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 development[128]. 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 poverty[129]. 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 economies[130]. 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 benefits[131].

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 options[132]:

- 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.

[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.

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 users[133].

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 customers[134]. 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 them[135].

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 periods[136].

[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 facilities[137].

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 rights[138], 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 Infrastructure[139].

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 priorities[140]. 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 factors[141].

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 plan[142]. 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 enterprises[144].

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 equality[145]. 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 activity[146]. 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 compelling[147]:

- 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, 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 businesses[148].

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.

[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)

[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 skills[149].

[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 areas[150]. 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 inclusivity[151].

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 services[152]. 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.**

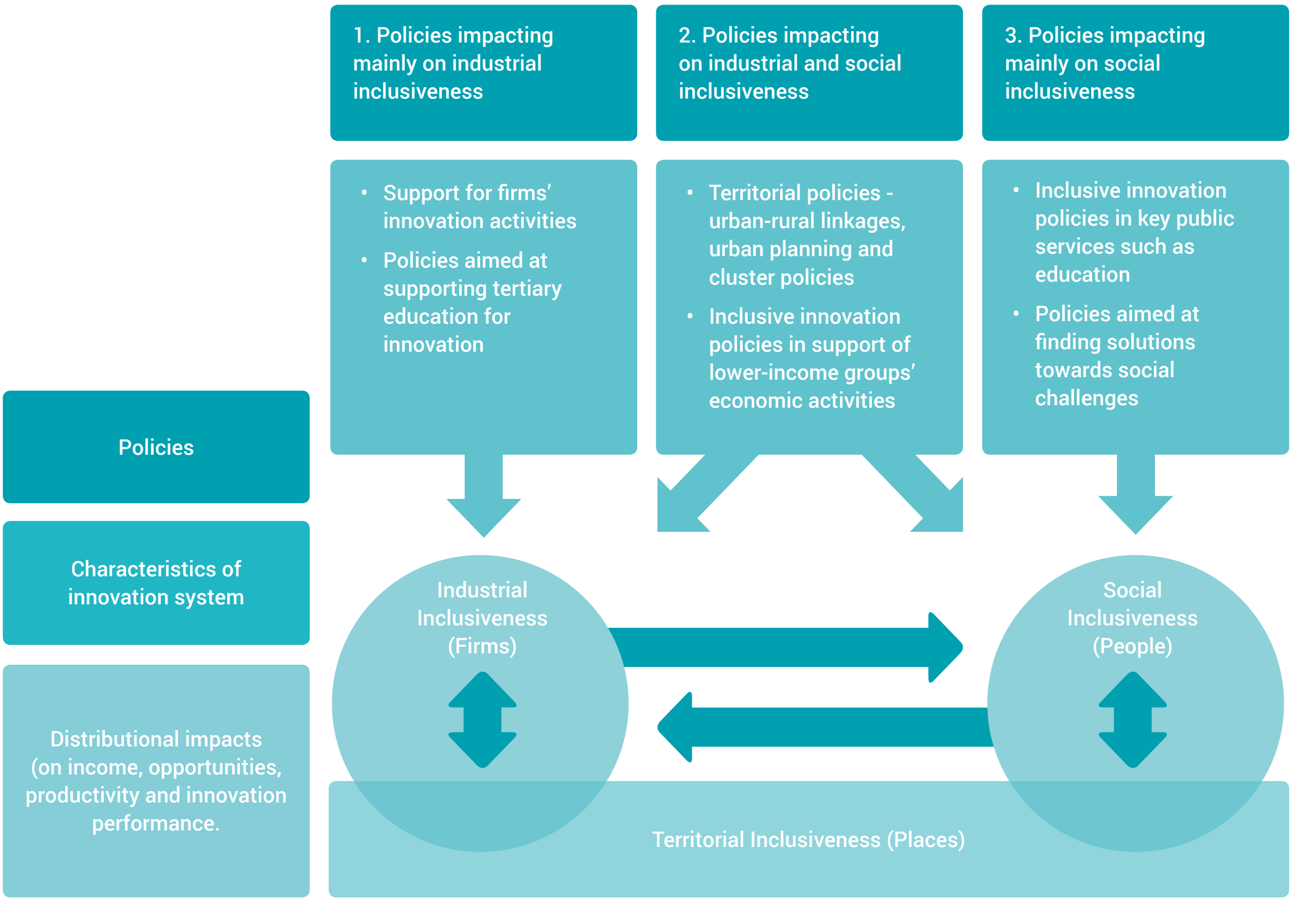
The following OECD graphic on the next page suggests some possible links between government policies and the use of private sector innovations to enhance the inclusivity of infrastructure[153].

[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 businesses[154].

In Ireland, the Going for Growth project similarly supports networking, workshops, mentoring and skills development for women entrepreneurs[155].

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 Leaders[156]:

- *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.**