G20 Development Working Group (DWG)
Key Elements of Quality Infrastructure
for Connectivity Enhancement towards Sustainable Development
(Final)

1. Infrastructure as a key driver of sustainable development

1.1 Infrastructure is a key driver of economic prosperity, sustainable development and inclusive growth. It can advance countries’ progress towards the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs).

1.2 Infrastructure connectivity is one of the essential features needed to achieve sustainable development, as it facilitates the well managed and safe movement of people, goods, services, knowledge and capital. Infrastructure in areas such as transport, energy and Information and Communication Technology (ICT) plays a fundamental role in connectivity enhancement. At the same time, infrastructure in other areas such as health, sanitation, water management, housing, agriculture and education is equally important to achieve sustainable development and inclusive growth. The necessity of such an integrated and coherent approach is confirmed in the G20 High Level Principles on Sustainable Habitat through Regional Planning in 2018 that considers integrated urban, peri-urban and rural development policies and planning, to harness their mutual strengths and advantages, aiming to achieve equitable regional development in social, economic and environmental terms.

1.3 Infrastructure is also a key for gender equality, as well-designed infrastructure projects have the potential to improve women’s access to education, health care, employment opportunities and economic resources.

2. Infrastructure financing gap

2.1 While infrastructure is crucial for sustainable development and inclusive growth, a massive gap in financing has constrained its development. We highlight that developing countries, including in Africa, Asia and the Americas, face specific challenges, when it comes to closing the infrastructure financing gaps, in terms of magnitude of investment needs, capacity to develop bankable projects and mobilizing and accessing financial resources for investment. While the infrastructure gap has been extensively discussed at the G20 Finance track, the Developing Working Group (DWG) has also discussed the issue emphasizing the sustainable development perspective.

2.2 According to the Addis Ababa Action Agenda, scaling up and integrating financing from all sources,

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1 In this document, infrastructure mainly refers to infrastructure in areas such as transport, energy and information, but infrastructure in other areas is not excluded to the extent that it contributes to connectivity enhancement.
including from public, private, and multilateral agencies (e.g. Multilateral Development Banks (MDBs)), as well as domestic resource mobilisation is critical to effectively address the infrastructure financing gap. In this vein, it is important to involve the private sector in quality infrastructure investment, by improving project preparation and investment climates, mitigating risks and utilizing, where appropriate, public funds as a catalyst for increased private sector investment, including through impact investment, blended finance, public private partnerships, private-sector instruments and guarantee instruments. Additionally, more efficient allocation and use of existing resources to fund infrastructure investment is critical.

3. Importance of quality infrastructure

3.1 While the volume of infrastructure investment is important, the quality of infrastructure investment also needs to be ensured in order to effectively contribute to sustainable development, as quantity and quality can be mutually reinforcing. At the G20 Hangzhou Summit in 2016, the Leaders confirmed the elements of quality infrastructure investment. Since then the G20 Leaders have endorsed a series of important documents and initiatives, most recently the Roadmap to Infrastructure as an Asset Class and the G20 High Level Principles on Sustainable Habitat through Regional Planning (2018), which highlights the necessity to advance a shared understanding of “quality infrastructure” within the G20 to support and promote infrastructure projects that are reliable and economically, financially, socially, environmentally and institutionally sustainable, across the entire life cycle.

3.2 Reliable, coherent data on quality infrastructure investment and its analysis, disaggregated by sex, age, disability and other relevant factors, is key to supporting evidence-based decision-making and policy monitoring. In this context, provision of technical assistance to reinforce developing countries' assessment capacity, especially at local level, could be considered.

3.3 Bearing this in mind, the DWG has elaborated the following elements, which will be provided as its input into a set of Principles on Quality Infrastructure Investment to be formulated in the G20 Finance Track, with the Infrastructure Working Group being the focal point. This initiative also contributes to the G20's coordinated efforts to promote sustainable development.

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2 The Tri Hita Karana Roadmap for Blended Finance, launched in October 2018 in Indonesia, is an example of a multi-stakeholder platform to advance blended finance principles and common values in support of the SDGs.
3 "We stress the importance of quality infrastructure investment, which aims to ensure economic efficiency in view of life-cycle cost, safety, resilience against natural disaster, job creation, capacity building, and transfer of expertise and know-how on mutually agreed terms and conditions, while addressing social and environmental impacts and aligning with economic and development strategies."
4 The Global Infrastructure Connectivity Alliance (2016), the G20 Africa Partnership (2017), the Roadmap to Infrastructure as an Asset Class (2018) and the G20 High Level Principles on Sustainable Habitat through Regional Planning (2018)
4. DWG Input of Elements into a set of Principles on Quality Infrastructure Investment

4.1 Sustainable Development
Sustainable development should be placed at the centre of infrastructure investment. Infrastructure investment should be aligned with national economic and development strategies, tailored to individual country conditions, and consistent with local laws and regulations.

4.2 Safety and Resilience
Infrastructure should be safe, resilient and adaptable across its life cycle to natural disasters, climate and weather-related impacts, as appropriate according to the geographical conditions, as well as to human-made risks. Such resilience reduces the risk of disruption to national, regional and global supply chains, including for food security, and promotes the reliability of systems that support the well-managed and safe movement of people, goods, knowledge and capital, as well as the accessibility of services and information. It also enhances the ability to better withstand and quickly recover from disasters and hazards of all types. In this respect, it is encouraged to develop better-designed and managed infrastructure, taking into account the lessons learnt from past disasters. All critical infrastructure is encouraged to be assessed for disaster and climate risk and retrofitted for mitigation measures.

4.3 Economic Efficiency
Infrastructure investment should be economically efficient, taking into account market demands. Economic efficiency, affordability with respect to life cycle costs and cost-effectiveness of infrastructure investments should be considered in view of not only initial costs, but life cycle costs, including operation, maintenance and other costs which will be incurred during the whole life of the infrastructure investment and in the foreseeable future. Efforts to reduce project development, operation and maintenance costs should be encouraged, including through open, transparent and competitive procurement (e.g. bidding processes), as well as equal footing, including equitable and non-discriminatory business environment for the public and private sectors, while ensuring the quality of infrastructure. Infrastructure investment should support sustainable economic growth through decent job creation, capacity building, and voluntary transfer of expertise and know-how on mutually agreed terms, in particular for the local communities and private sector, including small and medium-sized enterprises (SMEs). Increases in land value as a result of new infrastructure should benefit small landholders and the most vulnerable.

4.4 Social Consideration
Infrastructure investment should be inclusive, responsive to gender and disability needs, while respecting human rights and applicable international labour standards, including those of local communities and indigenous people, so that infrastructure investment can reduce poverty,
unemployment, marginalization and inequality based on age, gender, disability, race, ethnicity, origin, religion or economic or other status. Infrastructure investment should empower and promote inclusion of all, including by consulting with local authorities, local communities, civil society organizations and users, securing equitable access for all. Particular consideration should be given to how infrastructure facilitates women’s economic empowerment through equal access to well-paying jobs created by infrastructure investments, and improved access to services that reduce time poverty and health risks. Such accessibility to infrastructure is also important in the context of the "last mile" outreach of infrastructure connectivity, in particular for marginalized communities, with a view to ensuring that development gains are shared by all and no one is left behind. Social impact assessments should be taken into consideration in the planning, development and operation of infrastructure projects. Safety and security risks for communities, including women and girls, need to be addressed to prevent harm, including gender-based violence. Forced resettlement should be minimized and populations that have to be involuntarily resettled for the building of infrastructure should receive a fair compensation.

4.5 Environmental Consideration
Impacts on ecosystems, biodiversity, climate, weather and the use of natural resources should be integrated into planning, development and operation of infrastructure projects, so that infrastructure investment can be consistent with the protection and conservation of marine, coastal, inland freshwater, terrestrial and mountain ecosystems. Infrastructure projects should align with national strategies, and nationally determined contributions for those G20 countries choosing to implement and with transitioning to long-term low emissions strategies, while being mindful of country circumstances. Infrastructure projects should also align with the promotion of clean or cleaner energy and energy-efficient power sources, and the reduction of pollution. Accordingly, building materials are encouraged to be selected with consideration of their carbon footprint and environmental impact.

4.6 Openness in Operation
Infrastructure should be open, accessible and broadly beneficial for local people, communities and regions, in a non-discriminatory manner that facilitates the well-managed and safe movement of people, goods and capital within and beyond national borders, as well as access to services and knowledge.

4.7 Governance
Infrastructure investment should be transparent and accountable to concerned stakeholders, including local communities and users. Good governance supported by effective institutions and strong management capabilities provides the enabling environment that determines the success of infrastructure in supporting sustainable development, and mitigates the risk of corruption, which would otherwise disrupt needs-based prioritization of infrastructure projects that benefit local
communities and users, and derail the effective delivery of infrastructure projects, leading to lower returns and performance. Transparency, accountability and anti-corruption measures should be included over the life cycle of infrastructure projects. Infrastructure investment should support a borrower country’s financial, fiscal and debt sustainability, so as to secure the ability to meet the basic and other development needs. Both borrowers and creditors need to promote transparency and sustainable financing practices. Co-ordination between the multi layers of governments, the private sector and local communities should be promoted in planning and development of infrastructure projects.

5. Follow-up
5.1 The G20 will promote quality infrastructure investment in line with the final Principles for Quality Infrastructure Investment as developed through the Finance track. The G20 will also provide assistance for capacity building of developing countries where necessary and appropriate, and will explore more cooperation on infrastructure connectivity, shared benefits and equal opportunities for all.

5.2 We will cooperate with IOs, such as the OECD and MDBs, to reach out to non-G20 countries, to promote a shared understanding on quality infrastructure investment, including through providing a compendium of good practices.

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