionals from city governments, NGOs, as well as students interested in sustainable transport in LICs and MICs.

¹⁷ At the time of writing this report, two courses are currently available: Mobility and Access for Babies, Toddlers, and Their Caregivers, and 2) Mastering the Cycling City.

EU Mobility Academy

The Mobility Academy is coordinated by Rupprecht Consult and features several courses on topics related to sustainable mobility. All courses can be taken free of cost, as the courses are designed as learning activities produced under the framework of European research and innovation projects. The courses can be observed asynchronously, where the length of each course differs based on the workload, but typically courses take one month to conclude and participants have to submit homework on a weekly basis. The courses incorporate a moderated forum, so that participants can share, exchange and learn from one another and build networks and communities of practice. (43)

5.2.14 Data portals and libraries

Libraries and data portals host knowledge products, either in physical formats or online. Access to these knowledge products can help stakeholders improve their levels of technical knowledge and skills. Access to data portal and libraries may be public or membership-based.

Open access to public transport data could be the stepping stone to more informed decisions. For this reason, open-source data platforms hosting different formats of transport data for the benefit of policymakers, researchers and the public are gaining importance. The availability of data supports institutions to obtain measurable insights on the impact of their policies.

The BRT Standard by ITDP

ITDP adopts the development of guidelines and standards as a technical resource for decision-makers and public authorities. These standards are based on best practices and can guide cities implementing different transport projects. ITDP launched an updated edition of the BRT Standard in 2024 to equip cities with the frameworks and the evaluation tools to implement high quality BRT corridors. (44)

DigitalTransport4Africa Open Data Sources (WRI)

DigitalTransport4Africa (DT4A) is a collaborative digital commons platform focused on digitising transport data and enhancing urban mobility in African cities. By providing open data and facilitating peer-to-peer knowledge sharing, DT4A supports projects aimed at making safe, affordable, accessible, and sustainable transport systems. DT4A resources include the [open data repository for Africa and Latin America](#), and the [Mobility Data repository](#) for transit data. (45) The steering committee which consists of the founding partners and manages DT4A consists of WRI, AfD, MIT, World Bank, and Earth Institute at Columbia University.

ITDP Webinars YouTube Channel

In an effort to increase the reach and impact of ITDP's webinars, all webinars are uploaded to its public [YouTube channel](#).

TUMI Data Hub and GTFS Analyzer

TUMI Data Hub is an open data platform for collecting, sharing, and analysing mobility and urban planning data. The hub hosts different datasets which can be filtered by geographic location, format (GTFS, PDF, xls, urls, etc.), groups/data themes (public transport, raw mobility data, etc). The partners involved in the TUMI Data Hub are GIZ, New Urban Mobility Alliance (NUMO), Development Bank of Latin America and the Caribbean (CAF).

UITP MyLibrary

As part of UITP's service package, members receive exclusive access to [MyLibrary](#), which is the organisation's online library encompassing over 60,000 articles and reports covering all aspects of public transport. Articles can be filtered based on different thematic criteria. The online library hosts all presentations given at the various UITP conferences, workshops, and seminars, so if staff members were unable to attend specific events, they are still able to access the materials. Hence it is referred to as the home of UITP knowledge.

World Bank Open Data Portal

The World Bank has been periodically publishing country-specific data and statistics relevant to the transport and mobility sector on its [open data portal](#). Among others, population data, socioeconomic indicators, and environmental data can be freely accessed, downloaded, and used by stakeholders.

6. Categorising capacity building activities

Based on the different approaches to capacity building identified in Chapter 4 and 5, the below is an attempt to develop a model/analytic framework for them.

Applying a microeconomic lens, different capacity building activities can be analysed based on their level of excludability and rivalry. This categorisation is a useful framework because it allows accounting for funding and budget constraints faced by capacity building providers.

- **Excludability** refers to whether access to goods or services can be restricted.
- **Rivalry** refers to whether the access of individuals can affect the availability of goods or services to others.

Table 6 The four types of goods – Adapted from (46)

		Excludable	
		High 	Low 
Rivalrous	High 	Private Goods	Common Resources
	Low 	Club Goods	Public Goods

Based on these two factors, goods can generally be categorised into four distinct types:

- 1) **Private goods** are excludable, as they are sold at a certain price. Thus, if someone cannot afford them, then they are de facto excluded. Private goods are also rivalrous, as when someone buys a certain item or service, it may no longer be available to the next person. Cars, houses, ice cream etc. are examples of private goods.

Capacity building example: Formal education and in-person trainings are typically offered for a price (tuition fees and training fees), thus they are excludable. Further, providers typically have capacity constraints: The number of students/participants should not exceed a certain number to ensure an adequate teacher per student ratio, and for venue considerations as well (classroom size/ availability of desks etc.). Thus, one student/participant being admitted to a programme may reduce the possibilities of another joining.

- 2) **Public goods** on the other end of the spectrum are non-excludable and non-rivalrous. People do not have to pay to get access to them, and an individual’s access or use doesn’t hinder the availability of other people. Examples of these types of goods include fresh air, street lighting, knowledge etc.

Capacity building example: Technology offers the opportunity to offer non-excludable and non-rivalrous capacity building goods and services. Examples of capacity building activities that can be considered public goods include publicly available reports and guidelines, publicly accessible recordings of training sessions and educational videos etc. Free Massive Open Online Courses (MOOCs) can also be considered public goods.

- 3) **Common resources** are non-excludable but rivalrous, i.e. they are available to everyone, but their availability is limited, thus demand may exceed supply. Examples include freshwater, fish, etc.

Capacity building example: The phrase “first come, first served” best captures examples of capacity building activities that are common resources. They are freely accessible as long as the stock or capacity is available. Webinars with limited spots available, or free seminars and talks can only accommodate as many as the space of the venue or platform allows.

- 4) **Club goods** are excludable, but non-rival. Individuals can be restricted from accessing them, but their use/consumption does not reduce their availability to other individuals. They are also referred to as “artificially scarce resources”. Examples of this include subscriptions, toll roads etc.

Capacity building example of club goods: As the name suggests, club goods are inherently exclusive. Thus, member-only services such as the participation in working groups or access to exclusive knowledge sources and trainings are examples of club goods, as they are available to whoever is subscribed and their usage of the goods or service does not affect the ability of others to do the same.

This analytical framework to categorise capacity building activities is useful because of several considerations: because it allows accounting for funding and budget constraints faced by capacity building providers.

The diagram below represents the authors’ attempt to classify the different capacity building activity types identified considering the excludability and rivalry criteria, while incorporating the in-person and online criteria to reflect how these may support in making activities more inclusive and less rivalrous.

Categorising capacity building activities into these four categories makes clear that most capacity building activities identified are in fact excludable and rivalrous in nature: They are not freely accessible to everyone, because they require funding, and there are limitations as to how many people can benefit from them at the same time.

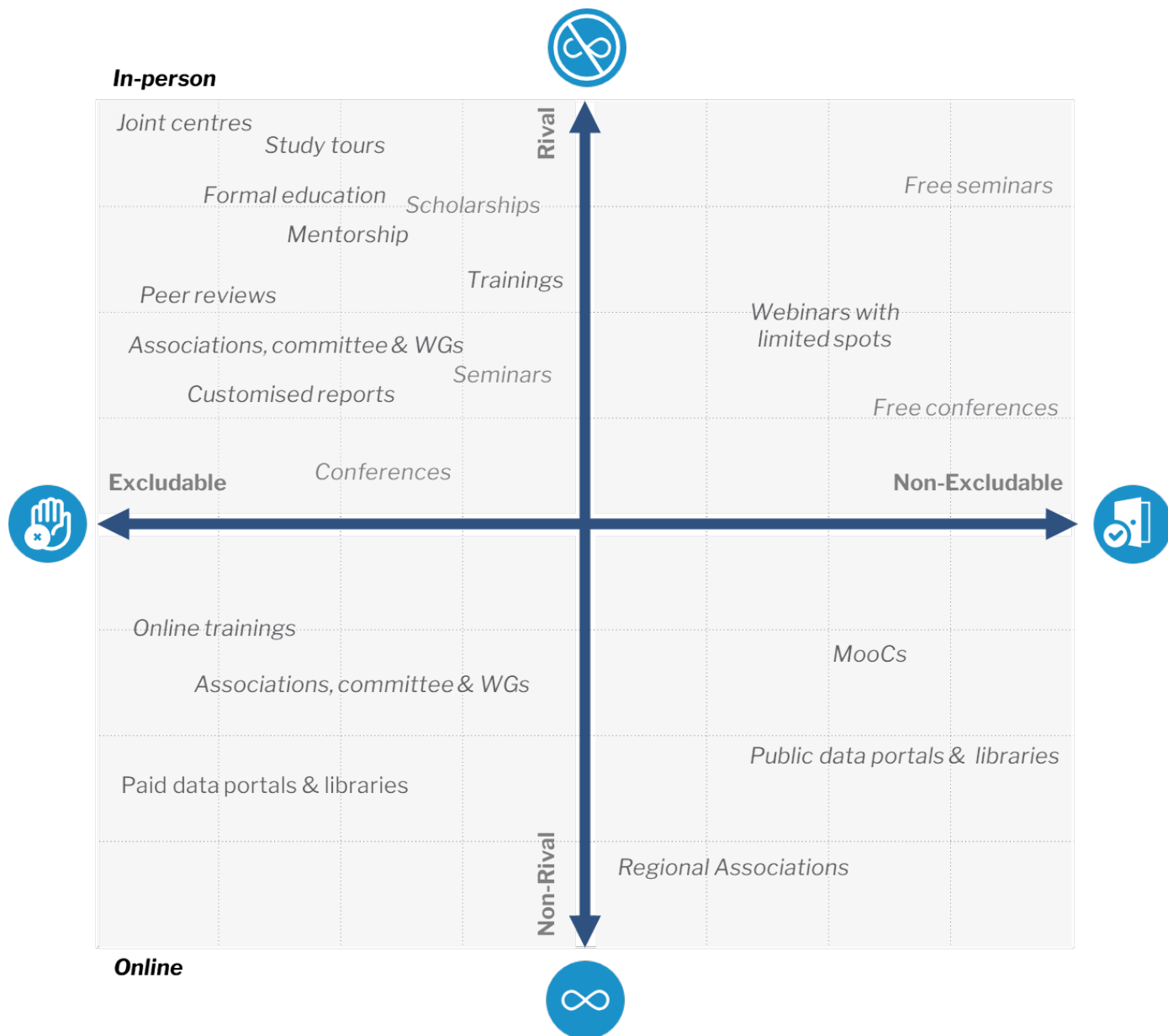


Figure 7 Categorisation model for capacity building activities (developed by TfC).

Two interim conclusions can be made based on this finding:

Funding agencies tend to prioritise activities with a wider reach. Based on the different expert interviews conducted, it has become clear that reach is a significant effectiveness indicator for funders and donors of capacity building activities. Thus, activities that may benefit a larger pool of individuals, organisations and/or cities and countries are usually favoured over activities that may only favour a few, such as study tours.

Digital tools can bridge gaps. Making use of digital tools and online formats may help to reach more people and organisations. Online trainings and conferences not only reduce the costs participants or attendees have to pay to attend these capacity building services, but hosting these activities on digital platforms helps to overcome venue constraints – though of course, servers may crash depending on their technical ability to host people at the same time.

7. Analysis of capacity building activities







After having closely inspected several types of capacity building efforts undertaken by different types of organisations, it has become clear that there are a number of factors that can be identified to characterise and identify different capacity building programmes.

Below is a non-exhaustive list of factors to consider when analysing the scheme, format or characterisation of capacity building efforts developed by the authors. While some factors are applicable to all the different types of capacity building activities including duration and language for example, others are format-specific including whether e-learning programmes have a synchronous or asynchronous learning setting.

Table 7 Capacity building analysis factors (developed by TfC)

Analysis indicators	Description	Theme
Thematic focus 	Which thematic or functional capacity does the capacity building activity focus on? What is the main subject/topic of the activity?	Content
Profile of expert(s) 	The qualification(s) of persons delivering the capacity building activity including relevant experience, knowledge and soft skills needed (interpersonal, communication, pedagogical etc.).	
Context 	Is the capacity building material tailored and customised to the context of the transport institution or is it general material applicable to different contexts? ¹⁸	
Practice components 	Does the capacity building activity include practice components such as homework, group work, presentations, tests etc.?	
Language 	What are the available languages in which the capacity building activity can be/is offered?	Target audience
Profile of partners 	What kind of transport institutions are sought for the capacity building activity? Similarly, which profile of individuals is targeted, on a departmental/functional level as well as on a seniority level (junior, mid- or high-level employees)?	
Incentive(s) 	In the case of trainings and formal education opportunities, do participants receive academic certificates, which are nationally, regionally, or internationally accredited? Do they receive a certificate of completion? Can course completion imply credit hours?	


¹⁸ In the case of trainings, practitioners differentiate between open calendar trainings and customised in-house trainings for example (Int. 8).






Accessibility	Is access to the capacity building activity free or is it a paid service that may also be sponsored by some donors?
	
Setting	Does the activity typically take place in-person or virtually?
	
Pace	In the case of trainings and formal education opportunities, do participants have to engage in real-time (synchronous) or can they do so flexibly without direct interaction with the other participants and trainers (asynchronous)?
	
Duration	How long does the activity typically last? As will be seen, some activities can take as little as half a working day, whereas others may take several years.
	
Frequency	Some activities are one-offs, while others can be recurring.
	
Cooperation	How can existing networks collaborate to achieve a collective impact rather than uncoordinated efforts?
	

A close inspection of the activities of the different entities and organisations providing capacity building has led us to a wider understanding of how it is practically applied.

Below is a non-exhaustive list of different capacity building opportunities available to transport institutions today along with their possible strengths and weaknesses. Similar to the catalogue chapter, the types of activities are sorted based on their typical duration, from shortest to longest.

Table 8 List of possible different capacity building opportunities available to transport institutions with possible advantages and disadvantages. (Developed by TFC)

Type (typical duration)	Typical strengths	Typical weaknesses
Seminars/Webinars (half-day) 	<ul style="list-style-type: none"> • Short activity • Can be attended by people with less time resources. • Relatively cost-effective. • Can be done online (depending on the objectives of the activity). 	<ul style="list-style-type: none"> • One-off activity • Short duration doesn't allow for deep-dive sessions. • For online seminars: Limited attention span and unstable internet can affect impact.
Workshops	<ul style="list-style-type: none"> • Short activity 	<ul style="list-style-type: none"> • One-off activity

<p>(1 day)</p> 	<ul style="list-style-type: none"> • Platform for interaction between trainers and audience as well as between audience members. • Can be done online (depending on the objectives of the activity). 	<ul style="list-style-type: none"> • Short duration doesn't allow for deep-dive sessions.
<p>Conferences</p> <p>(2-3 days)</p> 	<ul style="list-style-type: none"> • Exposure to state-of-the art knowledge. • Networking opportunity. 	<ul style="list-style-type: none"> • Cost-intensive for providers as well as recipients.
<p>Trainings</p> <p>(3-5 days)</p> 	<ul style="list-style-type: none"> • Medium-length activity. Allows for focused training content with individual and/or group assignments. • Can be recurring. • Platform for interaction between trainers and audience as well as between audience members (from within and/or outside the same organisations). • Can be done online (depending on the objectives of the activity). 	<ul style="list-style-type: none"> • Cost-intensive for participants • Difficult to ensure target audience's availability for a full 3-5 day work-week. • Employer incentives to successfully complete trainings may affect participation/ motivation. • Capacity constraints: Cannot be attended by a large number of people at the same time.
<p>Study tours</p> <p>(3-10 days)</p> 	<ul style="list-style-type: none"> • Interactive, sensory experience: Participants can see and touch best practice examples, talk directly with project owners and service providers. • "Fun" element of travelling • Providers are experimenting with organising these study tours online.¹⁹ 	<ul style="list-style-type: none"> • Time-intensive planning process • Cost-intensive for providers as well as recipients. • Capacity constraints: Cannot be attended by a large number of people at the same time. • Difficult to choose contextually relevant and comparably reasonable destinations and case studies.²⁰
<p>Mentorship programmes</p> <p>(variable)</p> 	<ul style="list-style-type: none"> • Direct contact with experts. • Typically done on a volunteering basis by the mentors/experts. • 	<ul style="list-style-type: none"> • Capacity constraints: Cannot be made available to a large number of people at the same time. • Requires the availability of a large, diverse, and available pool of experts.



¹⁹ ICLEI developed virtual study tours of Surat and Bogota e-bus transitions as part of the TUMI E-bus Mission (Int. 2).

²⁰ The Ugandan delegation visit to South Africa as part of SSATP activities was deemed successful and valuable because South Africa has an informal transport sector, which is similar to other African countries, and it also has a BRT system, so it can be a good example of integration between different systems, and how the public authority recognises the role of each (Int. 6).

<p>Peer reviews (<1 month)</p> 	<ul style="list-style-type: none"> • Opportunity to access best practice and knowledge and feedback from seasoned experts during the planning phase of a project and/or prior to its launch. • Relatively quick exercise without heavy paperwork. 	<ul style="list-style-type: none"> • Finding suitable experts to act as reviewers requires a strong and diversified pool of experts, which not all organisations/companies have.
<p>Associations, committees and working groups (2-4x per year)</p> 	<ul style="list-style-type: none"> • Platform to reflect outside of the standard workplace and work collaboratively with others. • Networking opportunity. • Learning opportunity. 	<ul style="list-style-type: none"> • Eligibility criteria. • Membership fees.
<p>Scholarships (1-4 years)</p> 	<ul style="list-style-type: none"> • Opportunity to access formal and/or semi-formal learning programmes “for free”. 	<ul style="list-style-type: none"> • Capacity constraints: Cannot be made available to a large number of people at the same time. • Eligibility criteria. • Time-intensive application process.
<p>Joint centres (several years)</p> 	<ul style="list-style-type: none"> • Joint efforts between two or more organisations to work together and promote local and/or regional knowledge and expertise. 	<ul style="list-style-type: none"> • Administrative and legal process to set up. • Cost-intensive.
<p>Customised reports (variable)</p> 	<ul style="list-style-type: none"> • Intended to respond to institutions’ knowledge gaps. • City-tailored guidelines give authorities clear steps on how the situation needs to improve and the steps needed to do it. 	<ul style="list-style-type: none"> • One-off activity • One-sided: cannot guarantee the application of learnings
<p>Formal education²¹ (Variable)</p> 	<ul style="list-style-type: none"> • Time-intensive format allows comprehensive and in-depth studying of materials. • The mobility-specific programmes balance the fact that most professionals in transport institutions come from scientific 	<ul style="list-style-type: none"> • In some cases, these programmes are funded by external agencies or don’t have a stable budget allocation, and this threatens their sustainability.²² • Without the endorsement of the transport institutions of their staff to sign up for these programmes,

²¹ This is specific to continuing education programmes, short courses or higher education master programmes held within a university with an educational certification upon completion.

²² ENIT used to run a master programme specific to transport professionals in collaboration with University of Westminster, and it stopped due to financial constraints and the cooperation agreement wasn’t renewed.

	<p>backgrounds other than transport.</p> <ul style="list-style-type: none"> • Opportunity to include consultants and professionals in developing course material and this minimises the gap between practice and academic studies. 	<p>the enrolment rate from professionals decreases.</p>
<p>MooCs (variable)</p> 	<ul style="list-style-type: none"> • Publicly accessible • Free of cost • Offering relevant certification • May be asynchronous. • Typically without capacity constraints 	<ul style="list-style-type: none"> • Costly to design, develop, market, and maintain.
<p>Data portals and libraries (unlimited)</p> 	<ul style="list-style-type: none"> • Accessible learning platform and opportunity. • Can include training/conference material that users were not able to attend in real-time. 	<ul style="list-style-type: none"> • May involve subscription fees. • Often difficult to navigate/use. • Requires proactive use by recipients. • Requires resources to maintain and update the portals.

8. Assessment of capacity building

We have identified and catalogued 14 types of capacity building (chapter 5), showing that there are so many more options beyond trainings. We have categorised them based on excludability and rivalry, (chapter 6) and analysed their typical strengths and weaknesses (chapter 7). This analysis allowed us to design the indicators upon which to guide the assessment of activities including content, target audience and logistics.

This process allowed us to come to the conclusion that **there is not one most effective capacity building type or format**. The specific context and circumstances determine which capacity building type or format is most effective for specific cases. Thus, deciding which type and format to use must be based on careful consideration including existing resources, overall objectives and goals of the capacity building activity as well as on its effectiveness with regard to filling the capacity gaps of transport institutions.

8.1 Capacity building assessment guidelines

Building on the analysis factors developed by the research team to better understand the different parameters of capacity building activities in Table 7, it became evident that the same factors can be used to assess the degree of success of a planned and/or implemented capacity building activity. The guiding questions for each indicator are presented below along with considerations based on the expert interviews (Int.) and key findings from the breakout rooms (BoR) of the multi-stakeholder consultation webinar.

8.1.1 Content

Whether organising a conference programme or preparing customised reports, ensuring the content is relevant, up-to-date, and addressing your target audience's needs and providing state-of-the-art information and skills (Int. 5) is a key component in designing the capacity building activity. Guidance on the assessment of the content is detailed through the following five factors: thematic focus, profile of experts, context, practice components, and language.

8.1.1.1 Thematic focus

Guiding question: *Does the capacity building activity focus on the thematic or functional capacity requested and/or needed by the transport institution?*

Address transport institutions' needs: It is important to accurately respond to the partner (or client) needs when planning and conducting a capacity building activity. (Int. 6) While this is of relevance to all types of capacity building formats identified, it is especially the case with guidelines and manuals, for example.

8.1.1.2 Profile of expert(s)

Guiding question: *Are the persons delivering the capacity building support qualified? Do they have the relevant experience, knowledge and soft skills needed (interpersonal, communication, pedagogical etc.) to effectively perform the needed task?*

Get the right expert(s). In the case of trainings for example, trainers should have pedagogical skills and know how to effectively communicate and teach diverse audience members, while also efficiently making use of the existing resources. Trainers should preferably be familiar with the local context and should be able to link the trainings to project implementation and to follow-up with the trainees when needed. (Int. 12) The same requirement and/or recommendation applies to speakers at conference sessions, and mentors in mentorship programmes, or facilitators at peer reviews for example.

Ensure the trainer profile responds to the local needs of the participants. In some cases, industry trainers can be considered more interesting to participants than academic trainers, due to the applicability of their approaches. (Int. 9)

8.1.1.3 Context

Guiding question: *Is the capacity building material tailored and customised to the context of the transport institution or is it general material applicable to different contexts?*

Ensure contextual relevance. Select contextually relevant case study destinations, so that the applicability of the learnings becomes realistic and not far-fetched. This is especially relevant for capacity building activities such as study tours where delegates need to see the *achievability* of change in their home countries. For African cities, South-South study tours tend to be less far-fetched than study tours to destinations in the Global North. (Int. 6, Int. 7, Int. 8).

Maintain a local presence and build trust. When working with governments and transport institutions, invest time in building trust and confirm your commitment to the city's long-term plans by maintaining local offices and/or scheduling frequent meetings on-site. (Int. 6, Int. 11, BoR 4, BoR 5) Building this mutual interest with local governments can support when facing issues of financing in projects, where cities can sometimes propose alternative financing solutions. (BoR 4)

Establish a sustainability strategy for capacity building activities. This is particularly important to ensure sustained local ownership, while addressing the common challenge of the high staff turnovers as public officials often move to the private sector (BoR 2). Workforce changes may also arise because of political reasons. Regardless of the reasons, the change in workforce poses a significant challenge because it may hinder the continuation of previously agreed upon capacity building programmes (Int. 1, BoR 5). Another suggested way to achieve this includes getting involved with the transport institution's Training Master Plans, which are typically organised every three to five years (BoR 5). This implies deep analysis of the transport institution's learning and development needs, and developing mutually suitable capacity building support options. Further ensuring the sustainability of capacity building includes designing programmes to arrange transitions such as Training of Trainers (ToTs) to build local capacity, making new processes permanent, such as requiring road safety audits for new roads and securing legal changes to gain governmental buy-in. It is also essential to empower the local private sector to encourage in-house development of solutions tailored to each city's context

Embed capacity building learnings into institutions to ensure continuity beyond individual leaders. (Int. 1, Int. 6). The suggestion came up to set up a Learning Management System, i.e. software available to the local partner/client with which they can keep track of the transport institution's learning path, to see their current status and benchmark it to their desired goals (BoR 5).

Build a network of local champions who can “inherit the experience” and act as trainers themselves. Following the ‘train the trainer’ approach, identify local champions and empower them to take the learnings from the capacity building activity forward, as future go-to experts in capacity building, fostering local ownership and expertise (BoR. 3).

8.1.1.4 Practice components

Guiding question: *Does the capacity building activity include practical self-study components such as homework, group work, presentations, tests etc.?*

Incorporate practice elements. This learning-by-doing approach increases participants’ learning experience (Int. 1, BoR 5). This is especially relevant for workshops and training programmes, both in-person and online, but even more so for capacity building activities such as mentorship programmes.

8.1.1.5 Language

Guiding question: *Are the language(s) of the capacity building activity in line with the expectations of the transport institution?*

Provide capacity building in the local language(s). When capacity building activities are conducted in foreign languages including English, it is often the case that representatives from the International Department or similar attend the activity due to their language skills. However, often, these are not the intended target audience members. (BoR 5) To make sure the capacity building activity is aligned with the needs and expectations of the audience, it is therefore important to cater to the local language requirements. If this proves difficult, then it is important to make arrangements to ease the communication in the local language or provide translation services to ensure the ease of discussions and group interaction. (Int. 8, Int. 10, Int. 12)

8.1.2 Target audience

Before starting a capacity building activity, both the provider and the recipient must agree on which efforts and resources are expected to generate specific outputs and outcomes. These theories or hypotheses should be co-created with the partner and constantly revisited and validated through real-world application. (5) In this second set of factors, we go through guidance related to working with partners, tools to incentivise them, and the importance of securing funding for the successful accomplishment of the intended results.

8.1.2.1 Profile of partners

Guiding question: *Does the suggested capacity building activity target the needed profiles (organisation, department, seniority level) to respond to the capacity needs of the transport institution?*

Deciding on the format of delivery based on the target audience. High-level audiences such as ministerial staff tend to not be available for several-day trainings (BoR 5). Short, concise meetings, conference sessions and/or workshops may be more suitable formats to ensure the attendance and

participation of high-level staff members and decision-makers within transport institutions (Int. 12). In the case of capacity building materials such as tailored reports, manuals or online libraries and databases, the material may have to be supplemented with other formats to effectively communicate it. Video formats and/or infographics tend to be more easily grasped than long-text formats (Int. 6). Often, training may be needed in order to be able to utilise data.

Invest in cross-organisational dialogue. Conferences, workshops, seminars and trainings can be capacity building tools to enhance and transform relationships, but potentially to also unlock tensions between stakeholders (such as between operators and regulators for example). (Int. 7) While inviting different stakeholders can set the scene for a wider dialogue, mixing stakeholder groups without being mindful of administrative government structures can result in a certain group being widely criticised, this may threaten the success of the capacity building activity. (Int. 10) Instead, one should be aware and mindful of whom to invite and how to involve them within the activity.

Invite decision-makers and technicians: Extend invitations to both decision-makers and technicians to participate in capacity building activities. Decision-makers provide the political will necessary for change, while technicians possess the expertise to implement technical solutions (Int. 12). By involving both groups, a collective effort can be made to drive tangible improvements.

Simplify application processes: Streamline the process for applying to capacity building programmes to make it more accessible. Additionally, provide support to applicants, particularly those from underrepresented backgrounds, by offering scholarships or other forms of assistance (Int. 11). This ensures that the most suitable candidates can participate and implement their learnings effectively.

Utilise annual conferences for comprehensive engagement: Leverage annual conferences as opportunities to engage all stakeholders in the ecosystem. These events provide a platform for exchanging ideas and onboarding new staff members. By utilising such gatherings effectively, organizations can promote collaboration and innovation within the industry (BoR. 4).

8.1.2.2 Incentives

Guiding question: *Does completing the capacity building activity offer any incentives/rewards for the transport institution or its employees? For training courses, is the material accredited? Does course completion or participation in a conference or training support career advancement within transport institutions etc.?*

Adopt a proactive approach when making transport institutions aware of available capacity building activities. Organise meetings to introduce programmes, get involved with the partners' learning and development planning, cater to the needs of the partner to incentivise them to proceed with the capacity building (BoR 5). Also, invest in networking activities by participating in conferences and meet-ups of transport institutions to stay up-to-date with local requirements and trends (Int. 6, Int. 8).

Ensure interest and buy-in of the transport institutions. Without them, capacity building efforts are bound to fail (Int. 1, Int. 3, Int. 6). Capacity building activities are often triggered by external interest from international development agencies and sometimes, within this process, local needs are overshadowed (Int. 4). The emerging interest by international partners to implement new sustainable transport infrastructure

can prioritise capacity building programmes related to specific transport modes and systems. During the transition, if the local capacity needs and knowledge are not integrated, this can lead to the failure of the operations of the new systems (BoR 2). Within this phase, it is important to listen to all the needs despite local hierarchies in management and operations. Power dynamics and rigid hierarchies tend to echo louder voices, overshadowing the needs and interests of different groups. This can be avoided **through research, stakeholder mapping and local engagement.**

Capacity building should be institutionally embedded in the professional trajectory of transport institutions' staff. The successful completion of training courses can be established as an official part of employees' professional trajectory within transport institutions (Int. 3, Int. 5, Int. 11, BoR 5). More ambitiously, the successful completion of short courses or training programmes could be formal grounds, if not prerequisites, for internal promotions (Int. 3, BoR 5). Further, experts have noted that capacity building is often a component of a larger project or programme designed for transport institutions. With that set-up, local partners have a vested interest to plan for and implement capacity building activities and apply the learnings thereof (Int. 6).

8.1.2.3 Accessibility/funding

Guiding question: *Is access to the capacity building activity free or is it a paid service that may also be sponsored by some donors? How can the capacity building activity sustain itself?*

Ensure resilient and sustainable funding for capacity building programmes. For longer term capacity building programmes, for example a multi-year training course, it makes sense to properly plan for and secure funding, which would be able to cover the entirety of the programme duration (Int. 11). Multi-year funding agreements are considered best practice.

Balance achieving short-term goals with long-term strategies. For short-term activities, be present and responsive to unexpected decisions that can present a capacity building opportunity, such as sudden changes in regulations by government. Unexpected regulations regarding the use or non-use of tuk-tuks or motorcycles for example, offers room to support local transport institutions' capacities (BoR 4). Longer term activities are usually linked to projects such as electrification or NMT projects, or BRT. For these projects, stay engaged with the government to know the milestones of the long-term projects and plan capacity building activities in relation to it. (BoR. 4)

Increase awareness that capacity building is an investment of which the results cannot always be measured (in the short-term). In many cases, development agencies (MDBs and bilateral agencies) and government partners prefer adopting short-term capacity building activities that are easily measured and respond to current needs, but long-term capacity building activities such as institutional transformations or establishing platforms require time and need to be valued by donors and development agencies as important forms of capacity building. (Int. 7)

8.1.3 Logistics

Through this third set of factors, we provide guidance on both the logistics and cooperation frameworks through which the activities are organised. This includes guidance on choosing the suitable settings, pace

of activity, its frequency and duration, but also considering opportunities for cooperation between organisations to better coordinate efforts.

8.1.3.1 Setting

Guiding question: *Does the activity respond to the logistical needs of the transport institution? Does it take place in-person or virtually?*

Decide on a setting which suits the target audience. Experts have mentioned that it is often quite difficult for transport professionals to convince their superiors to attend certain in-person trainings, meetings, or conferences for example due to their high workloads. Even when they do manage to secure time away from the office, they are often called back in or “forced” to continue working remotely from the venue of the capacity building activity (BoR 5). Based on the schedule, availability, and willingness of your target audience, decide on whether capacity building activities such as trainings can take place online or whether they have to be in-person.

Decide on a suitable location for the target audience. If it has been decided that the capacity building activity should be in-person, mutually decide on the optimal location of the activity. Which city, which country in what kind of venue should the activity take place to best suit the needs of the target audience? (BoR 5)

Create an atmosphere that facilitates the exchange of knowledge. In working groups or committee meetings, peers already have the knowledge and what is required are the right conditions and suitable platform. (Int. 7) Investing in creating these platforms contributes to a successful transfer of knowledge.

Consider the user experience: Capacity building material such as guidelines, self-assessment tools, data portals and libraries should be user-friendly and intuitive (Int. 2). Make sure to pre-test portals and libraries before going live. Prepare a user guide to help users navigate your data portal and library. Organise feedback loops to monitor the user experience.

8.1.3.2 Pace

Guiding question: *In the case of trainings and formal education opportunities, does the pace respond to the needs of the transport institution? Do they prefer participants to engage in real-time (synchronous) or can they do so flexibly (asynchronous)?*

Choose a pace which suits the target audience. Similarly to the location question, trainings and courses can be organised either in-person or virtually, or combining both in a blended setting. Experts have noted that since the COVID-19 pandemic, seminars, trainings and even some conferences have been increasingly taking place online (Int. 8). When it comes to online courses, practitioners have noted that offering asynchronous training courses and MooCs helps to respond to the busy schedules of transport institutions (Int. 11). In the case of in-person synchronous activities, experts have recommended so called “block seminars”, which take place on weekends or after working hours organised in an intensive way, as a method of securing participants’ availability and attention away from their daily workload and duties. (Int. 1, Int. 11, Int. 12, BoR 5).

8.1.3.3 Duration

Guiding question: *Is the proposed duration of the capacity building activity suitable for the transport institution? Is it suitable to achieve the intended goals of the capacity building activity?*

Be mindful of the duration of various activities and their alignment with the objectives of the capacity building activity. As illustrated in Figure 6, the duration of each activity corresponds to its design and intended impact. It can also be beneficial for the design of the activity to cross-examine the duration with the target audience's expectations. Committing to longer programmes may be unrealistic for high-level authorities with limited time capacity and demanding workloads. This doesn't necessarily exclude high-level figures from being part of longer study programmes or scholarships, but it should highlight the need to inquire about the suitable duration of an activity when assessing the programme with the potential partner/client.

8.1.3.4 Frequency

Guiding question: *Will this capacity building activity be a one-off activity or a recurring one for all employees of the transport institution at different career levels?*

Organising recurring training programmes may provide better quality material, as repeated feedback loops with audience members would identify and address any weak points in the content or organisation (Int. 8).

Keep the momentum and secure interest by organising regular engagement activities. Organise forums and conferences addressing different topics in transport such as paratransit and decarbonisation for regular conversation on different governance levels. (BoR. 4) For example, conferences can be planned annually to ensure national and state-level exchange.

Pedagogy often involves repetition. Given the anticipated staff changes within institutions and the varying receptiveness to learning among individuals, it is important to be comfortable with repeating information. (BoR. 4)

8.1.3.5 Cooperation

Guiding Question: *How can existing networks collaborate to achieve a collective impact rather than uncoordinated efforts?*

Coordinate efforts between organisations. Have a more coordinated and integrated approach between organisations/donors and focus on addressing key challenges collectively. Organising work between organisations, which are both NGOs, and revenue-making organisations, which are delivering activities, in the same cities by analysing the strong assets each organisation brings forward and coordinating who can do what to achieve the best results. (BoR. 4) It is also important not "to reinvent the wheel", but to build on previously achieved results, including when they are made by other organisations.

Work with universities and co-design courses with the programme beneficiaries. Universities represent the future capacities that could potentially work in the entities managing the transport services. (BoR. 4) Create an ecosystem where research projects are developed into professional development programmes (for professionals or technicians), which in turn feeds back into research. The dynamics where education is responsive to professional needs, and academia contributes to societal needs fulfils research and practical needs. (Int. 4)

Utilise global and local networks in learning from one another through identifying who is doing what and how it is done. This mapping can be especially beneficial for peer reviews where multiple experts have expressed a challenge in identifying experts equipped with local relevance to include in peer reviews.

Support the establishment of new platforms/structures that respond to a wide-scale need. A model where legacy transport authorities and new authorities can exchange on a wide array of topics on legal foundations, financial resources, legislative conditions encourage peer-learning.²³

Partnering with skilled technical experts. Offering e-based services is very different from offering in-person courses (Int. 11). It is important to have the right resources in place to properly run the course and fix any arising technical issues.

8.2 Limitations to assessing capacity building

It is important to recognise that building capacity is a gradual process. As the World Bank Institute (2) suggests, capacity development evolves over time, achieving different levels of progress. In fact, the ILO views capacity building as “a long-term investment whose benefits and impact might only become apparent in the medium and long run”. (47)

Based on different literature sources, the phase of evaluating training programmes and capacity building programmes should be firmly instilled in the project plan, but insights from the interviews (Int.) and the breakout room (BoR) discussions with experts show that this phase is often more difficult to sustain for variable reasons. These are some of these reasons:

Measuring improvement is not always suitable with different formats of capacity building: Assessments require a baseline and a target scenario, and indicators are developed to measure the improvement in reaching the target scenario. Since capacity building activities, as presented in Table 7, differ in formats and each address a specific type of need, assessment is not a direct process. For example, in the case of establishing platforms as a form of capacity building, measuring the improved relationship between the government and other institutions or across organisations is not an easy accomplishment to measure. (Int. 7)

Designing Indicators is not a one size-fits all process: It can be difficult to create indicators that show causality and affirm that a training has a direct impact on what is being measured. (Int. 12) Measuring the effectiveness of workshops, especially when measuring how the knowledge output resulted in actual

²³ The Urban Mobility Authorities Association (AUMA) is a network of African authorities which was created with support from SSATP in response to their need in having a platform independent of any external organisation and owned by African authorities. (Int. 7)

changes on the ground, is challenging. For instance, capacity building with the goal of establishing institutional structures or platforms would need different indicators than capacity building based on educational courses. (Int. 7)

Enabling environments can affect the applicability of learnings: Despite the successful knowledge transfer to trainees and conducting the training in the best possible format, it is not always guaranteed that this will transfer to the workplace (BoR 1, BoR 2). This can be the result of resistance towards change in institutional hierarchies or simply because change in the enabling environment usually needs higher level of incentives such as legislative or financial resources.

Experts have noted that **evaluation and satisfaction forms filled at the end of an activity might not be enough to assess the success of a capacity building activity** (BoR 2). Instead, it is advisable to also ask specific questions about the added value of the activity. For trainings for example, it may be more useful to test the gained knowledge pre- and post-trainings to assess to which degree trainings were successful in delivering certain content and skills (Int. 8) Further, rather than only aiming for immediate feedback, scheduled continuous feedback loops after 1 month, 3 months, or years later may provide useful insights, specifically with regards to assessing the impact of capacity building (Int. 8, Int. 12).

While assessments are crucial for tracking progress and impact, it is important not to adopt a mechanistic approach. Competency and success in capacity building are measured by the successful implementation of learned skills. Therefore, continuous assessment, rather than a one-off activity, is necessary, including monitoring changes in context, such as legislation and institutional restructuring.

The choice of which capacity building activity to conduct must be founded on an informed iterative process, whether that be done formally or informally. **This is where a capacity needs assessment would be useful.** Although all of the interview partners have noted the usefulness and importance of organising capacity needs assessments, the majority of the experts have also mentioned that they do not follow a formal process or methodology to conduct such assessments.

With this in mind, the next chapter shall establish an understanding of what capacity needs assessments are, how they are conducted, as well as best practices.

9. Capacity needs assessment

Capacity needs assessments are often not embedded in the internal work processes of organisations. They are often conducted prior to the official launch of a multi-year technical assistance project (Int. 1, Int. 12). However, capacity building activities with shorter durations (see Figure 4) are typically not based on the results of a capacity needs assessments. This is because assessments are quite lengthy and resource intensive.

Instead, the local context and capacity gaps are identified based on organisations' direct contact with transport institutions, which is often strengthened via their **local and regional presence in different countries** (Int. 2, Int. 6, Int. 8). Informal stakeholder meetings, discussions at events, and formal interviews often serve as the tools to gather information on the capacity needs and gaps of transport institutions.

Nevertheless, capacity needs assessments offer a most useful tool to make informed decisions when it comes to planning a capacity building activity. Therefore, the aim of this chapter is to shed light on the components of a capacity needs assessment and develops clear guidelines on how to them for planning capacity building activities in LICs.

“A needs assessment is a tool to make better decisions.” (48)

First, we define what is meant by capacity needs assessments first (subchapter 9.1). We then explain how the different roles are distributed in a needs assessment process (subchapter 9.2), before we present when and why it is advisable to conduct needs assessments (subchapter 9.3). In the next step, we discuss the different frameworks key international development agencies apply across sectors to conduct capacity needs assessments (subchapter 9.4). Finally, we present three examples of such capacity needs assessments implemented for the transport and mobility sector (section 9.4.2).

This section begins by reviewing the colliding and often overlapping terms related to capacity needs assessment through the literature produced by different international agencies, and then moves into the detailed process of capacity needs assessments, the conditions of conducting such assessments, and the roles of stakeholders involved in these processes.

9.1 What is a capacity needs assessment?

Before exploring how a capacity needs assessment process is broken down in different reports, we anchor the main goal behind needs assessments, which is to “improve capacities” as defined by the World Bank (48). Capacity needs assessment can be broken down into several terms, according to different project contexts.

- Needs

Bearing the three levels of capacity development in mind, needs are described as the gaps between current and desired capacity (48). This synonymous use of the word needs, with ‘gaps in capacity’ is aimed at highlighting the main goal of the needs assessment process, which is to understand the current status rather than moving towards initiating solutions.

- Capacity Assessments

Similar to the World Bank, the United Nations Development Programme (UNDP) defines capacity assessment as “the analysis of desired capacities against existing capacities to generate an understanding of capacity assets and needs that can serve as input for formulating a capacity development response” (49). The UN-Habitat further describes capacity assessments as a diagnostic tool that can be integrated to

examine all aspects of operations and performance (50). Therefore, capacity assessments are an enabling tool to understand systems on multiple levels; individual, organisational and enabling environment/society.

9.2 How are the different roles distributed in a capacity needs assessment?

To answer this question, a review of the different roles played by stakeholders in a capacity assessment process is needed. Figure 9 shows the main roles played in a capacity assessment process, as adapted from UNDP's capacity assessment methodology (49).

- In the framework of international development cooperation, the **primary client** is usually a government body, which has taken initiative for conducting the assessment and their role is very critical for determining the scope and scale of the capacity assessment exercise.
 - The **assessment owner** is assigned by the government unit and is responsible for overseeing the assessment process and acts as a focal point between the main stakeholders and the capacity assessment team. They can be a designated unit or a department within a government entity.
- The **beneficiaries** or possible future-recipients of capacity building programmes are the main stakeholder whose capacity is measured and analysed. This is the main group that undergoes capacity assessment processes, they fuel the assessment process with data and information.
- The **capacity assessment team** is responsible for planning, managing, and producing results from the assessment process. They can consist of both local and international consultants, depending on the scale of the assessment, i.e. experts from the UN and the World Bank, for example, form the capacity assessment team along with local consultants.
 - A **technical reference group** can be created from local stakeholders with specific expertise in the main thematic capacities (such as bus operations, route planning, etc..) that are consulted by the capacity assessment team.

Figure 8 shows the ideal case, this arrangement can differ according to the project scope and the assessment objective. In section 9.4.2.1, the authors apply this diagram on the different roles of the stakeholders involved in the SMART-SUT project.

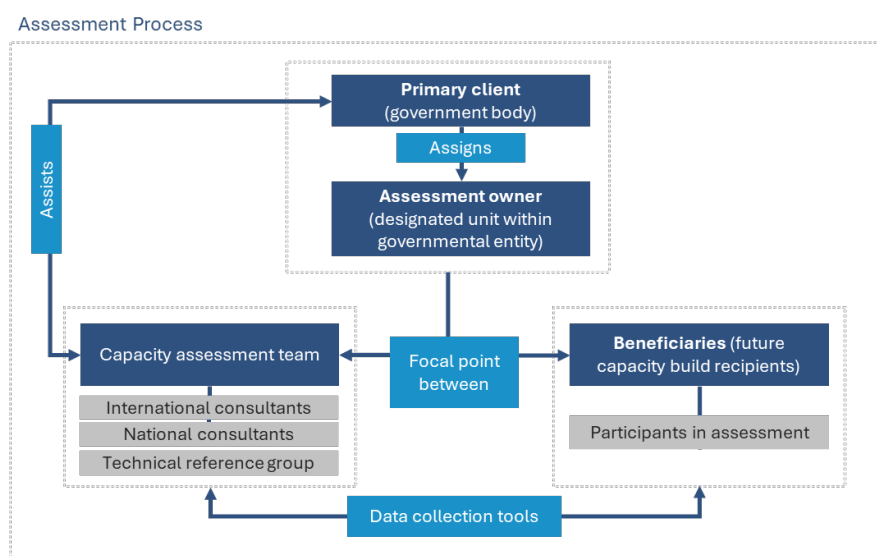


Figure 8 Roles of different stakeholders in the process of the capacity needs assessment. (designed by the authors based on (49))

9.3 When and why to undertake capacity needs assessments?

The World Bank gives a good overview on when to assess needs through explaining three possible scenarios:

- **The proactive scenario**, where the needs assessment aims to allocate opportunities for improvement of performance,
- **The reactive scenario**, where the needs assessment is a response to the identified gaps between desired and existing capacities,
- **The continuous scenario**, where assessments become part of the routinely conducted enhancement programmes (48).

The UNDP specifically explains when capacity assessment methodologies are utilised in a planning cycle: it can be during the development of national strategies, or the planning of different development agencies' programmes and projects in the partner country. A capacity assessment can also "provide the starting point for formulating a capacity development response; act as a catalyst for action; confirm priorities for action; build political support for an agenda; offer a platform for dialogue among stakeholders; and provide insight into operational hurdles" (49).

Similarly, GIZ (3) explains that capacity assessments are part of "politically and economically informed consultancy processes designed to elaborate implementation strategies for Capacity Development support." In section 9.4.2.1, the authors reflect on the case of the SMART-SUT project, to elaborate on the scenarios that led to conducting the capacity assessments.

9.4 How to undertake capacity needs assessments?

This section focuses on showcasing and connecting different international approaches to capacity assessments. This involves looking into the stages of the assessment, the process itself and the utilised tools, and the bigger framework, which ideally connects assessments to development strategies. The following table compares initial resources that have been reviewed and compares the process and framework.

Table 9 Comparison of needs assessment processes between different international reports.

Literature	Capacity Assessment Process	Capacity Development Framework
2009_UNDP – Capacity Assessment Framework (49)	<ol style="list-style-type: none"> 1. Mobilise and Design <ol style="list-style-type: none"> a. Engage Stakeholders; b. Clarify objectives with clients; c. Adapt UNDP Capacity Assessment Framework to local needs; d. Determine the data collection approach; e. Determine how to conduct the assessment; f. Plan and budget the assessment. 2. Conduct the assessment <ol style="list-style-type: none"> a. Determine level of desired capacity; b. Assess the level of existing capacity. 3. Summarise Results 	UNDP Capacity Development Process: <ol style="list-style-type: none"> 1. Engage stakeholders on capacity development; 2. Assess capacity assets and needs; 3. Formulate a capacity development response; 4. Implement a capacity development response; 5. Evaluate capacity development.

<p>2012_World Bank – A Guide to Assessing Needs (48)</p>	<p>Identifies three stages of assessment:</p> <ol style="list-style-type: none"> 1. Pre-assessment <ol style="list-style-type: none"> a. Determine scope of the needs assessment; b. Identify primary performance themes; c. Define the required data for the needs assessment; d. Create a management plan for the needs assessment; e. Validate plan with stakeholders. 2. Assessment <ol style="list-style-type: none"> a. Plan, manage and review data collection tools; b. Collect information on performance gaps; c. Define needs based on gaps between desired and current results; d. Synthesise information and recommend performance-improving activities to address the identified need. 3. Post-Assessment <ol style="list-style-type: none"> a. Summarise findings; b. Communicate with stakeholders and develop a dissemination strategy; c. Integrate results into M&E activities. 	<p>General Performance Improvement Framework:</p> <ol style="list-style-type: none"> 1. Assess 2. Plan 3. Act 4. Monitor 5. Evaluate
<p>2012_UN-HABITAT & IHS - Training Needs Assessment and Training Outcome Evaluation (51)</p>	<ol style="list-style-type: none"> 1. Verify demand and client commitment; 2. Identify key stakeholders; 3. Identify desired capacity; 4. Identify current capacity; 5. From current capacity to desired capacity; 6. How can training contribute? 7. Specify training needs. 	<p>The Training Cycle:</p> <ol style="list-style-type: none"> 1. Assessment of Needs <ul style="list-style-type: none"> • Assessment of needs; • Definition of Entry points; • Building on previous lessons learnt. 2. Design <ul style="list-style-type: none"> • Approaches and tools; • Designing the process; • Designing to fit client's needs. 3. Delivery 4. Follow-up 5. Evaluation
<p>2015_Capacity Works_GIZ (5)</p>	<ol style="list-style-type: none"> 1. Conduct a SWOT analysis to analyse current situation. 2. Identify a contrasting situation to use as a yardstick to pinpoint where you need to be (desired situation). 3. Clarify the target situation and the capacities required to achieve it. 4. Identify capacities needed to reach the target situation across four levels: <ul style="list-style-type: none"> • level of individuals 	<ol style="list-style-type: none"> 1. Understand the concept of a capacity development strategy. 2. Determine the focus of the capacity development strategy. 3. Define current and intended capacities. 4. Devise activities and hypotheses.

	<ul style="list-style-type: none"> • level of organisations • level of society – enabling frameworks • level of society – cooperation systems <p>5. Devise potential options.</p> <p>6. Select options:</p> <ol style="list-style-type: none"> Agree on selection criteria; Weigh up the effectiveness and risks; Decide on strategic options 	<p>5. Discuss the interactions between the levels of capacity development.</p> <p>6. Discuss complementary activities by other projects/actors.</p>
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9.4.1.1 The process

The term *needs assessment* entails the actual systematic process of data collection and analysis that guides the future planning and decision making (48). There is a difference between needs assessment tools and the assessment process itself. Gap analysis, performance analysis, focus groups, multicriteria analysis and other methods are considered as needs assessment tools that support the implementation of the process.

The World Bank identifies three types of needs assessment: strategic, tactical, and operational (48). The **strategic needs assessment** focuses on the high-level planning and policies level, which also affects the **tactical level** that is more concerned with implementing policies and setting the building blocks for the last level which is the **operational level**, which focuses more on short-term decisions (48).

UNDP: Capacity Assessment framework

The United Nations Development Programme (UNDP) developed a capacity assessment methodology which consists of the assessment framework, the process, and the supporting tools (49). Figure 9 shows the detailed steps and related sub-steps along with the suggested tools for each.

The capacity assessment process includes the following steps:

- **Mobilise and Design:** this step engages stakeholders, and is guided by answering three main questions: first, why conduct a capacity assessment? Second, capacity for who? Third, capacity for what?
- **Conducting the assessment:** this step can take various formats and adopts different tools based on the data required on current and desired capacities. Self-assessment, stakeholder interviews, and focus groups are all different examples of the possible data collection methods of this step.
- **Summarising, interpretation, dissemination** of results by comparing existing and desired capacities and recommending the interventions to close this gap.

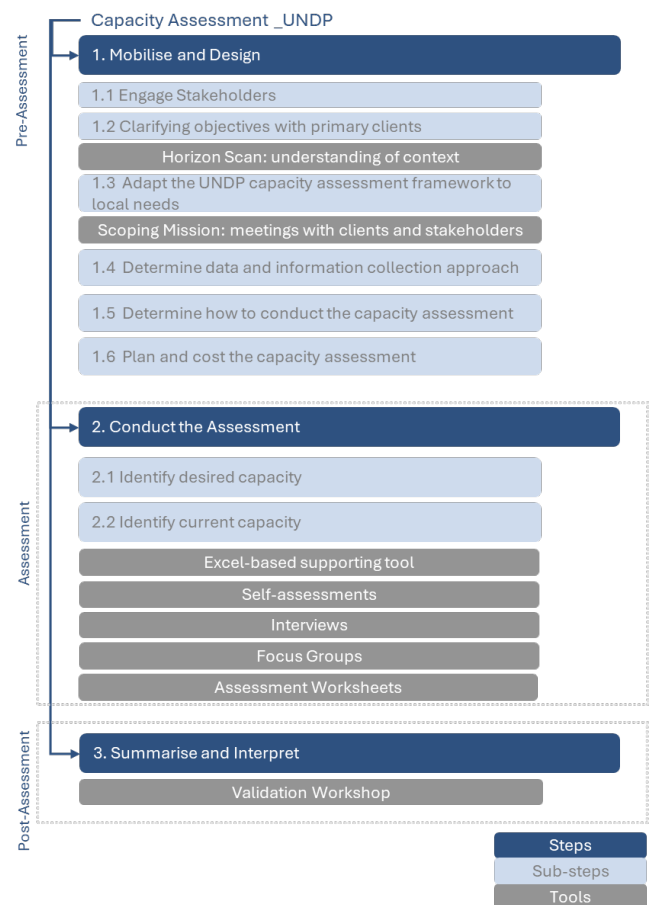


Figure 9 Stages, tools, and steps of conducting a capacity assessment (designed by the authors based on (45))

World Bank Book: A Guide to Assessing Needs

The World Bank guidance book on assessing needs defines three phases in the needs assessment process of large-scale projects:

- **Phase one: pre-assessment phase**

This phase aims to plan and develop the assessment and to make sure the outcomes are reliable for the following stages of the Capacity Development Strategy/Framework.

The main tasks of this phase are to define the scope of the assessment, the data required from the overall process, and to design a management plan for the needs assessment (48).

This phase requires a high level of stakeholder engagement to ensure the alignment between the needs of the different partners and the applied process.

- **Phase two: assessment**

This is the main phase that constitutes all the activities that are implemented to collect data on the status quo. The main task in this phase is the collection of data and designing the methods and tools that facilitate the process (48). The assessment adopts tools to assist the findings and interventions, including focus group discussions, stakeholder consultations, and training needs assessments.

- **Phase three: post-assessment**

This phase is related to monitoring and evaluation activities after the assessment is completed.

In their book, the World Bank categorises tools into decision-making tools and information gathering tools and explains each of them, their advantages, and disadvantages and when to choose each of the tools based on the information needed. The book does not necessarily guide readers on the utilisation of each of the tools in the different assessment steps, but rather shares the varieties of the tools, and recommends a selection matrix to choose the tools based on the information required.

UNHABITAT Manual on Training Needs Assessment

The UN-Habitat published a manual to support training institutions that provide training activities for sustainable urban development. Therefore, their steps tend towards assessing needs to develop training materials and furthermore, evaluate the results of these trainings. Figure 10 shows the recommended tools for each step.

The main steps recommended by the UN-Habitat in this report are the following:

- **Verifying the demand** and the commitment of the training recipient: This step is important to understand the client's perceptions on the issue being investigated, and whether the client has a specific priority in the training.
- **Identifying the key stakeholders:** this step focuses on analysing the stakeholders, the information they control, and how they can impact the training.
- **Identifying the desired capacity:** it is pivotal to understand how the client perceives the long-term goal of the training and this shared vision supports the training institution in designing a guiding framework of the training design.
- **Identifying current capacity:** this step supports the training institution in comprehending how the organisation/individuals operate. In this step, a better understanding is built on the context of the

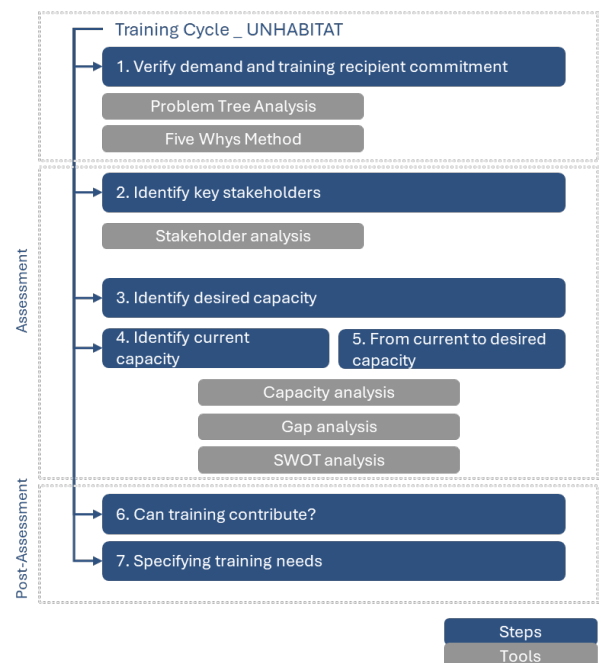


Figure 11 Steps and tools to conduct a training needs assessment according to the UN-Habitat Manual on training assessment. (designed by authors based on (47))

client: how laws are affecting the work of the organization, or how other similar organisations are operating.

- **From current to desired capacity:** at this step the trainer can identify what needs to be changed and this is based on the comparison between the existing and the desired capacity.
- **Can training contribute:** This step presents a decision point for training institutions, it supports them in understanding their impact and whether their services would benefit the recipients. The realisation of whether the training would support improving individual-knowledge or whether another type of capacity building measure is needed in the political framework that governs these entities can guide the training institution in knowing whether conducting a training is reasonable and responsive to the client's needs, or not.
- **Training Needs:** this step is specific to designing the training including the selection of the participants, the format of the training, and the possible enhancers to the learning process.

GIZ Capacity WORKS

The book "Cooperation Management for practitioners: Managing Social Change with Capacity WORKS" (5) is a rich manual published by GIZ in 2015 to give a practical overview on how to successfully prepare, conduct and evaluate international development projects with partner countries and cities. As such, it provides a detailed model and toolbox.

The use of capacity assessments is recommended prior to the launch of any development cooperation project including during the formulation of a capacity development strategy.

Pre-assessment

As per the toolbox, a SWOT analysis is to be organised with the foreseen project partners. The goal is to identify strengths, weaknesses, opportunities and threats across the four levels of capacity: enabling frameworks (societal level), cooperation systems (societal level), organisational, and individual level to capture quality information on the current status. An in-depth and hands-on approach is advised, including the organisation of workshops and discussions.

Assessment

Once the information has been collected, a capacity needs assessment can follow, as a means to prepare the capacity development strategy. The goal here is to identify what the situation should be, and to identify the capacities needed to achieve this. Based on that, several options to bridge the capacity gap can be formulated. To decide on the final options to proceed with, a renewed iterative approach with the partners is recommended. At this stage, it is important to agree on the selection criteria, and to weigh up the effectiveness and risks of proposed options and/or activities. Finally, the strategic options are mutually agreed on by GIZ and the project partners.

Post-assessment

The findings, i.e. the options and/or activities recommended in the capacity assessment phase, can be used to shape the capacity development strategy for upcoming cooperation projects with the partner country.

9.4.2 Applied examples of capacity needs assessments

After having analysed the typical capacity needs assessment process and frameworks for international donor agencies, it is now time to look at sector-specific capacity needs assessments. This section focuses on sharing examples that applied the capacity assessment processes for transport and mobility projects.

- The first example (section 9.4.2.1) is a GIZ project implemented in India. This example was chosen, as it adopts the GIZ Capacity Works framework. Further, the project includes a wide-scale assessment process involving multi-level government entities across different cities, thus, resulting in a capacity building programme with a wider scale.
- The second example (section 9.4.2.2) is a capacity development plan, which was created by C40 to support the electrification project of a corridor in Mexico City. This example shows how capacity assessment comes in as a preparational step for capacity building programme.
- The third example reviewed (section 9.4.2.3) is a project by SLoCaT, which made use of the capacity assessment as a research tool to recommend capacity building strategies in low-income and lower-middle-income countries (LI/LMIC). The research results include insights into which type of capacities should be assessed when looking into low carbon high volume transport (LC-HVT) projects.

9.4.2.1 Reviewing SMART-SUT India's capacity assessment process

The GIZ's capacity assessment undertaken in the framework of the Integrated Sustainable Urban Transport Systems for Smart Cities (SMART-SUT) India project offers a good example of a transport and mobility related capacity assessment. The capacity assessment process of the SMART-SUT project in Indian cities revealed the critical role of consultation meetings between GIZ and the city authorities to understand the specific support areas. (52). The SMART-SUT is showcased as an example of capacity needs assessment in the context of transport, and to show the application of the theoretic steps described in section 9.4.

Roles of stakeholders in the capacity assessment process of the SMART-SUT project

Figure 13 further describes the different roles in the assessment process, by adopting the framework presented in Figure 8 to the SMART-SUT project. Before the assessment process an agreement between the Ministry of Housing and Urban Affairs and the GIZ led to the launching of the SMART-SUT project. Therefore, the *Assessment Client* here can be considered the Ministry of Housing and Urban Affairs, since it is the main governmental entity under which the project has been created.

The project is implemented in three pilot cities. The cities are considered the *primary assessment owners*, since the assessment findings would support the improvement of the capacities of these cities.

The *capacity assessment team* is the SMART-SUT team and GIZ, and they are responsible for conducting the assessment through data collection tools (FGDs, interviews, meetings, etc.) with different stakeholders in the cities, including the municipal corporations and providers of the urban mobility system, and institutions with a transport-planning mandate, to cover both planning and operational stakeholders in the transport sector.

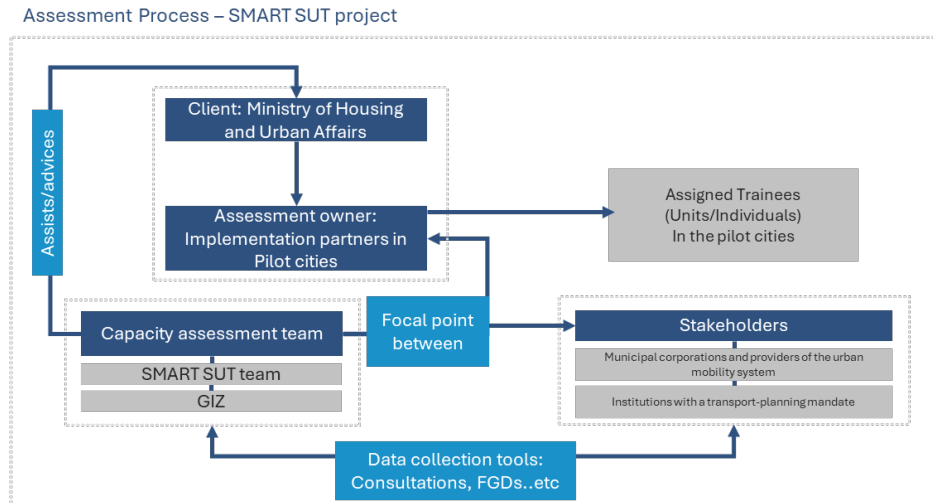


Figure 13 SMART-SUT project roles of different partners and institutions in the capacity assessment phase.

Why were capacity assessments conducted in the project?

The process of capacity assessment in the SMART-SUT can be explained as both a proactive and a reactive scenario, as described in section 9.3.

The *reactive scenario* was observed in multiple cities. In Bhubaneswar, the city conducted a self-assessment that showed their need to empower their bus service provider. Another agency on the municipal level had increased its initiative towards non-motorised transport (NMT) projects, and therefore requested capacity assessment for its staff to improve their planning, budgeting, and monitoring skills in NMT focused projects.

The *proactive scenario* is observed in the capacity assessment process in the SMART-SUT partner cities to reveal their priorities and preferences. The assessment of the capacities focused on three intersecting capacity levels: the individual, organisational, and cooperation level, and the thematic areas of: planning, financing, and implementing active travel transport, bus services, freight transport and multimodality.

The Process: how was the assessment conducted?

The process adopted by the SMART-SUT project included an organisational mapping exercise in the (pre) assessment phase, as well as activities undertaken for the assessment itself, both on the state and city levels.

Pre-assessment:

- Organisational mapping

At this stage, the main goal was to identify key actors and their existing roles and capacities in urban transport. These key actors can either be the main partners in each city who have been part of the project from the conceptualisation phase, those at which all support activities are directed towards, and/or entities whose dictated mandate places them in powerful positions in the urban transport sector (52). These actors were then analysed according to their functions in the transport sector. This was done to clearly understand the capacities of each in delivering the five different functions of urban transport:

- Planning and design;
- Project identification, execution and monitoring;
- Budgeting;
- Regulating;

- Training and research.

Assessment:

- City-level detailed assessment

When the assessment involved different cities, the process of assessment had to be responsive to the different contexts and capacities, and existing thematic priority projects in each city. The findings of the assessment involved comparing existing and desired capacities on the city-level, and suggesting interventions based on the comparisons (52). The assessments were analysed across the three capacity levels: individual, organisational and cooperation level capacities. The latter referring to the interorganisational framework governing the communications between the different departments and/or entities.

- State-level assessment

On this level, the assessment adopted similar data collection tools as in the city-level assessment, but the difference lay in the entities whose capacities are specifically analysed. Therefore, in this level of assessment, the SMART-SUT project conducted the assessment through:

- Initially mapping the state-level agencies considered as main partners for the assessment and intervention planning;
- Analysing the organisational capacities of these agencies, in relevance to their planning roles, which is clearly within the mandate of the institutions on this level.
- Analysing the individual capacities (at the departmental level) of these agencies. For operational departments, their main role was identified in the provision of transport services, such as data management, route planning, and bus maintenance.

9.4.2.2 C40 Cities Finance Facility (CFF) capacity development plan in Mexico City to prepare the investment for implementing an electric bus and bicycle corridor project (53)

As in the previous example, the capacity development plan's assessment process included activities that were preparatory (pre-assessment phase) as well as activities during the assessment process itself.

Pre-assessment:

- Identifying the main actors that would be involved in the capacity development activities in Mexico City:
 - Entity responsible for organising, promoting, and regulating urban mobility development;
 - Entity responsible for operating and administering electric transport systems.

Assessment Process:

- Assessing existing capacities using the assessment tools;
- Classifying all findings into the three levels of capacity (individual, organisational and inter-organisational);
- Identifying capacity gaps in the areas of needs;
- Drafting a capacity development plan and validating it with the city.

Assessment tools used:

- SWOT analysis with the Project Implementation Unit (PIU) to discuss the following core capacities:
 - Project planning
 - Project management

- Communication strategy
- Project funding and financing
- Interviews with stakeholders from the PIU unit specifically to confirm findings from the SWOT exercise that was conducted. The interviews focused on the four main core capacities in the SWOT exercise, in addition to the fifth capacity related to legal frameworks.
- Ideation workshop to share the capacity gaps identified with the stakeholders from the city administration.

These tools were also complemented with other external assessment methods to validate the findings:

- Document revision to extract the capacities (technical and financial) required to undertake pre-feasibility studies and develop business model for the project.
- Feedback from CFF technical staff supporting the project.
- Feedback from international technical experts supporting the project.

9.4.2.3 Capacity Building Needs Assessment & Strategy to Promote Low Carbon Development in HVT for Selected LIC/LMIC Priority Countries in Africa and South Asia (13)

The focus of this paper lies specifically on capacities related to Low Carbon - High Volume Traffic (LC-HVT) projects. This paper did not conduct the capacity assessment to implement a capacity building programme, as was the case of SMART-SUT. Instead, we have included this example because of the structured process in assessing capacities, and because of the findings, which are relevant to the transport sector.

The methodology of capacity assessment in the report involved 1) reaching out to stakeholders and 2) analysing the findings.

Expert outreach activities were conducted in each country in research institutions, government departments, the private sector, and implementing agencies. The primary data was collected via three tools: (1) stakeholder surveys, (2) expert interviews, and (3) physical workshops.

The data collected for the assessment was further analysed by the authors. Although not specifically mentioned, the assessment findings can be categorised into two groups: current capacities and future capacities.

- **Current, existing capacities:**
 - Identifying the needs that drive the choice of what type of transport projects will be implemented. This includes for example, reducing traffic congestion, providing affordable transport, etc.;
 - Identifying the possible challenges preventing climate change mitigation from becoming a higher priority. This includes for example weak regulation, inadequate capacity, skills, or knowledge, etc.
- **Future, intended capacities:**
 - Identifying the knowledge needed to overcome challenges to implementing LC-HVT. This includes for example the skills and know-how to influence decision-makers, and how to draft policies related to low carbon - high volume transport.
 - Identifying the themes for the perceived needs for knowledge exchange. This includes for example transport finance, institutional capacity, regulation, GHG analysis, etc.

10. Guidelines: Strategic needs assessment

Sub-chapter 9.4 reviewed the different capacity needs assessment methodologies used by international development agencies such as the World Bank (2012), UNDP (2008), UN-Habitat (2012) and GIZ (2015). These reviewed methodologies presume that the beneficiary of the capacity needs assessment is the local government partner. While the initiator of the capacity needs assessment process may vary, it is often the case that the assessments are initiated by the international development cooperation agencies funding the capacity building activity. That is because, any resources spent for official development assistance (ODA) by the international development cooperation agencies has to be monitored and justified to their respective governments. The assessor, on the other hand, is often a taskforce created by both the international agency as well as the local partner.

In the following chapter we produce guidelines based on this methodological review and based on the main highlights discussed in the expert interviews with the GIZ mobility team and the ICLEI sustainable mobility team in phase I.

Bearing the analytical framework for capacity building providers in mind, we recognise that the process and framework for capacity needs assessments differ from one provider to another. We can also observe the points of resemblance between the steps recommended, such as the vital role of stakeholder engagement, and the analysis of the gap between current and desired capacities, and a similar utilisation of tools to assist in the data collection phase. Despite these similarities, capacity assessments can still be considered a tailored process based on the project, and its own objectives, where decisions must be made by the assessment team and the partners to shape this process.

Thus, it is this chapter's aim to produce a short and easy to use guideline document, which would demonstrate the main steps for strategic capacity needs assessments. This will be done by the means of developing a table summarising the main tasks, activities and milestones different capacity assessment methodologies have in common – structured along the three main phases:

- the pre-assessment phase, where the aim is to explore opportunities and demand;
- the assessment phase, where the goal is to identify capacity gaps and improvement options;
- the post-assessment phase, where the goal is to utilise the findings.

Commonly used analytic tools and data collection formats will also be shortly mentioned. The guideline will conclude with a brief list of best-practice recommendations.

10.1 Recommended capacity assessment process

Based on the processes reviewed above, we introduce several recommendations in the summary table below for providers of capacity building activities to follow, to make sure that capacity needs assessments are carried out successfully. These include gauging the interest and commitment of potential partners before implementing the assessment, as well as carefully defining the scope, data needed, and roles and responsibilities of parties.

During the assessment phase, we recommend an in-depth analysis of the desired capacities vis-à-vis the current ones, and which measures to introduce to bridge the gaps between them. Several analytic tools are suggested along with data collection exercises to accurately capture the different nuances of the current situation.

Finally, an effective and inclusive communication and dissemination plan is advised in the post-assessment phase. This is to make sure that the assessment owner/partner is well-informed and well-equipped with the

findings of the assessment, so that they may successfully proceed with planning the capacity development activities.

Table 10 Capacity needs assessment guidelines for capacity building providers (summarised by TFC based on a literature review)

Tasks	Activities within tasks	Milestone to be achieved	Analytical tools and data collection formats
Pre-assessment (Explore)			
Understanding the context	Desktop research	Identify themes, and relevant stakeholders to be approached	<i>Tools:</i> Contextual analysis incl. Transport services, projects, challenges etc. Stakeholder mapping and analysis
Verify demand of stakeholders/partners	Stakeholder consultations	Gauge potential partners' interest and willingness to cooperate	<i>Tools:</i> Concept mapping (mind map), Problem tree analysis, Five whys method
Verify commitment of partner	Partner consolidation	Written or verbal agreement with partner/client (e.g. EoI, MoU, etc.)	
Assessment Scope	Partner discussions and negotiations	Clarify assessment objectives and level of assessment (individual/organisational or societal capacity assessment) as well as technical and/or functional as well as hard and/or soft capacities to be assessed	<i>Tools:</i> e.g.: UNDP Capacity Assessment Framework
Data requirements	Discuss and define data requirements for the needs assessment	Decide on type of data needed incl. qualitative vs quantitative data, and where to get it	<i>Tools:</i> Concept mapping (mind map), Cross-referencing functions with stakeholders <i>Formats:</i> Focus groups, and workshops
Management plan	Discuss and define management	Assign roles and responsibilities of parties	<i>Tools:</i>

	plan for the needs assessment incl. logistics (timeline, budget, responsibilities)	throughout the assessment process	GANTT chart and workplan, risk matrix
Assessment (Identify)			
Analysis of desired and current capacities	Data collection	Identify desired capacity, current capacity and capacity gaps	<p><i>Tools:</i></p> <p>Concept mapping (mind map), SWOT, task and performance analysis, fishbone analysis, problem tree analysis, five whys method</p> <p><i>Formats:</i></p> <p>Interviews, focus group discussions, (self-assessment) surveys and questionnaires, performance observations (shadowing)</p>
Synthesise information and discuss improvement activities	Stakeholder engagement	Make capacity development recommendations	<p><i>Tools:</i></p> <p>Scenario building, Future wheel, Results model, Logical framework (incl. inputs, outputs, outcome and impact SMART indicators)</p> <p><i>Formats:</i></p> <p>Focus groups, workshops</p>
Post-assessment (Utilise)			
Communicate assessment findings	Written and oral reporting to stakeholder	Stakeholders validate findings and are able to use assessment findings	<p><i>Tools:</i></p> <p>Dissemination and communication strategy</p>

			<i>Formats:</i> Validation workshops, high-level meetings, launch events
Evaluate needs assessment process	Stakeholder engagement	Stakeholders evaluate degree of success of the planned vs achieved assessment objectives	<i>Tools:</i> Internal and external evaluation surveys <i>Formats:</i> Assessment team meetings

10.2 Success factors for capacity needs assessment

Capacity needs assessments are a useful and sometimes overlooked tool within the broader framework of the project cycle of international development and/or capacity building programmes. This is because capacity needs assessments help identify capacity gaps, which enables stakeholders to make informed decisions on capacity building strategies and projects.

There are a number of best-practice factors to consider when conducting capacity needs assessments.

The following points should all be taken into account:

- **Partner involvement:** Without the political will and commitment of the partner to actively engage in a capacity needs assessment, the data collection and analysis will not provide high quality results.
- **Applicability of results:** The partner must be keen and able to introduce, implement and maintain the learnings, from the capacity building activity. Thus, partners “must have a vested interest in the process, assume responsibility for it, and be actively engaged in achieving the change objective” (3).
- **Ensuring continued ownership:** The more ownership the partner shows in the capacity needs assessment, the more likely the assessment and ensuing actual capacity building activity is to succeed. In fact, ownership and motivation are referred to as “the single most important determinants” (2). That is why it is important to make sure that the needs of the partner/client are accurately and continuously addressed throughout the process.
- **Participatory, with a high degree of involvement:** Similarly, it is vital that the partner be involved in all stages of the capacity needs assessment and capacity development process. This includes the design, implementation, and evaluation of the capacity assessment process. The participatory approach ensures responsibility and accountability of the partner/client.
- **Multilevel stakeholder engagement:** Engaging as many stakeholders as possible. This multilevel, inclusive approach ensures ownership, accountability as well as cross-sectional complementarity of capacity assessment findings (4).
- **Avoid jumping to solutions:** At the beginning of the assessment process, as the issues emerge, the team can feel compelled to provide solutions and activities. But it is important to maintain the process of data collection as planned and avoid any preconceived ideas about possible improvements activities. The capacity assessment process must be based on facts and collected data and not on assumptions (48).

11. Conclusion

Recognising the lack of sector-specific literature on capacity building in the field of passenger transport and urban mobility, the report addressed this gap by examining various capacity building activities and their effectiveness for LICs. After defining capacity building, the report identified six types of stakeholders involved in capacity building (public authorities, international development cooperation agencies, non-profits and NGOs, initiatives and partnerships, universities, and the private sector). A non-exhaustive overview of the different organisations and entities under each type is presented. The report then compiled a catalogue of 14 capacity building formats and listed examples of each related to transport sector. The catalogue rectifies the common misconception that capacity building consists only of trainings and expands on this by including, for example, mentorship programmes, committee meetings, and making knowledge products and data platforms available as capacity building activities.

Highly relevant for the international transport community and even more so for transport institutions worldwide, the findings of the report give a detailed response to the question of “*who does what where*” in terms of capacity building support for transport institutions in LICs and MICs, and how these efforts can be improved. The mapping exercise showed the current synergies that facilitate the transfer of knowledge and skills between providers and recipients of capacity building support.

To account for funding and budget constraints faced by capacity building providers, capacity building activities were categorised based on their degree of excludability and rivalry. The research findings suggest that most existing capacity building activities in transport and urban mobility are rivalrous and excludable in nature. Bearing in mind that donors tend to prefer funding capacity building activities with a wide reach, employing digital tools to capacity building activities may support in making them more inclusive and less rivalrous.

The authors suggest further analysing capacity building activities based on factors related to the content, target audience and logistics. Based on these, the typical strengths and weaknesses of the different capacity building activities were presented. While some formats offer opportunities for in-depth coverage of topics, and detailed exchanges between participants, there can be capacity constraints, which limit the number of attendees. The overview can guide both providers and recipients to be mindful of the opportunities and risks each type of capacity building activity poses.

The answer, however, to what is the most effective capacity building activity lies not in choosing a specific format, which scores the highest on a checklist, but rather in choosing a format, which responds to the specifics of the context and its circumstances. The applicability of learnings from capacity building is governed by multiple elements and is not always guaranteed, but efforts can be made to ensure the successful transfer of knowledge. Therefore, a number of short- and long-term recommendations for each type of capacity building activity were suggested. In the long-term, ensuring local ownership, institutionally embedding capacity building in the professional trajectory of employees and establishing cooperation mechanisms to align the efforts of different national and international agencies were among the key recommendations made by the consulted experts.

The interview partners further noted the importance of setting clear expectations of capacity building activities prior to conducting them. The choice of which capacity building activity to conduct must be founded on an informed iterative process, whether that be done formally or informally. With this in mind, capacity needs assessments were introduced at the end of the report, including when and how to conduct them. The chapter is guided by general frameworks and transport-specific case studies before breaking down the process into three phases. The first is a pre-assessment phase meant to explore the current situation, verify the demand of the partners, and determine the scope. The second phase is the assessment, which identifies

the needs by analysing the desired and current capacities and discusses improvement activities. The post-assessment entails communicating the findings and evaluating the process. Finally, some best-practice guidelines for undertaking capacity needs assessments are summarised.

Way forward

The consulted experts agreed that there is a need for more capacity building to respond to the challenge of advancing sustainable mobility in LICs and LMICs. Therefore, there is also a need to identify more resources to provide this capacity building support. Capacity needs assessments could be a tool which could help steer future activities and help with coordination among the national and international partners.

Capacity building in essence is a long-term learning and development exercise, which involves change management. Principles of pedagogy must not be disregarded in the process, and partner involvement and ownership must be ensured. The report guides both the design of capacity building activities, and brings to the table discussions on funding, long-term planning and cross-organisational coordination for achieving a collective and profound impact.

The methodology of this research relied primarily on collecting data from organisations providing capacity building support. While transport institutions were invited to participate in the multi-stakeholder consultation workshop online, they were not represented during the expert interviews. Thus, further research focusing on the experience of the transport institutions who receive capacity building support may provide additional insights that could not be fully covered in this report.

By doing so, several questions can be further researched:

- Are capacity needs assessments incorporated into the learning and development planning cycle of transport institutions in LICs, or is their use merely a requirement by external funding agencies?
- When do transport institutions seek to improve their capacities internally, and when do they seek capacity building support externally?
- Do transport institutions in LICs prefer some capacity building formats over others?
- Based on the experience of transport institutions in LICs, what are the key factors ensuring successful and durable capacity building?

Addressing these questions may further support the international transport community in meeting the capacity needs and capacity building requirements of transport institutions in LICs in Africa and South Asia. As suggested by the research findings, incorporating the viewpoints and preferences of transport institutions may increase the sense of ownership of the local partner. This in turn significantly affects the success of capacity building efforts, thus serving the overall goal of enabling transport institutions in LICs to manage their affairs successfully.

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