

How to Note: Reducing corruption in infrastructure sectors



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Purpose of this How to Note

The infrastructure sector is associated with corruption. Estimates of financial losses range between 10 and 30% of the value of publicly funded construction projects (Transparency International 2005). Global construction is predicted to grow by 70%, from US\$7.2 to US\$12 trillion, from 2010 to 2020 (Global Construction Perspectives 2010). Some estimates put potential losses as high as US\$2.5 trillion (CoST 2012).

In 2009/10 DFID invested £929.5 million into infrastructure, of which just over half was invested through country programmes (House of Commons, 2011). DFID provides direct grant funding for infrastructure programmes that reach the very poorest. This includes many water and sanitation and rural roads programmes, particularly in remote areas, where public funding is sometimes needed to reach those poorly served. Incorporating anti-corruption prevention mechanisms into these programmes is essential to minimise the risk of corruption and ensure value for money.

DFID support to infrastructure is also invested through the European Commission and multilateral development banks, which deploy concessional loans to finance large capital infrastructure projects. DFID also increasingly engages with partners who use grant funding to mobilise larger quantities of private sector finance (for example the Private Infrastructure Development Group (PIDG)). DFID needs to ensure its partners mitigate corruption when investing in their infrastructure programmes.

DFID has published specific plans to tackle the threat of endemic corruption in each of its 29 priority countries¹, as well as supporting action against international corruption, including through dedicated units in the UK Metropolitan and City of London Police and the Serious Organised Crime Agency.

The How to Note provides DFID Infrastructure Advisors and other policy makers involved at all levels of intervention in infrastructure programmes with practical guidance on how to identify and mitigate the risks of corruption in the infrastructure sector. It also points to further resources on the topic.

The guidance note consists of two sections:

- Section 1 explains what corruption is, and the forms it can take in the infrastructure sector, provides evidence on its scale and impact and discusses the challenge of how to address it.
- Section 2 provides practical guidelines for identifying and mitigating the risk of corruption in the infrastructure sector. It also provides some potential tools that can be integrated into infrastructure interventions by DFID and other development institutions.

¹ Afghanistan, Bangladesh, Burma, Democratic Republic of Congo, Ethiopia, Ghana, India, Kenya, Kyrgyzstan, Liberia, Malawi, Mozambique, Nepal, Nigeria, Occupied Palestinian Territories, Pakistan, Rwanda, Sierra Leone, Somalia, South Africa, Sudan, South Sudan, Tajikistan, Tanzania, Uganda, Vietnam, Yemen, Zambia and Zimbabwe.

1.1 What is corruption in the infrastructure sector?

This How to Note adopts the definition of corruption used by Transparency International: ‘the abuse of entrusted power for private gain’. This encompasses not only government (where private gain includes institutional and political gain), but also the contractors, consultants and suppliers who are engaged to deliver infrastructure services.

Acts of corruption include abuse of power, bribery, extortion, fraud, embezzlement and money laundering (see Annex 3 for a glossary of these terms). These activities will constitute a criminal offence in most jurisdictions, although the precise definition of the offence may vary ([GIACC 2013a](#)). Corruption can be described as ‘petty’ or ‘grand’:

- *Grand corruption* is where politicians, senior officials or major companies acquire public resources with the principal objective of maintaining or enhancing their power, wealth or status. Acts of grand corruption take 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 kickbacks² for contract award.
- *Petty corruption* is the everyday corruption where small 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 (Sohail and Cavill, 2007). For a company, petty corruption can include a small fee to get an invoice paid, to certify completion of the works or obtaining customs clearance for equipment and materials.

The different forms of corruption under each of these categories are numerous. The Global Infrastructure Anti-Corruption Centre (GIACC) highlights [47 corruption examples](#) during the procurement and construction stages of the project cycle, including bribing to win contracts, manipulating designs, false invoicing for inferior materials, or concealing defects. There are numerous examples of corruption during the project selection and preparation phases where the potential impact can be large. Annex 3 provides a glossary, and examples of the main types of corruption in the infrastructure sector.

1.2 Why is infrastructure susceptible to corruption?

Corruption in public infrastructure, as in so many areas of public service provision, is linked to weak governance, both in policy, legal and regulatory systems and institutional capacity. The nature of the construction industry and the manner in which infrastructure services are operated creates structural vulnerabilities that can encourage corruption. Transparency International’s 2005 report into corruption in infrastructure highlights 13 different features of infrastructure projects that make them particularly prone to corruption (Stansbury, 2005). The situation can be compounded by the political economy within a country, where policy choices are frequently driven by personal and political agendas.

² A kickback is a term used for a payment made to someone who has facilitated a transaction or appointment illicitly.



Box 1: Thirteen features that makes infrastructure projects prone to corruption

1. Size of the project – projects vary considerably in size. Large complex projects such as hydro-electric dams create ample opportunity to hide corrupt acts.
2. Uniqueness of the project – projects are often one-offs which makes it difficult to compare costs, which in turn makes it easier to inflate costs or hide corrupt actions
3. Government involvement – governments either own infrastructure or regulate its development. Where there are insufficient controls it can be relatively easy for officials to extract bribes.
4. The number of contractual links – these provide opportunities to offer a bribe for a contract award or for payment to be made.
5. A high number of project phases makes oversight difficult.
6. Project complexity creates uncertainty in how to manage problems. This creates opportunities to submit unjustified claims or inflate claims for payment.
7. Projects come at irregular intervals, creating pressure to win new contracts.
8. Work is concealed – many (physical) components in construction are concealed by other components. Lack of strong supervision creates the opportunity to conceal defective work or use cheaper components.
9. A culture of secrecy – there is no culture of transparency in the sector.
10. Entrenched interests – companies often have entrenched positions in the market place, often cemented by bribery.
11. No single organisation governs the industry – each of the many professions or trade have different codes of conduct and levels of enforcement of these codes.
12. Cost of integrity – corruption is an accepted norm with organisations unwilling to change the status quo as they risk losing out to less scrupulous competitors.
13. Lack of due diligence by financing bodies on the participants of an infrastructure project allows corruption to continue.

Source: Stansbury, N. (2005) [Exposing the Foundations of Corruption in Construction](#), in Chapter 2: Corruption in Practice, Transparency International Global Corruption Report 2005.

Infrastructure provision is characterised by *sector fragmentation*, where there are many procuring entities at each tier of government. These are the bodies in government ministries and agencies that enter into contracts with private companies to plan, design, supervise, build and/or operate the infrastructure. Separate contracts are signed with participants (design and engineering partnerships, professional surveyors, contractors, subcontractors and suppliers of materials and components). These are based on historically defined roles for the architect, engineer, quantity surveyor and builder, with separate responsibilities for planning and designing the structure, constructing the asset and supervising the construction (CoST 2011a). Each participant belongs to a separate commercial unit, often with competing commercial objectives and no contractual responsibility to each other. Although the participants have to comply with various control mechanisms (such as managing the cost and time of contractual changes) set out in their contracts, these mechanisms can be ineffective. Where control mechanisms are weak, or have broken down, an environment is created where any two parties can enter into an agreement to bend the rules.

The infrastructure project cycle consists of a number of different stages (e.g. project identification, project preparation, procurement, construction, service delivery and maintenance), often implemented over many years. Cost and time ceilings for completion of the works tend to be set at tender stage, yet in practice it is often difficult to predict the time or cost it will take to complete a project. Where the formal system does not work (or is by-passed), informal procedures can develop (Tavistock Institute, 1966).

On the basis of discussions with contractors and project managers in Ghana, Nigeria and the UK, Ladbury (2003) found informal systems involving practices common to all three countries. These include: bribery to get onto tender lists or to win contracts, submitting false information in documents, forming cartels, submitting multiple bids from the same contractor

under different names, front-loading³ the tender, putting in a low bid and then making claims or skimping on materials, not making good defects and foregoing retention payments. Many of the informants in Ghana and Nigeria did not see these practices as corrupt (see Box 2 for examples from the UK). Ladbury concludes that the opportunities for manipulation and the standards used to classify activities as ‘corrupt’ (as opposed to ‘good business practice’) appear to apply more to the construction industry than to the country at large. This makes the task of identifying and mitigating the risks of corruption all the more challenging.

1.3 Scale and impact of corruption

When establishing an infrastructure programme, it is important to have a broad understanding of the scale and impact of corruption within the sector and country concerned.

1.3.1 The scale of corruption

The difficulty of quantifying the scale of corruption in infrastructure has been highlighted in several studies. Kenny (Kenny, 2009a) estimates that the global average cost of corruption in infrastructure - solely due to bribery - is between 5 and 20%. Transparency International, OECD and the American Society of Civil Engineers estimate the costs of corruption as between 10 and 30 % of investment in public infrastructure. Although these studies are based on surveys and interviews (the strengths and weaknesses of which are highlighted in Annex 4 page 41), they provide an indication of the enormous scale of potential losses.

Losses during service delivery appear to be of a similar scale to those in the early phases of the project cycle. Davis (2003) estimates 20-35% of expenditure in the water and sanitation sector for service delivery in South Asia is on corrupt payments. This includes payments to expedite applications for new connections, for quick attention to water supply and sewer repair work, the falsification of water bills, and the provision of, or to ignore, illegal service connections. Gulati and Rao (2006) estimate that 20-30% of electricity is being stolen by consumers in collusion with staff (Kenny, 2009b).

A major challenge in assessing the scale of corruption is distinguishing corruption from mismanagement. The Construction Sector Transparency Initiative pilot identified causes for concern at each stage of the project cycle but it was unable to determine whether these causes were examples of corruption or simply mismanagement (CoST, 2011b) as Table 1 demonstrates. Further investigation would be required to be able to make this judgement.

Table 1: Causes for concern identified in the CoST pilot

Cause for Concern	Project
41% increase in price due to change in cladding... no reason provided for the change.	New office block for the Ministry of Works and Supply, Zambia
£4.5m cost increase due to delay in third party providing site access.	M40 road improvement scheme, UK
Volume of retaining wall in the bills of quantity exaggerated and the volume of excavation unimaginable.	Gindebir to Gobensa rural road scheme, Ethiopia
Inappropriate use of emergency procurement procedures leading to the direct award of a works contract.	Rehabilitation of Belize Bridge, Guatemala

Source: CoST (2011b), [‘Report on information disclosure and assurance team findings: International comparison’](#), Construction Sector Transparency Initiative, January 2011

³ Front-loading a tender means a contractor proposes the purchase of an abnormally high proportion of equipment, material and labour at the early stage of a contract.



Corruption in infrastructure is not unique to the developing world. In the last decade cartels of contractors agreeing which firm would win road contracts in the Netherlands have been exposed. This allegedly cost the Dutch taxpayer US\$0.5 billion per year (Doree 2004). In the UK, systematic cover pricing led to over 100 construction companies being fined by the Office of Fair Trading – see Box 2 (Chartered Institution of Building, 2010). In 2012, a [Commission of Inquiry on the Awarding and Management of Public Contracts in the Construction Industry](#), known as the Charbonneau Commission, was established by the Quebec Government to investigate the scale of collusion on public contracts. To date the Commission has heard evidence of collusion between major engineering companies and public officials, and a ‘mafia tax’ of 30% on the industry (Banerjee, 2012).

Box 2: Corruption in the UK construction sector

In 2008, 103 UK construction companies were found guilty of cover pricing, a form of bid rigging in which contractors collude to place high bid prices at the tender stage; they were fined a total of £129m. In 2006, 51% of construction industry respondents to a survey by the UK Chartered Institute of Building (CIOB) thought that corruption in the UK construction sector was either extremely or fairly common. In 2010, 45% of construction industry respondents to a second CIOB survey stated that cover pricing was still common.

Source: Chartered Institute of Building (2010), '[A report exploring procurement in the construction industry](#)'

1.3.2 Impact of corruption on developing countries

The impact of the increased cost of infrastructure, caused in part through corrupt practices, has a negative consequence for society in all countries. Corruption can also lead to unsuitable, defective, and dangerous infrastructure. See Box 3.

Box 3: Corruption kills

The 2001 Bhuj earthquake in India led to widespread damage, including the collapse of 461,593 rural houses of rubble masonry construction. Good seismic codes of practice exist in India, but their non-enforcement, combined with poor inspection procedures, led to the failure and heavy damage of 179 high-rise reinforced concrete buildings in Ahmedabad, 230 kilometres away from the epicentre. Recent statistical evidence published in Nature shows that about 83 percent of all deaths from earthquakes in the past three decades have occurred in corrupt societies usually with poor construction standards. The earthquakes in Haiti in 2010 and Iran in 2005 are extreme examples of excessive fatalities in nations where perceived levels of corruption are above average.

Sources: ProVention Consortium (2007), 'Construction Design, Building Standards and Site Selection: Tools for mainstreaming disaster risk reduction Guidance Note 12. International Federation of Red Cross and Red Crescent Societies and Ambraseys and Bilham, 'Corruption Kills' in Nature Vol. 469, January 2011 Macmillan Publishing pages 153-155.

Collusion in the market place leads to higher prices and significant cost overruns due to false claims. This reduces the resources available to governments for other public services. Where long delays are caused by officials demanding payment to certify works, the expected infrastructure services are not being realised. This creates pressure on existing services. Poor quality infrastructure leads to higher maintenance costs and a shorter life expectancy of the physical infrastructure. A government may also be found liable for an accident caused by defective infrastructure for which it is responsible. The problem was so large in Eritrea that its government reduced investment in construction to avoid the ensuing corruption (Collier, 2008).



International firms will also be influenced by legislation from the country in which they are registered. The UK Bribery Act 2010 applies to bribery in the private sector as well as to the bribery of public officials inside and outside the UK. It requires UK based organisations to apply 'adequate procedures' to prevent bribery and corruption being committed by persons associated with the organisation. The threat of judicial investigation by the Serious Fraud Office had begun to have an impact prior to the Bribery Act coming into force. Some UK-based companies have paid significant fines for overseas corruption. Companies in the US and Germany have also been prosecuted under domestic legislation in their respective countries. Firms also have to consider the potential for blacklisting by the multi-lateral development banks. Many firms have cooperated with inquiries and have subsequently gone through a process of changing their business practices. While this may be related to reducing the immediate cost of corruption to a firm, it also contributes to improving the overall operating environment.

Although UK firms have been concerned that the 2010 Act puts UK contractors and consultants at a competitive disadvantage, it is unlikely to impact on their overall market share. Many had already withdrawn from developing world markets (e.g. Sub-Saharan Africa) prior to the legislation coming into force as they were unable to compete on price with other firms (who may have had less regard to ethical and other standards (e.g. labour, environmental conditions)) (Wells, 2012).⁴

The direct and indirect impact of corruption is greater on small and medium sized enterprises (SMEs) than large firms. If a large contractor is not paid (because an official is delaying an authorisation) it will probably have the cash resources available to continue working. The firm may also have trained their staff to manage the situation. If it loses out on a contract because a bribe was paid by a competitor it can absorb the cost. A firm can decide whether to bid for future work from the procuring entity. If a situation persists, international firms may eventually decide to withdraw from particularly difficult markets (UNIDO and UNODC, 2007).

Surveys show that SMEs pay much higher percentages of annual revenues in bribes to public officials, and make additional payments to get things done much more frequently than large companies (UNIDO and UNODC, 2007). SMEs are often reliant for regular work from a single or small number of procuring entities. Their cash flow and access to capital is limited and the continued survival of their business is dependent on regular and timely payments to ensure they can continue to purchase materials and hire equipment and labour. Ultimately, they may be left with the choice of paying an official a bribe to ensure they get paid, or going out of business.

Ultimately it is society and especially the poor who are the main victims of corruption. Corruption exacerbates social inequality in terms of accessing education, work and health and can be an impediment to the empowerment of women. The poor also pay disproportionately through the illegal payments that are required to receive infrastructure services. They can often lose out from reductions in social welfare programme if government resources are diverted to other sectors.

⁴ This is demonstrated very clearly in a study of 11 large construction projects in Tanzania (ILO 2005)

2.1 How to assess the cost and impact of corruption

No single tool has managed to measure accurately and track corruption in the infrastructure sector. Advisors and policy makers should draw on a range of sources of information when assessing the potential impact of corruption. The sources of information can be grouped into six categories:

1. [Perception surveys](#) provide broad evidence of the level of corruption within a country or a particular government institution or service;
2. [Experience surveys](#) provide direct evidence of the experience of households, individuals and enterprises. They are particularly useful for understanding bribery payments to access services, obtain permits and licenses, or win contracts;
3. [Public expenditure tracking surveys](#) and [budget monitoring](#) are particularly useful in providing information on whether and where diversion and misuse of funds occur;
4. [Econometric studies](#) have provided evidence of the negative impact of corruption on economic growth and infrastructure service delivery principally through cross-country comparisons of a specific infrastructure sector e.g. water, electricity and telephones;
5. [Performance monitoring](#) through real time and post-completion financial, technical and forensic audits can highlight specific sector issues at programme and project level – see Box 4;
6. [Prosecutions](#) can provide real evidence of corruption within the sector. An example is the Lesotho Highlands Dam project which saw the successful prosecution in 2003 of the Canadian engineering firm Acres for bribing the Chief Executive of the Lesotho Highlands Dam Authority (Darroch, 2005).

Each has strengths and weaknesses. It is important to identify a number of different sources to find supporting evidence. Annex 4 on page 41 summarises the strengths and weaknesses of the sources of information, while Box 4 provides an example from the Zambia roads sector.

The Global Infrastructure Anti-Corruption Centre provides a structure to calculate the cost of corruption on infrastructure projects. It is described as the total loss and damage that is caused by all corrupt activity on or in connection with the project. In making this assessment, one should consider the following:

- Each corrupt activity that has occurred on or in connection with the project such as financial loss (inflation of project prices, increased maintenance and repair costs, environmental damage, loss of quality of life, personal injury and death);
- Each stakeholder that has suffered loss and damage as a result;
- The types of loss and damage that have been suffered by each stakeholder;
- The amount of each type of loss and damage suffered by each stakeholder.

GIACC then provides further guidance by breaking down each of these four areas with a series of possible areas of corruption. The sum total of that loss and damage may be said to be the cost of corruption in relation to the project. However, the loss and damage is unlikely to be wholly identifiable or quantifiable ([GIACC 2013 b](#)), not least because corruption is by its nature a hidden activity.

Box 4: Zambia Auditor General highlights misappropriation of road funds

A report into the roads sector from the Zambia Auditor General's Office, in partnership with the World Bank, provides a useful example of how a financial and technical audit can highlight the scale and types of corruption within a sector. The report highlighted misappropriation of over US\$250 million from the Road Development Agency during a three year period. This included work that had been paid for but had not started. It also reported the use of substandard materials on construction sites as demonstrated in the table below. This supported a 2008 survey of industry which stated that the use of substandard materials was the biggest source of unethical behaviour in the industry.

Defects found in project	Percentage of contracts affected
Improperly sized aggregate	44%
Too much clay	75%
Aggregates did not meet crushing strength	67%
Base thinner than required	81%
Surfacing dressing layers thinner than required	82%
Cement content less than specified	100%

Sources: Times of Zambia, May 18 2010, Government of Zambia, Report of Auditor General on the Road Development Agency for the Period 2006-2009 and Curbing Fraud, Corruption and Collusion in the Roads Sector, World Bank 2011.

2.2 How to identify and mitigate corruption risks

This section considers how to identify the corruption risks and mitigation measures at each stage of the project cycle (policy and regulation, project selection, project preparation, procurement, construction, service delivery and maintenance). It also suggests tools for mitigating corruption in infrastructure programmes. A summary of the risks, mitigation measures and tools are included in Annex 2 on page 353.

2.2.1 Policy and regulation

The regulatory and policy environment has a major influence on the risk of corruption further along the project cycle. There is considerable evidence that where there is a weak policy and regulatory environment the risks of corruption are greater. Paterson and Chaudhuri (2008) outline a set of policy and regulatory risks for the roads sector that could equally apply to all infrastructure sectors. When considering the potential risks of corruption an advisor or practitioner should pay attention to:

- a. The level of discretionary decision-making exercised by ministers and officials at each stage of the project cycle. Discretionary powers present a particularly high risk during project identification and the procurement process as the potential rewards from corruption are much higher during these stages.
- b. Unclear or overlapping department roles and functions at headquarters and subnational levels. This is particularly important where funding may be disbursed through budget support with delivery undertaken at different tiers of government.
- c. Unclear rules and regulations for procurement, quality control and financial control.
- d. The absence (or presence) of suitable arrangements for legislative oversight, national audit and space for independent media can create (or remove) an environment where individuals or organisations can potentially act with impunity.
- e. The lack of an independent judiciary and the capacity to investigate corruption reduces the risk of a corrupt act initially being identified and properly prosecuted. A low risk:reward ratio offers little incentive for a person to change their behaviour.

- 
- f. How staff are recruited and rewarded. Where recruitment is based on nepotism or political appointment there is the potential for corruption. Where technical qualifications are relaxed or waived in order to place a favoured person in key positions of authority, rent seeking may ensue. Low wages provides an environment in which the financial rewards from corruption become more attractive.

Over the last 15 years, many developing countries have gone through institutional reform processes which include measures to mitigate corruption. Some reforms are outlined below and summarised against the risks they address in Table 2 (overleaf):

- i Separating functions

This has been applied in particular, in the roads sector, where policy is set in a parent Ministry of Transport or Public Works. Delivery is through an agency led by a chief executive and overseen by an independent board. The intention was to reduce corruption through greater impartiality and transparency. Success has been mixed, with examples of corrupt officials 'capturing' the board and politically motivated board appointments – see Box 6. The appointment of non-state actors (e.g. road user representatives) to boards has endeavoured to mitigate this risk (Paterson and Chaudhuri, 2007).

- ii Procurement reform

Many low income countries have introduced a legal framework based on the UNCITRAL Model Procurement Law principles of efficiency, effectiveness and fairness. Although there is evidence that it has led to lower prices at contract award (Estache, 2011) this does not necessarily mean it leads to lower outturn costs or less corruption during construction. A public procurement oversight authority is established to ensure compliance with the legislation. The [Public Procurement and Regulatory Authority](#) in Tanzania has made significant investment in capacity building, including training, and regularisation of staff appointments. It recently debarred 358 foreign companies, either for fraud, corruption or breaches of contract (PPRA, 2012).

- iii Privatisation

There is evidence that private provision in utilities is broadly associated with greater efficiency and improved outcomes (Kenny 2009b). Such evidence can be found in energy and water (Gassner et al 2007; Estache and Kouassi 2002) and in telecommunications (Rossotto et al 2004). While it is difficult to attribute improved efficiency to reduced levels of corruption, it is considered likely to limit rent-seeking opportunities.

- iv Decentralisation

Decentralisation has been used to break up the monopolistic structure of infrastructure services. It has seen responsibility for smaller-scale infrastructure interventions such as rural roads and water and sanitation passed from highly centralised government to sub-national levels of government where institutional capacity is often very weak. Informal relationships may still dominate, unaffected by central government reforms – see Box 6. Wells (2012), and Johnson and Howarth (2012) state that decentralisation reduces corruption where there are high levels of community participation.

- v Anti-corruption agencies

Anti-corruption agencies have been established to investigate allegations of corruption. The widespread lack of success is attributed to inadequate capacity and funding, a lack of independence, a clear reporting hierarchy and the absence of a commitment by government to enact reforms that may be politically difficult (Doig et.al. 2005; Heilbrunn 2004).

Table 2: How reforms have targeted specific risks of corruption

Risk	Separating functions	Procurement reform	Privatization	Decentralisation	Anti-corruption commissions
1. Discretionary decision-making at each stage of the project cycle	✓	✓	✓	✓	
2. Unclear overlapping department roles and functions at headquarters and subnational levels	✓	✓	✓	✓	
3. Unclear rules and regulations in procurement, quality control and financial control	✓	✓	✓	✓	
4. Weak legislative oversight and national audit capacity	✓				✓
5. Lack of independent judiciary and investigatory capacity					✓
6. Staff recruitment and reward	✓				✓

Despite these reforms corruption continues to flourish. This can partly be explained by a poor understanding and enforcement of the law. CoST found that procuring entities in all pilot countries, including the UK, rarely met the legal requirements for disclosing project information (Hawkins and McKittrick, 2012). Donors can play a key role in mitigating these risks by working with government partners:

- To build the capacity of procuring entities to understand and apply the policy and regulatory framework.
- Promote improvements in public access to information.
- Take strong coordinated action to persuade government partners to investigate allegations of corruption.
- Introduce incentive based reforms, with rewards for staff who meet performance targets; or the development of an anti-corruption culture through training and personal development (Paterson and Chaudhuri 2007) see Box 5. GIACC provide a useful training manual and an on-line course.

Box 5: New incentives for public servants in Georgia

Having recruited a new class of public servants and dissuaded them from taking bribes, the government of Georgia needed to pay them a reasonable wage. Doing so proved difficult with limited state revenues. The government adopted an off-budget fund financed partly from the Open Society Institute, the United Nations Development Programme, and voluntary contributions by companies and private business people which helped provide performance bonuses to key staff across government agencies. This proved so successful that sufficient government revenues were raised to close the fund much quicker than had been expected.

Source: World Bank (2012a), 'Fighting Corruption in Public Services: Chronicling Georgia Reforms'. World Bank, Washington DC, USA

It is important to work closely with government partners to adapt what are largely bureaucratic reforms to suit the local political and social environment. Benitez et al (2010) argue that 'best practice' needs to be applied more flexibly to cater for the political economy of a country. The risk of ignoring the policy and regulatory framework is especially high where political power is based on a 'club for allies'⁵ such as in Uganda, Ethiopia, Venezuela

⁵ A highly controlled group of people bound by patronage and informal rules



or Zimbabwe. These patronage or club systems tend to keep political control over the infrastructure sector as part of their strategic plans, regardless of official policy, the legal framework and contract conditions. The consequence is a low level of trust by the private sector of the government, which in turn leads to higher costs of capital. In other countries and decentralised regions, the political space is wider but a clientele relationship between business and politics still applies - see Box 6.

Box 6: Corruption, competition and cooperating in the Indonesia construction industry

Since independence, the Indonesian infrastructure sector has been dominated by a corporatist structure between contractor associations and state institutions, especially with the military. Since the late 1990s there has been a series of market led reforms to break the corporate structures, public procurement legislation to encourage competition and a policy of decentralisation to the regions. However, large-scale corruption in infrastructure remains.

Klinken and Aspinall (2010) argue that although the corporatist organisations have lost the dominant position they once maintained, they remain important avenues through which influence and information is traded. More importantly the informal and collusive practices that underpinned the old corporatist system remain intact, particularly at a regional level. The motivation of the provincial political and business class is above all redistribution along clientele lines and in buying political stability. As consequence a theoretical open and transparent procurement system is shot through with manipulation where the payment of fees and the trading of political influence are ever present ingredients.

Source: Van Klinken G., Aspinall E, (2010) 'Building relations: Corruption, competition and cooperation in the construction industry' in the State and Illegality in Indonesia ed. Van Klinken G. Aspinall E.

2.2.2 Project selection

When identifying the risks consideration should be given to the process and political motivation for identifying and prioritising projects. In some cases, projects are conceived purely as vehicles for corruption and would not have passed this stage without this motivation (Stansbury 2005). Key decisions about public investment at this stage can be notoriously opaque where the decision makers are senior government officials and politicians.

The risk is of favouring large capital projects, such as highways and hydro-electric schemes (which offer higher financial returns from kickbacks or siphoning funds and greater opportunities for political patronage) over small-scale projects or maintenance schemes. Capital projects may also be favoured for electoral purposes, both in terms of winning voters and for generating revenue for election campaigns, as seen in Tanzania, Ghana and Nigeria (Ladbury 2003) - see Box 7. Corruption may result in the approval of projects which are completely unnecessary ('bridges to nowhere'), in which case 100% of the investment is wasted. Objective reviews of national development and sectoral plans should help identify the balance between investment in capital projects and rehabilitation and maintenance schemes. Where infrastructure programmes are being managed through budget support it is essential that a clear mechanism for prioritising infrastructure projects is in place.

Box 7: Corrupt elections

Corruption is a distinctive feature of multiparty politics in Tanzania. In some cases, the ruling CCM has been accused of using government projects in exchange for votes. A typical example was the construction of the Kigoma-Ujiji road during the Kigoma by-election in 1994. The Court of Appeal of Tanzania ruled that the maintenance work during the election campaign constituted non-compliance with the prohibition against electoral bribery, and was executed with the corrupt motive of influencing voters to vote for the CCM candidate and accordingly affected the results of the election.

More recently, it has been reported that TANROADS, the national roads agency, signed 22 major road contracts for alleged kickbacks without apparent funding in the year leading up to the 2010 General Election. The projects were to be completed within one to three years but only 6.5% of the total contract cost was included in the 2010/11 annual budget and only 7.8% had been paid as mobilisation advances by June 2011.

Sources: TANROADS Annual Report 2011 and 'The October 2010 General Elections in Tanzania', A.B. Makulilo and C. Raphael Department of Political Science & Public Administration, University of Dar es Salaam.

The scale of the risk varies according to the political economy of a country and the institutional capacity of the individual procuring entity and that of the government as a whole. The risk is likely to be higher in fragile states. The risk is likely to be compounded where there is sudden increase in government revenues (whether in the form of credit lines, taxation or direct investment). A study into the political economy and the construction sector in Angola highlighted the substantial increase in credit lines from, amongst others, China, Portugal and Brazil. The revenue generated from its resource wealth had led to US\$30 billion invested in construction since the end of the civil war in 2002. The study highlighted the high degree of informality and a near absence of effective management of public investment projects. A high risk for potential corruption is created where there are no formal procedures for prioritising projects (Wells 2011).

One option is for government partners to publish the programme of infrastructure projects on websites and in newspapers. In Chile, the public are invited to prioritise infrastructure projects on a [website](#). Community groups can be involved in prioritising small-scale infrastructure programmes, increasing transparency in the decision-making process and minimising the risk of political interference at local levels.

2.2.3 Project preparation

Activities include feasibility studies, social and environment impact assessments, site surveys and the design, either undertaken in-house by the procuring entity or outsourced to specialists. A quarter of the concerns found during the CoST pilot were identified during this phase of the project cycle. The risk of leakage at this stage is limited, but an incomplete design or inadequate surveys can create a set of corruption risks further along the project cycle. The risks at this stage include:

- Inadequate or incomplete designs
- No strategy for operations and maintenance
- Poor cost estimations
- Inadequate or no site surveys
- Politicisation of social and environmental impacts



The consequences of these risks include:

- Over-designed and overpriced projects
- Tailoring a specification to suit a particular firm
- High estimate of costs to provide an opportunity to divert funds
- Social and environmental impact assessments that deliberately distort compensation for project-affected people
- Site surveys that exaggerate the risks to suit a design specification

Enhancing the management capacity of the procuring entity can help to ensure that designs are completed and site surveys are undertaken. ICT systems can gather and analyse cost information to help improve estimations. Infrastructure advisors can work with procuring entities to adapt construction standards to identify areas at risk of over-specification or design and ensure that operations and maintenance plans and budgets are in place.

2.2.4 Procurement

Procurement is a major risk area for corruption. Companies or individuals may bribe officials to win contracts and bidders can collude with each other to control prices and/or allocate contracts. The risks at this stage of the project cycle include:

- Procurement procedures are unclear
- The evaluation criteria exclude capable companies from bidding
- Lack of transparency in procurement procedures
- Inconsistent application of procurement procedures
- Procurement procedures are not enforced
- Long period of time between notification of the preferred bidder and contract award

As described above (page 12), many countries have adopted new procurement legislation based on UNCITRAL Model Procurement Rules. Under these rules, consultants are procured using a two envelope approach whereby the envelope containing the price is only considered following a technical evaluation. Construction contracts are awarded based on lowest price as it is presumed that they are bidding to deliver a fixed design, there are accurate site surveys and they can accurately estimate costs. Awarding contracts on this basis removes discretion and thus, in theory at least, considerable risk of corruption. However, as the CoST pilot indicates, this is rarely achieved in practice. Changes are needed post-contract award, which opens the door to negotiation and opportunistic behaviour over variations and claims. This means that initial costs cannot be relied upon with any degree of confidence.

Low contract prices also encourage cheating during construction. Whether the low price is due to estimating error or a deliberate decision, the result is that there are insufficient funds in the contract to deliver the specification. A contract price below the estimated cost means that something has to give – either prices are inflated to cover real costs or work has to be accepted below specification. Inability to estimate costs accurately, and the danger of predatory pricing by others, drives contractors to bribe or collude in order to win contracts.

There are some alternative approaches for mitigating the risk of corruption in the selection of contractors and consultants. One is to introduce contractors based on their competence, past performance and reputation for integrity. This could create an incentive to perform well in order to obtain more work in the future.

- Framework contracts⁶ can reduce the incentive to operate a cartel as they reduce workload fluctuations and the threat of predatory pricing whilst providing the client with potential efficiencies through a competitive market (Dorée 2004). A framework could be applied where there is a programme of relatively straightforward capital projects such as rural roads, improvement programmes, rehabilitation, and maintenance activities.
- A post-qualification process initially identifies a preferred firm based on the lowest price. The qualifications and experience of the short-listed firms are then assessed. Where this was applied on road improvement schemes in Kenya and Bali, it increased the number of bidders and lowered the contract award price (World Bank, 2011)
- Evaluation points may be allocated for the past performance and reputation of engineering consultants appointed to design or supervise the construction work as it is they who control most of the avenues through which corruption occurs.

In addition, the transparency and accountability of the procurement process should be enhanced. These measures can include:

- E-procurement has become an increasingly effective means of increasing transparency by disclosing information relating to the tender process on a secure website.
- Community groups are trained to monitor the procurement process particularly the tender evaluation – see Tool 3 page 27.
- Complaint handling mechanism to allow contractors and community members to anonymously report fraud, collusion, corruption and intimidation.
- Integrity pacts are used to change the relationship between the procuring entity and potential bidders by all agreeing to refrain from and prevent corrupt acts and to submit to sanctions in the event of non-compliance during both tender process and the life of the contract - see Tool 5 on page 31.

2.2.5 Construction

There are considerable risks of corruption during construction which can be exacerbated by remote sites, challenging terrain or poor security. The normal means by which a construction project is priced (the Bill of Quantities) is based on the rates and quantities of materials inclusive of contractor profit, equipment and labour. Thus, there is a lack of transparency in the make-up of prices and how infrastructure projects are usually priced. The risks include:

- Weak enforcement of professional standards
- Contracts are rarely completed on budget
- Contractors submit exaggerated claims and or bundle claims together into a final account
- Manipulation of the Bills of Quantities
- Problems with poor quality construction
- Contractors recouping costs through variation orders having underbid for the contract
- Weak institutional capacity to supervise the construction site
- Long periods between submission and settlement of payment certificates
- Difficulty in benchmarking costs because of remoteness or novelty of construction site/project, limited suppliers and expense of transporting materials

The consequences of these risks may be

- Collusion between the supervisor and the contractor to increase the contract price or reduce the scope of work through variations

⁶ Framework contracts see multiple suppliers appointed on the basis of competencies, quality of services and rates, which are then applied to various projects over the life of the framework (ICE, 2009)

- Collusion between the supervisor and contractor to accept lower quality materials and overlook substandard work
- Payments to the supervisor or an official to ensure an invoice is paid or certificate is issued.
- Submission of false documentation in support of an associated claim
- Payment to officials (such as customs officials) to ensure the delivery of materials and often highly complex equipment and plant such as power turbines

The measures to mitigate corruption focus on improving the transparency of costs between the parties and improving the on-site supervision capacity.

- Separate profit and labour costs from the rates for materials and equipment in the Bills of Quantities. This provides greater transparency of contractors' costs.
- Enforce payment periods to reduce the risk of petty corruption.
- Opt for new forms of contracts that promote the fair allocation of risk and open book accounting based on actual costs – see Box 8.
- Explore the use of [project bank accounts](#) whereby all contractors, subcontractors and supervising consultants are paid from a single bank account held in trust. This provides the donor and procuring entity with transparency of payments.
- Separate the role of the supervising engineer by appointing i) a project manager to administer the contract and ii) a supervisor to decide upon technical issues. This avoids a potential conflict of interest and collusion whereby the supervising engineer is responsible for finding solutions to issues which arise on the contract (often of their own making) and for determining contractor entitlement for additional time and or costs for implementing the solutions (Shaw, 2008).
- Consider training community monitors to observe the progress and quality of the project – see Tool 3 page 27.

Box 8: Open-book approach provides cost transparency

The UK re-thinking construction agenda has developed innovative forms of procurement such as partnering and alliancing based on an open-book approach to cost management. This provides clients with visibility of what they are going to pay and when they are going to pay it (Latham 1995, Egan 1998, National Audit Office 2001). In 2005, the National Audit Office reported that this agenda had led to 55% of UK public sector projects coming in on budget compared to 25% in 1999. Similar initiatives have also taken place in Australia, New Zealand, the USA, Germany and Denmark (Nijhof et al. 2009). CoST found that the open-book approach under the NEC3 Contracts provided a transparent means for managing costs. This form of contact has been successfully used on development programmes in Botswana and South Africa including a water and sanitation programme in eThekewini, Durban.

Sources: CoST (2011), Briefing Note 3: Transparency and Accountability in Construction and Watermeyer R., Larkin D., Kee A., Thumbrian I., '[Delivering infrastructure at scale: eThekewini Water and Sanitation experience in a pilot project](#)'.

2.2.6 Service delivery

Corruption at this stage has a much more pervasive influence on the day to day lives of ordinary people. Weak policies and institutions lead to a reduced standard of service delivery and potentially the creation of a market for corruption at the point of service delivery. The corruption risks in the water and electricity sectors are similar as they involve providing services to households and businesses. The key risks that an advisor should consider include:

- Low coverage with the assessment based on expected income levels and geography
- A low collection ratio indicates a significant failure by the utility staff to collect bills

- Cost recovery either through subsidies or fees is less than or equal to operations and maintenance
- Long waiting lists for connection
- Bills and collection systems are disorganised
- High numbers of illegal connections or the under-recording of users' consumption (Halpern et al, 2008 and 2009).

In the water sector the above risks can result in officials providing illegal connections, the reselling of water and water pumps or tanks located to benefit elites. In addition there is administrative corruption - irregular billing, falsification of meter readings and over charging. In squatter areas, a bribe may be pitched at a level the poor can afford. But where the poor live in mixed-income settlements and the water market is different – high income households are prepared to pay more, and the bribe price can be higher, marginalising the poor and placing them at the end of the queue (Plummer and Cross 2007). The outcomes in the electricity sector are similar, as described in Box 9.

Mitigating measures - focused on improving the accountability of service delivery by engaging with consumers and providing them with more information - include:

- Citizen charters that clarify the service standards that consumers can expect;
- Report cards that survey citizens' experience – see Tool 7 on page 34
- Publicising the costs of services to citizens
- Engaging consumers in regulatory decisions
- Social audits have been used to drive improvements in infrastructure services and
- Customer complaints service.

Key to reducing corruption in service delivery is coordinated action as Box 9 demonstrates.

Box 9: Reducing corruption in the Georgia energy sector

By the early 2000s corruption permeated every stage of operation in the Georgia energy sector including generation, transmission and retail and wholesale leading to power shortages and countrywide black outs. Electricity theft was widespread, diesel intended for generators was sold on the black market and kickbacks for contracts were the norm. Cash collections were only 20-25 percent of billable amounts.

The government drove a coordinated set of actions that transformed a totally corrupt sector with a crumbling infrastructure into a financially stable net exporter of electricity and a potential source for new investment and growth with round the clock electricity supplies.

- Zero tolerance of non-payers including the army and hospitals were disconnected
- Installing thousands of new meters and rolling out a new billing system which measured consumption and any abnormalities
- Collective metering and collection in communities
- Staff held accountable for collections leading to top 10% being rewarded with bonuses and the bottom 20% being fired
- Higher tariffs off-set for the poor by lifeline tariffs which provide a basic consumption threshold
- Privatisation but only after the government had cleared the debts of the electricity companies and they were financially viable
- Recruiting a reform minded team into government on higher salaries.

Sources: World Bank (2012), 'Fighting Corruption in Public Services: Chronicling Georgia Reforms'. World Bank, Washington DC, USA.



2.2.7 Maintenance

A major risk is the potentially poor quality of the finished asset, leading to its rapid deterioration and higher maintenance costs. This risk can be exacerbated by a lack of maintenance funds, usually due to an inadequate system of revenue generation (either through consumer charges or taxation), or a preference for capital expenditure over maintenance. For consumer services such as water and electricity provision, this can lead to preferential treatment for repairs or newer services in exchange for so called 'speed money'⁷.

To mitigate these risks it is important that advisors and practitioners ensure there is a process for inspecting the completed asset prior to handover and that funds are retained to remedy defects within the appropriate liability period. It is essential that there is sufficient budget and capacity to maintain constructed assets. How the risks are then mitigated is dependent on the management arrangement for operations and maintenance. For example, performance based contracts have been used extensively on road maintenance. This means that the contractor is paid based on meeting specified standards of performance and targets, for example, filling a pot hole to a set standard, as opposed to the traditional means of payment based on rates and prices. Key to the success of such an approach is monitoring the contractor through professional supervision and community groups.

2.3 Tools to mitigate corruption risks throughout the project cycle

Weak oversight plus weak investigatory follow up creates an environment where there is little chance of perpetrators being caught and punished for corruption. To change behaviour there must be mitigation measures in place where there is at least the threat that corruption may be discovered. The seven tools listed below can be used at different stages of the project cycle to help identify and mitigate the risks of corruption.

1. **Audits** - can improve the fiduciary standard of an infrastructure sector programme and address weaknesses in the potential poor quality of the built infrastructure asset.
2. **Construction Sector Transparency Initiative** - aims to address weaknesses in transparency and accountability within publicly financed construction projects.
3. **Community Monitoring** - is used where there is a gap in accountability at a particular stage in the project cycle.
4. **Red Flags** - provides a set of alert indicators and is applied to recognise and track vulnerabilities to corruption during the infrastructure project cycle.
5. **Integrity pacts** - attempt to address the corrupt behaviour of procurement officials and potential bidders.
6. **Project Anti-Corruption System** - is an integrated and comprehensive system designed to assist in the prevention and detection of corruption on construction projects.
7. **Citizen report cards** - provide systematic feedback from users of public services.

Annex 1 summarises each tool, outlines its strengths and limitations, describes what it is attempting to address and the initial steps an advisor or practitioner should consider when applying that tool. It also indicates when an advisor or practitioner has the influence to apply the tool according to the finance mechanism used, and the stages of the project cycle and infrastructure sectors it may be applied to.

⁷

Speed money is where an individual or organisation pay additional fees to an official to speed up an administrative process for the provision an infrastructure service.



2.4 Integrating anti-corruption measures into infrastructure finance mechanisms

DFID use a number of different infrastructure investment mechanisms. These include investments made through multilateral development banks, multi-donor trust funds, leveraging private sector finance, budget support and direct investment and management of infrastructure programmes. The ability to influence the mitigation of potential risks varies according to the funding mechanism used. The next section outlines the tools advisors and practitioners can include in each funding mechanism.

2.4.1 Multilateral development banks (MDBs)

Funding channelled through MDBs such as the World Bank, African Development Bank and the Asian Development Bank will usually be disbursed as loans to governments to be spent on large capital infrastructure projects. Advisors and practitioners are then reliant on the anti-corruption measures that these organisations have in place.

Before approving loans, all MDB funded projects require studies which will help to reduce the risk that the project may benefit a particular group or individual. This has led to significant reforms in many borrowing countries. Any loan requires the recipient government to use the MDB's standard bidding documents, which contain a number of anti-corruption clauses. The donor will then approve the appointment of the preferred firm on a no-objection basis. MDBs also have strong investigatory units that examine complaints of inappropriate behaviour, blacklisting companies where circumstances dictate. MDBs have historically paid less attention during construction. Responsibility for project administration rests with the borrower. More recently greater attention has been paid with the development of red flags and a growing interest in the unit costs of infrastructure. Audits have tended to focus on financial oversight and less on the technical outcome of the project.

Where advisors and practitioners are advising the borrower or lender, they could consider introducing the CoST disclosure requirements, contract monitoring and the use of integrity pacts.

2.4.2 Multi-donor trust funds (MDTF)

MDTF consist of a number of donors contributing towards a national infrastructure programme. They will usually use the harmonised MDB standard bidding documents (regarded as the international standard). However, the World Bank acknowledges that the standard bidding documents have been designed for large-scale complex capital infrastructure projects and are 'less well tuned' to the different ways clients and the private sector can operate, particularly on smaller – less complex projects (World Bank, 2012b).

As a shareholder in the trust fund, advisors and practitioners could make their partners aware of the [ISO 10845 - Construction Procurement](#) as an alternative. The standards are especially relevant for developing countries that lack experience and instruments in this field (ISO, 2011). Advisors and practitioners could also advise on a set of 'red flags' for the programme which could be included in regular progress reports to the trust fund shareholders along with the application of CoST to help with improving the information management and transparency of the programme. Integrity pacts could also be used where there is the political leadership that will lead to the buy-in of potential bidders.

2.4.3 Private investment

Private finance lenders have to apply strict risk assessment processes to ensure they make a return on their investment. As part of this risk assessment, they are likely to comply with an internal process relating to the risks of money laundering, corruption and fraud. Although a number of recommendations are often made on how the funding should be managed, lenders have had less influence on project identification, development and construction.



When attempting to lever private finance, advisors and practitioners should consider how the risks and mitigation measures for these stages may be addressed. In PPP contracts there is the potential to include these measures as part of the contractual framework at each stage of the project cycle. In addition, advisors and practitioners should consider any PPP laws, government capacity to establish and manage the contractual arrangements and the process of project identification. With purely private sector funded projects, it may be possible to include a number of mitigation measures as part of the funding agreement, with a requirement that they are then included in the project documents. As these investments tend to be one-off projects, advisors and practitioners could consider adopting the Project Anti-Corruption System. Guidance notes can then be incorporated into the project documents.

2.4.4 Budget support

Advisors and practitioners can influence government partners to mitigate the risk of corruption by recommending the use of the tools in Annex 1 and the relevant mitigation measures in the business plan for sector support. These measures should strengthen and be compatible with a government's own financial management, procurement and accountability systems, which will be used for managing the funds. Offices can also reflect any measures taken to mitigate corruption risk in infrastructure in their country strategies, including corruption strategies if they have them. For example, DFID Ethiopia has made reference to its support for the CoST Ethiopia programme in its anti-corruption strategy.

2.4.5 Direct investment and management

Where DFID directly commissions an infrastructure programme, its own advisors and practitioners offer strong protection against the risks of corruption. Where the programme management is outsourced to a consultancy firm, NGO or a UN agency, the mitigation measures and relevant tools should be included in the contract agreement. Programmes tend to be on small-scale rural road programmes or water and sanitation programmes. Potential tools to consider include CoST (maybe using an adapted list of information for disclosure), community monitoring and red flags as part of reporting system. Citizen report cards could also be considered. More options relating to programmes in fragile and conflict affected states (FCAS) are provided in the following section.

2.5 Fragile and conflict-affected states

Infrastructure investments in fragile and conflicted affected areas present a particular set of challenges. As well as the overwhelming majority of the risks highlighted in Section 2 likely to apply, a number of risks are unique to the FCAS environment. Most notable are: security of the construction site, access roads and the workers; few available contractors; very weak government systems, including law enforcement; high pressure placed on government systems by major inflow of resources from international partners that are keen to see early results; and accessing and supervising construction sites in remote locations and in challenging terrain.

DFID country programmes channel infrastructure funding in fragile and conflicted areas through multi-donor trust funds, direct investment and to a limited degree budget support. There are also a few examples of leveraged private sector funding. When considering how these risks can be mitigated, the recently published paper on Supporting Infrastructure Development in Fragile States demonstrates that there are no perfect answers but instead there are a series of 'trade-offs'. For example, the use of MDB rules and procedures may reduce the risk of corruption, but may slow down the procurement process. However, bypassing standard procurement rules and management processes to accelerate delivery of infrastructure can be a driver for corruption (Jones and Howarth, 2012). In the Pakistan Swat Valley, DFID funds for a bridge reconstruction programme were managed externally,



which is likely to have reduced the corruption opportunities. The trade-off is that opportunities to strengthen public sector capacity may have been reduced.

The tools highlighted in this HTN should be adapted to the local environment, as seen in in Tool 3: Community monitoring in Timor Leste and Afghanistan on page 27. CoST disclosure requirements can be reduced to a shorter list that focuses on the items of information in which local communities are interested. The fragile and conflict affected states will not have the systems and resources in place to meet the full CoST disclosure requirements.

Community-based approaches are viewed as providing the greatest initial opportunities for the integration of infrastructure development and stabilisation and peace-building efforts. However, Jones and Howarth (2012) state that there are still risks of elite capture and local corruption in the selection of projects. These can undermine the benefits, or even exacerbate risks of conflict. Priority should be given to local infrastructure which then provides an incentive for local ownership and employment.

Using international consultants and NGOs as programme managers, to supervise the construction process, provides the capacity to mitigate the risk of corruption in the short-term. A project bank account could then be used to pay local contractors where they have access to bank accounts. Disclosing information on cash payment to firms who do not have access to bank accounts could be considered.

To develop long-term local capacity, advisors and practitioners should consider working with government to develop transparent procedures, such as procurement and contractual systems that will work effectively in the local context. Potentially this might include very simple short forms of contract in the local language. Training is then likely to be needed to ensure the local firms understand how contracts should be applied. These measures should be reflected in infrastructure strategies that are agreed with governments.

2.6 Conclusions

In this How to Note we have highlighted the risks that advisors and practitioners should consider when planning an investment in an infrastructure programme. It has outlined a series of measures and tools that aim to reduce the risk of corruption at the different stages of the project cycle and how they can be introduced into the different finance mechanisms used. From this, a number of key actions should be considered as part of any anti-corruption strategy within an infrastructure programme.

- a. Promote transparency by increasing the opportunities for all stakeholders to access information.
- b. Develop accountability mechanisms that empower civil society.
- c. Improve the institutional capacity of government and procuring entities to apply a robust policy and regulatory framework.
- d. Create trust between the procuring entity and potential suppliers to reduce the risk of informal practices being applied.
- e. Provide an incentive structure that rewards individuals and organisations for complying with the formal rules and penalised when they opt for the informal rules.
- f. Identify local political leadership to lead the successful implementation of a coordinated set of actions.

Annex 1: Tools to mitigate corruption risks throughout the project cycle

Tool 1: Audits

What it addresses	Financial audits can improve the fiduciary standard of an infrastructure sector programme. Technical audits can address weaknesses in the potential poor quality of the built infrastructure asset.				
First steps to using the tool	<ul style="list-style-type: none"> Consider an audit plan with your partners for an infrastructure project and or programme Consider if and how existing government institutions could take on the audit role 				
Project stages	<p>Financial audits can take place during each stage of the project cycle. Technical audits are used during the construction phase and at completion of the built infrastructure. It should also be considered during the O&M phase to identify potential premature deterioration of the asset and to ensure any maintenance work is completed satisfactorily. An audit would consider the following information:</p> <ul style="list-style-type: none"> Laboratory test results Review of the construction records Quality assurance Data Site correspondence Variation Orders and Contractors Claims Measurement and Payment Certificates Project Management Problems and Issues Construction/Completion Report Performance of the asset to date 				
Finance mechanism	Direct	Budget support	MDTF ⁸	Fragile States	Private Investment
	✓	✓	✓	✓	✓
Strengths	<ul style="list-style-type: none"> Audits provide, or at least the threat of them can provide, an important incentive to change. In a controlled experiment in local level road construction in Indonesia, the threat of audit was found to reduce unaccountable material and labour expenditures by 8% (Olsen, 2007). We have also seen earlier in this HTN the influence of a strong auditing function in Zambia where the Auditor General's Office highlighted significant levels of misappropriation in the roads sector. The audit included a technical evaluation of the construction as well as a financial audit. 				
Limitations	<ul style="list-style-type: none"> To reduce the amount of corruption the report needs to be widely read and used to generate debate amongst stakeholders. It then needs government to use the findings of the report to drive improvements in the infrastructure sector. 				

⁸ MDTF = Multi-Donor Trust Fund

Tool 2: Construction Sector Transparency Initiative (CoST)

What it addresses	<p>CoST aims to address weaknesses in transparency and accountability within publicly financed construction projects. It achieves this by disclosing information from each stage of the project cycle in a format that is accessible to all stakeholders. It then adds an assurance process to validate the information and interpret it in plain language to assist stakeholders to identify the main issues. Stakeholders can then use this information to hold the procuring entity and or the suppliers accountable.</p> <p>Evidence from the pilot suggests that the multi-stakeholder approach where representatives from government, industry and civil society provide leadership of the CoST national programme is an important element in using the findings of the assurance process to hold procuring entities to account (Calland and Hawkins, 2012).</p>										
First steps to using the tool	<ul style="list-style-type: none"> • Informal engagement with relevant stakeholders amongst government, industry and civil society who are interested in improving transparency on infrastructure programmes to see if there is interest in CoST. • Engage with a procuring entity to see if they might be interested in starting a CoST national programme. • Contact the International Secretariat for further information and assistance (CoST@constructiontransparency.org) 										
Sectors	<p>CoST can be applied to all infrastructure sectors.</p>										
Project stages	<p>Project identification, preparation, procurement and construction</p>										
Finance mechanism	<table border="0"> <thead> <tr> <th>Direct Investment</th> <th>Budget support</th> <th>MDTF</th> <th>Fragile states</th> <th>Private Investment</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">X</td> </tr> </tbody> </table>	Direct Investment	Budget support	MDTF	Fragile states	Private Investment	✓	✓	✓	✓	X
Direct Investment	Budget support	MDTF	Fragile states	Private Investment							
✓	✓	✓	✓	X							
Strengths	<ul style="list-style-type: none"> • Information is disclosed from each of the above stages of the project cycle at regular intervals in a format that is accessible to all stakeholders including the public. • It has been tested in a number of different sectors (transport, health, education, housing, water etc.) project sizes and levels of complexity and provided evidence of mismanagement at each stage of the project cycle • It has demonstrated its potential to directly impact projects, improve sector governance and influence the policy and regulatory environment. • It can be adapted to fragile states with weak institutional capacity but it is recommended that countries start by disclosing a reduced list of project information. • Multi-stakeholder approach provides a space for dialogue between civil society, industry and the government. 										
Limitations	<ul style="list-style-type: none"> • Evidence of the potential impact is currently limited with the benefits only likely to be realized in the medium to long term. • Further investigation of the disclosed project information is required in order to separate corruption from mismanagement • Governments need to make a considerable investment in information management systems to mainstream information disclosure • It has not been tested on PPP or an operations and maintenance contract. 										
Case study	<p>A civil society workshop in Ethiopia provoked considerable media interest in a rural road project. The CoST Ethiopia assurance team had highlighted concerns over level excavation required for the project. The CoST Ethiopia Multi-</p>										



<p>Further Information</p>	<p>Stakeholder Group (MSG) was able to use this public interest to persuade the Ethiopia Roads Agency to adopt a new design. To date this new design has saved US\$3.8m. For an investment of £220k, the CoST Ethiopia disclosed information from 25 projects with the MSG also able to persuade several procuring entities to make improvements in their governance. It also persuaded the Public Procurement Property and Administration Agency to issue a proclamation that requires procuring entities to disclose the majority of information required by CoST to be disclosed.</p> <p>Sources: CoST (2011), Briefing Note 10: The Ethiopia Pilot Experience and CoST 2012, 'Briefing Note 1: Impact stories'</p> <p>In addition to the Programme Summary, CoST is developing a series of Guidance Notes on establishing and implementing a national programme. It has also published a briefing note on Impact Stories.</p>
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Tool 3: Community Monitoring

What it addresses	<p>Community Monitoring is used where there is a gap in accountability at a particular stage in the project cycle. The tool has been used to mobilise the public against corruption and its use has been gathering pace over a number of years. There are many different variations of community monitoring as they are adapted to suit the local context. However, they are all based on the principle that non-state actors can make a critical contribution to strengthening public accountability, improving governance, reducing inefficiencies and combating corruption.</p>										
First steps to using the tool	<ul style="list-style-type: none"> • Identify a stage of the project cycle where corruption risks include weak monitoring and few accountability mechanisms • Identify the incentives for communities to monitor the project • Discuss with community groups and other stakeholders how community monitoring would be adapted to suit the local context • Identify potential resource requirements to train community monitors 										
Sectors	<p>All infrastructure sectors</p>										
Project stages	<p>The majority of community monitoring initiatives are focused on a specific stage of the project cycle.</p> <ul style="list-style-type: none"> • <i>Procurement</i> - Community groups have also been trained to observe the procurement process to ensure fair play and are often involved in the tender evaluation. • <i>Construction</i> – Often described as contract monitoring, community groups are trained to observe the progress of construction small-scale infrastructure such as rural roads or the construction of a local school or hospital. Community groups are provided with a monitoring tool such as a report card format where they can record their observations during regular checks of the construction site against the disclosed contract. The observations can include how much has been built against the programme, are the right materials are being used and whether the dimensions of the built asset match the specification. 										
Finance mechanism	<table border="0"> <thead> <tr> <th>Direct Investment</th> <th>Budget support</th> <th>MDTF</th> <th>Fragile states</th> <th>Private Investment</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">✓</td> </tr> </tbody> </table>	Direct Investment	Budget support	MDTF	Fragile states	Private Investment	✓	✓	✓	✓	✓
Direct Investment	Budget support	MDTF	Fragile states	Private Investment							
✓	✓	✓	✓	✓							
Strengths	<ul style="list-style-type: none"> • DFID’s report on Infrastructure Development in Fragile and Conflict-Affected States supports this by stating community engagement is of central importance for successful programmes, and this should fully recognised in programme design and implementation. • Critical to success is ensuring that the right incentive and structure are in place to ensure the community participates. Olken (2007) found that community monitoring on rural roads in Indonesia was effective where the benefit was to the community at large. In this case the monitors were incentivised by village workers being paid rather than a reduction in the cost of materials. 										



Limitations	<ul style="list-style-type: none">• Measuring impact is challenging as community monitoring approaches are often limited to one initiative in one locality and their findings are difficult to generalise• Effectiveness is dependent on the right incentives for the community to monitor
Case study	<p>In Timor Leste, Luta Hamutuk a national civil society organisation has created the right structure within the communities to ensure that community monitoring is supported. This includes the appointment of a focal point (a local teacher, farmer, youth coordinator etc.) in each community to facilitate community meetings, organise monitoring committees and identify which projects are monitored with the support of a national NGO, Luta Hamutuk. The focal points work with existing accountability systems, strengthening or creating linkages between local leaders and the community, and between the community and national policy-makers (Dix, 2011). The lessons from Timor Leste have been applied in Afghanistan as part of the Network on Integrity in Reconstruction where monitors have detected serious deficiencies in about 30 % of the projects they tracked.</p> <p>Sources: Dix, S. (2012), 'Post-war reconstruction and civil society', in 'Contemporary Issues in Construction in Developing Countries', ed. Ofori G. Spon, London</p>
Further Information	<p>Bantay Lansangan (Roads Watch) in the Philippines has developed a manual for community monitoring of road construction.</p>

Tool 4: Red Flags

What it addresses	<p>It provides a set of alert indicators and is applied to recognise and track vulnerabilities to corruption during the infrastructure project cycle (Alexeeva et al. 2008). Red Flags have been tested on two studies, firstly in Sub-Saharan Africa on over 100 World Bank funded road contracts and over 70 supervision contracts in 13 countries and secondly in Europe and Central Asia on over 200 World Bank funded completed or on-going road works contracts. The indicators included the time between bid opening and contract signing, bid price against contract price and thresholds for cost increases and time overruns (Alexeeva et al. 2011).</p>					
First steps to using the tool	<ol style="list-style-type: none"> 1. Identify an initial set of measurable risks of corruption with local partners that can be tracked on an infrastructure programme. These could include performance statistics on tendering, payments, number of defects, cost and time overruns etc. 2. Incorporate these indicators into the formal reporting process for the infrastructure programme 3. Agree with local partners what happens if a 'Red Flag' is triggered 					
Sector application	Roads, energy, water					
Project stages	<p>The two road studies focused on procurement and implementation. However, it should be possible to extend the concept across the project cycle. For example, Gulati and Rao cover project formulation, implementation and operation in the energy section.</p>					
Finance mechanism	Direct Investment	Budget support	MDTF	Fragile states	Private Investment	
	✓	✓	✓	✓	X	
Strengths	<ul style="list-style-type: none"> • Principally developed by the World Bank for the roads sector. But the concept and several of the indicators could be equally applied across all infrastructure sectors based on a reasonable data set being available. • Gulati and Rao (2007) have presented a set of Red Flags for the energy sector. However, it is not clear if these Red Flags have been tested. • Evidence from the study in Europe and Central Asia suggest that the number of red flags was positively and significantly correlated with higher unit costs. • The indicators provide a simple monitoring tool for identifying potential corruption in key risk areas. • It drives the collection of data which can provide useful performance statistics • It provides evidence on how the World Bank is developing its anti-corruption strategy in the roads sector 					
Limitations	<ul style="list-style-type: none"> • The evidence referred to above also the "number of bidders" does not have a negative sign. • The use of red flags has to date focused on procurement and construction only. However, there is no reasons why the principle could not be applied to all stages of the project cycle • One or two of the Red Flags used are controversial such as the use of lowest price for contract award. • As with CoST, Red flags do not constitute actionable evidence of corruption. Thus further investigation is required to assess the gravity of the red flag and conclude if it is potentially corruption or simply mismanagement. 					



Example of red flags	<p>Examples of Red Flags from the roads sector.</p> <ul style="list-style-type: none">• Period between bid opening and contract signing is more than 7 months• Cost increases by more than 20% during implementation• Time overrun is more than 30% of the originally contracted period• Contract value is more than 20% above the Engineer's Estimate• Half or more firms buying bidding documents do not bid• 20% or more of pre-qualified firms do not bid• Difference between winning bid and next lowest bid is within 2%• Difference between contract price and read-out bid price is more than 10%• Only one or two bidders• Cost per km for similar works and unit road works costs are higher than the 75% percentile <p>Source: Alexeeva V., Padam G. and Queiroz C. (2008), 'Monitoring Road Works Contracts and Unit Costs for Enhanced Governance in Sub-Saharan Africa', Transport Papers, World Bank, New York</p>
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Tool 5: Integrity Pact

What it addresses	<p>Integrity Pact attempts to address the corrupt behaviour of procurement officials and potential bidders. It is an agreement between the procuring entity and the bidders to refrain from and prevent corrupt acts and to submit to sanctions in the event of non-compliance during both tender process and the life of the contract. The aim is to create a common framework so that bidders can act with integrity knowing their competitors are bound by the same restraints and therefore cannot gain unfair advantage from illicit behaviour. The Pact also includes community monitoring tools and various sanctions as a reinforcement mechanism.</p>										
First steps to using the tool	<ol style="list-style-type: none"> 1. Establish if there is political will as this will be essential to give confidence to the market place that the Pact will be applied to all. 2. Establish if business is interested by engaging with contractor and consultant associations 3. Engage with the local Transparency National chapter to help develop a customised version of the Pact 										
Sector application	<p>All sectors but mainly on higher value projects</p>										
Project stages	<p>Procurement</p>										
Finance mechanism	<table border="1"> <thead> <tr> <th>Direct Investment</th> <th>Budget support</th> <th>MDTF</th> <th>Fragile states</th> <th>Private Investment</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>✓</td> <td>✓</td> <td>X</td> <td>✓</td> </tr> </tbody> </table>	Direct Investment	Budget support	MDTF	Fragile states	Private Investment	X	✓	✓	X	✓
Direct Investment	Budget support	MDTF	Fragile states	Private Investment							
X	✓	✓	X	✓							
Strengths	<ul style="list-style-type: none"> • Integrity Pacts have been extensively used in Argentina, Colombia, Ecuador, Germany, Mexico and Paraguay, as well as in Indonesia and Pakistan (Transparency International 2009). • Evidence from Argentina and Columbia in the procurement of two major public infrastructure projects confirms the rationale (Boeham & Olaya, 2006). This includes evidence from Columbia that the transparency introduced by the Integrity Pact encouraged bidders to participate in the tender process. • The Pact encourages participation from new entrants into the market place as they begin to trust the procuring entity as they know if they lose they lose fairly • TI states that political will has been easier to obtain at municipal level • Includes a monitoring tool typically used civil society organisations • Provides enhanced access to information from infrastructure projects 										
Limitations	<ul style="list-style-type: none"> • On appearance there is little difference between an integrity pact and all parties agreeing to abide by the rules of the tender • Failure of one bidder signing the agreement is likely to lead to the collapse of the Pact. • Leadership from the procuring entity is essential for the Pact to be effective • The procuring entity must enforce the sanctions when necessary 										
Case study	<p>Changes in transparency and ethics in the last three years have seen the number of law suits against the Ministry of Public Work in El Salvador reduced to zero. In 2009, the Ministry of Public Works had debts of \$43m with 80% of its contracts paralysed by legal problems.</p> <p>Integrity pacts have been a key component of a strategy to change the relationship between the El Salvador Ministry of Public Works and local contractors along with civil society monitoring, access to information policies and training of staff in ethics and anti-corruption. Integrity pacts have been</p>										



<p>Further Information</p>	<p>applied to 26 contracts on major projects since 2009 leading to an increase in the number of contractors bidding. Fundamental to this change has been the leadership of the Minister of Public Works, Gerson Martinez.</p> <p>Source: Liz Aguire, Ministry of Public Works (2012), Presentation at 'Transparency in Infrastructure Regional Conference', CoST and Secretary of Control and Transparency Guatemala and email correspondence with the author.</p> <p>The Water Integrity Network has developed a manual aimed at Government officials for implementing the Pact in the water sector.</p>
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Tool 6: Project Anti-Corruption System

What it addresses	<p>GIACC have developed the Project Anti-Corruption System (PACS) which is an integrated and comprehensive system designed to assist in the prevention and detection of corruption on construction projects. It uses a variety of anti-corruption measures, which can be integrated into project management. These measures impact on all project phases, on all major participants, and at a number of contractual levels. PACS comprises the PACS Standards and the PACS Templates. The main elements of the PACS standard includes:</p> <ul style="list-style-type: none"> • Independent assessment • Transparency • Pre-contract disclosure • Project anti-corruption disclosure • Project anti-corruption commitments • Funder (non-government) anti-corruption commitments • Government anti-corruption commitments • Raising awareness • Compliance • Audit • Reporting • Enforcement 										
First steps to using the tool	<ul style="list-style-type: none"> • Identify a one-off project where there is an absence of existing systems and procedures • Identify which components of the PACS would be useful • Identify how they can be adapted to suit the project 										
Sector application	<p>All infrastructure sectors</p>										
Project stages	<p>Project identification, preparation, procurement and construction</p>										
Finance mechanism	<table border="0" style="width: 100%; text-align: center;"> <thead> <tr> <th style="width: 20%;">Direct Investment</th> <th style="width: 20%;">Budget support</th> <th style="width: 20%;">MDTF</th> <th style="width: 20%;">Fragile states</th> <th style="width: 20%;">Private Investment</th> </tr> </thead> <tbody> <tr> <td>✓</td> <td>✓</td> <td>X</td> <td>X</td> <td>✓</td> </tr> </tbody> </table>	Direct Investment	Budget support	MDTF	Fragile states	Private Investment	✓	✓	X	X	✓
Direct Investment	Budget support	MDTF	Fragile states	Private Investment							
✓	✓	X	X	✓							
Strengths	<ul style="list-style-type: none"> • Brings together many of the tools presented in this How to Note into a single comprehensive set of standards and templates. This could potentially reduce the cost of introducing an anti-corruption system into an infrastructure programme. • Potentially useful for one off projects which are outside the standard project where systems are not in place. 										
Limitations	<ul style="list-style-type: none"> • No evidence of its use was found for both the Evidence Review of Corruption and Transparency in Infrastructure and this How to Note. 										

Tool 7: Citizen Report Cards

<p>What it addresses</p>	<p>The Citizen Report Card provides public agencies with systematic feedback from users of public services. By collecting feedback on the quality and adequacy of public services from actual users, the Citizen Report Card provides a rigorous basis and a proactive agenda for communities, civil society organisations or local governments to engage in a dialogue with service providers to improve the delivery of public services (ADB, 2007).</p> <p>The Citizen Report Card addresses critical themes in the delivery of public services such as: access to services, quality and reliability of services, problems encountered by users of services and responsiveness of service providers in addressing these problems, transparency in service provision (like disclosure of service quality standards and norms) and costs incurred in using a service (including hidden costs such as bribes). It provides a summative satisfaction score that captures the totality of critical service-related parameters (ADB, 2007).</p>				
<p>First steps to using the tool</p>	<p>A self-learning course produced by Asian Development Bank and the World Bank Institution provides users with some helpful guidance including:</p> <ul style="list-style-type: none"> • A feasibility assessment on the potential for citizen report cards • How to plan and design a citizen report card activity • How to carry out data collection • How to analyse results to prioritise actions and identify effective dissemination and negotiation strategies • How to design effective post citizen report card actions, e.g. public advocacy state citizen partnerships or public-private collaborations 				
<p>Sector application Project stages</p>	<p>Water, energy, transport, health, education</p> <p>Service delivery</p>				
<p>Finance mechanism</p>	<p>Direct Investment</p> <p>✓</p>	<p>Budget support</p> <p>✓</p>	<p>MDTF</p> <p>X</p>	<p>Fragile states</p> <p>✓</p>	<p>Private Investment</p> <p>✓</p>
<p>Strengths</p>	<ul style="list-style-type: none"> • Based on a decade of learning from the 'report card' on public services in Bangalore and has also been used in several other countries including Kenya, Ukraine and Bangladesh. • It's difficult for the service providers to ignore the report card • Encourages citizens to pro-actively demand greater accountability, accessibility and responsiveness from service providers • Enables Ministries and procuring entities to prioritize budget allocations and monitor implementation 				
<p>Limitations</p>	<ul style="list-style-type: none"> • Report card is based on perceptions of corruption rather than actual cases of corruption • Conducting a large survey is costly and time consuming • Institutional weakness/lack of will to act on CRC findings and implement reforms • Require political space for civil society and media to engage and hold public institutions to account. 				
<p>Further Information</p>	<ul style="list-style-type: none"> • CIVICUS have developed a summary toolkit on report cards with links to case studies in Kenya and Bangladesh. 				



Annex 2: Summary of the actors involved, corruption risks, mitigation measures and tools

Project stage	Actors	Risk	Mitigation	Tools						
				Audits	CoST	Community monitoring	Red flags	Integrity pacts	PACTS	Citizen report cards
Policy and regulation	Government ministers, politicians and senior civil servants	<ul style="list-style-type: none"> Unclear overlapping department roles and functions at headquarters and subnational levels Large discretionary funding and decision-making Lack of clarity of rules and regulations in procurement, quality control and financial control Weak legislative oversight capacity Weak or absent procurement and contractual framework Lack of independent judiciary and investigatory capacity Lack of national audit capacity Lack of space for independent media 	<p>Work with government partners to</p> <ul style="list-style-type: none"> Build the capacity of procuring entities to understand and apply the policy and regulatory framework. Promote improvements in public access to information, Incentive based rewards for reform oriented staff. Strong coordinated action with other donors to persuade government partners to investigate allegations of corruption Training staff on corruption 							



Project stage	Actors	Risk	Mitigation	Tools						
				Audits	CoST	Community monitoring	Red flags	Integrity pacts	PACTS	Citizen report cards
Project identification	Government ministers, politicians and senior civil servants + private sector consultants	<ul style="list-style-type: none"> No system for appraising and prioritising infrastructure projects Political influence to favour large projects and new construction over maintenance Low estimate of costs to get projects with low returns approved 	<ul style="list-style-type: none"> Select projects from national, local or sector plans prioritized according to need Use sector plans to identify the balance between large and small projects, and maintenance Systematic project appraisal system is adopted Publish the programme of infrastructure projects on websites and in newspapers Engage with community groups to prioritise infrastructure programmes 		✓	✓	✓		✓	
Project preparation	Procuring entity + consultants, (planners, designers, engineers, surveyors)	<ul style="list-style-type: none"> Inadequate or incomplete designs No strategy for operations and maintenance Poor cost estimations Inadequate or no site surveys Politicisation of social and environmental impacts 	<p>Improve the management capacity of the procuring entity to</p> <ul style="list-style-type: none"> Ensure designs are completed and site surveys are undertaken Develop ICT systems that can gather and analyse cost information to help improve estimations. Adapt construction standards to identify areas at risk of over-specification or design Ensures an operations and 		✓	✓	✓		✓	



Project stage	Actors	Risk	Mitigation	Tools						
				Audits	CoST	Community monitoring	Red flags	Integrity pacts	PACTS	Citizen report cards
Procurement	Client (procuring agency) + consultants, contractors, supervising engineers	<ul style="list-style-type: none"> • Procurement procedures are unclear • The evaluation criteria excludes capable companies from bidding • Lack of transparency in procurement procedures • Inconsistent application of procurement procedures • Procurement procedures are not enforced • Long period of time between notification of the preferred bidder and contract award 	<p>maintenance plan and budget is in place.</p> <ul style="list-style-type: none"> • Use framework contracts to reduce the incentive to operate a cartel. • Use a post-qualification process whereby bidders are initially short-listed based on price. • Allocate evaluation points for the past performance and reputation of engineering consultants. • Work with governments to develop E-procurement as means of increasing transparency in the procurement process. • Consider training community observers to monitor the procurement process particularly the tender evaluation. • Ensure there is a complaint handling mechanism to allow contractors and community members to anonymously report fraud, collusion, corruption and intimidation. 		✓	✓	✓	✓	✓	



Project stage	Actors	Risk	Mitigation	Tools						
				Audits	CoST	Community monitoring	Red flags	Integrity pacts	PACTS	Citizen report cards
Construction	Client (procuring agency) + Contractor, subcontractors, and supervising engineers	<ul style="list-style-type: none"> Weak enforcement of professional standards Contracts are rarely completed on budget Contractors submit exaggerated claims and or bundle claims together into a final account Manipulation of the bills of quantities Problems with poor quality construction Contractors recouping costs through variation orders having underbid for the contract Weak institutional capacity to supervise the construction site Long periods between submission and settlement of payment certificates Difficulty in benchmarking costs because of remoteness or novelty of construction 	<ul style="list-style-type: none"> Use Integrity pacts to change the relationship between the procuring entity and potential bidders Ensure that profit and labour costs are separated from the rates for materials and equipment in the Bills of Quantities. This will begin to provide greater transparency on the contractors' costs. Publicly state those payment periods will be enforced, to reduce the risk of petty corruption. More radically, opt for new forms of contracts that promote the fair allocation of risk and open book accounting based on actual costs – see Box 7. Explore the potential for project bank accounts whereby all contractors, subcontractors and supervising consultants are paid from a single bank account held in trust. Separate the traditional role of 	✓	✓	✓	✓	✓	✓	



Project stage	Actors	Risk	Mitigation	Tools						
				Audits	CoST	Community monitoring	Red flags	Integrity pacts	PACTS	Citizen report cards
Maintenance	Procuring entity + supervising engineer + contractor	<p>be allowing high numbers of illegal connections to persist or the under-recording of users' consumption (Halpern et al., 2008)</p> <ul style="list-style-type: none"> Poor quality work below specification, leading to rapid deterioration of assets Lack of funds for maintenance as new construction takes precedence No period in the construction contract for correcting defects to the infrastructure 	<ul style="list-style-type: none"> Inspect the construction site prior to handover Retain funds to remedy defects in appropriate liability period Ensure funds and capacity to operate and maintain constructed assets Performance based road maintenance contracts 	✓	✓	✓		✓		

Annex 3: Glossary of main types and forms of corruption

The following glossary defines the main types of corruption and provides examples of the forms that corruption may take. It has been developed using information from the DFID Guidance Note on Anti-Corruption and Counter Fraud Strategies, from the [GIACC website](#) and from 'Partnering to Combat Corruption in Infrastructure Services: A toolkit' (Sohail & Cavill, 2007).

Type of corruption	Definition	Forms of corruption examples
Abuse of power	A person in a public office deliberately or recklessly acts in a way that is contrary to his duty and in breach of his position of public trust.	<ul style="list-style-type: none"> • Allowing a conflict of interest to affect the persons judgement • Favouring friends or relatives for appointments or contracts (nepotism or cronyism) • Victimising or intimidating staff so that they make decision which support the official's view
Bribery	A person in authority accepts, solicits or exhorts a bribe (payment or other favour) to provide a service that should have been free, or to overlook an offence or desist from harassments.	<ul style="list-style-type: none"> • A project owner may bribe a government official in order to obtain planning permission for a project. • A bidder may bribe the project owner's designer to design a project in a manner which improperly favours that bidder over other bidders. • A bidder may pay a bribe to the project owner's representative to win the contract. • A contractor may pay a bribe to the project owner's representative to have defective or non-existent work approved. • The project owner may pay a bribe to the project engineer in return for the engineer refraining from issuing a payment certificate or an extension of time to a contractor. • If the parties are in dispute in relation to the construction of the project, one party may bribe a witness, expert, arbitrator or judge in order to give false evidence, or to give a favourable opinion or verdict. • A maintenance contractor may pay a bribe to a representative of the project owner in return for being awarded a contract to



Type of corruption	Definition	Forms of corruption examples
		maintain the project during its operation.
Embezzlement	Deception is used to divert official money, property or other assets for personal gain	<ul style="list-style-type: none"> • Funds are diverted from the intended infrastructure project for personal use
Extortion	Deception is used to divert official money, property, or other assets for personal gain.	<ul style="list-style-type: none"> • Refusal to make payments or certificates that are due • Refuses to provide customs clearance for equipment or materials
Fraud	A form of deception intended to result in financial or personal gain.	<ul style="list-style-type: none"> • Two or more bidders unlawfully collude creating a cartel to rig a bid to favour one bidder or to exchange or fix bid prices in advance of tendering. • Manipulation of pre-qualification or tender requirements so as to favour a particular bidder • Concealment of defects • Dishonestly exaggerating the quantum of a claim • Dishonestly withholding payment • Fabricating or falsifying evidence to support claims
Money Laundering	Has been described as the 'get a way car' for those committing corruption. It entails the concealment of the source of illegally obtained money and assets. Money may be laundered in country, for example, through buying real estate or internationally, through off-shore trusts and overseas companies.	<ul style="list-style-type: none"> • A company submits a fraudulent claim to a procuring entity for work with it did not carry out. The project owner pays the fraudulently obtained sum into the company's bank account with Bank A. The company and then moves the payment to Bank B.

Annex 4: Sources of information for measuring corruption

Sources of information	Strengths	Weaknesses	Examples
Perception surveys	Provides broad evidence of the level of corruption within a country	<ul style="list-style-type: none"> Unreliable guide to the actual level of corruption Disaggregating information relating to infrastructure from international surveys They do not provide evidence of the causes of corruption Focus on country level corruption rather than sector level and formal business level rather than informal businesses. 	<ul style="list-style-type: none"> Transparency International Corruption Perceptions index (CPI) World Bank Institutes Control of Corruption Index Global Integrity's Public Integrity Index Global Corruption Barometer National surveys Citizen Report Cards GIACC Anti-Corruption Score Card
Experience surveys	Provide direct evidence of the experience of households, individuals and enterprises. They are particularly useful for understanding bribery payments for service level corruption	<ul style="list-style-type: none"> The evidence does not provide sector specifics No correlation between estimates of corruption across all sectors and infrastructure sector (Kenny 2006 and 2009) Rarely captures large scale bribery 	<ul style="list-style-type: none"> World Bank's Business Enterprises Surveys World Bank Institutes household and firms country level Country Corruption Diagnostic surveys
Public expenditure tracking surveys	Provides information on diversion of funds into specific services	<ul style="list-style-type: none"> Dependent on the quality of administrative records which are often extremely poor 	<ul style="list-style-type: none"> Lessons from Tanzania



Sources of information	Strengths	Weaknesses	Examples
Econometric studies	<p>The DFID Evidence Review of Corruption and Transparency in Infrastructure Sectors highlights a number of econometric studies which provide evidence of the negative impact of corruption on economic growth and infrastructure service delivery. (Wells 2012).</p>	<ul style="list-style-type: none"> • The use of unreliable proxies to measure corruption is a weakness • Tend to be cross country comparisons 	<ul style="list-style-type: none"> • Estache, A., and Kouassi, E., 2002. Sector Organization, Governance, and the Inefficiency of African Water Utilities. World Bank Policy Research Working Paper 2890 • Del Monte, A., and Papagni, E., 2001. Public Expenditure, Corruption and Economic Growth: The Case of Italy. European Journal of Political Economy, 17(1), pp. 1-16. • Henisz, W.J., 2002. The Institutional Environment for Infrastructure Investment. Industrial and Corporate Change, 11(2), pp. 355-389. • Kaufmann, D., Leautier, F. and Mastruzzi, M., 2004. Governance and the City: An Empirical Investigation into the Global Determinants of Urban Performance. World Bank Policy Research Working Paper 3712.



Sources of information	Strengths	Weaknesses	Examples
Performance Monitoring	Financial and technical audits can highlight specific sector issues at programme and project level.		<ul style="list-style-type: none"> • Financial and technical audits (see Box 3 on page 8 for an example from Zambia), • Information disclosed by CoST – see page 25.
Prosecutions	Provides real evidence of corruption	Does not assist in the scale of corruption as more cases where the justice system is efficient, itself less corruption, and is focusing on the prosecution of corruption. (Kenny 2009)	<ul style="list-style-type: none"> • Lesotho Highlands Dam



Annex 5: Further information

Further information – websites

Civicus	http://www.civicus.org/
CMI CHR Michelsen Institute	http://www.cmi.no/
Construction Sector Transparency Initiative	www.constructiontransparency.org
Integrity Action	http://www.integrityaction.org/
Global Infrastructure Anti- Corruption Centre	www.giacccentre.org
World Bank Governance and Public Management	http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPUBLICSECTORANDGOVERNANCE/0,,contentMDK:22996457~pagePK:148956~piPK:216618~theSitePK:286305,00.html
Transparency International	www.transparency.org

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