

Industry Agenda

Strategic Infrastructure Mitigation of Political & Regulatory Risk in Infrastructure Projects

Prepared in collaboration with The Boston Consulting Group

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Foreword

Foreword from the World Economic Forum

Current demand for infrastructure is about \$4 trillion in annual expenditure with a gap of at least \$1 trillion every year. In spite of the growing gap in building new infrastructure, it should be emphasized that the worldwide stock of existing infrastructure is worth about \$50 trillion. This existing stock also offers a real opportunity to narrow the infrastructure gap if governments are capable and willing to optimize their infrastructure assets as a viable alternative to build new assets.

One of the most important areas for alternative investment is indeed infrastructure, particularly if this type of asset offers the necessary conditions to better balance long-term investment strategies. If building new infrastructure is the right solution, it is an imperative that projects are bankable and represent the best value for money in terms of delivery model. Exceptional progress has been made, for instance, in disseminating best practices for delivery models such as public-private partnerships, which constitute a convenient solution to tap into private sector capital or when there is a clear advantage in transferring risk to a party that is most capable of managing it. A dedicated infrastructure asset class would also attract investors when assessing their long-term portfolio strategies, which are in good alignment with the lifetime of such operating assets.

Although the specific challenges that economies face are different and require targeted solutions, there is a lack of instruments to mitigate the risk often associated with financing and investing in infrastructure. This challenge has been identified already by the High-Level Panel on Infrastructure during the B20 and G20 in Cannes in 2011, but has been sparsely addressed in subsequent discussions including the more recent ones held in Russia in 2013 and Australia in 2014. However, the focus of these discussions only partly elicited the lack of instruments that multilateral development banks would need to put in place, whereas a significant part of the effort should also rely in the private sector's hands.

The private sector has the means to create new risk mitigation instruments that are still missing and, equally important, set the stage for an enabling environment that may lead an infrastructure asset class. Examples of missing risk mitigation instruments include – but are not restricted to – asset specific risk, concession renewal risk, taxation risk and, very importantly, corruption and market distortion risk. The World Economic Forum's Strategic Infrastructure Initiative is a collaborative reflection of the steps required to efficiently and effectively deliver economic infrastructure projects.

The landscape of risk for infrastructure projects presented in this report consists of a multidimensional view on risk factors and their relevance to specific phases during the

project lifecycle. The approach elicits four categories of risks: business factors, political and regulatory risk, macroeconomic and social environment, and force majeure.

Political and regulatory risk is a categorization that includes those risks arising from individual political and regulatory decisions that affect an infrastructure project or an existing asset. In particular, the approach distinguishes political and regulatory risk affecting specific projects and those affecting the whole economy. In this context, the three groups of risk-mitigation measures covered in this report are: public sector measures, private sector measures, and joint public-private measures. For each of these groups, the report identifies and illustrates specific best practices for risk mitigation, namely:

- Robust infrastructure regulation and contracts
- General stability of laws and regulations
- Reliable and efficient administration
- Reliable dispute-resolution mechanisms
- International commitments
- Appropriate use of financial instruments
- Effective interaction with public sector
- Inclusive community engagement
- Responsible business conduct
- Culture of open dialogue

The Strategic Infrastructure Initiative – and its Knowledge Series Reports – has been providing a roadmap to steer governments and key stakeholders to comprehensive frameworks and actionable best practices that cover the whole infrastructure life cycle, namely origination, preparation and implementation of physical assets. This report is an extension of the Knowledge Series as it was felt that the World Economic Forum needed to specifically address the political and regulatory barriers to infrastructure financing and investment. This work is already positioned under the broader umbrella of the Global Challenge Initiative on Infrastructure, Long-term Investing and Development, which will continue to carve out an exceptional space for a number of regional and national discussions in the years to come, including Latin America and Asia and also Europe and North America. These efforts will continue to substantiate the globally acquired body of knowledge and experience into concrete measures that contribute to boosting strategic infrastructure development, including its dissemination through the B20 and G20.

This report is a direct result of a cooperative process with leaders from government, civil society and the private sector, particularly the engineering and construction, financial services and investors industries. In this regard, we would like to thank and acknowledge the World Economic Forum Partner companies that served on the Strategic Infrastructure Initiative Steering Committee: ABB, Aecon, Alcoa, Amec Foster Wheeler, APM Terminals (A.P. Møller-Maersk), Arup, Bilfinger, CCC, CH2M HILL, Danfoss, Fluor Corporation, GE, Hindustan Construction Company, Kokusai Kogyo (Japan

Asia Group), McGraw Hill Financial, Prudential, Punj Lloyd, Siemens, Skanska, SNC-Lavalin Group, Standard Chartered, Swiss Re, The Abraaj Group, The Rockefeller Foundation, Toshiba, Welspun Corporation and WS Atkins.

We would like to give special acknowledgement to Gordon Brown (Prime Minister of the United Kingdom 2007-2010). Uwe Krüger (Chief Executive Officer, WS Atkins). Michel M. Liès (Group Chief Executive, Swiss Re). Arif M. Naqvi (Founder and Group Chief Executive, The Abraaj Group), Doug Peterson (President and Chief Executive Officer, McGraw Hill Financial), Danny Truell (Chief Investment Officer, Wellcome Trust), Kim Fejfer (Chief Executive Officer, APM Terminals, A.P. Møller-Maersk) and John Beck (Chairman, Aecon) for their relentless interest and commitment to serve as Global Co-Chairs of the Strategic Infrastructure Initiative since the spring of 2014.

We would also like to thank the many experts who contributed to the report through their role on the Strategic Infrastructure Initiative Advisory Committee: Norman Anderson (CG/LA Infrastructure), Victor Chen Chuan (University of Sichuan), Karim Dahou (OECD), Nathalie Delapalme (Mo Ibrahim Foundation), Angelo Dell'Atti (IFC), Timothy Geer (WWF), Al Hamdani (Export Development Canada), Geoffrey Hamilton (UNECE), Clive Harris (World Bank Institute), Franziska Hasselmann (University of St. Gallen), Debbie Larson-Salvatore (US Army Corps of Engineers), Clare Lockhart (Institute for State Effectiveness), Kevin Lu (INSEAD), Thomas Maier (EBRD), Mthuli Ncube (African Development Bank), Aris Pantelias (University College London), Mark Romoff (Canadian Council for Public-Private Partnerships), Douglas Stollery (Stollery Charitable Foundation), Jan Van Schoonhoven (UNECE), Ramesh Subramanian (Asian Development Bank) and James X. Zhan (UNCTAD). Melanie Schultz van Haegen, Minister of Infrastructure and the Environment of the Netherlands, is kindly acknowledged for contributing best-practice examples from her ministry.

Finally, we would like to thank the cross-fertilization brought about by the Members of the Global Agenda Council on Infrastructure and its chair and vice-chair, Thomas Maier (EBRD) and Rashad R. Kaldany (Caisse de dépôt et placement du Québec, Canada). The experience, perspective and guidance of all the above people and organizations contributed substantially to a number of remarkable discussions with highlights at the World Economic Forum Annual Meeting 2015 in Davos-Klosters, Switzerland on 21-24 January.

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Foreword from the World Bank Group

Trillions of dollars are needed to bridge the infrastructure gap, \$4 trillion per year until 2030 according to this report. The enormity of the numbers discussed must not and cannot inhibit tackling the task at hand. The possibility and the consequences of failure will have a multi-generational impact. However, dismantling the single dollar requirement into its components is critical in order to make progress. This report provides a valuable contribution to the continuing analysis and progress of this issue by setting out the areas of certain risks and the potential mitigants. It unboxes the various elements of political and regulatory risk in infrastructure projects and identifies factors which need to be harnessed in order for investment to flow more efficiently and in greater volume.

It can be an easy argument for certain market participants to push readily the responsibility of solving the problem on to either the private sector or the public sector. Of course, the reality is far from being so easy or simple; it cannot be just one or the other. Genuine, transparent partnerships are the only way to unlock the capital stand-off. Through joint ownership, be that co-financing or other shared mechanisms, we can align better the roles and incentives required to ensure that robust, transparent and reliable processes and procedures are in place together with a judicious set of checks and balances. With the greater certainty that this approach can bring, other elements such as pricing and risk parameters can be refined so that greater investment flow can be encouraged.

It has been well documented that public sector money alone cannot bridge the gap. The imperative needed to bring in private sector capital is clear. We have a window of opportunity. Infrastructure investment is in many ways the key needed to unlock much needed growth. At the same time, it also offers yield and diversification to institutional investors who are central to the new finance paradigm.

To address some of the barriers which have historically restricted the level of private capital flow into infrastructure, the report highlights the importance of dissecting the different risks. By addressing each of the key risks and formulating a public-private joint approach, where appropriate, the pieces can be put in place to provide feasible levels of protection. The report summarises the impact that these different political and regulatory risk factors have on projects and cites a wide range of examples which help explain and underpin the need for risk mitigation tools. Importantly, the report demonstrates that these types of risks are encountered across a wide range of geographies as well as a wide range of types of economies; this is not a developed vs emerging economies issue. The report does a good job in seeking to view things from a balanced perspective. It examines the flaws and presents interesting angles on how these can be addressed, given the inherent complexities.

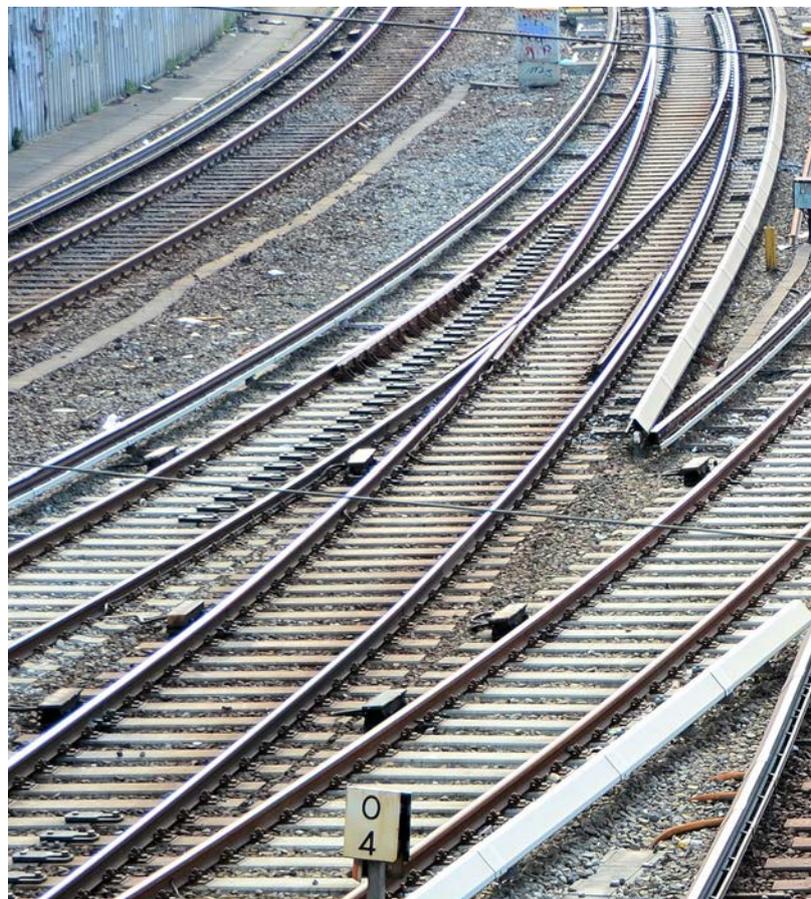
Further, the report proposes an interesting approach to put a framework around the different permutations of risk through the risk mitigation framework, which pulls

together many of the key components. Whether it is robust regulation and contracts, stability of law or reliable dispute resolution mechanisms for the public sector and effective and constructive interaction with the public sector, inclusive community engagement or responsible business conduct for the private sector, the report highlights a pragmatic overview of possible ways forward. By managing perceived and actual risks as well as the impact these have on return expectations, a cohesive way forward can be found.

As someone who has been in the midst of many discussions concerning infrastructure investment, the market failure, the large financing gap and the unbundling of the problem of mobilizing private sector investment in partnership with public sector capital, I know how critical solving this conundrum is. Indeed, it is our duty and responsibility to resolve it.

I am grateful to this report as it contributes to marshalling our energies and provides a solid basis from which to continue to progress the assessment and, crucially, the implementation of the necessary steps.

Bertrand Badré
Managing Director and World Bank Group Chief Financial Officer,
World Bank, Washington DC



Foreword from the Minister of Infrastructure and the Environment, The Netherlands

Infrastructure is currently at the heart of many critical issues facing our economies. Infrastructure is not just about a new bridge here or a toll road there. It is about enabling the health of our cities, national competitiveness and the future of our planet. The recent financial crises showed that a reduction in infrastructure spending has a serious impact on economies all over the world.

On average, infrastructure development in developed countries is around 5% of national GDP. For developing countries, infrastructure is essential also in social development to provide electricity, water and food, and to contribute to human well-being. On a global scale, infrastructure investments are needed to mitigate the effects of climate change: A low-carbon investment agenda in power generation, transport development and cities is needed to sustainably reduce CO2 emissions. Furthermore, the resilience of infrastructure is of increasing importance as our planet faces more extreme weather patterns.

The amount of investment needed for all these infrastructural demands is enormous, and it will require strong private sector involvement and investment. The Netherlands has a long-standing and successful experience with private sector participation through public-private partnerships. These partnerships are used in such diverse sectors as roads, water or hospitals. This includes open and transparent processes and early stage involvement of the private sector in its project pipeline.

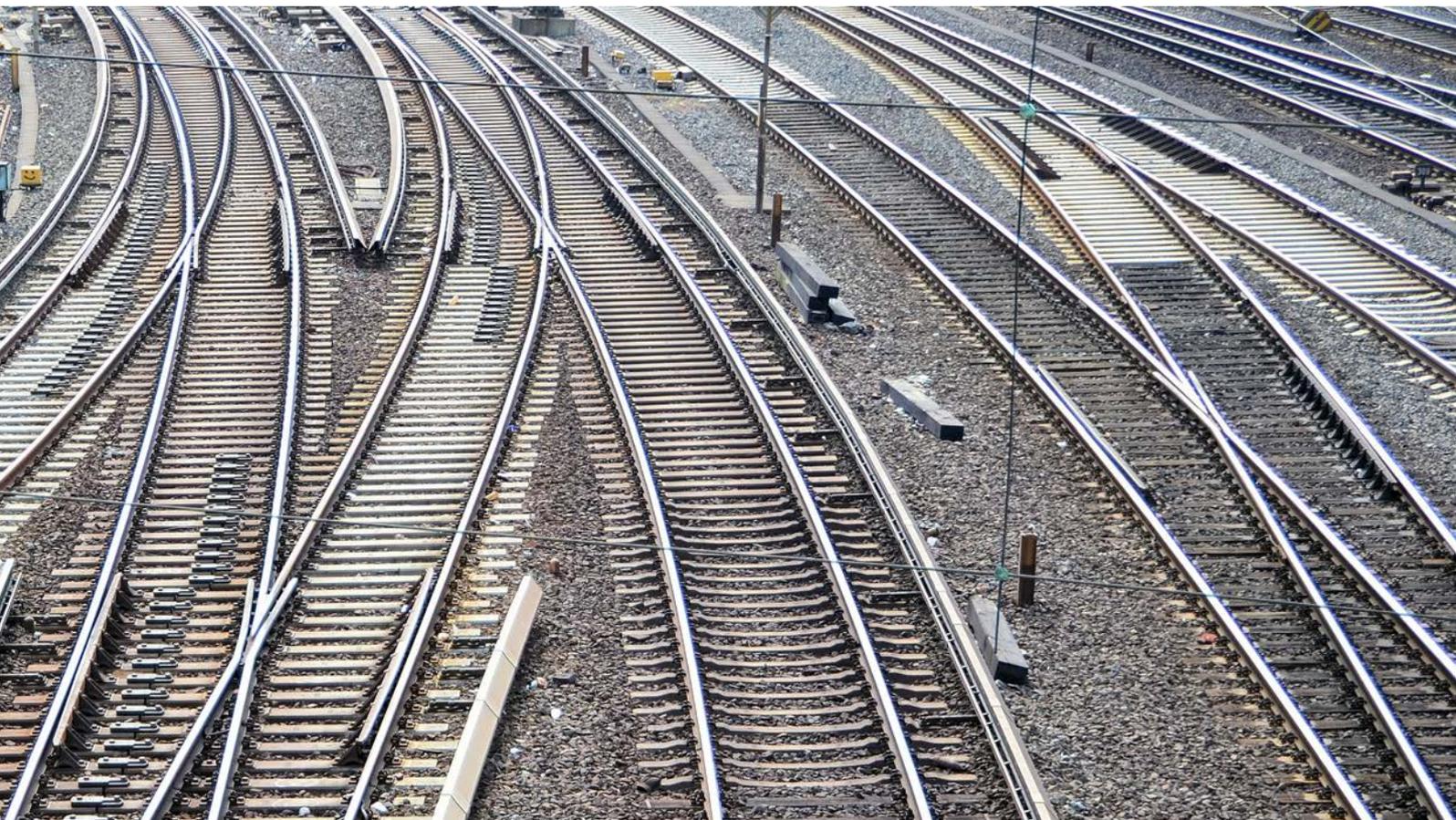
We also recognize the close link between climate and infrastructure, and thus both fields are incorporated in one Dutch government department – the Ministry of Infrastructure and the Environment. Moreover, investment in long-term assets such as infrastructure is subject to political and regulatory risk. Worldwide investors need to trust the consistency of political administrations' support for projects, both now and in the future. Hence, it is critically important to mitigate political and regulatory risk as much as possible.

This report contributes greatly to address this topic by structuring and summarizing possible measures in risk mitigation. My ministry was glad to contribute our best-practice examples and we look forward to learn from the experiences of others. The multistakeholder approach of the World Economic Forum is indeed the right approach. It allows everyone to reach a well-balanced view and to develop a number of steps which might be taken by both the public and the private sector, or jointly.

The report merits reaching a wide audience and will provoke strong discussion and solutions that will help mitigate political and regulatory risk, and will allow for the improvement of our world by the realization of important infrastructural projects.

I would like thank everybody involved for their valuable contributions to this report.

Melanie Schultz van Haegen
Minister of Infrastructure and Environment of the Netherlands



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Executive Summary

One prerequisite for sustainable and inclusive growth worldwide is a modern and efficient infrastructure. The required investment for reaching the optimal level is enormous, estimated at 5% of global gross domestic product (GDP) (or \$4 trillion) per year until 2030 – an amount that the public sector would find almost impossible to raise on its own. The gap will have to be filled by the private sector, but private investors are cautious when it comes to large and long-term infrastructure investments. In particular, they are concerned about political & regulatory risk, because an infrastructure asset typically has a lifetime much longer than political cycles, and the investors' revenues and cost base depend heavily on regulation.

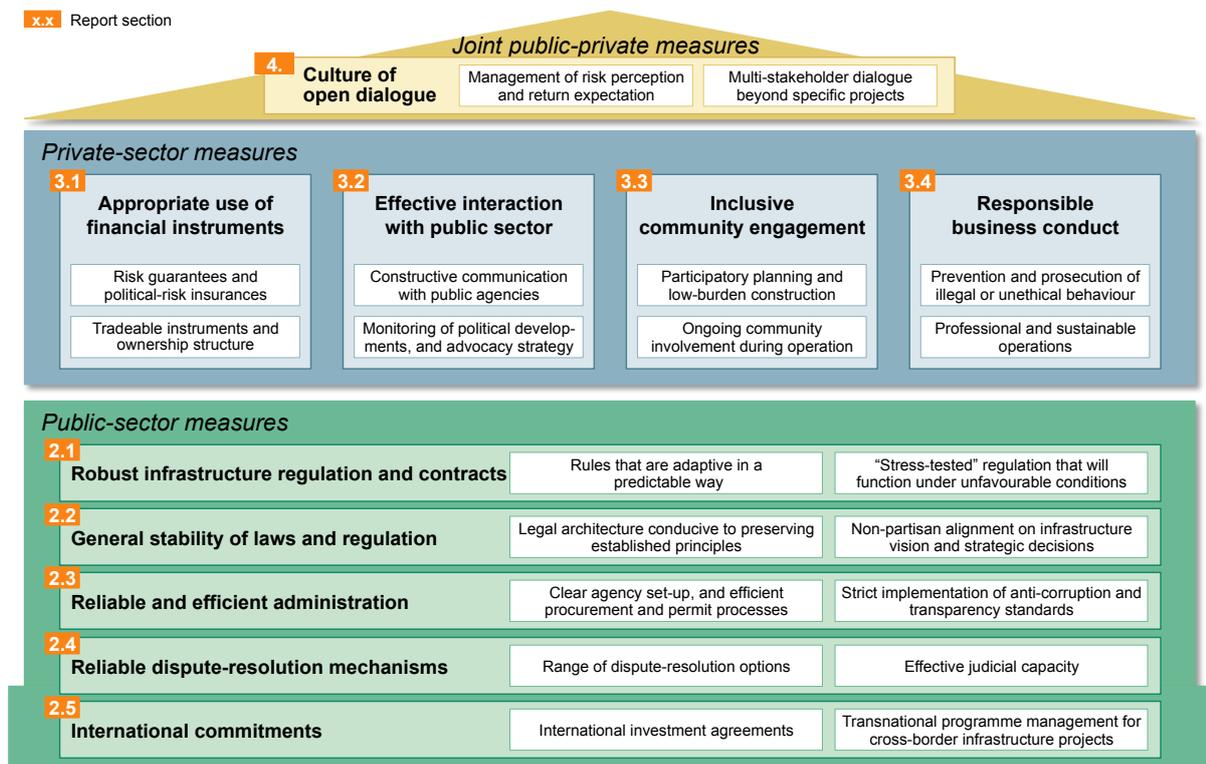
Political & regulatory risk has many facets

During the different stages of a project's life cycle, infrastructure projects are exposed to very different types of political & regulatory risk. Among the risks are, for example: during the planning and construction phase – delayed

construction permits, and community opposition; during the operating phase – changes to various asset-specific regulations, and outright expropriation; towards the end of a contract – the non-renewal of licences, and tightened decommissioning requirements. In addition, some broader risks apply throughout the life cycle, and can affect an entire infrastructure sector (or even the entire national economy) – changes to sector regulation or taxation laws, for instance, and endemic corruption.

To address all these political & regulatory risks, this report presents a risk-mitigation framework, listing 20 measures that can be taken by the public sector, by the private sector, and jointly by the various stakeholders (see Figure 1). The framework enables policy-makers and companies to take a holistic view of the potential levers, and hence to undertake a comprehensive effort to mitigate political & regulatory risk. Further guidance is provided in the form of international best practices from the different infrastructure sectors surveyed in this report.

Figure 1: Risk-Mitigation Framework



The public sector has to create a stable regulatory environment

The public sector, in particular the national government, can enhance political & regulatory stability by enacting and enforcing appropriate laws and regulation. The specific regulation of each infrastructure sector should be robust, with changes to sector rules that are as predictable as possible. In that regard, it helps to have automatic adaptation mechanisms in place – for example, linking photovoltaic energy feed-in tariffs to the development of module cost, or adapting the duration for a highway concession according to the actual revenue collected from road users. Beyond specific sector regulation, the overall legal architecture must also be considered: it should be conducive to a stable regulatory environment, by providing constitutional guarantees or dedicated investment stability laws.

Legislation alone is not enough, however. The laws and regulation need to be stringently implemented, by the country's executive branch. To mitigate the risk of unexpected and adverse administrative decisions, governments need to ensure a reliable agency set-up, with efficient procurement and permit processes that never compromise on their integrity, as well as strong anti-corruption measures. Investors and the government also need to have confidence in the available dispute-resolution mechanisms, so countries must ensure a judicial capacity that administers the law in an independent, timely and efficient way.

Further protection for investors can be provided by international commitments – hence the ongoing effort to (re-)negotiate bilateral investment treaties (BITs) and investment protection clauses in free trade agreements. Although BITs have been in place for a long time, some countries are still making very little use of them. And many BITs have shortcomings, such as vague protection clauses and controversial arbitration procedures, that cause concern to policy-makers and the public. Those issues are being addressed, however, by emerging new standards and by innovative clauses. So countries might consider increasing their involvement in equitable international commitments as a way of mitigating political & regulatory risk and fostering private investment in infrastructure projects.

The private sector also has means to manage and mitigate political & regulatory risk

Within the framework set by the public sector, the private sector has to find ways of managing and mitigating the political & regulatory risk. For “hard” risks, such as expropriation or currency inconvertibility, companies can make use of financial instruments such as political-risk insurance or guarantees, issued by multilateral organizations, national providers and the private market. In addition, political & regulatory risk could be mitigated by a carefully-crafted ownership structure: international co-owners and co-financiers – such as multilateral development banks or institutions from an investor's home country – can have a “deterrence” effect on political intervention, and joint ventures with local partners can enable an infrastructure operator to be viewed as more than just a “foreign investor”.

Private companies should also put particular effort into effective communication, both with public agencies and with affected communities. That will help manage the “soft” risks, by preventing misunderstandings and building a culture of trust. And when it comes to operating the asset, the more companies maintain professional and sustainable operations, the less likely they are to induce political or regulatory interference.

Comprehensive multi-stakeholder action is needed

There is no silver bullet for addressing the many facets of political & regulatory risk. The risk-mitigating measures presented in this report all have their uses, and they complement one another. Public and private stakeholders should cooperate, to prioritize areas for action and to create a culture of open dialogue.

It will always be a challenge to get the balance right – between the investors' need for regulatory stability and governments' freedom to adjust regulation in line with national priorities. But reasonable stability must be achieved to boost private investment, to increase the quality and quantity of infrastructure projects, and hence to benefit society at large.



1. Introduction and Landscape of Risk

For inclusive and sustainable growth, one of the crucial requirements is modern and efficient infrastructure. In many emerging markets, the infrastructure remains inadequate in quality and quantity – a situation that severely limits the countries' potential to develop and increase their population's well-being.¹ Many advanced economies are facing infrastructure issues now as well. In the wake of the global financial crisis, they have been suffering from low growth, and the quality of their existing infrastructure is deteriorating. So they too would benefit from further infrastructure investment. According to a 2014 IMF estimate, if advanced economies invested an extra 1% of GDP into infrastructure, they would achieve a 1.5% increase in GDP four years later.²

Improved infrastructure will also be a crucial factor in achieving sustainable development goals. In fact, the 2015+ sustainable development goals proposed by the United Nations imply a massive investment need into infrastructure assets.³ These new assets should be resilient to the impact of climate change and, at the same time, meet new environmental standards: the increase in traffic on new highways, for instance, will ideally be offset by an even greater increase in efficiency, to reduce overall carbon emissions.⁴

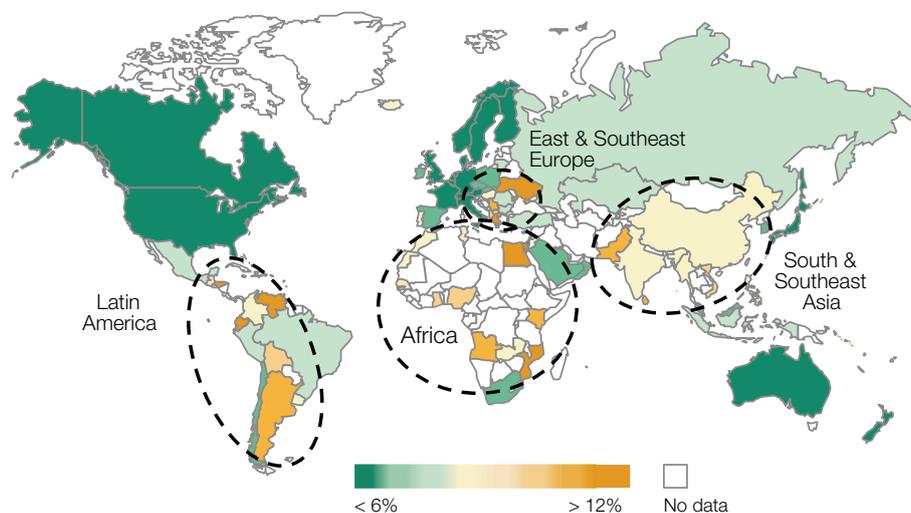
The infrastructure gap and private investment

Overall, the investment required globally for infrastructure projects is at least \$4 trillion (or 5% of global GDP) per year until 2030.⁵ Given fiscal constraints, the public sector can raise barely half of that amount.⁶ Private investment is essential for bringing in the required resources and is expected to fill the gap: one well-established delivery mode for private-sector participation in some countries is that of public-private partnerships (PPPs) and related arrangements.⁷ Given their relatively stable long-term cash flows and low correlation to other asset classes, infrastructure investments could also be very attractive to the private sector – especially to institutional investors, such as pension funds, insurance companies and sovereign wealth funds.

However, supply and demand do not always fit well together, in part because the risk–return profile of projects does not really match the expectations of potential investors.⁸ As Figure 2 shows, market risk premiums differ substantially between countries and are especially high in regions that have a high infrastructure investment need – notably, Africa, Latin America, South and South-East Asia, and South-East Europe.

Of course, the private sector is not generally averse to risk and will venture to make risky investments provided that the risks are manageable – and provided that the expected returns are in proportion to the level of risk. High risk premiums translate into high return expectations, and if those expectations appear unrealizable, the result will be that the proposed projects fail to attract any private investment whatsoever.

Figure 2: Required Market Risk Premium 2014 (Survey Data)



Source: Fernandez et al. (2014); BCG analysis

Note: Market Risk Premium = difference between the expected return in a market and the risk-free rate.

Survey conducted among finance and economics professors, analysts and managers of companies

Political & regulatory risk as an impediment to additional private investment

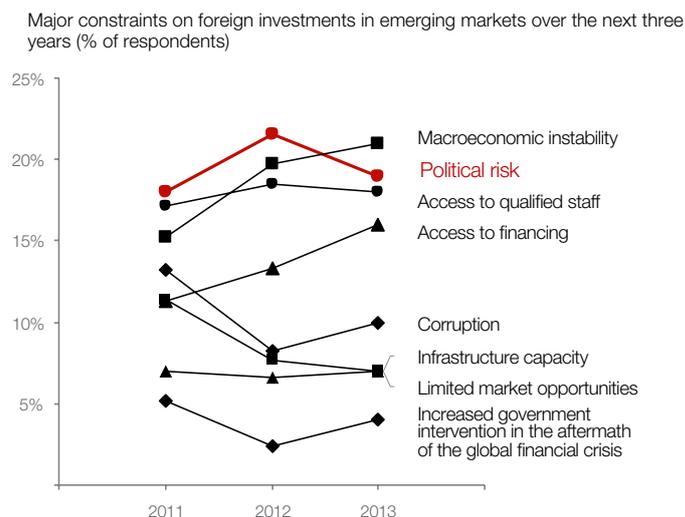
Investment risk is attributable to many factors – construction challenges, demand uncertainty and macroeconomic conditions, for example. One of the highest-ranked factors, however, is political & regulatory risk, which represents a major constraint on investment decisions. Approximately 20% of executives regard political risk as the greatest disincentive for any investments into emerging markets, more important than any other constraint except for macroeconomic instability (see Figure 3). It is the main reason why some investors, even when urgently seeking investment opportunities, will simply not consider infrastructure assets in emerging and developing countries.

Of course, a well-designed system of regulation is advantageous for society, and infrastructure investors have no problem with regulation per se. Rather, their concern is that laws and regulation can change unexpectedly; that is how political & regulatory risk arises, and the risk applies particularly strongly to infrastructure investments. Such investments typically involve a very long asset lifetime and contractual relationship, and payback well beyond the term of any individual government. Given this mismatch between political cycles and the infrastructure cycle, infrastructure investors are understandably cautious: they want to be fairly sure not only that the current government meets its commitments but also that the decisions of a future parliament or administration will not affect their investment too severely.

Originally, political risk was primarily caused by uncertainty about overall political stability, so its relevance was limited mainly to developing economies and young states. However, political risk is now affecting the developed world as well, owing to various political or regulatory decisions taken by several industrialized countries – for example, the special taxes introduced in some countries because fiscal stability had been weakened, in the wake of the recent financial crisis. Witness the current profile of international arbitration: in about 30% of the cases following the rules of the International Centre for the Settlement of Investment Disputes (ICSID), investors cite a developed country as respondent (see Figure 4).⁹ The cases now cover such diverse topics as sector tax changes and changes to renewable energy feed-in tariffs.

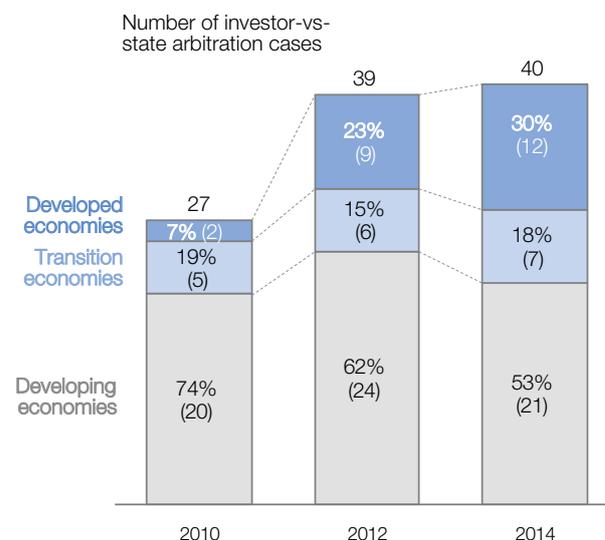
In addition, regulation plays an especially important role in many infrastructure sectors. In some cases, the market involves a natural monopoly: assets such as power grids, for example, clearly require attentive regulating to prevent abuse of pricing power.¹⁰ In other cases, such as public transportation, the assets may not be fully user-funded but would rely partly on subsidies, so the magnitude of investor returns depends directly on money from the public purse, and regulation therefore becomes a highly political and controversial topic.

Figure 3: Political Risk vs Other Constraints on Investment



Source: MIGA-EIU annual political risk surveys; BCG analysis
Note: Global survey; ranking might differ between regions

Figure 4: Investor-vs-State Arbitration Cases by Respondent Country



Source: ICSID Annual reports; BCG analysis
Note: Newly registered cases based on ICSID rules (in ICSID financial years, July–June); numbers might not add up to 100% due to rounding

Report scope and structure

This report discusses various ways of mitigating political & regulatory risk in infrastructure projects. The analysis proceeds in two stages:

- A risk landscape (presented in section 1.1) that clarifies the different facets of political & regulatory risk along an infrastructure project's life cycle
- A framework of risk-mitigation measures (introduced in section 1.2) that includes steps by the public sector (chapter 2), the private sector (chapter 3), and by multiple stakeholders jointly (chapter 4); it describes how to implement the recommended risk-mitigation measures (chapter 5) and presents examples of international best practices (marked as **EXAMPLE** each time).

Two notes on the focus of the report: first the emphasis is on economic infrastructure, i.e. transport, energy, telecommunication and water/wastewater. However, many of the risks and mitigation measures apply to social infrastructure as well – to schools and hospitals, for example. (In fact, much of the discussion is relevant to other large investments too, such as steel or cement plants.); second, the focus is on the risk faced by private-sector parties when dealing with governments or public agencies – and that kind of risk occurs mainly in projects involving PPPs or privatized assets.

BOX 1: The Strategic Infrastructure Knowledge Series

This report forms part of the World Economic Forum's Strategic Infrastructure Knowledge Series. While previous reports addressed infrastructure challenges along the life cycle (from project prioritization to preparation to operations & maintenance), this report complements the series by covering the cross-life-cycle topic of political & regulatory risk. The reports in this series are:

I. Steps to Prioritize and Deliver Infrastructure Effectively and Efficiently (October 2012)

II. Steps to Prepare and Accelerate Public-Private Partnerships (May 2013)

III. Steps to Operate and Maintain Infrastructure Effectively and Efficiently (April 2014)

IV. Mitigation of Political & Regulatory Risk in Infrastructure Projects (February 2015)

This report also draws on the Infrastructure Investment Policy Blueprint that was published by the World Economic Forum in February 2014. It derived actions for policy-makers based on interviews with infrastructure investors, identifying policy and regulatory enablers as an important area.¹¹

Audience of the report

This report is intended primarily for senior government leaders and for officials in national and international bodies who influence the political environment of infrastructure projects. It will help them assess the political-risk situation and will support their efforts to improve the investment environment. As for specific policy recommendations, these will typically depend on the country-specific context – to help identify the relevant recommendations for any given country, the report provides a framework to assess possible levers, and alerts the reader to global best-practice examples that address political & regulatory risk.

This report should also be helpful to private infrastructure investors, developers and operators, as it outlines what private companies can do to mitigate any political & regulatory risk they are exposed to.

Finally, this report will be of interest to academics, the donor community and members of civil society engaged in or concerned about infrastructure development.

1.1 Landscape of political & regulatory risk

For the purpose of this report, risk is to be understood as “unpredictable variation of project or asset value to a private party” – the private party being an investor, developer or operator. The discussion focuses on adverse risk.¹²

In infrastructure projects, private actors are subject to a wide variety of risks. These risks, as shown in Figure 5 (and in a magnified version in the appendix), can be differentiated in two ways: by the phase of the infrastructure life cycle in which they occur, and by the specific risk factor that causes the uncertainty. In PPP contracts, for instance, the different risks are allocated to a private party, or to the public, or they are shared between the private and the public parties – ideally, each risk should be allocated to the party that is best able to manage the risk.¹³

Political & regulatory risk refers to those risks that arise when individual political or regulatory decisions affect an infrastructure project or asset.¹⁴ Such risks are hard for private companies to manage (and often cannot be allocated to the public sector), so the question is about mitigating them as far as possible. Fourteen risks of this type are differentiated in this report; some are project-specific, while others impact on the entire infrastructure sector. A differentiated understanding of political & regulatory risk is a prerequisite for its mitigation, so a brief description of each type of risk is provided.

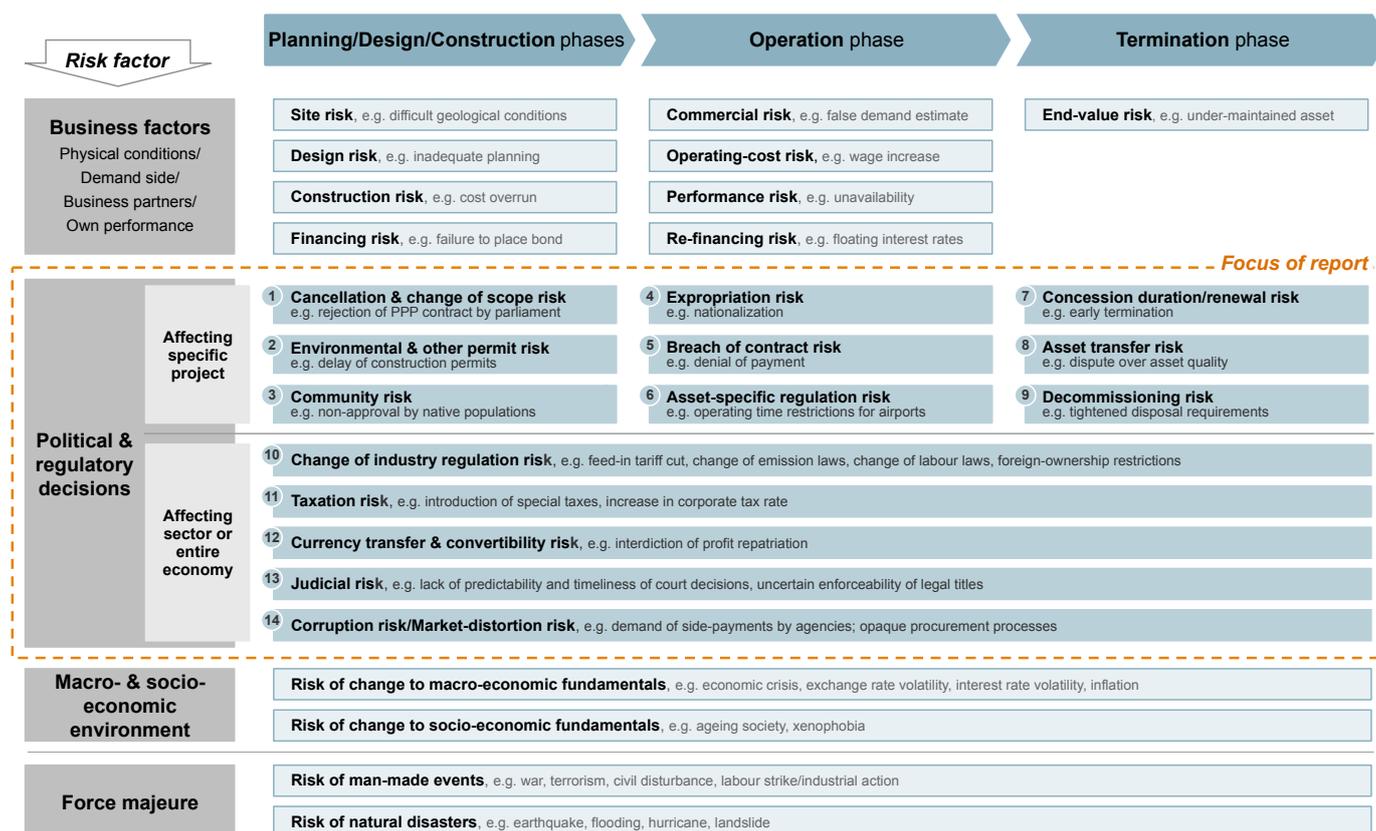
Risks affecting specific projects

The first group of risks consists of those that affect a specific project, such as a toll road, airport or power plant. The risk profiles of infrastructure assets differ greatly from one phase to another, as very different items of regulation and quite different public-sector agencies may be involved. Accordingly, it is worth differentiating between life-cycle phases: specifically, between the planning/design/construction phases, the operation phase and the termination phase.¹⁵

- The *planning/design/construction phases* include all activities prior to the commissioning of an asset, i.e. planning and permits, design, procurement and construction.
- The *operation phase* includes operation and maintenance of the asset.
- The *termination phase* includes decommissioning or other end-of-contract activities, such as contract extension or asset transfer.

Specific examples of each risk type are presented in Figure 6.

Figure 5: Risk Landscape for Infrastructure Projects



Source: World Economic Forum; Boston Consulting Group

Risks during the planning/design/construction phases

1. *Risk of cancellation or change of scope.* A project is vulnerable to cancellation if a new government sets different priorities from those set by the previous government, or if parliamentary approval is needed before major PPP contracts may proceed. Such a cancellation could hurt private companies, as they might already have made significant investments in the project to prepare their proposal. In addition, a decision on the part of public authorities to change the project scope at a late stage could have costly consequences for the private participants delivering the project.
2. *Risk concerning environmental and other permits.* Construction permit delays can have a severe impact on a project's profitability, as cash flows start later than anticipated. Such delays are often due to the unexpected outcomes of environmental and social-impact studies. Even permits issued promptly can contain unforeseen and costly conditions, such as compensation requirements or usage restrictions.¹⁶
3. *Risk of community opposition.* Local communities can affect projects in ways that do not just influence permit procedures. Native populations, for example, can have formal or informal veto rights over such projects within their territories; action groups can organize protests that prompt politicians to withdraw permission, and so on. Community risk is especially high if the project involves land expropriations or relocation of local inhabitants.

Risks during the operation phase

4. *Risk of expropriation.* One fundamental political risk faced by private infrastructure owners is the risk of outright confiscation or nationalization of their asset. More subtly, a series of renegotiations or regulatory changes can result in de facto expropriation, or "creeping expropriation".
5. *Risk of breach of contract.* In a PPP concession arrangement, the government might breach its contractual obligations on the grounds of safety, health or other public concerns. Whether these concerns are justified or not, the value of the asset would be adversely affected.
6. *Risk of asset-specific regulation.* For assets that could seriously impact on communities or on the natural environment – assets such as airports or dams – the operating regulations are obviously very specific. Any small change to the details – to permissible noise levels, for example, or water-quality requirements – can have a hugely detrimental effect on revenues or cost. The same is true for price caps, which might retroactively reduce toll-road charges, for instance, and thereby lower expected revenues.

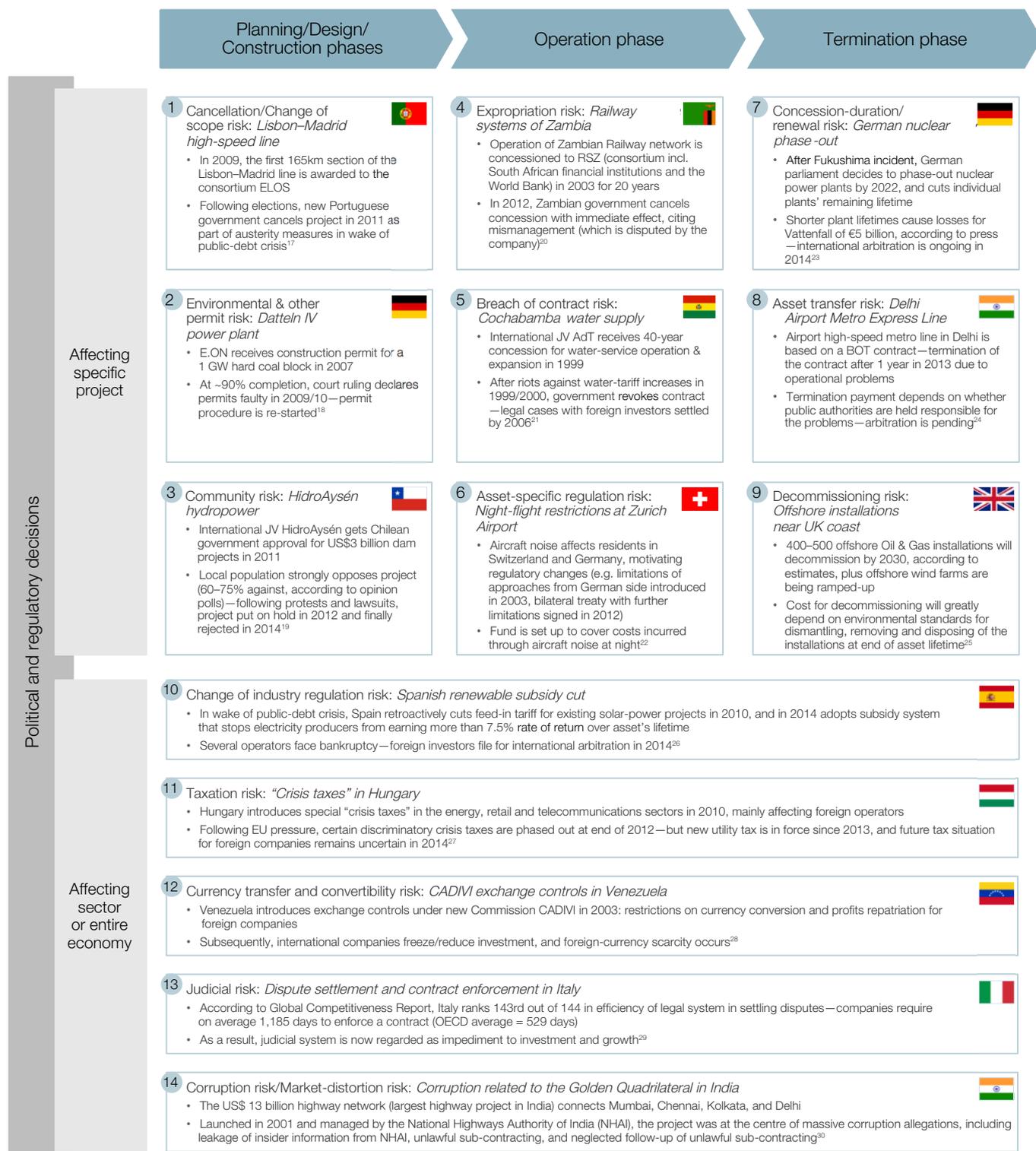
Risks during the termination phase

7. *Risk concerning the duration or renewal of the concession.* When the expiry of a concession is near, uncertainty can be high: will the concession be extended or will it be put out for renewed tender? The risk also exists that concessions will be terminated early.

8. Risk relating to the transfer of the asset. Some concessions explicitly include the requirement or an option to transfer the asset to the state or to a new concessionaire. In such cases, there is a risk of disputes over the transfer price, for instance based on disagreements on how to measure asset quality or on which valuation rules to apply.

9. Risk related to the decommissioning of the asset. If an asset has to be dismantled and disposed of at the end of its lifetime, the related cost will depend heavily on the environmental standards imposed, for example for the recultivation of open pits or the restoration of contaminated sites. If the standards are tightened during the operation phase, the predicted decommissioning costs will increase, and provision will have to be made for that increase well before the actual decommissioning.

Figure 6: Examples of Political & Regulatory Risks



Source: Press reports and public company information

Risks affecting the sector or entire economy

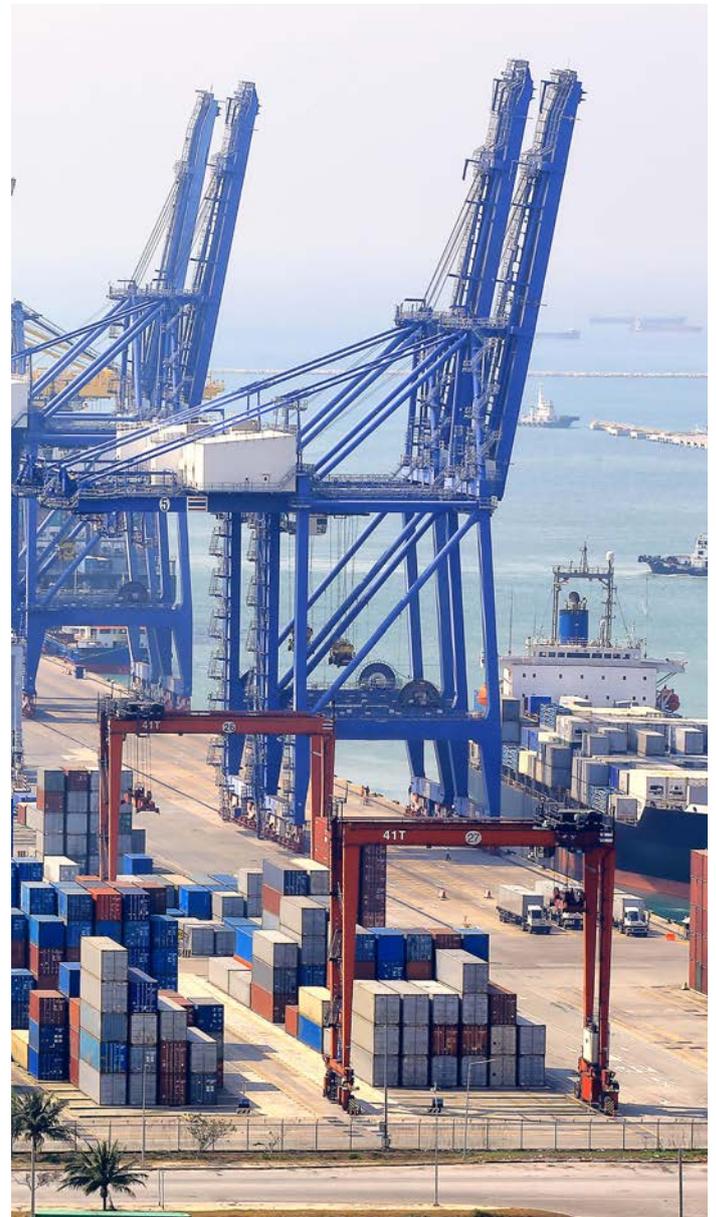
Project-specific decisions are only part of the risk profile. Equally important are sector laws determining the profitability of an entire industry, and general laws that set the rules for the national economy as a whole.

10. *Risk of changes to the regulation of the industry.* The economic performance of an infrastructure asset is closely linked to many regulations and is therefore affected by changes to them. The regulations in question might be sector-specific, such as rules on the feed-in of renewable energy or on road usage, or they might be general laws, relating to labour relations or immigration quotas, for instance. Changes of industry regulations can also put the preservation of a level playing field at risk, if those changes lead to incumbent or new players being disadvantaged.
11. *Risk of taxation changes.* Changes to tax rates are a special case of regulatory changes with a direct and immediate financial impact. The taxes affected might again be specific to the sector, or they might be general corporate taxes.
12. *Risks associated with currency transfers and convertibility.* International investors expect the liberty to convert local currency and repatriate profits to their home countries. They are troubled by the risk that new legal restrictions might be introduced. This risk is to be differentiated from the general exchange-rate risk. Exchange-rate fluctuations – a potentially serious risk for investors – do depend to some extent on political decisions, but also on many other macroeconomic developments that are beyond the control of the national government.
13. *Judicial risk.* A further risk to investors is that the judicial system does not function in a timely, efficient and fully independent way. The effects can be lengthy legal processes, unpredictable rulings and the unenforceability of favourable court decisions.
14. *Risk of corruption and market distortion.* Corruption and market distortion are underlying causes of inefficient political & regulatory decisions, of course, but they also represent a risk in themselves. For instance, there might be a demand for side-payments or under-the-table-arrangements, which in turn might later lead to the (legitimate) prosecution of any companies involved.

The risks listed above and addressed in the rest of this report are not isolated from the other risks that infrastructure investment is subject to. In particular, political & regulatory risk as a whole can be intensified by fundamental risks that affect the entire economy – such as the risk of macroeconomic shocks or the risk of natural disasters. Such risks if they materialize could undermine a country's fiscal strength and have repercussions on political decisions. Natural disasters are increasingly overburdening countries economically, especially developing countries. And the evidence shows such disasters can also trigger momentous political decisions

in response to increased societal concerns – a move away from nuclear power stations, for instance, or a drastic tightening of building codes. Some business risks (such as commercial risk stemming from false demand estimates) are related to very early decisions by public authorities – decisions taken during project prioritization and preparation, even before tendering. These risks – as well as their mitigation through a rigorous project-preparation process – are described in detail in an earlier report in this series.³¹

Finally, it should be noted that the typical risk profile can differ significantly between sectors and sub-sectors, some of which tend to use different delivery modes. For instance, concessions and PPP contracts are prevalent in road transport, whereas private delivery (often via foreign direct investment) is common in telecommunication. In addition, the risk exposure might depend on the origin of an investor: while most risks affect both domestic and foreign investors, the latter group can be more strongly affected by discriminatory regulatory decisions or currency convertibility risk. On the other hand, some mitigation measures are available only to foreign investors, as explained in the next section.



BOX 2: Root Causes of Political & Regulatory Risk

By drawing on the social sciences and taking a more theoretical look at political & regulatory risk, greater insight can be gained into the underlying causes.

The starting premise is that some degree of political uncertainty is intrinsic to democratic systems – unavoidable, and even desirable in some respects. Consider the following constraints:

A. *The evolving structure of public interests*

The “public interest” as such is not necessarily constant over time. Instead, it might change, owing to two factors.

- Societal concerns that are inconsistent over time: during the long lifetime of an infrastructure asset, the perception of technological safety or environmental responsibility might change, so the risk arises that regulation would change too.³²
- Government incentives that are inconsistent over time: for instance, before the signing of the contract, the government has the incentive to offer high user-tariffs (for electricity or train tickets, say) so that investors will be attracted by the prospect of a high return on their investment; after the asset has been completed, the government will favour low user-tariffs, to benefit the public (the asset will continue operating regardless, as long as revenues exceed marginal costs).³³

B. *The functional limitations of the public sector*

The “public interest” as an abstract concept does not necessarily translate directly into political & regulatory decisions, even if public-sector actors intend it to. This

difficulty is caused by functional limitations inherent in political systems:

- The need to maintain the sovereignty of future parliaments: so law-makers cannot easily make commitments that extend beyond the next election. Moreover, politicians will tend to avoid making any substantial decision during the last few months before an election.
- The continuous power struggle between different governmental levels or agencies (including NIMBY-ism).³⁴
- The limited capacities of ministries and public agencies: for instance, a shortage of talent and tools (especially in fast-growing countries with a quick ramp-up of infrastructure programmes), and the presence of corruption. These challenges create political & regulatory risk on sub-national levels as well, for example, in local and departmental administrations.

C. *A misperception by private actors*

Political & regulatory risk can also be caused by private rather than public participants. The investors or developers might perceive political decisions as unpredictable and hence “risky”, even though such decisions are almost inevitable. The reasons for this faulty perception are:

- Investors’ inadequate sensitivity to shifting societal concerns: so the investors would find it surprising when political decisions are made in response to public pressure or are motivated by a new understanding of socially desirable policies.³⁵
- Deliberate misrepresentation by the contractors during bidding, for example, underestimating the environmental impact or the cost of publicly-funded sections of an asset: so government intervention is almost certain, yet the investors would again be taken by surprise.³⁶



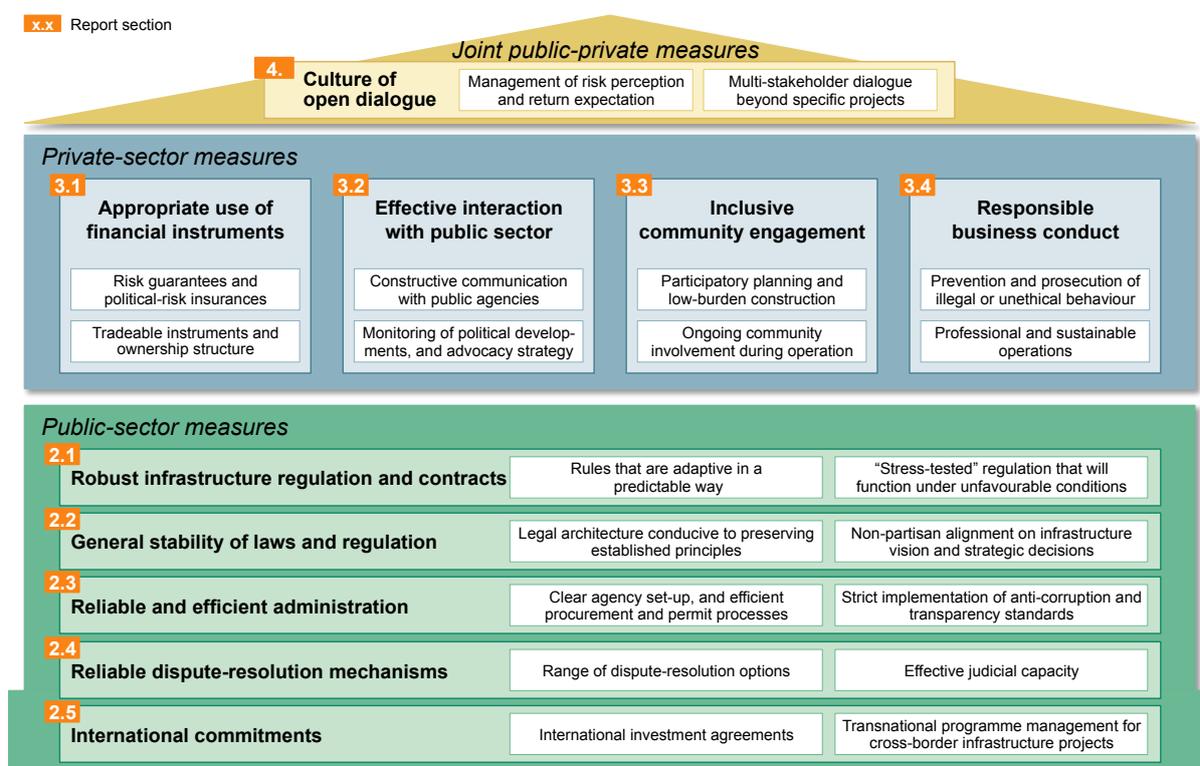
1.2 Best-practice framework for risk mitigation

The landscape of political & regulatory risk is a diverse one, so a multilayered approach is required for mitigating the risk (i.e. reducing the likelihood or severity of adverse events) – multilayered in the sense that both the public and the private sectors have to take action. This multilayered approach is reflected in the political & regulatory Risk-Mitigation Framework shown in Figure 7.³⁷

The framework structures the various measures according to responsibility: the public sector is responsible for laying the foundations of a low-risk environment; the private sector has to manage risks efficiently based on those foundations; and both the public and private sectors are responsible for a culture of open dialogue.

The following sections discuss the steps all actors must take, starting with the public sector.

Figure 7: Risk-Mitigation Framework



Source: World Economic Forum; Boston Consulting Group

2. Public-Sector Measures

2.1 Robust infrastructure regulation and contracts

Many infrastructure sectors are subject to highly detailed regulation. The specific regulations, sector codes or concessions encompass a vast number of aspects and thus need to adapt to the changing technical and socio-economic environment; contracts can last 20-30 years, after all, and consequently must have some built-in flexibility.³⁸ Therefore the rules may change frequently, but the private sector needs assurance that those changes will be moderate and calculable.

Rules that are adaptive in a predictable way

Ensuring that any changes to sector rules are as predictable as possible is important for maintaining a balance between public and private interests over time. Automatic adaptation mechanisms are a good way to do that; they buffer exogenous revenue and cost risk, and thereby eliminate the need for parliament or government agencies to intervene.

- **EXAMPLE:** In Germany, the guaranteed feed-in tariff for newly built photovoltaic (PV) plants is automatically adapted every month, based on the amount of PV capacity connected to the grid during the previous quarter (which in turn is driven by changes to the cost of PV capacity, for example). This flexible cap regulation was introduced in 2012. It succeeded in halting the regular year-end practice of quickly connecting additional PV capacity to the grid just before the tariff was reduced each time. It also reduced the fear of discretionary interventions into feed-in tariffs.³⁹
- **EXAMPLE:** In Chile, some transportation PPPs use a *Least Present Value of Revenue* mechanism. These variable-term concessions end as soon as the collected revenue reaches the amount quoted by the concessionaire during tendering. Used first in 1998, the mechanism enabled the \$400 million extension of the Santiago–Valparaiso highway to be financed in times of high economic uncertainty.⁴⁰

However, automatic adaptation mechanisms cannot cover all future developments appropriately. PPP contracts in particular, which typically have a very high level of detail, should allow options for ad-hoc government intervention as well, though in a predictable and fair way, of course – for instance, by specifying contract-termination clauses or options to introduce competition.⁴¹

Finally, infrastructure laws and regulation should be

as transparent and simple as possible (without being ambiguous) to ensure that outcomes of regulatory decisions are predictable as well for investors that might be new to a certain country – for example, by drawing on well-established international standards.

“Stress-tested” regulation that will function under unfavourable conditions

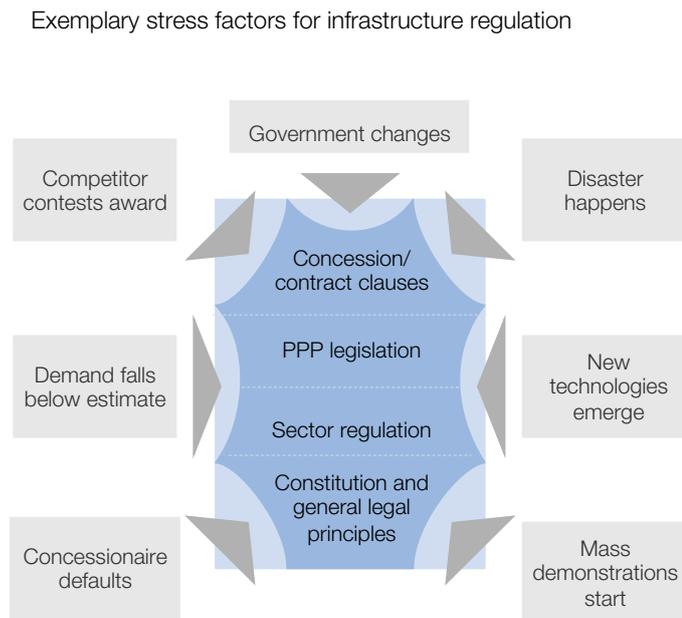
Potential infrastructure investors need to be assured that regulation will remain fairly stable, even when economic or political conditions are very unstable. If a regulatory framework has remained in place through several business cycles, it will impress investors as especially trustworthy and reassuring. Policy-makers should aim to build such a track record of stable sector regulation, but that will obviously take time.

As for new regulations, policy-makers should consider “stress-testing” them – i.e. simulating the impact that adverse economic or other events would have on private operators and public budgets. Figure 8 lists various important stress factors. For such tests, simulations could be conducted jointly by public and private stakeholders.

EXAMPLE: The Dutch Ministry of Infrastructure and the Environment developed a *PPP simulation* (“20-30-year PPP project in 1 day”), run jointly by the respective public-sector agencies and concessionaires, to test contracts and learn the principles of a PPP arrangement, covering the sectors of roads, buildings, hospitals, schools and water infrastructure, and involving more than 3,000 people until 2014. The simulation, available in English with training support, is being implemented in the United States as well.⁴²



Figure 8: Stress Test of Infrastructure Regulation



Source: World Economic Forum; Boston Consulting Group

2.2 General stability of laws and regulation

Before making their investment decisions, investors will want reassurance about not only the specific sector regulation, but also the general stability of laws in the country concerned. Much depends on the country's constitutional and legal architecture, and the way that strategic decisions are reached within a democratic system.



Legal architecture conducive to preserving established principles

A country's legal architecture – the methods and barriers involved in changing the law – can strongly affect the stability of laws. Policy-makers obviously need the flexibility or “policy space” to change regulations according to the public interest, but they might give some crucial laws a special status. The most common form here is constitutional guarantees, though other levers exist for enhancing the stability of a set of laws.

- **EXAMPLE:** Panama's *Investment Stability Law*, enacted in 1998, guarantees foreign investors stability of their taxation and customs conditions, as well as treatment like locals, for 10 years. As of late 2014, more than \$2.5 billion was registered for protection under the law.⁴³
- **EXAMPLE:** For European Union (EU) member states, *European primary law and secondary law* generally have a very stabilizing effect: individual governments cannot easily bypass them to change national laws. For instance, in 1995 EU law prevented the change of the Italian hydro-dam concession law – a proposed change that appeared to favour the incumbent concession holders inappropriately.⁴⁴

Overall, a country's constitutional architecture should achieve the right balance of power between national, district and local levels to ensure they are all included appropriately into decisions, to the extent that they are affected by those decisions.

Non-partisan alignment on infrastructure vision and strategic decisions

In democratic countries, policy-makers are free to go beyond a specified quorum and seek a higher consensus for an important infrastructure decision, i.e. to seek a non-partisan alignment. While potentially a lengthy process, it would establish the decision on a broader base, and reduce the probability that a new government would reverse the decision. The aim might be to secure a broad consensus not only for individual decisions, but also for a set of strategic decisions within a specific sector, and even for a *national infrastructure strategic vision*. Such a vision, for example, is promoted by the Business 20 (B20) Australia Infrastructure & Investment Taskforce.⁴⁵

EXAMPLE: In Switzerland, after the failure of earlier rail-corridor drafts, all political parties in the Federal Council supported the comprehensive long-term rail concept *Bahn 2000*, which was approved by 57% of the population in a referendum in 1987. On the basis of this broad support, approximately 130 projects worth \$6 billion have been realized and, by 2007, about 70% of the population agreed that the concept met their expectations.⁴⁶

2.3 Reliable and efficient administration

A country's executive power has to implement any laws affecting infrastructure in a reliable way. This kind of trustworthy administration depends on an appropriate agency set-up and efficient procurement and permit processes, and on the absence of corruption.

Clear agency set-up, and efficient procurement and permit processes

Clear roles and distinct responsibilities among government agencies are crucial to achieve an institutional framework that supports infrastructure development.⁴⁷ Two steps in particular have proved successful in ensuring a reliable administration:

- **An independent regulatory body** is almost indispensable when it comes to mitigating political & regulatory risk. Regulatory decisions must be detached from political sentiments. To ensure the requisite independence, the principles are: to separate the body's funding from public budgets; to select officials without reference to political considerations; and to appoint these officials for terms longer than political cycles.

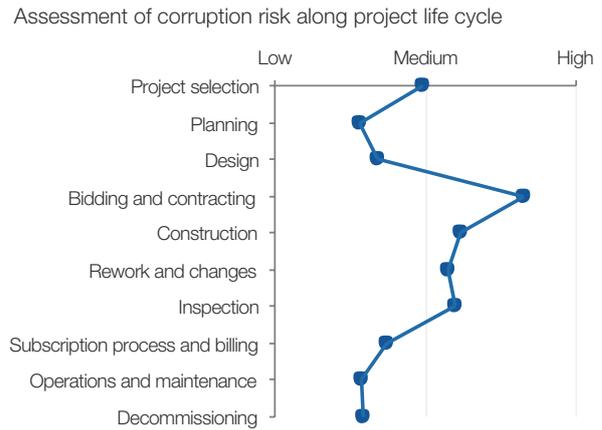
EXAMPLE: The Office of Gas and Electricity Markets (*Ofgem*), the UK electricity and gas regulator, is funded by licence fees from the companies regulated, and its board members are appointed at different times (resulting in a “staggered board”), following a competitive process based on competence.⁴⁸

- **Transparent and efficient procurement and permit processes** are crucial, and should be guided by global best practices. According to a 2014 estimate, if all countries committed to specific time limits for regulatory and environmental approvals for major infrastructure projects, an additional \$1.2 trillion of effective infrastructure could be added to the global asset base by 2030.⁴⁹

EXAMPLE: An interesting model of best-practice permit processes is Canada's “one project, one review” approach for resource projects such as pipelines. In 2007, the Major Projects Management Office (MPMO) was instituted as the single manager and a strict timekeeper for reviews. As a consequence, the average approval time for large energy projects was reduced from 4 years to 22 months between 2007 and 2011.⁵⁰

Streamlining institutional frameworks is generally desirable, but it should never compromise the integrity of permit processes. Permits must continue to rely on strict environmental standards and social policy objectives, and on minimizing illegal behaviour.

Figure 9: Perception of Infrastructure's Risk of Corruption



N = 50 participants from construction, engineering, real estate and other infrastructure-related industries, mostly chief compliance officers.
Source: World Economic Forum's Building Foundations against Corruption project, 2014

Strict implementation of anti-corruption and transparency standards

Administrations cannot be reliable if any public-sector corruption exists. But corruption is widespread in both developed and developing countries, and represents a major concern in infrastructure industries.⁵¹ According to a 2014 survey by the World Economic Forum's Partnering Against Corruption Initiative (PACI), the bidding, construction and inspection phases have an especially high risk of corruption (see Figure 9).

Accordingly, lawmakers should strive to design and implement laws, institutions and practices that prevent and penalize corrupt behaviour, which would help to enhance the transparency of regulatory decisions. Many countries have adopted international rules, such as the United Nations Convention against Corruption, a global, legally binding standard, and the Organisation for Economic Co-operation and Development (OECD) Anti-Bribery Convention, which additionally criminalizes bribery of foreign public officials (a pressing issue, illustrated by more than 400 foreign bribery cases concluded since the convention came into force).⁵² These standards clearly have to be incorporated appropriately into national laws, which must then be followed by strict enforcement to ensure that the deterrent is real rather than just theoretical.

EXAMPLE: Among the anti-corruption laws of individual countries, the *UK Bribery Act* is regarded as particularly strict. Enacted in 2010, it specifies that a company's failure to prevent bribery by employees or associates is a corporate offence, so companies need to ensure that adequate anti-bribery procedures are in place. The Act allows prosecution of any individual or company with links to the United Kingdom, with penalties of up to 10 years' imprisonment and unlimited fines.⁵³ However, observers are calling for more stringent enforcement.

Public-sector receptiveness to corruption (the “demand side”) can be prevented or reduced not only by laws, but also by organizational processes within administrative bodies – for example, through regular procurement audits based on benchmarks, job rotation for high-danger positions, and self-disclosure programmes or codes of conduct for officials. Also, using technology is a strong enabler for increasing transparency.⁵⁴ On the international level, the Group of Twenty (G20) established the Anti-Corruption Working Group which, in its 2015-2016 working plan, identifies public procurement, open data, whistleblower protections, immunities for public officials, fiscal and budget transparency, and standards for public officials as issues meriting particular attention.⁵⁵

Ultimately, achieving a corruption-free environment will also require decisive “supply-side” steps by the private sector, which will be discussed in section 3.4.

2.4 Reliable dispute-resolution mechanisms

Even if a highly reliable administration is in place, disputes may still arise between public and private stakeholders, given their differing interests and the very long-term (and naturally imperfect) nature of contracts, not least PPP contracts. These disputes require prompt and efficient resolution, without damaging the long-term relationship between the two parties. If justice is done in a predictable, timely and efficient way, the risk of inequitable regulatory decisions diminishes.

Range of dispute-resolution options

Disputes will vary in severity, so dispute-resolution options should likewise be varied, or tiered according to the severity of the dispute. The courtroom is not the only arena for discussion!

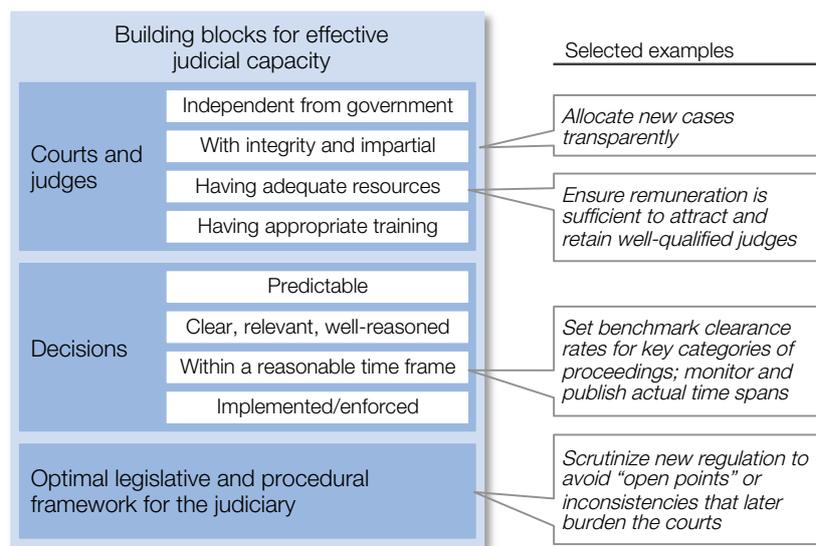
To settle disputes, a set of options, which has been used in the context of PPPs, includes mediators, non-binding expert panels, binding expert panels, national regulators, and international jurisdiction or arbitration.⁵⁶

EXAMPLE: Since 2004, Chile has been using *permanent expert panels* to resolve disputes in the electricity sector (between public and private sectors, and between regulated companies). Initially, the panels have a conciliation function, but cases can be escalated to an arbitration level, where the panels’ decisions are binding.⁵⁷

Effective judicial capacity

Since some disputes will end up going to court, an effective judicial process is essential for hearing and resolving them. Well-developed international standards can guide countries that want to improve their judiciary; such standards include the Core Principles of the European Bank for Reconstruction and Development (EBRD), the UN Basic Principles on the Independence of the Judiciary, and the Bangalore Principles of Judicial Conduct.⁵⁸ Figure 10 summarizes the essential building blocks of an effective judicial capacity, and promising measures to acquire them. By conscientiously implementing those standards, countries can reduce judicial risks considerably.

Figure 10: Effective Judicial Capacity



Source: EBRD (2010)

2.5 International commitments

To reduce uncertainty about national political decisions, governments can commit to international treaties. International investment law, an area emerging since the 1950s, is now in focus again, in light of ever-increasing global connectivity and cross-border capital flows. The longer an investment is committed to, the more important investment protection becomes – which is why international investment agreements (IIAs) are of such relevance for infrastructure assets.

International investment agreements

IIAs define the terms and conditions for private investment in a given country by nationals and companies of another country. Here, the most common form of IIA is the bilateral investment treaty (BIT), signed between a country where potential investments take place and the home country of potential investors. More than 2,000 BITs are in force as of 2014 and, on average, one to two new treaties are being signed every week. Increasingly, investment provisions are also being included in multilateral treaties, such as free trade agreements (FTAs), economic partnerships, regional agreements and double-taxation treaties.

The basic idea of all IIAs is to protect foreign investment from arbitrary governmental actions, by defining a standard set of investor-protection clauses and opening the way to international arbitration in the event of disputes (see Box 3). Purely domestic investment is not covered. Regarding the scope of protection, a balance has to be struck between the protection of investors from arbitrary decisions on the one hand, and the “policy space” of countries on the other; that is, on their freedom to enact and change regulation according to national requirements and priorities.

For an impression of current arbitration cases, see Figure 11. The set of BITs is by far the most common legal basis for cases, with the European Energy Charter Treaty of importance too. Infrastructure-related industries account for 40% of cases – which is not surprising, given the large volume and long duration of many contracts for such projects.

BOX 3: Protection Clauses in Bilateral Investment Treaties (BITs)

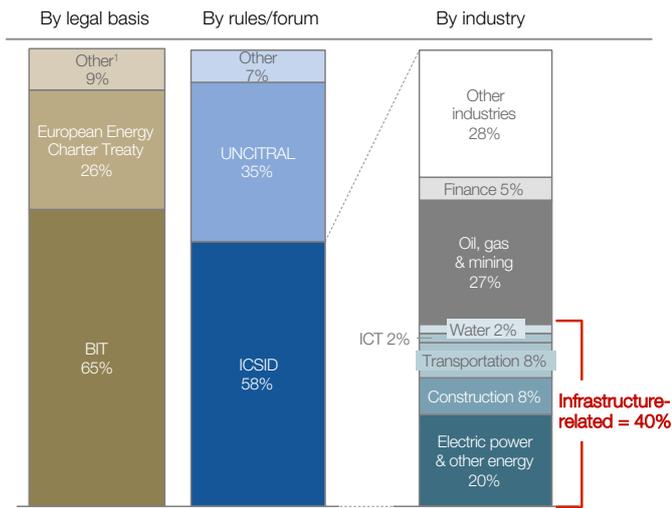
Though differing in their details, most BITs share the following clauses:

- Absolute protection: including protection from unlawful expropriation, the right to fair and equitable treatment, full protection and security, and free transfer of funds.
- Relative protection: including national treatment (foreign investors treated equally to local investors) and most-favoured-nation treatment (treatment equal to that given to investors from a nation that otherwise would be more favoured).
- Dispute resolution: providing for international arbitration (for instance, at the ICSID forum) to settle disputes between investors and the host government. Typically, an arbitration tribunal comprises three members appointed as follows: one by the investor, one by the state, and one “neutrally”, according to the terms of the specific BIT. The tribunal members generally evaluate claims without regard to a country’s specific legislation.⁶⁰

In addition to these protection standards, some BITs also specify various obligations for investors, as well as other provisions related to investment.⁶¹ Investment provisions in other international agreements (such as FTAs) typically include analogous clauses.



Figure 11: Newly Registered International Arbitration Cases 2013



¹ North American Free Trade Agreement (NAFTA), Central American Free Trade Agreement, Moscow Convention for the Protection of Investors' Rights.
 Note: 57 cases in total (the total "by industry" includes 7 cases under UNCITRAL rules but administered at ICSID).
 UNCITRAL = United Nations Commission on International Trade Law;
 ICT = Information and communications technology.
 Source: UNCTAD IIA issue notes; ICSID caseload statistics; BCG analysis

Macroeconomic and political stability, in conjunction with a large and growing GDP, is generally agreed to be a prerequisite for FDI. As for IIAs' direct impact, however, the evidence is mixed. For many countries, IIAs complement other steps within a broader economic reform package, and the effects are difficult to differentiate.⁶² As a result, countries have taken different views about the advantageousness of IIAs. For example, Mexico currently has in place about 30 BITs and 10 FTAs with investment provisions. Over the last 20 years, FDI has been on average about \$20 billion per year, while the "price tag" over the 20 years has been approximately \$270 million (paid in 15 arbitration cases). Mexican officials feel that it has been well worth it: the balance is positive.⁶³ Other

countries have come to different conclusions, however, and argue that the IIA regime is in need of reform.⁶⁴

Looking at the number of BITs in force shows huge differences between countries (see Figure 12). A number of them have very few BITs in force,⁶⁵ and though investment treaties are by no means the only way to stimulate investment, those countries might consider extending their use of IIAs. In doing so, they could benefit from international best practices and the current debate on balanced treaties for sustainable development.

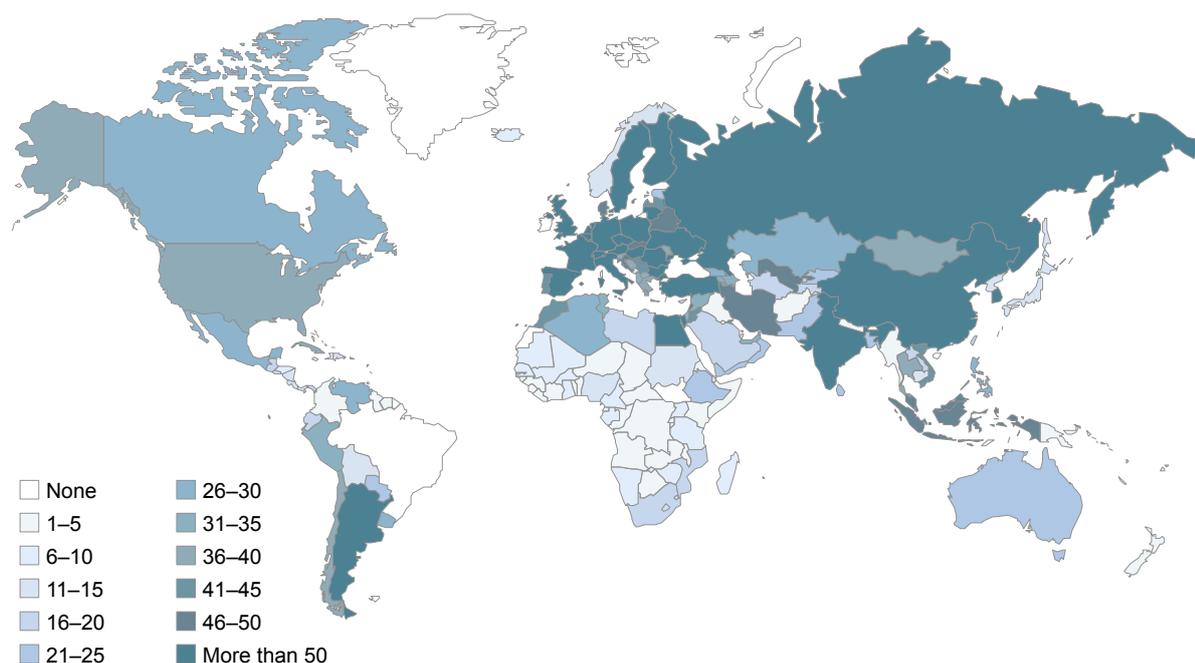
IIAs are widely regarded as an effective way of mitigating political & regulatory risk. Their shortcomings, however, are increasingly emphasized by policy-makers and the general public alike. Vigorous debate has revolved around some topics: for example, whether a broad interpretation of protection clauses will limit the policy space for sustainable development in developing countries inappropriately, and whether the current arbitration procedures really allow for unbiased and cost-effective rulings.

Recently, IIAs have had considerable media coverage in developed countries. This has been triggered by controversial claims, such as tobacco companies disputing anti-smoking policies, and the negotiation of major FTAs including the Comprehensive Economic and Trade Agreement (CETA) between the EU and Canada, and the Transatlantic Trade and Investment Partnership (TTIP) between the EU and the United States. Clearly, methods are being developed for achieving effective and appropriately balanced BITs. The momentum has grown since a 2004 update of the US model treaty for BITs that introduced flexibility mechanisms such as national security exceptions and reservations.⁶⁶ The 2012 United Nations Conference on Trade and Development (UNCTAD) Investment Policy Framework for Sustainable Development provides guidelines on how to negotiate sustainable-development-friendly treaties.⁶⁷ Moreover, the B20 Infrastructure and Investment Taskforce 2014 promotes the development of a non-binding International Model Investment Treaty.⁶⁸



Figure 12: Bilateral Investment Treaties by Country

Number of BITs in force in 2014



Note: Data as of July 2014.

Source: UNCTAD Investment Policy Hub (September 2014)

In addition to those emerging standards, a number of international best practices have been identified, as a guide for countries that decide to negotiate or renegotiate an IIA.

- **EXAMPLE:** For a balanced contract – defining the scope and meaning of protection clauses with great *precision and clarity*: This approach is especially important for the fair and equitable treatment (FET) provision, which has become the most frequently invoked clause in disputes between investors and governments. The interpretation of this clause was sharpened by the North American Free Trade Agreement (NAFTA) in 1994 and again in 2001. FET was linked to the (well-defined) minimum standard of treatment of aliens under customary international law, and thereby prevented arbitration rulings from imposing undue limits on national government authorities. This standard was subsequently used in model BITs of the NAFTA parties and in further treaties.⁶⁹
- **EXAMPLE:** For a sustainable investment-protection regime – reinforcing *arbitration's credibility*: One aspect is transparency; in response to growing public concerns, the United Nations Commission on International Trade Law (UNCITRAL) has developed and adopted the *UNCITRAL Transparency Rules for Arbitration*, which now apply to new treaties signed after April 2014 (unless parties explicitly opt out). For example, the rules allow for public access to documents and hearings in arbitrations.⁷⁰

Other aspects, in addition to transparency, are: the prevention of conflicts of interest for arbitrators (via a code of conduct,⁷¹ fee schedules or caps, and transparency on third-party financing); and encouraging fast and equitable proceedings at reasonable cost through, for instance, early dismissal of frivolous claims and the promotion of options for alternative dispute resolution.⁷²

Transnational programme management for cross-border infrastructure projects

Transnational infrastructure projects are one way for countries to fulfil their ambition for regional integration. Such ventures are especially beneficial in regions with many small (and partly landlocked) countries, such as Africa, Europe and South-East Asia. Of course, transnational projects do carry additional political & regulatory risk, as several legislatures and administrations might be involved, potentially with incompatible political cycles and conflicting national agendas. Unilateral changes can affect the overall business case of projects, and international agreements might lack a competent supranational authority to enforce them.

To minimize the political & regulatory risks in this context, the various countries involved should adopt a comprehensive approach to transnational infrastructure programme management. The best practices in this regard are outlined in the 2014 World Economic Forum report, *Managing Transnational Infrastructure Programmes in Africa – Challenges and Best Practices*:

- Establish regional planning for the different infrastructure sectors, and align on delivery models; harmonize concession schemes
- Harmonize technical standards and regulation, and institutionalize cross-border collaboration via a special agency
- Achieve a balanced allocation of cost, benefit and risk across countries; for example, by including an arbitrator such as a regional development bank⁷³

Examples of transnational infrastructure programmes include the Trans-European Transport Network, the Programme for Infrastructure Development in Africa (PIDA), and the Master Plan on ASEAN Connectivity.⁷⁴



3. Private-Sector Measures

3.1 Appropriate use of financial instruments

Within the framework set by the host government, private companies have to effectively and efficiently manage the risk inherent in their projects. An array of measures is available to this end, such as financial instruments that allow companies to directly address important aspects of political & regulatory risk.

Risk guarantees and political-risk insurance

Specific financial instruments have been developed to transfer political & regulatory risk from the project sponsors and financiers to a party better suited to bearing it (such as a development bank or an insurance company), and thereby protect the private sector from adverse incidents.

The protection is in the form of *guarantees* or *political-risk insurance*. Some participants differentiate between guarantees, which are activated as soon as a guaranteed payment fails to arrive, and insurance policies, where a claim evaluation must occur before payments are made. However, as insurance-type instruments are sometimes also labelled as guarantees, and vice versa, the terms are not differentiated in this report. Of course, these instruments come at a cost, depending on the risk profile covered.

The global market for political-risk guarantees/insurance is substantial: in 2012, the protection policies issued for infrastructure projects in developing countries provided about \$83 billion of cover (see Figure 13). Three types of organizations offer instruments; most of the organizations are members of the International Union of Credit & Investment Insurers (Berne Union):⁷⁵

- *Multilateral organizations*. As part of their mission to promote development, international financial institutions offer investors insurance against political risk. One important institution is the Multilateral Investment Guarantee Agency (MIGA), an investment-insurance facility for developing countries established in 1988 as part of the World Bank Group.⁷⁶
- *National providers*. To promote exports and FDI, many countries operate (quasi-)governmental export-promotion agencies or export-import banks, which offer political-risk guarantees as part of their portfolios. Guarantees are typically tied to the nationality of the exporter or investor. Guarantees are also offered as part of official development assistance.⁷⁷

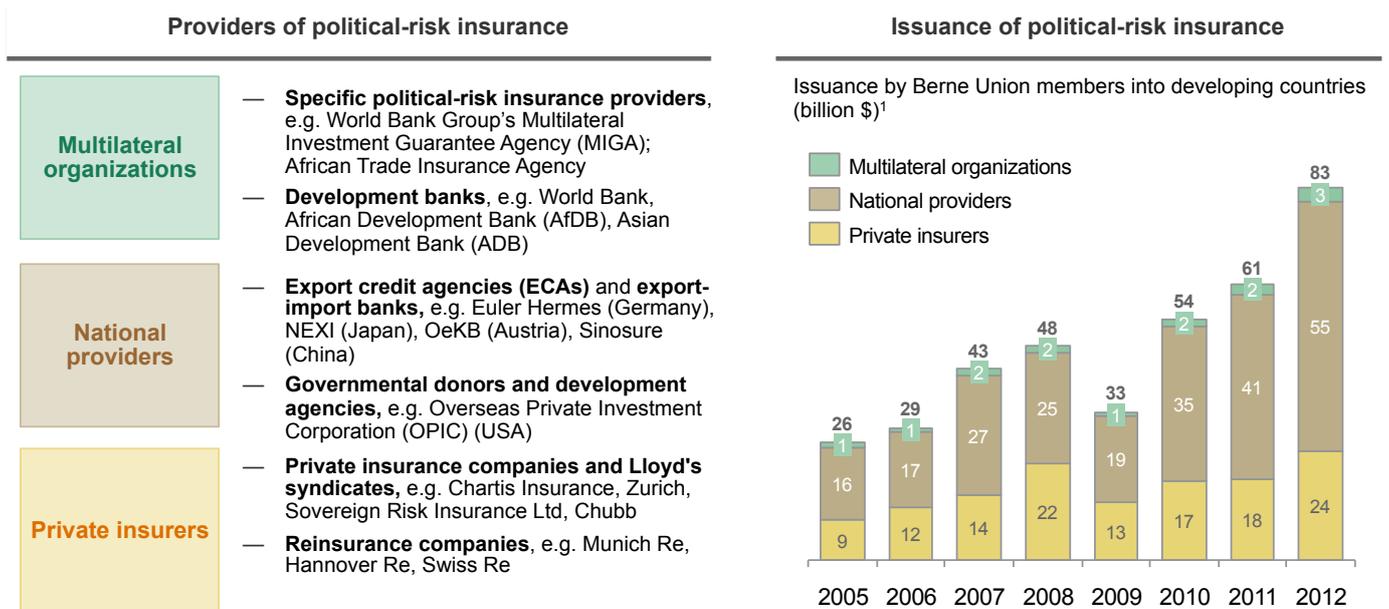
- *Private insurers*. Within the wider insurance markets, private insurance companies and Lloyd's syndicates offer protection against political & regulatory risk, both stand-alone and in combination with commercial risks. These insurance policies are underwritten by reinsurers.⁷⁸

For the political-risk insurance market, Figure 14 shows the available products classified by risk type (based on the risk landscape developed in chapter 1). Protection is offered for both project debt and project equity, and is available for the fundamental political risks of expropriation, breach of contract, and currency transfer restrictions and inconvertibility. Those risks are well standardized (given well-defined trigger events), so the risk can be transferred to reinsurers. In contrast, more “subtle” regulatory risks, such as a change of industry-specific regulation that adversely affects an asset, are typically not covered by the available insurance offerings – unless such measures have an excessive impact, and cross the “threshold” that would classify them as expropriation or breach of contract, hence the “white spaces” in Figure 14. For those political risks that are covered, protection is also available in combination with other risk types, including commercial risk or force majeure (together with coverage against war and civil disturbance, for instance, or in the form of “comprehensive coverage” offered by export credit agencies). Institutions such as MIGA also offer credit enhancement related to their guarantees.

MIGA, as well as other multilateral organizations, can extend guarantees to developing countries (though currently not to developed countries) as soon as a cross-border investment is involved.⁷⁹ In principle, the private insurance market has global scope, including developed countries. However, instruments are not equally available for all countries (especially developing countries); coverage by private insurers is particularly weak for early-stage projects in high-risk environments.⁸⁰

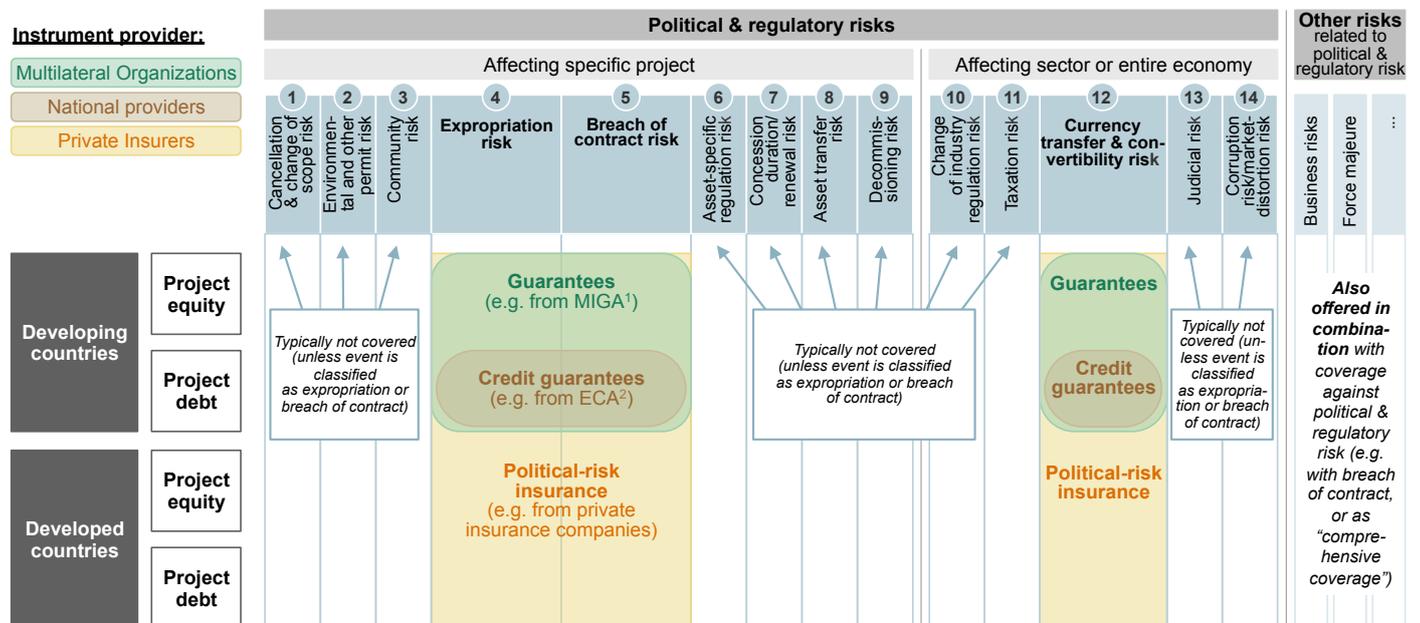
The instruments offered by multilateral and national providers have various features in common – not just the type of risk events that can be insured, but also the sustainability standards required for project eligibility. For instance, all export credit agencies from OECD countries have to follow the OECD “Common Approaches” for environmental and social due diligence. And, MIGA has defined comprehensive “performance standards” monitored by dedicated MIGA environmental & social staff. The project’s due diligence and monitoring take considerable effort, but they are worth it, to ensure that environmental and social standards are met.⁸¹

Figure 13: Political Risk Insurance Market



¹ Overall issuance of political-risk insurance, including infrastructure as well as other industries. Numbers are approximate and might not add up to the indicated totals due to rounding.
 Note: NEXI = Nippon Export & Investment Insurance; OeKB = Oesterreichische Kontrollbank.
 Source: Berne Union; MIGA World Investment and Political Risk Reports; BCG analysis

Figure 14: Political Risk Insurance Offerings



¹ Multilateral Investment Guarantee Agency.
² Export Credit Agency.
 Note: Illustrating primary focus with respect to protection of investment against political & regulatory risk; further offerings possible (e.g. ECAs extending guarantee for developed economies).
 Source: World Economic Forum; Boston Consulting Group

To make the best use of available instruments, infrastructure developers should carefully evaluate the offerings from multilateral organizations and national providers of all countries involved in a project. (They should also consider how to best structure the international footprint of investors, if appropriate.) In that way, they might make it possible for projects that appeared unfeasible to be realized after all.

- **EXAMPLE:** A MIGA guarantee (against expropriation, breach of contract, transfer restrictions, and war and civil disturbance) was instrumental in realizing the *DR-7 Samana Highway* toll road in the Dominican Republic. After several attempts to raise financing had failed, owing to the perceived risks involved, the concessionaire *Autopistas del Nordeste (AdN)* issued a MIGA-guaranteed bond worth \$162 million to international investors in 2006, at a rate of 9.4% per year. The bond was 40% oversubscribed.⁸²
- **EXAMPLE:** In 2005, a guarantee covering political risk, issued by the German export credit agency Euler Hermes, enabled Deutsche Investitions-und Entwicklungsgesellschaft (DEG), Germany's investment corporation, to invest in the 100-megawatt Embilipitiya power plant in Sri Lanka, which was still experiencing an ongoing civil war. The project has now been realized, and has significantly improved power supply and development in the region.⁸³

BOX 4: Extending the Offering of Multilateral Guarantees

The important role of guarantees, such as those provided by MIGA, is widely recognized. To make it even more valuable, policy-makers might consider extending the offering in two ways.

1. According to their mandate, MIGA and other multilateral agencies cannot currently extend guarantees for projects in developed countries, even though investments there are increasingly prone to political & regulatory risk as well.⁸⁴ To fill this gap, a truly global multilateral investment-guarantee agency is needed. Of course, such extension must take into account the potential impact on private-sector solutions already available; it will also have to ensure that developing countries are not disadvantaged if they have to “compete” with developed countries for guarantees. Further benefits would emerge if policy-makers could open the way for multilateral political-risk guarantees to be offered to domestic investors in both developing and developed countries.
2. At the moment, multilateral development banks and agencies tend to offer political-risk guarantees on a project-by-project basis. This involves detailed analysis of each project, and leaves investors uncertain about cover on follow-up projects within a given country's project pipeline. Such uncertainty was addressed in 2013 by a B20 White Book proposal to the G20 in Russia (and some further offerings are now available or are being developed). By implementing programmatic guarantee packages to be negotiated with a given country, policy-makers could reduce transaction costs and send a positive signal to potential investors.⁸⁵

Tradeable instruments and ownership structure

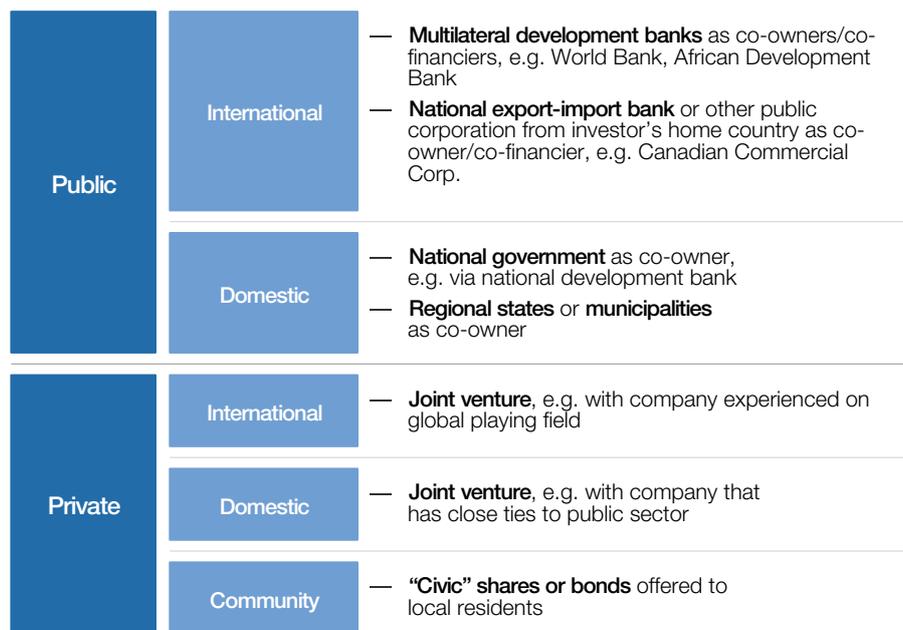
Apart from instruments specifically targeting political & regulatory risk, standardized hedging instruments, traded on financial markets, can be used to transfer specific risks. Examples include foreign exchange swaps to reduce exposure to exchange-rate fluctuations, which might be politically induced; and credit default swaps to hedge the public-default risk, which can be related to overall political stability.

The issue is that these instruments typically have limits on time and space: they are designed mainly for short-term cover, and are not readily available for all countries. For example, currency swaps for developing countries are often very expensive, and liquidity might be low owing to currency inconvertibility. So the instruments are applicable only for certain aspects of the risk profile – for instance, they have some relevance during the construction phase.

The ownership structure, as well as the overall financing structure, affect an infrastructure project's risk profile. By drafting the ownership and financing structure with great care, and selecting the right partners, a project's participants can considerably mitigate the political & regulatory risk. A number of relevant co-ownership models are conceivable (see Figure 15 for an overview):

- *International co-owners or co-financiers* (e.g. multilateral development banks or institutions from an investor's home country). Such an ownership structure might deter political intervention because any disputes would now take place at a higher level. The host government would have to contend not with individual companies, but with international organizations such as multilateral development banks, or with governments of other countries.
- *Joint ventures with the domestic public sector*. Such an arrangement might align interests to a certain extent, as the public itself would now be a part-owner, and public budgets would be affected by regulatory decisions. However, such joint ventures can be highly complex, and could cause additional conflicts, so they should be undertaken only after very careful assessment.⁸⁶
- *Joint ventures with the international private sector*. If the local private company or companies could partner with a large, experienced global company, the private-sector weight in opposing any threat of adverse intervention would increase.
- *Joint ventures with the domestic private sector*. By partnering with a domestic company, the asset operator might be viewed as more than just a “foreign investor”.
- *Community co-ownership/co-financing*. Such an ownership structure would get local citizens involved economically – notably, the residents of the affected areas – and would thereby gain community support.

Figure 15: Options for Co-Ownership/Co-Financing



Source: World Economic Forum; Boston Consulting Group

One other approach to mitigating political & regulatory risk is to involve a public international body not as co-owner, but as *commercial counterparty* to the tendering government. In this arrangement, the concession contract is signed as a government-to-government contract and then subcontracted to private parties. For future negotiations, this levels the playing field far more than when private parties have to face adverse regulatory decisions alone.

EXAMPLE: Consider the involvement of *Canadian Commercial Corporation (CCC)*, a public body of the Canadian government, in the construction of Quito airport in Ecuador. Quiport, a joint venture of Canadian Aecon and Brazilian Andrade Gutierrez, won the concession for the \$700 million project in 2002. The city of Quito signed a fixed-price engineering-procurement-and-construction contract with CCC, which in turn subcontracted 100% of the project to the Quiport consortium. In 2009, a dispute arose after Ecuador's constitutional court ruled that private airport fees were state property; with the help of the Canadian government, the parties resolved their differences, and construction could continue.⁸⁷

With the right ownership and commercial-counterparty structures in place, investors should consider encouraging domestic banks to participate in financing infrastructure projects; the international community might be more confident if local banks are involved. Finally, from a financial-market perspective, infrastructure debt could become a tradeable asset class if infrastructure securities would be further standardized, allowing investors to respond more easily to regulatory changes (see Box 5).

BOX 5: Infrastructure as a New Standardized Asset Class

The risk characteristics of infrastructure investments are rather different from those of other asset classes, such as equities or corporate bonds – notably, stable and inflation-hedged returns, as well as lower systematic risk.⁸⁸ Many projects therefore offer attractive risk-adjusted returns, with higher recovery rates and lower defaults than comparable corporate bonds.⁸⁹ Recently, international debate has intensified on ways of standardizing infrastructure securities and enabling infrastructure debt to become a tradeable asset class,⁹⁰ which could improve the attractiveness of investments for institutional investors at large. And that, in turn, would have an effect on risk – not to mitigate it per se, but to make it easier to transfer. Long-term investors, such as pension funds or insurers, would be better able to monitor their investments because a tradeable asset class would allow benchmarks to be developed. Furthermore, investors could respond more easily to changes in the political & regulatory risk landscape and adjust their asset allocation, and could thus “discipline” government behaviour by deterring adverse interventions in the first place.

EXAMPLE: Standardization's success is illustrated by *catastrophe bonds (cat bonds)*, which allow the transfer, via capital markets, of fiscal risks resulting from natural catastrophes. Natural disasters pose substantial fiscal risks: insured catastrophe losses exceeded \$100 billion both in 2005 (Hurricane Katrina) and in 2011 (the earthquake in north-eastern Japan). To deal with those peak damages, cat bonds came into play, exploiting the expertise of (re-) insurance companies on private capital market financing. Standardized claim procedures and payment terms have helped cat bonds to be rated by rating agencies, making them more interesting for institutional investors. In 2006, Mexico was the first country to issue a standardized cat bond, supported by Swiss Re. As of late 2014, cat bonds of over \$20 billion had been issued in a rapidly growing market.⁹¹

3.2 Effective interaction with the public sector

To mitigate political & regulatory risk, private companies should make a conscious effort to facilitate constructive interaction with the public sector. Such interaction will prevent misunderstandings, create transparency on the impact of regulations for the public and private sectors, and contribute to an overall mutually beneficial atmosphere.

Constructive communication with public agencies

Just as political & regulatory intervention can occur at any time during the life cycle of an infrastructure project, so can a well-designed communication initiative, whose details will vary according to a company's presence and activities in the country and sector. Some principles, however, will apply in most cases:

- *Avoidance of strategic misrepresentation.* From the beginning, bidders should refuse to give any misleading information during bidding and contract negotiation, even if such information is accepted (or even demanded) by public-sector representatives. For instance, bidders should not conceal any suspected problems that their construction plans might encounter.⁹²
- *Proactive sharing of information.* Conscientious communication will reassure the public-sector agency regarding successful delivery, and reinforce its trust in the private company's effort. For instance, the company should provide timely and comprehensive reports on progress and issues during the construction phase.
- *A single, continuous point of contact.* By employing a single individual or group to provide regular communication over the entire life cycle, the company will more easily build trusting relationships. The public-sector agency will know with whom to speak, as well as the appropriate contact in the organizational hierarchy in

case of difficulties, both before and after the construction period. This is one way to avoid the pattern of "seeing each other during tendering, and then again in court".⁹³

As infrastructure sectors are highly regulated, optimizing communications with public agencies is *strategically* important for private companies, which need to embed this responsibility at a high level within their organizations.

Monitoring of political developments, and advocacy strategy

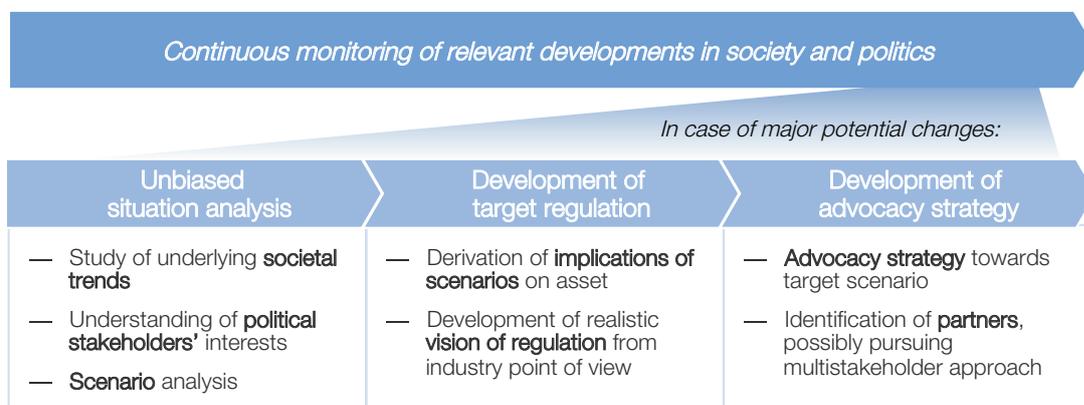
Given the importance of regulation, communications between the public and private sectors should not be limited to specific projects, but should extend to matters of industry-wide regulation. In that way, political decisions can take the industry's views into account, and will not come as a surprise. Figure 16 outlines one approach to regulatory engagement. It starts with an unbiased trend analysis, which could be conducted by external experts as the company might be overconfident about the accuracy of its own world view. With the potential for major regulatory changes, it becomes even more important for the private sector to engage proactively in developing a target regulation and an appropriate advocacy strategy.

In many cases, a joint industry approach on the national or international level is the most effective way to secure an appropriate regulatory regime.⁹⁴

EXAMPLE: *The International Air Transport Association (IATA) engaged with stakeholders after 9/11 to standardize previously uncoordinated international rules on airport security procedures. The new standard, agreed by 19 key governments, is being rolled out globally from 2014 to improve travellers' experience while keeping security tight at airports.*⁹⁵

Ultimately, any proposed regulation's credibility will depend on the balance maintained between various interests. Hence the need for multistakeholder approaches, to be discussed in chapter 4.

Figure 16: Approach to Regulatory Engagement



Source: BCG case experience

3.3 Inclusive community engagement

The private sector will also need to engage constructively with the public at large. By involving the affected communities throughout the asset's life cycle – from planning and construction through to operating the asset – companies can reduce the chance of political intervention.

Participatory planning and low-burden construction

Most infrastructure projects are highly advantageous for broader society, but they can also have an adverse impact on a local community. Thus, it is advisable to engage the community early on, and continue that engagement throughout. Relevant actions include the following:

- *Early consultations.* Environmental- and social-impact assessments will be part of the planning process, and these should include early and meaningful community consultations through appropriate formats. Such consultations will help to ease local anxieties, and improve the project design by taking the community's concerns into account.⁹⁶
- *Low-burden construction.* In many projects, the construction period creates the largest disruption for local residents. By incorporating suggestions from community consultations, companies can keep that disruption to a minimum; for example, well-planned route management will make construction traffic more bearable for residents.⁹⁷
- *Continuous communication.* Starting in the planning period, and continuing during construction, project developers should communicate with local residents on progress and potential impacts – to satisfy curiosity, allay justified fears and dismiss those unjustified, and generate a positive public involvement with the project.

- **EXAMPLE:** The construction of the €130 million *Hubertus tunnel in The Hague* caused concerns about the settling of soft soil in a prestigious residential area. In response, the contractor installed a €2 million sensor system, monitoring ground behaviour in real time and visualizing the data online. When an abnormal settling of soil was detected, automatic emails sent to relevant residents explained the company's actions. The residents trusted the approach and therefore refrained from taking legal action, thereby avoiding an estimated one-and-a-half-year delay.⁹⁸
- **EXAMPLE:** The redevelopment of *Berlin's Potsdamer Platz area and traffic junction* – the largest construction site in Europe at the time – was supported by the "Infobox", a three-storey, temporary information building. Here, anyone could get details of the project's aims, progress and long-term advantages. Between 1995 and 2001, the Infobox had more than 9 million visitors, and the scheme is now regarded as a blueprint for successful construction-site public relations.⁹⁹

Ongoing community involvement during operation

Engagement with the community should not end when construction is finished. Public support for the infrastructure asset is likely to require ongoing engagement, including activities in the following areas:

- *Education on operations.* Various measures are available to increase the public's understanding of the business and their positive involvement with it, such as railway museums, guided tours in ports and viewing decks in airports.

EXAMPLE: At the *Walchensee hydro plant* in Germany, the operator E.ON opened an information centre in 2001, which also offers tailored programmes for school classes. Although located in a lightly populated area, it now attracts more than 100,000 visitors per year.¹⁰⁰



- *Reporting on social and environmental impacts.* Transparent communication on the social and environmental impact of operations is extremely important, and can be included in standard health, safety and environment processes. It should be made in an easily accessible format for the target audience – for instance, short online updates instead of detailed technical reports.¹⁰¹
- *Participation in follow-up developments.* With any major refurbishments or extension projects, companies should again ensure that the community gets involved in the planning and construction process.

3.4 Responsible business conduct

Responsible business conduct is a prerequisite for sustainable economic success. If the society at large accepts the behaviour of infrastructure operators, stakeholder satisfaction will increase and the likelihood of policy-makers intervening will be reduced.

Prevention and prosecution of illegal or unethical behaviour

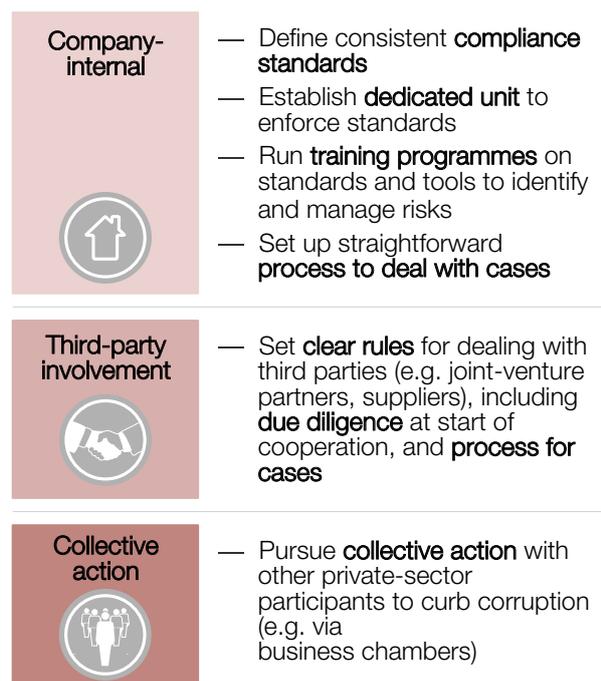
Illegal or unethical behaviour – above all, corruption – is not only unacceptable from a societal point of view, but also a major source of risk for individual companies. The public-sector measures to counter such behaviour are discussed in section 2.4; the private sector likewise has a responsibility to avoid or eliminate this behaviour. Figure 17 shows a three-step approach to that end:¹⁰²

1. *Company-internal measures.* The first step is putting one's own house in order. Most companies now have compliance standards in place, and run related training courses for their staff. Beyond prevention, a best-in-class company will also be ready to take legal action, and will prosecute cases in a professional and effective way. All measures should lead towards a corruption-free company culture.
2. *Third-party involvement.* A substantial risk of corruption can arise from third parties, such as joint-venture partners and suppliers. Clear rules will help to minimize that risk. Recommendations include due diligence at the beginning of any cooperative venture (guidelines are available from PACI),¹⁰³ and skilful handling of upcoming corruption cases.
3. *Collective action.* Ultimately, single actors cannot create a corruption-free environment; instead, a joint effort by all relevant parties is required. Depending on the specific issue, such an effort might involve collective action by the infrastructure industry, the business community as a whole, or by a larger group of public, private and societal stakeholders.¹⁰⁴

- **EXAMPLE:** The *Pearl Initiative* in the Arab world includes more than 30 international companies committed to promoting transparency, accountability and corporate governance, particularly through education and knowledge creation. One concrete outcome is the Centre of Excellence for Applied Research and Training at the American University of Sharjah, United Arab Emirates, which has been set up to share best practices and lessons learned to create a culture of transparency and accountability.¹⁰⁵
- **EXAMPLE:** Another emerging government-corporate collaboration is the high-level reporting mechanism (HLRM) developed by the Basel Institute on Governance and the OECD. It provides companies with a dedicated and high-level institution to report any bribery solicitation occurring during public procurement processes, and so helps to resolve issues while tenders are still open. In April 2013, Colombia became the first country to introduce the HLRM, with the 4G (Fourth Generation of Road Concessions) Program serving as a pilot.¹⁰⁶

Professional and sustainable operations

Figure 17: Private-Sector Anti-Corruption Measures



Source: World Economic Forum, PACI

Preventing illegal behaviour is not the only social responsibility that companies must undertake. Since infrastructure delivery often provides vital services to communities, companies also have a social responsibility to conduct operations in a professional and sustainable way. By doing so, they would also succeed in forestalling regulatory intervention.

- Professional operations. Society at large has two main interests regarding the operation of an infrastructure asset: providing adequate quality and affordable service, and avoiding adverse incidents. An operator's core business is to develop and implement procedures that serve these interests. To complement existing processes, the International Organization for Standardization (ISO) is developing a standardized framework – notably, the ISO 55000 series for general standards of asset management, and sector-specific requirements such as ISO/TC 224 for drinking- and waste-water systems.¹⁰⁷ Stringently implementing those norms can contribute to professionalizing operations.
- Sustainable operations. Besides managing their operations in a properly professional way, companies

also need to manage them *sustainably*, which involves respecting norms on employment, human rights, the environment and other areas. These norms are codified in international standards, such as OECD guidelines for multinational enterprises and for private-sector participation in infrastructure,¹⁰⁹ and are extensively discussed in the literature on corporate social responsibility.¹¹⁰

EXAMPLE: The Equator Principles set standards for assessing and managing environmental and social risks in project financing. Originally signed in 2003, they have been adopted by 80 financial institutions as of late 2014, covering over 70% of finance debt for international projects in emerging markets and thus contributing to more sustainable project delivery.¹¹¹



4. Joint Public-Private Measures

To thrive, infrastructure investment needs more than just “hard” measures such as contracts and financial instruments; it requires a spirit of cooperation as well, where public and private sectors understand and trust each other. A prerequisite for trust of this kind is open dialogue about not only individual projects, but also the overall vision for infrastructure, and the way that the two sectors can work together to produce success on both sides.

Management of risk perception and return expectation

Public and private sectors often have very different views on the risks related to infrastructure projects. For potential investors, higher perceived risk translates directly to higher expectations on returns; thus, risk perception needs to be adequately managed. Potential investors might withdraw if they regard the risk as prohibitive or the predicted returns as too low. And governments, meanwhile, might regard high-return expectations as “greedy” if they fail to understand the risk assessment made by potential investors.

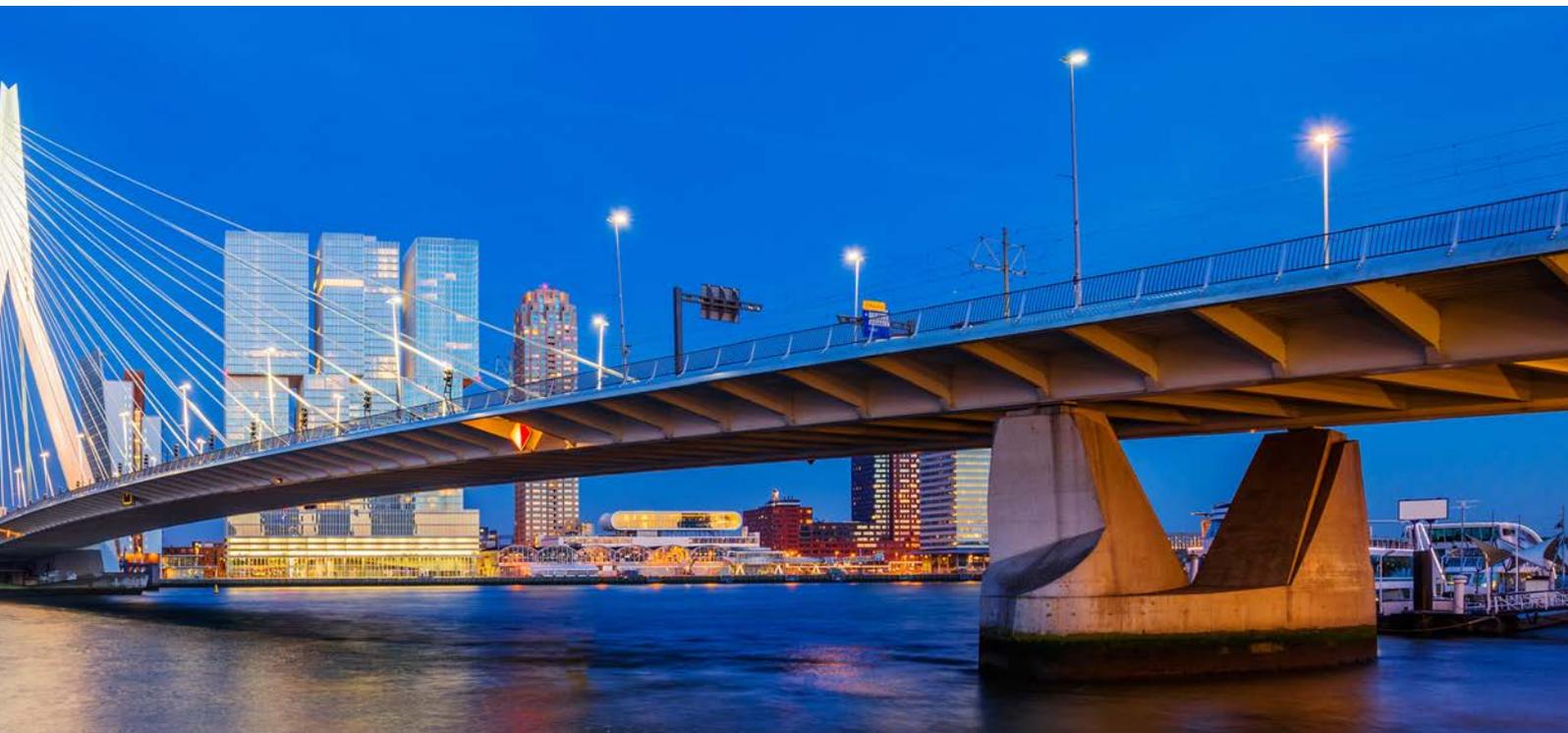
Related to this, some government officials and investor groups argue that the risks of investing, especially the political & regulatory risks, are “misperceived” in certain regions of the world, such as Africa.¹¹² To reconcile risk perception and return expectations for potential investors, governments will need to address the following four features:

- *Preparing projects rigorously.* The preparation of any infrastructure project, especially PPPs, has to follow a rigorous process, including an unbiased and robust feasibility study as the basis for estimated rates of return. (This process is discussed in detail in *Strategic Infrastructure: Steps to Prepare and Accelerate Public-Private Partnerships*, an earlier report in this series.) A typical danger is that of over-optimistic demand estimates; this should be addressed by a sophisticated forecasting methodology and a scrupulous review process, using risk-averse reviewers and reference-based forecasting, for example.¹¹³ In addition, projects to be tendered should specify adequate requirements allowing for long-term operation (for instance, resilience to climate-change impact) to reduce the likelihood of necessary regulatory interventions in the future.
- *Marketing investment opportunities.* Typically, a dedicated investment promotion agency (IPA) will be responsible for attracting investment into a country. To manage expectations, IPAs must not only highlight the advantages of investment opportunities, but also not “promise” unrealistic rates of return. This is especially true of vital services, as the general public would typically find it unacceptable that operators receive very high rates of



return, even if the risk involved is very high. International best practices for investment marketing are exemplified by successful agencies from OECD countries, such as ABA-Invest in Austria or Czech Invest.¹¹⁴ IPAs can contribute to a culture of open dialogue by also taking on the role of bi-directional communicator: on the one hand, explaining the country’s regulatory landscape to potential investors, while on the other, listening to potential investors’ concerns and then acting as “change agent” to achieve an appropriate balance between flexibility for the policy-maker and stability for those investors.

- *Sounding out the market.* To initiate a dialogue and gauge the level of market interest, public agencies should test their view of a project early on by seeking the opinions of experienced companies. The companies should be encouraged to provide open feedback on their view of the project’s scope, conditions, risk and overall attractiveness.¹¹⁵
- *Preparing comprehensive tender documents.* When a project is put out to tender as a PPP or for private delivery, the request for proposal will typically be a lengthy document and needs to be well-structured, consistent and comprehensive. The document’s figures, such as demand estimates and the estimated rate of return, should be underpinned by transparent analysis, including an overview of risks involved, and by background information such as historical timelines of relevant data.



For all these activities, the public sector clearly is in the driver's seat. But for meaningful results, private-sector participants too will have to be actively engaged, sharing their views frankly and contributing fully to a dialogue on upcoming projects. Various broker organizations, such as UN programmes, and development agencies can act as facilitators in the process, especially in countries that have limited experience with public-private cooperation.¹¹⁶

Multistakeholder dialogue beyond specific projects

Individual infrastructure projects involve many complexities that private companies must discuss with public-sector agencies and local communities (see sections 3.2 and 3.3). But the various stakeholders should look beyond individual projects, and use the opportunity to develop a joint view on infrastructure in the wider context: What are the key obstacles to infrastructure development? What are the possible levers for acceleration? And, what should be the contribution of each party? After all, on a larger scale, the interests of the public and private sectors are often aligned, and a multistakeholder dialogue should reinforce this alignment and encourage mutual understanding.

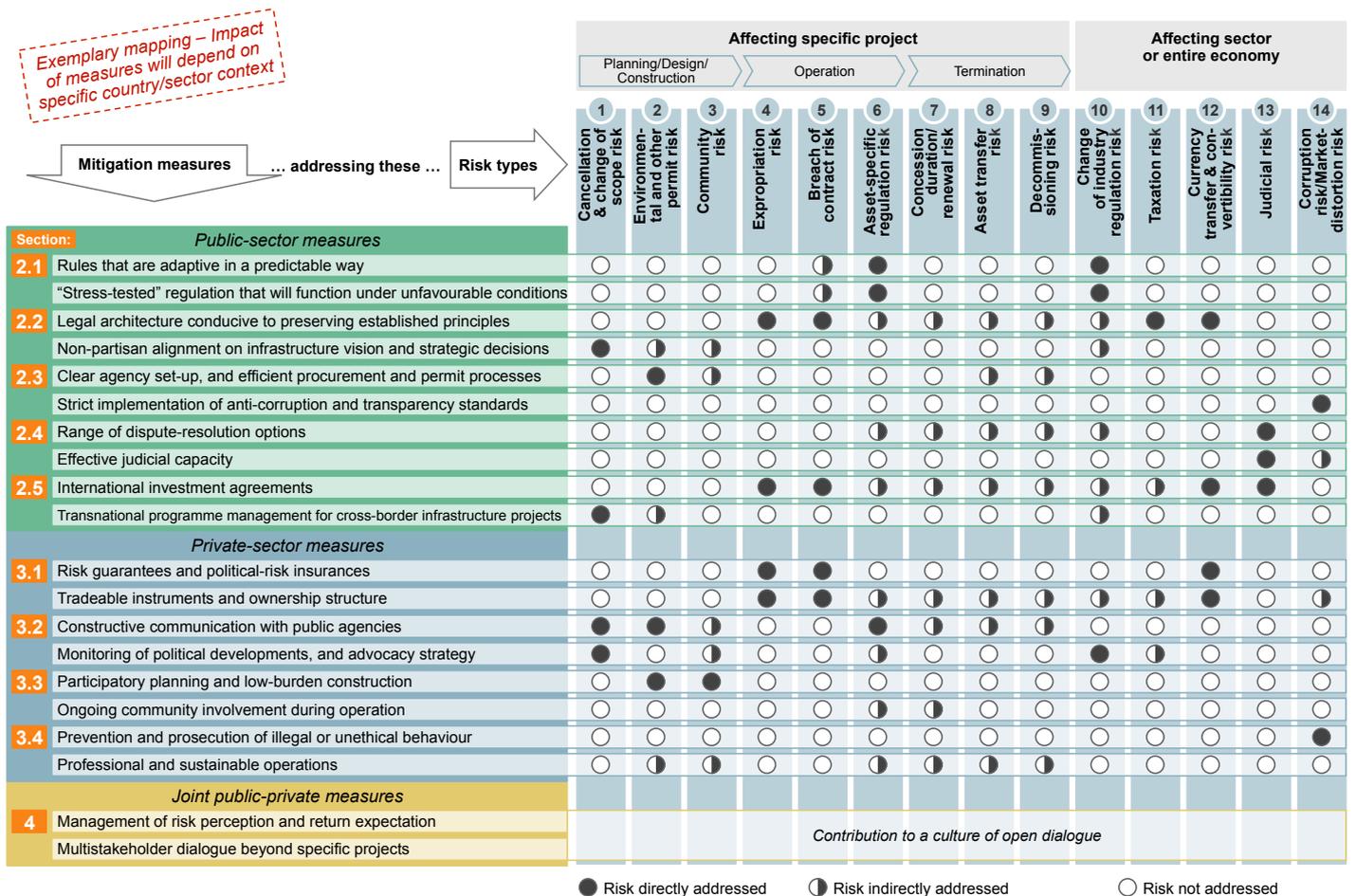
- **EXAMPLE:** *The Hydropower Sustainability Assessment Protocol*, launched in 2011, followed discussions between the hydropower industry, banks, governments, academia and non-governmental organizations on sustainable ways of delivering hydro-dam projects. Governed by a multistakeholder council, it provides a tool for reviewing and benchmarking projects with respect to their environmental, social, technical and financial implications. As of late 2014, more than 15 assessments had been conducted across five continents, and the EU has decided to adopt the protocol to assess European hydropower projects.¹¹⁷
- **EXAMPLE:** The World Economic Forum's *Business Working Group* on African infrastructure brings together private companies, multilateral development banks, NGOs and regional experts to promote developing the region's infrastructure. The initiative's focus is on creating a replicable acceleration process that meets the needs and constraints of both public and private stakeholders. In 2013, the group devised a methodology for selecting projects for acceleration. A pilot programme was selected – namely, the Central Corridor,¹¹⁸ which comprises 121 individual projects. In subsequent dialogue sessions, the group identified 18 of the projects for presentation at an investor forum in March 2015.¹¹⁹

5. The Way Forward

Modern infrastructure is crucial for economic development. It boosts inclusive growth in developing countries, maintains prosperity in the developed world and ensures a more sustainable and less carbon-intensive economy worldwide. One of the strongest impediments to increased infrastructure investment is political & regulatory risk, a major disincentive to private investors. A government can turn projected highways, power plants and other infrastructure assets – urgently needed for a country’s economic progress and the population’s welfare – into reality by resolutely addressing and reducing this risk, and thereby encouraging investment. Political & regulatory risk comes in many different forms and has a range of remedies, as outlined in this report. Figure 18 maps the mitigation measures onto the various risk types.

While the impact of any measure clearly depends on its exact specification, the mapping conveys the clear message that no silver bullet and no single overall remedy exists. Specific individual measures – international investment agreements, say, or risk insurance policies – might serve very effectively to mitigate specific risks, but they will have no impact at all on other types of political & regulatory risk. And, many private-sector measures might have a broad effect, but will make their impact only indirectly. Therefore, many if not all of the various measures must be adopted in order to reinforce and complement one another. The framework developed in this report duly encourages a holistic perspective: users can “check” each lever in turn, guided by international best practices, and decide whether it needs improvement.

Figure 18: Mapping of Risk Types and Mitigation Measures



Source: World Economic Forum, Boston Consulting Group

Imperative for action

Mitigating political & regulatory risk enough to boost private-sector investment is a huge challenge, and will take a dedicated effort by all stakeholders involved.

The *public sector*, being responsible for setting the regulatory framework, should carefully evaluate which risk types are most important, and continue working on measures that address those risks (see Figure 18).

The *private sector* should maintain or intensify its engagement. Certainly, companies and investors will want to continue assessing the political & regulatory risk very carefully (i.e. the likelihood and impact of adverse decisions) before committing to a project.¹²⁰ In doing so, they should consider the available risk-mitigation measures described in this report, and should help to build a culture of open dialogue beyond specific projects.

The *international community* might want to consider enhancing multilateral measures, for example by broadening the availability of guarantees to fill the “white spaces” in the political-insurance offerings, or by developing further international investment agreements. The standardization of infrastructure securities is another area that might need enhancement.

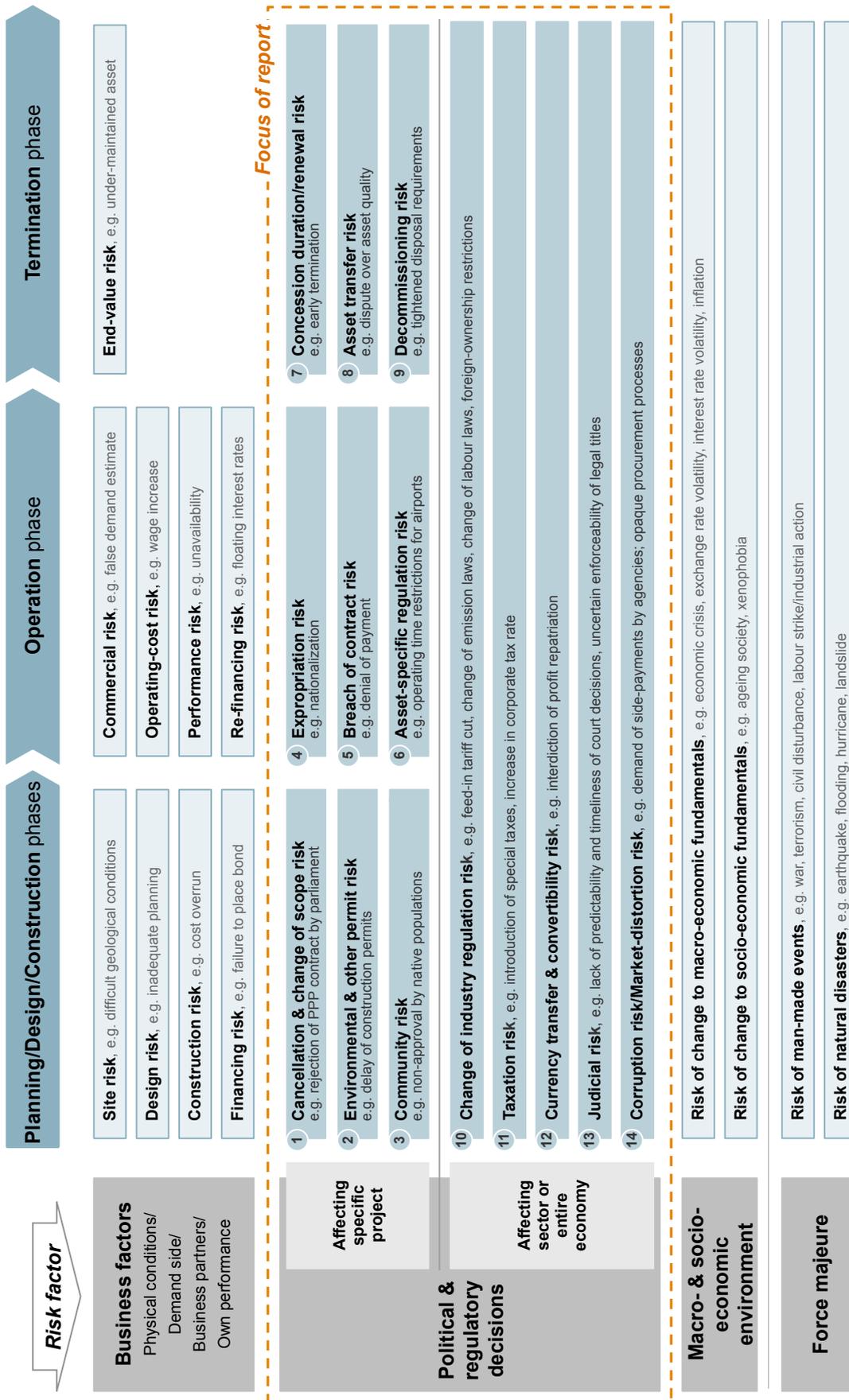
A balanced and conducive regulatory environment with low political & regulatory risk is not something that can be created overnight. It will emerge only through a sustained and cooperative effort from all stakeholders. The effort will be worth it, however, by narrowing the infrastructure gap and thereby benefiting society at large.



Abbreviations

4G	Fourth Generation (of road concessions programme – Colombia)
ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
BCG	The Boston Consulting Group
BIT	Bilateral Investment Treaty
Cat bonds	Catastrophe bonds
CCC	Canadian Commercial Corporation
CAFTA	Central America Free Trade Agreement
CETA	Comprehensive Economic and Trade Agreement
EBRD	European Bank for Reconstruction and Development
ECA	Export Credit Agency
EIB	European Investment Bank
EPC	Engineering-Procurement-and-Construction
FDI	Foreign Direct Investment
FET	Fair and Equitable Treatment
FTA	Free Trade Agreement
GDP	Gross Domestic Product
HLRM	High Level Reporting Mechanism
HSE	Health, Safety and Environment
IATA	International Air Transport Association
ICSID	International Centre for the Settlement of Investment Disputes
IFC	International Finance Corporation
IIA	International Investment Agreement
IPA	Investment Promotion Agency
ISO	International Organization for Standardization
LPVR	Least Present Value of Revenue
MPMO	Major Projects Management Office
MIGA	Multilateral Investment Guarantee Agency
NAFTA	North American Free Trade Agreement
NGO	Non-Governmental Organization
NIMBY	“Not in my back yard”
OECD	Organisation for Economic Co-operation and Development
OPIC	Overseas Private Investment Corporation
PACI	Partnering Against Corruption Initiative
PIDA	Programme for Infrastructure Development in Africa
PPA	Power Purchase Agreement
PPP	Public-Private Partnership
PV	Photovoltaic
RFP	Request for Proposal
SDG	Sustainable Development Goal
TEN-T	Trans-European Transport Network
TTIP	Transatlantic Trade and Investment Partnership
UNCITRAL	United Nations Commission on International Trade Law
UNCTAD	United Nations Conference on Trade and Development
UNECE	United Nations Economic Commission for Europe
USAID	United States Agency for International Development
WAIPA	World Association of Investment Promotion Agencies

Appendix: Landscape of Political & Regulatory Risk



Source: World Economic Forum; Boston Consulting Group

Endnotes

- ¹ That is why multilateral development banks such as the Asian Development Bank or the World Bank spend up to 50% of their resources on infrastructure development. See Adam Smith International (2012).
- ² These estimates apply specifically to public-sector investment into infrastructure. The effect is lower in emerging markets, because of the generally lower efficiency there of public-sector investment. See International Monetary Fund (2014).
- ³ The Sustainable Development Goals (SDGs), being prepared by the international community, are due to succeed the Millennium Development Goals, and should be approved by 2015. See UNCTAD (2014a).
- ⁴ See the recommendations in The Global Commission on the Economy and Climate (2014).
- ⁵ See the detailed discussion in World Economic Forum (2013a), in the “Introduction: The PPP Project Preparation Gap” section.
- ⁶ B20 Australia (2014).
- ⁷ For a detailed description of PPPs and their variants, see World Economic Forum (2013a).
- ⁸ Other reasons include a lack of bankable projects, and financial regulations’ limiting investment into the infrastructure asset class.
- ⁹ If other arbitral rules, such as United Nations Commission on International Trade Law (UNCITRAL), are taken into account, the figure is even higher. Almost half of all these cases were filed against developed states in 2013. See UNCTAD (2014b).
- ¹⁰ See Berg and Tschirhart (1988) for a comprehensive overview of the regulation of natural monopolies.
- ¹¹ See World Economic Forum (2014e).
- ¹² This definition of risk is more specific than the ISO conceptualization, which defines risk broadly as “effect of uncertainty on objectives”; see the risk management standard 31000 (ISO, 2009). In this report, the terms “risk” and “uncertainty” are used interchangeably.
- ¹³ See World Economic Forum (2013a), section 3.3.
- ¹⁴ More specifically, *political* risks result from decisions by legislative bodies (i.e. laws), and regulatory risks result from decisions by executive authorities. The borderline between these two decision-making groups varies from country to country, so this report examines the two types of risk together.
- ¹⁵ The structure and naming of life-cycle phases vary according to the sector and the organization managing the project (see Project Management Institute (2008)); the nomenclature used in the risk landscape is a simplified version of that used in Prieto (2013).
- ¹⁶ In certain cases, environmental-impact studies are necessary not only for individual projects but also for a larger ecosystem – for example, for an entire series of linked hydro dams. See USAID et al. (2010).
- ¹⁷ See The Guardian (2011); Railway Gazette (2012a).
- ¹⁸ See E.ON (2014); Frankfurter Allgemeine (2014); Handelsblatt (2012).
- ¹⁹ See Cossio (2014); The Wall Street Journal (2014a).
- ²⁰ See Hoffman (2012); Railway Gazette (2012b).
- ²¹ See The Democracy Center (2007).
- ²² See Stuttgarter-Zeitung (2013); Zeit Online (2012).
- ²³ See German Government (2011); Spiegel Online (2014).
- ²⁴ See The Hindu (2013); The Telegraph India (2013).
- ²⁵ See Tscherning (2011).
- ²⁶ See Bloomberg (2014a); Bloomberg (2010); Energy Charter (2014).
- ²⁷ See KPMG (2013); TeleGeography (2013).
- ²⁸ See Esposito et al. (2014); World Bank (2014); World Economic Forum (2014d).
- ²⁹ See Bloomberg (2014b).
- ³⁰ See Ghani et al. (2013).
- ³¹ See World Economic Forum (2013a).
- ³² The perception of technological, societal, geopolitical, environmental and economic risks is discussed in the World Economic Forum’s annual *Global Risks* reports. See World Economic Forum (2014a).
- ³³ For a detailed discussion of the “time inconsistency problem”, see Helm (2010); Kydland and Prescott (1977).
- ³⁴ The “not in my back yard” (NIMBY) principle is opposition to new developments that are close to a particular municipality, neighbourhood or the like.
- ³⁵ This inadequate understanding of changes in societal concerns has two broad causes: *organizational* malfunctioning and *individuals’* cognitive biases, such as projection bias, optimism bias or selective perception. See Baron (2007).
- ³⁶ On the phenomenon of strategic misrepresentation in megaprojects, see Flyvberg et al. (2002); Flyvberg (2005).
- ³⁷ In this report, “risk mitigation” is understood in a broad sense, involving measures to reduce the likelihood of risk events as well as measures to reduce the severity or impact of such events. In the classical schema, risk management consists of three steps: (i) identification of risks; (ii) assessment of risks; and (iii) solution to risks (risk mitigation is one option in step (iii); the other options are avoidance, transference and acceptance). For further discussions, see ISO (2009); Dorfman (2007).
- ³⁸ A concession is a frequent and flexible contractual structure used for implementing infrastructure assets. It can be broadly defined as a business operated under a contract, often with a degree of exclusivity within a certain area and within a limited time frame – typically 20 to 50 years. It is often seen in the port, airport and road sector, as well as the power sector in the form of a power purchase agreement.
- ³⁹ See EEG (2012); BMWi (2014); Unitcell (2012).
- ⁴⁰ See Gómez-Lobo/Hinojosa (2000); Engel et al. (2001); Vassallo (2006).
- ⁴¹ See World Economic Forum (2013a), section 3.6.
- ⁴² See Rijkswaterstaat (2010); additional details from discussions with Dutch experts.
- ⁴³ See Government of Panama (1998); US State Department (2013); Business Panama (2014).
- ⁴⁴ Similar cases occurred in France and Spain; see European Commission (2005a, 2006).
- ⁴⁵ See recommendation I&1B in B20 Australia (2014).
- ⁴⁶ See Schweizerische Eidgenossenschaft (2009, 2014); Infrac (2007).
- ⁴⁷ See Jooste/Scott (2011), and the discussion in World Economic Forum (2013a), section 4.1.
- ⁴⁸ See Ofgem (2014a, 2014b); The Guardian (2014).
- ⁴⁹ See B20 Australia (2014), recommendation I&4.
- ⁵⁰ See Northern Pipeline Agency Canada (2012); The Globe and Mail (2011); Government of Canada (2007).
- ⁵¹ See, for example, Transparency International (2011).
- ⁵² See UN (2004); OECD (2014); OECD (2011a).
- ⁵³ See Breslin et al. (2010); UK Government (2010).
- ⁵⁴ See the detailed discussion, including many best practices, in World Economic Forum (2013a), section 4.5.
- ⁵⁵ See G20 Australia (2014).
- ⁵⁶ See World Economic Forum (2013a), section 4.1.
- ⁵⁷ See Jadresic/Bertolini (2007); Jadresic (2006).
- ⁵⁸ See EBRD (2010); UN (1985); Round Table of Chief Justices (2002). Further international standards are: the Recommendation on the Independence, Efficiency and Role of Judges (Council of Europe 1994) and the Opinion on the Quality of Judicial Decisions (Consultative Council of European Judges 2008).
- ⁵⁹ Data from United Nations Conference on Trade and Development (UNCTAD) Investment Policy Hub (September 2014).
- ⁶⁰ For further details, see Born (2012).
- ⁶¹ The box covers only the most important clauses. For a detailed discussion, see Dolzer/Schreuer (2012).

- ⁶² One particular empirical challenge is endogeneity, as IIAs tend to be signed between countries that already exchange a significant investment flow. An extensive overview of empirical studies is presented in Sauvart/Sachs (2009); for more recent publications, see also the literature review in Nguyen et al. (2014).
- ⁶³ Permanent Mission of Mexico to the WTO in Geneva (2014).
- ⁶⁴ Several states expressed this view at the IIA conference within the United Nations Conference on Trade and Development (UNCTAD) World Investment Forum 2014 in Geneva on 16 October 2014. Statements can be downloaded at <http://unctad-worldinvestmentforum.org/programme/sessions/reforming-the-international-investment-agreements-regime/>.
- ⁶⁵ In addition, many of those countries are party to very few multilateral treaties such as FTAs.
- ⁶⁶ See Alvarez (2010).
- ⁶⁷ See UNCTAD (2012a), chapter IV.
- ⁶⁸ See B20 Australia (2014), recommendation I&5.
- ⁶⁹ Examples include the China-Peru FTA (2009) and the ASEAN-Australia-New Zealand FTA (2009). See Potterfield (2013); UNCTAD (2012b); Bronfman (2006).
- ⁷⁰ See UNCITRAL (2014); Clifford Chance (2014); Johnson/Bernasconi-Osterwalder (2014).
- ⁷¹ For example, CETA is the first agreement that proposes a binding code of conduct for arbitrators (based on ethical rules of the International Bar Association). See European Commission (2014).
- ⁷² For examples, see Salacuse (2007).
- ⁷³ See World Economic Forum (2014b).
- ⁷⁴ See European Commission (2005b); AU/AfDB/ECA (2008); ASEAN (2010).
- ⁷⁵ Matsukawa/Habeck (2007) includes profiles of multilateral and national providers, as well as a description of several transaction cases up to 2006. See also Berne Union (2014).
- ⁷⁶ See MIGA (2014); World Bank (1985).
- ⁷⁷ For an overview of national providers, see Gordon (2008).
- ⁷⁸ See MIGA (2009).
- ⁷⁹ See MIGA (2014); World Bank (1985).
- ⁸⁰ Based on discussions within the Global Strategic Infrastructure Initiative's Steering and Advisory Committees.
- ⁸¹ See OECD (2012); MIGA (2013b, 2013c).
- ⁸² See MIGA (2007); Diario Libre (2008).
- ⁸³ See BMWi (2013).
- ⁸⁴ See the discussion in the Introduction.
- ⁸⁵ See B20 Russia (2013).
- ⁸⁶ An alignment of interests between private and public stakeholders might also be reached through a well-designed PPP arrangement – see section 2.1 and World Economic Forum (2013a).
- ⁸⁷ See Government of Canada (2013); Diaz (2010); Aecon (2005).
- ⁸⁸ See, for example, Rothballe/Kaserer (2012); UBS (2011).
- ⁸⁹ Based on discussions within the Global Strategic Infrastructure Initiative's Steering and Advisory Committees.
- ⁹⁰ For instance, see Swiss Re/IIF (2014); Wiener (2014); Brookfield (2012); Inderst (2010). On proposed industry standards, see also European Financial Services Round Table (2014).
- ⁹¹ See The Wall Street Journal (2014b); Swiss Re (2013a, 2013b); Hardle/Cabrera (2010).
- ⁹² See Flyvbjerg et al. (2002); Flyvbjerg (2005); and the discussion in Box 2.
- ⁹³ For case studies on the set-up of public-affairs functions in a global organization, see Public Affairs Council (2013).
- ⁹⁴ Examples of recent transformative changes include a massive push towards renewable energies, increased regulation of CO₂ in road-vehicle emissions, and increased security levels in aviation after 9/11.
- ⁹⁵ See The National (2014); IATA (2012).
- ⁹⁶ For further discussion with respect to PPP projects, see World Economic Forum (2013a), section 4.6. A general overview of community engagement into planning, including examples, is provided by IFC (2007).
- ⁹⁷ See Steffen (2012), section 5.4.
- ⁹⁸ See Festa et al. (2013); van der Woude et al. (2009); Tunnel Talk (2007). Additional details from discussions with Dutch experts.
- ⁹⁹ See Die Welt (2001); Berliner Zeitung (2000); Fietz (1999).
- ¹⁰⁰ See Bayerische Gemeindezeitung (2012a, 2012b); E.ON (2011).
- ¹⁰¹ See World Economic Forum (2014c), section 1.4 for further discussion.
- ¹⁰² Launched in 2014, the global Building Foundations against Corruption project recently highlighted the importance of these steps for infrastructure projects. It is a cooperative venture of the World Economic Forum's Infrastructure and Urban Development Industries, and PACI.
- ¹⁰³ See World Economic Forum (2013b).
- ¹⁰⁴ Many examples are provided in World Bank Institute (2008).
- ¹⁰⁵ See Pearl Initiative (2012, 2014); Saudi Gazette (2012).
- ¹⁰⁶ See Basel Institute on Governance and OECD (2013); Government of Colombia (2013).
- ¹⁰⁷ See Hasselmann (2014), ISO (2001). A predecessor of ISO 55000 was the publicly available specification PAS 55 Asset Management from the British Standards Institution (BSI), one of the most popular standards. See the discussion in World Economic Forum (2014c), section 2.2.
- ¹⁰⁸ See OECD (2011b).
- ¹⁰⁹ See OECD (2007).
- ¹¹⁰ For a recent discussion, see MIT Sloan and The Boston Consulting Group (2013); for a conceptual discussion on how to include corporate social responsibility into corporate risk management, see also Kytte/Ruggie (2005).
- ¹¹¹ See Equator Principles (2014); Nguyen (2007).
- ¹¹² See G20 Mexico (2012).
- ¹¹³ See World Economic Forum (2013a), section 2.1.
- ¹¹⁴ See World Bank (2012). For best-practice sharing between IPAs, the World Association of Investment Promotion Agencies (WAIPA) offers study tours, training courses and conferences; see WAIPA (2012).
- ¹¹⁵ For details on how to prepare and run market soundings, see World Bank (2009).
- ¹¹⁶ See Stadtler/Probst (2012).
- ¹¹⁷ See International Hydropower Association (2014).
- ¹¹⁸ The Central Corridor is a highway and railway scheme connecting Tanzania, Uganda, Rwanda, Burundi and the Democratic Republic of Congo.
- ¹¹⁹ See World Economic Forum (2013c).
- ¹²⁰ This report's scope does not cover how individual companies conduct risk management beyond specific projects. It is worth mentioning, however, that companies can of course spread the risk, including political & regulatory risk, by choosing different geographies for their projects or, in some special cases, by keeping their options open. For example, in a project for a liquefied natural gas plant, a floating plant can be built instead of one on land, such that it can be shipped away if the political situation mandates it.

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