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## **How to catalyze private money into infrastructure investments? A roadmap for governments and private-sector stakeholders**

### **Why this paper?**

Countries across the globe experience a large and growing gap between infrastructure needs and the resources that governments have historically invested in meeting those needs. There is a big pool of literature on how to close the infrastructure gap. Multilateral institutions, international organizations, as well as private-sector companies, have all contributed to this pool.

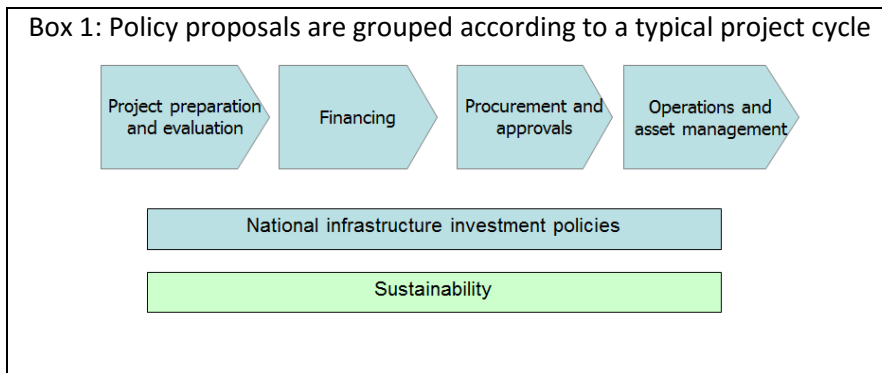
Under the G20 Turkey presidency, the Business-20 Infrastructure & Investment taskforce prepared a [comprehensive set of actionable proposals](#) for governments and businesses on how to close the infrastructure gap by increasing private-sector investment. The Think-20 contributed extensively with policy options for the G20 Infrastructure and Investment agenda in 2015 as well. This paper draws from the Business-20 and Think-20 thorough research, their meetings and workshops, and lays out a roadmap with implementable actions for governments and private-sector stakeholders on how to unlock funds of private-sector investors to infrastructure. The paper does not analyze infrastructure market and government failures which are discussed thoroughly in the B20 Infrastructure & Investment taskforce policy paper.

The paper brings together policy proposals lined up according to a typical infrastructure project cycle that includes the following stages: project preparation and evaluation; financing; procurement and approvals; operations and asset management. Closing the growing infrastructure gap requires

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initiatives that target various elements of the infrastructure investment ecosystem. Project cycle framework will allow stakeholders to structure and deliver engagements more efficiently, identifying and targeting those areas and practices where intervention is best justified.



The paper also introduces a critical sustainability component to the discussions. In bridging the infrastructure gap, infrastructure development strategies incorporating sustainability goals are critical. Infrastructure projects are long-term investments, which are massive in scope and in terms of financing required. Every year, the world spends approximately \$9 trillion on infrastructure, some \$2.6 trillion of which goes into economic infrastructure – transportation, power and water, and telecommunications. Over the next 15 years, the gap in economic infrastructure is forecast to reach \$15 trillion to \$20 trillion. This enormous demand highlights the importance of infrastructure and requires future-oriented solutions.

The G20 can play a major role in building the necessary environment to bridge the gap and develop sustainable infrastructure – that is socially, economically, and environmentally sustainable – taking into account climate change risks and low-carbon growth goals. One way for G20 members to support sustainable infrastructure development is to address it through national-level policies. Another way is for the members to support global collective actions, by encouraging critical stakeholders to factor in sustainability targets in all infrastructure investment projects.

Sustainable investment in infrastructure and innovation is one of 17 global development goals (Sustainable Development Goals, or SDG) that make up the 2030 Agenda for Sustainable Development by the United Nations. Through promoting sustainable infrastructure investments, members can achieve resilient infrastructure targets, ensuring affordable and equitable access for all. Later this year, at the 2015 COP21, also known as the 2015 Paris Climate Conference, countries aim at reaching a legally binding and universal agreement on climate, with the goal of keeping global warming below 2 degrees Celsius. Incorporating sustainable infrastructure targets into national infrastructure strategies can greatly enhance chances of success in mitigating climate change risks and low-carbon growth goals.

Collectively, as measured in the B20 Infrastructure & Investment taskforce policy paper, the discussed actions could generate \$15 trillion to \$20 trillion-worth of additional infrastructure capacity by 2030, closing the infrastructure investment gap.

**Box 2: Sustainable infrastructure is infrastructure that is socially, economically, and environmentally**

## sustainable

- Social: It is inclusive and respects human rights. Such infrastructure meets the needs of the poor by increasing infrastructure access, supporting general poverty reduction, and reducing vulnerability to climate change risks.
- Economic: It positively impacts GDP per capita and job outcomes. It does not burden governments with debt they cannot repay, or end users—especially the poor—with tariffs they cannot afford. It also builds local developer capacity.
- Environmental: This includes infrastructure that establishes the foundation for a transition to a low carbon economy. It mitigates carbon emissions during construction and operation (e.g., high energy efficiency standards), and is also resilient to climate change (e.g., by building public transport systems in less fragile places or to different specifications due to climate change risks).

Source: *Driving sustainable development through better infrastructure: Key elements of a transformation program*, Amar Bhattacharya, Jeremy Oppenheim and Lord Nicholas Stern, June 2015

## Policy proposals around infrastructure project cycle

### Stage 1: Project preparation and evaluation

#### **Develop a standard project structuring approach to help investors evaluate and finance projects.**

Across countries – and even within a single country – infrastructure projects often have completely different contractual terms, making it difficult to develop expertise and assess a larger number of infrastructure projects efficiently. Greater standardization of contracts and financing agreements across countries can reduce transaction costs, encourage investment from those with more limited resources, and help attract funds into smaller infrastructure projects, where high due-diligence costs relative to the total investment frequently make such projects unviable for investors. When possible, governments, multilateral development banks, and other key institutions should promote the standardization of project preparation and evaluation, for instance by using common-risk assessment frameworks and documentation.

For instance, the Global Infrastructure Hub can develop a standard project-structuring approach to help investors evaluate and finance projects by coordinating with multilateral development banks, development financial institutions, international agencies, and the private sector to develop a common framework, including processes, procedures, and regulations for contracting and financing infrastructure initiatives. The G20 should ensure that this group takes into account work already developed, such as the G20/OECD effective approaches to the financing of long-term investment by institutional investors, and the G20/OECD taxonomy of instruments and incentives for infrastructure financing.

#### **Improve general conditions around project preparation, including supporting and funding multilateral initiatives to provide technical support and skills during project preparation.**

Infrastructure projects often lack robust business plans, appropriate guarantees, and credit ratings. Many projects fail to progress beyond the preparation stage, which is often costly, complex and risky. Suboptimal preparation, in turn, can lead to delays, cost over-runs, or renegotiations. The pipeline of infrastructure projects can be improved if projects are designed better. This can

significantly increase the number and scale of projects being launched, their sustainability, and could eliminate issues affecting projects under way.

Governments can improve project preparation by engaging with the private sector as early as possible in project development. With better technical and business awareness, governments can define projects that will deliver the best long-term value. Businesses should play a more active role in project development, as they are more efficient in delivery and price negotiation, and can provide insights on potential structuring of bids with available technology and performance criteria. Also, the private sector can provide valuable insights on appropriate performance-based standards to develop sustainable projects and increase the long-term value of projects.

G20 governments can also enhance project-preparation capabilities by drawing expertise from multilateral initiatives. For example, the Global Infrastructure Facility brings together investors, technical experts, and advisory partners to address the infrastructure-financing gap and build a global pipeline of investments. G20 governments should support such initiatives and obtain technical support from them.

It is critical to come up with efficiency benchmarks for infrastructure projects through data collection and analysis, compile leading practice guidelines for project selection and delivery, as well as develop a common approach to life-cycle cost-benefit analysis. This work can be supported by the Global Infrastructure Hub (GIH), which should work alongside the OECD and the World Bank to develop a project preparation checklist. Such a checklist can help prioritize high-value projects with sustainability parameters, and eliminating those that are politically motivated, while project benchmarking can improve spending efficiency, making infrastructure projects more attractive.

### **Develop infrastructure project preparation facilities which provide venture funds for project preparation and development.**

While it is beneficial to bring in the private sector during early project stages, businesses are often wary of participating, as project's objectives and risks are unclear. A cost reimbursement mechanism for projects that successfully achieve financial close can address the early-stage financing gap. For instance, there have been efforts by development banks and donors to create infrastructure project preparation facilities (IPPF), which provide venture funds that pay for project preparation and development to bring projects to bankability. Indeed, IPPF models remain sound and these initiatives have made progress possible, however, some of them have not survived or have proved inefficient, and very few have achieved the scale to make the necessary impact. Practical aspects of the PPF need some critical adjusting.

In partnership with industry experts, the World Economic Forum identified five key principles of success for IPPFs, based on best practices observed globally.<sup>2</sup> The principles are: 1) Clear objectives and a focused strategy; 2) A self-sustainable financing model; 3) Excellence in portfolio

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<sup>2</sup> *A Principled Approach to Infrastructure Project Preparation Facilities*, World Economic Forum, June 2015

management; 4) Cost-efficient and value-adding advisory services; and 5) Stringent governance and accountability.

The WEF report mentions that incorporating these five principles into the IPPF design should produce positive results, including a higher project success rate, improved efficiency and sustainability of IPPFs and, ideally, greater scale. IPPFs should aim to increase private-sector financing in project preparation, but also to call on private-sector expertise to improve project preparation. When these private-sector resources are combined with public-sector support, the chances of successful project preparation are greatly enhanced.

**Increase the number of projects developed through public-private partnerships and, where necessary, build human and institutional capabilities to deliver PPPs.**

Another way to increase private-sector involvement is to promote and develop more public-private partnerships (PPPs). PPPs have a number of benefits: their whole-life costing approach optimizes construction, operation, and maintenance costs, and they offer better risk management and efficient project delivery. PPP frameworks, in particular contracted cash flows, provide more visibility and ensure predictability of cash flows. This makes PPP projects attractive to institutional investors seeking assets that match their long-term goals. To fund PPPs, governments can promote co-financing between multilateral development banks (MDBs) and the private sector to share risk and generate more investment.

Delivering successful PPPs requires governments to carefully prepare and develop projects. The lack of effective PPP project preparation is one of the key challenges that governments face. Governments should coordinate with international institutions, such as the International Monetary Fund (IMF) and the Organization for Economic Cooperation and Development (OECD), to establish standards and frameworks for PPP projects, as well as improve institutional capacity of countries to effectively implement these arrangements.

First, the public sector should be organized appropriately to manage the rigorous process. It should assemble a team of experienced professionals and have a steady leadership, clear governance and project management structure in place. Governments can build institutional capacity by:

- Establishing PPP policy frameworks to help execute complex operations for documentation and legal standards to attracting investors – local and international;
- Establishing a robust system of legal guarantees to reduce information asymmetries for private capital; and
- Educating government employees (i.e. PPP-related training, PPP-toolkits, and PPP workshops for knowledge sharing).

Second, a full project assessment (technical, financial and legal assessments) should be completed to ensure that the project is developed on a sound basis and meets strategic objectives. In addition, a clear and transparent process map should be established setting out criteria for evaluating bids and project selection, timeline and key decision points. The public sector should secure adequate funding to pay for such a thorough preparation, ideally through project preparation facilities.

Overall, PPPs should be based on a long-term political and budgetary commitment, and the public sector needs to build capabilities to execute and monitor PPPs. These factors are among the most critical ones that affect the private sector's decision whether or not to bid for a project.

## **Stage 2: Financing**

**Create an enabling regulatory environment for infrastructure investment by, among other things, evaluating the impact on long-term infrastructure investment of new regulations and continuous cooperation with the Financial Stability Board.**

To make long-term investments in infrastructure, investors need financial regulation that encourages long-term financing. To create an enabling regulatory environment, the G20 should assess current financial regulations, such as Basel III and Solvency II, and pension fund allocation rules, and review terms that may dis-incentivize long-term investment in infrastructure.

Both Basel III and Solvency II treat long-term investments in infrastructure as similar in risk to long-term corporate debt or investments, requiring higher capital ratios. For example, compared with Basel II, Basel III capital charges for long-term corporate and specialized loans increased by 30bp and 60bp respectively. However, infrastructure investments often have lower risk, with lower defaults, higher recoveries, and counter-cyclical features. Basel III regulation of bank capital, leverage, and liquidity intentionally discourages matches in the maturity of assets and liabilities; this makes it harder and more expensive for banks to issue long-term debt, such as project finance loans. Solvency II similarly penalizes equity infrastructure investments.

More specifically, governments should further evaluate the impact on long-term infrastructure investments of new regulations designed to promote stability. These regulations may have unintended consequences that constrain the ability of investors to make long-term investments, regardless of the term of their liabilities, and make it more expensive to provide long-term capital.

The implications of these international regulatory standards should be assessed (including a cost-benefit analysis) to evaluate their full impact not only on long-term investors and their beneficiaries, but also on the costs over time to the broader economy, employment, and other G20 objectives.

Other international regulatory standards under way (such as the international capital standards for insurers) could raise similar concerns over disincentives due to solvency treatment. To prevent this, international regulatory standards under development must include a cost-benefit assessment of the impact on the provision of long-term investment and other G20 objectives by the financial players that are within the scope of the regulation.

The Financial Stability Board (FSB) has been monitoring progress on implementation and effects of regulatory reforms by carrying out thematic and country peer reviews. These reviews help promote complete and consistent implementation of agreed G20/FSB reforms. The FSB should continue these reviews to evaluate the impact on long-term infrastructure investments of new regulations. At the same time, sharing analyses and building trust among member countries will remain critical, and the G20 should ensure a full cooperation with the FSB to timely address evolving risks.

**Promote the development of infrastructure capital market instruments and hedging products, such as political risk insurance, issuance of capital market instruments, development of bond markets, and refinancing risk hedge.**

To encourage more risk-averse investors to finance infrastructure projects, a risk-mitigating mechanism is required. For example, G20 governments can encourage financial institutions to offer political-risk insurance to help reduce the potential for political actions to negatively impact infrastructure investments. The G20 can coordinate with institutions providing for national and multilateral political risk insurance mechanisms such as Overseas Private Investment Corporation, U.S. (OPIC), or the Multilateral Investment Guarantee Agency of the World Bank (MIGA). G20 members can encourage existing providers of political-risk insurance to make these products more available to potential investors, as better coordination across the existing providers of political-risk insurance will facilitate increased usage amongst investors. Given the long-term nature of infrastructure assets, this type of insurance can be critical to reducing risk to an acceptable level.

As G20 economies are not perceived to be equally stable, political-risk insurance will be attractive for investors who are struggling to finance infrastructure projects in certain countries. By reducing significant sources of risk in infrastructure investment, political-risk insurance will encourage investors and funds to diversify their infrastructure portfolio and increase the amount they invest in infrastructure assets.

**Incorporate sustainability metrics into financing by international financial institutions, private and institutional investors.**

International financial institutions that finance and coordinate major infrastructure projects should evaluate social and environmental risks and factor them in when deciding about pursuing an investment option. In particular, they should incorporate sustainability metrics, as well as climate change risks, into their policies and financial models. They should promote and prioritize infrastructure projects that ensure sustainable development and help address climate change risks.

Social and environmental risks might not necessarily result in financial losses in the short-term, however, they can increase costs of a project, or threaten its viability in the mid- or long-term. Further, this can undermine global stability by deepening negative consequences of climate change, or intensifying financial crises and related political tensions.

For instance, MDBs play a fundamental role in allocation financial resources, and hence are in a position to work with stakeholders to pursue low-carbon growth which can also support poverty alleviation. The G20 should support international organizations in doing so, directing public and private investment towards sustainable infrastructure options. It will not only strengthen the financial soundness of a project, but also improve systemic financial stability, contributing to SDG targets.

At the same time, investors – private and institutional – should incorporate sustainability into business planning and decision-making process too. An increasing number of companies are actively

pursuing sustainability strategies, as the connection between environmental factors and financial performance is becoming more and more evident.<sup>3</sup> Sustainability targets in financial planning should become a standard practice, and the G20 should accelerate mainstream adoption of sustainable investing targets by investors to address global challenges. Meanwhile, providing government-backed guarantees for investments in sustainable infrastructure can improve the risk-return profile of investments particularly when dealing with a new or unproven technology, thereby increasing private-sector investment.

The United Nations estimate that about 2.6 billion people in the developing world are facing difficulties in accessing electricity full time, and 2.5 billion people worldwide lack access to basic sanitation and almost 800 million people lack access to water.<sup>4</sup> While there are significant socio-economic risks associated with these statistics, there is also considerable opportunity for investors to benefit from needed improvements in infrastructure. The private sector has a crucial role in addressing developmental challenges, and companies that focus on these challenges will be best positioned for long-term growth.

### **Stage 3: Procurement and approvals**

**Develop and adopt: 1) common standards for infrastructure procurement, including best-value tendering approaches instead of lowest cost; and 2) an open digital platform to create consistency and transparency in the procurement process.**

G20 members can streamline delivery and reduce costs by adopting policies and procedures used successfully in other countries under similar circumstances. For example, the cost of developing infrastructure on similar projects can vary by a factor of two to three across countries. Governments need to ensure efficient decision-making processes, establish priorities, and clearly define work-process timelines. The Global Infrastructure Hub can collect efficiency and effectiveness benchmarks across projects in G20 countries so that policy makers can more accurately evaluate projects' system-wide costs and benefits. In particular, the GIH can develop and promote the adoption of common standards for infrastructure procurement, including best-value tendering approaches instead of lowest cost; as well as an open digital platform to create consistency and transparency in the procurement process.

**Define a model approval path with clear criteria that each country can adapt to its own context.**

To encourage infrastructure investment and increase business confidence, governments need to alleviate delays and approval uncertainty. They should follow leading practices in issuing permits, involving rigorous project prioritization; define clear roles and responsibilities; be transparent on performance; and follow time-bound process steps (including time limits on public review). In

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<sup>3</sup> On the environmental dimension of sustainability, corporate eco-efficiency and environmentally responsible behavior are viewed as the most important factors leading to superior stock market performance. Morgan Stanley analyzed the performance of more than 10,000 mutual funds and found that sustainable equity funds met or exceeded median returns of traditional equity funds during 64% of the time periods examined. Over the longest time period analyzed (seven-year trailing, 2008-2014), Morgan Stanley found that sustainable equity funds met or exceeded median returns for five out of the six different equity classes examined (e.g., large-cap growth). Source: <http://www.morganstanley.com/ideas/business-case-for-sustainable-investing/>

<sup>4</sup> Sustainable Development Goals, United Nations, 2015 Source: <http://www.un.org/sustainabledevelopment/infrastructure-industrialization/>



addition, governments should review internal approval processes and set clear time limits for major approvals, and consider making a single agency accountable for deadlines. Such a model approval path can be developed by the Global Infrastructure Hub, so that each country can adapt the structure to its own context.

#### **Stage 4: Operations, asset management, service delivery**

**Review key future infrastructure interventions and investments, prioritizing the optimization of existing assets through demand management, operational improvements, and intelligent-usage management techniques, before resorting to building new capacity.**

A big opportunity exists to use existing assets more efficiently. For example, while demand-management techniques can significantly enhance the productivity of water and electricity infrastructure projects, public officials often prefer to build new capacity; the maintenance and improvement of existing brownfield assets is often not taken into account for political reasons. To make infrastructure less expensive and more sustainable, governments need to understand the potential of improving existing infrastructure. G20 members can evaluate how digital tools can improve the efficiency of existing infrastructure assets (for instance, by increasing throughput at port and border crossings and reducing shipment time).

Greater project review transparency and building the required skills should address the issues around incentives (including political bias), accountability, and lack of capabilities. In-depth cost-benefit analysis will enable usually risk-averse infrastructure owners to understand the methods of gauging the advantages of construction improvement, such as the use of design-to-cost and design-to-value principles, advanced construction techniques, and lean processes.

**Conduct a systematic review of existing assets and publish a transparent list of brownfield infrastructure assets that require ownership changes with evidence supporting the expected economic and social benefits, including evaluation of capital recycling initiatives, through the sale of brownfield assets to increase private investment in infrastructure.**

Apart from the operational improvement of existing assets, governments should analyze the potential for ownership model changes, including: concession, license auctioning, PPP, and asset privatization.

Brownfield asset pipelines should include projects that are selected only after government evaluation of existing assets. Governments should ensure that they are following the right strategy for each asset. Sale of brownfield assets can unlock public funds for greenfield projects. This strategy, known as capital recycling, is also attractive to insurers and pension funds that view brownfield projects with demonstrated returns as less risky than greenfield projects.

**Support the development of new and existing marketplaces for trading infrastructure assets and add liquidity to securities exchanges with governments playing the role of market-maker.**

Boosting financial participation in infrastructure to facilitate the development of infrastructure as an asset class means increasing its liquidity. The G20 should enable the development of more liquid, infrastructure asset classes, including green bonds. G20 members should support the development

of new and existing marketplaces for trading infrastructure assets to increase securitization and asset-based financing and bring in early-stage equity, and should also promote standardized and harmonized regulations for security exchanges. They should integrate existing market places to increase the volume of issuances, and develop new capital markets for infrastructure securities exchange.

Governments can significantly increase the amount of private investment in infrastructure assets by adding liquidity to securities exchanges. For example, they can issue equity and debt of government-owned infrastructure projects and infrastructure operators to encourage private investment. Governments should play the role of market-maker and encourage MDBs to sell their investments as individual or bundled assets to increase liquidity. Funds from sale of assets may be used for financing other infrastructure investments.

The benefits would be to:

- Increase transaction size and diversify risk, attracting more private-sector institutional investment.
- Unlock funds for MDBs to initiate a new project cycle and advance their portfolios to the next frontier – funding riskier project development and construction stages.
- Facilitate the development of infrastructure as an asset class for institutional investors willing to invest in operational stages but wanting to outsource due diligence for project quality to MDBs and development finance institutions.

## **National infrastructure investment strategies**

**Define investment strategies and action plans at the relevant level (international, national, state, regional) for public infrastructure investment, aligned with fiscal policy, with a clear role for the private sector, and defined sustainability parameters.**

Since the infrastructure gap can be filled only by a combination of private and public-sector involvement, governments need to build a credible national vision of planned projects – especially in key infrastructure sectors, such as urban development, transport, and energy – to attract more investors. Strong political commitment to a credible vision could alleviate investor uncertainty and enable productive collaboration between governments and investors. This will increase the amount of funds put into new infrastructure investments and deploy private expertise to the best advantage.

Governments should identify, on an individual-country level, the infrastructure investment required to meet socio-economic needs, including sustainable growth and job creation. Infrastructure targets, set as a percentage of GDP, should also be closely aligned with fiscal and monetary strategies. Commitment to an infrastructure target relative to GDP will allow countries to be more explicit on the real gap and the amount of infrastructure investment required. Government will also need to track performance against targets to ensure that the infrastructure develops steadily in line with national goals. They should commit to assessing actual investment against targets on an annual basis.

Further to developing infrastructure investment targets, governments should have a coherent, evidence-based strategic vision that incorporates job creation and sustainability targets, as well as

takes into account from the outset environmental sustainability and greater engagement with the private sector. These strategies should outline a clear plan necessary to meet the identified infrastructure investment. It will help clarify the role that the private sector can play in achieving these plans to ensure more effective and efficient delivery and operation of projects.

Often, governments are not fully transparent about their expectations of the private sector in terms of both the project pipelines and business models, including cost-benefit analysis, and private-sector involvement in infrastructure projects. Governments should be explicit about the target financing structure, including the share and type of financing in each project, and about the level of participation in the project preparation and delivery. This will make the public sector more disciplined about target setting and decrease ambiguity around the role of the private sector, thus attracting more funds.

**Incorporate sustainability parameters into investment strategies and action plans at the relevant level (international, national, state, regional), building on the analysis of the progress on the G20 Energy Efficiency Action Plan.**

Resource-efficient infrastructure can help investors maximize returns and ensure sustainability of projects, by enhancing infrastructure durability, and lowering maintenance costs, among other things. In 2014, the G20 came up with the G20 Energy Efficiency Action Plan, highlighting energy efficiency as the G20 members' priority. Huge amount of capital will be deployed in infrastructure over the next couple decades. Governments need to have a clear understanding of the amount of energy savings to deliver, and factor that into infrastructure choices. Members can draw from successful experiences of countries where huge energy savings are already made – in Germany or Denmark.

The G20, as a critical forum to exchange expertise, should continue to monitor progress being made on the G20 Energy Efficiency Action Plan, and build on the energy efficiency principles, mainstreaming this as an initiative of the Infrastructure Investment Working Group during the Chinese presidency and beyond.

Under the Turkish G20 Presidency, national investment strategies are being prepared to support member growth strategies. These strategies include measures to attract long-term institutional investors, enhance public-private partnerships, improve efficiency of public investment and support alternative sources of infrastructure investment such as asset-based financing, among other things. G20 members should incorporate a sustainability parameter into the investment strategies and targets.<sup>5</sup>

**Publish an integrated pipeline of major greenfield infrastructure projects both publicly and privately financed, including cost-benefit analysis, business-model evaluation and total cost of ownership, and sustainability evaluation, with a clearly defined time horizon.**

Successful infrastructure project and program delivery depend on early visibility into and commitment to the pipeline of opportunities. Given huge due-diligence costs of infrastructure

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<sup>5</sup> *Infrastructure Financing and Sustainable Development*, Think20 Turkey Policy Brief, 2015

projects, investors are often willing to incur the cost of building capabilities and local expertise only if they are assured a stable, predictable pipeline of investment opportunities. An initial analysis of G20 Member Growth Strategies shows that only 50 percent of G20 countries have published a clear pipeline of infrastructure projects, while 90 percent have a clear infrastructure plan in place and available.

Published documentation should include enough detail to create confidence that the appropriate due-diligence has been conducted and that projects have been prioritized according to a country's long-term vision. About 80 percent of the global pipeline available to equity investors consists of greenfield projects. Greenfield pipelines should select the most productive, sustainable, and socially beneficial investments and determine the best way to involve the private sector in their delivery.

**Involve existing infrastructure institutions and/or establish these where they do not exist to deliver infrastructure projects on time by monitoring progress, supporting implementing agencies when they encounter challenges, and rapidly escalating issues when relevant to senior decision makers.**

Governments need to develop capabilities to solve problems they typically face in delivering infrastructure projects, such as late delivery and budget over-runs. Many G20 countries have institutions (for example, Infrastructure UK, Infrastructure Australia) that support infrastructure development, and their responsibilities could be expanded. Existing institutions should monitor infrastructure projects, support implementing agencies, and escalate issues to senior decision makers. An independent, transparent review of existing projects will increase credibility and help to address issues early.

G20 countries that do not have such institutions should establish them. These institutions should have appropriate governance structures that encourage transparency, accountability, and effective decision-making process. This will facilitate long-term planning and reduce policy instability in the planning, delivery, and financing of infrastructure projects.

**Prioritize cross-border infrastructure projects and develop principles and standards to encourage the use of shared infrastructure.**

The G20 is critically positioned to ensure benefits of globalization are available for all, and the T20 has highlighted the role of cross-border projects and shared infrastructure schemes in facilitating global integration. For that, the G20 collectively, and national governments locally should encourage international collaboration on cross-border projects, such as the New Silk Road which aims to connect Asian, European, and African countries more closely, boosting trade and interconnectivity between the regions. The B20 has noted that some infrastructure recommendations can be piloted as part of cross-border projects.

The G20 should also work with the World Bank and other international financial institutions to develop principles and standards to encourage the use of shared infrastructure, particularly in resource-driven countries. Infrastructure projects often have unutilized capacity and expansion opportunities that can potentially increase asset productivity and support broad-based economic development. It is estimated that nearly 70 percent of investment in resource infrastructure could

potentially be shared among different operators – the largest opportunities in power in mining and pipelines in oil regions. The remaining 30 percent could potentially be shared among industry and other users.<sup>6</sup> The G20 should work together with relevant institutions to identify and articulate risks, costs and benefits of infrastructure sharing on a case-by-case basis, and then develop appropriate solutions to deliver shared infrastructure projects most effectively.

The focus on cross-border and shared infrastructure projects will not only boost potential economic growth, enhance trade, and facilitate development, but also facilitate global integration for the benefit of all. Increasing regional inter-linkages can help integrate developing countries and small and medium enterprises into global value chains, contributing to the G20's aim of making growth and development more inclusive.

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<sup>6</sup> *Reverse the curse: Maximizing the potential of resource-driven economies*, McKinsey Global Institute, December 2013