



SECTION 2

Action Areas

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Section 2

Building on the Framework presented in Section 1, this section presents the six Action Areas and their related practices in detail. It provides the practices' context and application, as well as practical recommendations to implement them, supported by examples across sectors and in developed and developing countries.

Note that the scope of this Reference Tool addresses targeting wider inclusivity in the beneficial outcomes of infrastructure. It does not cover guidance on the social and environmental safeguards required to mitigate negative impacts on vulnerable groups, such as Resettlement Action Plans.

Action Area 1: Stakeholder Identification, Engagement and Empowerment



Action Area 2: Governance and Capacity Building



Action Area 3: Policy, Regulation and Standards



Action Area 4: Project Planning, Development and Delivery



Action Area 5: Private Sector Roles and Participation



Action Area 6: Affordability and Optimising Finance





ACTION AREA 1: STAKEHOLDER IDENTIFICATION, ENGAGEMENT AND EMPOWERMENT

Key messages

- For inclusion of all sections of society in access to infrastructure and its benefits, it is crucial to first understand which stakeholders – people, groups or communities – are at risk of being excluded and what are the specific opportunities and barriers to their inclusion.
- Traditional stakeholder mapping and engagement will tend to most readily identify those stakeholders with the most influence on the implementation of an infrastructure project, or those who are most impacted by it. This approach may, however, overlook persons, groups, communities or organisations who are at risk of being under-served or excluded during the development and implementation of the project.
- Stakeholder identification and engagement should commence from a very early stage of planning the project, when there is most scope for successfully influencing options and implementing change to respond to needs. It must also continue throughout the lifecycle of the project, offering opportunity to further strengthen benefits and feedback to future designs. There should be a documented process to collect feedback, to present it to technical teams for consideration, to evaluate proposed changes and to feed this back to stakeholders.
- Weak stakeholder engagement on a large infrastructure project decreases the likelihood of it being endorsed by society as a whole (the so-called 'social licence' to proceed) and increases the social risks, leading to delays and cost overruns.
- Consideration of stakeholders can occur at a number of different levels, from the provision of information to stakeholders to empowerment of stakeholders. Successful stakeholder engagement should seek to empower previously excluded groups, whereas information campaigns, in which feedback is not adequately provided, can lead to stakeholder fatigue and disengagement.
- The relevant stakeholders, and the barriers they face, will be specific to each project. For example, people or groups that may have been previously excluded could include low-income groups, women, children, the elderly, people with disabilities, minority groups, and those without formal land title.

Three key practices have been identified under this Action Area, for which further detail and guidance is given in the sections below:

Data Collection and Stakeholder Identification

Inclusive Stakeholder Engagement

Stakeholder Empowerment

DEFINITIONS AND CONTEXT

Definitions

Stakeholders are generally considered to be a person, group, community or organisation who are impacted by, or can influence, the implementation of an infrastructure project.

In the context of inclusive infrastructure, **stakeholder identification** refers to the identification of persons, groups, communities or organisations who are at risk of being under-served or excluded during the development, implementation and operation of an infrastructure policy, program or project.

Stakeholder engagement is the process of interacting with and involving a person, groups, communities or organisations who may be affected by the policy, program or project, and **inclusive stakeholder engagement** should involve all disadvantaged target groups, including low-income, women and other marginalised groups, that are often at risk of being overlooked in stakeholder consultations. A structured and thorough stakeholder management approach identifies the relevant stakeholders for the specific policy, program or project, and defines processes that establish a positive and transparent relationship with them¹⁰.

Stakeholder empowerment is the process of increasing the ability and confidence of stakeholders to make choices and decisions, and access opportunities relating to their personal development and issues that concern them. This may be through access to information, resources, capabilities or institutional changes¹¹.

Context

Stakeholder engagement is crucial to the successful delivery of any policy, program or project. However, it is particularly important to inclusive infrastructure because, when well-targeted, it can enable the identification of and engagement with persons, groups, communities and organisations at risk of being excluded and, consequently, not able to benefit from the infrastructure asset being created.

Stakeholders who are the most vulnerable and at risk of not being given an opportunity to share their expectations and opinions should be given special attention throughout the stakeholder engagement process. This targeted approach increases policy-makers' and project planners' understanding of who is under-served or vulnerable and why, and their needs. As a result, they are better able to address the issues preventing inclusion; to design for specific stakeholder requirements; and to broaden the scope of intended beneficiaries for the infrastructure service.

Likewise, considering elements of inclusivity in infrastructure development can also result in increased stakeholder engagement and awareness throughout the project lifecycle. It is crucial to begin the process at an early stage, to inform the upstream phases of infrastructure planning and provide insights into potential improvements, rather than leave it until later stages when fewer aspects of the project can be changed. By starting with only a narrow view of project options and limited consideration of stakeholder groups, infrastructure planners can miss the opportunity to explore more innovative solutions that may offer better social value¹². Early stakeholder engagement may also benefit the project in supporting the identification of wider economic benefits, intangible benefits and unanticipated tangible benefits that help to strengthen its business case.

A robust stakeholder engagement and communication plan provides a framework applicable throughout the project lifecycle, starting from the planning stage. This plan can be developed to favour proactive, targeted and direct engagement with groups at risk of being excluded in a manner sensitive to their requirements¹³. Following international best practices by ensuring groups at risk of being excluded or under-served have access to information will create greater transparency of intention(s) and content.

Proactive engagement and the provision of communication platforms, where all stakeholders can access information and freely express their opinions, empowers people. It helps them to understand infrastructure plans and to have a positive influence on the design of the infrastructure and services that affect them.

¹⁰ Further resources can be found at <https://www.apm.org.uk/resources/find-a-resource/stakeholder-engagement/>

¹¹ Voice, Empowerment and Accountability: Topic Guide, (Combaz & Mcloughlin, 2014)

¹² The Green Book, Central Government guide on appraisal and evaluation, (HM Treasury, 2018)

¹³ International best practice includes Free, Prior and Informed Consultation (FPIC)

As illustrated in the *U.S. Bank Stadium Case Study*, an oversight committee (the Stadium Equity Oversight Committee) proactively hosted monthly meetings, which were open to the public, to start a conversation with the community, communicate the values of the project, and listen to issues associated with the development of the project.

Approaching stakeholder engagement with inclusivity in mind may increase the credibility of the project developers and/or owners. If all members of society are considered, acceptance of a project can increase. It can also help to create a shared and binding mission. If everyone is given the opportunity to understand how they can benefit from a development, it can give them a sense of belonging, ownership and responsibility, which contributes to the longer-term sustainability of the project. Stakeholders may also recognise the impact of the project on society and the economy, going beyond individual outcomes.

Where vulnerable stakeholders, or those representing the needs of vulnerable groups, influence the final design, the project will better respond to their needs. If the developer takes measures to proactively address specific needs, there is likely to be greater support and buy-in for a project.

Whether it is at policy or project level, stakeholder engagement can also prompt long-term behavioural changes and influence people's perception. Increased engagement improves awareness and demonstrates greater social responsibility. Such interventions may also reduce social risk on a project and, consequently, related costs¹⁴.

In general, there may be some variation in the optimal level of stakeholder engagement and empowerment in different contexts, such as between developing and higher income countries, particularly in regard to certain types of infrastructure, such as utilities. In developing countries where access to water and electricity is limited, women, who bear much of the burden of water collection, should be involved in key decisions, such as where water points should be located. In higher income countries with universal access to water, which is taken for granted, any stakeholder input into decision-making is more likely to be related to payment mechanisms and how they are managed to ensure that people with lower incomes can maintain access.

ANALYSIS AND GUIDANCE ON PRACTICES

DATA COLLECTION AND STAKEHOLDER IDENTIFICATION

Overview

For improving inclusion in access to infrastructure and its benefits, it is crucial to first understand which stakeholders are at risk of being excluded or under-served. This is supported through the collection of disaggregated data and analytical methods focusing on inclusive criteria to identify stakeholders and their needs. Where available, existing data and methodologies for data analysis can be built upon, amended or adapted to ensure inclusive benefits are maximised. This information can then be used to proactively influence the policy process and project planning activities in favour of vulnerable groups at an early stage.

Robust data collection methods, including quantitative and qualitative surveys, enable specific stakeholder groups to be identified; allow decision-makers to be more targeted in the formulation of a policy or the development and implementation of a project; and enable longer-term monitoring and evaluation of outcomes against a baseline. This information can also feedback into reforms and future project planning.

Relevance

Data collection and assessment methods are relevant at a policy and project level.

At the policy level:

- *Creating a legal requirement for project and program data collection.* Collection and assessment requirements and guidelines for programs and projects can be mandated by law.
- *Informing policy and decision-making and future good practice.* The data collected and assessments undertaken can be used as a basis to develop policy documents (e.g. white papers, consultation papers, cabinet proposals) that aim to inform the legislative body and support the decision-making process.
- Further consideration of the assessment of the needs of vulnerable groups in the development of policies and strategies is given under Action Area 3: Policy, Regulation and Standards.

¹⁴ The 2017 Australian Infrastructure and Community Survey conducted by the Next Generation Engagement Program found that stakeholder and community pressure was the leading cause of project delay.

At the project level:

- *Using data for strategic purposes throughout the project lifecycle.* Data can be used to help determine the project's strategy, mission, objectives, stakeholder engagement approach, communication plans, improved design, and as an overall guidance framework.
- *Monitoring and evaluation of impact.* Data can be used to define the parameters for project monitoring and long-term evaluation of inclusivity impacts.
- *Sharing of data.* Appropriate sharing of data and evaluation findings between projects has the potential to help strengthen future projects and improve beneficial outcomes on inclusiveness.

This practice is applicable to all infrastructure sectors, however there is no 'one-size-fits-all' approach. The resources and level of effort put into data collection will differ according to the specific inclusivity objectives of the project, its scale and its location. For example, in the water sector, low-income groups are often at most risk of lacking access to services. As noted above, the responsibility for collecting water often falls to women. Women with disabilities who are not able to perform this physically demanding role may, therefore, not have access to clean water or safe sanitation. Collecting data on the disaggregated needs of different stakeholders is crucial to evaluate their needs and incorporate them into the project design.

Guidance**1. Create disaggregated data by gender, income, age, location, occupation, expenditure profile, education, disability, etc.**

As an example, disaggregated data will provide the necessary basis for gender analysis and gender responsive planning and management.

Existing data sources should be assessed and used, but the existing databases may not provide the extent of disaggregation required, in which case supplementary data collection will be necessary. Useful existing sources of information may include census data, demographic health survey information, poverty mapping surveys, etc.

2. Use disaggregated data to identify stakeholders and to help decide which groups may require specific attention in the development of the project.

It is important to establish a clear baseline with a good understanding of the demographics of the communities – such as whether there is a high homeless population, elderly population, migrant population, people of low socioeconomic status, etc.

Care should be taken to ensure that potentially under-served or vulnerable groups are part of the stakeholder engagement process and its design. Connecting with local social services and non-government organisations (NGOs) to get their input on issues of inclusion for the location in question can help to define the specific needs in the communities, especially in terms of mental health, gender, disability, language, etc.

One of the challenges with engaging vulnerable or marginalised stakeholders is that they may not be readily identifiable in the first place. They may be excluded groups who are not immediately apparent on the radar of the government or developer. Tools, including stakeholder network analysis and early, community-based interventions (e.g. town hall events, information sessions) may help in identifying stakeholders. The 'weak ties' identified through network analysis can be particularly helpful, if a thorough analysis is completed.

A powerful tool to identify land use in communities in relation to the proposed infrastructure development is geographic information system (GIS) mapping.

3. Identify the responsible government entity and process of collaboration for data collection and assessment.

For example, the bureau of statistics may be responsible for data collection, and then provide data to other government departments to design the project and assess its feasibility. This requires collaboration, interface management and information sharing amongst different government agencies, and a clear mandate to set out the responsibilities of the departments involved.

Other government agencies, in particular health services, should be able to provide additional insights.

4. Use various data collection methods to collect disaggregated data, such as door-to-door surveys and focus group discussions.

For the Cairo Metro project in Egypt and the El Metropolitano Bus Rapid Transit (BRT) project in Peru, interviews were conducted on the street to share the project objectives and identify the needs of the community directly impacted by the project (see *Cairo Metro Case Study* and *El Metropolitano BRT Case Study*). For large data collection requirements, an e-survey method is more productive and cost effective, as demonstrated by the Ningxia Liupanshan Poverty Reduction - Rural Road Project in China, (see *Box 1: Illustrative example – Ningxia Liupanshan Poverty Reduction - Rural Road Project*,

China)¹⁵. Regardless of the method of data collection, the questionnaire should frame questions to reveal pertinent answers in relation to inclusivity. Social media may, in the future, also be increasingly used to help collect data.

5. Integrate inclusivity into conventional data collection methods through the formulation of a specific hypothesis or using query methods.

To formulate a hypothesis, start by asking questions about the topic to be addressed, and then come up with a prediction or possible explanation. Query methods will involve questioning the user directly about the subject to be addressed. This may be during a face-to-face interview, or in writing as a questionnaire. Make sure the surveys represent women, young people, people with disabilities, the elderly, low-income groups etc. and are tailored to the project. Ask open questions to ensure the needs and opinions of people at risk of being neglected are being captured when undertaking a survey.

6. Ensure that ethical guidelines are followed in the collection of data. Participants should have the assurance of being anonymous if participating in the survey poses any potential risk to them.

7. Include information on perceptions of the quality of service in the survey, i.e. infrastructure quality, demand studies, reasons for non-travel, affordability, opportunity cost, and mobile and internet use.

8. Build capacity for data collection and analysis, and employ social inclusion specialists (e.g. social specialists, gender specialists, etc.) to train the people implementing the survey program, to ensure inclusivity is taken into consideration.

9. Use findings from the data analysis to determine the project design in the feasibility and project planning stage.

This will ensure specific inclusivity-related issues are understood, and policy or project objectives are designed to address these issues. Findings can also be used to determine the specific criteria for project evaluation and monitoring.

10. Agree a preferred feedback method and allocate resources (e.g. budget, time) to return to the stakeholders with feedback on how their information was used and what influence it had on the project

Example

Data collection and stakeholder identification approaches are outlined in several of the Case Studies (see *Section 4*). An additional illustration is shown below.

BOX 1: ILLUSTRATIVE EXAMPLE – NINGXIA LIUPANSHAN POVERTY REDUCTION – RURAL ROAD PROJECT, CHINA

An e-survey was conducted to understand the socioeconomic parameters of the project and evaluate its impact on low-income areas.

The Ningxia Liupanshan Project improves 267km of rural trunk roads and 168km of rural feeder roads in the Ningxia Liupanshan Area in China. The capital expenditure (CAPEX) is USD 265.54 million and the project focuses on the seven counties in the area with the lowest income groups.

As part of the stakeholder engagement and integration process, an e-survey was conducted (using mobile technology) to collect and assess data on the socioeconomic parameters of 30 villages. It covered 1,188 households and captured data such as household income, household expenditures, household income type and number of jobholders per house. The project team considered the needs, concerns and interests of stakeholders in low-income areas and used the data collected to evaluate the project and measure its socioeconomic impact. It improved understanding of socioeconomic indicators prior to commencement and provided a baseline against which the benefits of the project could be measured in the long-term. It also increased public acceptance of the project.

continued..

¹⁵ Impact Evaluation of Road Improvement and Rural Poverty – Baseline Survey in the Ningxia Liupanshan Area of the People's Republic of China, Asian Development Bank, (Nishimura, Sieber, & Wang, 2018)

The findings of this type of survey can be used for multiple purposes:

- a) at project inception to establish baseline conditions and to map (identify) specific target stakeholder groups;
- b) during project development to inform the technical design; and
- c) during construction and operation to monitor and evaluate progress against the initial baseline.

Source: Impact Evaluation of Road Improvement and Rural Poverty – Baseline Survey in the Ningxia Liupanshan Area of the People's Republic of China, No. 13 ADB East Asia Working Paper Series 2018

INCLUSIVE STAKEHOLDER ENGAGEMENT

Overview

Inclusive stakeholder engagement is a process that specifically targets and considers the opinions of individuals and groups at risk of being excluded or under-served. This can lead to higher public acceptance of a project and informs the project to maximise social benefits.

To maximise benefits, the relevant stakeholders, engagement objectives, framework and engagement process should be considered as early as possible, and engagement should continue throughout the entire project lifecycle. It is important to use the feedback from public engagement to improve the project design and ensure the result reflects the needs of beneficiaries.

Relevance

At the policy level:

- *Implementing and enforcing policies on inclusion.* Inclusive policies should include stakeholder engagement, which can be implemented and enforced by public authorities, who control and administrate the delivery of social inclusion activities.
- *Focusing on proactive engagement.* This applies to all infrastructure sectors. There should be a special focus on proactive, participatory engagement methods, which empower targeted groups. As an example, the Guide to Community Engagement for Power Projects in Kenya has developed community engagement principles with a strong emphasis on inclusive participation, gender equality and the empowerment of women¹⁶.
- *Mandating inclusivity at the policy level.* A government or contractual mandate is the best way to ensure inclusive engagement processes are applied at project inception. Participation should be free and made public (e.g. online, through public consultations, or through targeted focus group discussions).
- *Strengthening citizen trust in policies and the government.* Citizen and stakeholder engagement can be used to strengthen and legitimise policies which, in turn, increase people's ownership and overall trust in government. This is discussed further under Action Area 3: Policy, Regulation and Standards.

At the project level:

- *Implementing inclusivity plans.* The project approval processes (e.g. cabinet papers, laws, decrees, project proposals and financing agreements) should require the implementing agencies or organisations to develop social inclusion plans and make them an integral part of the project. They may be referred to in a number of ways, such as a 'Social Integration Plan', a 'Community Benefits Plan', or a 'Social Benefits Plan'. The plans create accountability and responsibility throughout procurement, operation, monitoring and evaluation, and decommissioning. For instance, the International Crossing Agreement between the State of Michigan in the United States and the Province of Ontario in Canada mandated the development of a community engagement process across all project stages for the construction and operation of the Gordie Howe Bridge (see Box 2: Illustrative example – Gordie Howe Bridge Project, Windsor-Detroit).
- *Creating and enforcing inclusivity targets.* The procurement stage should include contractually agreed inclusivity targets to be achieved by the private sector organisation (or any other organisation responsible for project delivery), such as workforce utilisation targets.

¹⁶ The Guide to Community Engagement for Power Projects in Kenya, (Power Africa, 2018)

Guidance

1. Ensure stakeholder engagement commences at an early stage of planning and continues throughout the project lifecycle by considering the following:

- Source feedback through public dialogue, surveys or focus groups. There are a variety of engagement methods used to build relationships, gather information, consult with stakeholders and provide information about the project. Regardless of the method used, the process needs to be proactive and culturally appropriate. Sustained activity throughout the project makes the engagement genuine and dynamic.
- Consider practical means to overcome barriers to engagement of under-served or vulnerable stakeholders, e.g. mobile consultations with communities in remote locations, or the provision of bus services, etc. In scheduling engagements, consideration should be given to stakeholders' work and time commitments, and the opportunity costs to women and low-income groups, etc. in attending the consultations.
- Build capacity amongst stakeholders for informed engagement. This is particularly important for vulnerable members of society and those at risk of exclusion, so they have the knowledge and capacity to give informed feedback.
- Ensure all stakeholders (contractors, designers, communities and vulnerable groups) understand the objectives of the stakeholder engagement and the wider project and how it relates to their interests.
- Use the project's website to disclose information and share updates with stakeholders. It is one of the most efficient and direct ways to communicate.
- Recognise, however, that some under-served or vulnerable groups, such as low-income people, the elderly or those in remote locations, may not have access to the website and will need to be kept informed through other methods, such as regular meetings or printed newsletters. Multiple formats should also be used for the sharing of information, including for the hearing and vision impaired. Keep the language simple and support text with the use of appropriate diagrams, infographics and illustrations
- Manage and address grievances to show people that a genuine effort is being made to incorporate the concerns and needs of vulnerable groups into the design and implementation of the project, rather than react to escalations of tension. Consider establishing a formal grievance mechanism for each project.

The Guide to Community Engagement for Power Projects in Kenya¹⁷ integrates inclusivity principles and activities into its guidelines. Beyond the conventional aspects of stakeholder engagement, such as careful planning and preparation, the guide recommends other inclusive principles to be followed, of which the most relevant are Inclusive Participation, and Gender Equality and Female Empowerment:

- *Inclusive Participation:* Some groups may face social, political, cultural and communication barriers that preclude them from participating effectively during the planning and design phases. Consideration must be given to these groups. Specific interventions should be designed based on an informed analysis, and additional resources set aside to facilitate effective participation by these groups.
- *Gender Equality and Female Empowerment:* Gender equality is a fundamental principle that should guide community engagement. It is often assumed that, when the community is invited for consultation, both men and women will participate equally, but this may not always be the case. There needs to be a strategy to ensure women's meaningful engagement within the specific cultural context. For instance, women can speak in women-only groups, prior to their opinion being shared in a larger setting.

An example of a robust engagement process that was defined from the outset is the Gordie Howe Bridge project (see Box 2: *Illustrative example – Gordie Howe Bridge Project, Windsor-Detroit*).

2. Consider the needs of all groups within a community.

Engagement efforts need to respond to the priorities of all, especially under-served or vulnerable groups (such as women, the elderly, young people, religious and cultural minorities, indigenous and other ethnic groups, and people with disabilities). Failing to address these priorities could lead to investments that do not reflect people's true needs¹⁸. Engagement teams should include representation from the local populations where possible and demonstrate gender, cultural and age diversity.

¹⁷ The Guide to Community Engagement for Power Projects in Kenya, (Power Africa, 2018)

¹⁸ A Sourcebook for Poverty Reduction Strategy, (Klugman J. , et al., 2002)

3. Hold a separate focus group meeting for each underserved and vulnerable group.

Some groups (such as women, young people, and people with disabilities) may face social, political, cultural and communication barriers that preclude them from participating effectively. To overcome this, it is recommended that focus group meetings are held with each vulnerable group separately, for example, women-only focus groups where women can speak freely, and that they include a mechanism to share viewpoints on equal terms with other stakeholders.

Focus groups for advocates of vulnerable populations should also be considered, such as service providers working with the homeless, or representatives of local mental health or respite facilities.

4. Facilitate the introduction and interaction of various stakeholder groups.

Governments should consider connecting targeted groups to policy or project implementers and other relevant organisations. For instance, the authority responsible for the construction and operation of the U.S. Bank Stadium project was mandated to engage an employment firm (the authority chose civil society organisations (CSOs)), to specifically help it to hire women, the unemployed and young people (see *U.S. Bank Stadium Case Study*). NGOs can be used to help reach out to relevant groups in society. As part of the process, 'meet and greet' sessions with targeted groups and private sector organisations can be organised.

5. Provide community groups with knowledge, control, and authority to input to decisions and resources throughout all project phases¹⁹.

Communities who have ownership of a project are often motivated to utilise, conserve and promote the asset. Participation motivates people to collaborate and collectively recognise the positive outcomes of their involvement, and participatory approaches, such as co-design, can help facilitate this. As a result, tailored solutions are produced to address the actual needs and expectations of the stakeholders.

6. Use a participatory planning approach²⁰ as a straight forward technique for participatory assessment.

Participatory planning incorporates the local knowledge and opinion of stakeholders in the planning and management of projects. A good practice is to triangulate the findings from participatory transect walks, household surveys, focus group discussions and small group meetings on critical discussion points (e.g. land and resource claims)²¹. In the Bogotá Urban Service Project in Colombia (see *Box 15: Illustrative example - Inclusive urban development in Bogotá, Colombia*), the participatory planning approach empowered community groups and fostered ownership and involvement from affected households. The increased participation in the decision-making process for designing and planning resulted in tailored solutions that addressed the actual needs and expectations of the communities.

7. Form groups (e.g. representatives of a low-income community) to represent stakeholders' interests and formalise their involvement in the project.

For instance, as illustrated in the *Water Sector Trust Fund Case Study* in Kenya, Water Service Boards work with representatives from Community Water Associations composed of farmers (amongst others) to develop water access projects supported by the Kenya Water Sector Trust Fund. Another example is shown in the *U.S. Bank Stadium Case Study*, where it is mandated in its Equity Plan that there must be at least one female representative and a representative from a minority community on the Construction Review Panel composed of 10 people²².

It is important that members selected for such groups are truly representative and trusted by the targeted stakeholder group they represent, rather than perceived as biased towards the developer's interests.

¹⁹ A Sourcebook for Poverty Reduction Strategy, (Klugman J., et al., 2002)

²⁰ Also known as Participatory Rural Appraisal (PRA) or Participatory Learning for Action (PLA).

²¹ The Guide to Community Engagement for Power Projects in Kenya, (Power Africa, 2018)

²² Minnesota Sports Facilities Authority – Equity Plan for Design and Construction of the Stadium, (Minnesota Sports Facilities Authority, 2013)

8. Create a stringent oversight mechanism to facilitate the inclusion of stakeholders at risk of being excluded.

As demonstrated by the *U.S. Bank Stadium Case Study*, strong leadership and governance is required as part of the overall project management. For instance, if a contractor is required to disclose how many women or minority groups have been engaged in a project, there should be transparent and frequent reporting mechanisms to facilitate the monitoring of progress against this target.

This can be achieved by linking work approval and payment to verified accomplishment of the contractually agreed targets.

Example

Inclusive stakeholder engagement approaches are outlined in several of the Case Studies (see *Section 4*). An additional illustration is shown below.

BOX 2: ILLUSTRATIVE EXAMPLE – GORDIE HOWE BRIDGE PROJECT, WINDSOR-DETROIT

Early integration of community or individual needs, in combination with a planned inclusivity framework and process, ensures community needs are addressed at every stage of the project lifecycle.

The Gordie Howe Bridge is a 2.5km long bridge with an estimated CAPEX of USD 1 - 2.2 billion. It connects Detroit in the US and Windsor in Canada. During the pre-construction phase, a community benefits scheme was developed to gauge public opinion and improve inclusivity during procurement and delivery.

The Windsor-Detroit Bridge Authority was created in 2012 to construct and operate the Gordie Howe Bridge. The Authority is required by the bilateral agreement between the US and Canada to submit details of "community benefits plans and community consultations" to prospective bidders. The Authority created a process and framework to identify and implement a community benefits plan to ensure that positive impacts on communities reflected the stakeholders' comments. The identified focus groups are Michigan and Ontario residents, indigenous peoples, business owners and community leaders.

The following process was developed:

1. Inputs on community benefits were received from stakeholders (e.g. through public meetings, focus groups, website, email, mail).
2. The Windsor-Detroit Bridge Authority shared inputs received with prospective bidders.

3. Prospective bidders considered inputs and suggestions as they formulated their community benefits plan as part of their proposal to design, build, finance, operate and maintain the Gordie Howe Bridge. Part of the proposal needed to include the following considerations in the construction and operation of the bridge:
 - a) the manner in which stakeholders and communities would continue to be involved;
 - b) the manner in which host community inputs relating to community benefits and stakeholder involvement were to be factored in;
 - c) the manner in which bidders planned to work with local institutes of higher learning, unions and others; and
 - d) the manner in which job training and local job development would be encouraged.
4. Community plans were part of the Request for Proposal submission and part of the contractual obligation of service delivery.

The Windsor-Detroit Bridge Authority had stringent oversight of the community benefits plan during construction and operation of the bridge.

Source: The Windsor-Detroit Bridge Authority, Detroit River Internal Crossing Agreement

STAKEHOLDER EMPOWERMENT

Overview

As highlighted by the literature review and feedback from the consultative workshops, stakeholder engagement is about more than providing information to stakeholders. Done well, it is a dynamic and ongoing process that can transform stakeholders' experiences and situations. Targeted at low-income and other groups at risk of being excluded, through capacity building and empowerment in decision-making, it can help break cycles of disadvantage and achieve long-term gains for projects and communities.

Empowerment is a process through which individuals or groups increase their power and autonomy to achieve desired outcomes. Empowerment can increase people's autonomy, whilst enabling them to make valued contributions to society²³. This can be applied through the development of stakeholder and communication plans that set out project-specific measures for greater empowerment.

Greater transparency through information disclosure increases stakeholders' understanding of a project, and the provision of appropriate communication platforms can increase the willingness and ability of the public to communicate and share opinions.

Stakeholder empowerment can be considered along a scale of citizen participation: ranging from information, consultation and cooperation, through to delegation²⁵. In some cases, the lower levels of engagement can be tokenistic, and stakeholders can become disinterested if they have no real say in the decision-making process. The higher levels represent greater involvement in decision-making (see *Figure 6* below).

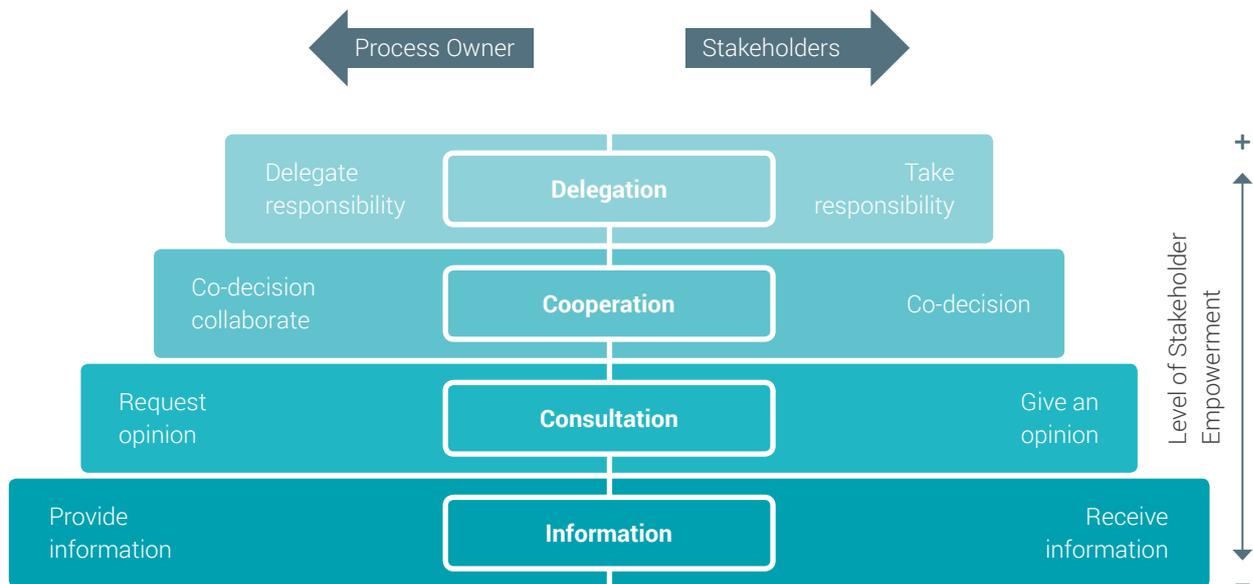


Figure 6. Four levels of stakeholder empowerment²⁴

²³ Voice, Empowerment and Accountability: Topic Guide, (Combaz & Mcloughlin, 2014)

²⁴ Stakeholder empowerment through participatory planning practices: The case of electricity transmission lines in France and Norway, (Späth and Scolobig, 2016).

²⁵ IAP2's Public Participation Spectrum is a widely used model: <https://www.iap2.org.au/Resources/IAP2-Published-Resources> Others include AA1000SES (2015): https://www.accountability.org/wp-content/uploads/2016/10/AA1000SES_2015.pdf and Arnsteins's Ladder of Engagement.

Relevance

Stakeholder empowerment is relevant at the policy, program and project level. The literature covers many examples of stakeholder empowerment for small-scale, community-level infrastructure (particularly in rural areas) in developing countries but contains fewer examples for large-scale infrastructure projects.

At the policy level:

- *Encouraging empowerment through regulation.* Regulation can be formulated to promote and enforce activities that increase empowerment and confidence, so groups in society feel comfortable to “raise their voices” and express their opinions.
- *Removing barriers to stakeholder participation.* Specific and tailored tools remove potential barriers to participation and communication.
- Transparency is covered in more detail in Action Area 2: Governance and Capacity Building.

At the project level:

- *Integrating empowerment at an early stage of project development.* Activities leading to more empowerment and transparency should be defined in the project's overall strategy, objectives and guiding principles.
- *Continuing to integrate empowerment throughout the project lifecycle.* Mechanisms applicable throughout the project lifecycle should be part of the governance and project management philosophy.

Guidance

1. Be proactive and engage with stakeholders at an early stage.

Proactive engagement means a specific effort to reach out to targeted groups in society to better understand their issues through conversation, a survey, public campaigns, etc. Proactive engagement is not a new concept and is one of the known tools of stakeholder engagement. However, it is particularly useful when trying to understand the views and opinions of under-represented groups. It also creates a sense of empowerment and helps people engage more with the wider community and freely express their thoughts.

Project outcomes can then be tailored to better suit their needs, positively impacting that group. It may also:

Maximise acceptance, qualification and implementation of new regulations and policies;

Yield more adequate representation of groups that tend to be under-represented;

Identify barriers in inclusivity earlier, which can be addressed during policy or project design; and

Help to maximise usage of infrastructure and identify further complementary actions required.

The Bogotá Urban Service Project in Colombia illustrates these points (see *Box 15: Illustrative example - Inclusive urban development in Bogotá, Colombia*). During the project preparation stage, the project's teams sought the community's views on the sanitation systems in the corridor along the routes of the proposed TransMilenio Bus Rapid Transit (BRT) system (see *Section 4 for TransMilenio Bus Rapid Transit Case Study*). Low-income areas were specifically targeted through the collection of disaggregated data. The preferences of the affected households in the process of selecting urban upgrading works were considered. This participatory approach fostered community ownership and increased participation in future community projects.

Additional evidence in support of these principles was found during the development of the GI Hub's Public-Private Partnership (PPP) Contract Management Tool²⁶, such as the I-495 Express Lanes case study described in that tool. In that case study, there is a discussion of the use of early feedback from major employers, elected officials and transport advocates, which resulted in the project team changing the scope of the project to include three major entry and exit points, rather than just one, to serve a key employment area. By proactively engaging stakeholders early, the parties were able to work collaboratively to develop a transportation solution that provided a better outcome, helping to reduce traffic congestion in the area²⁷.

²⁶ Available at managingppp.gihub.org.

²⁷ Case study: I-495 Express Lanes, Virginia, USA, (GI Hub, 2018)

The case studies found in Section 4 also provide examples of stakeholder empowerment, such as the *TransMilenio Bus Rapid Transit Case Study*, where the empowerment of people with disabilities was an explicit focus.

2. Identify further complementary actions required that empower disadvantaged groups in accessing beneficial outcomes of infrastructure services.

Low-income and other disadvantaged groups may have challenges in accessing the benefits from infrastructure services that go beyond the design and development of the infrastructure itself. For example, low-income farmers may be constrained from accessing maximum revenue from their crops, not just by the condition of the road or transport services, but also by a lack of information on the current prices that goods are obtaining at market. Complementary actions, such as information provision on market prices which can often be facilitated through mobile phone networks, or targeted training that can support better access to the employment opportunities generated, can help empower previously disadvantaged communities to access the wider benefits of infrastructure.

An example of targeted training is given in the *U.S. Bank Stadium Case Study* in Section 4, and guidance on capacity building for disadvantaged groups is elaborated further under Action Area 2: Governance and Capacity Building.

Other examples include increasing local participation by looking for opportunities to package work appropriately, as well as to structure employment opportunities and support in a way that meets under-served groups – for example, offering child care services to encourage the participation of working mothers. For further information relating to complementary actions to enable access to job opportunities see Action Area 5: Private Sector Roles and Participation.

3. Consider the Voice, Empowerment and Accountability (VEA) approach.

Voice, empowerment and accountability (VEA) interventions aim to support poor and marginalised people to build the resources, assets, and capabilities they need to exercise greater choice and control over their own development, and to hold decision-makers to account²⁸.

Research and evidence on the impact of VEA interventions is limited, however the GSDRC²⁹ knowledge series suggests that VEA interventions have led to short-term changes in policy, regulation and reform, as well as improved transparency, reduced corruption, increased community participation and improved government responsiveness to citizen demands³⁰.

In Australia, good results have been achieved by building understanding of planning and assessment processes, procurement processes, and planning and design processes to enable informed participation.

VOICE, EMPOWERMENT AND ACCOUNTABILITY (VEA)

Voice, empowerment and accountability (VEA) is an umbrella term that covers a wide range of ideas about how citizens can express their preferences, secure their rights, make demands on the state and achieve better development outcomes. VEA draws attention to the role of individual agency, power relations, and processes that can enable or constrain people's capacity to articulate and achieve their individual and collective goals. Though closely connected, the terms voice, empowerment and accountability are conceptually distinct (and also widely contested).

Voice is often understood as the ability of citizens to express their preferences and to be heard by the state, either through formal or informal channels, in written or oral form. Citizens' voices are not homogenous, and sometimes more powerful voices and opinions can crowd out those of excluded or marginal groups.

Empowerment is a process through which individuals or organised groups increase their power and autonomy to achieve certain outcomes they need and desire. Empowerment focuses on supporting disadvantaged people to gain power and exert greater influence over those who control access to key resources.

Continued...

²⁸ Voice, Empowerment and Accountability: Topic Guide, (Combaz & Mcloughlin, 2014)

²⁹ Governance – Social Development – Humanitarian – Conflict – Resource Centre (GSDRC) provides applied knowledge services on demand and online. It is a partnership of research institutes, think-tanks and consultancy organisations funded by UK DFID, Australian Aid and the European Commission. Available at <http://gsdrc.org/aboutus/>

³⁰ Voice, Empowerment and Accountability: Topic Guide, (Combaz & Mcloughlin, 2014)

Accountability is a process for holding individual actors or organisations to account for their actions. Accountability requires transparency, answerability, and enforceability between decision-makers and citizens.

Different communities and experts are split on the effectiveness of VEA in helping people to build the resources, assets and capabilities they need to exercise greater choice and control over their own development, and to hold decision-makers to account.

Source: GSDRC (2014), Voice, Empowerment and Accountability, Topic Guide

4. Create transparency objectives for the policy or project to boost stakeholders' ability to engage and provide feedback.

Data is oftentimes not published because it is confidential. However, disclosing this information can contribute towards community empowerment and allow project implementers to review the success of a project. For example, in Sao Paulo, Brazil, the PPP unit encourages the use of a digital system³¹ that enables members of the community to contribute to projects. Their comments are collected and reviewed in detail every five years (or within an agreed contract period) so that any challenges can be reviewed and changes to the project can be made to maximise benefits.

Websites can also be used at government policy level as a platform to feedback to stakeholders, for example, the Consultation Hub on the Scottish Government's website, with the outcomes of issues consulted on available in the section "We Asked, You Said, We Did"³².

A full discussion of transparency issues is found below under Action Area 2: Governance and Capacity Building.

APPLICATION OF PRACTICES TO TARGETED STAKEHOLDER GROUPS

The general principles of Action Area 1: Stakeholder Identification, Engagement and Empowerment apply to all stakeholder groups. Some points on the application of practices to specific stakeholder groups are highlighted below.

Low-income groups

Low-income groups are most likely to suffer from a lack of access to basic services. This is an important group to target and, while existing poverty mapping may help with the early stages of identification, the approach to stakeholder engagement should be developed with the support of social inclusion specialists, who are knowledgeable on the appropriate avenues of communication for each stakeholder group. For example, traditional written communication methods may present challenges to certain groups if literacy and education levels are lower in the poorest households. Participatory planning approaches can help in incorporating the views from people living in all corners of the community, particularly in low-income areas.

Gender

Data collection on stakeholders should optimise the usage of already available data sets. However, many common data sets will only go down to the household level, while men and women within households may face different challenges in accessing infrastructure services. Both qualitative and quantitative data – such as, for example, different patterns of usage and perceptions of safety when using transport systems – will be needed in helping to address barriers to access, as identified in both the *TransMilenio Bus Rapid Transit (BRT) Case Study* in Colombia and the *El Metropolitano Bus Rapid Transit Case Study* in Peru. Solutions should involve both men and women, and are likely to involve both elements of design and location of infrastructure (lighting, walkways, etc.) implemented from an early planning stage, as well as operational aspects, including the need for specialised staff training, anti-harassment campaigns, etc.

³¹ The Digital Partnership Platform, available at <http://www.parcerias.sp.gov.br/Parcerias/>

³² Scottish Government Consultation Hub, available at <https://consult.gov.scot/>

Approaches to stakeholder engagement with women should be culturally sensitive and designed to avoid backlash within their own communities. Considerations in the design of stakeholder engagement plans include the use of female engagement teams, focus group discussions, and practical solutions around the languages used, literacy levels, the convenient timing of meetings and provision of crèches given childcare and other responsibilities.

People with disabilities

About 15% of the world's population are living with a disability. However, this group is often overlooked or seen as too costly for consideration. User input from consulting and involving people with disabilities can help ensure cost effective and practical solutions from an early stage³³. This is more effective than making retrospective adjustments during the construction or operational stages.

The training of persons with disabilities as interviewers to carry out engagement with other persons with disability was found to be effective in Australia³⁴. This was innovative and overcame a number of barriers while increasing participant empowerment.

The TransMilenio BRT project in Colombia has a dedicated communications program that continues to target people with disabilities (see *TransMilenio BRT Case Study*). In 2017, a simulation centre was established to help passengers with disabilities experience boarding, alighting, transferring and moving through the BRT system in a safe, inclusive and stress-free environment. The program hopes to empower people with disabilities, so they can use the BRT system on their own and familiarise themselves with the support services available.

Other disadvantaged people - such as specific ethnic groups, or those living in remote or isolated areas

Data collection, and stakeholder identification, engagement and empowerment should take into account the diversity of groups within a project's service area and be designed together with representatives from minority groups to ensure that cultural and language differences are appropriately incorporated in the project design.

³³ Disability considerations for Infrastructure Programmes, (Agarwal and Steele, 2016)

³⁴ Choice, control and the NDIS: Service users' perspectives on having choice and control in the new National Disability Insurance Scheme, (Warr et. al., 2017)



ACTION AREA 2: GOVERNANCE AND CAPACITY BUILDING

Key messages

- Leadership and governance systems are at the heart of decision-making that guides how resources are used and assets are developed to target inclusive outcomes. Leadership forms the foundation of how a vision on social inclusion is translated into reality.
- Inclusive institutions with good governance are required to promote and enforce policies that address social inequalities, particularly with regard to under-served and other vulnerable groups.
- Important elements of good governance include transparency and accountability, which create trust between the government and society. Ease of access to information and modern communication tools can help to create an interactive and collaborative environment.
- In governance processes, the attitudes and behaviours of decision-makers and professional staff, whether conscious or unconscious, are important. Training and education of existing government personnel can help strengthen capacity to better understand, integrate and address the needs of vulnerable groups.
- Targeted capacity building may strengthen the relevant information, knowledge, and skills needed by under-served or other vulnerable groups to enable them to access wider benefits from infrastructure, such as access to markets, jobs and services.

Two key practices have been identified under this Action Area for which further detail and guidance is given in the sections below:

Inclusive Governance and Transparency

Capacity Building

DEFINITIONS AND CONTEXT

Definitions

Governance refers to structures, processes and systems that define decision-making and interactions amongst various stakeholders. It is also broadly referred to as the exercise of functions and power through a country's economic, social, and political institutions. In the context of inclusive infrastructure, it is linked to how government institutions are structured and operate in infrastructure development and implementation, and how they interact with the various public and private sector stakeholders.

In combination with **capacity building**, which is a process used to improve or acquire certain skills, knowledge, processes or systems in sufficient quantity to meet its core functions, governance can impact how decisions are made and implemented. In the context of inclusive infrastructure, capacity building refers to (i) strengthening the relevant capabilities in government institutions and (ii) developing the skills of under-served and vulnerable groups to enable them to better access job opportunities and other beneficial outcomes from infrastructure development.

Context

Leadership and governance systems are at the heart of how resources are targeted, and assets are developed. Leadership is closely linked to good governance, which is a prerequisite for effective infrastructure development³⁵. A leader can transform a common vision into a reality. A good example of this is the Mi Teleférico Cable Car project in Bolivia (see *Section 4 for Mi Teleférico Cable Car Case Study*), where strong political support from the nation's president was a driving force in the successful completion of the project. The cable car eased traffic and transportation issues between the two cities of La Paz and El Alto and provided a new transport option for previously excluded groups of passengers.

Infrastructure and its associated services stimulate economic growth, contribute to building the capabilities of under-served and vulnerable groups, and facilitate their connection to political processes, markets and social relations³⁶. This can be achieved through the development of efficient and well-integrated markets for labour, land and housing, effective public finance and responsive governance.

Additionally, governance has a significant impact on how the needs of social groups at risk of exclusion or discrimination can be better defended or positively promoted, and how protective measures can be developed and enforced. This is particularly relevant in situations of abuse of power or the application of entrenched social attitudes, values and discriminatory behaviours by an official, or when there is a lack of effective complaint or redress processes. In these situations, under-served and other vulnerable groups (such as low-income groups, women, indigenous peoples, etc.) are likely to suffer most³⁷.

To leverage the benefits of greater inclusion in infrastructure, governments, civil society organisations, private companies and local communities need to fully understand the issues and assess potential opportunities that can be derived through good governance, particularly in the decision-making and planning processes.

Governance which acknowledges the collective benefits of improved inclusiveness will influence infrastructure developments positively in the long-term. However, for this to be effective, there must be a system of accountability in place to ensure proper implementation and monitoring of inclusivity initiatives within government.

An open government policy is one instrument of accountability to promote transparency. An open government is exposed to public scrutiny, is always accessible to everybody, and is responsive to new ideas and demands. Transparency and accountability can be enhanced by taking an open government approach to data. That means government information is proactively disclosed and available online for everyone to access, reuse and redistribute without restriction³⁸.

³⁵ The Impact of Leadership on the Governance of Infrastructure Development in Nigeria, (Onolememe, 2015)

³⁶ A sourcebook for Poverty Reduction Strategies : Core techniques and cross-cutting issues, (Klugman, et al., 2002)

³⁷ A sourcebook for Poverty Reduction Strategies : Core techniques and cross-cutting issues, (Klugman, et al., 2002)

³⁸ United Nations E-Government Survey 2016: E-Government in Support of Sustainable Development. Chapter 2 Transparency through open government data, (United Nations, 2016)

The benefits of opening government data to the public are not limited to social gains; there are also economic benefits to be derived. Studies show that, globally, open data could generate USD 3 trillion in economic gains per year. Potentially as much as USD 5 trillion could be generated across several sectors including education, transport, consumer products, power, oil and gas, healthcare and consumer finance³⁹.

In governance processes, the attitudes and behaviours of decision-makers and professional staff, whether conscious or unconscious, are important. Training and education of existing government personnel is required to better understand, integrate and address the needs of vulnerable groups.

Capacity building and training is also required to elevate members of disadvantaged groups into positions of power, decision-making and influence. Inclusive governance requires greater transparency and public awareness of the existing governance structures and processes; of whether there is any lack of inclusion in government; of the occurrence of discrimination and inequality; and of the availability of information. Transparency and access to information can lead to greater participation by the community in decision-making.

A structured, rather than ad hoc, approach to capacity building enables more effective participation. It may trigger behavioural change or a paradigm shift if applied on a programmatic basis, with a long-term perspective and linked to practical components.

Improved governance, with an emphasis on capacity building, empowers citizens and fosters accountability and a shared sense of responsibility on the part of the government, provided there is consistent application of the strategy over time and a commitment to cultural change instead of one-off interventions.

ANALYSIS AND GUIDANCE ON PRACTICES

INCLUSIVE GOVERNANCE AND TRANSPARENCY

Overview

Governance pertains to the structures, processes and systems that define decision-making, economic and social interactions within a country. Key aspects of governance include the political will and capacity of governments to manage resources efficiently and to formulate, implement and enforce sound policies and regulations; and the processes by which the government is held accountable and monitored. With respect to infrastructure development, governance processes cover the entire lifecycle of the asset and are core to the project planning and decision-making phase.

Inclusive institutions with good governance are required to promote and enforce policies that address social inequalities, particularly with regard to under-served and other vulnerable groups. It is necessary to have processes, systems and institutions that enable communication with citizens and ensure their views can be acted upon.

Other important elements of good governance include transparency⁴⁰ and accountability, which create trust between the government and society. Ease of access to information and modern communication tools create an interactive and collaborative environment.

Good governance and well-designed institutions can help improve transparency and complaint mechanisms by establishing freedom of information legislation, the right to petition governments, opening lobbying to scrutiny, and setting up commissions of enquiry⁴¹.

For example, participatory budgeting, like that undertaken by the Sevilla Authority in Spain or the Toronto Community Housing Corporation in Canada, provides taxpayers with a say in how public funds are spent on the services that affect them.

³⁹ United Nations E-Government Survey 2016: E-Government in Support of Sustainable Development. Chapter 2 Transparency through open government data, (United Nations, 2016)

⁴⁰ Transparency refers to “unfettered access by the public to timely and reliable information on decisions and performance in the public sector”, (Armstrong, 2005).

⁴¹ All on board: Making inclusive growth happen, (OECD, 2015)

ELEMENTS OF GOOD GOVERNANCE

Accountability

At the macro level, this includes financial accountability; that is, an effective, transparent and publicly accountable system for expenditure control and cash management, and an external audit system. At the micro level, it requires that implementing agencies be held accountable for operational efficiency. Auditing systems should meet international standards and be open to public scrutiny.

Transparency

Private sector investment decisions depend on the public knowing what the government's policies are and having confidence in the government's intentions, as well as on the information provided by the government on economic and market conditions. Transparency in decision-making in infrastructure projects, particularly in budget, regulatory and procurement processes, is also critical for effective resource use and reduced corruption and waste.

The Rule of Law

In infrastructure development and implementation, a fair, predictable and stable legal framework is essential. Businesses and individuals need to be able to assess economic opportunities and act on them without fear of arbitrary interference or expropriation. This requires that the rules be known in advance, that they be enforced and applied consistently and fairly, that conflicts can be resolved by an independent and impartial judicial system, and that procedures for amending and repealing the rules exist and are publicly known.



Participation

Good governance requires that civil society can participate during the formulation of infrastructure development strategies, and that directly affected communities and groups should be able to participate in the design and implementation of infrastructure programs and projects. Even when projects have a secondary impact on localities or population groups, there should be a consultation process that takes their views into account. This aspect of governance is essential in securing commitment and support for projects and enhancing the quality of their implementation.

Source: IFAD (1999), International Fund for Agricultural Development. Good Governance: An Overview.

Relevance

Inclusive infrastructure requires close and meaningful engagement between the government and all stakeholder groups affected by, or benefiting from, a policy or project. This engagement should identify the developments likely to enhance the rights and interests of target groups, as well as those that will have a negative impact. In accordance with applicable legal and regulatory requirements, the focus should be on further strengthening the positive impacts and eliminating, mitigating or compensating any negative impacts.

At the policy level:

- *Improving regulations and legislation.* Embedding inclusivity in governance requires changes to operations and public administration, which affect the administrative rules of a state and may require amendments to relevant regulations and legislation.
- *Establishing a political champion and coordinated approach.* Initiatives may be complex and require a coordinated and aligned approach across all government ministries and other government or quasi-government entities involved, ideally supported by strong political champions.

- *Improving transparency.* Transparency is considered good practice in governance and helps to improve accountability and increase participation. Greater transparency can be achieved by giving the public access to information, helping people understand the decision-making process and by creating avenues for the public to express their opinions and influence government decisions on matters that impact them. Robust processes are required to enforce transparency. New technologies and communication platforms may increase accessibility to information and enable vulnerable groups (e.g. people with hearing or visual disabilities) to participate.

At the project level:

- *Integrating policy and regulatory requirements into project implementation.* Project governance refers to the processes and systems that allow a project to achieve its intended objectives and to implement these objectives in the best interests of all stakeholders⁴². To integrate inclusivity in project governance, project policies should be aligned with existing policies at the corporate or national level. For example, if there is a corporate policy on affirmative action in recruitment or a national policy on including minority-owned businesses in procurement, these should cascade down and be implemented at the project level. Project-related governance structures need to align with regulatory requirements, but should also be defined at project level. Policy and regulatory aspects are further outlined under Action Area 3: Policy, Regulations and Standards.
- *Aligning stakeholder views with project strategy and objectives.* Views and opinions of communities at risk of being excluded or under-represented, whether consciously or unconsciously, should be integrated into the project's strategy and objectives. Please refer to Action Area 4: Project Planning, Development and Delivery for further detail.
- *Improving transparency.* Regular and public reporting, transparency in decision-making processes, and redress mechanisms should be applied.

⁴² Governance rules! The principles of effective project governance, (Kelly, 2010)

Guidance

1. **Create a governance structure that moves away from the siloed approach of different ministries solely responsible for their sector, to an approach that encourages inter-agency cooperation and collaboration in the implementation of policy and projects⁴³.**

For instance, in the development of a housing project, there may be several ministries involved but an overarching body would facilitate their interactions. In the case of the *U.S. Bank Stadium Case Study* and the *TransMilenio BRT Case Study* in Colombia, task forces were created to encourage inter-agency cooperation.

2. **Use well-designed institutions to help improve transparency and contestability, notably by enacting freedom of information legislation and the right to petition governments⁴⁴.**

A major resource on transparency in PPP infrastructure projects is the World Bank's 2015 *Framework for Disclosure in Public-Private Partnership Projects*, which provides detailed technical guidance for systematic, proactive pre- and post-procurement disclosure of information in public-private partnership projects.

Some additional methods to increase transparency⁴⁵ include:

- developing and adopting specific measures to prevent, identify and tackle corrupt activities. This can be applied at the institutional and project level, and can be enshrined in law and regulations. For example, in Qatar, there is a requirement for an Anti-Corruption Declaration Form to be signed by all contractors working on government projects⁴⁶;
- making the formal guidelines on the decision-making process publicly available, together with any other information that would help concerned stakeholders lodge an enquiry and make key decisions open to public scrutiny and challenge. A good example is the *U.S. Bank Stadium Case Study*, where the governance structure and procurement and employment processes, which incorporated inclusivity targets, were released to the public, who were also welcomed at many of the meetings;

⁴³ Leaving no one behind: A critical path for the first 1,000 days of the Sustainable Development Goals, (Stuart, et al., 2016)

⁴⁴ All on board: Making inclusive growth happen, (OECD, 2015)

⁴⁵ Transparency and the Performance of Outsourced Government Services, (Mulgan, 2015)

⁴⁶ Atkins internal expert: this is practised in Qatar.

- providing online information on government contracts above a certain investment threshold, so the public is aware of the terms and conditions under which the infrastructure has been procured; and
- developing criteria to identify which sections of the contract are confidential for commercial or intellectual property reasons and establishing arrangements allowing for an independent audit of government agency compliance, with the following considerations in mind:
 - maximising access for government auditors during the design and implementation of contracts;
 - mandating that all contractors on major government projects adopt an open-book accounting principle;
 - providing administrative monitors with access to the contractors or operators; and
 - facilitating access to information held by government agencies or private sector partners, which is relevant to the provision of a publicly-funded service.

An example of how transparency can be achieved can be found in *Box 4: Illustrative example – Transparency in Practice: The United Kingdom experience*.

3. Hold public officials and senior managers accountable throughout the term of their service, not only during elections.

To do so, citizens must have access to information, and be able to interact with authorities. A transparent and inclusive approach should allow budgetary choices to be made available to citizens and other stakeholders (see *Box 4: Illustrative example – Transparency in Practice: The United Kingdom experience*)⁴⁷. In many countries, there are multiple mechanisms that facilitate fair and equitable access to information and provide opportunities for people to engage in the policy-making process. The following mechanisms address barriers to inclusion:

- freedom of information laws;
- policy enquiry commissions;
- high-level social partnerships between government, the private sector and community organisations; and
- referenda and two-way citizen engagement mechanisms driven by information and communication technologies⁴⁸.

It is important to note that the mechanisms adopted should be relevant, accessible and provide appropriate assistance to disadvantaged groups.

4. Outline the structures, roles, and responsibilities of the different government entities involved in a project and map them against the different levels of governance, management structures and management roles across the project lifecycle.

This process will allow the following steps to be taken:

- assess the operational constraints in the enabling environment of an inclusive infrastructure development;
- conduct an institutional and governance assessment, and develop an institutional map to inform project planning and implementation;
- identify and assess the main institutional and governance issues in the planning, programming, structuring and marketing of infrastructure investment programs and projects, and make recommendations for enhancing the government's capacity; and
- ensure adequate data collection, specifically in regard to groups in society who are at risk of being neglected or negatively impacted by the infrastructure development⁴⁹.

5. Decentralise powers and functions in government and encourage excluded groups to participate in governance.

Decentralisation can help to ensure public resources are properly allocated and the services that are delivered meet the needs of people living in the decentralised regions and remote locations. As part of this devolution of powers, efforts must be made to help traditionally excluded or marginalised groups take part in the governance process. One example of this is the constitutional acceptance of Panchayat in India (see *Box 3: Illustrative example - inclusive governance in India*).

⁴⁷ All on board: Making inclusive growth happen, (OECD, 2015)

⁴⁸ All on board: Making inclusive growth happen, (OECD, 2015)

⁴⁹ Taken and adapted from the ADB Tool Kit for Inclusive Urban Development. While the literature is specific to urban development, institutional mapping can find broader application at national or sub-national government level, (Asian Development Bank, 2017)

6. Sustain effective governance throughout the project lifecycle.

Ensure funding strategies and inclusive policies are implemented to safeguard the political prioritisation and inclusion of marginalised groups. There must be explicit recognition of the relationship between economic, social and environmental challenges, and an institutional structure that ensures policy is created and implemented collaboratively, not in silos⁵⁰.

7. Establish a monitoring process to track outcomes.

An example of a potentially useful tool is the Asian Development Bank (ADB) Citizen Report Card, which assesses the quality of governance and the satisfaction of citizens regarding the delivery of public services⁵¹. The design of the data collection process should ensure that data can be disaggregated to determine whether previously under-served or other vulnerable groups are benefitting from the services. The process should also consider the language and literacy barriers of certain groups, and how mechanisms for data collection (such as field interviews) help to ensure their views are taken into account. Action Area 1: Stakeholder Identification, Engagement and Empowerment offers more details on disaggregation of data.

BOX 3: ILLUSTRATIVE EXAMPLE - INCLUSIVE GOVERNANCE IN INDIA

Summary

In 1992, the 73rd and 74th amendments to the Constitution of India were passed, giving constitutional status to Panchayats (a decentralised form of government that allows each village to self-govern) and urban local bodies. It was the most significant country-wide initiative to promote inclusivity in governance and the devolution of powers. Of particular interest, with respect to inclusivity, is reserved seats for scheduled castes, scheduled tribes (scheduled castes and scheduled tribes are officially designated groups of historically disadvantaged groups in India) and women (who should have at least one-third of the seats) in the Panchayats. This allowed citizens to become more involved in the decision-making process on issues that directly affect them. There is now direct interaction between the government and its constituents, and communication is no longer limited to discussions with elected representatives or at occasional town hall meetings.

Panchayati Raj institutions

Prior to these amendments, only elected representatives to State legislatures and Parliament had a formal voice in the decision-making process. With the constitutional recognition of Panchayats through the 73rd amendment, inclusiveness at the grass-roots level was made possible. It devolved power to villages and various sub-districts, allowing each village to participate in local governance through an elected Panchayat. The Ministry of Panchayati Raj (system of Panchayat) reports that there are close to 2.8 million elected representatives composed of 30% women, 19% scheduled castes, and 12% scheduled tribes. In some areas, women have won as many as 58% of the seats.

In some states, the implementation of the Panchayati Raj has been successful in facilitating public welfare initiatives, such as the creation of water reservoirs, the establishment of small-scale industries, computerisation programs, and other initiatives.

continued..

⁵⁰ Leave no-one behind: infrastructure and inclusion - K4D – Knowledge, evidence and learning for development, (Raje, 2016)

⁵¹ ADB Tool Kit for Inclusive Urban Development, (Asian Development Bank, 2017)

Social audit

In 2005, social audits of Panchayati Raj Institutions were made mandatory through the National Rural Employment Guarantee Act, which enabled citizens to directly question elected representatives on a regular basis. In certain states, including Andhra Pradesh, social audits have resulted in administrative or criminal charges being filed against 7,000 officials for fraud.

Outcomes

The constitutional recognition of Panchayati Raj Institutions enabled the wider participation of disadvantaged groups (particularly women, scheduled castes and scheduled tribes) in governance by allowing for consultation and involvement in the decision-making process at the grass-roots level. The social audits have improved the transparency and accountability of these institutions for the citizens.

Source: Transparency for Inclusive Governance: An assessment of India. (Sharma, 2012)

8. Implement an open government policy.

There are many ways to interpret the phrase 'open government', but it can be broadly defined as fostering collaboration and co-creation between government and civil society. This may be through a dedicated project website, for example, and should promote the following principles:

- *Participation*: participation can be encouraged by informing, consulting, involving and empowering citizens and social organisations. Refer to Action Area 1: Stakeholder Identification, Engagement and Empowerment for more detail on participation.
- *Accountability*: governments must actively account for their actions and take public responsibility for their decisions.
- *Open data*: data that relates to the use of government funds and that does not contain sensitive commercial information or intellectual property must be made available in accordance with international standards for publishing data on the internet. It should be open, complete, primary, timely, accessible, machine processable, non-discriminatory, non-proprietary and licence-free.

The data can also be disclosed on public procurement platforms for infrastructure projects (see the above-noted World Bank *Framework for Disclosure in Public-Private Partnership Projects* and the additional discussion below on open data).

- *Sharing public information*: public information must be circulated to reach a wider audience.
- *Access and simplicity*: whenever possible, simple and easy-to-understand language should be used in documents.
- *Collaboration and co-creation*: practices and policies should be designed to encourage collaboration and co-creation at all stages of the process, particularly during the project development stage for infrastructure projects⁵².

An open government data policy can be implemented using the following measures:

- create or appoint an oversight authority that will be responsible for publishing data;
- provide guidance or other binding regulations to help with the implementation of the open government data policy;
- incorporate public perspectives into policy implementation;
- set appropriately ambitious timelines for the implementation of the open government data policy;
- create processes to ensure the quality of the data to be published;
- ensure sufficient funding is available to implement the open government data policy;
- explore potential partnerships. For example, for infrastructure projects that involve the private sector, information may be published online by private sector partners, but it must support the government's transparency policy; and
- mandate future reviews or potential revisions of the open government data policy⁵³.

⁵² What is the concept of Open Government? (Bellix, Guimaraes, & Machado, 2016)

⁵³ What is the concept of Open Government? (Bellix, Guimaraes, & Machado, 2016)

It is important to make government data available to the public, but this alone is not enough for the policy to be deemed inclusive. For that to occur, the needs of disadvantaged groups must be specifically addressed to ensure they are also able to access data through capacity building programs, the provision of tool kits and data literacy campaigns⁵⁴.

9. Measure the success of implementation by assessing the following aspects:

- government commitment;
- policy or legal frameworks;
- institutional structures;
- responsibilities and capabilities within government;
- government data management policies and procedures;
- demand for open data;
- civic engagement and capabilities for open data;
- level of government funding provided for an open data program; and
- national technology and skills infrastructure⁵⁵.

**BOX 4: ILLUSTRATIVE EXAMPLE –
TRANSPARENCY IN PRACTICE: THE UNITED
KINGDOM EXPERIENCE**

The government implemented legislation mandating an open data policy, increasing transparency and positively influencing the behaviour of public officials.

The UK has had a Freedom of Information Act for almost two decades but, in 2010, the government took its commitment to transparency a step further. For the first time, government and local authority contracts and tenders, individual items of spending by central government departments and local authorities, and local service and performance data, were all published online. The government's provision of open data is a leading example of a comprehensive approach to operational transparency.

The UK is one of the founding members of the Open Government Partnership, a multilateral initiative to secure concrete commitments from governments to promote transparency, empower citizens, fight corruption and harness new technologies to strengthen governance. The initiative was formally launched in 2011 and now has over 70 participating countries.

Support for open data increased in 2007 when the government commissioned its Power of Information Report to explore how it could improve the publication and sharing of available data. This was followed by the creation of a Power of Information Taskforce, which recommended that the government create an online repository where public information could be stored and maintained.

In 2010, the government launched *data.gov.uk*, with three main objectives – to increase transparency, improve public services, and drive economic and social growth.

The cross-government commitments covered the following:

- central and local government spending transparency, including tenders, itemised spending and contracts; and

continued..

⁵⁴ What is the concept of Open Government? (Bellix, Guimaraes, & Machado, 2016)

⁵⁵ What is the concept of Open Government? (Bellix, Guimaraes, & Machado, 2016)

- specific to infrastructure projects falling under the UK Private Finance Initiative (PFI) program, updated data and project trackers published on data.gov.uk periodically, as well as on the government's main website, gov.uk. The government also publishes the equity internal rate of return (IRR) for each project on both websites.

While the government has not been able to track and quantify the benefits of transparency because there are no monitoring measures, there is anecdotal evidence that the publication of data is having a positive effect on the behaviour and culture of public officials, making them more conscientious in their use of resources.

Sources:

Stott, A. (2012). Queensland Office of the Information Commissioner and the Australia and New Zealand School of Government. Transparency in Practice: The United Kingdom Experience, Occasional Paper No. 4. Retrieved from https://www.oic.qld.gov.au/_data/assets/pdf_file/0017/7640/100_4-Stott-Transparency-in-Practice_15.pdf

<https://data.gov.uk/>

www.opengovpartnership.org

www.gov.uk

CAPACITY BUILDING

Overview

Capacity building in this Action Area refers to the capacity of two groups:

1. the government institutions and private enterprises that are involved in infrastructure development and implementation. The aim is to enhance their ability to integrate inclusivity elements in the project lifecycle; and
2. the members of under-served and vulnerable groups. The focus is on improving their knowledge and skills to allow them to effectively participate in infrastructure projects, either in the decision-making process, in the supply chain or in the labour market.

For the first group, skills related to infrastructure development and implementation could include training topics on project management, social and gender safeguards, financial analysis, business case development and contract management.

A primary challenge is in ensuring the sustainability of capacity building initiatives within the government, which is responsible for engaging public-sector experts and industry leaders to provide training to its staff and to affected communities. It is important to ensure that capacity building takes place in a structured and sustainable manner, so that knowledge is retained at the institutional level, rather than just at the individual level, retaining capacity in spite of the turnover of government officials.

For the second group, capacity building relates more to the provision of additional information on infrastructure projects, to the impact it will have on these groups and their avenues for participation, and to improving the employability of these groups.

Capacity building, when implemented strategically and sustained over time, is a powerful tool to enhance the effectiveness of the government to understand the needs and concerns of vulnerable and other under-served groups, including providing them with mechanisms that empower them to raise their concerns.

Capacity building can also help empower vulnerable groups by providing them with relevant knowledge, skills and information to better access wider benefits from infrastructure, such as access to markets, jobs and services. This strengthens trust and creates a commitment between the government and its stakeholders. The end result is a community that participates in decision-making processes and opportunities, and a government that is sensitive to, and able to, address their needs.

Relevance

Capacity building activities should be available to all stakeholders to achieve maximum outreach, increase inclusivity awareness and address skill gaps.

At the policy level:

- *Enforcing capacity building through policy.* Capacity building requirements related to inclusivity can be integrated into existing or new policies.

- *Increasing employment opportunities through government-mandated capacity building.* Training for vulnerable groups lacking the skills required to access employment opportunities can be required by the government for the construction and maintenance of public infrastructure.
- *Changing preconceived notions through education.* In developing a capacity building policy, there should be a focus on changing attitudes or biases, whether conscious or unconscious, and ensuring staff members understand and respond to the needs of disadvantaged communities.
- *Fostering diversity at the organisational level.* Taking this a step further, there should be attempts to recruit qualified candidates from minorities or other disadvantaged groups to foster diversity and inclusion within the structure, values and culture of an organisation.

At the project level:

- *Providing inclusivity training.* All stakeholders involved in a project (throughout project development, stakeholder engagement and implementation) should be offered training to help them understand what inclusivity is and how best practices can be implemented.
- *Integrating the needs of vulnerable groups into a project through recruitment.* An effort should also be made to recruit candidates from disadvantaged communities into project teams, so their needs can be addressed in project plans and programs. For example, training offered to young people, either by industry or government, is often insufficient, of poor quality and poorly coordinated, which often means they find it hard to obtain employment.

A good example of building capacity and job skills is given in the Cairo Metro Case Study in Egypt, where construction work suppliers were contractually required to provide proper knowledge sharing to the workers. The knowledge sharing program, supplemented by necessary training, facilitates the transfer of knowledge and the upskilling of workers.

Guidance

1. **Use public campaigns to raise awareness of the benefits of inclusion at the institutional, government, and project level, and the benefits of involving stakeholders and civil society organisations⁵⁶.**

Positive action can be applied during the recruitment process to increase the participation of underrepresented groups in the labour market. While the benefits extend beyond the target minority groups to include all employees, it should be noted that positive action is not a universal remedy and must be tailored to the specific needs and circumstances of each case⁵⁷.

2. **Take a strategic, long-term perspective with detailed planning for effective capacity building programs.**

Identify target groups (government officials, private sector employees or members of under-served and vulnerable groups) and help them build the skills they need (e.g. planning, construction, administration) sufficiently in advance to deliver against project objectives over an extended period. This requires the accurate identification of the target stakeholders; their level of awareness and competencies; and the skills that need to be developed, taking into account the advance time required for skill development⁵⁸. Also, strong political figures to champion social inclusion objectives should be identified.

3. **Target a wide range of stakeholder groups, including government, private companies, communities (individuals, disadvantaged groups, or community organisations, such as cooperatives, women's groups, farmers' groups etc.), non-governmental organisations and local governments.**

Some of the issues faced by these groups include governance issues, lack of resources, insufficient and/or inefficient management capacity, and lack of technical skills⁵⁹.

4. **Create incentives by providing operating grants.**

Provide small grants to train and upskill core staff members at key agencies, especially when capacity building activities include members of disadvantaged

⁵⁶ Youth Scoping Study: Boosting Youth Employment through Infrastructure Programming, (Haegeman, 2017)

⁵⁷ The Benefits of Positive Action: Thematic Discussion Paper, (Strasser, Gächter, & Dzhengozova, 2008)

⁵⁸ Strategic Community Investment: A Good Practice Handbook for Companies Doing Business in Emerging Markets, Chapter 5: Investment in Capacity Building, (International Finance Corporation, 2010)

⁵⁹ Strategic Community Investment: A Good Practice Handbook for Companies Doing Business in Emerging Markets, Chapter 5: Investment in Capacity Building, (International Finance Corporation, 2010)

groups. An example of such a scale-up and incentivisation program is South Africa's Black Economic Empowerment Policy, where employment and education incentives are offered to South Africans who have previously suffered from discrimination.

5. Provide direct assistance to organisations.

Transfer experts (on a temporary basis) into organisations to provide expertise or direct technical assistance⁶⁰ in areas such as, for example, financial modelling, engineering solutions, business case, gender equality, and accessible design.

6. Make sure behaviour aspects are considered as part of the capacity building exercise.

Capacity building should focus on improving attitudes and eliminating or mitigating biases, as well as boosting functional and technical capacity or skills. It should provide equal focus on the following capacities:

- *Functional capacities:* the leadership and management capacities to formulate, implement and review strategies, programs and projects relevant to various sectors;
- *Technical capacities:* capacities associated with specific sectors or areas of expertise; and
- *Behavioural capacities:* cultural shifts and changes in attitude⁶¹.

A relevant example is the training provided for employees in the *TransMilenio BRT Case Study* in Colombia. Staff members in customer-facing roles were asked to consider the feelings of passengers with disabilities and were offered guidance on the appropriate language and behaviours that should be used to create an inclusive environment. This capacity-building activity helped to address some of the challenges faced by people using the public transport system.

7. Apply the following measures to build key functional capacities, focusing on members of disadvantaged groups:

- *Engage communities:* this involves building the capacity to involve multiple stakeholders in activities by building trust, listening, helping to give voice to the silent majority, and working towards putting community members "in the driver's seat";

- *Assess a situation and define a vision and mandate:* skills in analysis, defining a vision, assets and opportunity assessment, goal setting and project design should be improved or built upon as part of this capacity area. Mandates and vision statements should concisely explain the project's goals and help stakeholders to focus on its value and implementation;
- *Formulate policies and strategies:* skills in this area include strategic thinking, strategy mapping and development, social network mapping, prioritisation, operational planning, feasibility analysis and risk analysis;
- *Budget, manage and implement:* skills in this area include forecasting, participating, budgeting, cost analysis, funds allocation, reporting, financial oversight and bookkeeping; and
- *Monitor and evaluate:* skills in this area include setting measurable goals and objectives, defining outcomes, developing indicators, formulating and asking appropriate questions, gathering and analysing data, using tools for conducting participatory evaluations, and creating a positive learning environment⁶².

8. Support a capacity building strategy through the following interventions:

- *Networking:* connecting communities, organisations and individuals through formal and informal affiliations to expand service delivery, improve information sharing, set performance standards, and/or empower groups.
- *New entity creation:* this can involve the creation of new groups, co-operatives, civil society organisations, borrower groups, etc. that can advocate for the needs of under-served and vulnerable groups.
- *Training:* designing and delivering curriculum to support the transfer of critical skills.
- *Partnering:* brokering new relationships and joint ventures between key actors to meet capacity building objectives⁶³.
- *Leadership development:* serving as a role model or counsellor to emerging community leaders to encourage participation of under-served and vulnerable groups in self-governance.
- *Organisational development:* providing support to local organisations to enhance performance.

⁶⁰ Strategic Community Investment: A Good Practice Handbook for Companies Doing Business in Emerging Markets, Chapter 5: Investment in Capacity Building, (International Finance Corporation, 2010)

⁶¹ Strategic Community Investment: A Good Practice Handbook for Companies Doing Business in Emerging Markets, Chapter 5: Investment in Capacity Building, (International Finance Corporation, 2010)

⁶² Strategic Community Investment: A Good Practice Handbook for Companies Doing Business in Emerging Markets, Chapter 5: Investment in Capacity Building, (International Finance Corporation, 2010)

⁶³ Strategic Community Investment: A Good Practice Handbook for Companies Doing Business in Emerging Markets, Chapter 5: Investment in Capacity Building, (International Finance Corporation, 2010)

- *Exchanges and visits*: sponsoring exchanges to promote learning and the sharing of ideas.
- *Coaching and mentoring*: sharing time and expertise to inspire and empower target groups and promote active involvement in infrastructure development and implementation. An example of this type of intervention is the capacity building program for rural women in renewable energy (see *Box 5: Illustrative example – International Solar Training Program, Barefoot College, Worldwide*).
- *Social marketing*: applying principles of commercial marketing to raise awareness and influence behavioural change.
- *Development of local service providers*: strengthening the quantity and quality of local service providers to stimulate the local economy and labour market.



Figure 7. Interventions for capacity building

Examples

The importance of governance and capacity building interventions is highlighted in a number of the Case Studies (see *Section 4*).

In addition, two examples of how capacity building can help to address gender equity issues are shown below in *Box 5: Illustrative example – International Solar Training Program, Barefoot College, Worldwide* and in *Box 6: Illustrative example – Access to technology leading to women's empowerment, Kenya*.

BOX 5: ILLUSTRATIVE EXAMPLE – INTERNATIONAL SOLAR TRAINING PROGRAM, BAREFOOT COLLEGE, WORLDWIDE

A global training program educating and empowering disadvantaged women to become solar energy engineers.

The International Solar Training Program began in 2008. It is supported by the Indian Technical and Economic Cooperation (ITEC) – a division of the Ministry of External Affairs in India. The six-month program, which is conducted twice a year, is a collaborative effort of Barefoot College, ITEC and the respective governments and NGOs (ground partners) of the participating countries.

Barefoot College builds capacity at the village level by training rural, illiterate and semi-literate women from Asia, Africa, America and the Pacific Islands to build, install, maintain and repair solar energy systems in off-grid villages. Additional support is also given in wider legal, financial, IT, health and microenterprise training. During the six-month training program at the Barefoot College campus in India, the women build solar energy systems (such as LED lamps, charge controllers, home lighting systems and solar lanterns). The equipment is then shipped to their villages where it is used in their houses and communities. They are also taught how to set up a rural electronic workshop in their villages to store components and equipment needed for repair and maintenance of the solar units. Through its program, Barefoot College has trained women from 77 countries as solar engineers (as of 2018).

Sources:

International Solar Training Program (Barefoot College, 2018)

Infrastructure: A game changer for women's economic empowerment (Biswas and Mohun, 2016)

BOX 6: ILLUSTRATIVE EXAMPLE – ACCESS TO TECHNOLOGY LEADING TO WOMEN’S EMPOWERMENT, KENYA

M-Pesa, which was developed in 2007, is an electronic money transfer product that enables users to store value on their mobile phones. It is an example of a project that creates business opportunities, increases income possibilities and empowers people.

There are two types of users of the M-Pesa product: urban senders, who are mostly men, and rural recipients, who are mostly women:

1. Urban users: urban users adopted M-Pesa because it was cheaper, easier to access, and safer than other money transfer options;
2. Rural users: through using M-Pesa, women have been able to receive and manage the household budget independently, without having to seek permission from their husbands. M-Pesa has reportedly increased the financial autonomy of household members with lower bargaining power.

While the project does not intentionally target women as an under-served group, they benefit from training exercises that familiarise users with the use of phones and electronic money transfer services. This has improved social and financial inclusion.

The product helps people acquire new skills, find ways to express and fulfil specific needs, and gives them the chance to pursue entrepreneurial activities.

Source: M-Pesa - a success story of digital financial inclusion (Ndung'u, 2017)



ACTION AREA 3: POLICY, REGULATION AND STANDARDS

Key messages

- Anti-discrimination legislation exists at international and national levels to promote an inclusive approach to the planning and implementation of infrastructure.
- UN Human Rights legislation and the UN SDGs also promote universal access to basic services. Achieving universal access, by definition, requires an inclusive approach.
- Legislation, by itself, does not deliver inclusive infrastructure outcomes – it must be implemented through supporting activities and consistently enforced.
- Sector policies that explicitly incorporate the inclusion of disadvantaged groups help to provide a framework and accountability for implementation at the project level.
- Standards are a powerful instrument when they are implemented in national legislation with specific design codes, guidelines and enforcement mechanisms.
- Implementation of Universal Design standards provides a strong mandate and creates uniformity in an organisation's approach to inclusivity, particularly for people with disabilities.

Two key practices have been identified under this Action Area for which further detail and guidance is given in the sections below:

Inclusive Policy Development and Implementation

Inclusive Standards and Universal Design

DEFINITIONS AND CONTEXT

Definitions

Policy refers to a set of principles, guidance or documents adopted by a government.

Regulations pertain to rules or directives of a government, which may be contained in law or some other form of administrative issuance that has been approved by the relevant authorised government body.

Standards refer to defined or established (national or international) norms or reference models against which an evaluation or a design can be undertaken, and best practice benchmarked⁶⁴. Standards are usually written in a formal document, which establishes uniform criteria, methods, processes and practices, including of an engineering or technical nature⁶⁵.

In the context of inclusive infrastructure, the relevant policies, regulations and standards are those which integrate and promote inclusivity in planning, developing, designing and implementing infrastructure projects.

Context

At the international level, goals and targets promoting greater inclusion have been widely adopted, such as the UN Sustainable Development Goals (SDGs), which, amongst other matters, set out targets in relation to universal and equitable access to drinking water (SDG 6); affordable energy (SDG 7); and safe, affordable, accessible and sustainable transport systems (SDG 11), as well as gender equality and the empowerment of women (SDG 5). In addition, there are several other documents that promote greater inclusion of women, children, the elderly and other under-served and vulnerable groups (see *Box 7: International documents promoting inclusivity principles*).

While the importance of national-level inclusive policies, regulations and standards is widely accepted, implementation may be limited, especially in

developing countries⁶⁶. In developed countries, regulations that relate to inclusivity and anti-discrimination, as well as social welfare laws, are likely to be more established. For example, in the *U.S. Bank Stadium Case Study*, participation of women and minority-owned businesses in the improvement of the stadium was specifically included in state legislation.

The integration of inclusivity at the policy level can guide the overall direction of government infrastructure programs, regulations and standards. Their overall effectiveness will depend on rule of law and the government's will and capacity to enforce non-compliance. Policy interventions are more effective when operationalised through supporting activities. The adoption of regulations or standards that are specific and enforceable, such as having Universal Design principles, is an effective way to increase inclusivity in infrastructure.

Universal Design is a set of principles for the design of infrastructure assets, buildings, environments, etc. to make them accessible to all people, regardless of age, disability or other factors. This ensures infrastructure can be used by as many people as possible, regardless of their age or ability. For instance, the lack of access to, and ability to use, transport infrastructure can have a significant impact, as transport "can either facilitate social inclusion or exacerbate social exclusion"⁶⁷.

While the concept of Universal Design emerged primarily with people with disabilities in mind, the concept behind Universal Design should be to help everyone, including the elderly, pregnant women, children and people with a temporary illness or injury. Thus, implementing Universal Design should result in benefits such as increased accessibility, freedom to move, and access to employment opportunities and social activities⁶⁸. Although internationally recognised benchmarks or standards for certain activities related to infrastructure exist, such as the ISO standards on accessibility requirements, the application of these standards requires specialist skills to understand, implement and enforce. Establishing standards and using regulations to ensure compliance is a very powerful tool for the development of inclusivity in infrastructure.

⁶⁴ Adapted definition from Oxford Dictionary: Policy: "a course or principle of action adopted or proposed by an organisation or individual", Regulation: "a rule or directive made and maintained by an authority", and Standard: "Something used as a measure, norm, or model in comparative evaluations".

⁶⁵ For example, the International Organization for Standardization published 'ISO 21542 - Building construction - Accessibility and usability of the built environment', (International Organization for Standardization, 2011)

⁶⁶ Our study shows that complementary concepts such as sustainability, environmental and social assessments are much more mature and integrated in the policy dialogue. Furthermore, out of all the parameters and dimensions of "inclusiveness", gender-related approaches are the most prominent in the literature.

⁶⁷ Best Practice & Case Studies, Community Transport Organisation, (Tramby, 2013)

⁶⁸ Accessibility Design Guide: Universal design principles for Australia's aid program, AusAID, (Australian Government, 2014)

BOX 7: INTERNATIONAL DOCUMENTS PROMOTING INCLUSIVITY PRINCIPLES

International Covenant on Economic, Social and Cultural Rights, GA Resolution 2200A (XXI), December 1966: Article 11(1)

"The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions."

International Labour Organization Convention concerning Discrimination in Respect of Employment and Occupation, 1958

C100 - Equal Remuneration Convention, 1951; and
C087 - Freedom of Association and Protection of the Right to Organize Convention, 1948

United Nations' Principles for Older Persons, GA Resolution 46/91, 1991: Principle 1

"Older persons should have access to adequate food, water, shelter, clothing and health care through the provision of income, family and community support and self-help."

United Nations' Convention on the Rights of the Child, GA Resolution 44/25, 1989: Article 27(1)

"States Parties recognize the right of every child to a standard of living adequate for the child's physical, mental, spiritual, moral and social development."

United Nations' Convention on the Rights of the Child, GA Resolution 44/25, 1989: Article 27(3)

"States Parties, in accordance with national conditions and within their means, shall take appropriate measures to assist parents and others responsible for the child to implement this right and shall in case of need provide material assistance and support programs, particularly with regard to nutrition, clothing and housing."

United Nations' Convention on the Rights of Persons with Disabilities (CRPD), 2018: Article 9 - Accessibility

"States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas."

United Nations' Declaration on the Rights of Indigenous Peoples

"States shall take effective measures and, where appropriate, special measures to ensure continuing improvement of their economic and social conditions. Particular attention shall be paid to the rights and special needs of indigenous elders, women, youth, children and persons with disabilities."

ANALYSIS AND GUIDANCE ON PRACTICES

INCLUSIVE POLICY DEVELOPMENT AND IMPLEMENTATION

Overview

Policy interventions have been identified as effective instruments to initiate and implement socioeconomic change. The process of developing and implementing a policy is fundamental to reducing social inequality, discrimination, poverty, and unequal access to infrastructure. The selection of the appropriate policy intervention is equally important.

To effectively enforce policies, it is important that they are enacted through regulation or some other binding administrative issuance.

International references and conventions related to inclusivity may or may not be integrated at national levels. At the national level, dedicated policies that deal with inclusivity related to infrastructure are emerging, but some aspects may also be addressed through amendments to existing inclusive laws.

For instance, in Bolivia, the development of an efficient, sustainable and inclusive cable car system to resolve the transport issues in La Paz and El Alto, which was an initiative driven by the President himself, centred on a philosophy that considered marginalised groups (such as people with disabilities and low-income residents who could not afford a private car) (see *Mi Teleférico Case Study*). This was developed under a broad policy titled “Better Living” (*Vivir Mejor* in Spanish), which promoted sustainable development for all.

Inclusivity should not only be reflected in the actual policies, regulations and standards, but also in the process by which they are developed. The involvement of the groups targeted for inclusion is key to addressing their concerns and in crafting truly inclusive policies and regulations. This means the groups must have proper representation in the development process to ensure they are included. Research indicates that the under-representation of women in legislative and executive positions can adversely impact the fairness and inclusiveness of public policies⁶⁹.

An inclusive policy process must be well-informed and reflect the public interest. As such, it should be inclusive across the policy cycle, which requires effective and representative citizen participation, as well as mechanisms to curb the undue influence of money and power. Increasingly, governments are partnering with civil society in the design, implementation and evaluation of public policies. For example, in the São Francisco water supply project in Brazil, key stakeholders were engaged in service planning and delivery. The involvement of the community is seen as a way to increase inclusiveness and to address service failures and improve policy outcomes⁷⁰.

Relevance

Policy-makers and government officials should drive a policy and planning environment that seeks to address inclusivity.

At the policy level:

- *Enforcing inclusivity through policies, regulations and standards.* The establishment of a dedicated inclusivity policy can be developed over time into more detailed regulations and standards in infrastructure.
- *Building upon current policy.* Existing policies or regulations (such as social welfare law or anti-discrimination law) can be strengthened or broadened to promote inclusivity.
- *Integrating inclusivity into the policy process.* Greater benefits can be achieved if inclusivity practices are integrated into the policy development and implementation process. This is viewed as complementary to practices outlined under Action Area 2: Governance and Capacity Building.
- *Considering broader obstacles to achieving inclusivity.* Wider barriers to the inclusion of disadvantaged groups should be considered when developing and implementing policy.

At the project level:

- *Applying policies to a specific project.* Inclusive policies may need to be interpreted in greater detail in respect to specific projects. Policies may only outline broad principles and guidance. More detail on the application of policies at the project level can be found in Action Area 4: Project Planning, Development and Delivery.
- *Learning from the development of policies in the past.* Ensure policies are applicable and enforceable by assessing existing data on prior policies and lessons learned.

⁶⁹ All on board: Making inclusive growth happen, (OECD, 2015)

⁷⁰ All on board: Making inclusive growth happen, (OECD, 2015)

Guidance

1. Consider implementing policy, regulation and standards that directly address inclusivity in infrastructure.

An example of promoting greater inclusivity in major infrastructure is the initiative taken by the Government of Canada, whereby Canadian provinces that receive federal funding for infrastructure projects are required to implement inclusive employment and economic benefit measures in respect of those projects (see *Box 8: Illustrative example – the Government of Canada encourages provinces to create more inclusive infrastructure*). Under the Investing in Canada Plan, a “Community Employment Benefits” program seeks to encourage project planners and communities across the country to use their infrastructure projects to support diversification in recruitment, training and procurement practices⁷¹. It is in its early stages, but it shows how greater inclusivity can be promoted in major infrastructure projects at the national level, covering public transport, trade and transportation, green and social infrastructure, as well as infrastructure for rural and northern communities.

BOX 8: ILLUSTRATIVE EXAMPLE – THE GOVERNMENT OF CANADA ENCOURAGES PROVINCES TO CREATE MORE INCLUSIVE INFRASTRUCTURE

“Our government’s investments in infrastructure are helping to build stronger, more inclusive communities across the country while creating well-paying jobs for the middle class and those working hard to join it. Today’s announcement will help ensure that more Canadians, including those who have not traditionally benefitted from the jobs created by infrastructure investments, can access employment opportunities that help them reach their full potential.”

– *The Honourable Amarjeet Sohi, Minister of Infrastructure and Communities*

Objective

On 22 June 2018, the Government of Canada officially launched the Community Employment Benefits initiative. As part of the Investing in Canada Plan - a public infrastructure investment program of USD 137 billion (CDN 180 billion) over 12 years - recipients of federal funding for new major public infrastructure projects will be asked to pursue targeted efforts to contribute to employment opportunities and to economic benefits for the wider community.

Implementation

The initiative applies to all projects funded under the Investing in Canada Infrastructure Plan negotiated between the national and provincial governments. At the time of submission of a project proposal to Infrastructure Canada to review project eligibility requirements, provinces and territories must indicate whether the project will be participating in the Community Employment Benefits initiative. If a province or territory indicates that the project will be participating in the initiative, then a specific target will be developed by the province or territories to guide their progress towards ensuring benefits will be achieved for at least three of the federal target groups. The identified target groups are: apprentices; Indigenous peoples; women; persons with disabilities; veterans; youth; recent immigrants; and small-sized, medium-sized, and social enterprises. Considering the provincial context and circumstances, provinces and territories will be able to refine these project-level targets during the funding approval process.

continued..

⁷¹ Community Employment Benefits – General Guidance, Infrastructure Canada, (Canadian Government, 2018)

Provinces and territories may also, on a case-by-case basis, decide not to participate in the initiative, in which case a rationale of non-participation, determined by the province or territory, must be provided, which is also made public.

Expected outcome

In establishing targets for each participating project, provinces and territories have the flexibility to determine the appropriate targets in the context of that project, considering various factors, such as complementarity with existing local and regional employment initiatives or local labour market dynamics.

The initiative ensures that when building new infrastructure projects, proponents take into consideration the social and economic impact their project will have on the community and how they can encourage inclusive participation.

Expected benefits include better integration and greater economic and social benefits for the targeted groups, as well as the wider community.

Sources:

Community Employment Benefits – General Guidance, 2018, Infrastructure Canada

Newswire Article, The Government of Canada encourages community employment benefits through infrastructure projects, 22 June 2018

Investing in Canada Plan <http://www.infrastructure.gc.ca/site/alt-format/pdf/plan/icp-pic/IC-InvestingInCanadaPlan-ENG.pdf> and project Map: <http://www.infrastructure.gc.ca/gmap-gcarte/index-eng.html>

2. Involve all relevant government stakeholders in the development of inclusive policy.

Policy interventions need to be strategic and involve multiple levels of government, the relevant ministries, and other institutions to ensure efforts and resources are coordinated and aligned. The support and participation of key government agencies is important, considering the potential long-term effects of the intervention on the goal of achieving inclusivity in infrastructure development.

Processes to involve the relevant government stakeholders, at both national and sub-national levels, should be interactive and iterative, and key activities will include seminars and workshops in the country and, where relevant, on a regional basis. In many countries, however, there is limited capacity to undertake this type of policy development⁷².

3. Conduct a comprehensive assessment of the needs of the vulnerable and under-served groups when inclusive strategies and policies are being developed, using the following criteria:

- Who is the target group and why?
- What policies are needed to support more rapid growth and inclusion?
- What are the major obstacles to the target group's inclusion and participation in more rapid growth?
- How can governance arrangements be made more effective for the target group?
- How can broad-based participation in dialogue and decision-making be enabled?
- Are key sectoral policies and programs working to be more inclusive?
- Can progress be measured, including the impact of policies and programs on inclusivity?⁷³

4. Use public stakeholder engagement to strengthen and legitimise policies which, in turn, increases people's ownership and overall trust in government.

Achieving inclusive policy outcomes depends on whether policies reflect and integrate the perspectives of diverse stakeholders. When public decision-makers closely represent the societies they serve, they enjoy greater public trust and bring attention to important socioeconomic issues⁷⁴. This can be achieved through creating opportunities for citizens to participate in and influence policy decisions by providing access to information and promoting an open government policy to strengthen the perception of legitimacy in the process.

⁷² A sourcebook for Poverty Reduction Strategies : Core techniques and cross-cutting issues, (Klugman, et al., 2002)

⁷³ A sourcebook for Poverty Reduction Strategies : Core techniques and cross-cutting issues, (Klugman, et al., 2002)

⁷⁴ "Political and economic disparities tend to reinforce each other. Across the OECD, electoral turnouts are falling, and socio-economic disparities exist: adults with a tertiary education degree have a general election turnout 12% higher than those with secondary education or less, and older adults are more likely to vote than younger citizens. For inclusive growth to work well, appropriate institutions are needed, and citizens must feel that they can trust them." All on board: Making inclusive growth happen, (OECD, 2015)

Also, the ability of civil society to hold governments accountable contributes to increased trust⁷⁵. Several considerations have been highlighted in the available literature on this subject:

- Assessment of the status of participation, including the level of representation and accountability of governance structures.
- Dissemination of information on inclusive policy options and goals to facilitate participation.
- Seeking involvement in strategy design at the national and local levels, and consulting civil society and the private sector.
- Analysing feedback on program implementation and budget execution.

Stakeholder engagement is detailed further in Action Area 1: Stakeholder Identification, Engagement and Empowerment.

5. Select the right policy instrument to implement the inclusivity strategy.

The term 'policy instrument' refers to the method by which policy is implemented in practice. Policy instruments can range from a broad administrative guidance note to a more specific and enforceable regulation that carries consequences for non-compliance.

6. Utilise existing bodies of international benchmarks, as well as existing national policies.

Every new policy created to support inclusivity should consider national and international benchmarks, including the existing coverage of aspects of inclusivity at the national policy level, and international conventions and development objectives relevant to inclusivity.

7. Assess the content and purpose of existing policies and regulations that may be able to be built upon to specifically address elements of inclusivity.

For instance, the UK Equality Act 2010 legally protects people from discrimination in the workplace and in wider society, with dedicated chapters on advancements in the transport sector⁷⁶. Having a strong policy that broadly seeks to reduce poverty may also be comparable to a dedicated inclusive infrastructure policy in many ways.

By assessing existing policies and regulations, gaps can be identified, and an assessment made as to whether they should be amended, or new policies and regulations formulated.

8. Consider adapting sector-specific regulation to new sectors.

For instance, Kenya's Water Act 2016 recognises water access as a basic human right and specifies provisions to enhance access in remote and low-income areas. The same applies for the energy sector, where the Energy Act 2006 of Kenya establishes the Rural Electricity Authority's responsibility to implement the Last Mile Connectivity Program with a mandate to ensure universal electricity access by 2020 (see the *Kenya Water Sector Trust Fund Case Study* and *Last Mile Connectivity Program Case Study* in Section 4).

9. Consider sector-specific challenges when developing inclusivity policy objectives.

As an example of a sector-specific policy approach, several principles have been identified as being relevant to improving inclusivity in the transport sector:

- **Availability:** The public transport network should be within easy reach of people's homes and take them to and from the places they want to go at times and frequencies that correspond to patterns of social and working life. People also need to be kept informed of the services that are available.
- **Accessibility:** Vehicles, stops and interchanges, and connected walking paths, should be designed in such a way that, as far as possible, everyone is able to use them without difficulty.
- **Affordability:** People should not be 'priced out' of using public transport because of high fares and should be able to easily find the right ticket for them.
- **Acceptability:** People should feel that public transport is equipped to meet their needs, as well as being comfortable, safe and convenient⁷⁷.

⁷⁵ All on board: Making inclusive growth happen, (OECD, 2015)

⁷⁶ Equality Act 2010 – UK Government, (UK Government, 2010)

⁷⁷ Best Practice & Case Studies, Community Transport Organisation, (Tramby, 2013)

10. Consider utilising existing development bank and international organisation inclusivity frameworks.

Inclusivity is increasingly important to multilateral development banks and other international organisations. Many have implemented their own inclusivity frameworks, such as the World Bank, the Inter-American Development Bank (IADB), the Asian Development Bank (ADB),

the European Investment Bank (EIB) and the European Bank of Reconstruction and Development (EBRD). An example highlighted below is the EBRD's Economic Inclusion Strategy (see *Box 9: Illustrative example – EBRD's Economic Inclusion Strategy and Inclusion Policy Engagement*).

BOX 9: ILLUSTRATIVE EXAMPLE – EBRD'S ECONOMIC INCLUSION STRATEGY AND INCLUSION POLICY ENGAGEMENT

Inclusion strategy

Economic inclusion and inequality have become the defining political, social and economic issues shaping the EBRD region⁷⁸ today. The Economic Inclusion Strategy (EIS) is based on the concept of equality of opportunity and focuses on groups that experience disproportionate barriers to economic opportunity due to circumstances outside of their control – such as their gender, place of birth or socioeconomic background – which, in turn, influences their transition from education into employment. In this context, the primary target groups of the EIS are women, young labour market entrants and populations in disadvantaged (urban or rural) regions within a country, with an anticipated gradual expansion of target groups to include the ageing workforce, people with disabilities, refugees and others.

The EIS is integrated in the overall strategic and project cycles at country level (for instance through diagnostic studies) or at project and policy level with EBRD's forward-looking transition impact assessment system.

There are three strategic themes:

1. access to employment and skills;
2. entrepreneurship and access to finance; and
3. access to services that enhance economic opportunities (such as water, power, transport or infrastructure).

The focus is on the systemic impact of benefits to materialise in the wider sector or market through scale and replicability. The application is across the EBRD's investments, in all sectors and regions.

⁷⁸ The EBRD regions include countries in the regions of Europe, Central Asia and the Mediterranean, (European Bank for Reconstruction and Development, 2018)

Efforts can be complemented through technical assistance, bringing in the relevant technical expertise and capacity building at client and policy levels.

Inclusion policy engagement

The EBRD's inclusion policy dialogue leverages its strong private sector engagement to achieve broader systemic impact at national, sectoral and regional levels by addressing structural, regulatory and other policy challenges to foster equitable access to economic opportunity. Inclusion Policy Engagement Programs integrate the EBRD's experience in the following selected areas:

- support the reduction and elimination of regulatory barriers to the access to all types of occupations for target groups;
- introduce inclusive public procurement policies to encourage private sector contractors to offer work-based learning opportunities; and
- further explore opportunities to:
 - i. introduce Women in Business policy engagement to address regulatory barriers to the access of finance and entrepreneurship;
 - ii. identify policy recommendations in relation to new target groups (ageing, disability and others), in line with country strategies; and
 - iii. establish synergies between the EBRD's Investment Climate and Governance Initiative and inclusive policy engagement.

Every country, in line with the EBRD's strategic priorities, benefits through tailored inclusion policy objectives and priorities.

Source: EBRD Economic Inclusion Strategy

11. Consider inclusivity policies not just during design and construction, but also during the operational phases of projects.

For example, the Department for Transportation in the UK has an internal guide to policies and practices to make rail accessible. It ensures all rail companies try to accommodate passengers with disabilities. This includes issues such as: the operator's strategy, management arrangements, monitoring and evaluation, access improvements, working with others, staff training, emergency procedures, communications strategy and car parking.

INCLUSIVE STANDARDS AND UNIVERSAL DESIGN

Overview

Standards are a powerful instrument when they are implemented in national legislation with specific design codes, guidelines and enforcement mechanisms. They provide the necessary terms of references that ensure accessibility for all to physical infrastructure and associated services. Standards should be enforced at a national level alongside a robust monitoring and supervisory mechanism.

Some countries have implemented national certification systems and standards that cover certain aspects of gender equality, inclusion of older people and accessibility for people with disabilities. However, there is no global inclusivity standard that can be applied to address all the physical, behavioural and attitudinal barriers that these vulnerable groups routinely face. These barriers often prevent them from fully exercising their right to use and derive more positive outcomes from infrastructure.

Physical barriers are elements in the design of infrastructure that block access, such as staircases, doorways, layouts and the dimension of halls and sidewalks. They can be addressed with Universal Design standards. However, other behavioural and attitudinal barriers require the transformation of social norms to address the discrimination, prejudice, and unfair treatment these vulnerable groups can face every day when they are using and accessing infrastructure facilities. These types of barriers cannot be addressed with standards, but there are universal guidelines that can be adopted to lower them. A barrier-free environment is key to social inclusion in infrastructure.

The *Case Study of the TransMilenio BRT system* in Colombia illustrates the barriers that vulnerable groups, such as women, people with disabilities, homeless and informal vendors, face when accessing and using the BRT facilities.

In the project, the physical barriers were addressed with Universal Design standards but other behavioural and attitudinal barriers required a different approach. Using a variety of guidelines and initiatives, TransMilenio triggered a chain reaction of changes in the behaviour and attitudes of the citizens towards inclusivity. This Case Study successfully demonstrates the impact an inclusive infrastructure project can have on an entire society when exclusive barriers are removed.

Relevance

Inclusive standards, addressing physical, behavioural and attitudinal barriers, including Universal Design, can be used to create consistency in the approach to inclusivity.

At the policy level:

- *Ensuring accessibility by incorporating inclusivity throughout project design and construction.* Implementing and respecting standards and guidelines for accessible buildings and facilities, incorporating inclusive design at the planning stage, constructing in compliance with standards, and raising stakeholders' awareness will all help to ensure infrastructure is accessible.
- *Incorporating methods to increase understanding of behavioural and attitudinal differences in policy-making.* Lowering behavioural and attitudinal barriers requires the adaptation of inclusive standards and norms during the policy-making process.

At the project level:

- *Ensuring all stakeholders are accountable in ensuring inclusivity.* Defining responsibilities and identifying monitoring mechanisms across all government stakeholders, particularly for responsible implementing agencies, ensures inclusive standards are correctly implemented.
- *Creating and implementing an enforcement mechanism.* At the project level, a robust standard enforcement process is required, which is further explained in Action Area 4: Project Planning, Development and Delivery.

Guidance

1. **Mandate the implementation of Universal Design and other inclusiveness standards by law, include them in the project procurement and terms of reference, and integrate them in the approval process and performance criteria** (including during the operation and maintenance phase). Long-term impacts should be monitored beyond project completion.

2. Consider internationally adopted design standards or a benchmark of several design standards.

For example, many national level Universal Design standards (e.g. United States, Chile, Australia, Singapore, Vietnam and India) use the following principles contained in the International Disability and Development Consortium's statement on the United Nations' Convention on the Rights of Persons with Disabilities (CRPD) Article 9, where accessibility includes:

- *Equitable use*: design that is useful and marketable to people with diverse abilities.
- *Flexibility in use*: accommodates a wide range of individual preferences and abilities.
- *Simple and intuitive use*: easy to understand, regardless of the user's experience, knowledge, language skills, or concentration level.
- *Perceptible information*: design that communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.
- *Tolerance for error*: minimises hazards and the adverse consequences of accidental or unintended actions.
- *Low physical effort*: can be used efficiently, comfortably and with minimum fatigue.
- *Size and space for approach and use*: design that provides appropriate size and space for approach, reach, manipulation, and use, regardless of the user's body size, posture or mobility.

3. It is important for governments to take into account not only considerations of physical access, but also other dimensions of accessibility, such as the social, communication and information systems within a built environment (for example, see the *TransMilenio Bus Rapid Transit Case Study in Section 4*)⁷⁹.

4. Independent and external advisors can be used to provide benchmarks against other countries and supervise delivery of specific inclusivity elements, since the government implementing agencies and appointed contractors may not have the experience or the objectivity to assume these roles.

5. Adopt inclusive standards based on specific circumstances.

There are many general inclusive standards available as guidelines. However, the implementation must also consider the specific circumstances of the project. The TransMilenio BRT System in Colombia (see *TransMilenio Bus Rapid Transit Case Study in Section 4*) adopted a differential approach based on the ISO 26000:2010, Guidance on Social Responsibility with emphasis on the fundamental principle of "active participation and engagement of the community". It includes several achievable principles in its governance practices, such as transparency, environmentally-friendly infrastructure and services for passengers with disabilities, women and the elderly.

Some standards, norms and guidance related to inclusivity and Universal Design are listed in Box 10 below.

BOX 10: GUIDANCE AND STANDARDS FOR INCLUSIVITY AND UNIVERSAL DESIGN

ISO 26000:2010, Guidance on social responsibility⁸⁰ provides direction on the definition of social responsibility to help businesses and organisations translate principles into effective actions.

BS 76005, Valuing people through diversity and inclusion – code of practice for organisations⁸¹ provides recommendations for undertaking, reviewing, and assessing a competent and principled approach to diversity and inclusion in the workplace.

ISO/AWI 30415 Diversity & Inclusion⁸² (ongoing, to be released in July 2019) includes guidelines for global diversity and inclusion goals and strategies in organisations (including initiatives, programs, competencies and associated methods), and identifies related success factors (business case elements) that benefit organisations. Strategies and associated activities can include addressing leadership, organisational culture and programs, and supportive metrics (to use as internal assessment guidelines for identifying gaps in programs, systems, processes and practices).

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⁷⁹ Accessibility Design Guide: Universal design principles for Australia's aid program, AusAID, (Australian Government, 2014)

⁸⁰ ISO 26000:2010, (International Organization for Standardisation, 2010)

⁸¹ BS 76005:2017, (British Standards Institution, 2017)

⁸² ISO/AWI 30415, (International Organization for Standardization, n.d.)

The Gender Equality Framework⁸³ is part of the 'Gold Standard for the Global Goals', a certification that aims to ensure climate action projects contribute to the United Nation's Sustainable Development Goals. It enables developers and funders of climate protection projects to quantify, certify and maximise contributions to empowering women and girls. By quantifying and certifying gender impacts, projects can tap into additional funding from an increasing pool of gender-lens investors and a rising demand to credibly report on what dollars spent have delivered through verified impact data. The Framework's "Gender Sensitive Requirements" are obligatory for every Gold Standard-certified project and ensure they follow the latest best practices in, for example, consulting with a representative cross-section of local women and men, and adhering to gender-sensitive safeguards.

The Age and Disability Consortium developed the *Humanitarian Inclusion Standards for older people and people with disabilities*⁸⁴. They are designed to help address the gap in understanding the needs, capacities and rights of older people and people with disabilities, and promote their inclusion in humanitarian action. There are nine key inclusion standards, derived from the Nine Commitments of the Core Humanitarian Standard on Quality and Accountability (CHS), and seven sets of sector-specific inclusion standards: protection; water, sanitation and hygiene; food security and livelihoods; nutrition; shelter, settlement and household items; health; and education.

⁸³ Gold Standard for the Global Goals Gender Equality Requirements & Guidelines (Gold Standard, 2018)

⁸⁴ Humanitarian inclusion standards for older people and people with disabilities, (Age and Disability Capacity Programme, 2018)

The London Olympic Delivery Authority developed the *Inclusive Design Standards*⁸⁵, which are based on existing good practice guidance and include lessons learned from the London 2012 Olympic and Paralympic Games construction project. They contain detailed drawings and specifications on inclusive design, and sample documents that can be used as templates for best practice. The standards are a source of information for designers, project managers, engineers, access consultants and cost consultants who are interested in creating inclusive and accessible environments and buildings.

ISO/IEC Guide 71:2014⁸⁶ provides guidance to developers of standards on addressing accessibility in products, services and built environments. To assist standard developers to define accessibility requirements and make recommendations, it presents a summary of current terminology relating to accessibility; issues to consider in support of accessibility in the standards development process; a set of accessibility goals (used to identify user accessibility needs); descriptions of (and design considerations for) human abilities and characteristics; and strategies for addressing user accessibility needs and design considerations.

⁸⁵ Inclusive Design Standards, (London Legacy Development Corporation, 2012)

⁸⁶ ISO/IEC Guide 71:2014, (International Organization for Standardization, 2014)

6. Properly price Universal Design costs to increase acceptance.

Universal Design is often perceived to be a costly exercise, and some project developers and owners assume costs are larger than they are. This can be the result of a lack of knowledge or experience. Others rely on inaccurate construction cost estimates. Various studies have been conducted concluding that costs may be as low as

0.01% in relation to the gross domestic product or 1-2% of the cost of buildings⁸⁷. Another misconception relating to the cost of incorporating Universal Design is how much extra physical space is required. In many cases, it may only require rearranging and planning within the available space⁸⁸. It is worth noting that it is better to address inclusivity at the outset. Retrofitting can be much costlier and add to future risks.

⁸⁷ Accessibility Design Guide: Universal design principles for Australia's aid program, AusAID, (Australian Government, 2014)

⁸⁸ Accessibility Design Guide: Universal design principles for Australia's aid program, AusAID, (Australian Government, 2014)

7. Consider replicating existing guidelines and standards from other sectors to ensure accessibility and use of infrastructure by all.

The transport sector has a significant level of maturity in regard to inclusivity standards, relative to other infrastructure sectors. There are, however, some standards which have been developed for projects in other sectors, such as water and sanitation infrastructure. For instance, in Kenya, projects funded by the *Water Sector Trust Fund*

(see *Water Sector Trust Fund Case Study* in Section 4) require special toilets for women with children and a dedicated women's waiting area.

Examples

As examples of the standards used in the transport sector, Box 11 describes the Universal Design codes for rail systems in the UK, and Box 12 sets out the corresponding Universal Design codes for UK bus systems.

BOX 11: UNIVERSAL DESIGN CODES FOR RAIL IN THE UNITED KINGDOM

Design codes and provisions for transport in the UK are considered to be robust and detailed. The UK Equality Act 2010 sets out the general framework under Part 12 "Disabled person: transport". Chapter 2A outlines requirements for bus services and chapter 3 does the same for rail vehicles.

Provisions from the UK Equality Act can be found in a number of other documents, guidelines and regulations.

For bus systems, please see *Box 12. Relevant codes and standards for the railway sector* below.

Department for Transportation (DfT) Regulations – Code of Practice is mandated by the UK Government on railway projects and operations. Licensed operators must adhere to the Code. It covers the following:

CHECKLIST	EXPLANATION
Pre-travel information	Information regarding the level of accessibility at all stations and plans to upgrade or improve it
Substitute transport – pre-planned and emergency	Identify alternative transport for people who cannot use a DfT mandated service
Car parking	Location, dimensions, number of spaces, markings, monitoring and enforcement, approach to stations, set-down and pick-up locations, considerations for obstructed access
Building features	Doors, lighting, floors, walls, transparent walls, furniture, free-standing devices
Signs	Directional information, fonts, sign design, sign lighting, tactile (embossed/Braille) signs, display screens, maps and detailed information
Announcements	Passenger announcements, induction loops, emergency alarms
Help points	Locations, functions, requirements for access
Ticket sales points	Booking offices, information provision, customer service desks, ticket sales points, ticket barriers

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CHECKLIST	EXPLANATION
Elevation change	Lifts, emergency lifts, platform lifts, ramps, stair and step design, landings and areas beneath stairs, handrails, escalators, moving walkways
Platforms	Platform design, train interfaces, seating, waiting rooms, shelters
Toilets	Provision and location of wheelchair toilets, opening hours, doors, design and layout, rails, basins, finishes, lighting, emergency, baby-changing
Crossing the track	Subways, overbridge access, underbridge access

British Standard (BS) 8300 is also relevant. BS 8300 provides recommendations for the design of new transport-related buildings to meet the needs of people with disabilities. It applies to car parking provision, setting-down points and garaging, access routes to and around all buildings, entrances, and the interiors of new buildings. The recommendations also apply to facilities associated with, and in the immediate vicinity of, transport-related buildings. Specific to railways, the following topics are outlined:

- location and accessible routes to rail stations;
- ticket sales and information points;
- location and operating space for ticket machines;
- obstructions;

- waiting areas and seating;
- ticket barriers and gates;
- boarding points and platforms;
- toilets; and
- escalators and moving walks.

The International Organization for Standardization (ISO) 7000 provides advice on signage. Standardised colours and basic shapes should be used for safety-related signs so they can be easily recognised.

The UK Disabled Persons Protection Policy enforced by the Office of Rail and Road applies to all railway operators and covers:

EXAMPLE FROM POLICY	EXPLANATION
Support for passengers at stations	Accessible entrances and exits at all stations (funded by the DfT and NetworkRail, the infrastructure owner and operator in England, Wales and Scotland), help points at all stations with information and emergency buttons, all signs designed so they can be read easily, wide and “slow-reaction” ticket gates, toilets part of the RADAR Scheme ^{*1} , provision of ramps and lifts at major stations, and ramps on to all trains at stations.
Support for passengers on trains	Passenger announcements on all trains, information on all trains within timescale of franchise, wheelchair spaces and emergency spaces on all trains, alternative options if a train is inaccessible (booking 24 hours in advance).

^{*1} RADAR is a scheme that allows disabled and lesser-abled individuals access to toilets that the general public cannot access. It prevents misuse by the general public, and ensures cleanliness and 24-hour access.

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CHECKLIST**EXPLANATION****Buying tickets**

Accessible ticket booking office points (at stations with booking offices), dedicated assisted-travel teams, all ticket machines operating in line with DfT code of practice.

Support at interchanges

For platform changes at short notice or short interchange times, staff members will help people access their platform and make their train or connection.

Emergency provisions

An emergency plan that addresses the needs and requirements of people with disabilities.

Platforms, toilets, seating areas and help points

All stations with toilet facilities to have an accessible toilet, all trains to have an accessible toilet and seating areas for people with disabilities.

Wheelchairs and mobility scooters

Mobility scooter permit schemes, priority seating cards, wheelchair access and help for people who need support when they are moving around the station.

For the purpose of this study, the focus is on the UK design codes and practices. It is noted that the European Railway Agency (ERA), under a mandate from the European Commission, has issued Technical Standards for Interoperability (TSI) for Persons with Reduced Mobility (PRM).

Sources: ATW – Guide to policies and practices, DfT code of Practice – Design Standards for Accessible Stations, BS8300, ISO 7000, PRM TSI, Atkins internal

BOX 12: UNIVERSAL DESIGN CODES FOR BUSES IN THE UNITED KINGDOM

The UK accessibility requirements for buses and coaches are set out in the Public Service Vehicles Accessibility Regulations 2000⁸⁹ and came into force in August of that same year. Under this legislation, all buses had to be accessible by 1 January 2017 and all coaches must be accessible by 1 January 2020.

Design of buses and coaches

The exact requirements are set out in Schedule 1 of the Regulations. These include minimum dimensions for a wheelchair space and the width of the aisle. The minimum dimensions are:

- 130 cm measured in the longitudinal plane of the vehicle;
- 75 cm measured in the transverse plane;
- 150 cm measured vertically from any part of the floor of the wheelchair space;
- 75 cm wide for the aisle between a wheelchair space and the entrance/exit.

Audio-visual equipment

Section 17⁹⁰ of the Bus Services Act 2017 sets out the requirement for bus operators to provide information using audible and visible media on board local bus services in England, Scotland and Wales. The industry, operators and market are permitted to provide suitable solutions for the installation of audio-visual equipment.

⁸⁹ Public Service Vehicles Accessibility Regulations, (UK Government, 2000)

⁹⁰ Bus Services Act, (UK Government, 2017)

Assistance on buses, at stations and terminals

On 25 July 2018, the UK brought a year of public consultation on its transport strategy to a close and set out how it plans to make the system more inclusive for people with disabilities. As part of its Inclusive Transport Strategy, the UK Government will introduce an accreditation scheme to formally recognise the best transport operators for their work in improving services for passengers. The scheme will offer best practice guidance for delivering training across the bus sector and assist operators in complying with the new mandatory disability equality and awareness training requirements, effective from March 2018.

Actions to qualify for accreditation include:

- operators will provide training to all frontline and back office staff, including senior managers. It will focus on raising awareness and understanding of some of the conditions and impairments affecting people with disabilities;
- operators will commit to improving service for passengers with disabilities by making a public pledge;
- operators will provide assistance cards to passengers with disabilities when appropriate; and
- operators will ensure that their staff are trained to respond appropriately when assistance cards are presented by passengers.

Sources: Briefing Paper: Access for transport for disabled people, House of Commons, UK Parliament; Bus Services Act 2017; The Inclusive Transport Strategy: Achieving Equal Access for Disabled People, UK Department for Transport.

APPLICATION TO TARGETED STAKEHOLDER GROUPS

The general principles in Action Area 3: Policy, Regulation and Standards apply to all stakeholder groups and emphasise that inclusivity should not only be reflected in the actual policies, regulations and standards, but also in the process by which they are developed. This requires proper representation of the groups targeted for inclusion in the policy development process, to help ensure their concerns are included.

Some points on the application to targeted stakeholder groups are outlined below:

Low-income groups

Addressing the affordability of services to low-income groups while maintaining the overall sustainability of the service is important, particularly for essential services covered by large infrastructure systems. Since major infrastructure systems (such as the water and electricity utilities) often form a natural monopoly, this consideration is often addressed by policy developed by government departments, which is overseen by the economic regulators - such as Ofwat in the UK, which is responsible for implementing price control for UK water services under the Water Industry Act.

In many countries, the policy will often include a mechanism to support low-volume consumers, such as a social or lifeline tariff⁹¹. Further information on affordability is available under Action Area 6: Affordability and Optimising Finance.

Women

Help empower women through inclusive policies, which may include:

- ensuring that policies and regulations recognise the diverse needs, constraints and opportunities of women and men;
- breaking down silos between different government departments and agencies involved in designing and implementing infrastructure projects;
- soliciting technical support to negotiate better infrastructure contracts with the private sector that benefit and incentivise employment opportunities for women in the infrastructure sector;

- introducing clauses in PPP contracts that require involving women's groups in the design process and incentivising the expansion of opportunities for women to work in the delivery and operation of infrastructure⁹² (see *U.S. Bank Stadium Case Study in Section 4*); and
- promoting women's involvement in civic and political activities, which will help increase awareness of women's needs and support gender-responsive policies⁹³.

People with disabilities

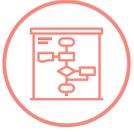
Regulation and the implementation of Universal Design principles is becoming a more widespread requirement which helps to address physical barriers to accessing infrastructure services for those who have impaired mobility due to disability, age or other reasons.

Policies should also consider other behavioural and attitudinal barriers that require the transformation of social norms to address the discrimination, prejudice and unfair treatment these vulnerable groups can face every day when they are using and accessing infrastructure facilities. Refer to *Box 11: Universal Design Codes for Rail in the United Kingdom* and *Box 12: Universal Design Codes for Buses in the United Kingdom*, plus relevant guidance points above these examples.

⁹¹ Policy Matters: Regulatory Indicators for Sustainable Energy, (World Bank, ESMAP, 2017)

⁹² Infrastructure: A Game-Changer for Women's Economic Empowerment. A Background Paper for the UN Secretary-General's High-Level Panel on Women's Economic Empowerment, (Biswas, S., & Mohun, R., 2016); In relation to the empowerment of women-owned businesses, please refer to Action Area 5: Private Sector Roles and Participation

⁹³ All on board: Making inclusive growth happen, (OECD, 2015)



ACTION AREA 4: PROJECT PLANNING, DEVELOPMENT AND DELIVERY

Key messages

- Inclusivity should be considered at all stages of the project – planning, development, delivery and operations, through to decommissioning. This is referred to as the project lifecycle approach to inclusion.
- Inclusivity should be incorporated as part of the overall project strategy, through to defining specific targets and mechanisms for design, implementation and compliance. A Social Equity Plan can help set out the considerations and targets throughout the project lifecycle (see also *Action Area 1: Stakeholder Identification, Engagement and Empowerment*).
- The inclusion of representatives from under-served and vulnerable groups in general planning committees should be considered to ensure a better understanding of the barriers faced by these groups.
- A suitably-qualified, dedicated team or project member should continuously engage with groups that tend to be neglected or under-represented in the decision-making process.
- The procurement stage provides an opportunity to specify to bidders the selected national or international design standards and codes that will need to be followed during the project's design and construction.
- Inclusive urban development demonstrates how inclusivity should be considered in an integrated, cross-sectoral manner to maximise the potential benefits to low-income and other disadvantaged groups.

Three key practices have been identified under this Action Area, for which further detail and guidance is given in the sections below:

Inclusive Project Lifecycle

Project Management and
Supervision

Inclusive Urban Development

DEFINITIONS AND CONTEXT

Definitions

An inclusive **project lifecycle** approach covers all stages of the project - planning, development, delivery and operations, through to decommissioning. It addresses the strategic questions of 'what', 'when', 'why', 'how' and 'by whom' for all infrastructure projects. From an inclusivity perspective, the beginning of the project planning process is the ideal time to assess and ensure that inclusivity is embedded in every aspect of the project throughout the project lifecycle, including management, supervision, monitoring and evaluation⁹⁴.

Context

Inclusivity cuts across a project – from planning, design, financing, procurement and implementation, to operations and maintenance. Initiatives can be developed in line with the project lifecycle, with a clear strategy, objectives and target outcomes for each phase of a project. By doing so, practical decisions can be taken at the project planning stage, i.e. the earliest phase of a project, to determine and influence the potential outcomes in later phases.

In addition to the consideration of practices at an individual project or sector level, the consideration of practices and benefits from a cross-sectoral perspective enhances the opportunities to address the needs of various target groups, including low-income or vulnerable groups. Inclusive urban development is a good example of the need for integrated, cross-sectoral planning, and is outlined as a specific practice below.

Note that inclusivity practices in relation to stakeholder management have been considered in detail in Action Area 1: Stakeholder Identification, Engagement and Empowerment, and are essential to every stage of the project lifecycle.

⁹⁴ For the purpose of simplicity, references to "project" include both "program" and "project", since some portfolios of projects may be managed at a program level.

ANALYSIS AND GUIDANCE ON PRACTICES

INCLUSIVE PROJECT LIFECYCLE

Overview

To realise the benefits of improved inclusivity in infrastructure, inclusivity must be a guiding principle which is embedded at the policy and regulatory level, and at every stage of the project lifecycle. This involves incorporating inclusivity as part of the overall project strategy through to defining specific targets and mechanisms for design, implementation and compliance.

For example, certain disadvantaged groups, such as women, face challenges in local infrastructure planning, procurement and operation because their behavioural patterns and information preferences are not considered⁹⁵. Their needs and concerns are often left out during the technical planning process for infrastructure and services, and related policies. Applying an inclusive perspective to infrastructure projects can positively benefit service providers, their customers, and society in general.

Integrating inclusivity practices at all stages of the project lifecycle, from project preparation, financing, design, project procurement, construction and operation, to project monitoring and evaluation, is likely to lead to greater socioeconomic benefits.

Relevance

It is important to set a precedence for the consideration and integration of inclusivity in the overall project strategy by embedding the concept early on and establishing clear inclusivity targets.

At the policy level:

- *Informing project development and delivery through inclusive policy.* Policies can define how inclusivity is integrated into project planning, design and delivery.
- *Setting inclusive parameters.* In line with a country's inclusive development strategy, the approach to monitor and evaluate performance management systems enables specific parameters to be set for a project to be appraised, approved, delivered and operated.

At the project level:

- *Integrating inclusive principles throughout the project lifecycle.* Considering inclusivity at every stage of the project ensures early consideration and integration of inclusivity in the overall project strategy.
- *Including stakeholders in project development and monitoring.* Stakeholder engagement in project management and supervision activities can support and foster aspects of inclusivity.
- *Using a project lifecycle approach.* The available literature on inclusivity indicates that a project lifecycle approach underpins the general success of a project and is particularly useful in incorporating inclusivity targets⁹⁶.

Guidance

The concept of embodying inclusivity throughout the project lifecycle is relatively recent and, therefore, has not been researched, tested, applied and documented. However, the literature has described the approach as it relates to specific topics⁹⁷. Figure 8 showcases the stages in which practices can be applied in the project lifecycle.



Figure 8: Project lifecycle and integrating inclusivity

⁹⁵ Strategy for the promotion of gender equality, (European Bank for Reconstruction and Development, 2016)

⁹⁶ Closing the Last Mile for Millions. (Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ), 2015)

⁹⁷ Integrating Gender Considerations into Energy Operations, (World Bank, 2013), Youth scoping study: Boosting Youth Employment through Infrastructure Programming, (Haegeman, 2017)

1 Policy and regulation

1. Set out the policy requirements in the business case and build them into the project objectives.

The application of inclusivity in policies and regulation is the responsibility of the government agency proposing the project and the relevant regulatory bodies. The role of the government is to ensure compliance. This can be done by setting out the requirements in the business case and building them into project objectives, along with the proposed approach to project management and the approval processes that will help the wider team comply with the mandated policies. General guidelines may need to be established to direct project teams in planning, design and delivery to meet inclusivity mandates. For more information, please refer to Action Area 3: Policy, Regulation and Standards.

2 Project preparation

2. Integrate inclusivity at the project planning stage to maximise benefits across the project lifecycle.

Considering inclusivity during the project planning stage will provide more opportunities to influence the design, construction, operation and maintenance of infrastructure facilities. Setting inclusivity targets and measurable outcomes at this same stage creates alignment throughout the project. Accessibility audits can help to identify and address problematic issues in a proposed infrastructure project at an early stage, at a time when such issues can be more easily addressed. In addition, aligning this work with the requirements of other policies and strategies helps to set project objectives and principles.

For instance, gender sensitivity can influence the way infrastructure projects are planned, designed and executed. In Colombia, the Bogotá Urban Mobility Survey (2005) showed that women use public transport for two main reasons – economic and domestic – and their patterns of usage included consecutive trips of shorter duration, that usually begin later in the day, and frequently include children. These characteristics have direct implications for the design and frequency of routes and the accessibility of services⁹⁸.

3. Provide a dedicated project member, who continuously engages with groups that tend to be neglected or under-represented in the decision-making process.

This may be a project-specific decision but may also be mandated by wider policy or regulatory requirements.

4. Identify corridors, areas, groups and enclaves that have not benefited equally from current infrastructure investments (first mile vs. last mile infrastructure investment, corridor projects, major vs. small infrastructure projects).

Once this determination has been made, the next step is to prioritise programs and projects that aim to achieve universal access, such as the Kenya Last Mile Connectivity Program of the Kenya energy sector, as enabled by the Energy Act with its associated mechanisms and organisations⁹⁹ (see the *Kenya Last Mile Connectivity Program Case Study* in Section 4).

5. Include social perspectives in project strategy with measurable objectives.

Specific stakeholder groups should be identified and baseline socioeconomic indicators collected and analysed. The disaggregated data enables in-depth monitoring of the long-term impact of the project. Often, monitoring and evaluation is ad hoc and only conducted for a short timeframe after the completion of construction. There should be a determination of the monitoring and evaluation timeframe, which should extend beyond short-term economic fluctuations and cycles. It is recommended that input is sought from a social or gender expert in the development of project objectives, components and scope to identify potential inclusivity-specific activities. For example, gender action plans should include setting up a skilled team to address gender issues in a project¹⁰⁰, and the inclusion of representatives from vulnerable groups in general planning committees should be considered to ensure a better understanding of the barriers faced by such groups¹⁰¹. In case there is no planning committee, a questionnaire can also help to obtain the inputs of disadvantaged groups on aspects of inclusivity.

6. Ensure sufficient and robust disaggregated data are available for project assessment.

If this cannot be done internally within the project team, external support for data collection should be sought. Refer to Action Area 1: Stakeholder Identification, Engagement and Empowerment.

⁹⁸ Sustainable Infrastructure for Competitiveness and Inclusive Growth, (Inter-American Development Bank, 2014)

⁹⁹ Closing the Last Mile for Millions, (Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ), 2015)

¹⁰⁰ Integrating Gender Considerations into Energy Operations, (World Bank, 2013)

¹⁰¹ Accessibility Design Guide: Universal design principles for Australia's aid program, AusAID, (Australian Government, 2014)

7. Establish a baseline and assess national, regional and international benchmarks to compare existing data to other cities or locations and determine current performance prior to intervention. Analysis of this data may assist in setting specific inclusivity targets and objectives for the project.

8. Consider the needs and expectations of identified stakeholders in the technical feasibility studies.

Stakeholder input should be tailored to each stage of an infrastructure project. For example, public consultations are important for project planning and at the design stage when input into the design is sought. See Action Area 1: Stakeholder Identification, Engagement and Empowerment.

9. Include a socioeconomic study in the financial feasibility studies that incorporates the economic and social costs and benefits of the project, including those related to inclusion, and that allows for a sensitivity analysis of the various factors.

Aside from the quantitative direct benefits, the cost-benefit analysis must also include the qualitative and indirect benefits that are not monetary. See Action Area 6: Affordability and Optimising Finance for further information on socioeconomic cost-benefit analysis.

10. Assess the project's potential benefits and also negative impacts to society.

An in-depth analysis should be carried out on who benefits, who is at risk of being excluded and of the people who could be negatively impacted by a project. It should cover the economic, commercial, environmental and social impact of the project¹⁰². Refer to *Box 13: Illustrative example – How to overcome the hurdles of last mile infrastructure* on how to deal with the challenge of delivering 'last mile' infrastructure for water projects in Kenya.

Carrying out an Environmental and Social Impact Assessment (ESIA) and implementing the safeguards for potentially negatively affected people is not the focus of this reference tool, however it is a hugely important area and an example of inclusive stakeholder engagement activities in the ESIA is provided by the *Cairo Metro Case Study* in Section 4.

¹⁰² Note that at this stage, only a high level environmental and social impact assessment is conducted, to be further refined in the design stage.

3 Financing and design

11. Ensure the needs and expectations of under-served and vulnerable groups are taken into account in preparing the design and financial models for infrastructure projects. This may involve the following activities:

- public consultations;
- in-person surveys;
- site visits;
- the establishment of community-based structures; and
- willingness and affordability studies.

12. Identify financing models and partners that consider high socioeconomic returns and favour the local economy in the form of job creation and long-term development.

Refer to Action Area 6: Affordability and Optimising Finance for further discussion on financing models. In many developing and emerging markets, multilateral institutions with inclusivity mandates (such as the EBRD) can help support a project with financing and expertise. Where an approach, such as a public-private partnership (PPP), is being used, social performance indicators can be linked to payment mechanisms.

13. Evaluate and select national and international design standards and codes that ensure universal access to physical infrastructure and associated services.

Infrastructure design should not be discriminatory in any form. Universal Design standards should be incorporated during the design stage of the project to achieve cost-efficiency. For more information, please see Action Area 3: Policy, Regulation and Standards.

4 Project procurement

14. Specify the selected national or international design standards and codes that ensure universal access in the Request for Proposal (RfP) that will be issued to bidders, and that will need to be followed in the design and construction of the project.

15. Consider bidders' experience and qualifications in delivering projects to maximise inclusivity and social returns to the community.

The bid evaluation, qualification and the interview process should specifically explore and test the bidders' experience in regard to delivering inclusive infrastructure projects. In addition, appointed members of the evaluation panel should include representatives for under-served and vulnerable groups. The Case Study on the *U.S. Bank Stadium* (see *Section 4*) describes an Equity Review Panel which provides advisory recommendations included in the hiring decision following interviews with potential construction managers on their experience and strategies to comply with the Equity Plan.

16. Include specific inclusivity conditions in the tender minimum requirements, targets in the award criteria and contractual obligations.

For example, the inclusion of women or other minority groups in the design and construction of the project can involve giving preference to certain types of businesses (such as those enterprises that are owned by women or people with disabilities) or having workforce targets (such as having a minimum number or percentage of women employed). This may also apply to PPP contracts, such as mandating the involvement of vulnerable groups in the design process and incentivising the expansion of opportunities for these groups to work in the delivery and operation of infrastructure¹⁰³, and establishing performance indicators related to inclusivity in the contractual agreements to measure the success of the project and define penalties for non-compliance. A sample project in this regard is described in *Box 14: Illustrative example – Robust enforcement of inclusivity policy in the Kingdom of Saudi Arabia*.

17. Encourage the use of local content and training if not already set out in national law.

A study of numerous low-income economies found that labour-based local content procurement created up to five times the employment for the same investment¹⁰⁴. A water project in Saudi Arabia demonstrates this through the requirement for the employment of local labour in the procurement contract (see *Box 14: Illustrative example – Robust enforcement of inclusivity policy in the Kingdom of Saudi Arabia*).

18. Establish a Social Equity Plan to facilitate interaction between the procuring agency, bidders and groups in society at risk of being discriminated against, to encourage dialogue and participation in the process.

5 Construction and operation

19. Assess potential labour supply and demand issues, as the integration of specific inclusivity targets may be inhibited by current market conditions.

For instance, even if targets have been set, there may be insufficient skills within the local labour market to deliver the project, which prevents the integration of workers from vulnerable groups. Therefore, governments may need to provide facilitation and guidance to ensure contractual inclusivity objectives can be achieved. The *U.S. Bank Stadium Case Study* (see *Section 4*) offers a good example of undertaking a gap analysis to examine the projected labour requirements.

20. Offer employment and training to members of groups in society who do not have equal access to employment for construction and operation roles.

An effective and successful method of doing this has been demonstrated in the U.S. Bank Stadium project, which developed an Equity Plan for the design and construction phases. A key element of this plan was workforce utilisation targets in relation to women and minorities, as well as targets for engaging women- and minority-owned businesses. An Equity Plan was also created for the operation of the stadium and replacement works, which featured similar mechanisms to drive inclusivity.

In another example, a lack of training and skills was identified as being one of the reasons that there were no female bus drivers in Almaty, Kazakhstan. This was addressed through training, supported by the EBRD. The training went beyond the skills needed for the actual job to include enhancing the skills of the human resource team. This led to an increased ability to approach and attract female bus drivers as part of the recruitment efforts (see *Box 9: Illustrative example – EBRD's Economic Inclusion Strategy and Inclusion Policy Engagement*.)

¹⁰³ Infrastructure: A Game-changer for Women's Economic Empowerment, (Biswas & Mohun, 2016)

¹⁰⁴ Of nets and assets: Effects and impacts of employment-intensive programmes - A review of ILO experience, (Keddeman, 1998)

21. Implement a robust payment mechanism in line with the agreed inclusivity targets.

As demonstrated in the *U.S. Bank Stadium Case Study*, approval of work and release of payment was only provided upon successful achievement of workforce utilisation targets and agreed integration of women- or minority-owned businesses in the project. Measures of non-compliance were also stipulated in the contracts between the implementing authority and the private sector.

6 Monitoring and evaluation

22. Align monitoring and evaluation with the overall program or project objectives and integrate measurable parameters.

In the U.S. Bank Stadium project, one of the main objectives was to distribute economic benefits of the urban development to women and minority groups in Minnesota. Parameters for monitoring and evaluation were included throughout the entire project lifecycle to ensure the program's objectives were met. These were specific targets, such as the share of women and minority workforce employed and share of women- and minority-owned businesses contracted.

23. Ensure the findings feed into the policy and regulatory cycle to integrate lessons learned on inclusivity.

Benefit realisation and lessons learned reports are powerful references for policy-makers. The London 2012 Olympic and Paralympic Games Committee prepared a 'lessons learned' report with detailed drawings and specifications on inclusive design. This legacy report provides practical reference for the future implementation of universal policies and designs for large infrastructure projects¹⁰⁵.

7 Decommissioning¹⁰⁶ and upgrading assets

24. Formulate a decommissioning or upgrade plan.

For infrastructure assets, especially long-term or large projects, it is crucial to have a decommissioning plan or asset upgrade plan in place. These are complex processes beginning far in advance of the expected decommissioning or upgrade dates¹⁰⁷. Proper planning can be achieved by an appointed team or committee tasked to produce comprehensive decommissioning or asset upgrade plans. This plan should be systematic and in accordance with regulatory requirements. The decommissioning and upgrading plans will also identify and mitigate micro and macro social issues that may arise¹⁰⁸ from these activities.

Decommissioning or upgrading infrastructure assets can have far-reaching implications. Socioeconomic factors relating to the workforce involved in the operational facility, or the local and wider community, are key to evaluating the success of the process¹⁰⁹. For example, if staff members are made redundant, it can have a significant impact on the individual and on the local community, especially in remote locations where the site is a major source of local employment and revenue¹¹⁰. Governments should require the incorporation of inclusivity principles into decommissioning plans to ensure that such plans take into account members of groups that do not have equal access to employment or are disadvantaged by technological changes. Retraining and reskilling the workforce in anticipation of decommissioning is one key aspect of inclusive planning that can be explored. One good example was demonstrated in the Build Up Skills Norway program, where onsite construction workers were given education, training and life-long learning to transition to energy-efficient building and the use of renewable energy¹¹¹.

¹⁰⁵ Inclusive Design Standards (London Legacy Development Corporation, 2012)

¹⁰⁶ Used as shorthand for the complete process of ending operations of the infrastructure asset.

¹⁰⁷ From late-life operations to decommissioning – maximising value at every stage, (McKinsey & Company, 2015)

¹⁰⁸ Managing the Socioeconomic Impact of the Decommissioning of Nuclear Facilities, (International Atomic Energy Agency, 2008)

¹⁰⁹ Managing the Socioeconomic Impact of the Decommissioning of Nuclear Facilities, (International Atomic Energy Agency, 2008)

¹¹⁰ Managing the Socioeconomic Impact of the Decommissioning of Nuclear Facilities, (International Atomic Energy Agency, 2008)

¹¹¹ Build Up Skills Norway, (European Commission, 2018)

BOX 13: ILLUSTRATIVE EXAMPLE – HOW TO OVERCOME THE HURDLES OF LAST MILE INFRASTRUCTURE

Project summary

The German Corporation for International Cooperation GmbH (GIZ) shared its experience in Kenya and Zambia in a 2015 report. Experience and research showed that, despite significant investment in the water sector (specifically, in clean water, sanitation and hygiene), low-income groups had been neglected. To achieve successful last mile infrastructure investments, sectoral reform was necessary. This example shows how barriers were identified and, over the process of several years, solutions were developed and implemented at all levels, and throughout various project stages (policy, project identification, financing, implementation, operation and maintenance). Policy interventions included developing an overall framework, which was essential for implementation.

Implementation

Through a better understanding of the challenges and barriers, it was possible to identify various approaches as follows:

- Foundations for scaling up
 - a sector framework covering all project stages (including operations/asset renewal)
 - policy interventions requiring utilities to focus on inclusivity issues
- Institutional mechanisms for implementation
 - establishment of information systems to manage scaling-up
 - development of an innovative financing mechanism through a Trust Fund
 - oversight undertaken by a regulatory body
- Tools and standards for last mile access solutions to enable capacity building
 - preparation of implementation toolkits for last mile water supply and last mile sanitation

Outcomes

The combination of innovative financing mechanisms, a pragmatic stance on service options, and an emphasis on continuous capacity development activities to support sustainable operations of last mile infrastructure have delivered the following in a relatively short time span:

- more than 2.7 million people have been reached with last mile investments in safe drinking water supply within seven years;
- more than 135,000 people gained access to adequate sanitation within the last five years;
- households made substantial savings, incidences of waterborne diseases declined, hygiene improved and the burden of fetching water, usually the task of women and children, has been significantly reduced;
- women have been empowered because they provide and manage water for the household. The reduction in the time needed to fetch water has enabled them to spend that time more productively; and
- remote communities and low-income areas, that were often neglected in the past, now have sustainable access to water services.

Source: GIZ – Closing the Last Mile for Millions, Sharing the Experience on Scaling up Access to Safe Drinking Water and Adequate Sanitation to the Urban Poor

BOX 14: ILLUSTRATIVE EXAMPLE – ROBUST ENFORCEMENT OF INCLUSIVITY POLICY IN THE KINGDOM OF SAUDI ARABIA

The general standard enforcement process used in the Kingdom of Saudi Arabia (KSA) enforces inclusivity at the project level. The Government of Saudi Arabia has mandated the wastewater implementing authority (the Water & Electricity Company (WEC)) to develop and implement more than 15 wastewater treatment plants across the country using public-private partnerships (PPP) on a Build-Operate-Own (BOO)/Build-Operate-Own-Transfer (BOOT) basis. The objectives of this program are:

- to reduce the infrastructure gap and improve the wastewater collection and treatment currently existing in KSA, where less than 50% of wastewater is currently collected and treated; and
- to achieve more social equity and social stability, as well as job creation and equal access to labour market opportunities (“Saudisation”).

WEC set out expectations as part of its tender documents. Targets were agreed contractually with developers, engineering procurement contractors, and operation and maintenance contractors for local Saudi content (50% during construction and up to 70% during the operations and maintenance phase) and are being followed up through a monitoring mechanism. Achievement of targets is necessary for work approval, and in the case of failure, financial penalties will apply.

The impact is the creation of employment opportunities in country. Overall, it supports the government’s efforts to address inequalities, social disparities and discrimination.

Source: Atkins internal expert

PROJECT MANAGEMENT AND SUPERVISION

Overview

Project management in infrastructure is an activity that takes place during all stages of a project’s lifecycle, including the planning, design, financing, procurement, construction, operation, monitoring, evaluation and decommissioning of a project.

An effective project management strategy delivers major infrastructure projects on time, on budget and within prescribed specifications, and requires economic, environmental and social considerations¹¹² to be embedded in the project management approach and methodology.

Inclusive project management and supervision consider all the inter-related aspects of projects, pertaining not only to the composition of the project management team and the application of processes, but also to the use of best practices that allow for an open system, effective implementation and monitoring of inclusivity targets of a project.

The integration of inclusivity in project management and supervision ensures alignment with policy and provides checks and balances for successful implementation. Defined targets are monitored, and in case of non-compliance, escalation procedures are in place to address the problem.

Relevance

Project management for large infrastructure projects needs to be applied as an open system, considering the complex and intertwined relationship with the areas, sectors and communities which projects traverse and impact upon. An open system involves continuous interaction and interdependency with the changing environmental, social, economic, physical, institutional and political context¹¹³.

At the policy level:

- *Ensuring effective project management through policy implementation.* A project management policy is a framework describing the key elements in the management of all projects. The applications at policy level ensure that projects are effectively managed within the budget, time, risk and specifications;

¹¹² Mega Projects and Mega Risks: Lessons for Decision-makers through a Comparative Analysis of Selected Large-scale Transport Infrastructure Projects in Europe, USA and Asia Pacific, (OMEGA Centre, 2011)

¹¹³ Mega Projects Executive Summary: Lessons for Decision-maker: An Analysis of Selected International Large-scale Transport Infrastructure Projects, (OMEGA Centre, 2012)

that appropriate governance, control, authorisation and acceptance are established; that stakeholder management is inclusive; and that benefit realisation reviews are conducted at the closing of the project. Some leading examples of project management policies adopted in the UK and Australia are publicly available¹¹⁴.

At the project level:

- *Establishing project teams responsible for the management of each stage of the project.* Major infrastructure projects have multiple teams concerned with various aspects of the project, including achievement of the inclusivity objectives. Accordingly, the process of project management is one of developing an appropriate plan, with checks to review the performance of the teams and the project against an overall project plan.
- *Assigning a project team according to the institutional set-up.* A team is appointed by the government's implementing agency; depending on the institutional set-up in the country, this can be a dedicated team within the responsible implementing agency or a project management board composed of representatives from the various institutions involved.
- *Coordinating project management responsibilities.* Contracted delivering entities, whether privately-owned or state-owned enterprises, have their own internal project management teams that work with the project team appointed by the implementing agency.
- *Monitoring inclusion throughout the project lifecycle.* Tracking and monitoring inclusivity targets throughout project implementation, from construction to operation, is one of the functions of the project management team. The use of a transparent platform for monitoring that is accessible to all relevant stakeholders (the implementing agency, the contracted delivering entity, etc.) should be considered. In the U.S. Bank Stadium project, the project management team utilised a bespoke web-based solution to monitor compliance of contractors, subcontractors and vendors with the agreed inclusivity targets (see *U.S. Bank Stadium Case Study* in Section 4).

Guidance

The following inclusivity principles should form part of project management practices. A detailed mechanism to integrate these principles throughout the project lifecycle will need to be further elaborated based on the requirements of the specific project. The following guidance is based on the universal principles of project management methods such as PMBOK¹¹⁵ and PRINCE2¹¹⁶. Inclusive tasks within each generic process flow are highlighted as guidelines.

1 Initiating

1. **Identify the resources available, including budget, talent, allocation of time, regulatory support and governance structure.**

These dedicated elements are instrumental to effectively implementing inclusion objectives in the project.

2. **Define the project's inclusivity goals by conducting a feasibility study.**

The study is a generic term of reference that provides details on social inclusion aspects to be examined and analysed. It is a checklist of possible issues to be investigated¹¹⁷.

3. **Establish a project governance structure with the social inclusion team reporting to the advisory or oversight board.**

The specialist team should have enough authority to manage and control the project resources and participants to achieve pragmatic inclusivity targets. The roles and accountabilities of all the participants are defined in the governance structure.

4. **Alternatively, hire a Gender Equity and Social Inclusion (GESI) specialist to manage the inclusion plan in parallel to the project management team.**

In the *U.S. Bank Stadium* and *TransMilenio BRT Case Studies*, the hiring of social inclusion specialists to lead the project management for the social equity plans was instrumental to the successful delivery of the project's inclusivity objectives.

¹¹⁴ In the UK, *Guidelines for Managing Projects - How to organise plan and control projects* (Department for Business Innovation & Skills, 2010). In Australia, *Project Management Framework and Policy* (Federation University of Australia, 2010).

¹¹⁵ Project Management Body of Knowledge by the Project Management Institute (PMI)

¹¹⁶ *Projects in Controlled Environment*, UK Government

¹¹⁷ *Gender Equality Social Inclusion Tools and Guidelines Update* (Climate Resilient Infrastructure Development Facility, 2016)

5. Conduct a screening of social inclusion issues with an initial assessment and justification as to what the expected positive and negative social impacts will be.

In addition, the screening process requires a further assessment on how and to what extent the project will benefit the vulnerable groups. This initial assessment is used as a basis for the design and planning stages. Where possible, all baseline studies should include quantitative data disaggregated by gender, socioeconomic groups, age, preferences, etc.

Refer to the guidelines detailed in the practices for Data Collection and Stakeholder Identification, in Action Area 1: Stakeholder Identification, Engagement and Empowerment. An example is the “Disparity Study”¹¹⁸ developed by the City of Minneapolis in the United States, which served as the initial screening for the development of the city’s inclusive urban development plan (refer to the *U.S. Bank Stadium Case Study* in Section 4).

2 Planning

6. Confirm objectives, scope, benefits and risks in an inclusive business case.

The business case for the Mi Teleférico cable cars project in Bolivia clearly set out the government’s intention to achieve affordability, accessibility, inclusivity, and financial sustainability (see *Mi Teleférico Cable Car Case Study* in Section 4). For more information, please refer to Action Area 6: Affordability and Optimising Finance.

7. Create escalation procedures and de-bottlenecking processes in case of conflicts and disputes.

They should be defined upfront and should be part of the project management plan. Tailored procedures in relation to inclusivity-specific challenges should be anticipated. For example, the Metropolitan Expressway in Tokyo, Japan, incorporated an escalation procedure to address the residents’ demand for a more inclusive and environmentally sensitive design solution (see *Box 15: Illustrative example – De-bottlenecking processes for the Tokyo Metropolitan Expressway, Japan*).

3 4 Executing

8. Develop a detailed work plan with realistic and practical actions that are accepted by all implementing parties.

The detailed work plan should also differentiate between specific interventions supported by the implementing agency and the project company and its contractors. In the U.S. Bank Stadium project, the Equity Plan set out pragmatic goals to integrate women, minorities and low-income residents in the workforce, and women- and minority-owned businesses in the design and construction activities of the project.

9. Develop a resource procurement plan with clauses embedded to ensure all delivery parties (contractors, designers, engineers, specialists) understand the inclusivity objectives and take appropriate action.

Projects such as the Water Sector Trust Fund in Kenya and the U.S. Bank Stadium in Minnesota show how this can be achieved in practice (see Case Studies in Section 4).

10. Ensure the action plan has monitoring and evaluation indicators and targets, which are linked to inclusion.

There are different types of indicators that correspond to each part of the project development cycle, such as risks, input, process, output, outcome and impact indicators.

5 Controlling

11. Manage quality, risk and change.

A useful tool to implement is a web-based reporting system, which should be available to all the participants of the delivery team. The project management team of the U.S. Bank Stadium project developed a web-based tool to manage all of the contractors involved in the project. It provided an efficient and transparent reporting platform for all parties involved.

12. Require monitoring and reporting of inclusivity indicators within a specified time-frame and frequency.

Attention should be paid to progress against inclusivity objectives, as well as any barriers encountered and possible mitigation strategies to resolve the issues. These reports should be made public, where possible, to provide greater transparency and accountability. The social inclusion team/specialist should control the charter, budget, and risk management, and should prepare periodic status reports.

¹¹⁸The State of Minority- and Women Owned Business Enterprise: Evidence from Minneapolis (NERA Economic Consulting, 2010)

13. Manage stakeholders.

The Metropolitan Expressway in Tokyo successfully implemented a stakeholder management process resulting in major improvements to cost reduction and conflict resolution. For a summary of the stakeholder engagement process, see *Box 15: Illustrative Example – De-bottlenecking processes for the Tokyo Metropolitan Expressway, Japan*.

For detail on this guidance refer to Action Area 1: Stakeholder Identification, Engagement and Empowerment.

6 7 Closing

14. Prepare a 'lessons learned' report with as much information as possible to generate efficiencies in the future.

The 'lessons learned' report is a valuable legacy of the project and can increase the impact of the inclusivity work of the project. An example is the Learning Legacy Report from the London 2012 Olympic and Paralympic Games¹¹⁹ construction project. It sets out the inclusive design standards used in the construction projects and highlights examples of best practice and tools and templates that proved to be successful in this large and complex project.

15. Develop a benefits realisation report following construction of the project, and at intervals during operations, to assess whether the benefits realised are according to the targets outlined in the business case¹²⁰ and to inform future initiatives.

Reporting should include a dedicated section on the results of the social inclusion activities, at completion of construction and at regular intervals during operations.

The U.S. Bank Stadium, Colombia's TransMilenio bus rapid transit system, Mi Teleférico in Bolivia, and Kenya's Water Sector Trust Fund are projects that update their benefits realisation reports periodically and make them available on their websites (see *Section 4* for Case Studies on these projects).

¹¹⁹ Inclusive Design Standards (London Legacy Development Corporation, 2012).

¹²⁰ Guide to Project Management: Getting it right and achieving lasting benefit (Roberts, 2013)

BOX 15: ILLUSTRATIVE EXAMPLE – DE-BOTTLENECKING PROCESSES FOR THE TOKYO METROPOLITAN EXPRESSWAY, JAPAN.

Project summary

An 18.2km section of the Metropolitan Expressway, the Central Circular (C2) Shinjuku Route, known as the Yamate Tunnel, opened in December 2007 for the initial section and in 2015 for the entire tunnel. The project is the world's longest in-city road tunnel. It runs alongside major utility infrastructure and is crossed by 11 rail lines. The project aimed to address the serious congestion expected in the future urban development of Tokyo.

The project was appraised at USD 5.5 billion. Its planning started in the 1970s; the construction started in 1992, running 18 months behind schedule due to the 1990s financial crisis and opposition from residents.

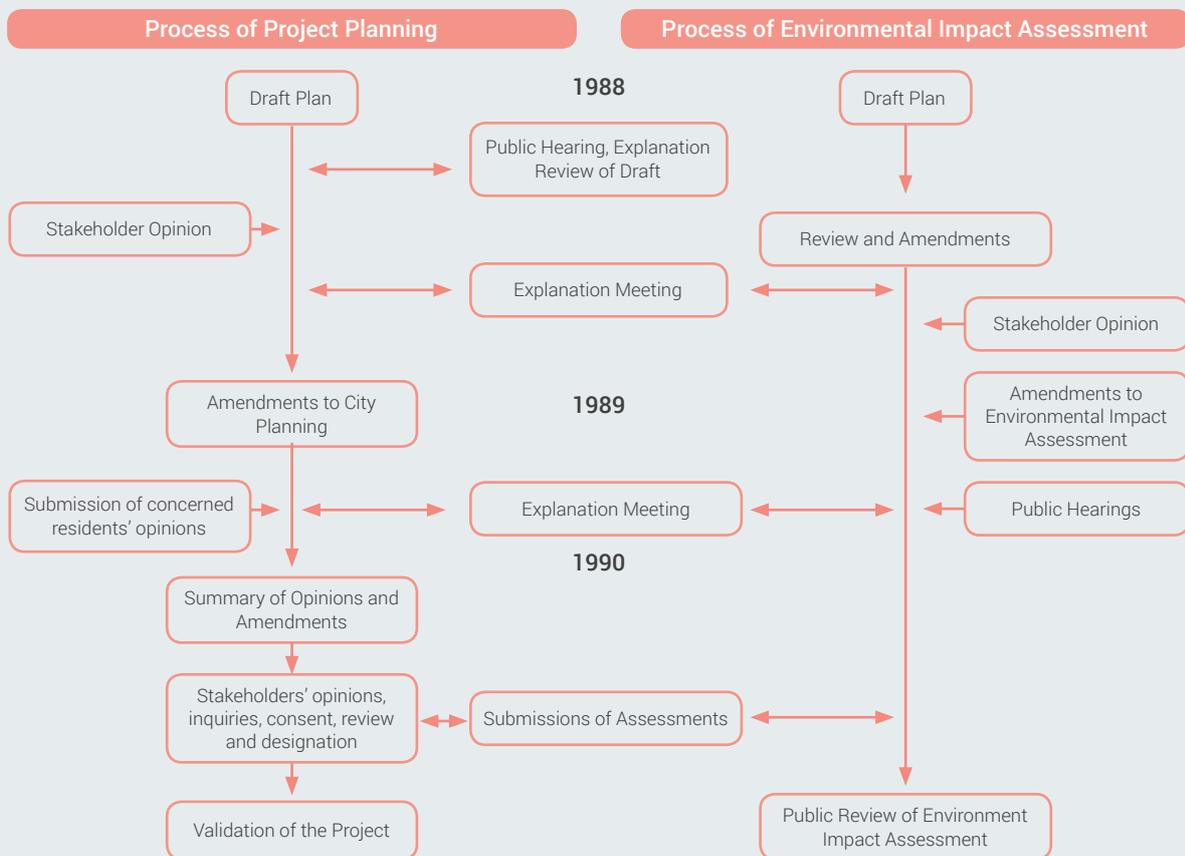
During the delay, the project management team took the opportunity to introduce stakeholder engagement processes and generated more efficient and highly successful technical innovations. As a result, the additional time allowed the project management team to adapt to the new context and effectively reduce costs, improve the schedule, modify specifications and de-bottleneck the opposition and conflicts from local communities.

Open system project management was the key to the successful completion of the project. The new process successfully established an escalation procedure for the public's concerns. Due to the public's input, the specification of the expressway radically changed from elevated design to underground tunnelling. Noise and pollution concerns were addressed with new shield methods and ventilation designs. Sites of natural beauty and cultural properties were preserved.

As a result, the conflicts were not only successfully managed but led to many positive achievements. The construction schedule was improved with innovative technologies. The project was completed at 1% under budget. New specifications allowed for the use of more advanced technologies, and the residents' demands for a more inclusive and environmentally sensitive design solution were addressed.

Displayed below are processes for the City Planning and Environmental Impact Assessment for the Metropolitan Expressway C2 Shinjuku Route.

Source: Project profile Japan C2 Shinjuku Route (Centre for Mega Projects in Transport and Development, Omega Centre, 2012).



INCLUSIVE URBAN DEVELOPMENT

Overview

Integrated planning and delivery approaches may create significant benefits in urban settlements. A holistic approach across all sectors within an urban context leads to better coordination and an increased understanding of dependencies. It also helps to identify the needs of various social groups, particularly vulnerable groups, so solutions that benefit everyone living in urban areas can be developed.

Inclusive urban infrastructure development is defined as an integrated approach encompassing sustainable, resilient, accessible and affordable solutions to the challenges faced by poorer urban residents and other vulnerable groups by enhancing their access to urban services and infrastructure through targeted investments¹²¹.

Using this definition, an integrated approach in urban planning goes beyond the identification of benefits related to individual sector approaches and considers benefits to the wider community in an urban area, particularly to specific communities that benefit from improved transport links, greater urban space and access to basic utilities such as water and electricity.

An inclusive approach to urban development can help to create more cohesive communities, where people from various social groups live together in the same neighbourhood. This encourages positive behaviours, promotes understanding and discourages segregation and the creation of slum areas.

Urban planning approaches should enable the development of communities where people can live, work and play by, for example, locating residential areas within the vicinity of commercial and industrial areas that provide employment. Master planning is key to this. For instance, in Singapore, affordable housing solutions are carefully located to ensure the proximity of these communities to healthcare facilities, transport links (bus stops and train stations), and working districts.

Projects must also consider the socio-cultural context. For example, in 2017, Singapore had a population density of 7,916 people per square kilometre compared to Kenya's 87¹²². In urban, land-scarce and highly populated cities, such as Singapore, high density housing of 15- or 30-storey units is considered socially acceptable.

However, in other countries, such as Kenya, where people are used to living far apart but close to the land, a similar high-rise solution might not be appropriate. There are several statistical and mapping tools that help to assess how an urban community occupies the available space. They can be used to identify patterns of urbanisation, which can be used to inform a developer's approach to inclusive infrastructure.

Inclusive urban development has been highlighted as a separate practice to illustrate the importance of integrated, cross-sectoral approaches at a program, as well as project, level of planning, development and delivery

Relevance

At the policy level:

- *Considering under-served groups in urban planning and development.* Inclusivity must be considered as part of local urban planning policies (such as land use plans, city zoning strategies, etc.), as well as national development planning policies. This is to ensure that, in the planning of urban spaces, which involves transport, water and power utilities and other community services, the needs of vulnerable groups and local communities are considered.
- *Assessing planning alternatives to solve problems caused by rapid urbanisation.* The ways in which cities are planned and built are changing rapidly. This continuous urbanisation can strain the resources and the available space in a city and may lead to social challenges which require the exploration of alternative development options, while still making sure that liveable communities are developed.

At the project level:

- *Aligning projects to the overall city development strategy.* Project strategies must be aligned with the city's development plans, especially on land use and social integration, so that projects contribute to the overall city master plan.
- *Considering the needs of under-served and vulnerable groups early in the project lifecycle.* Inclusivity should be integrated in the project planning phase, where it can affect the strategy and objectives of a project. This involves conducting demand studies and considering the needs of various income groups, and other vulnerable or under-served groups.

¹²¹ ADB Tool Kit for Inclusive Urban Development, (Asian Development Bank, 2017)

¹²² Data on population density, (World Bank, 2018)

Guidance

1. Develop a City Poverty and Vulnerability Profile (CPVP) using the following steps¹²³:

- i. *Develop scope*: Undertake a preliminary, or scoping, appraisal of the city, including an analysis of its role in the national urban system. Consolidate the CPVP through data gathering and mapping, including an annotated city base map, a sociocultural map, a vulnerabilities and/or spatial risk data map, and a future urban expansion map.
- ii. *Review*: Conduct a comprehensive review of available literature on the urban sector policies and regulatory frameworks, including related policies and strategies for climate change and disaster risk management. This involves understanding what makes a successful urban economy and how to achieve poverty-alleviating growth, placing emphasis on mechanisms that build assets and generate income for low-income groups.
- iii. *Validate*: Validate the city development strategy or city development plan based on timeframe, risks, action plan, and baseline audit.
- iv. *Output*: The CPVP will provide baseline data and analysis of the key economic, environmental and social challenges in the city. It will also provide a policy and standards review to enable policy reform, as well as contain sector assessments, and provide key investment shortfalls by sector.

2. Create a multi-sectoral and integrated approach.

In the process of building inclusive cities, policies and projects often affect the functioning of multiple sectors, sometimes with detrimental effects to urban low-income communities and/or to inclusivity. For example, the design of a mass transit system that reduces the travel time to central areas of the city is beneficial for all citizens. However, it increases land values and rents along the route. Therefore, the low-income residents may be pushed out of inner-city areas unless complementary public housing or urban upgrading programs are also undertaken¹²⁴.

3. Use a framework to conduct an inclusive needs assessment.

The Asian Development Bank 2017 publication *Enabling Inclusive Cities: Toolkit for Inclusive Urban Development* contains a sample framework for assessing inclusivity needs, covering issues such as income, social protection, education, and health¹²⁵. A graphic of the framework is presented in Figure 9, next page.

¹²³ ADB Tool Kit for Inclusive Urban Development, (Asian Development Bank, 2017)

¹²⁴ ADB Tool Kit for Inclusive Urban Development, (Asian Development Bank, 2017)

¹²⁵ ADB Tool Kit for Inclusive Urban Development, (Asian Development Bank, 2017)

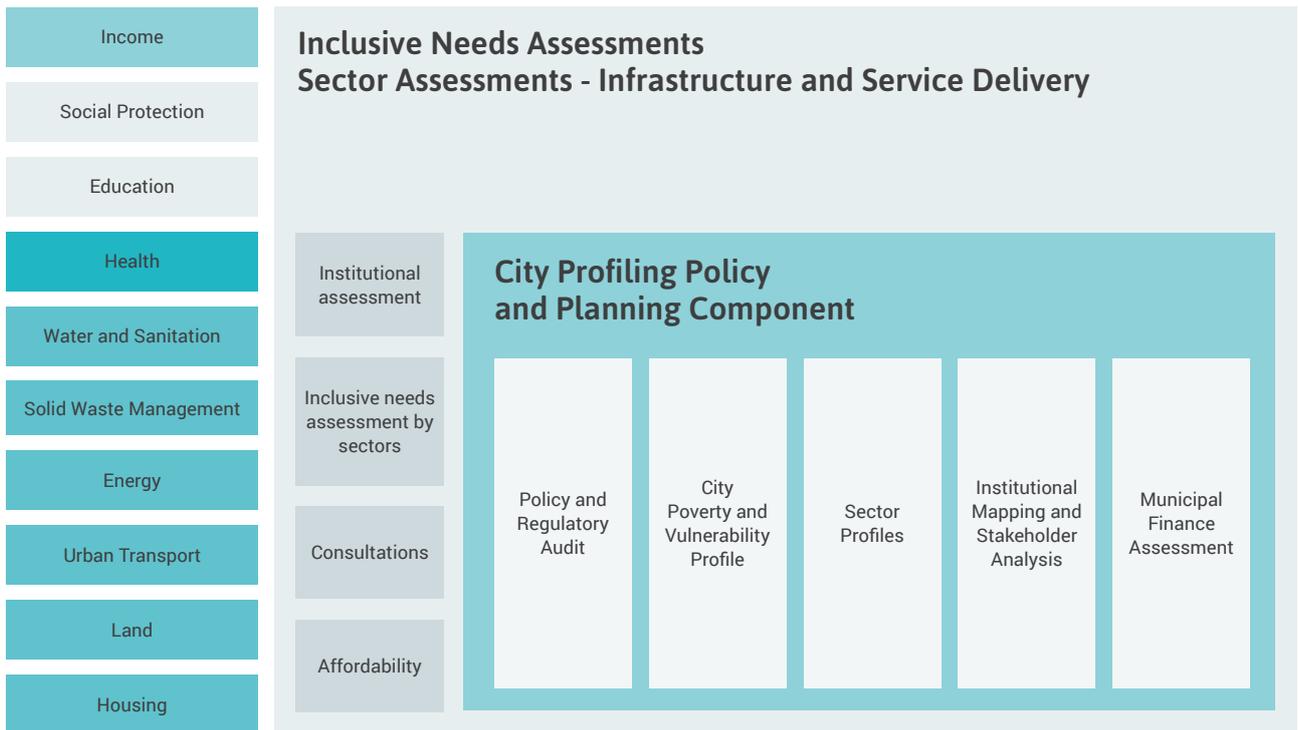


Figure 9: Framework for inclusive needs assessment of urban development

Example

A practical example of the ways inclusivity in urban development can be addressed is set out in the following illustrative example from Colombia's capital Bogotá.

BOX 16: ILLUSTRATIVE EXAMPLE - INCLUSIVE URBAN DEVELOPMENT IN BOGOTÁ, COLOMBIA

The Bogotá Urban Service Project was developed in line with the city's 10-year Spatial Plan and Development and Land Use Plan. It focused on building an inclusive and equitable city and improving people's quality of life through improved access to public transport, better sanitation services and potable water. As well as providing new public transport options through the development of the TransMilenio bus rapid transit system, the project also involved the planning and legalisation of neighbourhoods (*barrios* in Spanish), the construction of storm water, water and sewerage systems, and the creation and rehabilitation of public spaces and community services. Low-income areas were targeted, and disaggregated data was collected in these areas.

One of the lessons learned from previous upgrades was that improvements to the urban area should take into account the public's views and preferences. Accordingly, during the project preparation stage, local planning frameworks [*fichas normativas* in Spanish] were developed. More than 5,200 community leaders were involved in that process. Each team worked with groups of citizens to build local capacity in project planning and implementation. The local planning frameworks also served as the basis for the generation of demand-driven sub-projects. This participatory planning approach fostered a sense of community and increased public involvement in local projects. This, in turn, improved participation in the decision-making process and ensured that all work was tailored to the needs and expectations of the communities.

Source:

World Bank (March 2015), Implementation Completion and Results Report – Bogotá Urban Services Project

<http://www.worldbank.org/en/results/2015/08/13/better-transport-water-and-sanitation-for-the-urban-poor-in-bogota>

APPLICATION TO TARGETED STAKEHOLDER GROUPS

The general guidance in Action Area 4: Project Planning, Development and Delivery applies to all stakeholder groups, and emphasises the importance of considering inclusion at all stages of the project cycle and in a cross-sectoral manner. Some points on the application to specific stakeholder groups are outlined below.

Low-income groups

Low-income groups are amongst those that risk being excluded but also have the potential to benefit most from inclusive project planning, development and delivery through access to employment and other opportunities. Participatory approaches can help in incorporating the views from people living in all corners of the community, particularly in low-income areas.

Women

The different needs and concerns of women have often traditionally been left out of technical planning for infrastructure, services and related policies. Applying a gender perspective to infrastructure projects can benefit service providers, their customers and society in general. For example, in Colombia, the Bogotá Mobility survey showed that, for many women, the pattern of use of public transport included consequent trips of shorter duration throughout the day and often included trips taken with children – these characteristics have implications for the design of routes and frequency of services.

In developing countries, women often bear the primary responsibility for collection of water and its use in the household, but they are frequently left out of the discussions and decision-making around improving water services.

People with disabilities

Consulting and involving people with disabilities throughout the project lifecycle will not only help to ensure that infrastructure is more accessible, but will also help to identify wider employment opportunities, such as the procurement of enterprises owned by people with disabilities, and to provide feedback to further strengthen operational issues.

Age demographics: youth and older persons

It is also important to consider the needs and opportunities of people in various age groups. Age demographics are changing in many parts of the world. In Africa, the number of youth (aged 15-24 years) is continuing to grow rapidly and by 2030, it is predicted that the number of youth will have increased by 42% from 2015 levels. However, youth unemployment and inadequate skill levels to access jobs are already challenging issues. As illustrated in the *Cairo Metro Case Study*, infrastructure can play an important role in tackling youth unemployment, and these opportunities should be considered together with appropriate initiatives in skills assessment and training¹²⁶.

At the same time, the world's population, overall, is ageing. While this demographic trend is most prominent in high-income countries, virtually every country is experiencing growth in the number of old people in their population, with this growth occurring more quickly in urban areas than in rural areas. In 2015, a third of Japan's population was 65 years or over, with citizens also becoming more active for longer periods of their lives. These demographic transitions make it increasingly important that the planning and design of infrastructure and public services consider the needs of both youth and older persons throughout the project cycle.

Infrastructure, including housing and public transportation, and urban environments should support people with a diverse range of functional capacities and help support their productivity, mobility and independence. Safety and accessibility of infrastructure, including for those of limited mobility or with hearing and visual impairments, will benefit both young families and old persons. Policies, such as those illustrated in *Box 21: Illustrative example – Concessionary bus fares, free travel for older people and people with disabilities, United Kingdom*, support the mobility of older people, many of whom are no longer able to drive. New technologies, including mobile devices, also offer new channels for reaching and supporting older people, and governments should help bridge the digital divide through technology training for older persons. However, stakeholder engagement and ongoing interfaces, such as payment mechanisms, for example, should be designed taking into account every age demographic, whilst also considering the appropriate channels for those that cannot or will not access digital technologies¹²⁷.

¹²⁶ Youth population trends and sustainable development, (United Nations Department of Economic and Social Affairs Population Division, 2015)

¹²⁷ World Population Ageing, (United Nations, 2015b)



ACTION AREA 5: PRIVATE SECTOR ROLES AND PARTICIPATION

Key messages

- The private sector can play a role in improving inclusivity in infrastructure projects, but careful planning is necessary to ensure this result.
- The appropriate application of incentives, such as the linking of government payments to inclusive outcomes, can help to align the private sector with government inclusivity objectives, such as improving gender equity in access to infrastructure services.
- Many large infrastructure projects are monopolistic by nature. Regulation of infrastructure can promote and enforce compliance with government objectives, such as the desire to meet the basic infrastructure needs of low-income households.
- The creation of jobs is an important part of tackling poverty. Infrastructure projects can both directly and indirectly promote employment. Policies can be established to improve inclusive job opportunities and increase the involvement of small and medium-sized enterprises owned by minority groups that are likely to face discrimination and higher barriers to entry.
- The private sector can help develop innovations in infrastructure, which can assist in meeting the specific needs of disadvantaged groups, such as people with hearing disabilities.
- The general principles and guidance under this Action Area are applicable to all stakeholders, but some of the recommended approaches to private sector participation in this Action Area are sector-specific. All recommendations should, however, be adjusted, as necessary, to take into account the individual features of the infrastructure project under consideration, so as to optimise opportunities that will benefit targeted stakeholder groups.

Three key practices have been identified under this Action Area for which further detail and guidance is given in the sections below:

Incentives and
Legal/Regulatory Controls

Inclusive Opportunities
for Businesses

Innovation and Technology

DEFINITIONS AND CONTEXT

Definitions

This Action Area deals with the use of mechanisms to align private sector investment in infrastructure with the inclusivity objectives of the government. These mechanisms can include both financial and non-financial **incentives**, as well as **legal and regulatory** compliance arrangements.

This Action Area also covers **inclusive opportunities for businesses** - the promotion and improved integration of small and medium-sized enterprises owned by women or any other minority group that may face discrimination and higher barriers to entry to participation in major infrastructure projects, relative to other enterprises.

Innovation and technology play a significant role in infrastructure projects and offer new opportunities to overcoming barriers and addressing the needs of previously under-served or vulnerable groups.

Context

This Action Area provides guidance on how to create incentives and legal/regulatory arrangements that encourage private sector participation in inclusive infrastructure projects. It focuses on private sector involvement in projects to leverage skills and efficiencies, share risks and provide financing to accelerate development and to align with the inclusivity objectives of governments.

The extent of private sector participation in infrastructure, and the innovative financing mechanisms available, varies across sectors and with the level of national economic development¹²⁸. Attracting private investment, particularly using a PPP model, may be viewed as a challenge for some governments, as it requires creation of a robust investment environment and steep learning curves in respect of PPP procurement processes. To benefit most from private sector involvement, a detailed assessment of each project must be conducted, and bespoke solutions developed to target desired inclusivity outcomes. This involves having an in-depth understanding of constraints, opportunities and regulatory aspects that are unique to each project.

Private sector interest in major infrastructure projects is driven largely by expected financial returns. Policy interventions, regulatory frameworks, and both financial and non-financial incentives can be created to encourage private sector participation in achieving the government's inclusivity goals. Integrating inclusivity in infrastructure projects will require additional effort to address any sectoral market concerns and the needs of the beneficiaries.

To increase the participation of vulnerable or marginalised groups in employment opportunities from infrastructure projects, specific efforts can also be made to address market entry barriers and possible discrimination faced by small and medium-sized enterprises owned by women or other minority groups that want to participate in projects but face challenges in accessing the opportunities.

In terms of the wider benefits, most low-income households in developing economies depend on private sector activities, such as the sale of food and cash crops, labour and other services, for their livelihood. These activities are affected by the quantity and quality of infrastructure services and by having reliable access to these services. Consequently, interventions to improve infrastructure, particularly mobility and connectivity, can play a major role in reducing poverty¹²⁹. Analysis should be made of any complementary activities that may be required in tandem with the infrastructure itself to unlock these wider opportunities.

Private sector innovation and the development of new technologies (facilitated, frequently, with government support through research, guidance, tax breaks and grants) can be harnessed to facilitate improvements to infrastructure. Private sector innovation can also help to bring fresh ideas to the challenge of providing better access to infrastructure for disadvantaged groups, and improving the engagement of such groups with infrastructure development decision-making.

¹²⁸ Public-Private Partnership Monitor, (Asian Development Bank, 2017); Private Participation in Infrastructure Annual Report. (Hong, Saha, Shao, Modi, & Zemlytska, 2018).

¹²⁹ A Sourcebook for Poverty Reduction Strategy, (Klugman J., et al., 2002)

ANALYSIS AND GUIDANCE ON PRACTICES

INCENTIVES AND LEGAL/ REGULATORY CONTROLS

Overview

Private sector involvement in infrastructure in emerging markets stands at about 20% of infrastructure investment, compared with 70% in developed economies¹³⁰. This disparity can be attributed to several issues, including concerns regarding political stability, corruption and the lack of a stable, transparent, reliable and mature legal/regulatory environment. There is much onus on government to provide a predictable enabling environment to attract private sector participation.

When properly managed, increased private sector involvement in major infrastructure projects can have several advantages. First, it has the potential to increase the pace or extent of infrastructure developments that provide essential public services. As countries and cities struggle to provide universal access to basic infrastructure and services, either due to an inability to efficiently deliver such services or a lack of sufficient financing, private sector involvement in infrastructure can bring innovation, expertise and a source of needed finance. Second, infrastructure development can have a positive impact on businesses by providing additional commercial opportunities (engineering and construction) or production capacity (manufacturing equipment, materials). Finally, infrastructure investments have a strong, complementary relationship with human capital growth - job creation and upskilling local workers are some of the indirect benefits of infrastructure projects. As such, investment decisions should be based not only on the immediate economic impact of a specific infrastructure project, but also on its potential to create long-term jobs and economic growth, taking into account indirect benefits¹³¹.

Private sector interest in major infrastructure projects is driven primarily by expected financial returns. Policy interventions and regulatory frameworks can be created to encourage private sector participation in achieving inclusivity goals. One method is through public-private partnerships (PPPs), where payment can be linked to the achievement of performance standards and inclusivity goals, where appropriate.

¹³⁰ Closing the financial gap (Chua, Lee, and Chalmers, 2017)

¹³¹ A Sourcebook for Poverty Reduction Strategy, (Klugman J. , et al., 2002)

Relevance

To effectively engage the private sector and achieve greater inclusivity benefits, incentives need to be applied at both the policy level and the project level.

At the policy level:

- *Identifying incentives within the enabling environment.* The legal/regulatory framework can identify incentives that can be used to ensure inclusivity is considered in infrastructure development. For example, granting subsidies to the private operators of public transport to enable them to offer concession fares (for selected groups, such as people with disabilities and the elderly).
- *Providing a clear policy and legal/regulatory framework.* Investors benefit from greater clarity and stability where there is clear policy and guidance relating to inclusion, inclusivity standards and procurement.

At project level:

- *Managing private sector performance.* Inclusivity can be defined as part of the performance management of the private sector provider involved in the project.
- *Linking performance to inclusivity measures.* Project-specific approaches and incentives related to inclusivity will determine the private sector's risk and return profile, which will affect their decision to participate in a project and commit to achieving the specified outcomes (particularly where payment is linked to achieving the inclusive performance measure).
- *Building capacity at the project level.* Skill development and capacity building can increase the private sector's understanding of inclusivity benefits and how to integrate them in practice.

Guidance

1. Consider potential opportunities where greater private participation can support government inclusivity objectives.

Many governments, in acknowledging the potential benefits of increased private sector participation, are considering the level of private sector involvement, such as privatisation or PPPs, for example, and its role in achieving economic growth, increased pace of infrastructure development, poverty reduction and reduced burden on public budgets.

When considering private participation, governments also need to consider the potential negative impacts, including assessing the potential impacts on under-served groups in society and fully evaluating the fiscal implications of such initiatives.

Policy objectives should include developing specific goals, policies, regulations and programs to ensure that the greatest impact on inclusivity is being achieved through private participation.

The following aspects should be considered when identifying appropriate options¹³²:

- analyse the impact of infrastructure on the identified target group(s);
- develop intermediate sectoral goals;
- design policies and programs;
- evaluate the fiscal implications of policy and program changes; and
- develop robust and measurable indicators, to monitor impact on the identified target groups.

2. Liberalisation can reduce the cost of services and ensure greater accessibility, but the associated regulatory regime needs to be well-developed and thorough to address specific needs.

Traditionally, many countries have used regulatory mechanisms to control private sector entities engaged in the provision of infrastructure services. The rationale for this practice was that, in many infrastructure sectors (such as the supply of power and water), the services were monopolistic in nature, such that the public interest could only be protected – in the absence of competition – by a regulator. Under such arrangements, traditional regulators have been able to require the regulated companies under their jurisdiction to provide services so as to achieve specified inclusivity objectives – such as, for example, the provision of ‘lifeline’ tariffs for low-income customers of electricity utilities (see Action Area 6: Affordability and Optimising Finance for a more detailed discussion of price regulation).

Over the last few decades, in a number of countries, arrangements have been put in place to introduce competition into sectors which were previously monopolistic – such as power generation. This has reduced the need for the comprehensive regulation of price and quality, but it should be recognised that some degree of ‘light-handed’ regulation may still be appropriate, even in liberalised infrastructure markets – especially if governments wish to retain the ability to ensure that infrastructure services are being delivered in an inclusive and fair manner.

The regulatory objectives will, of course, vary from country to country. For example, in developing countries, the primary objective may be to provide increased accessibility, while in developed countries, the focus may be on regulating prices to ensure a balance of interests between the supplier and end users¹³³.

3. Consider the use of tariff regulations or subsidy schemes to increase the accessibility and affordability of the infrastructure service.

Tariff levels are frequently set by agreement in many private sector concessions and other contracts, such as in water offtake agreements or power purchase agreements. From a private sector perspective, the agreements and the pricing will need to be financially viable, and additional government intervention may be required in order to achieve pro-poor or other inclusivity objectives, either through subsidies or through the provision of additional incentives for the private operator of the infrastructure facilities. Price regulation is discussed in more detail in Action Area 6: Affordability and Optimising Finance.

In the UK, the Water Services Regulation Authority (Ofwat) is responsible for protecting consumers by ensuring private water companies carry out their functions, secure reasonable returns on their investments and have the required licences. As an example of the approaches which this regulator has taken in regard to inclusivity, Ofwat issued a Vulnerability Focus Report in 2016, highlighting the challenges faced by some of its customers¹³⁴. In acknowledging that water and wastewater services are vital and that, in most cases, customers have no choice over their provider, Ofwat developed a framework on how to identify vulnerable people and the steps that should be taken to assist them¹³⁵.

4. Consider PPP and other private sector approaches to facilitate the delivery of social infrastructure projects and other projects that enhance inclusivity.

PPPs are an alternative mode of procuring and financing an infrastructure project, and governments that have fostered PPP programs are now increasingly interested in using PPPs to help fulfil their inclusivity objectives, by putting more focus on people-first, multi-stakeholder PPP models that seek to improve lives. An example is an energy project in Tajikistan, which provided a clean, affordable and reliable electricity supply to a poverty-stricken region, which had no energy source during winter months, forcing schools, hospitals and business to close for extended periods¹³⁶.

¹³² A Sourcebook for Poverty Reduction Strategy, (Klugman J., et al., 2002).

The document extensively discusses the process and mechanism for poverty reduction through private sector involvement. While it focuses on poverty, the following process is relevant not just for low-income groups but for other disadvantaged groups of society that may not equally benefit from infrastructure developments.

¹³³ A Sourcebook for Poverty Reduction Strategy, (Klugman J., et al., 2002)

¹³⁴ Description of Ofwat’s duties, (Ofwat, 2018)

¹³⁵ A Sourcebook for Poverty Reduction Strategy, (Klugman J., et al., 2002)

¹³⁶ International PPP Forum: “Implementing the United Nations 2030 Agenda for Sustainable Development through effective, people first Public-Private Partnerships”; (United Nations Economic Commission for Europe, 2016)

Although PPPs have been more typically utilised for the delivery of economic infrastructure (such as roads, airports, rail, or other transport projects), governments are now also considering the use of PPPs for social infrastructure facilities, such as schools, healthcare facilities and affordable housing.

PPPs can also be promoted for local or regional projects, to help smaller service providers be competitive. For instance, in the Philippines, PPPs have been used by a number of local governments, particularly in the water sector. This provides more opportunities for local business people, including small and medium-sized enterprises, to be involved in infrastructure development. Small and medium-sized enterprises may also be prepared to provide infrastructure services in areas where large providers are unable or unwilling to extend their facilities¹³⁷.

5. Assess the involvement of the private sector on a sectoral basis to maximise potential benefits.

Many approaches to integrating the private sector in inclusive infrastructure development are sector specific. Every sector has a different risk or return profile, which depends on the policies and regulations in different countries. An analysis for each sector, such as for transport, water, power and other social infrastructure, should be conducted to better understand how inclusivity benefits can be maximised with private sector involvement.

Information, Communications and Technology. ICT is the most mature sector in terms of attracting private sector investment. However, challenges remain where the population is remote and hard to reach, or the population density is very low, as it affects the financial viability of providing access in remote communities. The focus for governments in this sector should, accordingly, be on the subsidies, incentives or other government actions that can be taken to ensure that under-served communities are reached.

Transport. The transport sector is, typically, heavily reliant on public funding due to the amount of capital expenditure required, particularly in the road and rail sub-sectors. A detailed analysis at project level is required to assess how inclusivity in each transport project, such as a mass transit project, can be implemented, taking into consideration budgeting and the fiscal constraints of governments.

Water and sanitation. The water and sanitation sector requires significant investment in infrastructure (such as water treatment plants and storage facilities; underground pipes for water supply distribution and for sewerage collection; and sewerage treatment plants).

While access to safe and clean drinking water and sanitation are viewed as basic human rights¹³⁸, and there is a high socioeconomic return on investment, affordability and cost-recovery are often a challenge, and many governments struggle to attract private sector investment in projects in the sector.

Social housing. The demand for housing often outweighs the supply of existing affordable housing schemes, particularly in developing countries. Affordable housing is often viewed as an impediment to achieving greater economic development, as industries require human capital to be within the proximity of industrial zones. For example, Kenya is struggling to provide affordable housing and the government is launching an ambitious program to build 500,000 homes in the next five years, partially using private sector participation.

Metro Manila in the Philippines is also using the private sector to develop affordable housing solutions. Specifically, the private sector has been used to create housing opportunities around industrial parks and special economic zones.

Challenges arise when the demand for housing still outweighs the supply, in which case the government will likely need to subsidise or otherwise incentivise private participation. This will particularly be the case where the government is seeking to provide housing to consumers at below-market rates. When providing subsidies to the private sector, governments should also ensure they are providing the correct incentives to the private sector to not only build the housing but also deliver broader benefits associated with such housing. For example, developers can support appropriately planned communities that incorporate residential, industrial and commercial zones, while ensuring that social services, such as schools and hospitals, are available in the vicinity.

An example of an innovative approach to the delivery of social housing in the state of New South Wales, Australia, is the Social and Affordable Housing Fund (see *Box 17: Illustrative example – The Social and Affordable Housing Fund (SAHF) in NSW, Australia.* On next page).

¹³⁷ A Sourcebook for Poverty Reduction Strategy, (Klugman J., et al., 2002)

¹³⁸ Resolution A/RES/64/292, (United Nations General Assembly, 2010)

BOX 17: ILLUSTRATIVE EXAMPLE – THE SOCIAL AND AFFORDABLE HOUSING FUND (SAHF) IN NSW, AUSTRALIA.

The Social and Affordable Housing Fund (SAHF) is an innovative approach to the delivery of social and affordable housing in New South Wales (NSW), to provide target housing assistance.

The SAHF was set up with over USD 790 million (AUD 1.1 billion) in seed funding from the NSW Government. This seed capital is invested in the market by the government's investment arm, the NSW Treasury Corporation.

Market returns from this investment will be applied to funding the SAHF. At the end of the program, the government expects to be able to re-invest the capital, with the returns used to support new social and affordable housing projects. Key features of this program include:

- the NSW Government does not take a direct interest in the underlying asset used to deliver accommodation services; a payment stream over a 25-year term funds the gap between provider equity, tenant revenues and the cost of providing the services package;
- a Services Agreement that combines accommodation, asset and tenancy management, tailored support coordination, and performance and data reporting services to deliver tenant and household outcomes; and
- the Services Agreement also provides a pathway to payment by outcomes over time.

The first 2200 affordable homes were completed as part of Phase I of the program. Procurement of an additional 1200 homes is contemplated under Phase II, in progress as of the beginning of 2019.

Source: NSW Social and Affordable Housing Fund (SAHF), www.nsw.gov.au

6. Consider the use of inclusivity principles in the setting of Key Performance Indicators (KPIs) and other performance standards.

In transactions involving private partners (including PPP transactions), compliance with KPIs or a failure to meet certain minimum service levels can subject a private partner to incur payment deductions or other forms of penalties. Similarly, performance above the prescribed level can entitle a private partner to bonus payments. The purpose of these mechanisms is to align government objectives with private sector profit drivers. There may also be minimum requirements whereby a failure to comply will entitle the government to terminate the contract.

As is the case with other government objectives, inclusivity targets can be integrated into performance standards. Governments should also consider which social outcomes are better to be mandated as strict requirements and which outcomes should be targets with payment incentives attached. Setting targets may allow the private sector to innovate or to better price the achievement of such outcomes.

If inclusivity is considered central to a project or overall strategy, the KPIs must incorporate inclusivity elements.

Examples of objectives that can be incorporated into contracts are requirements to provide gender-sensitive facilities and access for people with disabilities; or setting targets around recidivism rates for prisons. Further information on incorporating inclusivity in the contract can be found in the GI Hub Reference Guide on Output Specifications for Quality Infrastructure¹³⁹.

Governments will need to work with the private sector to ensure they are not imposing requirements that are not well-suited to profit drivers of the private sector. For example, linking student grades in a school project to KPIs and payment deductions would not be appropriate where the private partner is only providing building maintenance services.

¹³⁹ Available at outputspecs.gihub.org

7. Consider the use of inclusivity principles in the setting of bidding criteria, so as to encourage innovation.

Governments can utilise the competitive bidding process to maximise inclusive benefits. For example, bidding requirements could mandate that a certain percentage of under-served members of the community are employed during construction of an infrastructure asset, or the bidding rules could provide some weighting within the bidding criteria to encourage bidders to compete on that basis. Allowing for such competition might create a situation where some bidders agree to deliver a greater degree of inclusivity benefits than that which the government had thought was achievable.

8. Consider providing training to private sector infrastructure providers, to overcome prejudices in respect of low-income and marginalised groups.

Private sector infrastructure providers should understand how serving low-income communities and other vulnerable groups fits into the government's values and priorities¹⁴⁰. For example, training was provided to the private sector employees working on the TransMilenio Bus Rapid Transit System (see *TransMilenio BRT Case Study*) in Colombia to help them better understand and appreciate the needs of people with disabilities, homeless people, and women and children.

9. Consider the laws relating to private sector corporate governance and possible reforms to such laws.

There is a lack of clarity in many jurisdictions as to what consideration for-profit board directors should give to inclusivity and other environmental, social and governance (ESG) factors in the fulfilment of their fiduciary duties. Fiduciary duties require board directors to act exclusively for the benefit of the company they are serving. Those duties include duties of care, loyalty and prudence. In exercising those duties, some directors are uncertain as to whether their duties allow for the integration of ESG factors. To ensure that inclusivity is being considered not only by government, but also by directors of private organisations, governments should consider providing more clarity on what consideration should be given by corporate board directors to inclusivity and ESG factors¹⁴¹.

10. Establish reporting mechanisms that assess service delivery and customer satisfaction.

Private sector infrastructure projects can be made subject to review by end users and other consumer groups. For example, 'customer challenge groups' can be established to provide independent reviews and assurance of the quality of the customer engagement program of a private sector infrastructure provider, and the degree to which an inclusive approach is reflected in the provider's business plan. This helps to ensure the private sector infrastructure provider takes a proactive approach to serving hard-to-reach or vulnerable groups.

This practice has been applied by SES Water in the UK (see *Box 18: Illustrative Example – Independent customer challenge groups (CCG) to review and report on a company's customer engagement*). The customer challenge group is required to submit an independent report to the regulator at the same time as the company submits its business plan¹⁴². Stakeholder engagement is detailed further in Action Area 1: Stakeholder Identification, Engagement and Empowerment.

¹⁴⁰ Better practice in supplying water to the poor in global Public Private Partnerships, (Jacobs, J., & Franceys, R., 2007).

¹⁴¹ See also information on fiduciary duty on the Principles for Responsible Investment website, available at www.unpri.org/fiduciary-duty

¹⁴² Atkins Water Infrastructure Expert, 2018

BOX 18: ILLUSTRATIVE EXAMPLE – INDEPENDENT CUSTOMER CHALLENGE GROUPS (CCG) TO REVIEW AND REPORT ON A COMPANY’S CUSTOMER ENGAGEMENT

Context

Ofwat, the regulator for the water sector in England and Wales, expects water companies to engage directly with their customers (as they are best placed to understand their needs) and use the information they gather to drive decision-making on investments in infrastructure, taking affordability and customers’ potential vulnerability into account, to provide excellent levels of service for all. Their approach should also inform the development of their business plan.

Application

Customer challenge groups (CCGs) provide independent challenges to companies and assurance on the quality of a company’s customer engagement, and the degree to which that is reflected in its business plan. SES Water is a UK water supply company and its CCG membership reflects local circumstances and challenges.

It includes a representative from the Consumer Council for Water; the environmental and drinking water quality regulators (the Environment Agency and the Drinking Water Inspectorate, respectively); members of environmental and social NGOs; and local businesses. The CCGs must provide an independent report to the Water Services Regulation Authority, which is submitted at the same time as companies submit their business plans to Ofwat.

SES Water, with advice and guidance from its CCG, has considered the different customer segments it serves, and ensured they are appropriately represented during the customer engagement process. This includes defining customers living in vulnerable circumstances as, “A customer who due to personal characteristics, their overall life situation or due to broader market and economic factors, is not having reasonable opportunity to access and receive an inclusive service which may have a detrimental impact on their health, wellbeing or finances”. This includes hard-to-reach customers, or people who cannot or have not embraced digital technology. Through the CCG, these groups are given a voice and a platform to air any grievances. The company has thought creatively about how to engage with harder-to-reach customers in the design of its services and this has influenced its investment priorities. Together, the CCG and the company are tackling longer-term issues, such as resilience, the impact on future bills and affordability.

SES Water supplies residents in East Surrey and parts of West Sussex, West Kent and South London. Its supply area covers 835 square kilometres (322 square miles), much of it rural. Drinking water is supplied to approximately 707,000 consumers in 286,000 properties.

Source: Ofwat, SES Water, Atkins Water Infrastructure Expert

INCLUSIVE OPPORTUNITIES FOR BUSINESSES

Overview

Businesses owned by women or other minority groups can be encouraged to participate in major infrastructure projects, depending on their capabilities, willingness and readiness. Such businesses usually face higher barriers to market entry, such as, for example, discrimination, working capital and growth capital constraints, or lack of experience.

A study undertaken by the Organisation for Economic Co-operation and Development (OECD) reveals a similar picture within all OECD countries: “Disadvantaged social groups, such as women, youth and immigrants, face barriers to entrepreneurship. Social norms, networks and welfare systems, as well as access to finance and skills for entrepreneurship, are important obstacles that call for

corrective policy action”¹⁴³. Evidence shows that women-owned businesses are particularly under-represented, as they face greater challenges in comparison to comparable businesses owned by men.

Specific activities or government interventions can help overcome some of these challenges and create more equal opportunities. As an example, the EBRD’s Economic Inclusion Strategy has a focus on “entrepreneurship and access to finance”, targeting youth, gender and geographies (populations in disadvantaged regions). The Strategy promotes and assists in specific procurement methods to increase participation of such enterprises¹⁴⁴.

Many of the initiatives taken by governments in this area relate to women-owned businesses. However, the guidance provided below applies broadly to all under-represented groups (related to gender, income, race, age or some other characteristic).

¹⁴³ All on board: Making inclusive growth happen, (OECD, 2015)

¹⁴⁴ Economic Inclusion Strategy, (EBRD, 2017)

The economic impact of helping more women to scale up their companies is immense. The consultant firm, McKinsey, estimates that USD 12 trillion could be added to global GDP by 2025 by advancing women's equality¹⁴⁵. In Canada, research suggests a 10% increase in the number of female majority-owned small and medium-sized enterprises (SMEs) would yield a contribution of USD 151 million (CAD 198 billion) in increased economic activity¹⁴⁶. In the United States, the Center for Women's Business Research estimates that increasing the number of women-owned firms with one or more employees could add USD 10 trillion to the American economy. The business case for promoting women-owned businesses is compelling¹⁴⁷:

- 15% additional profit observed when the share of women in leadership positions went from 0% to 30%; and
- 13% greater revenue achieved by companies run by women less than 35 years old, compared to companies run by men of the same age.

Relevance

- Attention should be paid to businesses owned by women and other under-served or vulnerable groups to promote inclusivity, not just in access to infrastructure but also in the wider opportunities associated with major infrastructure projects.

At the policy level:

- *Transparent reporting on instances of discrimination.* Establish national platforms or programs to provide greater transparency on the level of participation of small and medium-sized enterprises to identify instances of discrimination or unequal access, and to address barriers to entry to the market.
- *Encouraging participation of minority groups in procurement processes and capacity building.* Promote national programs that help women and minority-owned businesses improve their access to, and participation in, government-led procurement processes and encourage them to develop their skills.

During long-term planning, identify capacity requirements adequately in advance to develop skills,

¹⁴⁵ The Power of Parity: How Advancing Women's Equality Can Add \$12 Trillion to Global Growth, (McKinsey Global Institute, 2015).

¹⁴⁶ Canadian Women Grabbing the Baton, (Royal Bank of Canada, 2013)

¹⁴⁷ Advancing Women in Business, (Canada-United States Council for Advancement of Women Entrepreneurs & Business Leaders, 2018)

and support the private sector to identify suitable businesses owned by women and minorities (see *U.S. Bank Stadium Case Study*).

At the project level:

- *Integrating inclusivity targets in infrastructure delivery.* Targets related to the use of inclusive businesses in the delivery of major infrastructure projects can be identified and integrated in infrastructure design, construction, operation and maintenance.
- *Monitoring achievement of targets.* Monitoring and supervision can help to ensure targets are achieved and that all stakeholders benefit from the available learning experiences.

Guidance

1. Support the establishment of organisations that encourage and promote the participation of under-served and vulnerable groups in business.

In North America, the Canada-United States Council for Advancement of Women Entrepreneurs & Business Leaders was appointed by the US and Canadian Governments in 2016, reporting to the Prime Minister of Canada and the President of the United States. Its recommendations are designed to reduce the barriers that limit women's participation in business, as well as support women's professional advancement, and assist women in starting and scaling up their businesses¹⁴⁸.

2. Identify barriers and potential solutions to increase the participation of women- and minority-owned businesses.

Examples of barriers that prevent women and other minority groups from competing on equal terms with comparable businesses include lack of working capital and growth capital, inadequate access to markets and expertise, and pervasive social and psychological biases (see also the section on women detailed below under the heading *Application to targeted stakeholder groups*).

3. Adopt policy and regulatory interventions to attract and develop women and minority group entrepreneurs and overcome barriers to entry into supply chain and labour markets.

Policy interventions may help address barriers for certain enterprises. For example, in Kenya, the Access to Government Procurement Opportunities (AGPO) program amended the government's procurement rules so as to require 30% of contracts to be given to firms led by young people, women and people with disabilities.

¹⁴⁸ Advancing Women in Business, (Canada-United States Council for Advancement of Women Entrepreneurs & Business Leaders, 2018)

4. Consider minimum targets for integrating women- and minority-owned businesses in major infrastructure projects.

For the U.S. Bank Stadium project, the State of Minnesota created an Equity Plan, which aimed to reduce discrimination and social disparity by ensuring women and minority groups benefited from the construction and employment opportunities arising from the project.

Under that plan, the State of Minnesota required that at least 11% and 9%, respectively, of construction contracts be awarded to women- and minority-owned businesses. The state also mandated that at least 32% and 6% of the workforce be from minority groups and women, respectively.

5. Mandate government agencies and implementing agencies to plan and facilitate the inclusion of a diverse range of businesses in the delivery of a project.

In connection with the above-mentioned U.S. Bank Stadium project, the City of Minneapolis conducted a study on the state of social disparities and inequalities between women- or minority-owned businesses in comparison to other businesses. Under this study, the capacity of the market, based on willingness, readiness and skills, was assessed, which resulted in a target threshold for women- and minority-owned businesses being given to the Minnesota Sports Facilities Authority, the government's implementing agency for the project.

To ensure that these business targets were met, the Minnesota Sports Facilities Authority initiated a number of programs, including activities to introduce women- and minority-owned businesses to contractors and architects; the organisation and facilitation of 'meet and greet' sessions; and support to businesses during the bidding process (for further detail on these activities, refer to the *U.S. Bank Stadium Case Study* in Section 4).

6. Expand the use of diversity programs, outreach, support and credit to disadvantaged small businesses.

In France, there is financial and business support for start-ups established by the unemployed who cannot access traditional financial products. In the Netherlands, the government created a facility, known as Start-up Credit for Partially Occupationally Disabled Persons, to provide loans, together with coaching and guidance, for businesses created by disabled people.

7. Facilitate greater involvement of disadvantaged groups in training programs to better include under-represented groups in access to labour markets.

Governments can provide training to support under-represented groups (e.g. women, young people and minority groups) to move from unskilled to semi-skilled or skilled work. This can also be achieved by partnering with NGOs and civil society organisations (CSOs) to facilitate activities that reach these groups.

INNOVATION AND TECHNOLOGY

Overview

Technologies, particularly digital technologies, are rapidly evolving, and innovation and technology play a significant role in infrastructure projects at the planning, development, and implementation phases. To help create sustainable and responsive solutions that address the needs of the public, new technology must be considered as a key component in the design and development of inclusive infrastructure projects.

The private sector can play an important role in such innovations. However, there is a need for collaboration between the government and private enterprises to leverage new technologies for inclusive infrastructure. There are many benefits that can be derived by government in collaborating with private enterprises to harness new technologies, whether it is by using 'big data' to improve inclusive infrastructure planning or finding new ways to deliver infrastructure with greater inclusivity benefits.

Innovation is a driver of productivity and long-term economic growth, and it can influence the distribution of opportunities and outcomes. Innovation includes both the introduction of new products and services to the market, and finding better ways of producing, marketing and distributing those products and services. At the same time, innovation can also accentuate income disparities, if technological change opens opportunities for individuals with advanced skills to the detriment of those who do not possess those skills¹⁴⁹.

¹⁴⁹ All on board: Making inclusive growth happen, (OECD, 2015)

Relevance

At the policy level:

- *Addressing challenges through technology.* Innovation and technology programs (i.e. in the form of government grants or research priorities) can be designed to have a focus on addressing challenges faced by disadvantaged groups, such as people with disabilities or those living in remote areas.
- *Collaborating with the private sector to develop inclusive solutions.* Government collaboration with the private sector can alter the way infrastructure is planned, so as to make the infrastructure more inclusive. For example, private enterprises can develop applications for mobile devices to enable the collection of large amounts of data, which, in turn, can be used to plan more inclusive infrastructure services (see guidance point 3, on opposite page). The collection and use of data should take into account privacy and other security concerns.

At the project level:

- *Unlocking additional value through partnering with the private sector.* Partnerships with the private sector in the project development process can unlock additional value for inclusive development. For instance, private sector participation can be used to help find technological solutions to concerns such as food security for the poor and challenges faced by residents in remote areas¹⁵⁰. Partnerships can also be developed in the areas of value chain development, innovation and technology transfer, business development or advisory services, and market infrastructure and logistics, again with a view to facilitating greater inclusivity¹⁵¹.

Guidance

1. Provide grants, subsidies, access to finance and other support to help private enterprises develop innovations enhancing inclusivity.

Governments and the private sector both have a key role to play in the development and application of technology, and the sharing of lessons learned, for the advancement of inclusivity objectives. One way to incentivise the private sector to develop such new technology is through grants, subsidies, access to finance, or other support.

Technology advancements have the potential to help make infrastructure more inclusive and expand the reach of infrastructure services. A specific example that has leveraged the rapid expansion of telecommunications access is the mobile phone banking service M-Pesa, which has been estimated to have 15 million users in Kenya for daily financial transactions. It brings those who engage with the informal finance sector into a more formal banking system and gives them access to basic financial services¹⁵². Although it started in East Africa, the technology has since expanded to South Africa and also to countries in Asia and Europe. It is a good example of one type of technological advancement (mobile money applications) building up on another technology (low-cost telecommunications) to enhance inclusivity.

Other examples of technological change benefiting inclusivity in infrastructure services include the advent of less capital-intensive power supply facilities (such as solar power generation) and the associated development of micro-grids that can collectively provide broader access to power where it may not be feasible to have communities connected to the national grid.

2. Consider the adoption of policies that strengthen the impact of technological advancements on the delivery of inclusive infrastructure.

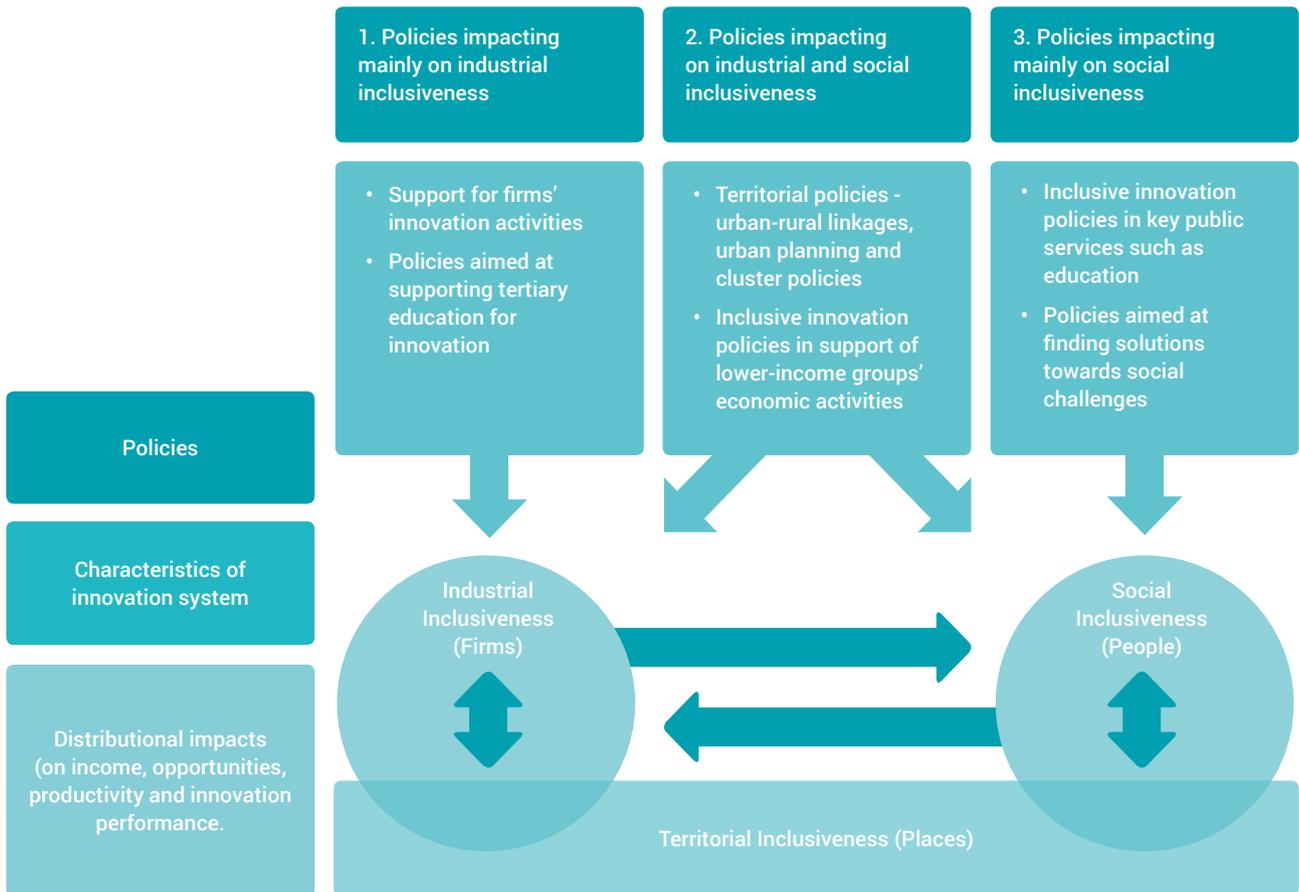
The following OECD graphic on the next page suggests some possible links between government policies and the use of private sector innovations to enhance the inclusivity of infrastructure¹⁵³.

¹⁵⁰ Public-Private Partnerships for Sustainable Agricultural Development, (Rankin, 2014).

¹⁵¹ Public-Private Partnerships for Sustainable Agricultural Development, (Rankin, 2014).

¹⁵² All on board: Making inclusive growth happen, (OECD, 2015)

¹⁵³ All on board: Making inclusive growth happen, (OECD, 2015)



3. Promote collaboration with the private sector to leverage the benefits of technology.

Governments should stay informed in regard to technological advancements and how they can collaborate with private sector enterprises, particularly where technological innovation is being led by the private sector.

In the transport sector, the private sector has a prominent role in developing many innovative technologies where it is willing to invest for a financial return, such as, for example, in the collection of ‘big data’ from various mobile applications. ‘Big data’ refers to large data sets that can be computationally analysed to reveal patterns (including relating to human behaviour). Big data collected from various applications (including ride-sharing apps like Uber, travel apps like Citymapper, Facebook, road surface sensors, street light sensors, power meters, etc.) can be utilised for transport planning and to provide greater access to under-served groups by better addressing their needs.

Other examples of the use of technology in transportation to support under-served or disadvantaged groups include:

- improved vehicle technology and design to take into consideration the needs of the physically disadvantaged by providing lower floor ramps and space for prams and walkers;
- smart cards that can be used at pedestrian crossings to adjust the timing of the traffic lights to enable more walking time for those who are mobility-impaired (this is currently being implemented in Singapore);
- geographic information system (GIS) mapping to identify how land is used in communities and how that relates to the transport network, map supply and demand, and identify communities that have poor access to public transportation, which also assists in stakeholder identification and data collection;
- smart cards to provide concessionary fares to special groups, enabling ease of management, enforcement and control of fraud; and
- autonomous vehicles to enable access for people who are unable to use a car or have no access to one, such as people with disabilities or the elderly.

4. Explore the use of appropriate, affordable and alternative technologies to reach remote and under-served areas.

Rural populations are not always well-served by traditional networks because of the remote locations and small concentration of communities. In the power sector, the additional capital expenditure required to connect low-income households in remote areas to the main transmission lines may be unaffordable to the end users.

Government intervention may be required to address these challenges, including by encouraging alternative technology solutions (such as off-grid networks and simplified energy metering technology) to drive down capital expenditure costs and speed up the achievement of universal access.

APPLICATION TO TARGETED STAKEHOLDER GROUPS

The general principles of Action Area 5: Private Sector Roles and Participation apply to all stakeholder groups. Some additional points on the application of those principles to specific stakeholder groups are outlined below.

Low-income groups

Since many large infrastructure projects are monopolistic by nature, governments may wish to consider establishing appropriate regulatory arrangements to protect the needs of low-income households through the use of 'lifeline' tariffs, subsidised connection fees and similar measures.

Governments may also wish to consider infrastructure's direct and indirect role in job creation as an important part of tackling poverty, and address barriers to accessing jobs by means of focused skill training programs.

Women

1. Governments could consider the establishment of organisations to encourage and promote the participation of women in business and entrepreneurship.

As mentioned above, one such example is the Canada-United States Council for Advancement of Women Entrepreneurs and Business Leaders. The Council was appointed by the American and Canadian Governments in 2016 and reports to the Prime Minister of Canada and the President of the United States.

Its recommendations are designed to reduce the barriers that limit women's participation in business, as well as support women's professional advancement, and assist women in starting and scaling up their businesses¹⁵⁴.

In Ireland, the Going for Growth project similarly supports networking, workshops, mentoring and skills development for women entrepreneurs¹⁵⁵.

2. Identify barriers and potential solutions to increase the participation of women-owned businesses.

The following examples of barriers to entry to the market have been identified by the Canada-United States Council for Advancement of Women Entrepreneurs and Business Leaders¹⁵⁶:

- *Lack of working capital and growth capital*: securing the necessary capital to expand a business is generally a challenge for entrepreneurs, but this is more acute for female-owned businesses;
- *Inadequate access to talent, networks, and expertise*: people need these to successfully scale up their businesses. However, vulnerable groups find it difficult to access other business leaders and technical experts because the networks which those leaders and experts develop tend to comprise people from the same social group;
- *Unbalanced 'family economics'*: entrepreneurship fails to offer a sustainable alternative to regular employment for many women, largely because they face a different cost-benefit equation when it comes to balancing work and family obligations; and
- *Pervasive social and psychological biases*: this includes conscious and unconscious biases, as well as external and internal barriers that erode self-confidence and cause women and minority groups to be treated differently by investors.

¹⁵⁴ Advancing Women in Business, (Canada-United States Council for Advancement of Women Entrepreneurs & Business Leaders, 2018)

¹⁵⁵ All on board: Making inclusive growth happen, (OECD, 2015)

¹⁵⁶ Advancing Women in Business, (Canada-United States Council for Advancement of Women Entrepreneurs & Business Leaders, 2018)

3. Adopt policy interventions to attract and develop women entrepreneurs and overcome barriers to entry into supply chain and labour markets.

Several areas of change have been recognised to support greater women-owned businesses and women's employment in the delivery of inclusive infrastructure:

- *monitoring and transparency*: collect data and understand the baseline conditions, measure progress, and report on women-owned business representation;
- make equal representation a top priority;
- actively recruit to increase representation in the applicant pool, including challenging decisions based on stereotypes or unconscious biases and make this a top priority;
- promote women to decision-making positions and set the 'tone at the top' through formal CEO/C-Level engagement, including at investment firms, and encourage influencers to publicly act;
- provide training and coaching (e.g. improving self-confidence) and attract more female mentors;
- build female role models and corporate networks and mentors, giving advice on key issues;
- *networking opportunities*: provide forums for women to network with male leaders and entrepreneurs and facilitate access to business and technical talent; and
- *policy interventions*: make childcare services available to women with young children; adjust social security regimes to offer financing for maternity leave for the self-employed.

People with disabilities

- 1. Consult with people living with disabilities to best leverage the skills of the private sector and the benefits of new technologies in overcoming barriers to accessing infrastructure, entry into supply chains and labour markets.**
- 2. Consider standards for universal access as a minimum requirement when tendering infrastructure projects.**



ACTION AREA 6: AFFORDABILITY AND OPTIMISING FINANCE

Key messages

- The socioeconomic returns for each infrastructure project must be carefully appraised, and issues of inclusivity and affordability clearly considered from the outset in each project's business case.
- In many cases, the socioeconomic returns from infrastructure (as can be shown in the economic Cost Benefit Analysis (CBA)) are higher than the financial internal rate of return from tariffs, etc. Viability Gap Funding (VGF) may be appropriate in these cases and should be carefully targeted.
- Affordability of tariffs and infrastructure services for low-income groups is an important aspect of ensuring inclusive infrastructure and enabling universal access to basic services.
- Willingness to Pay (WTP) and Ability to Pay (ATP) must be evaluated to determine affordability barriers for low-income people and other vulnerable groups.
- Financial assistance may be used to bridge affordability barriers to targeted users (e.g. low-income groups). The various options by which subsidies can be applied must be carefully evaluated.
- A project's revenue streams may be a combination of government funding (from taxpayers), user charges, and other ancillary revenue streams
- To be inclusive and sustainable throughout its lifecycle, an infrastructure service must be both (i) affordable to the targeted end users; and (ii) have adequate revenue streams to meet its debt obligations and enable its safe operation and maintenance.

Three key practices have been identified under this Action Area for which further detail and guidance is given in the sections below:

Business Case

Willingness and Ability to Pay

Financial Assistance and
Subsidy Instruments

DEFINITIONS AND CONTEXT

Definitions

The **Business Case** is the document that articulates the rationale for undertaking an investment. A well-prepared business case enables government decision-makers to understand the key issues, the available evidence base, influence appropriate scope and select the best option for delivery. The G20 *Principles for the Infrastructure Project Preparation Phase*¹⁵⁷ set out a list of critical aspects to consider in the Business Case under the dimensions of project rationale, options appraisal, commercial viability, long-term affordability and deliverability. Additional guidance on the preparation and uses of Business Cases is found in Chapter 5 of the GI Hub's Reference Tool on *Governmental Processes Facilitating Infrastructure Project Preparation*¹⁵⁸.

The term **Affordability** can vary in meaning, depending on the perspective being considered. Affordability of the project from a government's perspective often refers to the project's ability to be accommodated within the government's current and future budget constraints. From the perspective of end users, the affordability of tariffs will relate to their ability to pay the tariffs or other user charges associated with the infrastructure in question and not be excluded from accessing the service, which may be a particular concern for low-income groups.

A gap may exist between the level of tariffs or user charges that can be charged to end users and the revenues required to meet the project's costs, and governments can use various mechanisms to close this gap. The use of cross-subsidy structures, government subsidies and ancillary revenue arrangements can be used to help address this situation.

Guidance on these mechanisms can be found in the 2016 World Bank publication *Financial Viability Support: Global Efforts to Help Create Commercially Viable PPPs*¹⁵⁹.

The two aspects of affordability – from the government fiscal perspective and the user perspective – are linked. Since there are typically constraints on public budgets, careful attention needs to be given to the design and delivery of efficient and well-targeted subsidy mechanisms.

Ability to Pay (also sometimes known as Affordability to Pay or ATP), is a measure of end users' spending capacity and is typically based on their household income and expenditures.

Willingness to Pay (WTP) is a measure of the maximum amount that a consumer will agree to pay for the use of an infrastructure service such as water, electricity or public transportation.

A critical appraisal of the WTP and ATP of end users needs to be made in the Business Case for infrastructure projects and during the tariff-setting process. Vulnerable groups with the lowest income levels are particularly price-sensitive. Their spending capacity, preferences and expectations, as well as the benefits they derive from the infrastructure service, must be carefully considered.

Financial Assistance can take the form of government subsidies for the provider (the project company) and/or the end users of the services, with the aim of promoting the government's economic and social policy objectives.

¹⁵⁷ Found at http://www.g20.utoronto.ca/2018/principles_for_infrastructure_project_preparation.pdf

¹⁵⁸ The complete Reference Tool is available at <https://www.gihub.org/project-preparation/>

¹⁵⁹ Financial viability support: Global efforts to help create commercially viable PPPs, (The World Bank Group, 2016)

Context

Infrastructure should be carefully planned and designed to meet the needs of end users, and to use public financial resources in line with country-specific policy, strategies and regulations.

As set out in the G20 *Principles for the Infrastructure Project Preparation Phase*¹⁶⁰, each project Business Case should consider the dimensions of project rationale, options appraisal, commercial viability, long-term affordability and deliverability.

This appraisal must consider the project's financial viability and its affordability from the perspective of both end users and the government:

- Infrastructure needs to be financially viable, in that the funding received, whether through end user tariffs or from taxpayers through government budgets, must be adequate to meet the cost of operating and maintaining the infrastructure assets, as well as meeting any obligations to repay the financing for its initial construction. This objective will lead to a focus on 'cost-reflective' tariffs, since without adequate funding to maintain the asset, it will deteriorate, which will lead to reduced access and poor service levels.
- Governments also strive to serve their citizens' needs and to maximise infrastructure usage by setting tariffs that are affordable for end users. More affordable charges to end users will increase access, leading to better socioeconomic returns. To achieve universal access to infrastructure, the cost of usage (i.e. a bus or train ticket, an electricity connection fee or a water usage charge) needs to be affordable for all.
- In addition to being affordable to end users, and financially sustainable in terms of having adequate funding and operational revenue, infrastructure is a substantial investment and must also be affordable from the government's fiscal perspective – which means that the financial commitments of the government to the project (in the form of direct funding or subsidies) must be accommodated within the government's current and future budget constraints¹⁶¹. Governments also need to be cognisant of the contingent liabilities which the state is assuming in respect of infrastructure projects, in the form of payments or assumptions of liability that may arise if particular risks allocated to the government under a PPP materialise.

To ensure that the infrastructure is accessible, affordable (to both end users and the government) and financially viable, therefore, requires a detailed analysis of the costs and benefits. When pricing is set to meet criteria, such as cost recovery and return on investment, there is a risk that low-income segments of society will likely be excluded from a given service. This may also overlook broader socioeconomic benefits to society, such as broader job creation, decreased pollution and better health outcomes. Targeted subsidies or concessional tariffs can help reach groups that cannot otherwise afford the infrastructure services. The choice of subsidy or tariff structure is often political, as well as economic, as each option has its advantages and disadvantages, as outlined below in the practice analysis.

The optimisation of pricing and use of financial subsidies is challenging. The need to reconcile securing an efficient pricing arrangement (which is important from an investor's perspective), with inclusivity and equity considerations (which are important from a public policy perspective) is a particularly complex task. For example, in the transport sector, government policies have sometimes only considered aspects of mobility, such as time-savings to motorists, rather than greater overall accessibility and increasing the affordability of transport for the poor¹⁶². To properly address the problem of achieving both efficient pricing and inclusive outcomes, it is helpful to focus more broadly on accessibility rather than just mobility, while at the same time trying to achieve affordability to ensure inclusive access. Given the need for fiscal affordability to government, it is important to have well-targeted and effective measures to assist low-income and other vulnerable groups, and to eliminate waste of resources through inefficient targeting¹⁶³.

To help increase affordability, additional revenue opportunities can be useful, and should be considered in the project planning phase. For example, public transport projects can derive income both from passengers (via fare payments) and, potentially, from adjacent businesses benefitting from the additional traffic caused by the new transport service (via increased taxes or other revenue-raising schemes). Infrastructure can also create new business opportunities: for example, advertisers will pay for space on billboards near train platforms, and drivers can be charged for parking their cars close to the stations. In the case of the Mi Teleférico cable car system between La Paz and El Alto in Bolivia (see *Mi Teleférico Cable Car Case Study* in Section 4), complementary revenue streams represent 15% of the total revenue. The project achieved a financial surplus of USD 5.8 million within five years, entirely from farebox collection and this additional complementary revenue.

¹⁶⁰ Found at http://www.g20.utoronto.ca/2018/principles_for_infrastructure_project_preparation.pdf

¹⁶¹ Assessing Fiscal Feasibility (Affordability), (APMG International, n.d.)

¹⁶² Transport Pricing and Accessibility, (Kenneth Gwilliam, 2017)

¹⁶³ Noting that some high-income countries, such as Luxembourg, are moving towards policies for free public transport, however the fiscal feasibility is likely to be limited in most economies.

ANALYSIS AND GUIDANCE ON PRACTICES

BUSINESS CASE

Overview

Infrastructure projects should use public resources in line with country-specific policy, strategies and regulations. Quantitative and qualitative social criteria that target inclusiveness can and should be embedded in national guidelines pertaining to the preparation of infrastructure project Business Cases.

At the heart of any Business Case is the appraisal and weighing up of costs and benefits. For inclusive outcomes, social parameters and measurements should be explicitly integrated in the Business Case development process. Integrating inclusive social parameters, criteria and measurements into each Business Case enables the explicit quantitative and qualitative consideration of such criteria.

In the past, it was suggested that there is, inevitably, a binary trade-off between equality and economic efficiency¹⁶⁴. However, more recent commentators have noted that equality is an important ingredient in promoting and sustaining economic growth¹⁶⁵. A properly-prepared Business Case allows decision-makers to make a comprehensive assessment of the costs and benefits of options, in terms of both efficiency and distributive effects, and progresses this assessment beyond a binary, zero-sum approach. The Business Case is an important process by which options can be appraised and projects can be carefully designed so as to reduce inequality and maximise social benefits, thereby promoting economic growth. In contrast, poorly designed projects that do not adequately address the needs of disadvantaged groups can have the effect of limiting the potential for such growth.

During the development of the Business Case, different scenarios can be analysed. Both quantitative (e.g. level of availability and accessibility) and qualitative (e.g. perception of safety and sense of community) parameters should be considered.

Relevance

To develop the Business Case, costs and benefits are, ideally, quantifiable. One of the challenges is that social parameters and benefits are, frequently, not easily measurable (in terms of valuations in monetary units), and lend themselves more readily to qualitative evaluation. Nevertheless, there is scope to better integrate social parameters in the project development process.

¹⁶⁴ Equity and Efficiency: The Big Tradeoff, (Okun, 1975)

¹⁶⁵ Inequality and Unsustainable Growth: Two Sides of the Same Coin? (Berg and Ostry, 2011)

At the policy level:

- *Integrating social considerations into policies and guidelines to steer Business Case development.* Social parameters should be integrated in national policies and guidelines that guide the preparation of Business Cases for infrastructure projects. Social formulae may be included alongside more financial, environmental and technical criteria. This also provides transparency in terms of objectives and expected outcomes.

At the project level:

- *Including social formulae in the Business Case for every infrastructure project.* Social inclusion parameters should also be clearly integrated at the project level. Since Business Cases typically require costs and benefits to be calculated over a specified timeframe, a reasonable estimate of the duration and the expected socioeconomic returns must be developed.

Guidance

1. Consider inclusivity from the outset in each infrastructure project Business Case.

The Business Case for an infrastructure project can be prepared following various models, such as the UK Government's Five Case Model¹⁶⁶ that helps produce business cases for projects which use public spending. It involves the consideration of strategic, economic, commercial, financial and managerial criteria. From an inclusivity perspective, the economic case is particularly critical, as it determines the net value to society (the social value) of the proposed project.

The Business Case should involve an appraisal of the impact of the proposed project – and its alternatives – on society, and the costs of risks and mitigation measures. Depending on the desired impact, a preferred optimum balance between costs, benefits and risks to society will be made. This also leaves room to integrate and weigh-up qualitative aspects in the decision-making process. A description of the key appraisal steps in Business Cases, based on the UK Government's guidance, is provided on the next page:

¹⁶⁶ The Green Book, Central Government guide on appraisal and evaluation, (HM Treasury, 2018)

DESCRIPTION OF KEY APPRAISAL STEPS

The rationale for the project is the first step. This should be used to identify the objectives or outcomes that the government wishes to meet through the infrastructure investment.

A long-list of options considers how best to meet the government's objectives with a wide range of possible approaches. They should be appraised for viability and filtered down to a shortlist.

A shortlist appraisal follows and is at the heart of the economic appraisal, where expected costs and benefits are estimated, and the trade-off is considered. This is done using Social Cost Benefit Analysis (SCBA) or Social Cost-Effectiveness Analysis (SCEA).

Identification of the preferred option is based on a detailed analysis at the shortlist appraisal stage. It involves determining the option with the best balance of costs, benefits, risks and other unmonetisable factors.

Monitoring refers to the collection of data, during and after implementation, to improve current and future decision-making. Evaluation is the systematic assessment of a project's design, implementation and outcomes. Both monitoring and evaluation should be considered before, during and after implementation.

Source: The Green Book, Central Government guide on appraisal and evaluation, (HM Treasury, 2018).

2. Incorporate Social Cost Benefit Analysis in the Business Case and include key inclusivity indicators.

SOCIAL COST BENEFIT ANALYSIS (SCBA)

SCBA is an appraisal tool that is used to evaluate how public investment projects benefit society. It is an economic Cost Benefit Analysis that incorporates non-monetary outcomes by converting them into a monetary value, such as environmental impacts, time savings, health benefits, and accident costs (for transport projects). SCBA is an economic model which attempts to quantify social outcomes, whereas the financial CBA considers only the financial model related to investment and its Financial Internal Rate of Return (FIRR).

All groups in society need to be considered when developing a SCBA. For example, when users or consumers pay for a bus fare, they want the fare to be as cheap as it can be. At the same time, the bus operators or suppliers want the fare to be set as high as possible, so they can regain their costs. Bus drivers want an increase in their salary at least in line with inflation, and society as a whole wants further investment in better, cleaner, more frequent transport services.

All of these views need to be considered as part of the decision-making process.

The analysis of the prices, costs and intangible benefits from the perspective of consumers, suppliers and society makes up the SCBA.

Source: Atkins internal

The results of a SCBA should be clearly summarised and supported by more detailed analysis. Given the challenges of measuring social factors, key assumptions should be stated, and any additional non-monetised costs and benefits shown. Despite monetising social and environmental aspects, a SCBA may be blind to distributional issues.

An illustrative example of a SCBA and the resulting Net Present Social Value is shown on the next page in *Box 19: Illustrative example - Social cost benefit analysis in an appraisal model for a land remediation project, United Kingdom.*

BOX 19: ILLUSTRATIVE EXAMPLE – SOCIAL COST BENEFIT ANALYSIS IN AN APPRAISAL MODEL FOR A LAND REMEDIATION PROJECT, UNITED KINGDOM

Officials are appraising the remediation (treatment) of 15.8 hectares (39 acres) of contaminated land to be funded through a public sector grant. The clean-up of the land would enable new businesses to move closer to an existing cluster of firms in a highly productive sector. The positive outcomes of the intervention can be estimated by the change in the land value of the site (land value uplift), and the health and environmental effects. There is data on the current and likely value of the land, post remediation. For simplicity, it is assumed all values below are already appropriately discounted.

VARIABLE	VALUE IN GBP
Existing use land value estimate	(1,200,000)
Future use land value estimate	9,820,000
Total land value uplift	8,620,000
Wider social benefits	1,400,000
Present value benefits (PVB), including land uplift, health and environmental effects	10,020,000
Present value cost (PVC)	(10,000,000)
Net present social value (NPSV)	20,000
Benefit cost ratio (BCR = PVB/PVC)	1.002

In this appraisal, the project is viable with a positive NSPV of GBP 20,000. The total amount is GBP 10,020,000 when wider social benefits of GBP 1.4 million are added to create the project value as a result of the remediation. The benefits exceed the costs of the remediation only when the wider social benefits are considered. Under the more inclusive assumptions, the project is implemented based on a positive NPSV and a BCR higher than 1.

Source: Ministry of Housing, Communities and Local Government, United Kingdom, The Green Book Central Government guide on appraisal and evaluation (HM Treasury, 2018)

3. Consider the use of Multiple Criteria Analysis to appraise large infrastructure projects in order to present monetised and non-monetised impacts of projects to decision-makers.

Multiple Criteria Analysis (MCA) is an umbrella term used to describe various types of approaches used to assist decision-makers to take explicit account of multiple criteria in finding a solution¹⁶⁷. It is a social-technical process, including scoring and weighting, used by public entities to appraise prospective infrastructure developments. While not as common an appraisal analysis as Cost-Benefit Analysis (CBA) or Cost-Effectiveness Analysis (CEA), MCA offers a complementary method to overcome some of the shortcomings of traditional cost-benefit studies¹⁶⁸.

SCBA is a normative procedure that prescribes whether the benefits of a project outweigh its costs on a monetary measurement basis. Based on the efficiency criterion, CBA analysts will inform decision-makers about the trade-offs they should make and pass judgement on the quality of their choices.

Instead of making normative recommendations, MCA analysts only describe and inform decision-makers on the nature of those trade-offs.

The main role of MCA is to deal with the difficulties that decision-makers have in handling large amounts of complex and often conflicting information in a consistent way. It adds economic, social and environmental dimensions to the appraisal. It brings a degree of structure, analysis and openness to the decision-making process and goes beyond the practical reach of a CBA analysis. MCA is typically more inclusive of stakeholders' opinions and preferences than the CBA. An MCA analysis performed very early in the project planning and design can usefully guide the inclusion of additional economic, social and environmental considerations¹⁶⁹. MCA has been typically used to filter rather than to make final decisions, and can help because it is faster to process than CBA and helps evaluate impacts that cannot be fully quantified, however, there is a risk of double counting benefits in an MCA that would be well-managed in a properly conducted SCBA.

Various types of MCA approaches have been developed. One such approach is the Policy-Led Multi-Criteria Analysis (PLMCA) that seeks to achieve closer alignment with government policy across a wide set of objectives, including conflicting policy objectives¹⁷⁰. Another MCA approach is the Infrastructure Prioritization Framework (IPF)¹⁷¹ developed by the World Bank. The IPF is a multi-criteria decision support tool that considers project outcomes along two dimensions: social/environmental and financial/economic. When large sets of small to medium-sized projects are proposed, resources for implementation are limited, and basic project appraisal data are available, the IPF can be used to inform decision-makers in regard to project selection priorities.

4. Integrate monitoring and evaluation processes on inclusion into the business case itself.

A robust monitoring and evaluation process is essential in order to ensure that long-term infrastructure projects continue to achieve the government's socioeconomic objectives. The UK Treasury's *Green Book: Central government guidance on appraisal and evaluation*¹⁷² suggests that the planning for monitoring and evaluation should take place at an early stage, before the implementation of a project, and that it should continue through to the end of the project's lifespan. At each stage, specific inclusivity parameters should be integrated into the monitoring and evaluation arrangements.

¹⁶⁷ Multiple Criteria Decision Analysis: an integrated approach, (Belton & Stewart, 2002)

¹⁶⁸ For example, people might feel more strongly about a project that imposes both environmental and social costs, than that which would be estimated by adding separate valuations of the two effects.

¹⁶⁹ Multi-criteria analysis: a manual (Department for Communities and Local Government, 2009)

¹⁷⁰ Theory and Background of Multi-Criteria Analysis (MCA): toward a policy-led MCA for megaproject transport infrastructure appraisal, (Ward, E.J., Dimitriou, H.T., and Dean, M., 2016)

¹⁷¹ The Infrastructure Prioritization Framework: An Alternative Approach to Project Selection, (The World Bank Group, 2016), available at https://library.pppknowledgelab.org/documents/3552?ref_site=kl&keys=prioritization&restrict_pages=1&site_source%5B%5D=Knowledge%20Lab

¹⁷² The Green Book, Central Government guide on appraisal and evaluation, (HM Treasury, 2018)

WILLINGNESS AND ABILITY TO PAY

Overview

The determination of a fee, or tariff, for the use of an infrastructure service is common practice and usually involves an analysis of end users' ability to pay (ATP) and their willingness to pay (WTP)¹⁷³. Knowledge and understanding of the ATP and WTP of end users should be reflected in the Business Case and assist in the formulation of accessible tariff structures, subsidies, grants or output-based aid (OBA) mechanisms.

ATP is a measure of affordability. When a set tariff is defined for access to an infrastructure service, there is a risk that certain groups or individuals may be excluded from using it, as the tariff level exceeds their ability to pay. This creates economic and social inequalities and disparities. Data analysis, stakeholder engagement and surveys can help to define critical affordability thresholds. Affordability is linked to the income of a person and his/her household budget. Although a number of 'rules of thumb' on the affordability thresholds of utilities expenditures as a percentage of income are sometimes

cited, these are not absolute, and are subject to trade-offs. For example, transport users may trade off housing costs for transport costs.

WTP can be independent of personal or household income, and can be affected by historical precedence (e.g. resistance to the introduction of water charges in a country where such charges did not previously exist); by perceptions of fairness and quality of service; and by the availability of other options (e.g. a non-tolled transport route).

An inclusive approach to ATP and WTP studies will involve applying the analyses to disaggregated groupings of stakeholders (by income level, gender, etc.) while also considering intra-household effects where there are members of the household who would not normally control expenditure.

Ability to pay should be considered alongside willingness to pay. There are standard approaches on how to conduct ATP and WTP analyses, but such studies are inherently problematic, and results can change over time depending on circumstances.

Some of the challenges of conducting ATP and WTP analyses are:

CHALLENGES OF ABILITY-TO-PAY ANALYSIS

The ability-to-pay analysis, in the context of increasing the accessibility of certain infrastructure, requires a detailed understanding of the project's revenue, expenditure structure, inflation and other factors. The income of end beneficiaries and society groups at risk of not being able to access the infrastructure may be exposed to the negative impacts of climate change, job insecurity, and financial and political instability. This results in continuous change and fluctuation of household income. Additional micro and macro-economic factors (e.g. inflation) further impact spending capacity. Such circumstances and uncertainties create an additional challenge when identifying the ability to spend. To determine the most realistic numbers, income and expenditure variations need to consider fluctuations, dependencies and cost of living (housing, subsistence, education, leisure).

CHALLENGES OF WILLINGNESS-TO-PAY ANALYSIS

The willingness-to-pay analysis is complicated because it relates to a moment in time and a specific situation in which choices are made (e.g. if undertaken during a drought when there is limited food, priority is given to food).

It is also subjective and requires the respondent to be honest and realistic in their self-assessment when asked during a survey.

As illustrated in the Kenya Last Mile Connectivity Program Case Study, WTP in the poorest households will be influenced by competing priorities.

Source: Accounting for Poverty in Infrastructure Reform, World Bank, 2002

¹⁷³ Willingness to pay is defined as the maximum price at or below which a consumer will definitely buy one unit of a product. The assessment is often not that straightforward as it depends on personal preferences, choices available and circumstance in which the decision is made.

Relevance

At the policy level:

- *Performing ATP and WTP analyses considering aspects of inclusion to increase accessibility and affordability.* Carrying out ATP and WTP studies with an inclusivity focus (i.e. studies that consider low-income and other vulnerable groups) can inform the policy development process and positively influence increased accessibility and affordability.
- *Combining analysis results with data to determine optimal tariffs or subsidies.* In combination with data collection and disaggregation, these studies can also help to set the tariff or subsidy at an optimal overall cost to the economy and society.

At the project level:

- *Determining the bankability of a project through ATP and WTP analyses.* At project level, ATP and WTP studies are essential instruments to determine whether a project is affordable and bankable. If the analysis shows that the tariff needed to achieve financial viability will not be affordable, or that end users will be unwilling to pay such tariffs, then there is a possible need for financial assistance from the government to decrease the overall cost of the project.
- *Facilitating affordability discussions with funding entities through ATP and WTP studies.* Such studies can facilitate dialogues with government agencies and donor organisations on the subject of how the viability gap can best be addressed.

Guidance

1. Prior to conducting ATP and WTP studies, collect and analyse relevant data using varied collection methods.

If disaggregated data from national statistics is used for ATP and WTP studies, it needs to be robust and available at the required level of detail. In the absence of robust disaggregated data, separate surveys and data collection efforts will have to be undertaken to estimate the gap between what a household can, and is willing to, pay for the proposed infrastructure service, and the actual cost of the service. One drawback with WTP surveys is that they are based on hypothetical questions rather than on actual payment behaviour¹⁷⁴.

¹⁷⁴ Accounting for poverty in infrastructure reform - learning from Latin America's experience, (Estache, Foster, & Wodon, 2002)

2. Prioritise the poorest communities, given the vulnerability of their income and expenditure levels.

Individuals in the poorest communities need to allocate scarce resources to meeting basic necessities. For example, one of the findings in the *Kenya Last Mile Connectivity Program Case Study* was that, in the poorest communities, food and clothing were prioritised over access to electricity. In addition, ATP and WTP studies should take into account the fact that, in poor communities, incomes may be highly unstable and prone to fluctuation. Most exposed and vulnerable communities are impacted by seasonality and climate change, and they rely on global markets and commodity prices. Their income is dependent on various factors beyond their control, such as a stable political and financial environment.

Another example of the special circumstances affecting the poorest communities is provided by India where, despite the widespread availability and relative affordability of telecommunications services, not all segments of society use such services¹⁷⁵. Several factors contribute to this, such as restricted mobility, lack of education, men's control over information, media content excluding rural women, etc. Poorer communities also cannot benefit from access to the internet if they are illiterate¹⁷⁶.

3. Ensure the service quality matches the expectations of users.

Unreliable and inadequate supply is one of the reasons households 'opt out' of accessing infrastructure. People will be less willing to accept tariff increases where they have no confidence that the service will improve, or if they have suffered poor experiences in the past related to promises of improved service.

4. Consider differences in the local context, within a country or in the wider community.

The differences between communities in regard to their members' willingness to pay for particular types of infrastructure services may be significant. For instance, mobile users in sub-Saharan Africa spend, on average, 15% of their total income on mobile services. More people in sub-Saharan Africa now have access to mobile services than sanitation. In contrast, people in Chile with the lowest incomes are only willing to spend 2–3% of their earnings on communication devices. This is far below the cost of the technology needed to connect to the internet¹⁷⁷.

¹⁷⁵ Topic Guide, Maximising the Benefits to the Poor from Infrastructure Programs aimed at Increasing Growth, (Hawkins, Wells, & Fernz, 2014)

¹⁷⁶ Topic Guide, Maximising the Benefits to the Poor from Infrastructure Programs aimed at Increasing Growth, (Hawkins, Wells, & Fernz, 2014)

¹⁷⁷ Topic Guide, Maximising the Benefits to the Poor from Infrastructure Programs aimed at Increasing Growth, (Hawkins, Wells, & Fernz, 2014)

5. Determine a minimum tariff value for the services provided.

Providing a service or infrastructure for free may not encourage responsible behaviour. For example, providing free water distribution creates a risk that users will not value the service, leading to overuse and a lack of general care and maintenance. Charges based on volumetric consumption of electricity can also promote more responsible use and maintenance. However, some countries have also opted to fully subsidise infrastructure access for a specified group of individuals (see, in the final sub-section of this Action Area, *Box 21: Illustrative example – Concessionary bus fares, free travel for older people and people with disabilities, United Kingdom*).

Setting a lifeline tariff for low consumption levels, and increased tariffs at higher levels, can also promote effective demand management.

6. Consider smaller projects when reaching out to vulnerable community groups.

Often more innovative solutions can be applied to smaller projects, with service levels being tailored to needs and affordability levels. The advantage of a smaller project is demonstrated by the United Nations Capital Development Fund's (UNCDF's) Unlocking Public and Private Finance for the Poor Local Finance Initiative (see *Box 20: Illustrative example - Integration of private sector financing in combination with output-based aid*).

BOX 20: ILLUSTRATIVE EXAMPLE - INTEGRATION OF PRIVATE SECTOR FINANCING IN COMBINATION WITH OUTPUT-BASED AID

The United Nations Capital Development Fund's (UNCDF) Unlocking Public and Private Finance for the Poor Local Finance Initiative is a flagship program that offers practical examples of public and private financing, and a platform for knowledge exchange for least developed countries (LDCs). LDCs suffer from chronic infrastructure deficits, which are even more pronounced in secondary towns and rural areas. Infrastructure finance has its own challenges, which are further increased when the social inclusion dimension is also considered. Therefore, the UNCDF focuses on financial inclusion and financing mechanisms for demographic groups with the least income.

Project example - Mpale Village 50Kw solar micro-grid in the Tanga region of Tanzania.

The following challenges had to be overcome to make the project financially viable:

- lack of economies of scale (due to the size of the project), making it a low return project that could not attract private capital during the initial stages;
- untested management model proposed by the project developer; and
- lack of interest by commercial banks to lend to greenfield projects.

The UNCDF provided a USD 124,000 seed grant and technical assistance, which helped to unlock the remaining 67% of total project cost from two public financing sources: the US Africa Development Foundation (USADF), and the multi-donor Energy and Environment Partnership (EEP) program.

The UNCDF financial and non-financial contribution is seen as a catalyst for the development of the project.

This project is the first of its kind in Tanzania to employ the energy daily allowance (EDA) system. The EDA system assigns a daily fixed amount of electricity to each household. This amount is calculated and agreed upon with each household and is based on the number of appliances and the number of hours each appliance needs to be powered through the mini-grid during a 24-hour cycle.

Outcomes:

- Improved operational efficiencies of small-sized businesses and the enabling of business expansion.
- Created non-agricultural employment opportunities for members of the community and adjoining villages.
- Cost savings for users, increasing their purchasing power and improving their economic situation.
- Access to electricity to aid in the diversification of the local economy away from primary agriculture.
- Access to electricity enables women to shift time spent on unpaid house work, such as collecting firewood and fetching water, toward income-earning activities and businesses. Lighting provides more security, so women-owned businesses can extend their trading hours into the evening. Also, girls will have more hours to study in the evening.

Source: UNCDF, www.uncdf.org, Case Study No. 2: Mpale Village 50Kw Solar Micro Grid

FINANCIAL ASSISTANCE AND SUBSIDY INSTRUMENTS

Overview

Thorough planning and appraisal of a proposed infrastructure project should be the first step in determining if financial assistance is required to improve the inclusivity of the project. When financial assistance is required, in the form of subsidies or otherwise, Social Cost Benefit Analysis (SCBA) can be used to appraise the subsidies and calculate their impact, including the fiscal, environmental and social impact of a proposed subsidy, as well as its distributional impact.

There are a number of different social, environmental and financial objectives in pricing and subsidies. While some aspects of these objectives can be complementary, others may be competing. These competing pricing objectives add complexity to setting the optimal pricing subsidy.

For example, urban transport pricing subsidies may be designed for environmental reasons or to reduce congestion; and the setting of tariffs based on the metering of a utility service (such as water or electricity), can play an important role in demand management and addressing environmental concerns, since end users are much more likely to curtail their consumption when supply is metered.

However, certain types of pricing strategy may raise concerns regarding equity and the impact on vulnerable groups. Tariffs established on the basis of cost recovery, or demand management, may not address affordability to low-income users. To address this problem, alternative pricing strategies and efficient financial assistance delivery ought to be considered¹⁷⁸.

The effectiveness of subsidy measures to assist the poor can be assessed using inclusion and exclusion indicators from household survey data to measure targeting errors. Figure 10 illustrates how these errors of inclusion (when non-targeted groups receive the benefits) and errors of exclusion (when the targeted groups do not receive the benefits) can be calculated from household survey data.

Errors of inclusion (the share of benefits received by non-vulnerable people out of the total benefits available to both groups)

Errors of exclusion (the share of vulnerable people who did not receive benefits out of the total number of vulnerable people)

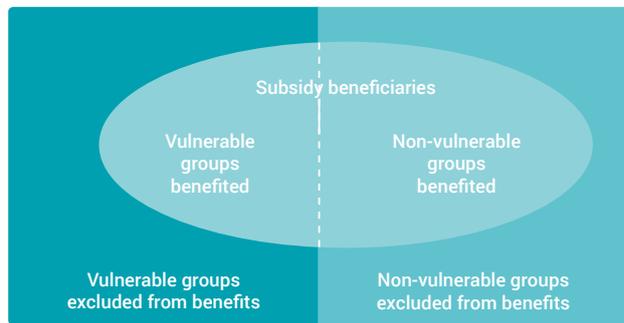


Figure 10: Errors of inclusion and exclusion in subsidy arrangements¹⁷⁹

Subsidy instruments

Subsidy instruments take many different forms, on both the supply and demand side.

Subsidies on the **supply side** (i.e. subsidies to project company service providers to facilitate the supply of an infrastructure service) are often unrelated to the welfare of the poor. Instead, they are mostly aimed at ensuring the viability of the service in the face of market difficulties.

These supply-side interventions in the transportation sector can take the form of capital grants given to public transport infrastructure, such as metro systems. These may have an efficiency justification in reducing traffic congestion, etc. but such subsidies do not specifically target low-income people. Accordingly, the welfare-distributing impacts of such capital subsidies will depend on who uses the subsidised services.

In contrast, subsidies on the **demand side** (i.e. direct subsidies to targeted end user groups), can directly address accessibility and equity problems. Demand-side subsidy instruments include income-based subsidies, journey-based subsidies and person-type subsidies. Figure 11 on the next page shows different types of urban transport pricing instruments¹⁸⁰.

¹⁷⁹ Foster (2004) via Transport Pricing and Accessibility, (Gwilliam, 2017)

¹⁸⁰ For detailed discussion on the objective of each pricing instrument, see Gwilliam (2017)

¹⁷⁸ Transport Pricing and Accessibility, (Gwilliam, 2017)

SUBSIDY INSTRUMENTS		TAX INSTRUMENTS
SUPPLY-SIDE SUBSIDIES	DEMAND-SIDE SUBSIDIES	
Maximum fare control	Class-related fares	Fuel tax
Franchise rights	Peak surcharges	Tax on vehicle miles
Network support	Off-peak surcharges	Licence duties
Bus tender subsidies	Flat fares	
School bus subsidies	Location-specific fares	
Non-work journeys	Club subscriptions	
Vehicle capital grants	Commuting tokens	
Clean fuel subsidies	Student cards	
Earmarked taxes	Child fares	
Deficit system support	Senior fares	
Route subsidies	Disabled fares	
Tendered management contracts	Flat fares	
Off-peak discounts	Location-specific fares	
Labour subsidies		
Special transport cash subsidies		

Figure 11: Urban transport subsidy and taxation instruments

A leading example of a transport sector subsidy directed exclusively at travel by low-income households is the TransMilenio BRT system in Bogotá, Colombia (see *TransMilenio Bus Rapid Transit Case Study* in Section 4), where, in 2013, the city authority (with the assistance of the World Bank) introduced a system in which members of households with a low national poverty index score could opt for a public transport subsidy through a personalised smart card. This program has contributed significantly to

an increase in infrastructure services available to workers in the informal sector and other low-income groups.

In the design of subsidised tariffs for utilities such as water and electricity, both affordability and willingness to pay need to be assessed, as outlined above. Subsidies can be based on the concept of 'lifeline subsidies' to ensure a defined minimum standard of accessibility, or the subsidies can be provided on a 'means-tested' basis.

Relevance

Where financial assistance is being provided in the form of subsidies at the sector or project level, these can be either on the supply side for service providers or on the demand side for users. The pricing strategy is also an important mechanism for the distribution of benefits and has a significant impact on the welfare of vulnerable groups.

At the policy level:

- *Targeting vulnerable groups through subsidies within the country's overall tax regime.* Subsidy and pricing instruments can be used to target low-income or other vulnerable groups, and should be considered alongside the broader context of the overall tax regime and the social safety-net systems in the country. Sector-specific financial assistance may be appropriate for certain 'merit goods' that provide wider benefits to society and to end users, which are not fully recognised at the time of their use (e.g. safe sanitation, education, etc.).

At the project level:

- *Applying subsidy instruments and financial assistance to ensure affordability.* Optimised financial assistance, delivered as subsidies and inclusive pricing strategies at the project level, can be effectively applied to ensure the project's affordability, accessibility and sustainability.

Guidance

- 1. Assess the need for government financial assistance to projects having regard to the project's Business Case, using Social Cost Benefit Analysis as appropriate, in alignment with national strategies, such as ensuring universal access to basic services.**

Financial assistance from government may be required to ensure that a project is financially viable, where the social benefits of a proposed project outweigh the costs of such assistance. Direct subsidies to sectors can be targeted to ensure inclusion, and both the advantages and the potential disadvantages (such as the distorting effects of subsidies) should be carefully assessed. The efficiency of infrastructure subsidies should be assessed versus wider options, such as general cash transfers to the poor¹⁸¹.

- 2. Assess different options for targeting subsidies.**

Two broad approaches are available for demand-side subsidies in infrastructure. They can be based on the consumption level of households, in which case they are called 'lifeline subsidies'. Alternatively, the subsidies can

be based on socioeconomic characteristics, in which case they are referred to as 'means-tested subsidies'¹⁸². A lifeline tariff can target a minimum standard of service delivery, in accordance with national standards or as set out in the UN SDG targets – and such mechanisms can be designed so that wealthier end users with higher consumption levels are subject to higher tariffs. If there is a preference to use means-tested subsidies, there will need to be reliable systems to identify income levels which can be readily applied and are not subject to abuse. In some countries this can be challenging, and geographic targeting of poor districts is often used as a proxy for means-testing.

At the end of this sub-section, Box 21 presents an illustrative example of an application of concessionary bus fares and statutory free bus travel for the elderly and disabled in the United Kingdom.

- 3. Consider the use of cross-subsidies to provide eligible households a percentage discount on their bills, which is funded by a percentage surcharge applied to ineligible households.**

Under a cross-subsidy program, money raised from a surcharge to relatively wealthy end users goes to a special fund, from which subsidies can be paid to households that apply for and meet the eligibility criteria. As they are somewhat hidden, cross-subsidies often have the advantage of generating less opposition from those who pay the subsidies than general taxes, and they avoid the problem of tax evasion. However, cross-subsidies may generate larger economic distortions than general taxes, because the prices for both those receiving and paying the subsidies are distorted¹⁸³.

- 4. Consider the use of subsidies to local governments or private sector providers against certain performance output (so called output-based subsidies, or output-based aid¹⁸⁴) to incentivise inclusivity.**

Chile's rural electrification program, launched in 1994, created a special rural electrification fund (REF), whereby subsidies are linked to specified output targets. This fund competitively allocates direct subsidies to private distribution companies to cover part of their investment costs in rural electrification.

¹⁸¹ Accounting for poverty in infrastructure reform - learning from Latin America's experience, (Estache, Foster, & Wodon, 2002)

¹⁸² Accounting for poverty in infrastructure reform - learning from Latin America's experience, (Estache, Foster, & Wodon, 2002)

¹⁸³ Accounting for poverty in infrastructure reform - learning from Latin America's experience, (Estache, Foster, & Wodon, 2002)

¹⁸⁴ Output Based Aid is a subsidy that is disbursed only after achievement (and verification) of agreed outputs (often also called outcomes).

The distribution companies apply for a subsidy by presenting a project proposal, then the proposals are scored against a checklist of objective criteria, including cost-benefit analysis, operator investment commitment and social impact. The central government allocates subsidies to regions according to the number of un-electrified households and the progress each region has made in rural electrification during the preceding year¹⁸⁵.

Another example of this type of subsidy is the Water Sector Trust Fund in Kenya (see related *Case Study* in *Section 4*), whereby payments are made to local service providers after construction has been completed in accordance with previously agreed output specifications. Under this program, the Trust Fund sends an independent assessor to complete a report on the works that have been constructed, and on the basis of this report the subsidy is disbursed.

5. Establish and implement systems for monitoring and evaluating the use (and mis-use) and impact of subsidies. Determine inclusion and exclusion indicators¹⁸⁶ to measure the proportion of the target group that fails to benefit from the subsidy (exclusion index) and the proportion of people outside the target group benefiting from the subsidy (inclusion index).

By undertaking this type of inclusion and exclusion analysis (see Figure 10 on previous page), governments can determine if a subsidy is achieving its objectives. This finding can be very important in the design and reform of subsidies. This approach was first applied to public transport in Buenos Aires¹⁸⁷ to evaluate the socioeconomic impacts of the infrastructure reforms of the 1990s.

When the objective to redistribute benefits from the defined non-vulnerable groups to the targeted vulnerable groups has been successful, then both exclusion and inclusion indicators should be close to zero (i.e. the subsidy is well-targeted and applied to the intended group).

APPLICATION TO TARGETED STAKEHOLDER GROUPS

Low-income groups

The targeting of subsidies and the pricing strategy used for infrastructure services are particularly important topics for low-income groups. In addition to assessing the household income of low-income groups on a stable basis, consideration should also be given to variations in income levels caused by events such as failed harvests, epidemics or job losses. In addition to the amounts paid by low-income groups for infrastructure services, consideration should also be given to non-financial barriers. For example, there are instances where poor families are actually paying more for their informal water supply than higher-income households are paying for water utility services, but the former group is unable to access the utility service due to the size of upfront connection fees, the need for a formal proof of address, or an insistence upon end users having a personal bank account.

People living in remote areas

For people living remote from existing networks, the tariff implications and economic efficiencies of centralised versus decentralised supplies should be carefully assessed. In the power sector, the following mechanisms have been identified to make electricity supply more affordable and accessible for groups living in remote areas¹⁸⁸:

- feed-in tariffs for renewable energy supply;
- rural distribution franchises: for example, in India, the distributed generation and supply (DG&S) model combines generation and distribution, e.g. in addition to distributing power and collecting revenues, the franchisee also generates power locally and supplies it to the franchised area¹⁸⁹;
- innovative payment mechanisms (i.e., payments by mobile phone, and pre-paid services).

¹⁸⁵ Topic Guide, Maximising the Benefits to the Poor from Infrastructure Programs aimed at Increasing Growth, (Hawkins, Wells, & Fernz, 2014)

¹⁸⁶ Transport Pricing and Accessibility, (Gwilliam, 2017)

¹⁸⁷ Toward a Social Policy for Argentina's Infrastructure Sectors: evaluating the past and exploring the future (Foster, 2004)

¹⁸⁸ Empowering Rural India: Expanding Electricity Access by Mobilizing Local Resources. Analysis of Model for Improving Rural Electricity Services in India through Distributed Generation and Supply of Renewable Energy, (World Bank, 2010)

¹⁸⁹ Empowering Rural India: Expanding Electricity Access by Mobilizing Local Resources. Analysis of Model for Improving Rural Electricity Services in India through Distributed Generation and Supply of Renewable Energy, (World Bank, 2010)

BOX 21: ILLUSTRATIVE EXAMPLE – CONCESSIONARY BUS FARES, FREE TRAVEL FOR OLDER PEOPLE AND PEOPLE WITH DISABILITIES, UNITED KINGDOM

Under the provisions of the Transport Act 2000, the statutory concession currently consists of guaranteed free off-peak travel for older people and people with disabilities on all local buses, anywhere in England, from 9:30am until 11pm on weekdays and all day on the weekends and on Bank Holidays. The concessionary bus travel is popular and successful, with almost 12 million pass-holders making more than 1.2 billion bus journeys in 2015/16. This statutory concession is complemented by voluntary concessions.

Objectives

The objectives are based on social inclusion and access.

The provision aims to enable people with disabilities and the elderly, especially those on low incomes, to use public transport. It recognises the role access to public transport can play in tackling social inclusion and well-being. It promotes greater freedom and independence.

Eligibility criteria

People with disabilities, as specified in section 146 of the 2000 Act, include:

- a) those who are blind or partially sighted;
- b) those who are profoundly or severely deaf;
- c) those without speech;
- d) those with a disability, or those who have suffered an injury, which has a substantial and long-term adverse effect on their ability to walk;
- e) those who do not have arms, or who have long-term loss of the use of both arms;
- f) those with a learning disability, that is, a state of arrested or incomplete development of mind which includes significant impairment of intelligence and social functioning;
- g) those who would, if they applied for the grant of a licence to drive a motor vehicle under Part III of the Road Traffic Act 1988, have their application refused; and
- h) those who are automatically eligible for free bus travel, such as recipients of the war pensioner's mobility supplement.

Older people

Eligibility criteria is as follows: "in the case of a woman, her pensionable age [and] in the case of a man, the pensionable age of a woman born on the same day".

The scheme is administered by travel concession authorities and funded with GBP 1.17 billion per year. The bus pass is particularly popular amongst older people.

Benefits

Each £1 of government expenditure on concessionary travel for older people and people with disabilities generates at least £3.79 in benefits, broken down as:

1. impacts for concessionary bus passengers;
2. impacts for other bus passengers and other road users;
3. wider economic impacts, especially those associated with volunteering; and
4. well-being, including physical health.

Discretionary fares

Local authorities have discretion over any concessionary fares they choose to offer in addition to the statutory concession (i.e. to students and older people not yet of pensionable age, which is currently 65 for men and 60 for women). Any such discretionary concessions are funded from general spending. Across England's bus network, more than one in five journeys are made using a concessionary pass.

The London Scheme

The London Scheme (known as the Freedom Pass) provides a standard concession for older people and people with disabilities. The scheme provides free travel for pass-holders on almost all public transport in London, such as buses, the Underground, the Overground and Docklands Light Railway, and National Rail services.

Sources: House of Commons Library, Briefing Paper Concessionary bus fares SN01499, 2015. The costs and benefits of concessionary bus travel for older and disabled people in Britain, Greener Journeys, 2017

OVERVIEW OF ACTION AREAS ILLUSTRATED BY CASE STUDIES

While every infrastructure project should consider practices under each of the Action Areas, for illustrative purposes, the case studies (found in *Section 4*) have focused on specific Action Areas, as summarised below.

BOX 22: PRINCIPAL ACTION AREAS COVERED AND TARGETED STAKEHOLDERS IN DETAILED CASE STUDIES

CASE STUDY	PRINCIPAL ACTION AREAS COVERED	TARGETED STAKEHOLDERS
U.S. Bank Stadium, United States of America	<ul style="list-style-type: none"> 3. Policy, Regulation and Standards 4. Project Planning, Development and Delivery 	<ul style="list-style-type: none"> Low-income groups Women and girls Minority groups People living with a disability Women- and minority-owned businesses Veterans
El Metropolitano Bus Rapid Transit, Peru	<ul style="list-style-type: none"> 1. Stakeholder Identification, Engagement and Empowerment 4. Project Planning, Development and Delivery 	<ul style="list-style-type: none"> Low-income groups People living with a disability Women and girls Bus Rapid Transit (BRT) system users
Regional Communications Infrastructure Program (RCIP), Malawi	<ul style="list-style-type: none"> 2. Governance and Capacity Building 3. Policy, Regulation and Standards 	<ul style="list-style-type: none"> Low-income groups District Information Offices Secondary schools Teacher Development Centres and Technical Colleges
Water Sector Trust Fund, Kenya	<ul style="list-style-type: none"> 1. Stakeholder Identification, Engagement and Empowerment 6. Affordability and Optimising Finance 	<ul style="list-style-type: none"> Women and girls Youth Water users' associations Communities without access to improved water resources
Mi Teleférico Cable Car, Bolivia	<ul style="list-style-type: none"> 1. Stakeholder Identification, Engagement and Empowerment 5. Private Sector Roles and Participation 6. Affordability and Optimising Finance 	<ul style="list-style-type: none"> Low-income groups Women and girls People living with a disability All cable car users and employees
TransMilenio Bus Rapid Transit, Colombia	<ul style="list-style-type: none"> 1. Stakeholder Identification, Engagement and Empowerment 2. Governance and Capacity Building 3. Policy, Regulation and Standards 5. Private Sector Roles and Participation 	<ul style="list-style-type: none"> Women and girls People living with a disability Informal vendors People facing homelessness BRT employees BRT users
Cairo Metro, Egypt	<ul style="list-style-type: none"> 1. Stakeholder Identification, Engagement and Empowerment 2. Governance and Capacity Building 	<ul style="list-style-type: none"> Low-income groups Youth (in both urban and rural areas)
Last Mile Connectivity Program, Kenya	<ul style="list-style-type: none"> 1. Stakeholder Identification, Engagement and Empowerment 3. Policy, Regulation and Standards 6. Affordability and Optimising Finance 	<ul style="list-style-type: none"> Low-income groups People living in informal settlements and isolated communities Communities without electricity access

