



Sector | Construction, Public Works & Infrastructure

INTRODUCTION

The value of this sector is huge, with half of all fixed capital investment by governments and Public-Private Partnerships being in the construction of public infrastructure. The volume is increasing every year and is expected to reach [\\$17.5 trillion](#) per annum by 2030. The value of losses through corruption is estimated at between 10 and 30% of this total, and others believe that a similar amount could be lost through mismanagement and inefficiency ([Wells 2015](#), [Matthews 2016](#)). This means that by 2030, unless measures are introduced that effectively improve this situation, close to \$6 trillion could be being lost annually through corruption, mismanagement and inefficiency. Losses on this scale cannot be tolerated in any sector, but losses in infrastructure investment have particular significance, because infrastructure underpins every aspect of economic growth and human development. 'Engineering and construction' is the sector with the most reported bribery and corruption in advanced economies globally – see the figure below from [Price Waterhouse Coopers \(2014\)](#)

Figure 2: Reported bribery and corruption, by industry



The corruption in construction is as evident in advanced economies as in developing countries. Whether it be sub-standard cement used in construction of department stores in Korea or in housing projects in New York City, the examples are as regular as in poorer countries. It is also systemic rather than occasional. For example, in the UK, half of a sample of 701 UK construction professionals believe that corruption is common throughout the British construction industry ([CIOB 2013](#)). And 49% of executives from international engineering and construction companies report significant corruption in their industry in 2014, more than in any other industry sector ([Price Waterhouse Coopers \(2014\)](#) *Fighting corruption and bribery in the construction industry*). There has also long been organised crime involvement in construction in developed countries, from Japan to Canada (e.g. see [Wells 2015](#)).

Two levels of anti-corruption action: Ministry-level and Project-level

Level 1. Construction, Public Works and infrastructure is a complicated subject in government. It can be the responsibility of a Ministry in its own right, such as the Ministry of Public Works or Urban Development, or a Ministry dealing with Public-Private partnerships. It can be a major part of other ministries, such as within the Ministries of Transport or Energy. Alternatively, large projects might be separated out from government as Public-Private Partnerships or placed under the supervision of a national Major Projects Agency. There are many corruption issues arising at this ‘Ministry-level’.

Level 2. At the same time, individual projects can be enormous, sometimes larger than a whole country’s GDP, with immense complexities. There is thus another block of corruption issues at this ‘Project level’.

Terminology note: For brevity we often refer to this sector review as ‘Construction’ rather than the full title of ‘Construction, Public Works and Infrastructure’.

AUTHORS AND CONTRIBUTORS

The originating author of this section is Mark Pyman, who is the managing editor of **CurbingCorruption**. Additional contributions have been made by Neill Stansbury; Peter Matthews; Hamish Goldie-Scott; John Bray.

1. Ministry-level corruption and reform

Guidance summary: STEP 1 Analysing the specific corruption types

We suggest you start by understanding in detail the different corruption types that you are faced with. You can do this in the following way:

1. Look at the template of the different sector corruption types in our review. Use this as the basis of your identification of the corruption types in your situation.
2. Gather available data. We suggest that you do this first at a macro level, to get a sense of which corruption issues are big or small across the sector, regions and/or countries. Often there is a lot of such macro data publicly available. Then, gather available data at the micro level, local to you.
3. Decide if it would help to do a formal analysis of the corruption types and the levels of corruption risk. This takes time but gives you a thorough baseline for your reforms. It also serves to show the level of danger and damage from corruption to staff and to the public.
4. Consider doing an analysis of the levels of support and opposition that you can expect. This is called a ‘political economy analysis’.
5. Prepare for the later step in which you develop your strategy (Step 4) by thinking about which the best ‘entry points’ are likely to be – certain corruption types, regardless of scale, merit being tackled first because they are the most likely to build momentum and/or enable further reform. This choice of starting point is hugely context dependent.

You can read more guidance on Step 1 [here](#).

Ministry-level overview

At the policy-making and regulation level, there is great scope for constraining the corruption that can arise from uncontrolled projects and developments. The scope is greater early on rather than during later phases, such as at the tendering, construction or payment stages.

The table below showing an overview of perceived corruption risks along the construction value chain illustrates this point of early intervention ([Goldie Scott 2012](#)):

Table 6.7 Overview of Perceived Corruption along the Construction Sector Value Chain

Stage of value chain	Risk level			Comments
	Low	Medium	High	
1. Policy making and regulation			□	Perceived possibility exists of abuse of the dominant role the government plays in controlling the construction sector.
2. Planning and budgeting		□		Perceived risk is present in parts of the sector that collusive practices drive up prices through reduced competition, higher-than-necessary technical standards, and weak associated planning.
3. Management and performance monitoring		□		Strong perception exists that inconsistencies in the quality of governance in the sector, combined with external pressures, can give rise to unjustified shortlistings.
4. Tendering and procurement		□		Persistent unsubstantiated perceptions of improper collusion are present in the sector, including between Chinese contractors.
5. Construction and operations	□			Reported examples of operational-level corruption tend to be opportunistic and fairly minor, though some corrupt practices do not appear to be considered particularly corrupt.
6. Payment and settlement of certificates	□			Provision of small facilitation payments are a common, though not necessary, part of ensuring prompt settlement of certificates.

Source: Author's analysis of stakeholder responses.

Similarly, a 2016 analysis by the [Hertie School of Governance](#) in Germany concludes that the way in which infrastructure policy is governed has more impact in reducing corruption than 'traditional' measures such as tight regulation. They identify four key reasons for poor infrastructure performance – Analytical capacity, Delivery, Regulation and Coordination. They point most of all to **insufficient coordination across government** as the major reason for both poor efficiency and corruption.

1.1 MINISTRY-LEVEL CORRUPTION PREVENTION

At the high level of decision making that is associated with policy on major public works and infrastructure projects, the corruption type itself is rather simple – it is collusion, favouritism and illicit influence in the decision making. The variation is not so much in the corruption type as in the different ways that the opportunity for corruption arise and are constrained and controlled, or not. Corrupt influence exists especially due to capture of the decision-making process by elites, to poor coordination across the many bodies

involved, to the endless complexity of construction projects, and to biased intermediate-level decision making.

Reform measures that the Ministry can take to prevent or address these are:



1. The government/agency makes a policy to commit to transparency throughout the whole construction cycle and establishes a team and structure to action this. This will include commitment to 'open contracting'
2. Creating clarity in the ministry organisational structures and processes and in relevant agencies
3. Adopting integrity measures, such as formal codes of conduct, asset declarations, declarations of conflicts of interest, chances for concerned individuals to speak up safely
4. Requiring clarity of the project delivery structures
5. Insisting on strong independent scrutiny
6. Active engagement with the construction industry and the related professional bodies
7. Conducting special analyses of possible illicit influence.

At the same time, there is also a need for policy level responses to the lower level corruption, such as in permits and licenses, as these too can enable the growth of collusion and illicit influence.

1.2 GOVERNMENT COMMITMENT TO OPEN CONTRACTING

Many governments are moving to adopt 'Open Government' standards in respect of public procurement, and particularly in respect of construction. One major aspect of this is 'Open Contracting' where the government commits to much greater transparency in respect of all aspects of public infrastructure contracting. These organisations are discussed in [Section 4](#) Transnational initiatives.

Example: Mexico and adoption of the Open Contracting data standard

Mexico is one of the countries making active progress against corruption in general, and especially in relation to infrastructure. Here is part of a speech from the Mexican Minister of Public Administration, Arely Gomez Gonzalez, launching a World Economic Forum initiative on tackling corruption in infrastructure and construction in March 2017: *'For the past four years, Mexico has been in a process of social, cultural and economic transformation introduced by 11 structural reforms that are redefining the relationship of citizens to their government, aiming to find new ways of addressing old problems to promote growth, development and well-being for Mexicans. Paramount to this process has been the creation of the National Anti-Corruption System (NAS), which has initiated a new legal framework to prevent, detect and prosecute corruption.... as a crucial element of Mexico's anti- corruption agenda, we are promoting the implementation of the Open Contracting Data Standard (OCDS) in the largest public infrastructure project of this administration and the fifth-largest in the world – the New Mexico City Airport. The OCDS increases transparency and guarantees the effective allocation of public spending by opening the data of the entire contracting process (planning, tendering, allocation and execution). And to take this effort further, we have amended the norms that regulate public procurement by making implementation of the OCDS a norm for all contracts in COMPRANET, the electronic contracting system of the federal government. At the international level, Mexico has launched the Contracting 5 (C5) initiative, together with the Governments of Colombia, France, the United Kingdom and Ukraine, to promote the exchange of best practices in the implementation of the OCDS. Mexico will chair this initiative during its first year.'*

Improved public procurement, including for construction, has seen huge advances in anti-corruption and transparency in the last ten years, from electronic procurement in multiple countries (See here for one of many such initiatives in Korea) across to radical reform in conflict countries (See here

for [Afghanistan's National Procurement Authority](#) example, which includes re-review of numerous construction tenders). The [Open Contracting Partnership](#) also has numerous examples.

1.3 CREATING CLARITY IN MINISTRY ORGANISATION STRUCTURE & PROCESS

In some countries, a significant part of the construction and public works corruption problems lie with Ministry officials, both low level ones and at the most senior levels. Ministries can easily become corrupted in whole or in part, or, at the least, tolerant of dubious behaviour. In countries with high and endemic levels of corruption, this problem may reach the point where the Ministry is 'captured' by corrupt interests.

If the problem is deep rooted, changing the mandate and structure of the Ministry and its related agencies might be necessary. Two current examples are from Afghanistan, a country that is recognised as deeply corrupt, but at the same time is making huge efforts against corruption.

Example: Afghanistan and the National Procurement Council

Afghanistan has had chronic corruption problems with its public procurement system. Through this system passed all the major public works and construction contracts, and this was well recognised as the epicentre of large-scale elite corruption. After a brief review of alternatives in 2016, the Afghan government decided on a radical reform based on a single regulatory body and a centralized procurement system. At the apex of this system is the [National Procurement Commission](#) (NPC). The NPC is chaired by the President of Afghanistan, with membership of the Chief Executive Officer, the Second Vice President, and the Ministers of Finance, Justice and Economy, together with the President's Senior Advisor on Infrastructure Affairs. Also, in attendance as observers are civil society, SIGAR (the US watchdog on US spending in Afghanistan), and NATO's Resolute Support Mission. Under the NPC is the National Procurement Authority (NPA), located within the Administrative Office of the President. The NPA is the "engine" of the procurement system; its team (currently around 280 staffers) links with the Procurement Departments in every Ministry, which are responsible for the administering the tender process.

The NPA and the Ministry procurement teams go through a back-and-forth process (with controlled time allowances for each iteration) in order to get each tender to the point where the NPA agrees that the contract can be put

up to NPC for approval. The NPC's members (including the President himself) then personally review each contract and collectively decide whether to approve or reject them at a weekly meeting (which usually lasts for 2-3 hours); the NPC approves typically about 10 contracts per meeting. All the decisions of the NPC are made public. The NPC has reviewed some 3,000 contracts, worth nearly \$6 billion, and approved most but not all of them. 88% of the contracts have been won through open tendering, 10% through restricted bidding, and 2% through single source. 145 fraudulent companies have been debarred.

This structure is remarkable for several reasons. Running a disciplined tender approval process is very hard work, even in sophisticated modern corporations. Keeping to a tight timetable requires immense discipline. It is remarkable that Afghanistan's whole government procurement machine—above the threshold level—is running through this system, particularly given the enormous commitment of time by the senior leadership. These leaders are also facing significant pushback from those whose interests are threatened by the creation of such a large “Island of Integrity”; indeed, accusations of corruption being flung back at the NPC and NPA in an attempt to undermine them. Moreover, a very different work culture is needed to run such a system. This is most noticeable in the NPA, which has harnessed the aspirations of young generation to work with increased efficiency and transparency to make a difference.

1.4 REQUIRING TRANSPARENCY OF DECISION-MAKING AT SENIOR LEVELS

Confidence is built from knowing that it is possible for the senior decision-making process and results to be scrutinised by others. One such example was given above, where the President plus relevant Ministers, plus outside stakeholders all participate in real time in the decision-making on each of the large procurements. They all have opportunities to ask questions.

1.5 ESTABLISHING A FORMAL INTEGRITY FRAMEWORK

Integrity approaches are a known part of the ways to constrain corruption – by improving the behaviour of staff rather than by compliance. In most national anti-corruption strategies, efforts to build integrity across the public sector are part of the mix of measures.

Table 2. **Integrity Framework for Public Investment**

Phase	Policy objective	Policy options
Applicable to all phases of the public investment cycle	Providing standards of conduct of elected and non-elected public officials	<ul style="list-style-type: none"> Developing codes of conduct, which include: <ul style="list-style-type: none"> clear mission of the organisation, its values and principles clear definitions on what constitutes a corruption risk guidelines on how public servants deal with ethical dilemmas, prejudices and grey areas that are encountered in everyday work sanctions for integrity breaches. Raising awareness and capacity on standards of conduct through training on the code of conduct, values and principles. Defining public officials in "at risk" areas with specific codes of conduct, especially for those who have higher interaction with private sector.
	Identifying and managing conflict-of-interest situations	<ul style="list-style-type: none"> Developing conflict-of-interest and private-interest disclosure provisions (OECD 2003 Guidelines for Managing Conflict of Interests in the Public Service). Providing clear examples and situations of private interests that may lead to potential conflict of interest situations. Setting specific restrictions and prohibitions on public officials (especially in decision-making positions) working in the public procurement authority or responsible for public procurement in government bodies. Requiring public officials to disclose their family members' private interests where potential conflicts of interest may arise.
	Providing standards of conduct for the private sector and consultants	<ul style="list-style-type: none"> Ensuring that the public sector develops and implements codes of conduct for private sector employees, which include: <ul style="list-style-type: none"> clear examples of activities that will compromise the ethical behaviour of the business when working closely with the public sector punishments for integrity breaches including administrative, disciplinary and criminal breaches. Applying strong legal sanctions to contractors who offer bribe payments such as restrictions on participation in future investment projects or other public procurement processes. Ensuring support and commitment from senior management in the prevention of corruption in public investment.
	Regulating and limiting the use of confidential information by public officials	<ul style="list-style-type: none"> Cancelling retrospectively the decisions based on confidential information. Setting up mechanisms that prevent confidential information, authority or influence from being used for personal gain or for improper advantage of other businesses and non-profit organisations.
	Providing protection for employees who report wrongdoings or breaches of integrity in both the private and public sector	<ul style="list-style-type: none"> Providing consistent advice and support to staff in case of questions or having witnessed misconduct and integrity breaches through a whistleblower hotline. Developing guidelines to report wrongdoing in case of integrity breaches or mismanagement. Providing effective protection ensuring that private and public sector employees, as well as their careers, are protected, in case they report wrongdoing in good faith.
Needs definition and selection phase	Ensuring that public investment decisions are based on national, regional or sectorial objectives	<ul style="list-style-type: none"> Providing online platforms where the public is invited to inform national infrastructure priorities. Setting up an independent body responsible for assessing the national infrastructure needs. Co-ordinate with sub-national governments to ensure that strategic priorities for investment are well aligned across levels of government.

In respect of public works and infrastructure, OECD have been putting effort into elaborating this approach. The [OECD 2016](#) report *Integrity framework for public infrastructure* is a contribution to developing policy and regulatory guidance for controlling integrity and corruption in construction. The table

opposite is taken from that report. It shows policy responses both to promote integrity and to constrain corruption opportunities.

1.6 REQUIRING CLARITY OF DELIVERY STRUCTURE MODALITY

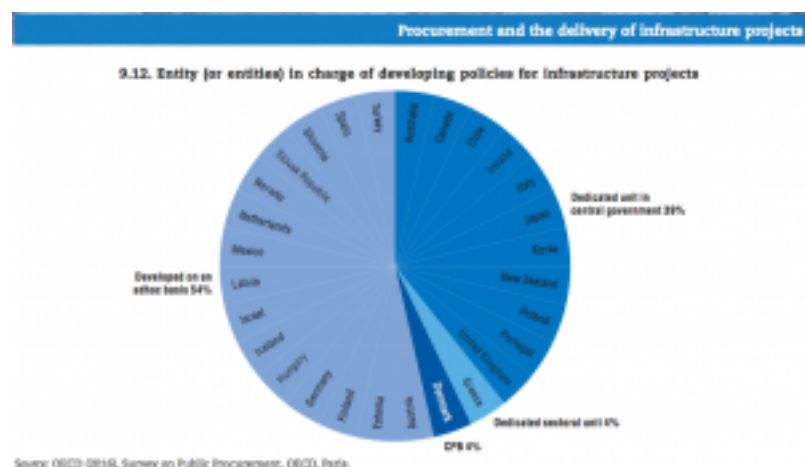
OECD gives guidance in their integrity framework report on the benefits of different sorts of delivery structures for major government infrastructure projects. Again, from their [OECD \(2016\)](#) report, p180:



‘Infrastructure projects constitute a major mandate of governments in the delivery of key public services and have high and direct implications on a country’s economic capacity, human development, social inclusion and environmental sustainability. once a project is planned and financing schemes have been defined, it is critical that governments deliver infrastructure projects in a cost- efficient way that is trusted by users and citizens to fulfil their mandate.

Decisions on how to deliver infrastructure projects involve a close assessment and careful balancing between risk allocation and value for money. the choice of a delivery modality is often criticised for being based on habit rather than on project and market characteristics. Some 15 OECD countries responding to the survey (54%) do not have a specific entity in charge of developing policies for infrastructure projects, including choosing delivery modes. this could hinder the application of a consistent methodology in choosing delivery modes for infrastructure projects. Some 13 OECD countries (46%) have a dedicated entity (or entities) for developing policies for infrastructure projects. these entities are mostly dedicated units in central government. Greece has put in

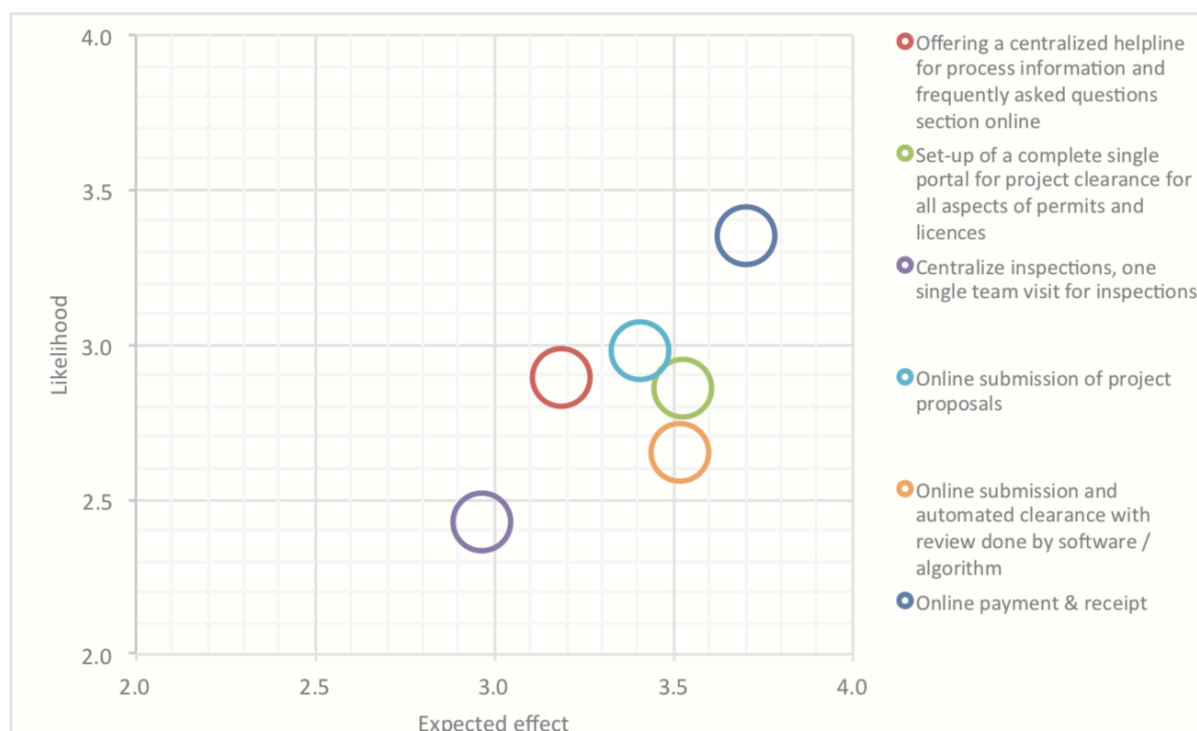
place a dedicated sectoral unit. In Denmark, the central purchasing body is in charge of developing policies for infrastructure projects.’



Example: Australia. The 2016 analysis by the [Hertie School of Governance](#) in Germany quotes the positive experience of Australia, who set up ‘Infrastructure Australia’ as a cross government agency to better coordinate government infrastructure planning (p46).

1.7 CARRYING OUT ANALYSIS OF REGULATORY IMPACT

The World Economic Forum has many good observations about how nations can strengthen themselves by way of policy measures in the infrastructure sector. Below, in an example from Mexico, is a policy-maker’s approach to different ways of controlling corruption in permits and licenses ([WEF, 2017](#)).



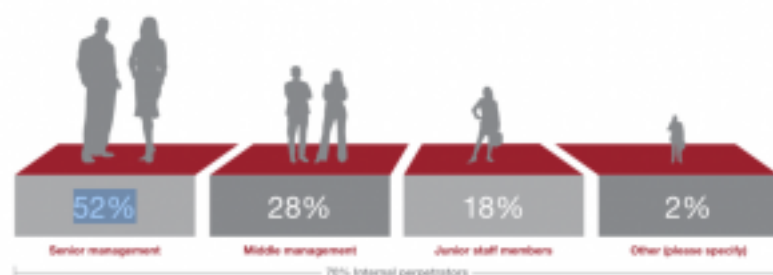
Solutions for corruption in permits and licenses.

From World Economic Forum's Partnering Against Corruption Initiative (PACI); Infrastructure and Urban Development integrity 2017; p21

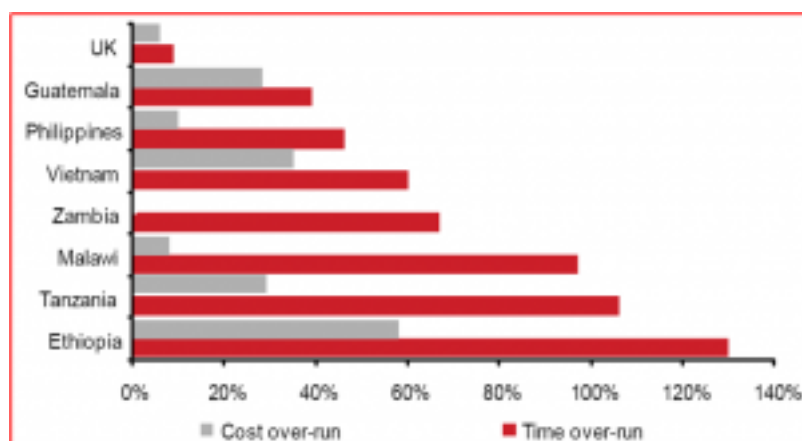
1.8 ACTIVE ENGAGEMENT WITH THE CONSTRUCTION INDUSTRY

There is much to be learnt from talking to the executives of the large construction and infrastructure companies. The [Price Waterhouse Coopers 2014](#) report finds that 70% of all corruption related to their projects is caused by insiders within their companies; most of them senior management.

Figure 6: Engineering & construction companies need to fight the threat from within



In cases where companies have been exposed in large corruption scandals, one of the industry responses, in mitigation, is to establish an advisory council of worthy people to advise the company on how to behave better in future. Two recent examples are from [Airbus](#) in Europe and [Odebrecht](#) in Brazil. There is no known evidence, however, on whether such councils are effective or perform merely as a whitewash.



1.9 ATTENTION TO PUBLIC-PRIVATE PARTNERSHIPS

Public-Private Partnerships (PPP) are a major feature of infrastructure projects, and likely to get larger still in view of the current gap in infrastructure investment. The World Bank has a whole [toolkit on PPPs](#), giving detailed guidance on how to do them well and effectively. COST is also involved, having just started a project on PPPs in Honduras, in cooperation with the World Bank. This extends to multiple subsidiary tools, for example:

- Assistance on laws and regulations via the PPP Infrastructure resource centre ([PPPIRC](#))
- An [International Infrastructure Support System](#) (IISS) that is being developed by the Sustainable Infrastructure Foundation in association with a number of multilateral development banks. The IISS is an online project preparation platform that provides resources to improve project preparation and encourage collaboration between investors and government. It will be accessible to investors and the public and is intended to provide a high-quality, consistent and systematic approach to early-stage project development.

1.10 INVOLVING CIVIL SOCIETY IN PROJECT OVERSIGHT

The immense complexity of major construction projects prompted many authorities to look at additional oversight of the specific projects by civil society bodies as an additional check on corruption risk. Examples include the new Berlin airport in 2005 (See [Olaya 2010](#), pages 120-125) and hydroelectric power plants in Mexico (See [Olaya 2010](#), pp 110-119).

1.11 INTERNATIONAL AID-FUNDED PROJECTS

One of the biggest funders of infrastructure projects in the developing countries are the Development Agencies. They have long had an interest in how to develop such projects to minimise corruption: one such example, *How to reduce corruption in infrastructure sectors*, written for the UK Development Agency DFID (Hawkins, 2013). Other Aid agencies also have extensive knowledge of corruption issues in public works and construction, such as USAID.



There is also a lot of knowledge on how and why construction projects went wrong. The diagram below, for example, shows an analysis of time and cost overruns for seven developing countries plus the UK. This shows the average time and cost overruns on a sample of 145 public sector construction projects in eight countries (Construction Sector Transparency [Briefing Note 5](#) from CoST).

1.12 OTHER REFORM APPROACHES

There are other approaches that you can take to shape the construction and public works environment. The actual reform measure in each case will be specific to your local context. You can read about different reform approaches that you can take and see how/whether they apply in your environment in other sector reviews.

2. Project level corruption and reform

Individual construction projects can be enormous, having budgets the same magnitude as a nation's total annual spending, involving many thousands of

sub-contractors. Each one, singly, therefore warrants dedicated attention to the corruption risks. One such example was the new airport in Berlin, Germany, which was cancelled due to corruption concerns and, when restarted in 2005, accompanied by an '[Integrity Pact](#)' as an additional way to limit the corruption risk.

The Head of the [Global Infrastructure Anti-Corruption Centre](#) identifies 13 features that make construction projects particularly prone to corruption. Besides the large size of the projects, he notes **Uniqueness** – No two construction projects are the same making comparisons difficult and providing opportunities to inflate costs and conceal bribes; **Complex transaction chains** – The delivery of infrastructure involves many professional disciplines and tradespeople and numerous contractual relationships that make control measures difficult to implement; the fact that **work is concealed** – Materials and workmanship are often hidden, e.g. steel reinforcing is cast in concrete, masonry is covered with plaster and cables and pipes enclosed in service ducts; and **official bureaucracy** – numerous approvals are required from government in the form of licenses and permits at various stages of the delivery cycle, each one providing an opportunity for bribery.

2.1 PROJECT-LEVEL CORRUPTION TYPOLOGY

At the early stage of a project – the concept and appraisal phase – the corruption opportunities are for politicians, senior officials or major companies to acquire public resources via political influence, collusion or similar. Such large-scale corruption takes place during the early stages of the project cycle, particularly during project identification, project preparation and procurement, where the financial rewards for a one-off act of corruption are potentially highest. Examples of these forms of corruption include selection of high value uneconomical projects (to allow for kickbacks and political patronage, designs that favour particular firms, and kickbacks for contract award.

At the project design, tender and construction phases, more operational forms of corruption are the norm, where payments are extracted by public officials from the users of a service or offered by a company to speed up or overcome an administrative or legal procedure during the later stages of the project cycle. Fees are paid to secure routine services such as provision of electricity or access to clean water. For a company, such corruption can include a fee to get an invoice paid, to certify completion of the works or obtaining customs clearance for equipment and materials.

A good template typology for construction projects comes from the Anti-Corruption Resource Centre U4 in Norway (2015), with the corruption issues listed according to the stage of contracting

Table 3. Corruption risks at various stages in the delivery of a construction project

Stages	Risks	Main actors
Project appraisal	<ul style="list-style-type: none"> Political influence or lobbying by private firms that biases selection to suit political or private interests Promotion of projects in return for party funds Political influence to favour large projects and new construction over maintenance Underestimated costs and overestimated benefits to get projects approved without adequate economic justification 	<ul style="list-style-type: none"> Government ministers Senior civil servants Procurement officers Private consultants (e.g., planners, designers, engineers, and surveyors)
Project selection, design, and budgeting	<ul style="list-style-type: none"> Costly designs that increase consultants' fees and contractors' profits Designs that favour a specific contractor Incomplete designs that leave room for later adjustments (which can be manipulated) High cost estimates to provide a cushion for the later diversion of funds Political influence to get projects into the budget without appraisal 	<ul style="list-style-type: none"> Government Ministers Senior civil servants Procurement officers Private consultants (e.g., planners, designers, engineers, and surveyors)
Tender for works and supervision contracts	<ul style="list-style-type: none"> Bribery to obtain contracts (leaving costs to be recovered at later stages) Collusion among bidders to allocate contracts and/or raise prices (potentially with assistance from procurement officers) Interference by procurement officers to favour specific firms or individuals Going to tender and signing contracts for projects that are not in the budget 	<ul style="list-style-type: none"> Procurement officers Private consultants (e.g., supervising engineer) Contractors
Implementation	<ul style="list-style-type: none"> Collusion between contractor and the supervising engineer (with or without the client's knowledge) that results in the use of lower quality materials and substandard work Collusion between contractors and the supervising engineer to increase the contract price or adjust the work required in order to make extra profits, cover potential losses, or recover money spent on bribes 	<ul style="list-style-type: none"> Procurement officers Private consultants (e.g., supervising engineer) Contractors and subcontractors
Operation and maintenance, including evaluation and audit	<ul style="list-style-type: none"> Agreement by the supervising engineer to accept poor quality work or work below the specification, leading to rapid deterioration of assets A lack of allocated funds for maintenance, as new construction takes precedence in the project identification stage for future projects 	<ul style="list-style-type: none"> Procurement officers Private consultants (e.g., supervising engineer) Contractors and subcontractors

From U4. Construction risks at various stages in the delivery of a construction project.

Example: Canada and collusion in the construction industry. Collusion among clients, consultants, and contractors is in fact believed to be widespread in the construction industry in many parts of the world, including in highly developed countries. Evidence is difficult to obtain, but the work of the Charbonneau Commission in Quebec (2017) is throwing a bright light on the corrupt relationships among the actors in public construction. The Commission's findings ... revealed complex webs of collusion, as well as highly sophisticated stratagems for the extraction of funds from public construction projects. Politicians, high level public officials, consultants, and contractors are all involved.' ([Wells \(2015\)](#) *Corruption in the construction of public infrastructure*).

Example: UK and collusion in the construction industry. The UK has been relatively open about corruption in its construction industry, as already mentioned, and the review by the Construction Industry Board (2013) is worth reading. [Harvey \(2014\)](#) comments that '*Corruption in the construction industry is deep-rooted and the UK's example at confronting the problem is admirable.*' For example, an [investigation](#) by the UK Office of Fair Trading in 2008 uncovered widespread collusion amongst companies bidding for government contracts ([Matthews 2016](#)). Such findings have led to a move away from competitive tendering based on lowest price and towards a greater focus on quality and collaborative working arrangements.

Other typologies

Project corruption risks. From Global Infrastructure Anti-Corruption Centre (GIACC)

Another typology comes from Stansbury at the Global Infrastructure Anti-Corruption centre (GIACC).

2.2 PROJECT-LEVEL GUIDANCE

There is a great deal of guidance available to both governments and to companies for controlling construction corruption at the project level. The most focused resource is the Global Infrastructure Anti-Corruption Centre (GIACC) (See [Section 4](#)). Most commercial consultancies also provide guidance. Here are two examples:

- [Price Waterhouse Cooper \(2016\)](#) *Corruption and public works: Maintaining an integrity edge*
- [Ernst & Young \(2014\)](#) *Managing bribery and construction risks. The real estate, construction and infrastructure industry.*

3. Develop the overall strategy

How you develop your strategy for tackling corruption in construction projects depends on which of the two different situations that we described earlier you are in: Working at ministry level or working on a construction project.

Pre-qualification and tender

1. Loser's fee
2. Price fixing
3. Manipulation of pre-qualification
4. Bribery to obtain main contract award
5. Bribery during sub-contract procurement
6. Corruptly negotiated contract
7. Manipulation of design
8. Specification of overly sophisticated design
9. Inflation of resources and time requirements
10. Obtaining a quotation only for price comparison
11. Concealment of financial status
12. Intention to withhold payment
13. Submission of false quotation
14. Falsely obtaining export credit insurance

Project execution

15. False invoicing: supply of inferior materials
16. False invoicing: supply of less equipment
17. False work certificates
18. Excessive repair work
19. Overstating man-day requirements
20. Inflated claim for variation (1)
21. Inflated claim for variation (2)
22. False variation claim
23. Issue of false delay certificate
24. False extension of time application
25. False assurance that payment will be made
26. Delayed issue of payment certificates
27. Concealing defects (1)
28. Concealing defects (2)
29. Set-off of false rectification costs
30. Refusal to issue final certificate
31. Requirement to accept lower payment than is due
32. Extortion by client's representative

For example, your strategic objective in a public works ministry could be to raise the trust of the public in the construction of public infrastructure, or to ensure that all construction professionals and officials operate to high ethical standards, or to reduce the average cost of all Ministry-sponsored construction.

However, at ministry-level, there is no published overall strategy that we are aware of (although we understand that Afghanistan Ministry of Public Works has recently set out one, as at mid 2018).

At project-level, your strategy objective might be to eliminate bribery in all the aspects of project design and construction, or to stop price inflation due to collusion among construction companies and the sub-contractors, or to enable all professionals involved in the project to safely report corruption by, without fear for their job or family. Most of the sources quoted in the previous section (here) also give guidance at the more strategic level.

Guidance summary: STEP 3 Developing an overall strategy

After you have reviewed the specific corruption types and identified possible reform measures, you can develop an overall strategy. Because curbing corruption is about changing the status quo, so you need to be thinking about how to build support, how to spread the benefits, how to bring opponents on board or how to outflank them. This is where judgement and political skill are important. You also need to think carefully as to which combination of measures and management is likely to result in the most impact within the limited resources and time available. We suggest that you develop an overall strategy – in collaboration with those who can also own it with you – in the following way:

1. Thinking through objectives and what impact you really want to achieve
2. Challenging yourselves by considering strategic opposites and different entry points
3. Flexibility – preparing yourselves to be wrong
4. People, politics and skill – where and how to build support
5. Implementation – setting up a sound programme
6. Maximising supportive structures across government & stakeholders.
7. Choices in high corruption environments

You can read more guidance on Step 3 [here](#).

4. Transnational construction initiatives

Guidance summary: STEP 4 Transnational initiatives

Review what international sector efforts are active in tackling corruption in your sector. They may be sources of knowledge, ideas, support and perhaps assistance in the development of your initiative. Sector-specific organisations include:

- Professional sector associations (many have an ‘anti-corruption working group’ or similar forum);
- Initiatives and programmes targeted on building integrity, raising transparency and reducing corruption in the sector;
- Multilateral organisations associated with the sector (eg World Health Organisation). They too may have anti-corruption knowledge and capability.

Non-sector-specific organisations also have sector knowledge. These include:

- Multilateral economic organisations such as World Economic Forum, IMF and OECD; among these,
- OECD has a large group focused on public integrity and anti-corruption.
- There are multiple stand-alone initiatives focused on issues such as beneficial ownership transparency, or access to information.
- Multilateral development organisations, like the World Bank, UNDP and U4, can hold valuable sector knowledge and expertise, whether or not you are based in a developing country.

4.1 GLOBAL INFRASTRUCTURE ANTI-CORRUPTION CENTRE (GIACC)

[GIACC](#) is a UK-based centre run by two construction lawyers, Neill Stansbury and Catherine Stansbury. They have a huge database of supportive material and templates that you can pick up and use. Since its launch in 2008, the GIACC Resource Centre has been visited on-line by organisations and individuals from 190 countries. You can contact them [here](#).

They publish a set of twelve anti-corruption standards for construction projects, each containing detailed guidance:

- **PS 1: Independent assessment:** An independent assessor should be appointed whose duty is, for the duration of the project, to monitor and assess the project for corruption and report.
- **PS 2: Transparency:** The government or project owner should disclose project information to the public on a website on a regular basis and in an easily accessible and comprehensible form.
- **PS 3: Procurement:** The project owner should implement fair and transparent procurement procedures which do not provide an improper benefit or advantage to any individual or organisation.
- **PS 4: Pre-contract disclosure :** At tender stage, the project owner and each tenderer for a major contract should provide each other with relevant information which could reveal a risk of corruption
- **PS 5: Project anti-corruption commitments:** The project owner and each major project participant should provide anti-corruption contractual commitments which expressly cover the main types of corruption, and which oblige them to implement anti-corruption measures.
- **PS 6: Funder anti-corruption commitments:** The project owner and each project funder should provide anti-corruption contractual commitments to each other which expressly cover the main types of corruption, and which oblige them to implement anti-corruption measures.
- **PS 7: Government anti-corruption commitments:** Relevant government departments should take steps to minimise extortion by their officers in the issuing of permits, licences and approvals. They should appoint a senior officer to whom complaints of bribery and extortion can be made.
- **PS 8: Raising awareness:** Major project participants should raise awareness among their staff by posting up anti-corruption rules at all project and site offices and providing anti-corruption training.
- **PS 9: Compliance:** Major project participants should appoint a compliance manager who will ensure compliance by the company and its management and staff with their anti-corruption commitments.
- **PS 10: Audit:** Financial audits should be carried out to ensure that all payments by the project owner have been properly made to legitimate

organisations for legitimate services. Technical audits should be carried out to ensure that the project design, specification and construction accord with good practice

- **PS 11: Reporting:** Safe and effective systems should be established by which corruption on the project can be reported by the public, by project staff, and by the independent assessor.
- **PS 12: Enforcement:** Enforcement measures for breach of anti-corruption commitments should include civil enforcement (e.g. disqualification from tender, termination of contracts, damages and dismissal). The risk of criminal enforcement (e.g. imprisonment) should be highlighted.

They also provide free on-line information, advice and tools, for both governments and companies, including:

- Corruption information: Detailed analysis of [what is corruption](#), [why corruption occurs](#), [how corruption occurs](#), [why avoid corruption](#), [liability for corruption](#), and [cost of corruption](#).
- Examples of corruption: Hypothetical [examples](#) of how different types of corruption take place through the project phases.
- Anti-corruption programmes for [organisations](#), [governments](#), [funders](#), [project owners](#) and [business associations/professional institutions](#).
- Project Anti-Corruption System ([PACS](#)): A set of measures designed to help prevent corruption on major projects. See the box below.
- Anti-corruption measures: Specific anti-corruption measures which an organisation can implement, either separately, or as part of an anti-corruption programme. See index on left of page to access these measures.
- Anti-corruption training: [On-line anti-corruption training module](#) (available in English, Spanish, French, German, Italian, Polish and Romanian). [Anti-corruption training manual](#) (available in English, Spanish and Chinese).
- Dealing with corruption: Advice on how [organisations](#), [individuals](#) and the [public](#) can deal with corrupt situations.
- Information on anti-corruption [conventions](#), [forums](#), [indices and surveys](#), and [initiatives](#).

4.2 COST INFRASTRUCTURE TRANSPARENCY INITIATIVE

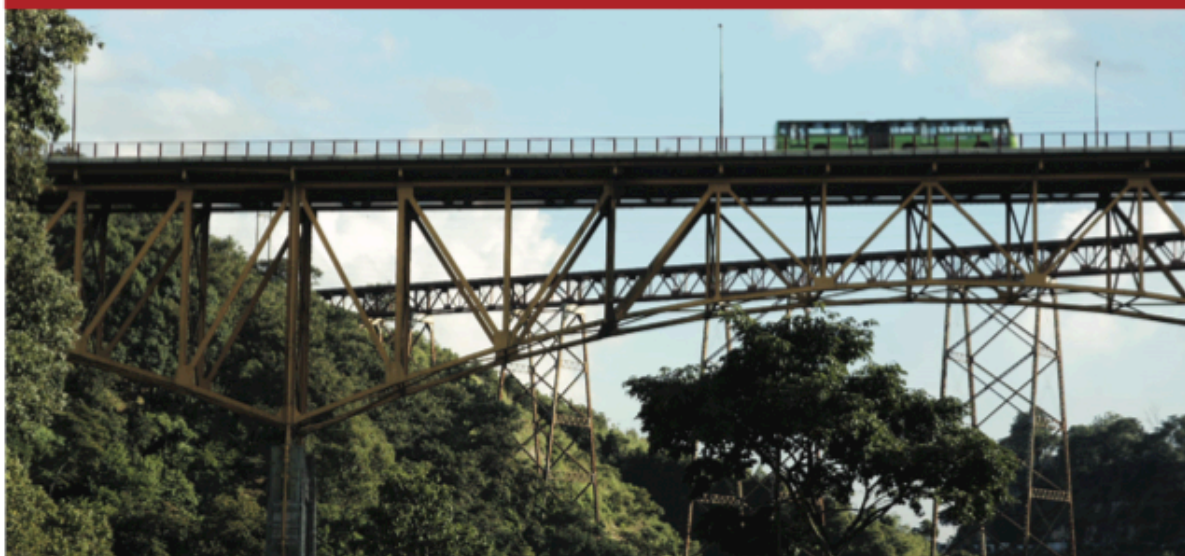
[CoST](#) is a multi-stakeholder sector-specific initiative, currently with 15 participating nations. Launched in 2012, *‘CoST grew out of the lessons learnt from a three-year pilot programme which tested the viability of a new transparency and accountability process in eight countries. CoST promotes transparency by disclosing data from public infrastructure investment.’* You can contact them [here](#).

The CoST initiative is gradually extending its footprint and now has four categories of activity:

1. Disclosure of information (from relevant state procurement agencies, e.g. road, health). This consists of 40 data points of information over the lifecycle of the programme. It starts on a voluntary basis for nations, then sets up formal disclosure requirement. Guatemala has recently done this.
2. Each CoST project works via *‘Multi-stakeholder working’* comprising representatives of government, the private sector and civil society.
3. Assurance is the 3rd CoST can organise independent assurance of one or more national projects. CoST prefers that government do this role, e.g. through audit, but in general public trust is low, so this is not useful. CoST may therefore select a small sample of projects to monitor. For example, there are some 5000 projects within the [CoST project in Guatemala](#)).
4. CoST achieves its impact by strengthening *Social accountability*. This often means working with existing institutions. For example, in Honduras there are hundreds of citizen monitoring groups at municipal level and CoST has been training them.

There is also a process under way to fully integrate – for Infrastructure Projects and Contracts – the CoST Infrastructure Disclosure Standard and the Open Contracting Data Standard for Infrastructure Projects (See Section 4.3 below).

CoST Guatemala improves the quality of construction and saves US\$5 million



CoST Guatemala saved US\$5 million through their intervention in the Belize Bridge project.

CoST Guatemala's Assurance Team highlighted that the use of emergency procedures for awarding the Belize Bridge contract in Guatemala City was inappropriate, leading to a contract annulment and saving of US\$5 million. Furthermore, the Assurance Team's report demonstrated that the bridge did not require rehabilitation and that the planned work could have made the bridge dangerous.

CoST Guatemala also increased the transparency levels from 16% to 80% on the Chichavac road project, infrastructure which now allows the local community to access life-changing markets and healthcare.

CoST Guatemala increased the transparency levels from 16% to 80% on the Chichavac road project.

CoST has enabled better integration and coordination between the project's construction companies, supervisions companies and the General Directorate of Roads and Highways. Through this project, the quality of construction has improved.

Ariel Alvarado, Chief of Pre-Investment and Planning, General Directorate of Roads, attributed the improvements in the quality this infrastructure to the project's inclusion in the CoST programme: "CoST has enabled better integration and coordination between the project's construction companies, supervision companies and the General Directorate of Roads and Highways. Through this project, the quality of construction has improved."

Watch the full story on CoST's YouTube channel

Making use of CoST

If you are not a participating nation, you can already use some of their guidance and benefit from seeing some of their successes, as described on the CoST website. As a participating nation, they offer the valuable opportunity to bring additional anti-corruption expertise into your country and specific issues, and to lend extra weight to problems that may otherwise more easily defeat you.

For example, Ukraine is a participating nation and there the CoST team are taking the lead in encouraging the disclosure of more information relating to road construction. Such disclosure in the early years is subject to the whims

of just a few individuals, and the involvement of an international group such as CoST can make more difference than local pressure only.

- They can access Ministers and the Cabinet of Ministers, if necessary, where there is resistance.
- They can also publicise obvious conflicts of interest, such as when quality control is not exercised by an independent agency, or when the road companies use Parliamentary connections to gain contracts.
- They can make arguments for new ways of working, such as helping associations of independent construction engineers develop independent control capabilities

In Honduras, they are developing such civil society monitoring capabilities by training and capacity building.

Bringing about change in a sector where the status quo has long favoured corrupt officials and contractors will still be very hard; but it will be easier together with an international entity like CoST than doing it alone. This is the big lesson of these international sector-specific groups.

4.3 OPEN CONTRACTING PARTNERSHIP (OCP)

The [Open Contracting Partnership](#) started in 2012, and in 2015 was spun out of the World Bank to become an independent programme. OCP has a well-practised methodology for how a Ministry, or a nation, can implement a policy of cleaner contracting. The technical basis for the guidance is a standard for open data, so that all parties can see the key data related to any contract. Country evidence so far includes [Ukraine](#), [Nigeria](#), [Latin America](#) and the [UK](#). A [secretariat](#) is based in Washington, D.C. OCP are governed by an independent [Advisory Board](#), made up of individuals from government, the private sector, civil society, the technology sector and development.

There is also a ‘subset’ of OCP, the ‘[Contracting 5](#)’ initiative. Colombia, France, Mexico, United Kingdom, and Ukraine officially launched the Contracting 5 (C5) initiative during the OGP Paris Summit in 2017.

You can contact them at engage@open-contracting.org

4.4 OPEN GOVERNMENT PARTNERSHIP (OGP)

OGP is broader than either construction or contracting: it is a multi-nation platform dedicated to enhancing cooperation between governments and civil

society. OGP was launched in 2011 to provide an international platform for domestic reformers committed to making their governments more open, accountable, and responsive to citizens. Since then, OGP has grown from 8 countries to over 70 participating countries and 15 subnational governments. In all of these countries, government and civil society are working together to develop and implement ambitious open government reforms.

If your country is a member of OGP, then you should be able to harness resources from OGP, and to ensure that public works reform is contained within the 'National Action Plan' that your government will be implementing in respect of getting more benefits from civil society engagement. In general, OGP's engagement on infrastructure transparency tends to run through COST and OCP, with which OGP has cooperation agreements. Read OGP's website [here](#).

4.5 UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP)

UNDP is well aware of the importance of tackling corruption in construction. See [this](#), for example after the 'Agenda 2030' was adopted in New York at the end of 2015: *'Given the magnitude of potential losses to corruption in the infrastructure sector, mounting to trillions of dollars annually on a global scale, clean construction is also of paramount importance for achieving Goal 16 on building peaceful, just and inclusive societies. ...We will fail on both these aspirations if we remain unable to substantively reduce all forms of corruption...Increased transparency and accountability in the construction sector is thus a sine qua non for a successful outcome of the 2030 development agenda'*.

Example: Mongolia and UNDP engagement on construction

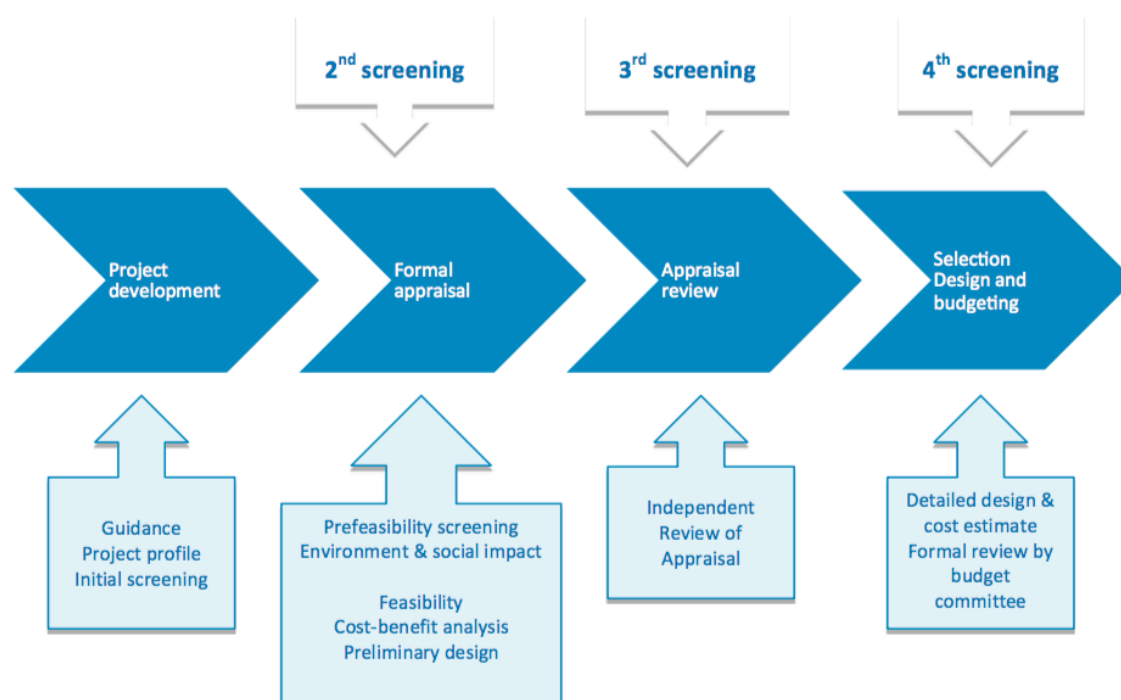
corruption. Construction companies face corruption risks throughout all steps of construction from submission of building permit requests until the State Committee endorses that building meets all technical requirements and standards. Corruption costs affect both small and large construction companies alike, and as a result increases the price paid by consumers. So, what are specific corruption risks at each of these stages and how can we address them? This was the main theme of the discussion held at the Chamber of Commerce and Industry of Mongolia on 23 November 2015 among construction companies, professional associations, and relevant government agencies. See [Mongolia](#).

4.6 U4 ANTI-CORRUPTION RESOURCE CENTRE, NORWAY

[U4](#) is a resource centre set up by Development Agencies to do independent research on corruption issues in developing countries. As they say in their website *We share research and evidence to help international development actors get sustainable results.* You can contact them at u4@cmi.no.

U4 has a 2015 guide on how to oversee and/or monitor corruption risks in large infrastructure projects, '*Corruption in the construction of public infrastructure. Critical issues in project preparation*'. The diagram below, for example, shows their representation of how a government can obtain assurance about integrity at the project preparation phase.

Figure 2. Four “must have” features for project preparation



Source: Adapted from Rajaram et.al. (2010)

From [U4 \(2015\)](#): Critical issues in project preparation

5. Ask and Connect

Contacting others really helps. It is not just a nice thing to do. Because corruption is a tough problem, with no ‘manual’ of how to go about tackling it. Much of the current guidance, whether in reports or in the form of technical advice from institutions, is generic. It rarely gets down to sector level actions,

which is where much of the real impact of corruption issues is seen and experienced.

Yet at the same time people everywhere really hate corruption. This means that others working in your sector round the world are almost always pleased to have been contacted and happy to talk or contribute.

Here's what we suggest:

1. Get in touch with the people at the transnational organisations outlined in Section 4 above. Ask for their input.
2. Ask other readers and followers of **CurbingCorruption**: Use the Twitter and LinkedIn buttons below.
3. Ask us. We may be able to offer ideas and/or point you to relevant examples. Use the 'Ask & Connect' form below or just contact us directly at editor@curbingcorruption.com
4. Contact the authors of any of the articles and references that we cite. Our experience is that they are happy to respond to questions.

Contacting others also has a second benefit. Everybody involved in efforts against corruption, whatever their country or sector, is nervous of whether their anti-corruption ideas are plausible. They are aware they have no deep knowledge of how to tackle corruption and have less time to spend on this than they would like; so they are lacking in confidence. The best way to gain confidence is to talk with other people who also understand the problems in your sector.

Reading and bibliography

ADDITIONAL READING

In this review, we have assembled all the useful guidance that we know of, together with country experiences in construction, infrastructure and public works anti-corruption reform. Read it first. The following are also very informative:

1. [Matthews, Petter \(2016\)](#) *This is why construction is so corrupt*. World Economic Forum.

2. [World Economic Forum \(2017\)](#) *Partnering Against Corruption Initiative: Building foundations for trust and integrity – infrastructure and urban development.* A good discussion of progress being made by Mexico
3. [OECD \(2016\)](#) *Integrity framework for public infrastructure.*
4. [Price Waterhouse Coopers \(2014\)](#) *Fighting corruption and bribery in the construction industry.*

WEBSITES

These websites have useful material, especially GIACC for addressing corruption at project level:

[Global Infrastructure Anti-Corruption Centre \(GIACC\)](#)

[Construction Industry Transparency Initiative \(COST\)](#)

[Open Contracting Partnership \(OCP\)](#)

BIBLIOGRAPHY

Construction, Public Works & Infrastructure: Full Bibliography

Basel Institute of Governance; *Collective Action*

Initiative.[https://www.collective-](https://www.collective-action.com/initiatives/list?title=&field_collective_action_type_value=All&field_sector_tid=51&field_main_country_iso2=All)

[action.com/initiatives/list?title=&field_collective_action_type_value=All&field_sector_tid=51&field_main_country_iso2=All](https://www.collective-action.com/initiatives/list?title=&field_collective_action_type_value=All&field_sector_tid=51&field_main_country_iso2=All)

Carraro, Beatrice (2017) GenieBelt. <https://geniebelt.com/blog/construction-prone-corruption>

Charbonneau Commission, Quebec (2017) *Commission of inquiry on the awarding and management of public contracts in the construction industry.*<https://www.toronto.ca/legdocs/mmis/2017/gm/bgrd/backgroundfile-106799.pdf>

Construction industry of Great Britain (CIOB) (2013) *A report exploring corruption in the UK Construction industry.* Sept 2013. <https://www.ciob.org/sites/default/files/CIOB%20research%20-%20Corruption%20in%20the%20UK%20Construction%20Industry%20September%202013.pdf>

Construction Industry Transparency Initiative

(CoST) <http://www.constructiontransparency.org/the-initiative/objectives?forumboardid=3&forumtopicid=3>

Ernst & Young (2014) *Managing bribery and construction risks. The real estate, construction and infrastructure industry.* [http://www.ey.com/Publication/vwLUAssets/Managing_bribery_and_corruption_risks_in_the_construction_and_infrastructure_industry/\\$FILE/Assurance %20FIDS sector paper Construction.pdf](http://www.ey.com/Publication/vwLUAssets/Managing_bribery_and_corruption_risks_in_the_construction_and_infrastructure_industry/$FILE/Assurance%20FIDS_sector_paper_Construction.pdf)

Freedman, Lawrence (2013) *Strategy: a history.* Oxford University Press. <https://global.oup.com/academic/product/strategy-9780199325153?cc=gb&lang=en>

See review in: <https://www.theguardian.com/books/2014/mar/07/strategy-history-lawrence-freedman-war>

Gilbert, Alan (2011) *Transparency and corruption in public contracting in Colombia.* <http://www.constructiontransparency.org/documentdownload.axd?documentresourceid=38>

Global Infrastructure Anti-Corruption Centre

(GIACC) <http://www.giaccentre.org>

Goldie-Scot, Hamish (2012) *Construction sector corruption in Ethiopia.* In: Plummer, Janelle (Ed). *Diagnosing corruption in Ethiopia. Perceptions, realities and the way forward for key sectors.* World Bank. http://www.ethiomeia.com/addis/diagnosing_corruption.pdf

Harvey, Sarah (2014) *Corruption in Construction: Watching Brief launched on construction industry.* <http://www.harveylawrence.com/corruption-construction-watching-brief-launched-construction-industry/>

Hertie School of Governance (2016) *The governance report 2016: Infrastructure governance.* <https://www.hertie-school.org/en/governancereport/govreport-2016/>

IMF (2017) *Western corruption survey in IMF report.* <https://www.weforum.org/agenda/2017/12/international-monetary-fund-imf-tackles-corruption>

Kenny, Charles (2007a) *Construction, Corruption, and Developing Countries.* Policy Research Working Paper; No. 4271. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/7451>

Kenny, Charles (2007b) *Publishing construction contracts and outcome details.* World

Bank. <http://www.constructiontransparency.org/documentdownload.axd?documentresourceid=40>

Kenney Charles (2006) *Measuring and reducing the impact of corruption in infrastructure.* World

Bank. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.333.7681&rep=rep1&type=pdf>

Khan, Mushtaq, Andreoni, Antonio, Roy, Pallavi (2016) *Anti-corruption in adverse contexts: a strategic approach.* SOAS Research

Online. <http://eprints.soas.ac.uk/23495/1/Anti-Corruption%20in%20Adverse%20Contexts%20%281%29.pdf>

Matthews, Petter (2016) *This is why corruption is so corrupt.* World Economic Forum. <https://www.weforum.org/agenda/2016/02/why-is-the-construction-industry-so-corrupt-and-what-can-we-do-about-it/>

OECD (2016) *Integrity framework for public infrastructure.* <https://www.oecd.org/corruption/ethics/Integrity-Framework-For-Public-Infrastructure-Brochure.pdf>

Olaya, Juanita (2010) *Integrity pacts in the water sector. An implementation guide for government officials.* Water Integrity Network and Transparency International.

Open Contracting Partnership(OCP) <https://www.open-contracting.org/wp-content/uploads/2016/05/OpenContracting-2pager-web.pdf>

Procurement Watch Incorporated (2009) *A study of anti-corruption initiatives in the Philippines' construction sector.* <http://www.constructiontransparency.org/documentdownload.axd?documentresourceid=39>

Price Waterhouse Coopers (2016) <https://www.pwc.com/us/en/forensic-services/publications/assets/pwc-aba-corruption-and-public-works.pdf>

Price Waterhouse Coopers (2014) *Fighting corruption and bribery in the construction industry.* <https://www.pwc.com/gx/en/economic-crime-survey/assets/economic-crime-survey-2014-construction.pdf>

Pyman, Mark, Eastwood, Sam, Hungerford, Jason, and Elliott, Jasmine (2018) *Analysing the anti-corruption approaches of the 26 top-ranked*

countries: an opportunity for a new generation of strategies. Institute for Statecraft and Norton Rose Fulbright, March 2018. Available at: http://www.statecraft.org.uk/sites/default/files/documents/EMEA_2384_Bespoke%20brochure_Countries%20Curbing%20corruption%20final%20report_V3....pdf

Pyman, Mark, Eastwood, Sam, Hungerford, Jason, and Elliott, Jasmine (2017) *Research comparing 41 national anti-corruption strategies. Insights and guidance for leaders.* Institute for Statecraft and Norton Rose Fulbright. Available at: <http://www.nortonrosefulbright.com/knowledge/publications/147479/counties-curbing-corruption>

Transparency International (2005) *Global corruption report 2005: Corruption in construction and post-conflict reconstruction.* https://www.transparency.org/whatwedo/publication/global_corruption_report_2005_corruption_in_construction_and_post_conflict

U4 (2015) *Corruption in the construction of public infrastructure: critical issue in project preparation.* <https://www.u4.no/publications/corruption-in-the-construction-of-public-infrastructure-critical-issues-in-project-preparation/>

Weick, Carl (2001) *Making sense of the organisation.* Blackwell publishing. <https://www.bookdepository.com/Making-Sense-Organization-Karl-E-Weick/9780631223191>

Wells, Jill (2015) *Corruption in the construction of public infrastructure: Critical issues in project preparation.* U4. <http://www.u4.no/publications/corruption-in-the-construction-of-public-infrastructure-critical-issues-in-project-preparation/>

World Bank (2012) *Public Works as a Safety Net: Design, Evidence, and Implementation.* Published: November 2012, ISBN: 978-0-8213-8968-3, e-ISBN: 978-0-8213-9461-8. <https://doi.org/10.1596/978-0-8213-8968-3>

World Bank (2011) *Curbing fraud, corruption and collusion in the roads sector.* http://siteresources.worldbank.org/INTDOII/Resources/Roads_Paper_Final.pdf

World Bank (1997) *Helping countries combat corruption: the role of the World Bank.* <http://www1.worldbank.org/publicsector/anticorrupt/corruptn/cor02.htm>

World Economic Forum (2017) *Partnering Against Corruption Initiative: Building foundations for trust and integrity – infrastructure and urban development* http://www3.weforum.org/docs/WEF_PACI_IU_Report_2017.pdf.