INFF | Integrated National Financing Frameworks

GUIDANCE NOTE

INFFs and Infrastructure Financing

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About integrated national finance frameworks

Integrated national financing frameworks (INFFs) are a planning and delivery tool to help countries implement the Addis Ababa Action Agenda at the country level. INFFs lay out the full range of financing sources – domestic and international sources of both public and private finance – and guide countries in developing a strategy to increase investment, manage risks and achieve sustainable development priorities, as identified in national sustainable development strategies.

To help build cohesion and encourage knowledge exchange between countries implementing INFFs around the world, the United Nations and the European Union, in cooperation with a growing network of partners, are developing joint approaches to bring together expertise, tools and relationships in support of country-led processes. For more information about INFFs, visit www. inff.org.

Acknowledgements

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SUPPORTING PARTNERS

Contents

Abbreviations

ABS	Asset-Backed Securities
AFI	Alliance for Financial Inclusion
CLOs	Collateralized Loan Obligations
ECA	Export Credit Agencies
EME	Emerging Market Economies
ETFs	Exchange-Traded Funds
GI Hub	Global Infrastructure Hub
IITS	Investment Infrastructure Trusts
IMF	International Monetary Fund
INFF	Integrated National Financing Framework
LDCs	Least Developed Countries
MDBs	Multilateral Development Banks
MSMEs	Micro, Small, and Medium Enterprises
NDBs	National Development Banks
ODA	Official Development Assistance
PPPs	Public-Private Partnerships
REITS	Real Estate Investment Trusts
SIDS	Small Island Developing States
SOEs	State-Owned Enterprises
TA	Technical Assistance

1. Introduction

Infrastructure development lies at the nexus of economic growth, productive investment, job creation, and poverty reduction. An Integrated National Financing Framework (INFF) helps countries incorporate financing into national planning to achieve national sustainable development priorities (see Box 2). This note provides guidance on the application of INFFs for better integrated national infrastructure planning and financing processes.

It addresses the following questions:

- How can INFFs help finance infrastructure plans/goals?
- How can INFFs help enhance the consistency and alignment of all financing in support of infrastructure?
- How can INFFs help bring together infrastructure, national development, and financing actors?

This note is intended for a broad range of stakeholders including those listed in box 1 below. The INFF fosters coherent financial strategies and actions among key stakeholders in infrastructure projects.

Box 1. Infrastructure Stakeholders – national, local, and international levels

Public Sector
• President Prime Ministers Offices, Cabinet Ministers • Municipal and local councils • National planning agencies, Ministries of Finance and aid management agencies (donor focal points) • Central Banks, National Development Banks (NDBs), Infrastructure Banks and Facilities • Export Credit Agencies (ECA) • Infrastructure, economic and development planning agencies, committees and commissions • Legal and regulatory authorities – national lawmakers, sector, city, and local regulators, technical and environmental permitting agencies, and public procurement agencies • Public asset owners – national state investment corporations, state, and local government agencies • Public infrastructure managers/operators – State Owned Enterprises (SOEs) • Trade and industry development agencies • Development cooperation partners – Donors, Multilateral Development Banks (MDBs) and IFIs, Infrastructure TA Facilities • Climate fund focal points • Public landowners
Private Sector
• Infrastructure owners/operators – private and publicly listed utilities, SOEs with financial and managerial autonomy • Institutional investors – investment fund managers, sovereign wealth funds, pension funds, and insurance companies • Commercial banks – registered international, national, and local banks, bankers' associations • TVET providers associated with the infrastructure sector skills development and technology transitions • Chambers of Commerce, small business associations, industry associations • Industry associations participants – project developers and managers, legal advisers, engineers, project managers, materials providers, construction companies, services, etc. • Private landowners

Civil Society
• Cooperatives and community infrastructure asset owners/managers/operators • Women and youth associations, trade unions, and special interest groups • Landowners, representatives of traditional leaders and indigenous people • Home-owners associations, informal sector umbrella groups, farmers, and rural development associations • Community credit associations

Box 2. What is an integrated national financing framework (INFF)?

Integrated national financing frameworks (INFFs) help countries finance their national sustainable development objectives and the Sustainable Development Goals (SDGs).

Through INFFs, countries develop a strategy to mobilise and align financing with all dimensions of sustainability, broaden participation in the design, delivery and monitoring of financing policies, and manage risk.

INFFs are voluntary and country-led. They are embedded within plans and financing structures, enabling gradual improvements and driving innovation in policies, tools and instruments across domestic, international, public and private finance.

Four building blocks can support governments in putting an INFF into practice:

1. Assessment and diagnostics (to provide the basis for decision making on financing – i.e. what are the needs, what financing is already available and how it is being used, what are the risks, and what are the underlying obstacles/binding constraints);

2. Financing strategy (to guide the design of financing policies and reforms that can mobilise financing in line with national priorities and all dimensions of sustainability);

3. Monitoring and review (to bring together all relevant data and information to track progress and facilitate transparency, accountability and learning on all things financing);

4. Governance and coordination (to ensure institutions and processes required for the formulation and implementation of coherent financing policies are in place and functional).

Note: Global guidance on each of the building blocks can be found at inff.org.

On the one hand, infrastructure is a key enabler of the SDGs, as is captured in SDG 9 “Build resilient infrastructure, promote inclusive and sustainable industrialization and foster

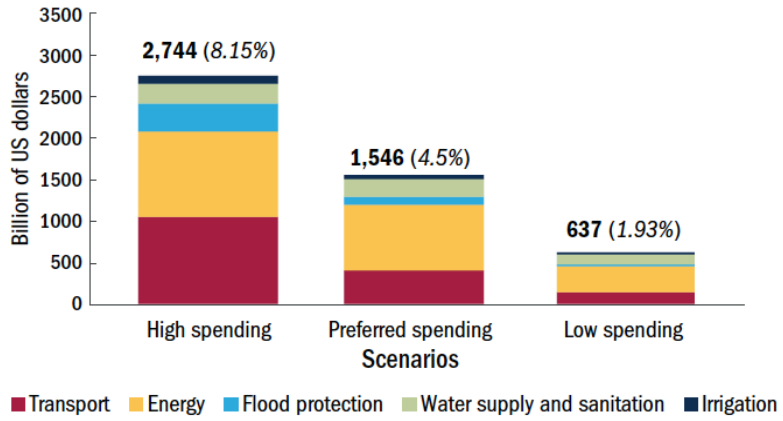
innovation"[1].On the other hand, infrastructure choices have significant impacts on the environment. It is responsible for more than 79% of global greenhouse gases and 88% of all adaptation costs[2]. Moreover, it consumes 60% of the world's materials[3]. Roads alone can account for up to 30% of greenhouse gases.

The World Risk Report highlights that "sufficient and well-built infrastructure, such as high-quality power and transportation networks, can limit the impacts that natural hazards can cause both in terms of loss of life and economic damage. At the same time, the breakdown of nodal points in infrastructure, such as airports or power plants, can also cause impacts that reach far beyond the actual extent of the hazard"[4]. Sustainable infrastructure is, therefore, indispensable to climate adaptation.

Decisions made on infrastructure investment today will lay the foundations for countries' development paths for decades ahead and should be aligned with the SDGs, climate goals and disaster risk reduction priorities. To improve the sustainability and resilience of infrastructure services delivery, governments can build on the many initiatives launched in this area.[5]

Financing infrastructure is thus a critical aspect that requires deliberate consideration and planning through an integrated approach.

Figure 1. Annual costs of infrastructure by sector, 2015-2030[6]



The World Bank estimates that low- and middle-income countries need to invest around 4.5 percent of GDP to achieve infrastructure-related Sustainable Development Goals (SDGs) and to stay on track to limit climate change by no more than 2 degrees Celsius (preferred scenario figure 1).

However, the infrastructure financing gap is huge. According to studies from the G20's Global Infrastructure Hub and the United Nations, the gap stands at multiple trillion of dollars per year. The infrastructure funding gap is particularly problematic in Small Island Developing States (SIDS), Least Developed Countries (LDCs), and the African region. In Emerging Market Economies (EMEs) this is estimated at $1.3 trillion per year. Closing this infrastructure financing gap is paramount to attaining the SDGs.

2. Infrastructure financing: an Overview

Infrastructure financing in practice

The definition of infrastructure varies among financing actors and is dependent on the context of each country and region. General infrastructure categories include economic and social sectors. Infrastructure can also be classified by sub-sectors, each having specificities. Core or critical infrastructure generally includes water, health, education, energy, transport and communications, agriculture, financial services, and housing.

High cost and long-life cycle characterize infrastructure industries and make economies of scale in production essential to sustainable financing. Public utilities supply essential goods and services using infrastructure and are subject to varying levels of public control and regulation, ranging from local community-based groups to statewide government monopolies. Utilities include state-owned enterprises (SOEs), corporations, and private companies. SOEs that are organized with financial and managerial autonomy are counted as private entities in terms of infrastructure financing.

In sub-sectors where predictable revenue streams are established on middle- and higher-income consumers, i.e., telecommunications and electricity, the private sector is generally the most significant infrastructure financing source. Private financing is much less common where revenue streams are constrained by factors such as the type of consumer and role of the state in primary service provider, for example, social housing, education, health, and water. While private investment cannot replace public investment in infrastructure, there are opportunities for scaling up its role in certain areas. This requires addressing obstacles preventing greater private investment and moving away from a project-by-project approach to a more systemic one.[7]

Ideally, the maturity of finance should approximate the long-term economic life of the underlying asset. Otherwise, investors, firms, and projects would be exposed to liquidity and interest rate risks that severely constrain investment.

Some aspects that distinguish infrastructure financing from other sector approaches include:

- The asset being financed is a long-lived capital asset;
- The project's sponsors often establish and become principal shareholders in a Special Purpose Vehicle (SPV), de-consolidating the project from their respective public- or private-sector balance sheet;
- As a standalone legal entity, the SPV's debt is structured without recourse to the sponsors, thus preserving their credit quality;
- Private-sector infrastructure projects tend to be financed with a 70/30 mix of debt and equity, compared with a typical 50/50 mix in the corporate area. The debt component of public sector infrastructure projects is typically substantially higher[8].

Middle- and low-income countries have not benefited from private infrastructure investments to the same extent as high-income countries. Governments in high-income countries have used private project finance methods to fund public infrastructure, utilizing general obligation bonds and bonds supported by project-specific cash flows. Emerging markets have also adopted private project and infrastructure financing due to the higher returns and cross-border

diversification opportunities sought by foreign direct and portfolio investors. However, this financing is narrowly concentrated on the energy, power, and telecommunications sectors.

Public finance for infrastructure investment is under significant pressure. Countries that rely on public expenditure and official development assistance (ODA) face significant funding gaps as high needs combine with fiscal pressures and tighter international banking regulations. This particularly impacts LDCs that predominantly use government or donor funds or obtain capital through foreign borrowing or direct investment.

As public finance still dominates economic infrastructure in developing countries, there remain obvious opportunities to improve efficiency. Since public investment is only loosely correlated with provision in many countries, public investment management is key. Public investment management assessment (PIMA) can help and consists of planning (strategic planning, including SOEs), allocating (medium-term budget frameworks), and implementing stages (expenditure controls, project evolution, etc.). Priorities for reform should focus on strengthening medium-term fiscal and budgetary frameworks to improve investment planning and coordination across levels of government. Fiscal frameworks should protect investment spending against fiscal pressures in the near term and make investment flows less pro-cyclical and more fiscally sustainable in the longer term. Fiscal sustainability of long-term infrastructure plans requires that the plans are linked with budget allocations and other sources of financing and aligned with the medium-term expenditure framework (see box 3). This assures the relevant stakeholders of the stable, multi-year availability of resources. Hence, countries should hence strongly link national or sectoral investment strategies to budget planning processes.

Public-private partnerships (PPPs) are an important vehicle for financing infrastructure. One of the key advantages of PPPs is their ability to mobilize private sector capital for infrastructure investments. Private sector partners can bring significant financial resources to a project, allowing governments to leverage their limited public funds to attract larger investment volumes. Additionally, PPPs can help to reduce the burden on public budgets by shifting some of the financing and operational risks to private sector partners. In addition to leveraging public funds with private capital, PPPs can offer improved accountability and efficiency in the use of resources. By bundling together project preparation, construction and service delivery, PPPs can also serve to strengthen innovation and foster long-term efficiencies.

Research carried out for the European Parliament in 2014 showed that poorly constructed PPPs are sometimes the most expensive way for governments to invest in infrastructure, at times costing twice as much as if the investment had been financed with bank loans or bonds. This underscores the need for a strong PPP enabling environment with effective legislation, strong institutions, and processes that are adhered to. Reforms can include enacting PPP law, developing PPP regulations, and establishing a strong pipeline of PPP projects.

Multilateral development banks (MDBs) and public development banks (PDBs) can play a larger role in scaling up financing for public infrastructure investments. MDBs can play a pivotal role in financing such projects by lending at low or no interest or providing grants to fund projects in infrastructure, energy, education, environmental sustainability, and other areas that promote development. Additionally, MDBs can provide access to sustainable finance as they are able to make available countercyclical support in times of crisis. PDBs also play a central role in

supporting long-term investment in the SDGs and climate action (the 528 development banks and development finance institutions have total assets of $23 trillion and are estimated to finance around 12 percent of investment globally.) Development banks have the potential to play a larger role in development finance. The G20, the United Nations Secretary-General's SDG Stimulus, the Bridgetown Initiative and other initiatives have also recognized the important role of PDBs and MDBs in particular and called on the MDBs to scale up lending to help meet sustainable development challenges, including by optimizing their balance sheets. Such reforms could have profound effects on infrastructure financing[9] (see box 8 in section 4).

Both public and private financing are needed to bridge the infrastructure financing gap. However, there is no one-size-fits-all solution as different countries and sectors have specific needs. Therefore, tailored financing solutions are required. To improve financing quality, enhance the blending of public and private finance from various sources (see table 1), and encourage and de-risk private investment, greater capacity and innovation are needed.

Development partners could explore ways to improve the effectiveness of technical support for infrastructure development, for example, by creating a marketplace for technical assistance and further leveraging technology in this area.

Table 1. Examples of funding sources for infrastructure

Type	Funding sources	Link to infrastructure finance and characteristics
Public	Domestic tax revenues	Tax revenues are linked to the capacity for infrastructure-related public expenditure. All countries have opportunities to raise additional public resources, especially middle-income countries.
	Public expenditure	Strengthening public procurement and investment management capability can improve the efficiency of public expenditure on buildings, roads, water and sanitation, education, and health sectors. Guarantees and subsidies for low-income populations can mobilize additional private finance.
	Official Development Assistance (ODA)	ODA is particularly important for low-income and post-conflict countries. Guarantees can remove constraints and mobilize additional private finance using blended approaches. The number of bilateral and multilateral sources makes coordination especially important.
	Multilateral Development Banks (MDBs) and Public Development Banks (PDBs)	MDBs and PDBs can help finance public infrastructure investment is through direct lending, which involves providing loans to governments or public entities for the construction of infrastructure projects such as roads, bridges, schools, hospitals, and water treatment facilities. These loans typically have longer repayment periods and lower interest rates than commercial loans, making them more attractive to borrowers. MDBs and PDBs can also help finance public infrastructure investment through co-financing by partnering with other financial institutions, such as commercial banks or other MDBs. Co-financing can help reduce the risks associated with large infrastructure projects and increase the amount of financing available. MDBs and PDBs can also help finance public infrastructure investment through guarantees that provide assurance to lenders that their loans will be repaid in the

		event of a default by the borrower. By providing guarantees, MDBs and PDBs can help attract private-sector financing for public infrastructure projects.
	Public climate finance	Important to support climate-proofing infrastructure investment, adaptation, and mitigation investments, especially adaptation of critical infrastructure in LDCs and SIDS. Facilitates private investment in low-carbon economies in all countries.
	Sovereign borrowing	Lever for low-interest long-tenor borrowing for countries associating long-term returns with repayments. Useful to support reforms and fund non-economic assets. It can also improve the bankability of economic investments and enable additional private finance.
Mixed	Special Purpose Vehicles (SPV)	Set up as an intermediary between lenders and operators of a specific infrastructure asset. Useful to blend finances from different public and private sources and enable a "bankable" project with sufficient revenues from the completed infrastructure asset to repay investors.
	Bonds	Useful for middle- and high-income countries, corporations, and large cities to raise finance from capital markets. The issuer could aggregate a portfolio of infrastructure investments to reach a larger scale. Includes green/blue/SGD bonds, project bonds, government, and general obligation bonds.
Private	Infrastructure service fees	Revenue from consumers of infrastructure services (private and some public) provides flows of finance for infrastructure investment. Essential for sustainable financing of utilities/SPVs.
	Corporate lending	Shorter term finance (3-5 years) for utilities and corporations for smaller projects and upgrades. Requires sufficient collateral and economic performance. More flexible than project finance. Offered by commercial banks and MDBs in lower-income countries.
	Bank lending (ST and LT)	Provides short-term or long-term loans for infrastructure projects that are customized to meet specific financial requirements. Local actors familiar with local economic and investment conditions are key players. Missing in some low-income contexts.
	Equity	Funds infrastructure investment by utilities, corporations, and infrastructure investment trusts/funds. Equity (shares/parts, etc.) is sold in regulated financial markets. Flexible long-term and low-cost finance. Focused on high - and middle-income countries and sectors with higher economic returns including energy, transport, and telecommunications.
	Foreign Direct Investment (FDI)	Focused on corporations/utilities with economic infrastructure including energy, telecommunications, transport, tourism, and extractive industries such as forestry, oil and gas, and minerals. Requires enabling environment for border investments including rule of law, policy, and regulatory frameworks (FDI, PPP and sector), economic and social stability.
	Institutional investors	Regulated investment in infrastructure assets by pension funds, sovereign wealth funds, and insurance companies through equity and bonds. Pension funds are often limited by their statutes, i.e., not allowed to invest in alternative asset classes. Mostly benefits advanced economies.

	Reinsurance and securitization	Resale, bundling and de-risking of existing infrastructure investments. Enables the originating banks/corporations/sponsors to sell assets and make further investments. In emerging markets, these circuits are not often functional.
	Private climate finance	Investment in mitigation and adaptation by corporations and companies including for energy transition (low carbon electricity production) and energy efficiency (insulation of buildings). Instruments include tax/carbon credits/offsets, and commercial/retail bank loans mostly in higher-income countries. Many countries lack policy frameworks, intermediary institutions and collateral needed to enable investments.

Typical challenges

Examples of challenges encountered by infrastructure projects are outlined below, categorized as demand (development of projects) or supply side (access to finance) issues:

Demand-side challenges

- **Pipeline of "bankable projects".** A significant number of infrastructure projects fail to obtain financing due to various challenges. Cumulatively, these challenges hinder countries from developing a series of projects that meet the required financial return and security standards set by banks and institutions. Consequently, the lack of funding creates difficulties in long-term planning for infrastructure development.
- **Significant time and cost overruns.** The cost of project development is high. Delays related to land acquisition, project clearances, financial closures, geographical challenges, changes in approach, and labor shortages often add to costs.
- **High variation in cost and revenue estimation.** Projects run for years, and future costs and revenues are uncertain. The absence of scientific tools and robust cost projection techniques, changes in technology, diminishing utility, and unanticipated competition from other projects contribute to uncertainty.
- **Public infrastructure management.** Infrastructure project development, project financing, and asset management require specialized knowledge. Skills are in short supply and infrastructure service delivery is often not optimal. Women are generally also underrepresented in infrastructure-related trades and professions.
- **Technology transfer.** Innovation is transforming sectors, especially digital and low-carbon technologies. Obsolete technology and inefficient techniques are undesirable. Existing and new workers need new skills. This is particularly challenging for LDCs, SIDS, and countries with existing capacity constraints.

Supply- side challenges

- **Large financing gaps.** Most countries are not spending enough to provide the infrastructure needed to reach universal access and meet the Sustainable Development Goals.
- **Domestic financial intermediation.** Institutions that facilitate private infrastructure investment tend to be underdeveloped and even nonexistent in too many countries.

- **Non-performing assets.** Insufficient return on investment and high perceived risk impede private financing from flowing to lower-income countries and more sectors (e.g., water). This is a key reason investors avoid financing infrastructure.
- **Policy and regulatory framework for infrastructure services.** Ensuring a conducive policy and regulatory environment is key for improving the effectiveness of services involving multiple agencies and balancing the interests of groups with unequal power, e.g., social infrastructure for women and children.
- **Poorly designed PPP frameworks.** Key issues with PPP frameworks may include the absence of a legal framework for PPPs, or shortcomings in project preparation, procurement and safeguards management. Frameworks may also be opaque and difficult to understand, making it difficult for policymakers and citizens to assess the accuracy of estimates and the basis for policy decisions.
- **Setting infrastructure service fees.** The level and predictability of fee rates are essential factors in the "bankability" of infrastructure project proposals. In principle, rates should cover full life cycle costs. However, this can clash with political interests and become a barrier to the inclusion of rural and low-income populations.
- **Incentive frameworks.** Complex multi-partner governance arrangements and large sums of money increase fiscal risk and corruption. Ineffective rules governing the infrastructure project cycle are a major reason infrastructure projects fail to meet their timeline, budget, and service delivery.

Need for an integrated approach

Infrastructure investment has a key role in achieving medium and long-term priorities across national and sectoral strategies and plans. It is important for infrastructure investment plans to be linked to broader strategies. Integration can inform options to finance multiple needs sustainably over time. This includes mixing and matching resources such as attracting private investment, borrowing from development banks, public budgets, etc.

The potential for infrastructure to contribute to national development outcomes can be increased by bringing together sectors and themes to overcome silos and make financing gaps and opportunities more apparent. For example, applying standard gender analysis across sectors and projects can help better represent the needs of women and girls in infrastructure investments.

Infrastructure financing can leverage additional private resources across a range of financing instruments and partners. Enabling this requires mitigating risks and understanding constraints across organizations, projects, and sectors as well as understanding the cumulative impact on the economy. In section 4, a dedicated box (see box 5) presents lessons from past infrastructure projects that failed to account for unintended effects (on the environment, sub-populations, debt sustainability and more), emphasizing the need for integrated policymaking, not only in the design of projects but also in the way they are financed.

Long-term financing at scale for quality infrastructure is essential for all countries. This is dependent on interconnected but independent institutions. Investments are inter-generational and shape public and private relations. Negotiating sustainable financing arrangements requires a mix of coordination, cooperation, and collaboration.

The effectiveness of investments can be reinforced by sharing infrastructure-specific knowledge between public and private agents, across sectors, and between peer countries. Meaningful engagement between public and private stakeholders at different levels strengthens accountability for long-term results.

3. Applying an INFF to finance Infrastructure

To implement the INFF building blocks (see Box 2), some important issues need to be considered, including:

- **Building on existing systems and knowledge:** An INFF is based on the premise that countries do not start from scratch – all countries have policies and institutional financing arrangements. Many developing and emerging market countries already have long-established institutionalized and centralized processes for infrastructure planning, with projects that are costed, included in a medium-term expenditure framework or budget framework, and then translated into annual capital budgets and implemented (see box 6 in section 4). INFFs aim to make such processes more systematic, cohesive, and integrated. The key is identifying which part of the existing system would be the best to build on (see INFF Governance and Coordination Building Block) and avoiding creating a parallel process. This can be done in the Inception Phase of the INFF (see guidance on this). Tools presented under the four building blocks of this guidance document should be considered as additional tools to consider, building on the existing work already being done at the national level or with institutional partners. In the process of implementing an INFF, resources, especially personnel, should be prioritized and dedicated to engaging and being actively involved.
- **Prioritize:** The INFF building blocks are not meant to be sequential or prescriptive. It can and should be tailored to the country's context. For example, some aspects of the assessment and diagnostics building block can be data-intensive and data needed may not always be available or readily accessible. It may also be the case that governance and coordination issues are important to address first.
- **Ensure effective development cooperation:** Development partner fragmentation and lack of coordination are enduring issues for many developing countries. It is important that all relevant partners are engaged to avoid duplication and explore synergies with other partner initiatives.
- **Be pragmatic:** Focusing on a few priorities and/or fostering a phased approach to implementing an INFF can prevent overwhelming government capacity. It can also help INFF implementation through cycles of political instability and conflict. Implementing an INFF through phases could also better match resources/capacity with INFF objectives, cultivate a risk-appraisal culture and ensure knowledge transfer. A phased approach can help countries make incremental changes to move from an operational to a strategic focus, from static to dynamic processes and from basic to comprehensive systems. Building on capacities that can be sustained and not attempting too much can also ensure country ownership.

Building Block 1: Assessments and Diagnostics

The INFF global guidance on the assessment and diagnostics building block aims to expand upon traditional needs assessment models to provide a complete picture of national financing needs and available financing sources, as well as the challenges and risks countries face when financing their sustainable development. This building block is the first step in matching appropriate financing flows to the long-term development objectives outlined in a country's national development plan.

The main components of the assessment and diagnostics building block are expanded below. While all four components should be undertaken by countries developing INFFs, the scope and form of these components will depend largely on individual country contexts.

Building Block 1.1 - Financing Needs Assessment

The INFF global guidance on financing needs assessment provides details on:

- Setting scope, objectives, and purpose
- Costing methodology
- Calculation of costing estimates
- Consideration of financing gaps and how to meet them

The scope of infrastructure plans can be economy-wide, sector or project-based. A starting point could be costing the entire national development plan or updating a revised version, the annual capital budget process, a priority thematic plan (e.g., Nationally Determined Contribution, climate adaptation plan), or a sector strategy or part of the financing process for a major infrastructure project. Sector scope is also highly contextualized e.g., local markets and fisheries infrastructure are very relevant to SIDS and transport is strategically important for landlocked countries. In all cases, the full asset lifecycle should be considered.

Given the inter-generational nature of infrastructure investment, scalability beyond immediate needs should be considered. Factors to consider include population changes, social and economic development trends, innovation, environmental and climate change impacts. In

practice this is challenging as it requires additional technical and financial capacity, especially for LDCs and SIDS. The additional technical and financial demands could to some extent be mitigated by support from development partners and strategies that enable incremental scaling and adaptation over time.

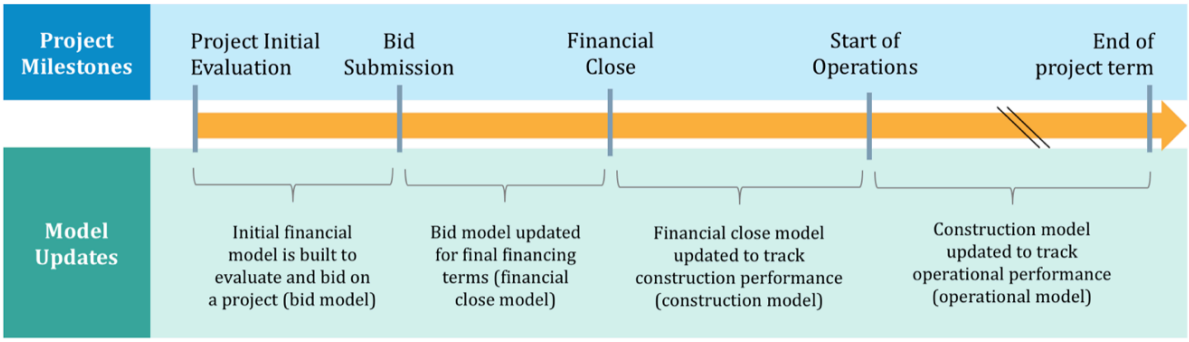
Needs assessment builds on existing information collected from published reports, such as technical studies, project models, strategies, corporate financial reports, government budgets and capital plans. Costing approaches could include detailed project costing, sector-level model-based approaches and qualitative assessments where quantitative information is unavailable. The appropriate costing methodology will depend on the purpose, sector, and availability of existing information. High-level model-based approaches could be used to estimate investment needs for new sectors and sub-sectors identified. However, standardized unit costs in these approaches may need to be contextualized. For example, the cost per person of infrastructure services in SIDS can be much higher than industry standards due to the lack of economies of scale and the need to service multiple small and dispersed populations.

Major infrastructure projects require detailed project costing methodologies. Specialized infrastructure advisers and financing partners provide important information and essential support services, e.g., engineering consultants, multinational development banks, and infrastructure banks. This includes:

- **Design** – stakeholder engagement, engineers fees, environmental, social, and economic reviews, and studies; financing arrangements; land purchase;
- **Build/construction** – materials, labor, inspection, documentation, training, and contingencies;
- **Operations** – both normal and emergency modes, including labor, power, and additives;
- **Maintenance and repair** – unplanned reactive maintenance can become the largest cost over the lifecycle;
- **Rehabilitation** – results from a failure (cost-benefit studies can help determine replacement or repair);
- **Replacement** – next project cycle.

Calculating cost estimates could take years to assess and is an iterative process. Ideally, this would mean both the prioritization and dedication of resources, especially personnel, to actively engage and be involved in the process throughout. Great distances (e.g., railways, roads, inter-regional electricity transport), unique geographical conditions and large footprints increase stakeholders (different regulatory agencies and constituencies). Distance also increases the cost of planning, materials management, and dispersion of teams. Finally, needs can change over time as a project reaches different milestones including bid, financial close, construction and operations (figure 2).

Figure 2. Updating needs is necessary across a project lifecycle (GIH)



Questions to consider when undertaking costing exercises:

- What are the sectors where infrastructure investment could add the most value to productivity, employment, and contributions to multiple SDGs?
- How can designs be optimized to reduce costs and achieve SDGs goals?
- Have climate and gender considerations been adequately considered?
- What are the reasons for sectors with financing gaps?
- What is needed to improve the profitability of SOEs?

Examples of tools and information sources:

Name	Description
Ministry of finance, fiscal accounts, and budget publications	Past expenditure trends and projections can inform future needs especially related to public investment management, maintenance, and operations.
Technical studies	This includes preliminary and detailed engineering reports, social, economic, and environmental impact assessments.
Project finance models	Specific infrastructure projects are often costed using Excel-based models covering the full asset cycle including construction, operating and maintenance costs, accounting and tax, debt financing, distributions to equity. Models to be updated over time.
World Bank and UNICEF Sanitation and Water for All WASH SDG Costing Tool	An excel-based tool for national or sub-national levels to estimate costs of meeting WASH targets. Users can input desired coverage targets and technology solutions with related unit costs and establish required investments and financing gaps.
The International Energy Agency's World Energy Model (WEM)	An excel-based, dynamic policy simulation model that can be used to estimate investment needs for power generation under current and alternative scenarios. The difference in cost between a business-as-usual scenario and a sustainable development scenario can also be used to estimate costs related to climate action.

The World Bank costing approach for infrastructure	Combination of unit cost-based, partial equilibrium models and other sector-specific methodologies. It provides a framework for decision-makers at the country level in infrastructure. The methodology is applied to four infrastructure sub-sectors (WASH, power, transport, flood protection), with estimates presented as ranges depending on different policy and technology choices and scenarios.
ORIS	Road project software as a service platform to measure sustainability performance and ensure low-impact infrastructure designs. Applicable to model different design options.

Building Block 1.2 - Financing Landscape Assessment

The INFF global guidance on financing landscape assessment contains details about suggested steps and tools as follows:

- Aggregate assessment of the financing landscape
- Analysis of allocation and use of financing, gaps, and links to sustainable development outcomes
- Feeding findings into other elements of the assessment and diagnostics

The infrastructure financing landscape typically involves multiple funding sources (table 1) and a broad range of financing instruments (see section 4 for a compendium of instruments).

To gain insight into trends related to the longer infrastructure lifecycle, the landscape mapping process should cover a period of at least the most recent year for which actual expenditure data is available, along with budgets and medium-term estimates (4 years) and, if possible, have a long-term (10 years) outlook. Information sources include the following:

Public finance

- Government and public corporations' financial reports/statistics, budgets, revenue, and expenditure strategies;
- IMF, central bank, and sector reports;
- Public accounts, reports, and strategies on sovereign borrowing related to infrastructure;
- Budget and agency reports on current and forward assistance allocations, donor country strategies, regional infrastructure facilities/funds as well as ODA databases (refer to the INFF guidance on Development Cooperation);
- Government budget/agency, global, regional, and bilateral allocations of climate finance (e.g., Green Climate Fund, Adaptation Fund, GEF), MDB facilities (e.g., AfDB, CIF). Tag financing by mitigation (e.g., reducing emissions) and adaptation (e.g., climate proofing, disaster risk reduction) (refer to the INFF guidance on Climate Finance);
- Low-income countries: concessional finance strategies of partner international financial institutions (IDA);
- Middle-income countries: operations strategies from partner development and commercial banks. Specifically, identify blended and co-financing opportunities (IBRD, National and Regional Development Banks).

Private finance

- Industry-specific financing policies, strategies, and reports;
- Utilities corporate financial reports, plans, and strategies;
- Private sector analysis, strategies, and operational plans/funds/facilities of countries partners including bilateral and multilateral development banks (MIGA, EIB, EBRD, IBRD, CDB, ADB, AfDB), and South-South Cooperation (EXIM, CIIB, NDB);
- Financial market analysis (Fund managers, IMF, UNCDF) and regulatory reports estimate the infrastructure financing opportunity across different capital pools.

Table 2. Taxonomy of instruments and vehicles for infrastructure finance adapted from OECD (OECD, 2015)

<table>
<tr><th colspan="2">Modes</th><th colspan="2">Infrastructure Finance Instruments</th><th>Market Vehicles</th></tr>
<tr><td>Asset Category</td><td>Instrument</td><td>Infrastructure Project</td><td>Corporate Balance Sheet</td><td>Capital Pool</td></tr>
<tr><td rowspan="5">Fixed Income</td><td rowspan="3">Bonds</td><td>Project Bonds</td><td rowspan="2">Corporate Bonds
Green Bonds</td><td rowspan="3">Bonds Indices, Bond Funds, ETFs</td></tr>
<tr><td>Municipal/Sub-Sovereign Bonds</td></tr>
<tr><td>Green Bonds Sukuk</td><td>Subordinated Bonds</td></tr>
<tr><td rowspan="2">Loans</td><td rowspan="2">Direct/Co-Investment lending to infrastructure project, Syndicated Project Loans</td><td>Direct/Co-investment lending to infrastructure corporates</td><td>Debt Funds (GPs)</td></tr>
<tr><td>Syndicated Loans, Securitized Loans (ABS), CLOs</td><td>Loan Indices, Loan funds</td></tr>
<tr><td>Mixed</td><td>Hybrid</td><td>Subordinated Loans/Bonds, Mezzanine Finance</td><td>Subordinated Bonds, Convertible Bonds, Preferred Stock</td><td>Mezzanine Debt Funds (GPs), Hybrid Debt funds</td></tr>
<tr><td rowspan="2">Equity</td><td>Listed</td><td>YieldCos</td><td>Listed infrastructure & utilities stocks, Closed-end funds, REITS, IITS, MLPs</td><td>Listed Infrastructure Equity Funds, Indices, Trusts, ETFs.</td></tr>
<tr><td>Unlisted</td><td>Direct/Co-investment in infrastructure project equity, PPP</td><td>Direct/Co-investment in infrastructure corporate equity</td><td>Unlisted Infrastructure Funds</td></tr>
</table>

As the aggregate financing landscape comes together, a picture of the allocation between public and private finance will merge with gaps and broader opportunities. This is not a linear process and will involve many iterations and ongoing dialogue with a range of agencies, sectors, and stakeholders. Dialogue should address the opportunity to finance infrastructure to develop trade, investment, local MSME capacity development, and domestic infrastructure financing markets. The brokering between public and private partners is a fundamental function of the integrated approach.

Dialogue with the private sector could help governments identify sub-sectors of infrastructure with broad support for financing by direct private investment, foreign and domestic. This will be more significant in advanced economies but can apply to most contexts by combining instruments such as guarantees, regulatory strengthening, and domestic financial market development. These discussions feed into the following sections on risk and constraints.

Questions to consider when assessing the financing landscape:

- Which sectors have the most potential for additional private financing?
- Is there potential to raise public revenue from new or improved services, taxes, or fees?
- What potential do utilities have for additional corporate borrowing?
- How can climate or ODA grants be mobilized to leverage additional private finance?

Examples of tools and information sources:

Name	Description
Ministry of Finance, fiscal accounts, and budget publications	Information on governments revenues, borrowing, spending and investment by SOEs. Agency reports/budgets (climate/environment/aid management offices) inform on allocations of bilateral donors and vertical funds to infrastructure.
Public enterprise annual reports	Provides infrastructure spending and investment information by public enterprises.
Bilateral and multilateral development banks, country plans and strategies	Documents such as country operations business plans, country partnership strategies, and reviews provide information on country programs and effectiveness such as current debt stock, experiences, future lending intentions related to infrastructure finance, and important providers of infrastructure finance for low- and middle-income countries.
IMF government financial statistics website	Public revenue and spending by sector. Standardized information enables comparisons across countries, regions, and income groups.
Development assistance databases	https://stats.oecd.org/Index.aspx?DataSetCode=crs1OECD Credit Reporting System providing ODA trends by beneficiary country, provider, sector, and modality, and the AFI Sectoral Absorptive capacity Database.
Project finance models	Calculating revenue is a key component of project finance because it underlies future cash flows generated by activities of a completed infrastructure investment. Revenue is another word for money a company generates from sales. Gross revenue is most simply calculated as the number of units sold (e.g., for electricity/water) multiplied by the selling price. There may be discounts and other items that need to be accounted for to arrive at net revenue. Excel is often used to model calculations based on sector accounting industry standards.

Company valuation	Estimating the borrowing capacity of utilities informs infrastructure finance options. Excel spreadsheets based on industry standards are commonly used to analyze balance sheets and test different loan scenarios and different economic conditions.
Ministry of Commerce publications, Central Banks	Provide data and analysis about domestic investment and foreign direct investment.
Public-private partnerships (PPPs)	A range of approaches to increase private-sector role in constructing and operating large-scale public service projects. Forms include build-operate-transfer (BOT), build-own-operate (BOO), and design-build-finance-operate (DBFO) arrangements.
IFC Scaling Infrastructure	Approach to creating bankable private sector infrastructure opportunities - focusing not on single asset development, but on a holistic approach that creates a pipeline of infrastructure projects. The essence of the Scaling approach is to develop a robust public-private partnership (PPP) model for a single deal and then replicate it, which spreads costs, enhances the impact, and encourages programmatic, competitive tendering, with faster delivery and lower prices - genuinely creating new markets.
World Bank Toolkits for public-private partnerships	A number of toolkits related to evaluating and creating public-private infrastructure partnerships. These toolkits gather together checklists, guidelines and resources for different types of projects (energy and power, water and sanitation, transportation, waste management, climate and more).
IMF World Economic Outlook databases	GDP, inflation, and debt forecasts of macro-economic trends.

Building Block 1.3 - Risk Assessment

The INFF global guidance on conducting risk assessments includes a detailed overview and suggests the following steps:

- Understand the country's risk landscape
- Assess the potential impact of identified risks on the country's financing system and prioritize the 'costliest' ones
- Identify possible policy solutions

Regarding infrastructure financing, it is important to assess risks both at the project and broader levels (SOEs, sectors, markets, economy).

Infrastructure financing must account for an array of interrelated risks ranging from completion risk and market risk to sovereign risk and force majeure risk. In addition, the type of project financing instrument selected for an investment must fit with the portfolio-efficiency objectives of major capital pools worldwide that are accessible to the country, including bank lending portfolios and the asset profiles of pension funds and other institutional investors.

Categories of risk include:

- **Economic and geopolitical risks:** Debt sustainability of the country, inflation, conflicts, exposure to external shocks from disasters and economic crisis.
- **Political risk:** Adherence to contracts, ability to enforce contracts, arbitration.
- **Technology and design:** Risk of costs being underestimated or design changes/enhancements requiring additional funding.
- **Construction:** Risk of construction not performing due to the complexity of the design and delivery method, land acquisition and resettlement of populations.
- **Project management:** Risk that management will not perform on its requirements (e.g., cash management, design approvals, permit retention, and dispute resolution).
- **Construction funding:** Risk related to funding versus projected needs. This includes financing risks related to disputes over elements of PPP contracts such as fees.
- **Operational risk:** Supply side risks and off-taker risks related to who is buying the infrastructure services (e.g., debt sustainability and financial management of SOEs).
- **Currency risk:** Infrastructure services revenues (e.g., tariffs) being in one currency and debt in another.

Once risks are identified, impacts and probability can then be assessed, and a matrix can be developed to identify the costliest risk. An INFF can help draw on "best practice" risk management from across countries, sectors, projects and programs and portfolios to:

- Review existing and emerging risk management tools and techniques;
- Understand specific risks to the infrastructure sector and projects;
- Learn from risk management practice in high-profile project case studies;
- Develop guidance for risk management;
- Identify instruments to mitigate risk;
- Serve as a forum for networking for risk management practitioners within the infrastructure community.

Examples of tools and information sources:

Name	Description
IMF Country Risk Assessment Approaches	Risks covered include fiscal, financial, real, external, and contagion risks (the latter includes exposure through trade channels and cross-border financial sector exposure). Risk assessments for emerging markets (EM) and low-income countries (LIC).
IMF Fiscal Affairs Department (FAD) Fiscal Risk Handbook	Risks covered include fiscal risks (including at the instrument level in relation to guarantees and PPPs). Includes tools and diagnostics for assessing and managing risks for SOEs, public guarantees, quasi-fiscal activity, and public-private partnerships.
IMF Art IV consultations Risk assessment matrix (RAM)	Risks covered include fiscal, financial, real, and external risks (depending on context not all may be covered). Overview of key external and financial vulnerability indicators and a risk assessment matrix (RAM) showing events that would materially alter the baseline path. The matrix covers global and country-specific risks and includes an assessment of their likelihood and impact (low-medium-high) as well as related policy responses.

Credit Ratings Agency reports on sovereigns	Risks covered include fiscal and financial risks. Consider structural features that affect sovereign creditworthiness, such as governance, political capacity, and GDP levels, and show how external investors view risk in a country.
GI Hub Risk Potential Assessment Tool (RPAT)	Standardized tool to evaluate project risk for public spending proposals.
World Bank Stylized Analytical Tool to Assess and Quantify Credit Risk from Public Corporations	Technical assistance (TA) package to assist governments in improving the management of explicit and implicit contingent liabilities from a public corporations. Evaluation of the credit risk that accrues to the central government when public corporation fails to meet its financial obligations to lenders. This evaluation is facilitated by the Credit Rating Tool to Assess and Quantify Credit Risk from Public Corporations, which involves scoring risk factors and aggregating the scores into a credit rating.
GI Hub Project Complexity and Risk Assessment Tool	Supports implementing agencies to accurately determine the level of risk and complexity of a project, for the purposes of project approval and expenditure authority.
GI Hub PPP Risk Allocation Tool	Guide for governments to decide on the appropriate allocation of project risks in each PPP project, as well as potential risk mitigation measures. The sectors covered include energy, social, transport, water& waste, and communication.
IMF-World Bank Public-Private Partnerships Fiscal Risk Assessment Module	A tool that assesses potential fiscal costs and risks arising from PPP projects. Also included are planning and strategy, quality infrastructure, economic efficiency, value-for-money analysis, life-cycle costing, cost control mechanisms, operation and maintenance, risk management, infrastructure governance, and financial & debt sustainability.
UNDESA-UNCDF Handbook on infrastructure asset management for local governments	Deepen understanding of the subnational risk landscape.
World Bank Climate and Disaster Risk Screening Toolshttp://www.gihub.org/resources/publications/climate-disaster-risk-screening-tools/	Provides a systematic, consistent, and transparent way of considering short- and long-term climate and disaster risks in project and national/sector planning processes. Includes energy, water, transport, health, ICT, etc.
UNDRR National Disaster Risk Assessment	Risks covered include systemic risks, natural and man-made hazards, and climate change. The assessment tool supports a holistic assessment of the different dimensions of disaster risk (hazards, exposures, vulnerabilities, capacities), the direct and indirect impacts of disaster (physical, social, economic, environmental, institutional), and the underlying drivers of risk (climate change, poverty, inequality, weak governance, unchecked urban expansion). It includes guidance on the various methodologies that can be used to aggregate and compare risk from all hazards.
DesInventar Sendai	Damage and loss databases insights to monetary impacts of risks.
PEFA fiduciary risk profiles	Country development and fiduciary risk profiles by PEFA themes.

Building Block 1.4 - Binding Constraints

This section builds on INFF global guidance on binding constraints and seeks to answer the following questions:

- What are the economic, policy, institutional, and capacity constraints to financing infrastructure that would have the largest effects if removed (i.e., the "binding" constraints)?
- What tools are available to identify them?
- Which constraints should policymakers address as a priority, e.g., in the context of their financing strategy?
- How feasible (and desirable) is addressing or removing identified constraints?

Binding constraints in infrastructure relate to economic or market-related factors, policy or regulatory gaps, or institutional and capacity constraints. Typically, countries face a multitude of such constraints. Addressing all of them at once is neither possible nor practical. Priorities will have to be set. While such prioritization is ultimately a political process, binding constraints analysis can help support more informed decisions.

Examples of financing sources follow:

Public finance

- **Limited fiscal space for infrastructure investment.** More effective and efficient public expenditure and investment in infrastructure are generally desirable with public investment management and procurement capability being important levers. Increasing revenues from taxation is also desirable albeit more politically sensitive. Aligning with global minimum tax rates is a good starting point.
- **Non-performing SOEs.** Low profitability, dividends, or even losses constrain public investment capacity. It can be highly desirable for governments to remove these constraints by performance-enhancing measures that improve asset management.
- **Sovereign debt limits.** Increasing debt levels, including additional risk transfer instruments (e.g., state guarantees) is not always desirable. Infrastructure borrowing needs to be considered within the total debt picture with national, subnational, and SOEs.

Private finance

- **Insufficient returns on infrastructure investment.** Affordability of infrastructure services is a constraint across developing countries. Consumers in post-conflict countries, LDCs/SIDS tend to have a low capacity to pay the total cost of services. These can be mitigated through subsidies (community service obligations) or targeted cash transfers, however, these need to be sustained by government budgets.
- **Legal and regulatory barriers.** This can prevent institutional investors from investing outside investment-grade infrastructure (e.g., developing countries). Removing such obstacles is not always desirable as they were designed to protect savings and foster diversification. Higher quality of infrastructure projects and risk transfer mechanisms is more desirable.

- **Institutional capacity for private infrastructure financing.** Most emerging markets lack effective institutions to intermediate between capital markets and infrastructure projects. The development of domestic infrastructure financing institutions can build industry knowledge and products.

Macro-economic and systemic issues

- **Weak regulatory and legislative capacity.** This can lead to increased corruption risks, particularly for public investment, asset management and financial markets, and underperformance of contracts impacting PPPs and public sector procurement.
- **Lack of infrastructure skills.** Many countries, including middle- and high-income countries, lack skilled people across infrastructure sectors. Particularly challenging for LDCs and SIDS.
- **Gender bias.** Gender bias continues to act as a powerful barrier to women attaining infrastructure skills in most countries. This also impacts the prioritization and design of infrastructure.
- **Economy of scale.** Weak and informal economies dispersed, and remote populations contribute to a lack of critical market mass making infrastructure uneconomical. Pooling resources and cooperation are highly desirable, e.g., SIDS, LDCs.

Examples of tools and information sources:

Name	Description
World Bank InfraSAP2.0	Diagnostic for evaluating the infrastructure situation in a country to identify investment gaps and policy shortfalls, as well as identifying opportunities for private sector participation.
IMF financial development Index	Identify binding constraints across the financial sector including financial institutions, stock markets, pension funds etc. that enable private investments in infrastructure.
IMF Public Investment Management Assessment (PIMA)	Framework for countries to evaluate the strength of their public investment management practices based on 15 institutions that shape decision-making at the three key stages of the public investment cycle: ● Planning sustainable investment across the public sector; ● Allocating investment to the right sectors and projects; ● Implementing projects on time and on budget.
World Bank Benchmarking Infrastructure Development report	Assesses the quality of regulatory frameworks worldwide to develop large infrastructure projects, benchmarking them with internationally recognized good practices.
https://www.countrydiagnostics.com/Joint MDBs+ database of country diagnostics	Systemic and private sector diagnostics.
UNDP Inclusive Public Procurement Playbook	Strategies that can promote supplier diversity while guaranteeing important public procurement principles.

Engendered Growth diagnostics decision tree	Analysis of infrastructure constraints from gender perspectives.
GI Hub Governmental Processes Facilitating Infrastructure Project Preparation	A practical guide for governments, informed by a country-lens review of leading practices.
World Bank Country Policy and Institutional Assessment (CPIA)	Assesses the conduciveness of a country's policy and institutional framework to poverty reduction, sustainable growth, and the effective use of development assistance.

Building Block 2: Financing Strategy

The steps outlined in the INFF global guidance for developing the financing strategy include:

Step 1: Establish Financing Policy Objectives

The scope and form of the financing strategy will differ depending on the country's circumstances and needs. In some cases, national authorities may want to develop a comprehensive strategy document (time-bound, action items). In other cases, it may serve to better tie together existing strategies and documents and link them to national sustainable development strategies or plans. Policymakers also need to determine the financing objectives of the strategy. These can be formulated on two related levels. The first level includes matching needs assessments to resources, such as public revenues, aid, and sometimes private financing. The second level comprises financing policies, regulatory frameworks, and other aspects of the enabling environment—which aim to align financing and behaviour with sustainable development.

Step 2: Identify Policy Options

National authorities will need to identify policies, legal or regulatory measures, financing instruments, and processes that can support achieving the objectives defined in Step 1.

Policymakers can consider a broad range of options at this point. Identifying policy options is a consultative process, using existing tools and resources to determine policy solutions and recommendations. Policymakers can use the following two questions to guide their efforts: (i) what is already in place (strengths/ weaknesses/gaps)?; and (ii) what further opportunities exist?

A financing strategy can include measures to improve the efficiency and effectiveness of existing infrastructure financing, as well as create new financing opportunities. Policy options can be upstream and downstream measures. Upstream measures are related to the policies framing infrastructure investment, while downstream measures are specific infrastructure financing facilities and instruments, for example:

- Fiscal Policies;
- Debt Management Frameworks;
- Regulations;
- PPP Frameworks;
- Skills development;
- Specific infrastructure financing instruments.

A compendium of policies for infrastructure financing can be found in section 4 (see table 4).

Step 3: Policy Prioritization

Policy prioritization can occur in two phases: (i) coherence checks to make trade-offs and integration explicit, and (ii) assessment of preconditions and resource requirements to support the sequencing of interventions. Table 5 (see section 4) presents examples of this two-step process. A case study (see section 4) provides examples of infrastructure projects that failed to account for said trade-offs and resulted in unintended consequences that hurt populations, the environment and the country's financial stability.

Coherence checks focus on assessing consistency with macro-economic targets, the extent to which there is coherence with sustainability, identification of tradeoffs, externalities and synergies across sectors, and checks impact on risk and resilience of the financing system. Options can either be retained or adjusted depending on alignment.

For coherent policy options, the next step of prioritization is to assess political support, the existence of supporting institutions, processes and instruments as well as the capacity and finances needed to implement an option. Options can be retained where they meet all requirements or adjusted to include complementary institutional, policy or regulatory reforms that need to be implemented first. This informs the final choice and sequencing of options to be included in the financing strategy's short-, medium-, and long-term plans.

Step 4: Operationalization

The final step brings everything together, by formulating a holistic financing strategy that can guide national efforts to mobilize public and private resources for national priorities.

Embedding integrated policy choices in national development planning and financing cycles is critical to ensure that infrastructure investments are made in a coordinated and strategic

manner (see box 3 below). Governments can ensure that infrastructure projects are integrated into broader national development strategies by aligning infrastructure investments with national planning processes. This can help to ensure that infrastructure investments are not made in isolation, but rather as part of a larger development agenda that is focused on achieving specific development goals and outcomes.

Box 3. Embedding INFFs in national development planning and financing policy cycles

INFFs bring together the sustainable development aspirations of national planning systems with the financing policies, regulations, instruments and partnerships that government uses to mobilise, align and create incentives for investment in sustainable development. National plans – whether long- or medium- term national development plans, SDG or NDC action plans, sectoral or thematic strategies – lay out *what* needs to be financed. Governments use INFFs to determine and deliver a strategy for *how* these priorities will be financed.

The INFF approach is most impactful if it is embedded within a country's existing planning and financing policy systems and the institutions that manage them. Given the diversity of the architecture, systems and capacities of planning and financing policy institutions in different contexts, this may look quite different from one country to another.

The following questions can help governments consider how to do this, while at the same time informing the scope of the country's INFF[1]:

- At which point of the planning cycle is the INFF being introduced? For example, as a plan is being developed, during implementation, or alongside a mid-term review.
- Which processes are used to design, deliver, monitor, learn from and report on national plans, and how will the INFF approach be embedded at each stage in the process?
- How is the financing aspect of the identified plan/ strategy going to be strengthened? For example, is it lacking altogether? Is there limited/no understanding of financing needs? Is it focused on public finance alone, and requires more consideration of the roles that different sources of finance could play?
- At which point of relevant financing policy development cycles is the INFF being introduced? For example, at the start of the national budget cycle, as an investment promotion policy is being articulated, during the review of a specific financing policy.
- Which institutions[2] exist to lead and manage implementation and monitoring of the identified national plan? How will they need to evolve to implement the INFF? What capacities exist and may be needed as the INFF develops?
- Which monitoring and review systems exist to track implementation of the identified national plan and ensure learning is fed back to policy design? How is financing treated?
- What key outputs are produced throughout the cycle of planning and financing policies (e.g. annual statements, monitoring reports, open data initiatives) and how could INFF data be incorporated into them?

Note:

Scope refers to whether the INFF is going to focus on an entire national development plan or a particular objective/set of objectives therein, as well as whether it is going to focus on all financing policy areas (public, private, macroeconomic) or one/a subset of them.

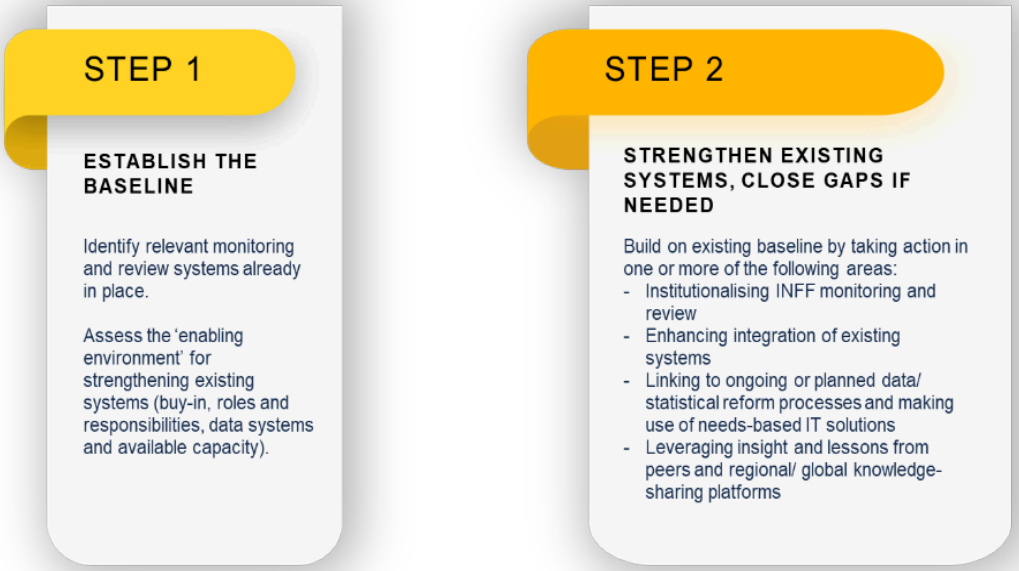
[2] In line with the global guidance on Building Block 4 Governance and Coordination, the term 'institutions' here is used in its broader sense, with an emphasis on institutional functions and the organisations, processes and coordinating mechanisms that are in place.

Examples of tools and sources of information:

Name	Description
Project finance models	An analytical tool (Excel) used to assess the risk-reward of lending to or investing in a long-term infrastructure project based upon a complex financial structure.
Infraclear	Private sector platform providing project and financing agreements details of terms, risks, pricing from thousands of prior agreements. The platform uses natural language processing and machine learning algorithms to extract insights and conduct analysis.
GI Hub Infrastructure Contractual Models	A menu of infrastructure contractual models categorized by the ultimate functions the models deliver. Covers the main activities to deliver an infrastructure project, design, construction, operations, and maintenance. Each model is defined along with the identification of alternative variants or names that can relate better with known categories in some jurisdictions.
GI Hub InfraCompass Tool	An online tool that guides governments on how to create the best conditions for infrastructure delivery.
SOURCE infrastructure project development software	Multilateral platform for sustainable infrastructure led and funded by Multilateral Development Banks (MDBs) designed to support the (1) development of well-prepared projects to bridge the infrastructure gap, (2) digitalization agenda of governments globally and (3) mobilization of private finance. SOURCE in the online infrastructure project development software, under UN servers, designed for both traditional procurement and Public-Private Partnerships (PPPs) providing project development management, infrastructure intelligence solution and well-prepared pipelines of projects.
National Infrastructure Bank Guidance Note	A Note designed to assist governments interested in establishing, or reforming, a National Infrastructure Bank, or a similar financing facility.
GI Hub Global Infrastructure Project Pipeline	A tool that sets forth credible and/or expected infrastructure project investments or procurements across a reasonable time horizon, providing details that can be used by stakeholders to plan and prioritize their resources to invest in and/or deliver the specified projects.
APMG PPP Certification Program	The certification program equips PPP practitioners to improve all aspects of the PPP transaction and performance, including fostering cross-discipline participation through effective team building, creating a shared understanding between public and private team members, and exposing participants to best-in-class PPPs that can be adapted and replicated.
Portfolio or institutional alignment tools	Sustainability definitions, taxonomies, Environmental, Social and Governance (ESG) rating methodologies, verification and certification schemes, benchmarks and other portfolio or institutional alignment tools to align financial investments (including infrastructure) with climate and other sustainability goals.[10]
WorldGBC Circularity Accelerator	A global program to advance circular and regenerative built environments.

Building Block 3: Monitoring and Review

The INFF global guidance on monitoring and review provides additional details outlining the following steps:



Monitoring and reviewing infrastructure should draw on existing national, regional, and international data sources to build up national baseline information. This can include national infrastructure investment plans/project pipelines and reports from multi-stakeholder infrastructure commissions/committees, specific geographic areas (regions, cities, islands), sector and thematic groups as well as infrastructure project committees.

Private sector infrastructure owner/operators have established monitoring and review functions performed by corporate boards and specific project committees as well as audited financial reports from utilities. Monitoring private investment mobilization (both FDI and local), PFM (IMF reports, PEFA, PIMA) and central banks are important existing information providers.

International thematic indexes (access to water, electricity) and regional data sources (MDBs) provide useful information and comparative data about country peers. National dashboards could pull together and share information from international, regional, and national and sectoral sources based on outcomes and linked to national priorities.

Questions to consider for monitoring and review:

- Where are the data gaps?
- What programs exist that could complete information?
- What information exists/is needed to identify the social, economic, and environmental value of infrastructure investment?
- What is the return on investment on assets/utilities? How does this compare to peer countries and industry benchmarks?

Examples of tools and sources of information:

Name	Description
Corporate Boards Project/Sector Management Committees	Oversee implementation of major infrastructure projects and related sectors.
Budget and expenditure reports	Measure public expenditure on infrastructure including capital investment against budgets and sector financing strategies.
Annual reports and reviews	Published documents, including reports from National Infrastructure Banks, SOE Annual and Utilities, Ministries (sector reviews and annual reports).
PFM roadmaps	Monitor progress against public financial management priorities including procurement and debt management
IMF Financial Sector Assessment Program (FSAP)	Risks covered include financial risks. Comprehensive and in-depth analysis of a country's financial sector involves assessing the resilience of the banking and non-banking financial sectors; conducting stress tests and analyzing systemic risks; examining micro and macro-prudential frameworks; reviewing the quality of supervision and financial market infrastructure oversight; and assessing development aspects such as inclusiveness, competitiveness, the quality of legal framework and payment and settlement systems, and the financial sector's contribution to economic growth and development.
World Bank Joint private investment mobilization	Methodology to recognize and measure the private capital mobilized in MDB project activities.
GI Hub Infratracker	Shows trends and data insights on how countries allocate infrastructure stimulus across sectors and outcomes including post–COVID-19 economic recovery and long-term transformative outcomes.
GI Hub Data tool	Comparatives of investment per GDP/sector/country.
GI Hub Infrastructure Monitor	GIH online report complemented by data insights and policy articles. Provides in-depth analyses of global infrastructure trends to allow monitoring of private investment in infrastructure and infrastructure investment performance. Data aggregated from leading infrastructure databases. Insights for policymakers, investors for more sustainable, resilient, and inclusive infrastructure.
Corruption-related Indexes	Corruption Perceptions Index (CPI) and Anti Money Laundering Index (AMLI)
World Bank World Development Indicators	Country-level outcome and output statistics on unemployment, economic activity, social sectors, etc.

Building Block 4: Governance and Coordination

The INFF global guidance on governance and coordination provides additional details outlining the following steps:

The cross-sectoral nature of infrastructure financing means that governance arrangements are diverse. This includes public agencies at international, regional, national, sectoral, city and local government levels as well as private sector, community groups and consumers.

Complexity, high capital costs and significant risks require coordination between institutions framing skills development, procurement, utilities operations, private investors, and financial market development necessary to deliver effective public infrastructure investment. Strengthening the flow of information between these sectors/agencies, regions, and countries facilitates mutual understanding, awareness of innovation and builds trust.

The diverging interests of multiple partners add to the complexity. This is particularly problematic for low-capacity countries including post-conflict affected countries, LDCs and SIDS. Coordination mechanisms should be explored to facilitate specialized technical assistance, foster co-financing arrangements and knowledge sharing (see box 4 below).

Box 4. Regional Coordination for Infrastructure

Pacific Region Infrastructure Facility (PRIF) is an investment coordination and technical assistance facility that supports the planning, prioritization, coordination, and management of infrastructure in the Pacific.

The facility aims to improve development effectiveness and the sustainability of infrastructure investments in Pacific Island member countries by (i) strengthening coordination among PRIF partners, (ii) improving infrastructure policies and regulation, and (iii) improving infrastructure planning and management.

A management committee provides strategic oversight of activities, based on governance arrangements in the PRIF charter. Partners chair the management committee on a rotational basis. PRIF is co-financed by partners including the Asian Development Bank, The World Bank, Australia, European Union, Japan, New Zealand, and the Unites States of America.

Coherent systems should improve the alignment of infrastructure financing priorities with the national development priorities. This includes linking infrastructure decision-making with existing national planning committees/commissions, cabinet, government budgeting, and international cooperation partners.

Questions to consider for governance and coordination:

- What infrastructure indicators are most relevant to the national development strategy?
- What infrastructure facilities and coordination mechanisms exist?
- How have peer countries overcome infrastructure financing challenges?

Examples of tools and information sources:

Name	Description
Country PEFA/PPP/IMF article IV reports	Assessments of governance, including debt management, regulatory and legislative agencies, procurement oversight (inclusive and transparent), and strengthening corporate governance (oversight and management of SOEs).
Infrastructure Pipelines	Prioritized list of infrastructure projects, status, associated financing sources and needs. Useful to mobilize and coordinate finances.
PRIF National Infrastructure Investment Plans (NIIP)	Long-term (10-year) projections of infrastructure investment by sector, financing sources, and partners (includes donors, investors, SMEs, SOEs, households, communities, FDI).
Infrastructure Coordination Facilities	Specialized technical assistance for developing countries to manage public infrastructure investments.
G20 QII Principleshttps://www.worldbank.org/en/programs/quality-infrastructure-investment-partnership/qii-principles	Six principles defining quality as sustainable, inclusive, resilient, and which integrates environmental and social concerns into infrastructure investment.
GI Hub Quality Infrastructure Investment Database	Case studies, guidance documents and best practices.
GI Hub Infrastructure Contractual Models	A menu of infrastructure contractual models categorized by the ultimate functions the models deliver. Covers the main activities to deliver an infrastructure project, design, construction, operations, and maintenance. Each model is defined along with the identification of alternative variants or names that can relate better with known categories in some jurisdictions.

4. Compendium of Policy Options for Infrastructure Financing

The table below provides a non-exhaustive list of financing instruments, policies, regulations, and processes that can support infrastructure financing. The correct and best policy is context-specific and depends on institutional, political, and environmental considerations.

Table 4. Indicative List of Infrastructure Financing Strategy Elements

Field	Intervention Area	Policy/Strategy/Instrument/Regulation/Intervention
Public Finance (Action Areas A and C)	Public revenue	• Raise additional domestic tax revenues which are linked tothe capacity for infrastructure-related public expenditure. All countries have opportunities to raise additional public resources, especially middle-income countries • Public assets and grants (e.g., budget support) • Implement public finance management reform to strengthen frameworks (e.g., public investment management, public procurement, debt management, transparency, and accountability)
	Public borrowing	• Develop medium-term debt management strategies, government guarantee and on-lending policies, and related capacity • Loans • Domestic borrowing • Sovereign borrowing: Lever for low-interest long-tenor borrowing for countries associating long-term returns with repayments. Useful to support reforms and fund non-economic assets. Can also improve the bankability of economic investments and enable additional private finance • Thematic bonds (green/blue/SDG bonds, project bonds, government and general obligation bonds): Useful for middle- and high-income countries, corporations, and large cities to raise finance from capital markets. The issuer could aggregate a portfolio of infrastructure investments to reach a larger scale

	Public expenditure	• Strengthening public procurement and investment management capability can improve the efficiency of public expenditure on buildings, roads, water and sanitation, education, and health sectors. Guarantees and subsidies for low-income populations can mobilize additional private finance • Contract private sector to speed up and improve the quality of public infrastructure maintenance and development • Reform public budgeting to facilitate mobilization of additional public finance from long-term financing instruments, e.g., government and general obligation bonds associated with budget tagging and verification systems (climate adaptation/mitigation) • Link national or sectoral investment strategies to budget planning processes • Repurpose public expenditures away from recurrent spending categories with low returns in order to increase resources available for spending on infrastructure.Reform focused on strengthening medium-term fiscal and budgetary frameworks to improve investment planning and coordination across levels of government
	Development Cooperation	• Coordinate development partners in the infrastructure sector to facilitate scaled-up and coordinated financing of priority infrastructure projects • Grants, loans and ODA, are particularly important for low-income and post-conflict countries. Guarantees can remove constraints and mobilize additional private finance using blended approaches. The number of bilateral and multilateral sources makes coordination especially important • Technical assistance
	Public investment and blended finance	• Public investments instruments (equity, guarantees, loans) • Regulated investments by sovereign wealth funds • Blended finance instruments. Blending finance from public and private sources can help finance new infrastructure assets for unmet needs, e.g., MIGA funded Guarantees for off-taker agreements and geopolitical risks in lower-income countries; • Developing PPP policies, enacting PPP law (see box 7) and establishing an independent PPP regulator with responsibility for setting tariffs • Establish a strong pipeline of PPP projects • Risk-sharing/transfer financing instruments (e.g., guarantees and provisions) including guarantees and underwriting to mobilize increased private investment. This includes NDBs/MDBs underwriting and guaranteeing loans, credit lines and bonds • Improve SOE performance, governance, asset management, preventative maintenance, strategies, and performance benchmarking. Improve returns on existing equity, increase investment capacity and improve services

		• Public climate finance to support climate-proofing infrastructure investment, adaptation, and mitigation investments, especially adaptation of critical infrastructure in LDCs and SIDS. Facilitates private investment in low-carbon economies in all countries • Special Purpose Vehicles set up as intermediaries between lenders and operators of a specific infrastructure asset. Useful to blend finances from different public and private sources and enable a "bankable" project with sufficient revenues from the completed infrastructure asset to repay investors.
	Development Banks (see box 8)	• Development Banks play a crucial role in financing infrastructure projects. They can provide long-term financing directly from their own funding sources, by tapping into new sources and by leveraging additional resources, including private, through the co-financing of projects with other partners.
	National Infrastructure Bank	• Create/strengthen a National Infrastructure Bank/Facility. Coordination of developers and financiers can facilitate quality bankable infrastructure projects, foster aggregation, and scale debt and equity financing from institutional investors and fund managers • Regulatory and legal frameworks for domestic infrastructure banks, funds, and facilities
Private Finance (Action Area B)	Commercial Private Investment (domestic and foreign)	• Regulations, principles, and standards to increase transparency and alignment to sustainable development (see paragraphs below for OECD guidance), private sector sustainable investment disclosure regulations, orienting investment towards more sustainable infrastructure. Sector/competition policy and re-setting industry standards ESG, CSR, Green labels, etc. • Investment in resilient infrastructure for disaster risk reduction, climate mitigation and adaptation • PPPs to involve the private sector in public service delivery • Tax rebates and other incentives • Establish a private-sector-led project development facility to undertake activities required to get privately sponsored projects to financial close, which will attract (i) local investors as co-developers, (ii) local banks providing 3- to 5-year tenor loans in local currency, and (iii) infrastructure bonds post-construction • Foreign Direct Investment (FDI) focused on corporations/utilities with economic infrastructure including energy, telecommunications, transport, tourism, and extractive industries such as forestry, oil and gas, and minerals. Requires enabling environment for border investments including rule of law, policy, and regulatory frameworks (FDI, PPP and sector), economic and social stability.

		• Bank lending providing short-term or long-term loans for infrastructure projects that are customized to meet specific financial requirements. Local actors familiar with local economic and investment conditions are key players. Missing in some low-income contexts. • Corporate lending: Shorter-term finance (3-5 years) for utilities and corporations for smaller projects and upgrades. Requires sufficient collateral and economic performance. More flexible than project finance. Offered by commercial banks and MDBs in lower-income countries. • Infrastructure service fees: Revenue from consumers of infrastructure services (private and some public) provides flows of finance for infrastructure investment. Essential for sustainable financing of utilities/SPVs.
	Impact Investment	• Impact investing policies /responsible investment frameworks to orient investment towards more sustainable infrastructure. Sector/competition policy and re-setting industry standards ESG, CSR, Green labels, etc. • Private climate finance: Investment in mitigation and adaptation by corporations and companies including for energy transition (low carbon electricity production) and energy efficiency (insulation of buildings). Instruments include tax/carbon credits/offsets, commercial/retail bank loans mostly in higher-income countries. Many countries lack policy frameworks, intermediary institutions and collateral needed to enable investments.
	Institutional Investment	• Regulated investment by pension funds and insurance companies in infrastructure assets through equity and bonds. Pension funds are often limited by their statutes, i.e., not allowed to invest in alternative asset classes. Mostly benefits advanced economies.
	SOEs	• Privatization of SOEs by the partial or full sale of shares based on a comprehensive assessment of benefits and costs associated with privatization
	Financial Markets	• Equity: Funds infrastructure investment by utilities, corporations, and infrastructure investment trusts/funds. Equity (shares/parts, etc.) is sold in regulated financial markets. Flexible long-term and low-cost finance. Focused on high - and middle-income countries and sectors with higher economic returns including energy, transport, telecommunications • Reinsurance and securitization: Resale, bundling and de-risking of existing infrastructure investments. Enables the originating banks/corporations/sponsors to sell assets and make further investments. In emerging markets these circuits are not often functional.

Macroeconomic and Systemic Conditions (Action Areas E and F)	Macroeconomic and financial sector stability	• Prudential and regulatory frameworks for domestic infrastructure financing • Macroprudential policies • Regulations • Capital controls • Risk management

Countries can leverage existing frameworks (see box 3), e.g., medium-term revenue strategies (where they exist) to strengthen coherence between policy areas and infrastructure financing policy measures. Infrastructure Financing policy incoherence can adversely affect the achievement of SDGs. For instance, there is a trade-off between the benefits of creating a local infrastructure bank system and the potential crowding out effects this may have on existing financing sources (see table 5).

As described in the INFF global guidance on Building Block 2, coherence checks help align financing policies with national development goals and highlight any unintended consequences that must be considered. Assessing each policy intervention for coherence, sustainability as well as risks and considering preconditions, both institutional as well as procedural, and resource requirements will help narrow down the form that specific policies will take (see step 3 of the suggested approach in the INFF global guidance on Building Block 2). The table below is an example of such coherence checks. It provides a list of infrastructure financing policies with their intended outcomes, the tradeoffs policymakers need to consider, and the corrective measures that can be implemented to counter said tradeoffs.

Table 5. Examples of Coherence Checks for Infrastructure Financing Policy

Measure	Intended Outcomes	Tradeoffs	Corrective Measures
Improve/create a local infrastructure bank system	• Mobilize private financing • Lower financing costs • Reduce project foreign exchange exposure • Funding available for subnational infrastructure	• Technical failures in the local financial market • Crowding out of existing financing sources, loss on investments • Competition between MDBs and commercial banks • Restrictive access to funding for projects that don't meet stringent eligibility standards (i.e., environmental standards)	• Creation or consolidation of country-specific financial products • Coordination with MDBs financing and technical expertise • Supporting agencies, e.g., The National Infrastructure Agency and National Agency for Financing to mobilize private financing • Provide a platform to help the development and formulation of projects
Market reforms – introducing	• Private sector investment opportunities	• Undermining SOE business model • Corruption	• Strengthen SOE • Develop taker contract terms based on

independent power producers	• Public funds for noneconomic sectors • Low carbon energy transition	• Risk to fiscal stability due to guarantees • IPP may face difficulties in achieving financial viability	international best practices • Controlled increase in private production capacity • Investments in SOE efficiency and transition to sustainable business model • Support from governments or other sources to remain competitive in the early stages
Outsourcing infrastructure services	• Efficiency gains • Reduction of costs • Increased private sector opportunities • A smaller number of government employees	• Reduction in public employees creating political pressures • Corruption in contract awards • Mismanagement of contracts • Increasing costs • Security risks, data breach	• Strengthening public procurement systems including transparency • Contract management training and systems • Public procurement training for SMEs • TVET courses for in-demand skills
Use of ODA to finance infrastructure projects	• Mobilize significant upfront funding to finance projects • Help bridge the financing gap	• Over-dependency on external funding • Funding fluctuates based on external factors • Reduces incentive for governments to mobilize domestic resources	• Diversification of funding sources to reduce reliance on external funding • Promote good financial governance

In parallel, the OECD's Compendium of Policy Good Practices for Quality Infrastructure Investment offers a unique set of existing integrated and multidisciplinary international good practices that policymakers and practitioners in both developed and developing economies can use voluntarily. These good practices promote a shared understanding of the elements needed to support quality infrastructure investments in alignment with the G20 Principles for Quality Infrastructure Investment and in accordance with international standards.[11]

Box 6. Building on existing systems: good practices in integrated infrastructure planning and financing

Efficient and well-integrated planning and budgeting functions are key for building quality infrastructure. Planning functions establish a framework of national, sectoral, and subnational government goals, policies, and targets. Budgeting puts these policies into a defined fiscal space and resource envelope, thus allowing policymakers to implement their plans.[1]

Many developing and emerging market countries (see examples below) have long-established institutionalized and centralized processes for infrastructure planning, with projects that are costed, included in a medium-term expenditure framework or budget framework, and then translated into annual capital budgets and implemented. The aim of centralized investment planning is to target scarce funds to key infrastructure bottlenecks, ensure that investment projects comply with rigorous standards of evaluation; establish a pipeline of strategically important projects to be financed through public, private, or hybrid financing mechanisms; share expertise in project management; and track project execution.[2]

Uganda. Investment projects are prioritized within multiyear sector development strategies, guided by an indicative medium-term budget framework (MTBF). A public investment programming (PIP) mechanism was established in 1994 to coordinate the prioritization and funding of post-conflict reconstruction and rehabilitation, which was then almost entirely funded by donors. Since then, Uganda has institutionalized a transparent framework for planning, appraisal, and approval of capital projects. This framework integrates planning and budgeting requirements and is coordinated by the Development Committee in Ministry of Finance, Planning and Economic Development. Although the framework is well defined, it is not always adhered to in practice.

Korea. Using a range of tools and procedures, the Ministry of Strategy and Finance (MOSF) manages an elaborate planning and project-selection system. The Preliminary Feasibility Study (PFS) evaluates whether a project is eligible for financing through the budget, taking into account both economic and policy analyses, risk assessment, and a regional evaluation. A comprehensive pipeline of investment projects is prepared by the MOSF, based on the results of the PFS, and used to select projects for inclusion in the annual budget and National Fiscal Management Plan.

[1] IMF (2020) Integrated Infrastructure Planning and Budgeting
[2] IMF (2015) Making Public Investment More Efficient
Note: case studies are drawn from source 2

Box 7. Kenya's PPP experience[1]

To address Kenya's infrastructure requirements, the Government of Kenya (GoK) has been looking at alternatives to public procurement of infrastructure investments and made infrastructure development through PPPs a priority.

The GoK issued the National PPP Policy Statement in 2011, enacted the PPP Act in 2013, and subsequently developed PPP regulations for national and sub-national governments. A PPP unit was also established under the National Treasury to promote and oversee the implementation of the PPP programme. Kenya benefited from World Bank support in developing its PPP legal and institutional framework, and a PPP project pipeline.

As of November 2019, a strong pipeline of PPPs had been developed, comprising 80 projects in the transport, power, water and education and healthcare sectors, with 31 of these regarded as frontrunner projects. In terms of the progress in each of these frontrunner projects, 1 project was under construction, 11 projects had reached commercial close, 8 projects were at the contract negotiation stage, 4 at tender stage, 5 ready for tender, 1 had a completed feasibility study and 1 had a feasibility study under preparation.

Kenya has made progress in developing its local currency domestic capital markets and has the basic preconditions for mobilizing institutional investors into infrastructure projects, including: (1) domestic institutional investors (pension funds, insurance companies) with sizeable assets under management and with interest in investing in infrastructure projects alongside local banks, if suitable capital market vehicles can be set up, and regulatory constraints and institutional risks are addressed; (2) financial regulators committed to enabling infrastructure finance through mobilization of resources on the domestic capital market; (3) ongoing reforms

aimed at improving the efficiency of sovereign debt markets designed to both reduce the risks of potential crowding out of investments in infrastructure, and provide a reliable pricing benchmark for the issuance of long-term to be used in the financing of infrastructure investments; and (4) strong interest on the part of international institutional investors. Reflecting the strengthened enabling environment and the quality of projects in the pipeline, Kenya's PPP transactions have attracted major international infrastructure developers, investors and construction companies.

[1] The Africa Long-Term Finance Initiative (2022). The Country Diagnostic for Ghana, Case Study 2: Kenya's PPP experience.

Box 8. Multilateral and National Development banks and infrastructure financing: frameworks and key lessons learnt

Multilateral Development Banks (MDBs) have the potential to play a major role in assisting low-income countries to achieve development goals along with climate resilience and mitigation through sustainable infrastructure financing. While these infrastructure projects promise environmental sustainability, social development, and economic growth, MDBs must improve project planning and safeguards implementation to attain the triple win.

New MDB guidance documents, such as the IDB Sustainable Infrastructure framework, encourage infrastructure projects to integrate considerations for the four capitals (built capital, human capital, social capital, and natural capital) through upstream planning and strong coverage of environmental and social criteria at the project preparation and design stages. The implementation of this additional guidance improves the effectiveness of safeguards requirements, including environmental and social impact assessments and management frameworks (ESIA/ESMF), stakeholder engagement, inclusion of marginalized groups, access to project benefits, gender equality, health safety, biodiversity protection, and the prevention and mitigation of pollution and other project risks. Integrated upstream planning is essential for infrastructure finance to move beyond a "do no harm" approach to embrace innovation and provide lasting social and economic co-benefits to communities. Additionally, avoiding project-related harms requires that MDBs fully implement their safeguards.[1]

While National Development Banks (NDBs) are well positioned to scale up financing for climate-smart urban infrastructure, only a small minority finance local governments or green infrastructure.[2] To fulfill this goal, the following key lessons must be implemented:
• While fulfilling a developmental role, development banks need to be able to carry out their mandates on a fully financially sustainable basis. This is crucial to avoid causing a major distortion to financial markets, which would be self-defeating.
• The mandates of development banks need to be clearly defined and relatively broad so that the banks are able to diversify their risk exposures. While banking for small and medium-sized enterprises would provide a sufficiently broad mandate, servicing a specific sector, such as the agricultural sector, is unlikely to prove to be viable. In achieving their mandate according to the above criteria, development banks are best organized as second-tier institutions.
• Credit risks are best borne by private sector intermediaries that have the specialized skills required to manage credit risks; Sound governance of development banks is crucial.
• The board of each development bank needs to be independent from the government. The majority of board members should be chosen on a transparent basis reflecting their professional qualifications.

[1] Ladd Connell, Bank Information Center (2021). How can MDBs strengthen sustainable infrastructure finance?
[2] Policy Brief Leveraging National Development Banks to Enhance Financing For Climate-Smart Urban Infrastructure, Cities Climate Finance Leadership Alliance

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5. Such as: (i) the G20's Principles for Quality Infrastructure Investment; (ii) UNEP's Ten Principles for Sustainable Infrastructure; (iii) UNECE's People-first Public-Private Partnerships; (iv) Inter-American Development Bank's Framework for Sustainable Infrastructure; (v) United Nations Office for Disaster Risk Reduction's Principles for Resilient Infrastructure; (vi) UN/DESA-UNCDF's Handbook on Infrastructure Asset Management; and (vii) the FAST-Infra public-private initiative.
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