B20 Infrastructure & Investment Taskforce Policy Paper

September 2015

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For other B20 taskforce policy papers and the B20 Policy Summary please see http://b20turkey.org/ policy-papers/

EXECUTIVE SUMMARY

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 gap can be bridged in several complementary ways:

- **Improve the effectiveness and efficiency of spending.** This can reduce investment needs by 40 percent according to the McKinsey Global Institute's (MGI) projections. This includes optimizing the use of existing assets, where possible, rather than building new capacity, improving project selection and planning, and improving delivery.
- **Ensure that regulatory conditions enable private investment**. Notably for power utilities and telecoms operators, companies will increase their levels of investment, as long as they can make returns equal to their cost of capital.
- **Build a bridge between institutional investors and infrastructure assets.** The long-term predictable cash flows of debt and equity investments in infrastructure assets and concession contracts are a natural match for institutional investors with long-term liabilities. This could open up a large additional channel for unlocking investment and enable banks to diversify their portfolios via syndication processes and lending, particularly during the earlier phases of infrastructure investment.
- **Increase the level of public investment.** While fiscal budgets are tight and governments are rightly concerned about consolidating spending, low interest rates in most G20 economies suggest there is room for further productive public investment and for unlocking the value of existing public assets.

The taskforce focused on identifying ways to increase private sector investment in infrastructure. It developed three recommendations for actions that G20 nations can take – individually and collectively – to promote infrastructure investment. These focus on building a bridge between private investors and infrastructure assets, as this is a newer channel and requires significant shaping. Investment has also suffered tremendously from changes to the financial system in the aftermath of the recent global financial crisis. The recommendations also touch on the other three points above, as action is required across all four elements to close the infrastructure financing gap. The taskforce offers the following three recommendations to the leaders of the G20:

1. Improve the infrastructure investment ecosystem to facilitate the development of infrastructure as an asset class. The private sector may play a bigger role in financing infrastructure projects, but market inefficiencies and legislative and regulatory disincentives constrain private capital that could fund infrastructure projects. Unlocking funds of institutional investors to infrastructure requires initiatives that target improving various elements of the infrastructure investment ecosystem. The G20 should:

I. Improve the enabling environment to increase the number of bankable infrastructure projects and the level of private sector funds invested.

II. Implement infrastructure project development, procurement, and approval processes consistent with leading practices.

III. Support the development of new and existing forms of funding and market places for trading infrastructure assets.

IV. Increase the number of projects developed through public-private partnerships (PPP) and, where necessary, build the capabilities of governments to deliver PPPs.

2. Develop country-specific infrastructure investment strategies linked to G20 growth aspirations. The infrastructure gap can be filled only by a combination of private and public-sector involvement, and governments need to build a credible national vision of planned projects to attract more investors. Each country should identify and set up country-specific targets on infrastructure spend and publish credible, evaluated infrastructure pipelines.

3. Commit to international investment principles related to foreign direct investment (FDI). Despite a growing consensus in developed countries on international investment rules and the increasing convergence of interests between developed and developing countries, significant barriers remain to negotiating a single, globally consistent set of investment principles. The G20 should strengthen the international investment framework enabling an open flow of investment for more-efficient allocation of resources around the world and increased prosperity in both developed and developing economies.

Collectively, these actions could generate $15 trillion to $20 trillion-worth of additional infrastructure capacity by 2030, closing the infrastructure investment gap. Some infrastructure recommendations can be piloted as part of actual cross-border projects, such as the New Silk Road project, which aims to connect Asian, European, and African countries more closely.

TASKFORCE CONSTITUTION AND PROCESS

B20 Turkey Leadership

The Deputy Prime Minister of Turkey Ali Babacan appointed an executive committee that included the representatives of Turkey's six leading business organizations to guide the work of the B20 Turkey in 2015 under the leadership of Rifat Hisarciklioglu, B20 Turkey Chair and President of the Union of Chambers and Commodity Exchanges of Turkey: Mehmet Buyukeksi, Haluk Dincer, Nail Olpak, Erol Kiresepi, Erdal Bahcivan, and Tuncay Ozilhan. The executive committee appointed Sarp Kalkan as B20 Sherpa.

B20 Taskforce Policy Development

The B20 organized itself around six taskforces: five of them – Trade, Infrastructure and Investment, Financing Growth, Employment, and Anti-Corruption – built on the work of the previous cycles' taskforces, and given the G20's priority of implementation, focused on advocacy and refinement of the existing set of B20 recommendations. Given G20's inclusiveness priority, a new taskforce on SMEs and Entrepreneurship developed recommendations to better integrate SMEs into the global economy.

The policy development process began with a scoping exercise to develop themes for investigation. Each theme was then deeply researched and debated within the taskforce to generate draft recommendations. The draft recommendations were then refined in an iterative process and a series of actions developed to test the practicality of each recommendation. The draft recommendations were also discussed in ten regional consultation meetings. The contributions of the taskforce members were coordinated and turned into policy papers by taskforce working groups that include chairmen's deputies and representatives of the knowledge and international business network partners. See section 'Taskforce schedule and composition' for the list of the members of the working group of the Infrastructure and Investment Taskforce.

The Economic Policy Research Foundation of Turkey (TEPAV) provided content for taskforce recommendation development, with a team led by Ussal Sahbaz, B20 Content Lead. Directly reporting to B20 Turkey Chair, the B20 Steering Committee supervised the B20 content. The members of the steering committee were Tunc Uyanik (chairman), Janamitra Devan, Robert Milliner, and Guven Sak.

Infrastructure and Investment Taskforce

The Infrastructure and Investment taskforce was established under the coordinating chairs Ferit F. Şahenk – chairman of Doğuş Holding, and Fu Chengyu – former chairman of Sinopec. The co-chairs were David Thodey – CEO of Telstra Corporation, Francesco Starace – CEO and General Manager of Enel Group, Krill Dmitriev – CEO of Russian Direct Investment Fund, Marcus Wallenberg – Chairman of Skandinaviska Enskilda Banken, Nabil Habayeb – President and CEO of Middle East, North Africa & Turkey at General Electric, and Zhi Ying – Vice President and Chief Brand Officer at Tsinghua Tongfang Co., Ltd. The deputies for the coordinating chairs were Koray Arıkan – Advisor to the chairman of Doğuş Holding, and Oğuzhan Dedeoğlu – External Affairs Manager at Doğuş Holding.

The taskforce received in-depth content and process support from McKinsey & Company as its knowledge partner, and the World Economic Forum (WEF) as its international business network partner.

The Infrastructure and Investment taskforce had 188 members, most of whom were senior executives in business, business associations, and professional services firms. The membership broadly represented countries of the G20. The taskforce members met in person three times before the B20 Conference organized in September 2015 and exchanged ideas and material between meetings. See section 'Taskforce schedule and composition' for details.

INTRODUCTION

A large amount of private funds available for investment could be directed towards infrastructure assets. According to taskforce estimates, there is potential to increase private investments in infrastructure by up to $15 trillion to $20 trillion by 2030. However, in most cases, infrastructure investments are an illiquid asset and this often discourages private investment.

In general, institutional investors (such as insurance companies and pension funds) have the ability and willingness to hold long-term illiquid infrastructure assets to match their liabilities of a similar nature. However, many potential infrastructure investors face challenges: the variety of project structures, the lack of standardization in commercial arrangements and uniformity in financial instruments, and the scarcity of readily available data, create high due diligence costs that discourage private investors; uncertain taxation and the current regulatory environment put public and private investors off long-term projects (including infrastructure). Poor project preparation and lengthy approval periods usually lead to budget over-runs and delayed project launch and delivery time. Finally, the illiquid infrastructure market leads to higher requirements for anticipated returns from investments. While some investors can overcome these challenges, they keep many out of the market and likely reduce total overall investment in infrastructure.

As the world invests to meet its infrastructure needs, the G20 must encourage private investment in modern, clean, and efficient infrastructure. Directing as much investment as possible toward sustainable infrastructure will help the world move to a low-carbon trajectory through 2030 – and this investment can also lead to as much prosperity as a high-carbon pathway. Growth through sustainable infrastructure is likely to be more inclusive, build resilience, and strengthen local communities.[1]

1 Amar Bhattacharya, Jeremy Oppenheim, Nicholas Stern, “Driving Sustainable Development Through Better Infrastructure”, Global Economy & Development Working Paper number 91, July 2015. Link

RECOMMENDATION 1: Improve The Infrastructure Investment Ecosystem To Facilitate The Development Of Infrastructure As An Asset Class

The B20 Infrastructure and Investment taskforce believes that the following initiatives should be prioritized to improve the investment ecosystem and solve some of the issues limiting private investment:

Reference	Initiative
I&I 1.1	Improve the enabling environment to increase the number of bankable infrastructure projects and the level of private-sector funds invested.
I&I 1.2	Implement infrastructure project development, procurement, and approval processes consistent with leading practices.
I&I 1.3	Support the development of new and existing marketplaces for trading infrastructure assets.
I&I 1.4	Increase the number of projects developed through PPPs and, where necessary, build the capabilities of governments to deliver PPPs.

The following pages provide detail on each of these initiatives.

INITIATIVE 1.1: Improve The Enabling Environment To Increase The Number Of Bankable Infrastructure Projects And The Level Of Private-Sector Funds Invested

Initiative	Improve the enabling environment to increase the number of bankable infrastructure projects and the level of private sector funds invested.
Reference	I&I 1.1
Timing	2016
Value	$300-500 billion of additional investment per annum.

Context

The current allocation to infrastructure from institutional investors and the private sector is some $1.5 trillion to $2 trillion. However, given the estimated gap of $15 trillion to $20 trillion by 2030, increasing the level of investment from institutional investors and the private sector is critical to closing the infrastructure gap.

Private investors seek attractive, long-term infrastructure investment opportunities but they face a shortage of well-prepared, bankable projects. Investor requirements for project preparation vary, but the typical understanding of a well-prepared, bankable project includes a well-developed business model (with robust revenue and cost projections), manageable risk levels (typically investment grade), and an attractive risk-adjusted return.

Often, prospective infrastructure projects lack elements such as robust demand, engineering studies, or fair risk allocation. Poor project preparation is not attractive to private investors. To promote private sector investment, G20 governments should take the following actions.

Actions

I&I 1.1.1: 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 would help to 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 (MDBs), and other key institutions should promote the standardization of project preparation and evaluation, for instance by using common-risk assessment frameworks and documentation.

Accordingly, the G20 should mandate a group convened by the Global Infrastructure Hub (GIH) to 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 (Organisation for Economic Co-operation and Development) effective approaches to the financing of long-term investment by institutional investors, and the G20/OECD taxonomy of instruments and incentives for infrastructure financing. Actions should be proposed by the G20 2016 summit.

I&I 1.1.2: Create an enabling regulatory environment for infrastructure investment.

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, the B20 should make a broader recommendation to the G20, mandating that 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.

- Support the OECD review and analysis of investment regulations governing pension funds and insurers to better understand the constraints with regard to long-term investment financing and alternative investments.
- Ensure that new standards under development (for example, the International Capital Standards for Insurers) include a cost-benefit assessment of impact on the provision of long-term investment and other G20 objectives.
- Commission a review by the International Integrated Reporting Council and International Accounting Standards Board of accounting rules that may hinder investment in infrastructure and a report that recommends what G20 governments should do to promote widespread adoption of integrated reporting.

  For example, it has been suggested that the use of fair-value accounting principles has led to short-termism in investor behavior. Long-term investors argue that short-term volatility resulting from fluctuations in the market value of their investments does not provide information on real performance, as the fluctuations are not indicative of the prospects for future net cash inflows.
- Promote stable and fair regulatory pricing frameworks and enable regulatory relief for equity and debt investors in infrastructure assets. The frameworks should match the life of the underlying assets to boost confidence in better-matched capital through long time horizons and reduce risk.

I&I 1.1.3: Improve the general conditions around project preparation, including supporting and funding multilateral initiatives to provide technical support and skills during project preparation.

In many cases, infrastructure projects lack robust business plans, appropriate guarantees, and credit ratings, while suboptimal preparation can lead to delays, cost over-runs, or renegotiations. Well-prepared projects would eliminate the issues affecting projects under way and increase the number of new projects being launched.

G20 governments should build project-preparation capabilities by drawing on 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. G20 governments can also improve project preparation by engaging with the private sector as early as possible in project development, as well as creating effectiveness and efficiency benchmarks for infrastructure through data collection and analysis, best practice guidelines for project selection and delivery, and developing a common approach to cost-benefit analysis including base economics and societal benefit. The work should be supported by the GIH, which should work alongside the OECD and the World Bank to develop a project preparation checklist.

Better project preparation will increase the number of bankable projects and decrease delays and budget over-runs. In particular, governments should promote public-private sector engagement in project development. With better technical and business awareness, governments can define projects that will deliver the best long-term value supported by available technologies and an integrated approach to infrastructure investment. This model

creates a comprehensive approach to project development including building in necessary planning for future growth.

Clear project-selection guidelines (including life-cycle cost-benefit analysis) will bring additional socio-economic benefit by prioritizing high-value projects and eliminating those that are politically motivated. Project benchmarking and targeting best practices will improve spending efficiency and cost and improve business models, making infrastructure projects more attractive.

I&I 1.1.4: Increase the role that the private sector can play in project development by, among other things, developing infrastructure project preparation facilities which provide venture funding for project preparation and development.

Attempts to address the early-stage financing gap include the efforts by development banks and donors to create Infrastructure Project Preparation Facilities (IPPFs), which provide venture funding for project preparation and development. While these initiatives have made progress possible, some of them have not survived or have proved inefficient, and very few have achieved the scale to make the necessary impact. In partnership with industry experts, the World Economic Forum identified five key principles of success for IPPFs, based on best practices observed globally.[2] The principles are: 1) Clear objectives and a focused strategy; 2) A self-sustainable financing model; 3) Excellence in portfolio 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.

G20 governments should help private investors play a more active role in project development: 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. Governments should also have the capabilities and resources to evaluate bids.

I&I 1.1.5: Support the development of innovative financing mechanisms to promote additional investment.

To increase private investment, G20 governments should attract a broad set of potential investors. Developing innovative financing structures and instruments, as well as promoting existing ones, can unlock funds that are tied up due to regulatory or other constraints. It can also facilitate access to additional pools of capital with specific commercial and structural requirements. Some examples of these innovative mechanisms are asset-based financing and mechanisms that capture and reward reduced risk from resilient infrastructure and capture total-cost-of-ownership savings.

2 *A Principled Approach to Infrastructure Project Preparation Facilities*, World Economic Forum, June 2015. Link

Reference	Action	Owner
I&I 1.1.1	Develop a standard project structuring approach to help investors evaluate and finance projects.	G20 governments collectively
I&I 1.1.2	Create an enabling regulatory environment for infrastructure investment.	G20 governments collectively
I&I 1.1.3	Improve the general conditions around project preparation, including supporting and funding multilateral initiatives to provide technical support and skills during project preparation.	G20 governments individually
I&I 1.1.4	Increase the role that the private sector can play in project development by, among other things, developing infrastructure project preparation facilities which provide venture funding for project preparation and development.	G20 governments collectively
I&I 1.1.5	Support the development of innovative financing mechanisms to promote additional investment.	G20 governments collectively

INITIATIVE 1.2: Implement Leading Practice Procurement And Approval Processes

Initiative	Implement infrastructure procurement and approval processes consistent with leading practices.
Reference	I&I 1.2
Timing	2016
Value	Cost saving on annual infrastructure spending: $400 billion to $600 billion.

Context

Securing regulatory approval is time-consuming – it is one of the top-three causes of project delays – and uncertainty about obtaining approval is a large contributor to project risk premiums. Many projects do not address clearly defined needs or cannot deliver hoped-for benefits because of technical deficiencies (capabilities, forecasting, data), psychological reasons (new investment bias, subconscious asset preference), and political bias. To promote best practices in procurement and approval processes, G20 governments should take the following actions.

Actions

I&I 1.2.1: Develop through the Global Infrastructure Hub 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 governments can streamline delivery and reduce costs by adopting policies and procedures used successfully in other countries. 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.

B20 Infrastructure and Investment taskforce fully endorses the Global Infrastructure Hub that was established last year to drive the G20's infrastructure agenda. Under its mandate to

collect, develop and promote the adoption of best practices, GIH should collect efficiency and effectiveness benchmarks across projects in G20 countries so that policy makers can more accurately evaluate projects' system-wide costs and benefits.

I&I 1.2.2: Define through the Global Infrastructure Hub a model approval path with clear criteria that each country can adapt to its own context.

To encourage infrastructure investment and increase business confidence, G20 governments need to alleviate delays and approval uncertainty. They should follow best 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 addition, governments should review internal approval processes and set clear time limits for major approvals, and consider making a single agency accountable for deadlines. See Leading practice box 1 for details on process streamlining in Australia.

Leading practice 1: Process streamlining in New South Wales

The state of New South Wales in Australia cut the time required to secure a construction permit for infrastructure projects by 11 percent in one year by streamlining processes. It did so by defining decision rights more clearly, prioritizing projects, standardizing processes, and focusing on performance.

As the first step, the national government shifted the final decision-making power on permits to the state, rather than cities, and gave all agencies involved clear roles and guidelines to avoid duplication. The federal government played a role only in special cases. Elevating decisions from the city to the state level helped clarify the prioritization process. A dedicated state government unit staffed by experts helped speed up decision-making and identify projects to fast-track.

New South Wales also standardized processes across agencies and tiers of government by adopting an integrated planning and permitting system. To account for the cross-jurisdictional nature of infrastructure projects, it negotiated bilateral agreements with other state governments. Finally, the government specified metrics, benchmarks, and performance monitoring to track approval times. This created accountability, ensured reliable service, and reduced uncertainty for applicants. To increase accountability and transparency, data on the status of projects were published.

After a year, more than 70 percent of approvals were being processed within three months.
Source: MGI report Infrastructure productivity: How to save $1 trillion a year, 2013. Link

I&I 1.2.3: Encourage government support of public-private procurement models that permit within a predictable framework the reimbursement of early-stage development and feasibility costs for projects that are successfully procured.

To improve the number of well-prepared bankable projects, G20 governments should seek more private-sector expertise. The private sector has more efficient budgeting and planning processes, so projects with private-sector involvement will have faster delivery time and lower budget over-runs. To do this, G20 governments need to create a framework that reimburses the private sector if project preparation is successful. The framework and associated processes should be transparent to prevent corruption. This will improve the early-stage project pipeline and support early-stage project development. The effort should be coordinated with action item I&I 1.1.4 on the development of infrastructure project preparation facilities.

Reference	Action	Owner
I&I 1.2.1	Develop through the Global Infrastructure Hub and adopt common standards for infrastructure procurement and an open digital platform to create consistency and transparency in the procurement process.	G20 governments collectively
I&I 1.2.2	Define through the Global Infrastructure Hub a model approval path with clear criteria that each country can adapt to its own context.	G20 governments individually
I&I 1.2.3	Encourage government support of public-private procurement models that permit the reimbursement of early-stage development and feasibility costs for projects that are successfully procured.	G20 governments individually

INITIATIVE 1.3: Support The Development Of New And Existing Forms Of Funding And Marketplaces For Trading Infrastructure Assets

Initiative	Support the development of new and existing forms of funding and marketplaces for trading infrastructure assets.
Reference	I&I 1.3
Timing	2018
Value	Captured in 1.1 (up to $300 billion to $500 billion).

Context

Boosting financial participation in infrastructure to facilitate the development of infrastructure as an asset class means increasing its liquidity. In some ways, infrastructure is already treated as an asset class; for example, investments in unlisted funds alone amounted to more than $40 billion in 2014 and some countries, such as Australia and Canada, have a more-developed market for trading infrastructure assets. At the same time, the infrastructure marketplace is quite limited and has great potential for development. To do this, G20 governments should collectively implement the following actions.

Actions

I&I 1.3.1: 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.

G20 governments 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.

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 (DFIs).

Funds from sale of assets may be used for financing other infrastructure investments (see Initiative 2.2).

I&I 1.3.2: 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. In addition, G20 governments 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.

According to a paper published by the World Economic Forum in February 2015,[3] investors can use political-risk insurance issued by multilateral organizations, national providers, and the private market for "hard" risks such as expropriation or currency inconvertibility. According to the paper, this political-risk insurance reached $83 billion in 2012, and additional support from the G20 can help this market develop even further. The Multilateral Investment Guarantee Agency (MIGA) is one of the key organizations that provide political-risk insurance, generally offering it through a developing country's government. 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.

Reference	Action	Owner
I&I 1.3.1	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.	G20 governments collectively
I&I 1.3.2	Promote the development of infrastructure capital market instruments and hedging products.	G20 governments collectively

3 *Strategic Infrastructure: Mitigation of Political and Regulatory Risk in Infrastructure Projects*, World Economic Forum, February 2015. Link

INITIATIVE 1.4: Increase The Number Of Projects Developed Through PPPs And, Where Necessary, Build The Capabilities Of Governments To Deliver PPPs

Initiative	Increase the number of projects developed through PPPs and, where necessary, build the capabilities of governments to deliver PPPs.
Reference	I&I 1.4
Timing	2017
Value	Captured in 1.1 (up to $300 billion to $500 billion).

Another way to increase private-sector involvement is to promote and develop more public-private partnerships (PPPs). These 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 and the private sector to share risk and generate more investment.

As shown in figure 1, the share of PPPs can vary significantly between developed and developing countries. Developing countries tend to be less successful in delivering PPPs, so G20 governments in these countries should make increasing the share of PPPs a priority.

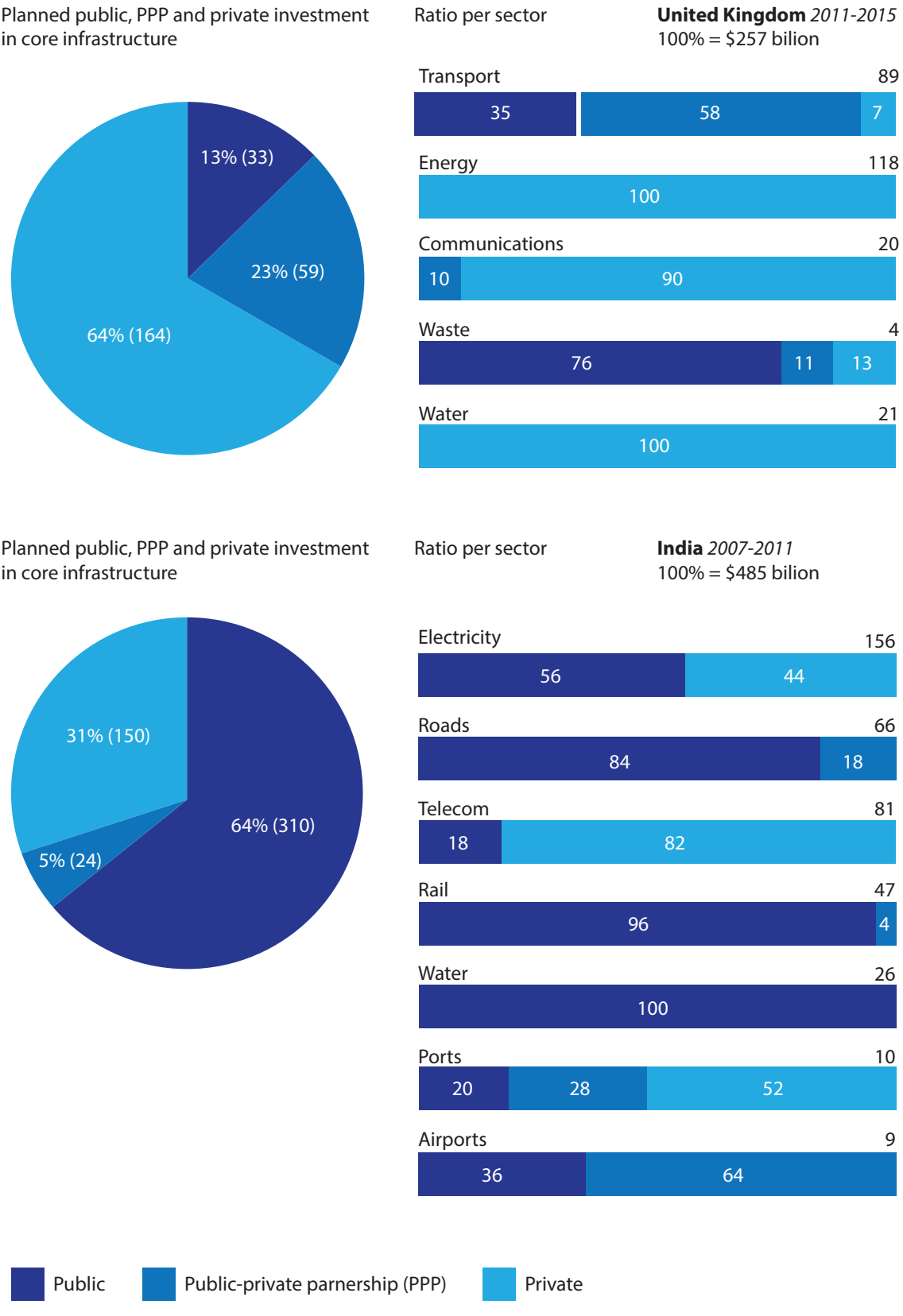
Delivering successful PPPs requires governments to carefully prepare and develop projects. The lack of effective PPP project preparation is one of the key challenges that governments face. First, the public sector should be organized appropriately to manage the rigorous process. It should assemble a team of experienced professionals and have a steady leadership, clear governance and project management structure in place.

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. See more on project preparation under action item I&I 1.1.3 and details on project preparation facilities under action item I&I 1.1.4.

Overall, PPPs should be based on a long-term political and budgetary commitment, and the public sector needs to build the 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.

Figure 1

The share of public and private capital in infrastructure development varies significantly across countries and assets



Source: HM Treasury, United Kingdom; Planning Commission, India; McKinsey Global Institute analysis

RECOMMENDATION 2: Develop Country-Specific Infrastructure Investment Strategies Linked To G20 Growth Aspirations

Recommendation	Develop infrastructure strategies at the country level linked to G20 growth aspirations.
Reference	I&I 2
Timing	Targets to be set by individual G20 members by November 2915 Summit for 2016-2010 and to be reviewed at the G20 2016 Summit. Establish greenfield and brownfield project pipelines by the G20 2016 Summit.
Value	Additional infrastructure investments of $6.6 trillion by 2030.

Context

Every year, the world spends approximately $9 trillion on infrastructure and real estate, $2.6 trillion of which is spent on economic infrastructure – transportation, power and water, and telecommunications. Globally, projected infrastructure investments and needs indicate an infrastructure gap of $15 trillion to $20 trillion in the next 15 years.

While on average a country spends 3.8 percent of GDP on economic infrastructure, spending varies significantly across G20 countries and the world; some governments under-invest and spend only up to 2 percent of GDP, according to MGI estimates. The infrastructure gap is also linked to short-term political cycles, bureaucratic issues, lack of construction labor force, and legislative and contractual barriers, among other factors. Governments must identify and prioritize their infrastructure investment needs.

Each country should develop its own spending plan according to its context: each has a different infrastructure stock starting point and a different level of need for investment. However, common guidelines can be drawn up. Any plan to close the infrastructure gap should be led by government and have public and private-sector involvement. Governments should identify and set up national targets on infrastructure spend as a percentage of GDP and implement actions to achieve these goals.

A big obstacle for private investors is the lack of data and clear understanding of project costs and benefits. In addition to the uncertainty and risks related to long-term financing, almost 50 percent of projects do not have a clear pipeline. This makes it difficult for private investors to make decisions and discourages them from investing in potentially attractive projects. Governments need to develop expertise and publish credible, evaluated infrastructure pipelines by the next G20 summit in 2016.

Taking into account that the global economy is rapidly becoming digital, G20 countries should put more emphasis on future investments in digital infrastructures to ensure connectivity to prepare for the change to the digital economy and benefit from digitalization.

To set up national targets and ensure credible pipelines, governments need to implement the following actions.

Actions

I&I 2.1: Identify, on an individual-country level, the infrastructure investment required to meet socio-economic needs, including sustainable growth and job creation.

To encourage infrastructure investment, G20 governments need to create a vision for future development. Infrastructure targets should be closely aligned and based on each country's socio-economic, sustainability targets, and fiscal/monetary strategies. They should be set for each country as a percentage of GDP. 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.

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 to attract more investors. Strong political commitment to a credible vision would 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. Finally, all G20 governments should commit to assessing actual investment against targets on an annual basis.

See Leading practice box 2 for examples of setting up socio-economic priorities as a basis for infrastructure development from Singapore, Australia and Switzerland.

Leading practice 2: Setting up socio-economic priorities as a basis for infrastructure development

Infrastructure planning should be rooted in a country's broader socio-economic objectives set through a political process, and selected projects should directly address those objectives. Some countries are closer to achieving this than others.

For example, Singapore's national goal for dense urban living has led to a target of 70 percent usage for public transit. This in turn has guided the selection of transport projects by the country's Land Transport Authority.

Similarly, Australia has set a goal to deliver high-speed Internet connectivity to 93 percent of its population and identified the establishment of a national broadband network as the best way to achieve this.

Switzerland's Federal Council has established overarching objectives for economic, ecological, and social sustainability. The Department of the Environment, Transport, Energy and Communications publishes an infrastructure strategy for the Federal Council based on these objectives and individual authorities develop specific strategies that focus on the most important objectives established by the department and the Federal Council.
Source: MGI report Infrastructure productivity: How to save $1 trillion a year, 2013. Link

I&I 2.2: Define aspirations, 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.

These strategies should be strongly aligned with fiscal policy. G20 members should develop a coherent, evidence-based strategic vision that incorporates job creation and sustainability targets and takes into account climate change adaptation requirements to close the gap between investment required and public-investment targets. G20 members should clarify the role of the private sector in achieving national/regional infrastructure objectives – financing versus a broader role including financing – and ensure more effective and efficient delivery and operation. This should be based on analysis of G20 investment strategies.

Building on action I&I 2.1, this will outline the strategy and plan necessary to actually meet the identified need. Further, it will help outline the role that the private sector can play in achieving these plans. 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 (for example, is government open to private sector expertise? What will the joint effort look like?).

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.

I&I 2.3: 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 the capabilities to solve the 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, but 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.

I&I 2.4: 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 governments 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). Leading practice box 3 provides an example of using existing power stations in India more efficiently.

Leading practice 3: India – getting more out of existing power plants

For decades, power demand in India has grown faster than supply, leaving the nation with negative reserve margins. To narrow the gap, the government has drawn up consecutive five-year National Action Plans for Renovation and Modernization (R&M). These plans focus on older, inefficient units, particularly coal-fired power stations that have deteriorated over time.

The decision to renovate and modernize an existing plant rather than build a new-generation unit is based on a standard process involving detailed cost-benefit analysis. First, potential target plants are evaluated in terms of their remaining life via a residual life assessment study. Plants whose economic life could be extended by 15 to 20 years are candidates for upgrades, but the R&M costs cannot exceed 50 percent of the cost of building a new plant with comparable capacity. The detailed cost-benefit analysis informing the investment decision encompasses technical and economic considerations and sensitivity analysis.

Source: MGI report Infrastructure productivity: How to save $1 trillion a year, 2013. Link

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.

In addition, G20 governments need to evaluate and assess the full spectrum of opportunities available for brownfield assets optimization, including:

- Operational improvement opportunities that can be implemented under current ownership and business models to maximize the potential value from assets through cost savings or revenue enhancements.
- Changes to the business model, for example, using outsourcing to maximize cost savings.
- Financial engineering opportunities to optimize capital structure and increase risk-adjusted value (such as add or reduce debt, replace deemed equity with debt in regulated businesses).

I&I 2.5: 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 offer early visibility into and commitment to the pipeline of opportunities. Given the enormous due-diligence costs of infrastructure transactions, investors would be 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 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.

I&I 2.6: 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, G20 governments should analyze the potential for ownership model changes, including: concession, license auctioning, PPP, and asset privatization.

Leading practice 4: Asset sales in Australia
The Australian government has announced plans to raise up to AU$130 billion ($120 billion) from asset sales. More specifically, the government of New South Wales, Australia, announced that it would sell the leased electricity network business to release capital to finance a $20 billion investment in infrastructure. When combined with AU$2 billion from Australia's asset recycling incentive scheme, this approach will enable the government of New South Wales to maintain a Triple A credit rating.

Brownfield asset pipelines should include projects that are selected only after government evaluation of existing assets (see I&I 2.4). 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. See Leading practice box 4 for details on asset sales in Australia.

Reference	Action	Owner
I&I 2.1	Identify, on an individual country level, the overall infrastructure investment required to meet socio-economic needs.	G20 governments individually
I&I 2.2	Define aspirations, investment strategies, and action plans at the relevant level (international, national, state, regional) for public infrastructure investment.	G20 governments individually
I&I 2.3	Involve existing infrastructure institutions and establish these where they do not exist to deliver infrastructure projects on time.	G20 governments individually
I&I 2.4	Conduct a review of key future infrastructure interventions and investments, and a detailed review of existing assets.	G20 governments individually
I&I 2.5	Publish an integrated pipeline of major greenfield infrastructure projects.	G20 governments individually
I&I 2.6	Conduct a systematic review of existing assets and publish a transparent list of brownfield infrastructure assets that require ownership change.	G20 governments individually

RECOMMENDATION 3: Commit To International Investment Principles Related To FDI

Recommendation	Work towards greater promotion and protection of private investment and FDI.
Reference	I&I 3
Timing	2016
Value	Provide additional infrastructure investments of about $400 billion by 2030.

Context

Open flow of foreign direct investment (FDI) would enable more-efficient allocation of resources (capital, knowledge, and people) around the world to increase prosperity in both developed and developing economies.

Despite a growing consensus in developed countries on international investment rules and the increasing convergence of interests between developed and developing countries, significant barriers remain to negotiating a single, globally consistent set of investment principles. Different political, regulatory, and legal frameworks and policies lead to inconsistent regulatory decisions that increase investor uncertainty. To overcome this, G20 governments should collectively implement the following actions.

Actions

I&I 3.1: Strengthen the international investment framework by mandating the OECD and UNCTAD, in consultation with the WTO, to prepare a common set of "international investment principles" to promote broad adoption of existing international standards.

With over 3,200 fragmented international investment agreements, G20 governments need to develop a non-binding international investment rule model (International Investment Principles or IIPs) to reduce complexity. These IIPs would improve regulatory predictability and investor protection, while maintaining governments' ability to pursue legitimate public-policy objectives. Governments should collaborate on modernizing, simplifying, and achieving some coherence in this area, starting with broad agreement on core principles.

Such a set of principles and associated commitments should include:

- Establishing and enforcing a body of laws and regulations that provides for fair and equitable treatment, national treatment, and most-favored-nation treatment of foreign investments.
- Setting clear limits on expropriating investments and providing for payment of prompt, adequate, and effective compensation when it occurs.
- Providing for resolution of disputes between business and government through binding dispute-resolution mechanisms, in particular:
  - Access for foreign investors to adjudication before an independent judiciary in accordance with the rule of law (for example, investor-state dispute settlement).
  - The right for foreign investors to pursue international arbitration or other recognized investor-state dispute settlement mechanisms.

I&I 3.2: Adopt the OECD Code of Liberalisation of Capital Movements and subscribe to the OECD Declaration on International Investment and Multinational Enterprises.

Existing international principles – such as the OECD Code of Liberalisation of Capital Movements and the OECD Declaration on International Investment and Multinational Enterprises – are very helpful for international investors. Most G20 countries have signed these documents, but some have not and should do so.

G20 governments should also promote the implementation of the OECD Policy Framework for Investment and the G20/OECD Principles of Corporate Governance.

Commitment to international principles will enable easier and cheaper flow of capital and will result in more investments into infrastructure thanks to the elimination of taxation and capital-control restrictions.

I&I 3.3: Promote greater transparency and harmony in taxation and incentives related to FDI.

The complexity of cross-border taxation treatment hampers private investment by external investors. The multitude of withholding tax regimes, national rules on interest deductibility, tax incentive regimes, bilateral national agreements, and "opportunities" to seek exemption can become problematic and frustrate investment decisions. Sometimes, tax rates are negotiated among the involved parties.

To encourage FDI, G20 governments need to align on transparent principles of taxation and incentives.

Reference	Action	Owner
I&I 3.1	Mandate the OECD and UNCTAD, in consultation with the WTO, to prepare a common set of "international investment principles" to promote broad adoption of existing international standards.	G20 governments collectively
I&I 3.2	Adopt the OECD Code of Liberalisation of Capital Movements and subscribe to the OECD Declaration on International Investment and Multinational Enterprises by the next G20 Summit. The G20 should also encourage other non-member countries to do likewise.	G20 governments collectively
I&I 3.3	Promote greater transparency and harmony in taxation and incentives related to FDI and give due attention in the discussions on Base Erosion and Profit Shifting (BEPS) to the impact of rules on debt and interest deductibility on cross-border infrastructure investment.	G20 governments collectively

VALUE CALCULATION METHODOLOGY

The potential impact of the recommendations made in this document has been evaluated via a two-step process.

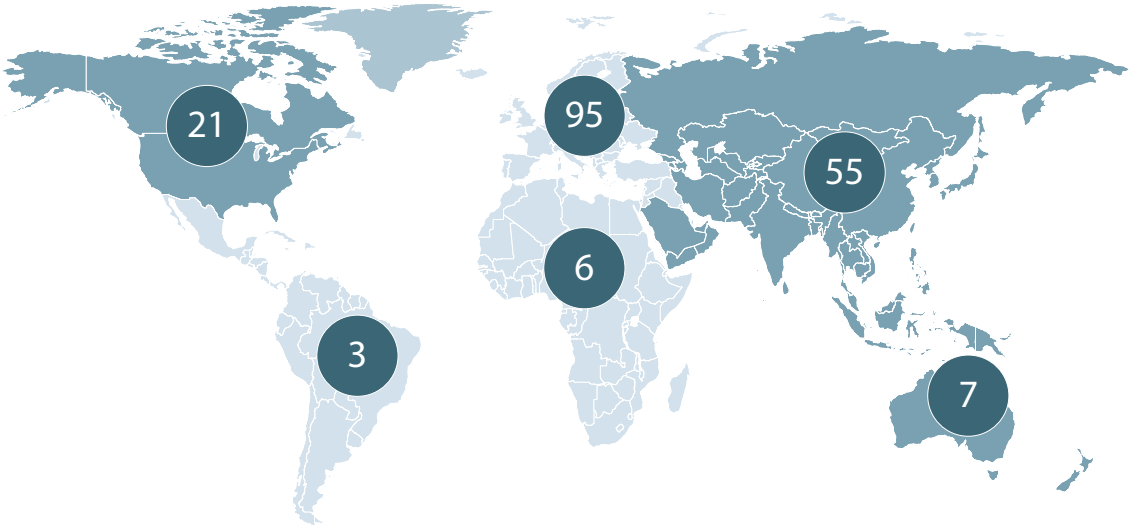
Step 1 was to estimate the potential gap in infrastructure capacity that G20 countries may expect by 2030. The analysis was performed for each country by evaluating the historical level of infrastructure investment (as a percentage of GDP) and comparing this to the anticipated level of investment necessary to maintain the global average stock of infrastructure capacity (as a percentage of GDP). The analysis focused on those countries that are currently under-investing in infrastructure and revealed a potential capacity gap of some $15 trillion by 2030.

Step 2 was to evaluate the potential impact of each recommendation along three themes: delivering cost savings on infrastructure spending, mainly by optimizing the project procurement and delivery process; providing additional resources to the infrastructure market, by improving the regulatory environment and investment framework; and enabling better flow of infrastructure investment. For each recommendation, it was assumed that the associated actions were fully implemented to achieve the full potential impact.

APPENDIX: Taskforce Schedule And Composition

Distribution of members

Country	No.	Country	No.	Country	No.
Argentina	1	India	6	Saudi Arabia	4
Australia	7	Indonesia	0	South Africa	6
Brazil	2	Italy	8	Turkey	42
Canada	3	Japan	3	UK	15
China	19	Korea	2	USA	17
France	9	Mexico	1	Other EU countries	6
Germany	1	Russia	8	Other	28



Schedule of meetings

No.	Date	Location	Theme
1	9 February	İstanbul, Turkey	Kick-off meeting. Align on scope, review B20 Australia recommendations and propose new recommendations.
2	9 March	Teleconference	Refine emerging recommendations, and launch advocacy efforts in each country.
3	16-17 April	Washington DC, United States	Joint taskforce/IMF meeting. Receive feedback on advocacy efforts to date and refine first draft of policy paper.
4	2 June	Paris, France	Joint taskforce/OECD meeting. Receive feedback on advocacy efforts to date and refine second draft of policy paper.

Draft recommendations of the taskforce were discussed in ten regional consultation meetings held in Saudi Arabia, India, Singapore, Azerbaijan, Brazil, Russia, Mozambique, Italy, and Ethiopia.

The taskforce will launch the policy paper at the B20 Conference to be held in Ankara, Turkey on September 3-5, 2015. The recommendations will be presented to the G20 leaders during the G20 Summit in Antalya in November 2015.

Taskforce members

Last Name	First Name	Position	Organization	Country
Coordinating Chairs				
Fu	Chengyu	Former Chairman	Sinopec	China
Şahenk	Ferit F.	Chairman	Doğuş Holding	Turkey
Co-chairs				
Dmitriev	Krill	CEO	Russian Direct Investment Bank (RDIF)	Russia
Habayeb	Nabil	President & CEO MENAT	General Electric	USA
Starace	Francesco	CEO & General Manager	ENEL	Italy
Thodey	David	CEO	Telstra Corporation	Australia
Wallenberg	Marcus	Chairman	Skandinaviska Enskilda Banken (SEB)	Sweden
Ying	Zhi	Vice President & Chief Brand Officer	Tsinghua Tongfang Co., Ltd.	China
Working group				
Arıkan	Koray	Advisor to the Chairman	Doğuş Holding	Turkey
Dedeoğlu	Oğuzhan	External Affairs Manager	Doğuş Holding	Turkey
Kurguzova	Anna	Policy Content Manager	B20 Turkey	Turkey
Drucker	Daniel	Policy Content Manager	B20 Turkey	Turkey
Alaçam	Gamze	Project Coordinator	B20 Turkey	Turkey
Aydın	Ebru	Project Coordinator	B20 Turkey	Turkey
Garemo	Nicklas	Director	McKinsey & Company	UAE
Janauskas	Mauricio	Partner	McKinsey & Company	Turkey
Mischke	Jan	Senior Expert	McKinsey & Company	Switzerland
Hjerpe	Martin	Partner	McKinsey & Company	Sweden
Loehrer	Josh	Engagement Manager	McKinsey & Company	Kenya
Fomin	Ilya	Consultant	McKinsey & Company	Russia
Rajagopal	Niranjana	Consultant	McKinsey & Company	UAE
Tricamo	Alessandro	Consultant	McKinsey & Company	UAE
Kaur	Arpit	Analyst	McKinsey & Company	India
Ghazaleh	Zaid	Engagement Manager	McKinsey & Company	UAE
Rodrigues de Almeida	Pedro	Head, Basic Industries Directorate	WEF	Switzerland
Wong	Alex	Senior Director	WEF	Switzerland
Papakonstantinou	Vangelis	Project Lead-Infrastructure Initiatives	WEF	Switzerland
Members				
Abdelwahab	Walid	Director, Infrastructure	Islamic Development Bank	Saudi Arabia
Abdullayev	Rovnag	CEO, President	Socar	Azerbaijan
Acar	Aclan	Chairman of the Board	Doğuş Otomotiv	Turkey
Ahmad	Nomi	Senior Vice President, Group Development & Commercial	Sembcorp Industries Ltd, Singapore	Singapore
Akarca	Mehmet Ali	Deputy Director General of Cooperate Communication Affair	Turk Telecom	Turkey
Akçaoğlu	Serra	Country Officer for Turkey	Citi Turkey	Turkey
Akdemir	Erkan	CEO	Avea	Turkey
Akın	Pelin	Chairman of the Board of Directors	Akfen Holding	Turkey
Aksoy	Batu	CEO and Board Member	Turcas Petrol	Turkey
Aksoy	Erdal	Chairman of the Board	Turcas/ Conrad	Turkey
Alierta	Cesar	CEO	Telefónica	Spain

Last Name	First Name	Position	Organization	Country
Aliev	Dzhomart	Director General	JSC "Rusatom Overseas"	Russia
Alireza	Yusuf	CEO	Noble Group	Hong Kong
Alli	Nazir	CEO	Sanral	South Africa
Alsuroor	Yassin	Chairman	ICC Saudi	Saudi Arabia
Arat	Hasan	Chairman	Capital Partners	Turkey
Arson	Cenk	CEO	Limak Investment	Turkey
Astaldi	Paolo	Chairman	Astaldi S.p.A	Italy
Ata	Serkan	Strategic Planning & Risk Manager	İç İçtaş Energy	Turkey
Atıl	Kutsal	CEO	Dogus Energy	Turkey
Atkin	Colin	Executive Director	Hastings	Australia
Awada	Mohamad	Manager	GCEL	Malaysia
Ballesteros	Mauro	CCO	CEMA Mexico	Mexico
Banks	Bill	Global Infrastructure Leader	Ernst & Young	UK
Barton	Dominic	Global Managing Director	McKinsey & Company	UK
Bassanini	Franco	President	Cassa Depositi e Prestiti SpA	Italy
Bejarano	Germán	Chairman Senior Adviser, Director for Institutional Relations	Abengoa	Spain
Bergevin	Christiane	Executive Vice-President	Desjardins Group	Canada
Berman	Jonathan	Fellow	Milken Institute	USA
Berthiaume	Denis	Senior Executive Vice President	Desjardins Group	Canada
Big Öncel	Deniz	Market Access Manager	Novo Nordisk Turkey	Turkey
Bindawood	Mohammed	CEO	Manafea Holding	Syria
Brikho	Samir	Chief Executive	Amec Foster Wheeler plc	UK
Brufau	Antonio	Chairman	Repsol S.A	Spain
Bulcke	Paul	Chief Executive Officer	Nestlé S.A.	Switzerland
Bulut Maraşlı	Özge	Director of Strategic Group	Dogan TV Holding	Turkey
CAO	Peixi	President	China Huaneng Group	China
Cavagne	Bruno	CEO	Giesper	France
Chatterjee	Koushik	Group Executive Director (Finance and Corporate)	Tata Steel Limited	India
Chen	Kimball	Chairman	Energy Transportation Group, Inc.	USA
Crane	Andrew	CEO	CBH Group	Australia
Cui	Genliang	Chairman of the Board	Hengtong Group	China
Cummings	Chris	Chief Executive	TheCityUK	UK
Çeçen	Serhat	Chairman of the Board	İç İçtaş Energy	Turkey
Daraban	Mihai	President	The Chamber of Commerce and Industry of Romania	Romania
Deau	Thierry	CEO	Meridiam	France
Diao	Chunhe	Chairman	China International Contractors Association	China
Dlamini	Patrick Khulekani	Chief Executive Officer & Managing Director	DBSA	South Africa
Dmitriev	Kirill	CEO	Russian Direct Investment Fund	Russia
Dossarps	Christophe	CEO	Sustainable Infrastructure Foundation	Switzerland
Edmands	Phil	Managing Director, Rio Tinto Australia	Rio Tinto	UK
Enders	Tom	CEO	Airbus Group	France
Erdem	Ahmet	Country Manager	Shell Company of Turkey Ltd	Turkey
Farina	Guiseppe	Senior Partner	Helix Management Consultants	Turkey
Feridun	Füsun	Marketing & Communication Country Leader	IBM Turkey	Turkey

Last Name	First Name	Position	Organization	Country
Fu	Chengyu	Former Chairman	Sinopec Group	China
Gao	Jifan	Chairman & CEO	Trinasolar	China
Gasset	Jose	Director, International Corporate Affairs	Iberdrola	Spain
Gattaz	Pierre	President	Medef	France
Gelis	Hüseyin	President & CEO	Siemens Turkey	Turkey
Gibbs	Sonja	Director Capital Markets & Emerging Markets Policy Dep.	International Institute of Finance	USA
Gilbert	Martin	CEO	Aberdeen Asset Management	UK
Gombeaud	Jean-François	VP Financial Engineering	Airbus Group	France
Grey	Mark	Advisory Board	GCEL	Malaysia
Gritsevich	Alexander	Partner	Third Rome	Russia
Guocai	Chen	Vice President	China State Construction Engineering Corporation Limited	China
Gupta	Paritosh	CEO	IIDC Limited	India
Güral	Harika	Chairman of the Board	Güral Porselen	Turkey
GV	Sanjay Reddy	Vice Chairman	Gvk Power & Infrastructure Limited	India
Habayeb	Nabil	President & CEO, MENAT	General Electric	USA
Haojie	Li	President	Tianrong Invest Group	China
Hara	Ichiro	Co-Director	Keidanren	Japan
Hardy	Jeffrey	Director, ICC G20 CEO Advisory Group	ICC	France
Hodkinson	Gregory	Group Chairman	Arup	UK
Huang	Feng	Vice President	China International Engineering Consulting Corporation	China
İldeniz	Ayşegül	Vice President	Intel Corporation	Turkey
Jones	Olav	Deputy Director General	Insurance Europe	Belgium
Jones	Ian	Senior Vice President of Climate Smart Investments	ICMIF	UK
Kanoria	Rajya Vardhan	Chairman and Managing Director	Kanoria Chemicals & Industries Limited	India
Kapila	Sachin	VP International Organizations	Shell	Netherlands
Kaptan	Erkan	Senior Analyst of Governmental Affairs	Google Turkey	Turkey
Kelly	Cassandra	Chairperson	Pottinger	Australia
Kempthorne	Dirk	President and CEO	American Council of Life Insurers	USA
Kıvılcım	Cenk	General Director	Cisco Systems	Turkey
Kim	Dongsoo	Director	Korea Productivity Center	South Korea
Kobayashi	Eizo	Chairman	ITOCHU Corporation	Japan
Kraus	Daniel	Deputy Director General	Confindustria	Italy
Kron	Peter	CEO	Alstom	Turkey
Laboul	Andre	Counsellor	OECD	France
Lall	Rajiv	Executive Chairman	IDFC Ltd	India
Landa	Fernando	International Institutional Director	Organizacion Techint	Argentina
Li	Qingkui	Chairman of the Board	China Huadian Corporation	China
Lies	Michel	CEO	Swiss Re	Switzerland
Lim	Liang Song	CEO	Changi Airports International	Singapore
Liu	Zhenya	Chairman	State Grid Corporation of China	China
Liu	Li	Senior Researcher	China International Trade Institute	Hong Kong
Lu	Ying	Director	China National Petroleum Corporation	China

Last Name	First Name	Position	Organization	Country
Lysechko	Victor	Head of Department of international cooperation	Russian Direct Investment Fund	Russia
Maeda	Tadashi	Representative Director, Senior Managing Director	Japan Bank for International cooperation	Japan
Maier	Thomas	Managing Director, Infrastructure	EBRD	UK
Malinowski	Andrzej	President	Employers of Poland	Poland
Manning	Richard	Senior Research Fellow	Blavatnik School of Government, Oxford University	UK
Masmoudi	Farid	Director Business Development & Partnerships	ICD	Saudi Arabia
Melis	Eric	Principal	Pension Fund Infrastructure Advisors Inc.	Canada
Mestrallet	Gérard	President and CEO	Gdf Suez	France
Milliner	Robert	Sherpa	Australia B20	Australia
Mittal	Vineet	Vice Chairman	Welspun Renewables	India
Mokhtar	Tan Sri Dato' Azman bin Hj	Managing Director / CEO	Khazanah Nasional Berhad	Malaysia
Moleketi	Jabulani	Chairman	Development Bank of Southern Africa (DBSA)	South Africa
Morris	William	Chair BIAC Tax Committee & GE Director, Global Tax Policy	BIAC & General Electric Company	USA
Movsumov	Shahmar	Executive Director	State Oil Fund of the Republic of Azerbaijan (SOFAZ)	Azerbaijan
Naqvi	Arif	Founder and Group Chief Executive	The Abraaj Group	UK
Nas	Adnan	Board Member	Global Yatırım Holding	Turkey
Nielsen	Peder Holk	CEO	Novozymes	Denmark
Nyembezi-Heita	Nonkululeko Nku	Chairman	Johannesburg Stock Exchange	South Africa
Odebrecht	Marcelo	CEO and President	Odebrecht S.A	Brazil
Olayan	Lubna	CEO	Olayan Financing Company	Saudi Arabia
Öğüt	Gökhan	CEO	Vodafone Turkey	Turkey
Özkan	Haydar	General Delegate to the Middle East and Region	International Road Transport Union	Switzerland
Özmen	Tamer	General Director	Microsoft	Turkey
Pandır	Ali Aydın	Chairman & CEO	Erdemir Group	Turkey
Papagiannopoulos	Lykourgos	President & CEO	Lvp Hellas S.A.	Greece
Pappa	Sprio	Executive General Manager, Global Institutional Banking	National Australia Bank	Australia
Pathomsak	Kasemsit	Executive Chairman	Merchant Partners Asset Management Ltd.	Thailand
Peeters	Jaak	Company Group Chairman, Pharmaceuticals	Johnson & Johnson	USA
Perez Fortea	Javier	CEO	Globalvia	Spain
Pitsuwan	Surin	Chairman Asia Logistic Council Advisory Board	GCEL	Malaysia
Potì	Roberto	Executive Vice President	Edison SpA	Italy
Preksin	Oleg	Deputy Chairman of RSPP Commitee for International cooperation, Russian B20 Sherpa	Russian Union of Industrialists and Entrepreneurs	Russia

Last Name	First Name	Position	Organization	Country
Prior	Nick	Global Head of Infrastructure & Capital Projects	Deloitte	UK
Rakhmangulov	Mark	Director	Russian Union of Industrialists and Entrepreneurs	Russia
Rangoonwala	Asgar	Managing Director	Janssen Turkey/ J&J	Turkey
Recchi	Giuseppe	Chairman	Telecom Italia	Italy
Robinson	Peter	President and CEO	United States Council for International Business (USCIB)	USA
Sabato	Tommaso	General Manager Central Eastern Europe and Turkey	Astaldi Concessioni	Italy
Salman	İnanç	Deputy Director General	Zorlu Energy Group	Turkey
Schroeter	Lisa	Global Director of Trade and Investment Policy	Dow chemical company	USA
Schumacher	Christoph	Managing Director	Union Investment Institutional Property GmbH	Germany
Schwartz	Jordan	Head	Global Infrastructure Facility	USA
Sebastian de Erice	Jose Pedro	Secretary General	Technicas Reunidas	Spain
Seçkiner	Göktuğ	Deputy Director General	Dogus Construction	Turkey
Setiloane	Thero	CEO	Business Leadership South Africa	South Africa
Seung Youn	Kim	Chairman	Hanwha Group	South Korea
Shamolin	Mikhail	CEO	AFK Sistema	Russia
Sokov	Maxim	CEO	En+ Group	Russia
Spencer	Lake	Group General Manager, Global Head of Capital Financing	HSBC Bank	UK
Stanhope	John	Chairman	Australian Post	Australia
Starace	Francesco	CEO	Enel	Italy
Stewart	James	Chairman, Global Infrastructure	KPMG LLP	UK
Sun	Ziyu	Vice President	China Communications Construction Company Ltd.	China
Talu	Burak	Board Member	Dogus Construction	Turkey
Tanrıkulu	Özgür	Director	McKinsey Turkey	Turkey
Teksöz	Ahmet Tuncay	Corporate Affairs Director	Pfizer Turkey	Turkey
Terzioğlu	M. Kaan	CEO	Turkcell	Turkey
Thodey	David	Chief Executive Officer	Telstra Corporation	Australia
Topçu Kılıç	Şule	Deputy Country Director	EBRD Turkey	Turkey
Truell	Danny	Chief Investment Officer	Wellcome Trust	UK
Türker	Hakan	Vice President	British Petroleum Turkey	Turkey
Türker	Meltem	Director of Government Affairs	Dow Chemical Company-Turkey	Turkey
Vatansever	Ece	Country Business Advisor	Shell Turkey	Turkey
Viallix	Alain	Public Affairs, Director	Alcatel-Lucent	France
Vianello	Luigi	Corporate Communications	Salini Impregilo	Italy
Wallenberg	Marcus	Chairman of the Board	Skandinaviska Enskilda Banken (SEB)	Sweden
Wang	Binghua	Chairman	State Power Investment Corporation (SPIC)	China
Wang	Wenbiao	Chairman	Elion Resources Group	China
Warden	Staci	Executive Director	Milken Institute	USA
Weber	Axel	Chairman of the Board of Directors	UBS AG	Switzerland
Wen	Wang	Executive Dean	Chongyang Ins. Renmin University of China (RDCY)	China

Last Name	First Name	Position	Organization	Country
Wiener	Daniel	Chairman	Global Infrastructure Basel	Switzerland
Wilkins	Michael	Managing Director	Standard & Poor's Ratings Services	USA
Wilson	Gavin E.R.	CEO	IFC Asset Management Company	USA
Xing	Wei	Chairman	China Potevio Group	China
Yang	David	Co-Chairman, Turkey-Singapore Business Council	Singapore Business Federation	Singapore
Yıldırım	Onur	Corporate Affairs Manager	Intel Turkey	Turkey
Zheng	Dongshan	Vice President	China General Nuclear Power Corporation	China
Zhengang	Zhu	Director, International Cooperation and Overseas Bus.Development	China Goudian Corporation	China
Ziqiu	Xu	Assistant President	China Shipbuilding Industry Corporation	China

List of acronyms and glossary of terms

BEPS	Base Erosion and Profit Shifting
DBSA	Development Bank of Southern Africa
DFI	Development Finance Institution
FDI	Foreign Direct Investment
GIH	Global Infrastructure Hub
IIPs	International Investment Principles
IPPF	Infrastructure Project Preparation Facility
MDB	Multilateral Development Bank
MGI	McKinsey Global Institute
MIGA	Multilateral Investment Guarantee Agency
OECD	Organisation for Economic Cooperation and Development
PPP	Public Private Partnership
RDCY	Chongyang Institute for Financial Studies, Renmin University of China
R&M	Renovation and Modernization
SEB	Skandinaviska Enskilda Banken
SOFAZ	State Oil Fund of the Republic of Azerbaijan
SINOPEC Group	China Petroleum & Chemical Corporation
TEPAV	Economic Policy Research Foundation of Turkey
UNCTAD	United Nations Conference on Trade and Development
WEF	World Economic Forum
WTO	World Trade Organization