UNECE International PPP Forum:

"Implementing the United Nations 2030 Agenda for Sustainable Development through effective, people-first Public-Private Partnerships"

9 – 11 May 2017

City University of Hong Kong
Lau Ming Wai Academic Building

Dossier of Draft PPP Standards

Note by the UNECE Secretariat

The UNECE is currently elaborating international standards in Public-Private Partnerships (PPPs)[1] which are consistent with the United Nations 2030 Development Agenda. Project teams have been established to elaborate these standards and in some cases their work is supported by International Specialist Centres.

Action point:

Delegates are invited to submit comments on the draft standards. The UNECE secretariat is particularly eager to receive PPP case studies that contribute to a better understanding of the PPP standards.

Written comments may be submitted electronically to ppp@unece.org

*****The document is a draft and provided for informational purposes only. The information contained herein is subject to change and does not commit the United Nations Economic Commission of Europe*****

[1] More information is available at: https://www2.unece.org/wiki/display/pppp/PPP+Standards+Development+Process and www.unece.org/ppp

Table of Contents

RESTRICTED

Draft

Standard for Zero Tolerance Approach to Corruption in PPP Procurement

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THE FINAL VERSION OF THE DOCUMENT WILL BE PUBLISHED IF IT IS ADOPTED.

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Contents

Terms

AAAA	Addis Ababa Action Agenda
DB	Design and Build contract
DBO	Design Build and Operate contract
EPC	Engineering, Procure and Construct contract
OECD	Organisation for Economic Co-operation and Development
O&M	Operation and Maintenance
PPP	Public Private Partnership
PfPPP	People First Public Private Partnership
SDG	Sustainable Development Goal
ToR	Terms of Reference
UNECE	United Nations Economic Commission for Europe
UNCITRAL	United Nations Commission on International Trade Law
USD	United States Dollars

Introduction

The United Nations Sustainable Development Goals (SDGs) come with a huge price tag. Recent reports have estimated that global infrastructure will need USD 3.3 trillion of investment per year just to keep pace with projected growth.[2] This massive sum will need to be mobilized from many sources, including from the private sector. And governments scaling up investment and infrastructure development of this magnitude will need to make a strong commitment to transparency and integrity and in particular implement plans to fight corruption, in order to attract the requisite investment, efficiently and effectively partner with the private sector, and accelerate their initiatives to meet the SDGs.

While the potential of PPPs to fill the development gap is great, and the SDGs call on governments and officials to rise up to this challenge, corruption continues to pull governments down.

In developed and developing countries around the world, there are compromised public processes, bribes being paid for basic public services, friends and relatives of officials being awarded contracts, and other abuses where public authority is leveraged for personal gain.

And the damage is not only monetary. Corruption slows the provision of public services, impairs economic growth and activity, and undermines the time, energy and resources applied by those attempting to provide actual good governance and public services.

Governments embracing the UN SDGs, however, in particular those seeking robust development programmes that include PPPs, should not measure corruption simply on the toll that it takes, or how it undermines their efforts; instead, governments should measure corruption by what they have to gain in successfully combating it and implementing a zero tolerance approach. How much could be saved? How many more people could be served? How would the world look with far less corruption?

The potential savings in fighting corruption

Saving Money

The potential savings in fighting corruption in public procurement can be massive.

- The 2014 OECD Foreign Bribery Report estimates that bribery consumes 10.9 per cent of the total transaction value in public procurement globally.
- The World Bank estimates that about USD 1 trillion is paid each year in bribes around the world.[3]

While corruption is known to occur in virtually all sectors and involve both public and private actors, the potential cost savings in public construction projects alone (which is often a substantial part of PPPs) is also significant:

"We will work to strengthen regulatory frameworks at all levels to further increase transparency and accountability of financial institutions, of the corporate sector as well as of public administrations".

Addis Ababa Action Agenda Declaration 2015

[2] McKinsey analysis; McKinsey Global Institute Analysis, 2016
[3] World Bank Governance Brief Anti-Corruption. May 2016

- Transparency International, in its Global Corruption Report 2005, estimated that corruption in construction could add as much as 50 per cent to a project's cost. It further estimated that 10 to 30 per cent of investment in a publicly funded construction project may be lost through mismanagement or corruption (COST 2011 Research).

The European Commission has stated that "annual losses in global construction through mismanagement, inefficiency and corruption could reach USD 2.5 trillion by 2020. And yet the savings are perhaps better measured not by the monetary savings, but by the increased impact that programmes and projects could have in a corruption free environment.

Saving Lives

The World Bank has stated that corruption disproportionately impacts the poor while undermining growth and prosperity by siphoning away resources from their intended purposes *and* exacerbating the long-term effects of those services not being delivered.[4] Corruption also erodes the social contract between state and citizens.

For example, in the healthcare sector, corruption can in very real terms harm people. Corruption diverts time, attention, and resources away from the care that is to be provided and the health of the population that are to be served. This means, among other impacts, increases in child mortality, decreases in the availability of critical medicines, and failures to prevent otherwise preventable illnesses.

People First PPPs

Corruption is therefore of a particular concern for the UN SDGs and "People First PPPs" (PfPPPs) because a core aim of PfPPPs is to not just deliver value for money and have routine public services provided to the people, but for PPP projects and programmes to have the maximum positive transformational effect on the lives of those people[5]. This is especially critical for projects that aim to improve conditions in low and middle income countries and where budgetary and capacity constraints are most acute.

Consequently, there is an urgent need to build upon existing anti-corruption and anti-bribery resources and develop materials that a) are universal in nature, b) contain anti-corruption principles and recommendations specifically targeted toward PPPs, c) may be readily incorporated by countries and governments into their systems to combat corruption, and d) enhance a government's overall anti-corruption efforts. Doing so will offer all stakeholders of PPP projects a comprehensive and substantially increased level of protection against corruption and pave the way for pipelines of projects that bring real development to the users of these standards while saving money and saving lives.

The purpose and implementation of this standard is also important because the UN recognizes that corruption has a unique potential to undermine the SDGs, and reference should be made in particular to:

[4] World Bank Group President Jim Yong Kim, Anti-Corruption Summit 2016, London, United Kingdom
[5] UNECE is currently preparing guidance materials and criteria for People First PPPs.

- SDG 16 is dedicated to the promotion of peaceful and inclusive societies for sustainable development, the provision of access to justice for all, and building effective, accountable institutions at all levels. SDG 16.5 and 16.7 further target a substantial reduction in corruption and bribery in all their forms, and development of effective, accountable and transparent institutions at all levels.
- SDG 17 calls for strengthening the means of implementation and revitalization of the global partnership for sustainable development. Its SDG 17.17 calls for encouraging and promoting effective public, public- private, and civil society partnerships, and building on the experience and resourcing strategies of partnerships.

The Addis Ababa Action Agenda (AAAA), a global framework for financing development post-2015, also calls on governments to combat corruption at all levels and in all its forms, and to implement effective, accountable and inclusive democratic institutions.[6]

Objectives and drafting considerations for the Standards

1. Objectives

The overall objectives of the Standard are the following:

- Provide a voluntary set of principles and conditions that governments could incorporate in their regulations or policies in undertaking PfPPP procurement in compliance with the SDGs.
- Assist governments desiring to improve the implementation of PPPs in ways that mobilise their potential and reduce risk and complexity while improving the regulatory response to corruption in PPPs.
- Inform and educate all parties, including civil society, on how PPPs may be entered and operated that are of high quality and not compromised by unethical behaviour and defects caused by the lack of integrity or corruption.

2. Drafting considerations

To achieve the above-referenced objectives, this document has been based on:

- An identification by a multidisciplinary team of public and private PPP experts from various organisations and countries, of the 'high risk' areas within a PPP procurement process; and.
- An integrated drafting process aimed at producing a standard of universal nature, which is drafted in plain language, easy to understand, simple to apply, and requires little to no judgement in determining a means for effective implementation.

[6] Addis Ababa Action Agenda, Financing for Development, Section II. B. 48; UN Sustainable Development Goals, Target 17.17

Effective Implementation of the Standard

Presentation and Publication of the Standard

a. Governments seeking to implement this standard should adopt the standard and then adapt its recommendations through various actions that may include making them binding and subject to judicial review and criminal penalties in case of major infringement.

b. Governments should make elements of the standard and its recommendations and actions publicly and freely available and accessible and put systems in place to keep them up to date.

c. Governments should make all other authoritative information relating to a PPP procurement, notably legal rules and procurement procedures, easily accessible and free of charge to access this information.

Coordination with UNECE

d. Governments should consult with UNECE as needed on the implementation and compliance with the Standard.

e. Governments should exchange with UNECE to resolve any issues of implementation and compliance with the Standard.

f. Governments should utilize any accompanying UNECE materials, standards, guidance, and/or checklists for better implementation of the Standard.

Voluntary Certification of the Governmental Entity Responsible for Procurement of the PPP

g. Governments should work to bring their respective administrative and procuring entity(ies) into compliance with the standard and build the necessary institutions, procedures, and capacity to combat corruption.

h. Governments should consider a voluntary review and consultation with UNECE to evaluate the entity(ies) responsible for Procurement of PPP compliance with the standard and progress toward the award of a UNECE certification of compliance.

Non-compliance with Transparency and Integrity Standard and Sanctions

i. Governments should investigate allegations of misconduct, conflict of interest, or other acts of corruption and utilize an independent authority having the power to take interim measures to safeguard the integrity of the procurement process.

j. Governments should sanction any infringement with civil or criminal penalties as necessary and as determined by the jurisdiction.

k. Governments should establish a transparent, independent, efficient and fair procedure of inquiry and enforcement.

l. Governments should establish, publish, and maintain a debarment list within an independent authority and make the list judicially reviewable.

Misprocurement and Protests

m. Governments should implement an effective protest mechanism for bidders. A mechanism which, for example, can include a prohibition on the government signing the PPP contract for a specified period of time while the name of the preferred bidder and the basis for award is disclosed to all prospective bidders, and/or resolution of the protest has occurred.

n. Governments should allow any bidder, or prospective bidder justifying an interest, who fails to be selected, to protest the award for misprocurement.

o. Governments should allow protests to be reviewed by a Fairness Auditor and/or filed with an independent authority or a court having the power to make a full or interim decision to, among other things, suspend the awarding process upon proof of prima facie evidence that the protest has sufficient merit, cancel the procedure, and/or take other appropriate remedial action.

p. In the event of a protest, governments should provide to the aggrieved bidder any special report certified by an Integrity Officer and any other transcript or procurement record generated by the government in accordance with the public disclosure rules. This is particularly important in scenarios where the procurement involved competitive dialogue or negotiation and/or there is a greater risk of improper communications.

q. The public authority may proceed with the signature of the contract without prejudice of the right of any aggrieved bidder to initiate court proceeding for damages with a competent court.

Organization of the Standard

Part 1 discusses the three (3) stages of PPP procurement and highlights the potential for corruption in PPPs.

Part 2 elaborates further the core areas where corruption in the procurement process may occur and sets out recommendations on implementing a zero tolerance to corruption approach in People First PPP procurement.

I. Corruption Risk in PPP Procurement

Preliminary Observations and Public Contracts

PPPs belong to the category of public contracts. As such, the core principles underlying the procurement of 'traditional' public contracts are also applicable to PPP contract procurement. This includes competitive bidding, transparency and non-discrimination throughout the tender. The UN Commission of International Trade Law (UNCITRAL) Model Law on Public Procurement provides that a well-designed procurement a) maximizes economy and efficiency, b) fosters and encourages participation in the process, c) promotes competition for the subject matter of the procurement, d) provides fair, equal, and equitable treatment of those involved, e) promotes integrity, fairness and confidence in the process by stakeholders, and (f) achieves transparency in the process.[7]

While of the same family, PPPs have certain distinguishing characteristics from 'traditional' public procurement contracts. One main distinction is that a PPP often aggregates under one composite contract, the financing, design and construction (or rehabilitation) of public infrastructure, together with the delivery of part or all of the associated public services by the private partner. In addition, PPPs need to accommodate changing needs of the people they serve due to the longer period of the venture. This triggers a "partnership situation" where the public and private sector partners must truly work together over long periods of time and fine tune the services, economic conditions, and other contractual obligations and performance of the project. Parties must therefore build a fair and equitable approach to future contingencies and operational and maintenance issues that is uncommon, or at least of a much different magnitude, from other types of public contracts.

One of the procurement challenges of PPPs is to evaluate and plan for, well in advance the various issues and risks that will be encountered during the life of the contract. It is also difficult to choose a partner that is able to make long term commitments for financing, designing, building and operating infrastructure, under rigorous performance parameters and contractual clauses, is capable of real partnership with the public sector, and places the interest of the people first. This is arguably the most important distinguishing characteristic, that is, to find the right counterpart and bring public and private parties together in a lasting partnership that is not just a short term 'deal', but is grounded in partnership law and traditional contract and procurement law.

The impact of this type of contracting on public procurement is manifold. For instance, a core selection criteria in traditional public procurement is the price to be paid upon acceptance of the work or upon completion of certain performance specifications. By contrast, in the majority of PPP cases, the price to be paid for the work or the infrastructure, while certainly important, is just one of many criteria; criteria such as the optimum design commensurate with innovation, improvement, and adaptation of the service, the overall ability to limit maintenance costs, the existence of a robust asset replacement plan, a responsible and limited impact on the public budget, etc. In fact, this "basket" of performance criteria, along with appropriate weighting ratios, is the recommended procurement approach to selecting the

[7] UNCITRAL Model Law on Public Procurement , January 2011, available here: http://www.uncitral.org/pdf/english/texts/procurem/ml-procurement-2011/2011-Model-Law-on-Public-Procurement-e.pdf

private partner in PPPs rather than traditional public contracts awarded primarily on lowest responsible bid

Nevertheless, despite a range of differences, PPPs remain a public contract, arising from a public process, and aimed at fulfilling a public need. In this sense, a PPP will benefit from a well-designed procurement and a rigorous anti-corruption framework just as any traditional governmental contract would.

The Three stages of a PPP procurement

PPP procurement operates much like traditional public procurement, either in concept or in fact, with the procurement process unfolding across three conceptual stages:

> **Stage 1 is** the public entity's effort to identify its needs, examine its available resources versus those that it will need to obtain, identify potential sources and solutions in the market, measure impacts, benefits, and risks of the PPP option, identify budgetary capacity versus the potential liabilities of solutions due to the anticipated allocation of risks or rights of an approach, and finally set out the parameters of its proposed tender. A key goal of these Stage 1 activities is to ensure awareness by the public and private sectors of each other's problems and preferences.

> **Stage 2** is putting the contracting opportunity out to bid thus subjecting it to competition, and evaluating and awarding the contract. PPPs can be large projects with complex interconnected operational elements, and sometimes equally complicated financing, so the cost and time to generate a responsive bid and evaluate offers can be very high. As a result, PPP procurement is often broken into two steps, a qualifying step and then a bidding step. [8] The qualifying step is where qualified bidders are identified and shortlisted to enter the next bidding step. The shortlisted bidders then compete on the contracting opportunity and bid. In the end, the public entity, through an evaluation process, awards the contract to the bidder who has proposed the best solution in terms of approach, cost, and services that are needed, and is capable of achieving the declared benefits for citizens' lives and sustainable development goals.

> **Stage 3** is after a winning bidder has been identified, contract finalization occurs, the contract is awarded, and the long-term performance under the contract commences. This Stage 3 is sometimes referred to as the design, construction, and operations and maintenance phase and includes such key activities as contract administration, performance reporting and monitoring, change and dispute resolution, and ongoing relationship management.. This is also when governments may review and identify variations in the expected and declared benefits of a project on citizens' lives and the identified sustainable development goals through an ex-post evaluation (and update any standardized tools, approaches, or risk allocation expectations used in the process.)

[9] *See, Curbing Corruption in Public Procurement: A Practical Guide*, Transparency International, 24 July 2014

Risk across all three stages

Corruption in PPP procurement is often seen as gaining an unfair advantage in the 'competition' (Stage 2 of the process), that is, influencing the competition such that one bidder wins or gains an unfair advantage amongst the pool of other potential bidders.

A holistic view of corruption in PPPs however needs to focus on all three of the PPP procurement Stages and their linkages. This is not only because corruption can occur at any stage of the process, but because corruption tends to go wherever the system is weakest or unregulated – that is, wherever it is the easiest to get away with and in some cases where the least amount of scrutiny is being applied.

For example, empirical evidence shows that extortion, bribes and other collusion with public officials to 'win' contracts occurs frequently at the outset of procurement, while unfairly seeking adjustment to performance requirements, distorting regulatory procedures, reporting, or invoices can occur years into a long-term contract.[9]

The fact that these examples demonstrate corrupt practices at the outset of a PPP and at the end during operations, might suggest that governments have a robust and well executed Stage 2, e.g. the tendering process.

Unfortunately, this less than absolute, many governments still lack basic institutional elements and good practices to conduct a robust tender, especially when the intensity and complexity of a PPP presents itself.

As a result, Government systems need improvement across all three stages. And in order to provide value for people through PPPs and follow the findings of the Addis Ababa Action Agenda of the Third International Conference on Financing for Development, governments (and their private partners) need to be thoughtful in the design and implementation of PPPs in order to prevent the pitfalls from the past and rise up to the ambitious goals of the UN SDGs.

Corruption potential

Corruption in PPPs is not a certainty. Many PPP projects are undertaken and executed with integrity and transparency and result in very positive outcomes. In fact, in some ways PPPs can be better insulated from corruption than traditional public procurement contracts. Because PPPs often involve the creation or rehabilitation of large or significant pieces of infrastructure, the project can receive a greater amount of attention and scrutiny than many routine or smaller public contracts. PPPs can also benefit from well-structured agreements that are negotiated at length and in detail, and have customized incentives to ensure a project is constructed to high standards and has long term durability; thus, reducing the risk of questionable contracts being awarded, contractors cutting corners, and bribery influencing the outcomes or performance.

Despite these potential upsides, PPPs can also be more at risk for corruption[10], with some of the more prominent causes being:

[9] *See, Curbing Corruption in Public Procurement: A Practical Guide*, Transparency International, 24 July 2014

[10] Most institutions, the UN, the World Bank Group, OECD recognize the corruption risks, and that it can come in different forms. from unfairly determining the winners, to awards favouring friends or relatives of

- When the government lacks strong institutions –government structures, authority, and review and approval procedures that are all clearly established and demarcated, and operate with integrity and transparency under robust yet efficient checks and balances on decision making.

- When a PPP concept is market tested and the public body goes out and interacts with the market and potential bidders to see what solutions are available - this interaction is often a necessary step in a PPP procurement, yet it also potentially opens opportunities for improper conversations or influence between the bidder and public officials, or simply for the private sector to steer the public party's 'needs'.

- When competitive dialogue and negotiation is used - which may be necessary to fine tune the public service, and if not well-organised with appropriate safeguards, it also provides opportunities for improper conversations or influence, behind the scenes arrangements, or schemes to gain an upper hand against competition.

- When projects are very large and/or technically complex in nature - certain sectors that compete on these types of public contracts are actually small communities, with a finite number of companies, employees, experts, and contractors working in that sector. The result is that the risk of conflicts of interest are enhanced, especially when employees may between public and private sectors.

- When projects involve significant amounts of money - the desire to win such opportunities can be intense, and the incentive to get access to the contract, even if for example it is simply helping a friend or family member gain a subcontracting opportunity on a lucrative project, can be great.

- When PPPs are long term - public contracting opportunities of significant length do not come around often, and as noted, certain sectors have a limited number of players who are able to provide such a service and for such a long term, so the need to gain an advantage over the competitors and/or win the contract can be acute.

- When governments are technically ill equipped – governments often have to employ sophisticated, front-end transactional, financial, technical, and/or legal consultants and experts to handle complex PPPs. These relationships, many of which the government relies upon heavily, present windows of opportunity to control the process or influence the outcomes of the procurement and consultants and experts, while necessary, need to be managed appropriately.

- When project performance measurement is weak - governments can caertainly benefit from the outcome based contracts often used in PPPs, but when there are no clear or applicable methodologies in the tender and/or contract to measure those outcomes and performance, such as reliable base year data, the project can be made to simply appear successful, while ultimately failing in its purpose.

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government officials, to simply skewing how the institution or competition works. These large institutional players recognize that corruption is important and tackling them is critical to making their and governments' efforts effective and achieving sustainable change. (For example, the World Bank Group has debarred more than 370 companies, governmental organizations and individuals over the past 7 years.)

II. Zero Tolerance Approaches to Anti-Corruption in PPP Procurement

Stage 1

Stage 1 of a PPP procurement encompasses all the activities and period of time prior to a public entity putting a PPP contract out to bid. Anti-corruption measures implemented during this stage are often some of the most important because they establish many of the key elements of an anti-corruption environment and mentality that will span from project inception, to tender of the contract, and through the long term operational activities that will be carried out under a PPP contract. The following approaches are procurement related, institutional elements that promote the overall transparency and integrity of PPPs and the governmental systems within which they occur.

A. Compliance with Laws and a Code of Ethics

Challenge

The challenge for governments in a PPP procurement is to promote predictability in an open and fair competitive process with public and private participants adhering to high ethical standards and clean conduct throughout the PPP process.

Recommendations

1. Governments need to set boundaries, benchmarks and expectations for public and private sector participation in a PPP, and establish legal and ethical controls that build trust in, and between, the public and private participants and a framework that ultimately strengthens the underlying social compact between government and its citizens.

2. Governments should have anti-corruption laws, regulations and codes in place that either incorporate or are based upon international models and anti-corruption instruments.

3. Public and private sector participants to a PPP procurement process should endorse and/or commit to complying with all domestic and applicable international laws, regulations and codes relating to anti-Corruption, including a code of ethics that sets up the standards of behaviour for public and private participants involved in the procurement process,.

4. The Tender documents shall refer to such applicable laws, regulations and codes and require a written commitment by the public authority and by the bidders to comply with them.

5.

6.

7.

8. Violations of the law, regulations or codes relating to anti-corruption should be enforced and contain provisions for punishment or sanctions for violations, including such remedies as fines, civil or criminal penalties, and removal or disbarment of the offending person or entity.

9. Governments should have an independent anti-corruption entity providing oversight, guidance, administration and enforcement of anti-corruption systems.

10. Governments should require private sector companies bidding for PPPs to have their own published code of ethics and internal anticorruption procedures that can be independently audited and are maintained throughout the life of the contract.

B. Avoidance of Conflicts of Interest

Challenge

In order to put "people first", it is important for governments to ensure that their PPP projects are protected from those seeking to extract improper personal gain from the initiative. Conflicts of interest are one of the key indicators of just such an opportunity therefore governments are challenged to implement strong identification and remedial measures for conflicts of interest.

Recommendations

11. As part of their anti-corruption efforts and ethics system, Governments should avoid conflicts of interest in PPPs where the direct or indirect economic, financial or personal interests of a person or entity are incompatible with or perceived to compromise their impartiality, independence, or that arise from obligations occurring in their official public capacity and the PPP.

Conflicts of interest are 'red flags' indicating the risk of corruption and a general threat to the integrity of the process. Because conflicts can be identified they are important tools to an anti-corruption system that attempts to uncover conduct that is often purposefully concealed or hidden.

12. Governments should define corruption broadly. .

13. Governments should be particularly aware of conflicts of interest that arise as the result of economic interest, political or national affinity, family or emotional ties, or any other relevant connection or shared interest.

14. Governments should take preventative steps or institute corrective measures even when there is merely an appearance of a conflict of interest.

15. Early identification, rapid disclosure, and appropriate mitigation are key to an effective system for handling conflicts of interest.

16. Governments are particularly at risk of conflicts of interest during exchanges with bidders and in a process of evaluating or optimizing the bids.

C. Disclosure of Information

Challenge

Governments are challenged to provide access to the essential facts and information that public officials use to make decisions and undertake their official responsibilities.

Recommendations

17. Public disclosure rules are essential to promoting transparency and integrity in the PPP process. Governments should institute robust disclosure practices at the outset of a PPP program or project and continue through general awareness and use of tools such as electronic disclosure, public information access systems and other disclosure practices.

Imbalanced sharing of information can lead to opportunities for corruption. Because corruption is often concealed, stakeholder access to procurement information is critical to holding public and private sector participants accountable.

18. Governments should create training and awareness programs that ensure the public disclosure requirements are met and utilized.

19. As an extension of any public disclosure rules, governments should establish an information disclosure framework for the PPP that spans the entirety of the project. The framework should offer, preferably by electronic internet based means, unrestricted and full direct access free of charge to relevant PPP documentation, abstracts, and key contract provisions and reports in a readily accessible format, and updated on a regular basis..

20. While attention should be paid to robust disclosure requirements, PPPs often invite bidders to propose innovative solutions which can involve proprietary technology or trade secrets, therefore governments should put systems in place to protect these sensitive materials from unauthorized disclosure and use by public and private parties.

21. The framework should include other disclosure procedures, such as timing and violations of the framework through failure to disclose or other wrongful withholding of materials that were subject to disclosure.

22. The disclosure rules and framework should be well publicized and set out clearly for public and private participants and stakeholders to the PPP process.

D. PPP Units, Committees and Boards

Challenge

Clear and transparent lines of reporting and responsibility within government as well as the designation or existence of a high level coordinating and decision making body is a key factor for success.

Recommendations

23. Governments should isolate certain preparation, evaluation, awarding and decision making activities in a PPP procurement and have select activities administered discretely by entities such as PPP Units, Committees and/or Boards that are independent from one another and designed to provide checks and balances on the process.

24. Governments should establish PPP Units, Committees and Boards at appropriate levels in the governmental system such that there is a clear authority, competency, scope of decision making and/or dispute resolution, and a clear approval path for projects to navigate.

Division of responsibilities and division of authority within a PPP procurement act as both i) a deterrent to corruption because no single actor can control the outcomes of the process and ii) an oversight function because the entities can monitor the activities of the others.

25. Governments should publish and reference in the bidding documents the applicable PPP Units, Committees and Boards that will be implicated in the PPP and outline their respective functions, roles and responsibilities, and decision making authority with regards to the PPP.

E. Consultants and Experts

Challenge

Because of the influence consultants and experts can exert on the decision-making processes of governments, including such basic decisions as whether to initiate a PPP, or on what grounds to award a PPP contract, governments are challenged to clearly specify and carefully control the basis for employing consultants and experts and the scope of their expected deliverables.

Recommendations

26. Governments should implement guidelines that control when, if, and under what terms and conditions consultants and experts may be employed for a PPP project. .

27. Consultants and Experts should have a high level of integrity and competent to handle each stage of the project or tender for which they have been engaged, from evaluation of the needs of the public partner, up to final award of the PPP agreement(s) and oversight of the service provision.

28. Governments should give due consideration to the capacity of consultants and experts to work within a team of public officials and deal with the specific, yet diverse competencies needed within a PPP project or series of projects.

29. Consultants and experts should be independent and have no conflicts of interest with individuals, companies and institutions, financial or otherwise, having an interest in the Project.

30. Governments should use open, clear, and consistent invitations, ToR, and evaluation systems to retain consultants and experts.

31. Governments should consider use a value and/or quality based selection approach to evaluate consultants and experts and to balance the cost of their engagement with their available budget and the size, complexity, and cost of the project.

32. Governments should identify cost controls, including the ability to increase, decrease, or eliminate specified services, prior to the engagement of consultants and experts and incorporate them into their engagement contracts.

33. Governments should actively monitor consultant and expert performance and their maintenance of the conflict free advisory role.

F. Whistle-blowing

Challenge

Governments are challenged to establish a framework for whistle-blowing that can act as a check and balance on improper conduct that is often difficult to track or identify and is purposely concealed from disclosure.

Recommendations

34. A whistle-blower is any person from the public, and potentially the private sector, fairly witnessing a conflict of interest, corruptive manoeuvres or other fraudulent practices that is detrimental to public interest and deciding to report it in accordance with a, recommended, whistle-blowing framework.

35. Governments should establish whistle-blowing policies, rules and procedural frameworks that are easy to initiate by a whistle-blower, protect duly substantiated whistle-blowers, and enable and encourage proactive disclosure of conflicts, corruptive manoeuvres and other fraudulent practices.

36. Governments should incorporate whistle-blower rules and frameworks that verify the identity of the whistle-blower but provide confidentiality of the information involved and protect the identity of the whistle-blower from disclosure.

37. Governments should provide protection against personal and professional retaliation and against criminal and civil liability to a duly substantiated whistle-blower reporting in good faith.

38. Governments should not protect a whistle-blower when a disclosure does not meet the requirement of good faith, and in such case governments should be able to hold the whistle-blower liable to specified penalties.

Stage 2

Stage 2 is the actual tender of the PPP opportunity and awarding the contract to the private partner by the public entity. Anti-corruption measures implemented during Stage 2 are focused on procurement procedure and carrying out the tender. They are designed to ensure a fair and transparent bidding process while promoting a competitive environment so the public entity receives the best offer from all participants. Stage 2 conceptually ends with award of the contract and when the project moves into the contract performance and operational stage. The following are key procedural elements that promote transparency and integrity in Stage 2 of a PPP procurement.

G. Unsolicited Proposals

Challenge: Governments are challenged to bring innovative solutions to the task of providing public services, however they must do so in a cost-effective and responsible manner, therefore governments must be cautious when dealing with unsolicited proposals that may be intended to avoid the open and competitive tendering processes.

Recommendations

39. Governments should be cautious with unsolicited PPP proposals, and if choosing to allow them, put in place stringent controls on their receipt, review and approval.

Unsolicited proposals by their very nature do not originate from the public planning process. If not managed properly, they can divert public time, attention, and resources away from the government's strategic plans and priority projects that could have otherwise been undertaken.

40 Governments should plan their infrastructure needs and services and give priority to publicly originated and procured projects. Unsolicited proposals should be considered as an exception

41. The majority of unsolicited proposals can be competitively procured in whole or in part. Governments should strive to organize a competitive procurement that is open to all potential bidders and invite competing proposals.

42. In the exceptional circumstance that an unsolicited proposal is not able to attract market interest and competition and is directly negotiated with the proponent, consideration needs to

be given to how competition can be incorporated into components of projects, such as construction or financing. .

43. Legal respect for proprietary information and intellectual property encourages private entities to submit innovative unsolicited proposals. However, governments must be careful not to allow unsolicited proposal proponents to claim confidentiality of their submission (or elements thereof) on the basis of proprietary information or intellectual property without sufficient evidence to support such assertion. All relevant project information and data, including the existence of the unsolicited proposal, should be disclosed publicly.

44. Governments should provide public notice, in an open and easily accessible location, that an unsolicited proposal has been received and is under review.

45. Governments should align PPP and unsolicited proposal policies and processes in order to increase stakeholder support, enhance market interest, and ensure consistency in public decision-making. This should include a multi-step review and approval process at key moments of the unsolicited proposal process..

H. Tender Notices and Bidding Documents

Challenge: Procurement is most effective when there is competitive tension amongst the bidders. Governments are therefore challenged to ensure their PPP procurement process includes fair and transparent communications with all potential bidders such that it invites an appropriate amount of participation and competition to the PPP procurement.

Recommendations

47. Governments should apply the underlying requirements of transparency contained in the 2011 UNCITRAL's Model Law on public procurement implementing the UN Convention against Corruption.

Tender and bidding documents that are vague, provide too little time to respond, have criteria that favour one bidder, are intentionally inconsistent, or not universally circulated, are all approaches that can be used to skew the competition in a PPP.

48. Governments should design tender notices to seek responsive candidates and provide the highest possible degree of public information in proportion to the purpose, nature, subject and value of the PPP project.

49. Governments should use tender notices that are simple and accurate, contain all the main information relating to the tender, and allow any responsive potential bidder to understand the functional specifications that are required by the project, as well as all pertinent information on the process, conditions and criteria for selection.

50. Governments should ensure that all candidates are able to have access at the same time, to the same information, and same documentation necessary for preparing responses and for participating in the tender procedure.

51. Governments should not include requirements of technical, professional or financial capabilities which are disproportionate or excessive in relation to the requirements and feasibility of a project, nor criteria that are designed to favour any of the candidates.

52. Governments should provide within the tender notices and bidding documents for the disqualification of a bidder when a conflict of interest or other improper behaviour is identified.

53. Governments should indicate in tender notices and bidding documents that the bidders are to refrain from influencing the awarding process and avoid any direct or indirect contact with the contracting or administering authority and its agents unless such contact is expressively authorized and organized by the government.

I. Pre-Qualification Process

Challenge

PPP Procurement is designed to attract bidders that on one hand are responsive, responsible and able to tender competitive offers, but on the other not be so burdensome as to negatively impact timeliness or cost effectiveness of the procurement. Governments are therefore challenged to create a fair and just pre-qualification process that permits qualified bidders to compete, yet assists in streamlining and expediting the administration of the procurement.

Recommendations

54. The purpose of prequalification is to advertise the project to the largest number of potential bidders, provide the information necessary to allow potential bidders to evaluate the reliability and quality of the preparation of the project, identify the criteria for prequalification and if interested, allow potential bidders to submit qualifying documentation with the objective of being pre-qualified.

Prequalification can be a means of facilitating corruption because it can be used to exclude bidders who would otherwise be qualified.

55. Governments should allow pre-qualification to be open and unlimited, however in some certain circumstances such as two-step procurements, competitive dialogues, and/or those projects with unique characteristics or involving functional specifications that are very complex or costly in nature, governments may limit the number of pre-qualified candidates, taking into account the cost of preparing and bidding, number of available providers in the market, and overall ability to maintain competition.

56. Governments should require bidders to maintain their prequalified status throughout the procurement process and may perform a timely post-qualification check of the successful bidder.

57. Governments should disqualify a bidder who has provided inaccurate or forged information related to the pre-qualification, and depending of the intent and nature the misleading information, be able to seek further penalties or sanctions, including after award annulling the contract.

58. Governments should verify in a timely manner the accuracy of the relevant pre-qualification information provided by the winning bidder.

J. Dialogue-based PPP Procurement

Challenge

Governments are challenged to maximize the opportunity that dialogue-based procurement provides, which is to assist governments to identify project specifications that are fit for purpose and achieve the objectives of the public entity, yet limit the window of opportunity for improper interactions or the provision of unfair competitive advantage to a bidder(s).

Recommendations

59. Governments should use dialogue-based PPP procurement when, after having set up preliminary functional specifications and key performance parameters, the government is unable or does not have sufficient expertise to establish the design that meets the functional specifications and performance parameters over the lifetime of the project

Dialogue based procurement that does not have strict controls in place allows for direct interaction and potential collusion or corruption between the public entity(ies) and the private bidders.

60. Dialogue-based procurement may include two stage tendering including a first phase where the technical specifications and the characteristics of service meeting the functional requirements are discussed with preselected bidders and where only selected bidders having passed the technical evaluation are authorized to submit a financial bid. The successful bidder is the one having the best composite score aggregating the technical and financial evaluation.

61. Due to the elevated risks of corruption and potential abuse with open dialogue, Governments should tightly scope and control interactions between the government and one or more selected bidders, and focus the dialogue only on the technical (which may include certain financial requirements) of the PPP and where the government expects contribution from the bidders.

62. Governments should not permit dialogue to revisit functional specifications, performance parameters, or standards or norms which are clearly specified in the tender documents and/or are of the essence of the project as determined by the procuring authority.

63. Governments should put in place a tender evaluation committee that has the necessary capacity to evaluate technical proposals and make quick and fully documented decisions during any technical dialogue phase.

64. Governments should ensure confidentiality of bidder information in any dialogue where intellectual property and know-how, including proprietary financial and contractual innovation is shared.

K. Confidentiality and Maintenance of Information

Challenge

In a competitive PPP procurement environment, information is essential. Information that the public provides to the private sector that forms the basis of the PPP competition, and information the private sector may share with the public sector that forms the basis of their competitiveness. Governments are therefore challenged to hold public and private information confidential throughout the process because its disclosure could impact the objectives of the PPP and the competitiveness of the procurement, while unfairly affecting the decision making of the public authorities or willingness to participate of the participants.

Recommendations

65. Governments should protect and preserve the confidentiality, integrity and safe custody of information and documents that are shared during the bidding process.

66. Governments should establish and publish a clear chain of responsibility, with parameters and timing for retention and/or disclosure of information, in accordance with the public information disclosure framework.

67. Governments should maximize the use of electronic procurement and document management systems.

Leaking of bidder information is a common approach to providing a competitive advantage to a preferred bidder. This is particularly true in procurement involving dialogue where clarifications and modifications may be frequent and entities are forming their competitive solutions and value propositions in real time.

L. Tender Evaluation Committee

Challenge

Governments are challenged to create a transparent system of review and evaluation of bidders and their bids that is uniform, based only on the merits of their proposal, and awards a contract to the entity that was judged to have submitted the best offer.

Recommendations

68. Governments should appoint members of the Tender Evaluation Committees after giving due consideration to the particulars of the project, the procurement method, the nature and timing of the evaluation, and the skills resources, and necessary capacity for the committee to carry out a fair, independent and professional evaluation.

69. Governments should bind each member and the Tender Evaluation Committee to a code of ethics and require that they have no conflicts of interest.

70. The Tender Evaluation Committee should memorialize in writing all deliberations and decisions.

71. The Tender Evaluation Committee should have a clear threshold for decision making (e.g. simple majority, highest score, etc.), and make all decisions based on objective criteria and only using information derived from the bidding materials and bidder responses provided during the course of the PPP procurement.

Evaluation criteria can be tailored to favour one bidder, bias the decision making against a bidder, or simply cause a strong bid to be unresponsive. The criteria can also be over burdensome or unreasonable such that certain responsive bids are rejected.

M. Integrity and Fairness Mechanisms

Challenge

Governments are challenged to recognize that projects involving assets of particularly high value, complexity, or political sensitivity may require additional mechanisms for ensuring protection against corrupt practices.

Recommendations

Integrity Officer

72. If a government does not have a system or authority that reviews the integrity of a procurement, Governments should consider the use of Integrity Officers to ensure and review the integrity of a procurement.

73. Governments should appoint Integrity Officers to participate in and certify that the procurement proceedings comply with the applicable laws and regulations, tender documentation and procedures, and other

Probity and fairness inquiries provide a check and balance on procurement practices and authority that is largely consolidated in the public entity. They also act as a deterrent to corrupt behaviour because of the threat of an audit and exposure.

requirements such as codes of ethics or information disclosure and confidentiality rules.

74. Integrity Officers should have proven professional capacity and skills and remain independent from all public and private parties involved in the PPP.

75. The Integrity Officer certificate should be a comprehensive report that comments on all pertinent activities and communications in light of the procedural requirements, and certifies compliance with the same (rather than for example stating an opinion).

76. Governments should make the integrity certificate and any associated reports or materials part of the documents reviewed by the body(ies) approving the selection of the successful PPP bidder and/or the body settling claims of misprocurement.

Fairness Auditor

77. If a government does not have a system or tribunal for handling claims of misprocurement, Governments may also appoint Fairness Auditors to audit the process, but unlike Integrity Officers, audit the substance of the proceedings, including deliberations of the evaluation committee and other sessions of the tendering entities, to ensure that a fair evaluation and neutral assessment was conducted.

78. Governments should ensure that Fairness Auditors have similar professional capacity, skills and independence as Integrity Officers.

79. Governments should allow the appointment of a Fairness Auditor at the request of any of the parties claiming misprocurement and/or as preliminary step to a claim of misprocurement.

80. The Fairness Auditor(s) is empowered to audit the full procurement process and should issue a report confirming compliance or non-compliance with applicable procurement procedures and rules and stating any reservations about the process identified in their audit.

81. Governments should make the Fairness Auditor report part of the documents reviewed by the body in charge of approving the selection of the successful bidder and/or the body settling claims of misprocurement.

82. Governments should require that the Integrity officers and Fairness auditors be different, independent individuals.

Stage 3

Stage 3 is the contract performance period of the PPP procurement where the public entity is actively engaged in contract management and working with the private partner to undertake the PPP activity. Anti-corruption measures implemented during this Stage are focused on sound contract management practices and procedures and are designed to support full and compliant performance of the contractual obligations and realization of the project's full potential and value for money. The following are key elements that promote transparency and integrity in Stage 3 of a PPP procurement.

N. Contract Management

Challenge

Governments are challenged to adapt to their new role as contract managers rather than contract implementers, and create contract management systems that will enable them to effectively oversee their private partners' activity, endure and adapt to the substantial length of many PPP projects, and track the range and complexity of performance and payment activities undertaken in PPPs.

Recommendations

83. Governments should seek to employ and retain experienced technical and operational project managers who are knowledgeable in the applicable sector, involved from the initial stage of the project through procurement, negotiation and operations, develop a robust understanding of the project and its whole history, and are able to assist in monitoring project performance parameters and verifying and interpreting contract performance related issues.

84. Governments should establish multiple layers of review and approval, including non-consolidated approval authority and cross monitoring, for contract management activities such as payment of invoices, acceptance of materials and performance, and interpretation and modification of contractual obligations.

85. Governments should implement, preferably electronic, records management systems to provide comprehensive project tracking and record keeping, facilitate performance monitoring and management, retention of project documentation and materials, control billing and payment practices, and provide a transparent, traceable, and disclosable contract administrative record.

86. Governments should institute real time contract performance monitoring to manage the partner and project and identify necessary project modifications and/or performance adjustments.

87. Governments should institute real time accounting practices that respect and reconcile project expenditures with budgetary limitations and obligations, and allow officials to consider financial modifications and performance adjustments on an as needed basis.

88. Governments should authorize periodic self and external accounting and auditing functions, by officials or entities with clear oversight authority, that encourages, among other things, proactive review and reconciliation of contract documentation, performance compliance verification, and billing and payment practices.

89. Governments should guard against opportunistic renegotiation of contracts by both public and private sector players

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Standard for Water Supply and Sanitation

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Contents

1. Introduction

Water and sanitation services play an essential role in the sustainability of human settlements of all sizes and at all stages of development. They underpin the economy, public health, education, environment, well-being and much more. In spite of this, these services tend to be neglected and suffer from lack of investment, political interference and poor operation. Repeated international efforts to overcome this have been met with limited success. A very significant proportion of the world's population today does not benefit from reliable access to water and sanitation services that comply with the standards or conditions required to satisfy human rights.

The dedicated water goal of the UN Sustainable Development Goals aims to change this. To succeed will require very significant government commitments in governance and organisation and large increases in finance, innovation, technology and skills. This is widely recognised to be beyond the capacity of the public sector on its own. The contribution expected from the private sector can take several forms, one of the most effective being Public Private Partnership contracts (PPPs).

Well designed and executed Public Private Partnerships (PPPs), in which both parties are actively engaged and which are supported by sound institutional structures, deliver very significant improvement and extension of services to water users. (Example)

This recommendation provides guidance on best practices for policy makers – in local and national governments – who are interested in developing PPPs in water and sanitation services to fulfil their responsibilities. Drawing on empirical evidence, it provides a model on how to use the PPP option to combine the financial, intellectual, and technological resources of the public and private sectors for the delivery of water and wastewater services. It addresses the principal issues as follows:

- Some general issues relative to PPPs
- The institutional framework required for success
- Alternative models of PPP tailored to different situations in water and sanitation
- Questions to consider in the selection of the appropriate model
- Managing a PPP project throughout the steps of the project lifecycle
- Financing for PPPs.

2. Objectives of the standard

2.1. Public-Private Partnerships in the agenda for water services

Universal access to safe water, sanitation and hygiene services is a long-standing development goal enshrined in the New Delhi Statement of 1990 and the UN General Assembly and Human Rights Council resolutions on the Human Rights to Safe Drinking Water and Sanitation (HRTWS) of 2010.

In 2015, the United Nations continued these goals and adopted itsPost-2015 Sustainable Development Goals, including goal n°6 dedicated to water, as part of the development agenda to end extreme poverty by 2030. These SDGs are applicable to all countries irrespective of the level of development, and this is particularly true of water. While provision of access to services for the first time is the main challenge in developing countries, in many developed countries urgent attention is required to bring infrastructures and operational practices in dorder to bring water supply and sanitation to all.

2.2. PPPs linking public and private efforts

PPPs in water and sanitation provide governments with the opportunity to bundle infrastructure creation and/or rehabilitation with related service delivery in a meaningful way. This can free Governments from the constraints of daily operations and allows them to focus on their specific, non-transferable, duties of supervising water policy and planning and overseeing costs, and overall service quality and impacts. Under "traditional" public procurement, significant parts of water and wastewater provision such as capital works, supply of pipes and other goods and services are routinely provided by private entities and represent the major part of the costs of water or wastewater services, whether these are managed by a government entity or not. PPP contracts are a natural extension from this traditional approach and in some countries have a long and proven history.

2.3. Scope of the standard

There are different PPP models and structures in water and sanitation PPPs Chapter 4). This standard will assist governments in choosing the appropriate model while addressing important elements that impact successful water and sanitation PPPs, such as the political environment, institutional and social support, laws, regulation, affordability, willingness and ability to charge and pay tariffs and/or taxes, availability of data, and country rating, among others.

This standard will also highlight the recent evolution through practical experience of PPPSs in water and sanitation; For example, the major shift in PPP contracting in recent years to using Key Performance Indicators (see Annex VI), for tighter and more transparent control of the water and sanitation service provision by public entities.

Also, for purposes of this standard, a Public-Private Partnership is being defined as, "a contractual agreement between a responsible public authority and a private sector operator for the development, redevelopment and/or operational management by the private sector of water and sanitation assets, including often a staffing component, that provides a public water and sanitation service to the community, under the oversight and ultimate control of the governmental entity responsible for the delivery of that service. The water and sanitation assets may be financed by either the private sector, the public sector or a combination" of both. Upon completion of the PPP the asset is returned to the Public Sector owner.

3. Central Question

(What the UN SDGs say in this sector and in general terms how appropriate is the PPP model to meet this goal or other goals if there are more than one.)

Sustainable Development Goal number 6 calls for ensuring access to water and sanitation for all and has is detailed in eight specific targets, the first three being:

- 6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water;

- 6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations;

- And 6.3: By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and at least doubling recycling and safe reuse globally

To meet this water goal, or optimise it where universal coverage is already achieved, will require a significant increase in effort from National and Local Governments. Success in the provision of water and sanitation will also contribute to meeting numerous other Post-2015 Sustainable Development Goals, which are relevant to all countries without exception as acknowledged in the UN-Water Brief "water and sanitation interlinkages across the 2030 agenda for sustainable development".

The UN recognizes that Governments must tap the private sector expertise in order to deliver against the ambitious SDGs' targets, yet in doing so must remain accountable for safeguarding the inherent public interest in access to water and sanitation.. Public-Private-Partnerships in water and sanitation can provide the necessary gap financing and capacity development, and are themselves mentioned explicitly in Target 17.17: "Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships". They are also highlighted in the Addis Ababa Action Agenda of the Third International Conference on Financing for Development, which forms an integral part of the 2030 Sustainable Development Agenda.

3.1. Project Types and Examples

(Global experiences with the model, especially in low income countries. These should objectively review what has happened in the sector by looking at projects, countries' strategies, etc. and the types of models which have been typically used. Mention can be made to any projects which have had a real transformational impact.)

[NEED CASE STUDY EXAMPLES]

There are a significant number of potential structures that can be used to create water and sanitation partnerships between public authorities and the private sector. These extend from the outsourcing of service contracts to complex project finance structures.

While there is a wide range of possible PPP models, some of the most commonly-mentioned models are as follows:

- For existing systems and assets: the three most common models are management contracts, affermage-type and lease contracts, and concessions. Each is associated with, and defined by, a particular set of objectives, allocation of responsibilities and risks. One way of designing the arrangement is to determine whether one of the three standard models can deliver the desired outcome.

- For new assets: the most common forms of PPP include Design-Build-Operate (DBO, which does not include financing by the private sector) and Build-Operate-Transfer (BOT, which does include financing by the private sector). Variations on the BOT structure include BOOT (Build-Own-Operate-Transfer), BOO (Build-Own-Operate), DBOOM (Design-Build-Own-Operate-Maintain), DBFO (Design-Build-Finance-Operate) and more, and for purposes of this document, all these variations will generically be referred to as BOT.

The different aspects of the main models are further compared in Annex I part 1, and each model is detailed in Annex I parts 2 to 7.

In practice, allocation of risk and responsibility under a particular standard model may not match the preferred outcome, in which case a tailored or hybrid approach can be developed. Various types of customized risk-sharing arrangements are possible, such as a “lease-plus” model, whereby some responsibility for investment is transferred to the private partner. For example, the private partner could fund the extension of service coverage to poor areas or peri-urban neighbourhoods, while the contracting authority retains responsibility for other investments.

Also, country laws and regulations may condition contract length, procurement procedures and contractual terms and responsibilities.

3.2. Respective advantages and disadvantages of various PPP models in water supply and sanitation

(Identify the pros and cons of models in the sector.)

Advantages

While private financing can be one of the main attractions of PPPs, it is efficiency gains, improved service quality and compliance brought about by the private sector’s management systems and innovative technologies and techniques that make PPPs an attractive mode of delivery in the water and sanitation sector. In addition, the introduction of private operators also creates a competitive environment in an otherwise monopolistic sector.

Disadvantages

Private companies involved in PPPs in water and sanitation services face a very high level of public scrutiny, as they must answer to the government entities that hire them, to various regulators, auditors and committees, to public opinion and media. Their engagement therefore increases the transparency of the service they are contracted to supply.

Water is equally vulnerable to public, private or political mismanagement. Private sector participation in the water sector has faced opposition. Causes of this resistance include:

- Political opposition to the government which implements a PPP policy,
- Political interference from officials who try to impose ideological conditions on legal contracts that have no relevance to the viability of the project and are not supported by PPP legislation.
- Economic motives of some stakeholders
- Lack of public awareness of the investment needs and actual costs of water services, linked with a fear of tariff increases, attributed (rightly or wrongly) to private sector participation
- Ongoing perceptions on “free water” and misinterpretation of Human rights.

Getting water from natural resources and delivering it to everyone according to sanitary norms, collecting wastewater safely and treating it adequately always has a cost. This reality is expressly recognized by the human right to water and sanitation.

Nevertheless, the issue of access to water for all and in particular for the poorest is critical. Regardless of the involvement of private water operators, cost reflective tariffs and connection fees must be structured appropriately. Targeted cross-subsidies or fiscal measures can be used to ensure inclusiveness and affordability. Overall cost recovery policy, including tariff setting, remains a duty of the public authority, and must not be confused with the possible option of tendering out the service or parts of it.

The UN Right to Water and sanitation is neutral towards the delivery mode, provided Governments remain accountable and aim for project sustainability. It is the government's responsibility to respect a fair rate of return on investments in capital or workforce, and to regulate profits. Governments must use rational arguments and proactively raise public awareness of the issues at stake. Communication with stakeholders such as employees affected, the community receiving the service, the media, appropriate labour unions and relevant interest groups, is of prime importance and should be conducted in a pragmatic manner.

3.3. PPPs Meeting People First Objectives – Replicability, Scalability, Equity, Efficiency, Sustainability, Effectiveness Demonstrated

(Identify the suggested model(s) and propose, if appropriate, a model that is best fit for purpose for the UN SDGs.)

4. Delivering the model in water supply and sanitation

4.1. Project selection / Baseline requirements for private interest (for the sector)

Pressure for the efficient performance of water supply and sanitation is greater today than ever, driven by urbanization, scarcity of resources, health and environmental protection, all dimensions now captured in the Sustainable Development Goals in general, and in particular in Goal n°6. Historically, public utilities have generated less than half the money they need to invest from their own operations. With public finances under pressure as never before, this approach is not viable and leads inevitably to degradation of infrastructure and falling levels of service.

These financial constraints, together with the need to improve the performance of services rapidly, are driving the shift to the recognition that water services must be managed as economic as well as social and environmental services, using sustainable economics to meet the costs of extraction, treatment, distribution and maintenance. This warrants investigation into the potential benefits of greater private participation in the water supply and sanitation sector, under due control by public bodies.

The selection of a particular PPP model and the development of a structure to underpin it should be based on the specific needs of the government entity in charge of delivering a public service, and of the community receiving the service. Key decision factors include:

- What are the operational challenges facing the public utility?
    - Human resources: does the public utility have the required qualified staff for its existing assets?
    - Management systems: does the public utility have the tools, procedures and knowledge base to provide the best service possible?

    - Does the public utility have the staff needed to operate new assets scheduled to come on-line?
    - Is the quality of service showing improvements, or is it deteriorating?
    - Does the public utility have the capacity to reduce costs and increase revenues?
    - Is the system compliant with environmental, public health and other regulations?
- What are the capital-program challenges facing the Utility?
    - How reliable and accurate is data about the nature and condition of existing assets?
    - Are there significant investments to be made in the short term?
    - Is it a nationwide or regional priority?
    - Does the system require considerable investment to repair existing assets?
    - Does the system need new capacity (e.g. new networks or treatment plants due to growing population or changing standards)?
    - Is the leakage rate high?
    - Are there new regulatory constraints leading to new investments (e.g. obsolete materials or infrastructures, combined sewer overflows, nutrient removal)?
    - Does the public utility have the capacity to procure new technology and manage it?
- What are the financial and tariff constraints of the utility?
    - Are revenues equal, higher or lower than operational costs?
    - Can the population afford current tariffs or a tariff increase?
    - What is the mix of tariffs and taxes in the current cost recovery system?
    - Are pro-poor mechanisms in place?
    - Is the utility able to issue its own debt?
- Engagement with stakeholders and anticipating their reactions
    - Need for the government to deliver on sustainable development goals and be compliant with human rights
    - What are the benefits to citizens?
    - What are the likely tariff impacts?
    - What are the benefits to environment and health?
    - What are the benefits to the local economy?
    - Who are the employees affected and how is a PPP likely to impact them? Which are the labour unions?
    - Have the other stakeholders been identified? What are their principle concerns?

Annex II proposes a *decision tree* for the selection of a PPP model which best addressees the challenges faced by the water and wastewater services. The government should nevertheless seek qualified advice (see Section 5.3 hereafter). Annex III provides more detailed insight on the respective advantages of each type of PPP regarding (1) water and/or sanitation expansion, (2) cost of service and impacts on tariffs, (3) quality of service and (4) operational efficiency.

4.2. Financing models (for the sector)

4.2.1. Issues with funding and financing

Funding is the primary stream of revenue used to offset cost or to support various leveraging options. Finance is the means by which the primary revenue streams are managed to make funds available when needed or to reduce the costs of borrowing. Governments around the world have often an insufficient revenue stream from water tariffs, thus a “funding gap”. Additionally, fragile

economies face a financing challenge due to the limited development of capital markets. PPPs can help to solve the financing challenge, and can partially lower the costs to help in solving the funding gap: this is why cost-reflective tariff issue needs to addressed upfront (see chapter 3.5) .

4.2.2. Choosing the right PPP model depending on the revenue-generating capacity of the project

It is necessary to decide whether the project will be funded or paid back by users, by taxpayers or some combination of the two. Depending on the choice, PPPs could take a concessive (corresponding to concessions, lease/affermage and divestiture models) or a non-concessive nature (service and management contracts and some BOT forms and variations). In a concessive PPP the private sector acquires the market risk and/or the commercial risk and the project is paid back through tariffs. In a non-concessive PPP the private sector only acquires the performance risk and is paid back by the government to the project developer via monthly fees, often taking the shape of a fixed (availability) fee in combination with volumetric payments.

In deciding the model the direct revenue-generating capacity of a project should be taken into account. If this is limited, and there is a significant gap to reaching financial viability, one should consider the non-concessive options. In this case, combinations of both sources (taxpayers' money and users' payments) are also possible and in that case government could make use of the so-called Viability Gap Funding (VGF) scheme. This reduces the upfront capital costs of pro-poor investments by providing grant funding at the time of financial close that can be used during construction. The VGF 'gap' is between the revenues needed to make a project commercially viable and the revenues likely to be generated by tariffs. This could also come in the form of official development assistance (ODA).

4.2.3. Access to Project Financing in a PPP Model

Public-Private Partnerships and the related financial structures can help governments gain access to alternative debt and equity that traditional finance (public funding and/or public debt financing) cannot provide. Nevertheless, this access to capital is a function of the project's ability to generate predictable and stable revenues that ensure the positive Net Present Value (NPV) of the project and an acceptable Internal Rate of Return (IRR) for the lenders and operators. The return on investment is dependent on two factors that are crucial for all PPPs:

- the ability of the project to cover its expenses through tariffs and other revenues
- the ability of the government to support the project during its lifetime through subsidies and other political and financial initiatives.

If the combination of these two factors is adequate, a viable project will be possible and this will leave the full benefits, both technical and financial to the public sector. However, if a project concept fails to meet the required revenue level needed by the private sector partner to justify the risks associate with the project the project should not be developed under a PPP project-finance model.

4.2.4. Possible Sources of Project Financing

Use of the Project Finance Model opens water PPPs to greater potential sources of financing than the more traditional models. It can also open those projects to greater usage of those funds due to the commercial nature of the financing – non-public funds being more flexible in their usage. These sources and usages will depend on the individual project, public sponsor and market conditions but, some options are listed below.

- Multi-Lateral Financing Organizations: these organizations are the primary source of financing of projects for many governments around the world. Financing provided from such organizations can have a lower cost of capital due to low interest rates and fees

- Private Finance Corporations (Banks): the global private banking systems can be a source of project financing for revenue positive projects, or for those projects that have firm government financial support

- Equity Investors: non-debt investment of capital comes with a higher cost than debt, due to the requirement of return on investment. Equity is needed for most Public-Private Partnerships. Private equity can be more willing to wait for that return to come (whereas debt wants repayment early-on) and equity funds can be used by project companies (special purpose vehicles) for project needs that debt cannot – including making debt repayments during the construction phase

- Pension Funds (Public): those managed for the benefit of public employees can be a source of dedicated, long-term financial support for projects. Public pension funds can also have the added benefit of increasing political support for the project.

4.2.5. Innovative financing instruments and emerging financing sources

A growing number of innovative financing instruments are being developed to speed the process of reaching the Sustainable Development Goals. International financial markets present a largely untapped pool of capital to finance infrastructure and institutional investors have the potential to provide an additional source of long term finance (World Bank, 2015) . Some of the emerging sources are:

1. Bond Financing and Local Currency Bond Markets for countries securing a credit rating at or above investment grade, and

2. Institutional Investors, including Sovereign Wealth Funds. Investor exposure to alternative assets has been growing, reflecting an appetite for diversification, a search for yield, and the attraction of valuation methods for unlisted assets.

Additionally innovative financing instruments that may become more and more relevant for WASH projects are:

1. Carbon Markets. A relatively novel instrument to generate climate finance can be found in cap-and-trade schemes, which set a limit to the overall emissions, thereby creating carbon credits (emission allowances). Any surplus carbon credits can be traded at carbon markets, thereby generating a new revenue stream. In equal manner, project developers can invest in low-emissions projects generating carbon-offsets which can be sold at voluntary carbon markets—to private

consumers and companies who want to reduce their carbon footprint. Carbon credits are being used to fund a variety of development projects

2. Resources-for-Infrastructure (RfI) Deals in Fragile States: Under RfI, oil or mineral extraction rights are exchanged for turnkey infrastructure, complementing standard tax and royalty regimes. The RfI financing model has been adopted by some countries, mainly in Africa, to overcome obstacles related to limited capital market access and domestic capacity to implement large infrastructure projects. It should be noted that it remains to be seen if this model is to be used in combination with PPP models or limited to the more traditional project delivery models.

4.2.6. Upfront payment at contractual closing

A number of concession-type PPPs have included upfront payments at contractual closing. These are payments (sometimes substantial) made by the concessionaire to the government in charge of the public service in the PPP's scope. The use of such money for purposes other than water and sanitation may create a sensitive situation. In some places, they are not allowed, as they can lead to mismanagement or worse at the level of the government. These payments are sometimes used by the government to compensate investments already made, to fund other expenses outside of the water and wastewater area or to fund ongoing operating budget deficits (salaries and such) through an increase in rates beyond what is required for the water system.

A government considering a concession fee payment should use the upfront payment for long term investments that will be visible throughout the life of the concession. The transparency of such systems and the ability to audit them at all stages is important.

4.3. Legal and regulatory context (for the sector)

The legal framework includes the water code or other sector-specific legislation that enables private-sector involvement in the management of water utilities, as well as any texts that govern private-sector participation in the economy, including laws governing procurement, taxation, insolvency, dispute resolution and other areas. The legal context plays a major role through the incentives and protections it provides to investors, both domestic and foreign. Investment laws should be aligned with national investment policies and priorities and at the same time meet international standards in order to be attractive to investors.

The challenge with the legal framework is to balance public and private interests: the legal framework establishes conditions that ensure effective and efficient operation, while protecting consumer and public interest in the availability, affordability, and sustainability of water and sanitation services. Appropriate nationally-enforced Key Performance Indicators (KPIs), provide an essential tool for tracking performance. The choice and accuracy of the KPIs is at stake and should be carefully weighed with the stakeholders.

Context-specific policy goals should reflect national KPIs, complemented by local ones (see Annex VI). They should be time-bound, and in line with financial means.

PPPs are particularly sensitive to regulations or their absence. Any exogenous risk (such as usage rights, resource availability or quality, environmental quality controls, etc) not borne by the public entity under regulations will have to be transferred through the contract provisions. In contracts, all parties need to forecast the financial sustainability of the project accurately.

4.3.1. Policy context

In most countries, ensuring access to and continuous supply of affordable safe water and sanitation services to all is a challenge and should be prioritized over other objectives.

PPPs are not an end in themselves. Local policy makers have to determine how private participation can be an efficient tool to achieve the public authority's objectives. This should start with clarifying and sometimes improving the regional and national water-related legal framework, with due consideration to a wider integration to overcome fragmentation and secure stable revenue streams. Against this backdrop, local authorities need to identify their own trade-offs:: financing constraints, quality of service and compliance, efficiency gains and innovation.

Once a plan/strategy/policy is in place, with clearly defined goals and allocated resources, national and regional governments can encourage investment and or recourse to PPPs to improve access, quality and affordability.

4.3.2. Regulator

Where an independent regulator implements the rules and regulations governing service provision, as stipulated in water service licenses and permits, they should be:

a) clearly defined and specific to particular service areas

b) predictable and stable

c) empowered and

d) enforced equally on public and private operators.

One of the usual functions of a national regulator, if it exists, is the collection and processing of KPIs allowing sectorial monitoring.

4.3.3. PPP laws

It is preferable to have a separate law to regulate PPP tendering, as opposed to relying on standard public procurement regulations for capital works, which have often proved to be restrictive in attracting international companies. Any existing restriction needs to be carefully investigated and remedied well before initiating the PPP tender process. However, it is important that such elimination of legislative barriers and uncertainties should not target or be perceived to target a particular PPP project or benefit a prospective bidder. The same applies to tax legislation. Strict regulations for processing unsolicited proposals and subjecting them to competitive tendering should also be in place to ensure value for money for the public purse.

4.3.4. Tariff setting and updating

A characteristic of water (and other public) services is that cost recovery levels from tariffs or taxes are determined politically and therefore often subject to short-term political pressures, whilst the real costs are determined by physical realities and incurred by the operators, irrespective of whether these are public or private. In certain contexts, regulations should aim at changing the culture from water services being freely available to being ones that have real value as well as costs, regardless of the public or private nature of the service provider. Governments and municipalities increasingly expect water and wastewater utilities of all kinds to fulfil their environmental and health goals and to finance themselves, which they can only do from revenue. Establishing cost-reflective tariffs, at least by regulation ("should-cost" method), prior to PPP will substantially decrease negative public

reactions, otherwise unavoidable if the PPP results in price hikes. The introduction at this stage of differentiated tariffs (according to users and to levels of consumption, social tariffs) is also common practice. The regulatory framework for cost-reflective tariff setting and updating is very important, regardless of whether water and sanitation services are delivered privately or publicly.

When adopting a PPP approach to service provision, regulations should allow a reasonable level of private profitability coupled with incentives for increased cost effectiveness. This can be achieved by employing different tariff setting methodologies:

- Competitive bidding for tariff level, with adjustment formula. This is suitable for affermage-type and lease contracts
- Various price-cap or revenue-cap regulations. These are suitable for concessions, BOOT and other PPP models with higher risk transfer to the private sector.

Cost-reflecting tariff setting is always critical and the final decision remains in the public hands. Depending on the scope of the PPP, the cost-recovery component of the project within the overall cost-recovery profile of the water services sector needs to be given careful consideration. For example, a water-only PPP tariff may also be recovering the costs of an extensive wastewater program.

5. Feasibility for low and middle income countries

6. Other issues - Allocation of risks (Risk Matrix)

It is important that the allocation of risks is defined in a clear, unambiguous contract that sets out the risks, who takes them, how they will be mitigated, and outlines the consequences of and actions to be taken when the risk event actually occurs.

Sustainability of water and sanitation services should always be the first concern. Therefore, rapid early identification of any upcoming risks, events or trends and their mitigation is essential to assure the quality of service without:

- Delays
- Failure to meet performance specifications, collapse, malfunctioning or obsolescence of infrastructure and equipment
- Cost overruns
- Unwanted price increases to the final consumer
- Adverse impact on or failure of the Operator.

The PPP Project Life Cycle as described in this chapter provides a roadmap for projects from inception to completion and closeout over a period that in most cases can exceed 20 years. There will almost inevitably be changes in the external environment, political, economic and operational requirements during the life of a PPP contract. It is therefore necessary for both parties to review

the real situation on a regular basis and formalise any adjustments that these changes may require in the contract and the way it is carried out.

In order to avoid loss of sustainability or quality of service, the Public Entity should engage in periodic contract reviews with the Private Operator in order to maintain the economic balance originally agreed in the contract and risk allocation. Where appropriate, these reviews should permit remedies including:

- If the risk is allocated to the Private Operator according to the contract, then the private partner should not normally be compensated for the consequences.
- If, and only if, the risk is allocated to the public sector or shared, direct monetary compensation/'availability payments' and/or extending the contract term, and/or reviewing price to consumer must be considered.

Listed in Annex V - Table I, are some common risks (both public and private) that may be mitigated from an early stage of tendering preparation, namely, population and demand growth, finance, design, technology, construction, operation, maintenance and commercial risks.

Neither public nor private partner will be able to foresee all risks and their consequences. The partners should review the partnership regularly. If either partner falls victim to the consequences of a risk that it was meant to bear, or the consequences would be greater than could reasonably be anticipated, they should modify the contract terms. Failure to do this would otherwise create a risk of failure for the services and the final consumers.

Some exogenous, unforeseen risks need to be taken into consideration and mitigation is still possible, as described in Annex V - Table II. Such risks are: legislative, social, regulatory, environmental and sovereign or political risks.

7. Indicators of compliance

8. Credits and References

- Water and sanitation interlinkages across the 2030 agenda for sustainable development, UN-Water, 2016
- Delivering Universal and Sustainable Water Services, Partnering with the Private Sector, The World Bank, 2016
- Approaches to Private Participation in Water Services, a Tool kit, The World Bank, 2006
- Structuring Private-Sector Participation (PSP) Contracts for Small Scale Water Projects, the World Bank, 2014
- Private Sector Provision of Water Supply and Sanitation Services in Rural Areas and Small Towns The Role of the Public Sector, The World Bank, 2016
- Financing for Development Post- 2015, World Bank, 2013

Annexes

Annex I: Main PPP models in water supply and sanitation

1. Typical Features of the main PPP models

	Service contracts	**Manag. Contract**	**Affermage-type lease**	**DBO**	**BOT**	**Concession**	**Outright Sale/ Divestiture**
Asset ownership	Public	Public	Public	Public	Public	Public; under private possession during concession period	Private
CAPEX Finance	Public	Public	Public	Public	Usually private; but public funds may be involved	Private	Private
Operation & maint.	Partial Private, depends on contract scope	Usually private, depends on scope, risks and terms of reference	Private	Private	Private	Private	Private
Manag.	Public	Private	Private	Private	Private	Private	Private
Human resources	Public with private specialists	Usually public workforce with private management	Private, but public workforce may be transferred to contract	Private	Private	Private, but public workforce may be transferred to the concession	Private
Scope of partnership	Variable: a single asset (plant) or aspecific service within an entire water or wastewater system	Variable: a single asset (plant) or an entire water or wastewater system	Typically and entire water or wastewater system	A single asset to be built or upgraded or expanded	A single asset to be built or upgraded or expanded	An entire water or wastewater system	An entire water or wastewater system

2. Service contracts

Service contracts should be used for specific (and time concentrated) help in matters where a public entity does not have internal skills, either because the task is non-core or because is too specialised, complex or too delicate in terms of technology. Also useful if only a short-term "boost" is required.

<table>
<tr><th>Public entity/authority
Grantor</th><th>Private company
Operator</th></tr>
<tr><td>• Retains overall responsibility for the Utility but contracts out specific, limited scope services;
• Bears all the commercial risk;
• Pays a contractual fee for the services provided by the Operator plus bonus/malus according to performance;
• Must finance fixed assets and working capital.</td><td>• Manages its own workforce and services efficiently;
• Implements its own tools to provide the service and is responsible for the deliverables required in the Terms of Reference;
• Little or no fixed investment is required from the private sector.</td></tr>
<tr><th colspan="2">Duration of contract</th></tr>
<tr><td colspan="2">Short period of time, usually less than 5 years; may be renewable, but the current trend is towards performance-based service contracts with longer duration.</td></tr>
<tr><th>Main benefits
For Public entity</th><th>Main risks
For Public entity</th></tr>
<tr><td>• Technical and technological risk is assumed by the Private Operator over the period of the contract;
• Fast, measurable results;
• Chances to follow up services (if and when needed);
• Work generally has a low visibility.</td><td>• Lack of liability placed on the private sector;
• Low level of compromise to address major infrastructural challenges;
• Does not attract private finance;
• Limited private participation in the overall scope of services delivery.</td></tr>
<tr><th colspan="2">Key issues</th></tr>
<tr><td colspan="2">• Application of service contracts to very specific, targeted issues such as advisory, feasibility studies, supervision, infrastructure and equipment operation and maintenance, complex rehabilitation and repairs, water quality control, field training, energy efficiency, leakage detection and quality control;
• Also applicable to highly sophisticated tool implementation, such as geographical information systems (GIS), automation and remote management and control, design of internal procedures and best practices manuals;
• Adjustments have to be made for each type of project;
• Terms of Reference should be detailed and should include bonus/malus for non-delivered targets;
• Include extensive capacity building component in the Terms of Reference to ensure sustainability of improvements.</td></tr>
</table>

3. Management contracts

Management contracts are used for: non-revenue-water (NRW) and Operation, Management and Maintenance (OMM) contracts, reform of the management of technical and commercial operations, provide quality management for the implementation of investment programs, improve network efficiency, etc. The private-sector is engaged to undertake operation, management and maintenance of infrastructure services. The private-sector provides a service for which it receives a fee. Assets are publicly financed, and this is an appropriate form of contract where there is limited scope to raise private capital directly. However, these can help to leverage capital indirectly.

<table>
<tr><th>Public entity/authority
Grantor</th><th>Private company
Operator</th></tr>
<tr><td>• Assets are financed and owned by Public Grantor;
• Transfers responsibility for management of the operation and maintenance of a system or part of a system including the management of associated workforce to a Private Operator;
• Provides working capital and investment funds.</td><td>• Acts on behalf of the public authority and is therefore an agent;
• Makes day-to-day management decisions without bearing any commercial risk;
• Gets paid in the form of a fee, generally linked to its performance.</td></tr>
<tr><td colspan="2">Duration of contract</td></tr>
<tr><td colspan="2">May vary from 3 up to 15 years depending on the country laws and project needs.</td></tr>
<tr><th>Main benefits
For Public entity</th><th>Main risks
For Public entity</th></tr>
<tr><td>• Promotes private sector innovation;
• Public Entity focus on public sector responsibilities;
• Delegation of specific parts of day-to-day operation;
• Increased access to private expertise;
• Longer term commitment (than service contracts).</td><td>• Delays on Public Entity responsibilities' may compromise PrivateOperator objectives and create conflicts (i.e. delay on delivering a certain facility needed to distribute water);
• Requires constant monitoring of contract objectives and performance targets;
• Does not attract private finance directly;
• Setting up unrealistic objectives.</td></tr>
<tr><td colspan="2">Key issues</td></tr>
<tr><td colspan="2">• Usually fitted to public utilities that already reach a fair operational control and wants to take the service to a higher level;
• Terms of reference should be objective and detailed. They should include key performance indicators and penalties for non-delivered targets;
• Public management should have: (i) a strong grip and leading skills; (ii) financial capacity and; (iii) provide working capital;
• It is important that the Private Operator has control over the means which allow him to achieve the performance targets;
• Involvement and cooperation of the staff is key (change of the organizational culture);
• Include extensive capacity building component in the terms of reference to ensure sustainability of improvements.
• There should be a clear mechanism for day to day dialogue between parties and for resolving issues before they become disputes;
• Clear reporting requirements.</td></tr>
</table>

4. Affermage-type lease contracts

In affermage-type lease contracts, the Public Entity Retains the responsibility for capital investment while contracting out the day-to-day activities of running the service to a private operator. The level of investment for operations and maintenance and system replacement dedicated to the operator is determined on a case-by-case basis.

<table>
<tr><th>Public entity/authority
Grantor</th><th>Private company
Operator</th></tr>
<tr><td>• Assets are financed and owned by Public entity;
• Is still responsible for capital expenditure, replacement of major works, debt service, tariffs and cost recovery policies;
• Transfers the public P&L to Private Operator;
• Lease is awarded to the highest bid (lease fee) and payment to Grantor is based on cost-plus;
• Affermage is awarded to most competitive bid.</td><td>• Is responsible for operation and maintenance and collects the tariff from consumers on behalf of the Public entity;
• Rents or leases the facilities;
• May be asked to invest on behalf of the Public entity;
• May be asked to bring working capital to support day-to-day operations;
• Recovers costs, directly, or indirectly, from tariff collection from consumers.</td></tr>
<tr><td colspan="2">Duration of contract</td></tr>
<tr><td colspan="2">Medium to long-term duration, usually 10 to 15 years but can be extended for as long as 20 years</td></tr>
<tr><th>Main benefits
For Public entity</th><th>Main risks
For Public entity</th></tr>
<tr><td>• Full transfer of operation/management and commercial risk to the Private Operator;
• No need for tariff to be set at “full cost recovery” (CAPEX may be subsidized);
• Skilled management and significant potential for operational improvements;
• Improves quality of service and efficiency with economies of scale, innovation and technology.
•</td><td>• Subsidization of the sector in relation to the increase in tariff;
• Delays on public investment may compromise private performance in meeting objectives;
• The separation of decision making between CAPEX and OPEX may create some problems;
• Low attraction of direct private finance;
• Setting up unrealistic population/demand growth and service objectives.</td></tr>
<tr><td colspan="2">Key issues</td></tr>
<tr><td colspan="2">• A clear contractual definition of O&M and delineation of responsibilities with regard to renewal and replacement are mandatory;
• Requires mechanisms for identifying, carrying out and financing investments;
• Terms of reference should include a disclaimer for all non-controlled variables, as well as penalties for non-delivered targets;
• Contracts should encompass a possibility to extend the contractual period (3 to 5 years) to assimilate deviations that may occur;
• Proposals should be made with conservative forecasts and projections;
• Public sector needs to monitor the contract objectives and performance;
• There should be a clear mechanism for day-to-day dialogue between parties and for resolving issues before they become disputes;
• The operator can either bear the risk on volumes produced or on volumes sold;
• Public workforce may be transferred to the Private Developer under public personnel cession laws;
• Performance based affermage-type lease contracts are a new trend to consider.</td></tr>
</table>

5. Design, Build Operate (DBO), Build Own Operate Transfer (BOOT), Build Operate Transfer (BOT), Build Own Operate (BOO), Design Build Finance Operate (DBFO) contracts

BOT contracts (each form has different grades of responsibility to each parties) are appropriate to facilities that are complex or requires some skills to operate. Also, they are suited to fast construction programs and full delegation risks of specific facilities.

Public entity/authority ***Grantor***	***Private company*** ***Operator***
• Transfers to Private Operator operating and construction risk (BOT), plus design (DBO) and finance risk (BOO, BOOT & DBFO); • Is responsible for determining the demand for the service being contracted and the size of the facility; • In the end of the contract, facilities revert to Public entity.	• Builds, owns, operates and may finance a specific new facility, rather than operation and further developments of an existing system (Concession); • Is paid by the Grantor by a fixed monthly fee or a variable fee (per cubic meter delivered) or a mix of both. • Optimisation of infrastructure design and operating procedures
Duration of contract	
Related to the time needed to cover the financial and operational costs. Contract period may vary from 5 to 30 or more years.	
Main benefits ***For Public entity***	***Main risks*** ***For Public entity***
• Off-balance sheet financing of large facilities; • Attracts private finance and accelerates construction; • Transfers the risks of cost overruns and delays to the private sector; • Transfers design risk to Private Operator that seeks a whole life costing approach. •	• Wrong forecasts in demand once Public entity often guarantees the demand; • Funding guarantees may be required; • No long term risk transfer in case of technical challenges; • Cost of re-entering the business if operator proves unsatisfactory. • May need a “take or pay” provision.
Key issues	
• Used for “high tech” or cutting edge/pilot technology infrastructures, for investments in solving specific, concentrated problems (pollution, complex wastewater, unpredictable raw water) and confined project areas (such as new residential, financial or industrial cities); • Requires a strong Public entity able to collaborate with BOT Private Operator in integrating it into the overall system; • Consider phasing of system to size the facility in line with demand growth.	

6. Concession contracts

In Concession contracts, both capital expenditures (CAPEX) and operational expenditures (OPEX) are granted to the Private Operator.

<table>
<tr><th>Public entity/authority
Grantor</th><th>Private company
Operator</th></tr>
<tr><td>• Assets are owned by Public entity that entrusts them to the concessionaire;
• Delegates to Private Operator risk of finance, design, construction and operation;
• The fixed assets must be returned in the same (or improved) condition at the end of the concession.</td><td>• Has overall responsibility for the services (operation, maintenance, management, collection and commercial), and capital investments for the expansion of services (including rehabilitation and replacement);
• Is paid directly by the customer, based on the defined set of tariffs, generally related to consumption.</td></tr>
<tr><th colspan="2">Duration of contract</th></tr>
<tr><td colspan="2">Usually 20 to 30 years (or more), depending on the level of tariffs, investment and payback period needed for the concessionaire to recover investment costs.</td></tr>
<tr><th>Main benefits
For Public entity</th><th>Main risks
For Public entity</th></tr>
<tr><td>• Attracts private finance that may be important if public capital is a constraint;
• Faster initial investment plan;
• Technical, operational, collection and commercial risk are assumed by Private Operator;
• Improves quality of service with economies of scale, innovation and technology;
• If tariffs level ensures “full cost recovery” and sustainability throughout the entire period of concession, the Private Operator may pay a rent.</td><td>• Tariff risk due to “full cost recovery“ concept;
• Possible subsidy from the Grantor to ensure the sustainability of the project (if tariff affordability is compromised);
• Rate and foreign exchange risks;
• Lack of public acceptance and political confusion with “privatization”;
• Public entities may be tempted to increase population and consumption forecasts in order to get lower tariffs.</td></tr>
<tr><th colspan="2">Key issues</th></tr>
<tr><td colspan="2">• Requires good legal framework in the countries;
• Both partners need to optimize investment and operations for the duration of the contract;
• The Operator commitment must be in terms of results or means;
• Concessions need to be realistic from a perspective of performance, revenue, operational costs and maintenance;
• Conditions will change over such a long period and concession contract should be reviewed at least every 10 years and preferably every 5-6 years in certain variables (fixed and known to all competitors during tender process);
• Setting up a proper independent tariff regulation avoid sudden rate increases;
• Terms or Reference should include penalties for non-delivered targets;
• Both, Terms of Reference and Proposals should be made with conservative investment plans, forecasts and projections;
• Public workforce is usually transferred to the concession under public personnel cession laws.
• Public sector needs to manage concessionaire and monitor performance;
• New trends rely on combination of government and domestic loan financing rather than equity.</td></tr>
</table>

7. Outright sale/divestiture

Outright sale/divestiture is a specific case of privatization: ownership of the water or wastewater assets by a private entity, usually regulated by a government body (after divesture it ceases to be a PPP). The public authority will receive a lump payment for the sale of the water utility and, from this time onwards, ends liabilities for the public entity. Tariffs level should ensure "full cost recovery". Here, the private owner may have an economic driven management so, a strong public regulator is advisable to assure water access to the most periphery and needed population and to guaranty affordability to everyone.

Public entity/authority ***Grantor***	***Private company*** ***Operator***
• Creates a public firm under the country's existing commercial code; • Creates a public authority (or regulator) to monitor and guide private management; • Defines minimum objectives and general policies for the services; • Promotes a public tender in order to sell all or part of the firm.	• Buys and owns all assets; • Takes full responsibility for the services (operation, maintenance, management, collection and commercial), and capital investments for the expansion of services (and for rehabilitation and replacement).
Duration of contract	
Unless a serious event happens, privatization is a deal for life.	
Main benefits ***For Public entity***	***Main risks*** ***For Public entity***
• The authority will receive a lump payment for the sale of the water utility; • No on-going liabilities for the authority; • Private entities may find it easier to obtain private long term funding on capital markets. •	• Lack of public acceptance; • Excessive benefits for the private operator may occur if public authority isn't vigilant or doesn't gather sufficient information or situation analysis; • Loss of control over the long-term interest and sustainability of the sector. •
Key issues	
• Sectorial reforms and legislation implementation prior to asset sale to enforce performance guarantees; • Transparent indicators in case of non-compliance; • Need for a strong regulator for tariff setting, performance monitoring and general oversight and clear restrictions on sale of assets required for regulated business; • Need for a Revenue CAP (capital asset price) or similar regulation model.	

Annex II: Selection of PPP models

<table>
<tr><td colspan="8">Are the public utility's operations of existing assets in a difficult situation – e.g. non-compliance with quality of service, environmental regulations, lack of qualified staff?</td></tr>
<tr><td colspan="4">Yes</td><td colspan="4">No</td></tr>
<tr><td colspan="4">Is the public utility facing important capital program challenges – such as the need for new infrastructure, or the rehabilitation of existing infrastructure?</td><td colspan="4">Is the public utility facing important capital program challenges – such as the need for new infrastructure, or the rehabilitation of existing infrastructure?</td></tr>
<tr><td colspan="2">Yes</td><td colspan="2">No</td><td colspan="2">Yes</td><td colspan="2">No</td></tr>
<tr><td colspan="2">Is the utility facing financial constraints – e.g. difficulty setting economic tariffs or issuing debt?</td><td colspan="2">Is the utility facing financial constraints – e.g difficulty setting economic tariffs or issuing debt?</td><td colspan="2">Is the utility facing financial constraints – e.g difficulty setting economic tariffs or issuing debt?</td><td colspan="2">Is the utility facing financial constraints – e.g. difficulty setting economic tariffs or issuing debt?</td></tr>
<tr><td>Yes</td><td>No</td><td>Yes</td><td>No</td><td>Yes</td><td>No</td><td>Yes</td><td>No</td></tr>
<tr><td>The government can consider a concession, partnering with an expert at managing operations and capital investments and reducing costs.</td><td>The utility can consider an affermage-type lease, with a focus on operational and capital program management.</td><td>The utility can consider a management contract or an affermage-type lease, which will bring a partner able to address operational issues and identify and implement cost reductions and efficiency.</td><td>The government may consider a management contract to improve the operations of its assets, while continuing to fund new investments directly.</td><td>The utility may consider a BOT, which will help address its new infrastructure challenges and the need for economically efficient funding.</td><td>The utility can consider a DBO, which will procure an expert partner for the new infrastructure, while maintaining public financing.</td><td>The utility can consider a management contract or an affermage-type lease, which will bring a partner able to identify and implement cost reductions and efficiency.</td><td>The government should consider keeping its current form of governance; the PPP approach may provide more complexity than assistance.</td></tr>
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Annex III: Different needs, different contracts: which kinds of PPPs are most appropriate: THE FOUR DIMENSIONS ANALYSIS

1. Water and/or sanitation expansion: network coverage and access through household, yard connections and standposts

According to the relative importance of the coverage extension, the financial needs will drive towards long term contracts.

Service Contracts	Short term services cannot help in water and sanitation access, although they may be indirectly useful in master plans, feasibility studies, engineering design, supervision, training and advisory.
Management Contract	Useful in setting up procurement, award and supervision of public works that aim at water and sanitation expansion. Also useful in commercial relationship with customers with the goal of increasing household and yard connections.
Affermage-type lease	Useful in setting up procurement, award and supervision of public works that aim at water and sanitation expansion and in commercial relationship with customers with the goal of increasing connections. Also, part of CAPEX – replacement and renovation – may be borne by the Private Operator.
BOT /BOOT / DBO / BOO / DBFO	BOT and its variations are particularly fitted to increase service access, once they are selected as a tool to build and operate new facilities. They may be used to raise dams, WTP, WWTP and confined networks (new neighbourhoods, industrial and financial cities, etc.)
Concessions contract	The Private Operator is responsible for water and sanitation access and network, responding to pre-identified needs stipulated by the Public entity. Good model to achieve quick initial investment plans and quick growth. Goals must be identified by the Public entity in bidding terms of reference as well as in contracts.
Outright sale/ Divestiture	Water and sanitation access and network expansion are private responsibility and minimum objectives and performance levels should be agreed on beforehand.

2. Cost of service to public entities and/or tariff levels to consumers

The margin of manoeuvre to optimise the service in cost terms depends on the scope of the contract and its duration: broader contracts generally enable greater efficiency gains.

Service Contracts	Short term services impose an operational cost on Public entities and aren't the best option for implementing cost cut measures and increasing revenues, but they may be useful in advising on such matters.
Management Contract	Asset finance must be assured by the Public entity, either from its own budget, or soft loans from donor countries and IFIs, or from public subsidies. The profitability risk is borne by the Public entity and payment to the Private Operator is generally made of a mix of a (monthly) retainer fee and a variable performance fee linked to the achievement of pre-defined goals and reward success.
Affermage-type	Similar to Management contracts: most of the CAPEX financing must be assured by the Public entity. Here, the profitability risk is borne by the Private Operator and it is

lease	rewarded by its own results. The Private Operator rents or leases the asset. Tariffs may (or may not) be subsidized - depends whether rent covers the amortization of public CAPEX or does not.
BOT /BOOT / DBO / BOO / DBFO	Depending on the decision of Public entities, financing may be private, or mixed (some public financing can also take place). Payment schemes vary from project to project. In some agreements, Private Operator receives a fee for the construction, plus a fee for the operation (both paid throughout the lifetime of the contract). In others, the Operator receives a retainer fee linked to the availability of the facility and a performance fee linked to the production/use of the facility.
Concessions contract	CAPEX execution, finance and fund guarantees are fully private. Profitability is private responsibility and is rewarded by its own results. Generally, tariffs should ensure "full cost recovery", but subsidies may occur.
Outright sale/ Divestiture	CAPEX execution, finance and fund guarantees are the private sector´s responsibility. A purchase agreement should fix the value and payment conditions between the seller (public entity) and the buyer (private). Tariffs should ensure "full cost recovery", including the acquisition price paid and a fair rate of return, but subsidies may still occur.

3. Quality of service: drinking water quality, daily availability of supply, pressure and flow, sewerage drainage, treatment and adequate disposal

Service and management contracts can be more efficient on specific scopes, such as non-revenue water reduction, as it allows to concentrate efforts. Conversely, longer contracts have a broader impact but allow horizontal progress.

Service Contracts	In specific problem solving, facility upgrades and IT solutions, service contracts can be an option for improving quality of service. They can be hired for short periods and for defined tasks.
Management Contract	Usually good for improving quality of service, but a set of objective and key performance indicators for the lifetime of the project must be identified in the bidding terms of reference and in the contract in order to supervise the private performance and measure its success. The availability of accurate information is key to determine a baseline for the KPIs and objectives.
Affermage-type lease	Quality of service is Private Operator's responsibility and Affermage type lease contracts enforce this matter.
BOT /BOOT / DBO / BOO / DBFO	Being a responsibility of Private Operators, quality of construction and operation must be assured by them. Public entity should require and monitor quality levels of service as he buys an output (e.g. quantity and quality of product) rather than assets.
Concessions contract	Quality of service is private responsibility and Concession contracts help achieving it.
Outright sale/ Divestiture	Private operator bears the full responsibility for the quality of the whole service.

4. Operational efficiency

Service and management contracts are suitable to provide quick improvements, while concessions usually provide more sustainable results; capacity building is key for the durability over the long term.

Service Contracts	In specific problem solving, upgrades, IT solutions and advisory, service contracts can be an option for improving efficiency. They can be hired for short periods and for defined tasks.
Management Contract	Good for improving efficiency for medium and long term. A variable fee may be paid to the Private Operator if he exceeds required performance.
Affermage-type lease	Good for improving efficiency. Full operation risk/benefit is borne by the Private Operator who, therefore, is encouraged to increase efficiency.
BOT /BOOT / DBO / BOO / DBFO	Efficiency is assured by the equilibrium of (i) best construction; (ii) best operation costs; (iii) best final price to the Public entity. In the BOO/BOOT and DBFO, the Private Operator will normally receive incentives to fully optimize life-cycle costs, considering a long term (normally 15-25 years) of operation and maintenance.
Concessions contract	Good for improving efficiency in a long term vision. Efficiency is assured by the equilibrium of (i) best construction; (ii) best operation costs; (iii) best final price to the Public Entity. Full operation risk/benefit is borne by the Private Operator who, therefore, is encouraged to increase efficiency.
Outright sale/ Divestiture	Efficiency is assured by the equilibrium of (i) best construction; (ii) best operation costs; (iii) best final price to Public entity. Private Operator bears the full responsibility for improving efficiency.

Annex IV – Main phases and related deliverables

Phase	Typical deliverables
Project identification	✓ Definition of policy objectives ✓ Inception report ✓ Feasability study ✓ General assesment of the needs, the project scope and of the proposed project
Project preparation	✓ Definition of public priorities, project scope and objectives ✓ Selection of most appropriate contractual model ✓ Preparation of bid documents ✓ Definition of Key Performance Indicators and deliverables ✓ Pre-qualification criteria for contractors ✓ Announcement of project and public consultation ✓ Pre-Bid announcement and shortlisting of potential bidders ✓ Financial feasibility report ✓ Risk assessments ✓ Project requirements ✓ Reality check of contract performance metrics to ensure realistic targets ✓ Detailed terms of reference for the contract procurement ✓ Environmental and social impact assessment ✓ Project “road show” to main stakeholders
Procurement	✓ Management and supervision of tendering process ✓ Tender documents

	✓ Key Performance Indicators ✓ Rents, fees, penalties ✓ Tariffs ✓ Bid evaluation ✓ Clarifications and contract finalisation ✓ Contract signature
Project start-up	✓ Completion of "Conditions Precedant" ✓ Staff agreements ✓ Project announcement and publicity ✓ Transition phase
Design and construction	✓ Engineering design ✓ Operating standards ✓ Maintenance standards ✓ Specific environmental impact assessment studies ✓ Permits ✓ Construction and commissioning ✓ Acceptance procedure
Project operation	✓ Biannual or annual operational and accountancy reports ✓ Annual evaluation of performance and appropriate action plans ✓ Periodic general contract review
Project completion and contract exit	✓ Assets assessment ✓ Financial audit ✓ Transfer plan (Assets, staff, others.)
Post contract evaluation	✓ Post contract evaluation

Annex V – RISK CATEGORIES AND MITIGATION MECHANISM

1. Most common risks and their mitigation options

Risk type	Risk description	Potential consequence	Who bears the risk	Risk mitigation
Population growth	- Over (under) estimated population growth; - Wrong planning of geographical areas of urban expansion.	- Over (under) dimensioned CAPEX; - Over (under) estimated revenues; - Unwanted raise of price to final consumer.	**Public entity** should forecast population growth and fix it in the tender documents.	- Use of conservative forecasts; - Stipulate periodic contract reviews, (at least every 10 years and preferably every 5-6 years), to ensure the adaptation of the contract terms above/below certain deviations (fixed in the tender process); - Mitigation mechanism: (i) Revenue guarantees by government e.g. take or pay formula or business interruption insurance; (ii) PPP agreement to allow the private partner to pass this risk partially to consumers e.g. increase tariffs; (iii) PPP agreement to include a clause allowing the extension of the project term, permitting as such for the private operator longer time to recoup investments; (iv) PPP agreement to give private sector discretion in scheduling capital investment depending on population growth.
Demand	- Over (under) estimated number of clients - per-capita consumptions increase/decline.	- Over (under) dimensioned capex; - Over (under) estimated revenues; - Opex overruns.	Depends on type of contract. Generally, **Private Operator** is the one that has the know-how and should present forecasts in its proposal.	- If risk is private (usually in concession, affermage-type lease and divestiture), then private has overall responsibility for deviations and the use of conservative forecasts is the main mitigation mechanism. - If risk is public (services, management contracts and some BOT forms and variations), then use the same risk mitigation as “population growth” but applied to “demand”. - When demand forecasts are set by Public entity, loss of income due to a per-capita consumption decline should be off-sett.

Design, technology and construction	- Failure to meet performance specifications; - Cost and/or time overruns; - - Failure/delay of obtaining necessary permits, licenses and access to land.	- Delays in complying with service objectives; - Capex and/or Opex overruns.	When Capex is private (Concessions, BOO, DBFO): **Private Operator** bears risk for new facilities and for further developments of an existing system.	- PPP agreement to allocate the responsibility of timely land expropriation and licensing to the government entity; - PPP agreement to include a performance bond and liquidated damages; - Pass the on-time / on-budget completion risk to the construction subcontractor by: (i) including joint and several liability in the construction subcontractor agreement; (ii) including a fixed price in the construction subcontract – turnkey / fixed price; (iii) including a clause of back-to-back responsibility for penalties that may come from PPP contract due to delays and/or malfunctions; - Hire extended insurance policy to protect assets and loss of profits.
Finance	- Risk associated with the availability and cost of funds for the project. - Also includes: (i) risk of change in interest rate; (ii) Risk of change in inflation rate; (iii) Risk of change in foreign exchange rate; (iv) Residual value risk; - Finance risk could also include unforeseen investments that would be required during the lifetime of the project.	- "Draw stop" of bank loans with delays on Investment Plans if project does not comply with "events of default"; - Delays in complying with service objectives; - Overrun of financial costs.	**Public entity** when Capex is public (services, management, lease/ affermage contracts and some BOT contracts); **Private Operator** when Capex is private (concessions, divestiture and some BOT contracts).	- Financial agreements usually are complex and require professional advisory input during negotiation; - Involvement of banks since the beginning of bidding process gives comfort to banks; - Involvement of banks during contract review negotiations is crucial to avoid defaults and "draw stop"; - Foresee a "standby loan" and "standby equity" for unpredictable investments or deviations in revenues during the lifetime of the contract; Other risk mitigation mechanisms: - Specific country financial risk: incorporate specific country risk (ie local currency risk) mitigation options into contract structure - Interest rate risk*: (i) Hedged by interest rate swaps allowing the private partner to convert variable rate debt to fixed rate debt**; (ii) Take fixed rate loans. - Inflation rate risk: (i) Pass it through to the end user or the government through the indexation of capital grants and other contract payments (e.g. availability payments, fares); (ii) Tariffs to end user may be revised on a yearly basis with inflation and other key variables. - Foreign exchange risk: (i) Hedged by currency swaps taken by the private partner; (ii) Private sector to reduce reliance on imported inputs or foreign currency borrowing; (iii) Government guarantee through the inclusion of a revenue adjustment formula in the PPP agreement; (iv) PPP agreement to link infrastructure service price to exchange

				rate fluctuation; - Residual value risk: (i) PPP agreement to include incentives to encourage asset transfer to the government in suitable condition e.g. option to renew the agreement instead of transferring the asset; (ii) PPP agreement to include the creation of a sinking fund to bring asset up to desired standard. IMPORTANT: also see Section : Financing Models. * Price indices used should be from public sources to ensure transparency and minimize bias. ** However, the government should assume the risk of change in swap rates between bid submission and financial close.
Operating and Maintenance (O&M)	Operation failures or costs greater than anticipated and/or maintenance programme or costs are greater than anticipated.	- Failure to meet performance specifications, collapse or malfunctioning of infrastructure and equipment; - Opex overrun.	**Private Operator** has overall responsibility for operation and maintenance (except in service contracts).	
Commercial (billing & collection)	Delays in collection; increase collection period and overdue debt; Increase of uncollectible: challenges raised by "could pay won't pay" and "would pay but can't pay" users. The operator has often responsibility for collecting money to repay activities linked with the service but outside the scope (abstraction	Shortage of necessary cash-flow for day-to-day costs and/or investment.	**Private Operator** has overall responsibility for commercial risk (except in service and management contracts).	- Predict a “social tariff” to poor income families. This social tariff policy should be fine-tuned (see section Financing Model(s)) and should get public authorities' formal validation; - Use conservative forecasts regarding collection period and uncollectible; - Include short term loan in finance agreement to foresee these issues; - Predict payments by monthly instalments and with the help of local commercial banks to support clients; - Use tested utility billing software in the country/region of contract (if possible). - Collection risk for municipal clients are not transferrable to the private operator

	charges, taxes, regulators et cetera.).			
Early termination	- Public entity may declare "public interest" to terminate the contract. - Public entity may revoke the contract due to Private Operator failing to meet performance obligation . - Private Operator may revoke the contract due to violations of Public obligations.	Reduction of the value of the project.	**Public entity** has overall responsibility for ransom.	- If Public Entity declares "public interest" to terminate the contract including compensation description (due to Private Operator) in PPP agreement. - If Public Entity revokes the contract due to Private Operator failing to meet performance obligations Private Operator may have to compensate Public Entity: including motive and compensation terms of PPP agreement. - If Private Operator revokes the contract due to violations of Public obligations: Public Entity may have to compensate Private Operator: including motive and compensation terms of PPP agreement.

2. Exogenous risks

Risk type	Risk description	Potential consequence	Who bears the risk	Risk mitigation
Legislative	Changes in legislation, and/or taxes, and/or fees.	- Increase of costs; - Loss of viability/value of the project; - Unwanted raise of price to final consumer.	Usually **Public entity**, unless stipulated otherwise (it may be shared in some cases of concessions and BOT variants).	- Perform proper legal due diligence and study impact of potential legislation changes on financial viability; - PPP agreement to specify the applicable law and jurisdiction, as well as dispute resolution mechanisms; - PPP agreement to include compensation for discriminatory changes in law.
Social	- General public backlash or dissatisfaction with the project; - Increasing lack of public acceptance and political confusion with "privatization"; - Inappropriate stakeholder influence (vested interests).	- Social protest and boycotting; - Operational difficulties to perform the contract; - Delays; - Overrun costs.	**Public entity** has overall responsibility for social risk, unless in some commercial aspects, if duly identified in PPP agreement.	- Promote public involvement since the early decision making stage; - Promote campaigns around the advantages and value added after deciding to use a PPP;
Regulatory	Changes in the regulatory empowerment and framework.	Change impacting the project positively or negatively, including price and tariff variation; Undue interference by regulator and/or government on utility operator.	**Shared**, depending on depth of regulatory changes.	- Perform proper regulatory due diligence and study impact of potential regulatory changes on PPP agreement; - contract should clearly stipulate how to deal with changes imposed by regulators as opposed to those created by other external circumstances or the will of the contracting parties. - PPP agreement to specify the applicable law and jurisdiction, as well as dispute resolution mechanisms; - PPP agreement to include clause stipulating the mechanism for tariff adjustments.

Environmental	Harmful effects to human health or to ecological systems resulting from exposure to an environmental stressor.	- Fines and administrative penalties; - Implementation of compensatory and corrective measures; - Capex and/or Opex overruns.	**Private Operator** (except in service and management contracts but only if the risk isn't borne due to private operation).	- Due diligence to include an Environmental Impact Assessment (EIA) and proper management plan; - Construction and operations subcontracts to include environmental management and indemnification. - PPP agreement to specify the applicable law and jurisdiction, as well as dispute resolution mechanisms; - PPP agreement to include clause stipulating the mechanism for tariff adjustments.
Sovereign or Political	Government policy changes, unilateral interference on the contract, expropriates assets, implements exchange controls or enforces other non-contractual disciplines.	Reduction of the value of the project to the private investor.	**Public sector** has overall responsibility for sovereign and political risk.	- PPP agreement to relieve the operator from responsibility in case of «unforeseeable discriminatory government conduct»; - PPP agreement to include a breach clause, a termination clause and lenders' step-in rights; - Include multilateral organizations among the shareholders or lenders; - Financial involvement of sponsors or lenders from the host country; - Recourse to the export credit agencies, which act as guarantors for the political risk during the loan period. - Actual insurance to hedge certain specific risks, to be obtained from public insurers such as MIGA or private insurance companies. NOTE: Sovereign risks includes: 1. Currency Inconvertibility and Transfer Restriction 2. Expropriation 3. War, Terrorism, and Civil Disturbance 4. Breach of Contract 5. Non-Honouring of Financial Obligations

Annex VI – Suggested Key Performance Indicators

Policy goals and objectives should provide the basis for defining the appropriate key performance indicators (KPIs). Establishing well defined policy goals with subsequent use of appropriate KPIs in the PPP agreements are key criteria for successful PPP projects since they permit essential decisions concerning the rationale and feasibility of possible PPP arrangements.

There are some important principle for defining and selecting KPIs:

- The KPIs should support the achievement of policy goals/objectives, and demonstrate the extent of improvement;
- The KPIs should be defined precisely and measurable
- It should be clear how the private sector shall report on individual KPIs, how technical auditors shall verify the PIs;
- There should be a reasonable relationship between the cost of measuring and consolidating the KPIs, their relation to the policy objectives, and the possible incentives and penalties;
- The public sector should have or secure the capacity to review the KPIs of the contract in addition to the contract cost elements ,
- The progress/improvements measured by the KPIs should reflect planned capital investments and asset maintenance to be undertaken by the private sector;
- Average or weighted average figures for targets should be used with caution particularly for KPIs with a large number of data parameters (such as for instance water quality and customer relations);

Penalties and incentives (for services requirements, performance and delays) should be clearly stipulated in contracts (with a maximum cap).

Basic service performance indicator categories for water distribution include:

- Coverage of households or other potential customers;
- Quantity of water provided and consumed;
- Water quality and environmental compliance;
- Water pressure and reliability of pressure;
- Non revenue water
- In case of intermittent provision, service frequency/ supply disruption;
- Rehabilitation of pipelines
- Customer service response times;
- Customer satisfaction with different aspects of service;
- Affordability
- Economic indicators.

Basic wastewater performance indicators include:

- Coverage of households, kiosks and other potential customers;
- Adequacy of treatment capacity

- Service quality and reliability (frequency of sewage and overflows or frequency of collection of sewage from holding tanks);
- Occurrence of structural collapses in collectors
- Rehabilitation of collectors
- Customer service response times;
- Affordability;
- Level of treatment and quality of outflows of treatment plants to the environment.
- Economic indicators
- Sludge treatment Destination

Annex VII –

Draft

Standard for Roads

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DATE: 29-4-2017

I Introduction

The United Nations Sustainable Development Goals ("SDGs") adopted by the UN General Assembly in September 2015 (the 70th session) identify a range of measures to "provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety…", to tackle climate change along with an emphasis on the need for sustainable development and clear mechanisms for implementation.

SDG17 is relevant to PPP in general as it encourages effective public, public-private and civil society partnerships, SDG11 (sustainable cities and communities), as above referred, and SDG9 - "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation" are particularly relevant to the roads transportation sector, but success in meeting others such as SDG3 (access quality essential health-care services), SDG4 (access to education), SDG7 (affordable, reliable, and modern energy supply), SDG8 (sustainable and inclusive economic growth), SDG12 (responsible consumption and production), SDG13 (climate action), and SDG15 (decreasing negative ecological impacts of development and human settlements), SDG16 (promote peaceful and inclusive societies) all directly relate somehow to the quality of development of roads transportation systems, the way transportation infrastructure are deployed and how they are available for access and use by the world's citizens. To realise these goals, significant investment in the improvement of roads transportation systems is needed.

To this aim, the 2030 Agenda recognises that successful delivery of the SDGs will depend on global partnerships and cooperation between public, private and civil society. The UNECE supports the use of global partnerships for sustainable development and has produced this Standard to provide guidance to governments considering the use of Public-Private Partnership ("PPP") programmes to deliver investment in roads transportation systems and infrastructure as a way of meeting SDG11 and contribute towards satisfying the other SDGs. Within this Standard, cross references to the SDGs are shown in square brackets.

If managed well, PPP projects can help governments tackle development needs by bringing sustainable investment, replicable processes and expertise to complex systems. PPP programmes can support the successful implementation of roads transportation policy, to facilitate sustainable and resilient infrastructure development, promote inclusive and sustainable industrialization and foster innovation, and making staff dedicated to the realization, maintenance and operation of roads transportation infrastructure feel valued and fulfilled. The production of this Standard is intended as a step towards universal implementation of the SDGs. The Standard is resource to assist governments in the successful utilisation of PPP as a means of increasing their access to investment for the delivery of needed infrastructure.

Road infrastructure is therefore crucial for achieving almost all of the referenced United Nations' Sustainable Development Goals ("UN SDGS"). From the eradication of poverty through advancements in health, education, water supply and industrialization, to combating climate change, road infrastructure and particularly access to well-organized, maintained, and flexible road systems will be needed.

In fact, the UN SDGs call for improved transportation and connectivity cannot be realized unless the private sector is mobilized – and on a significant scale. UN SDG 17 (Revitalize global partnerships for sustainable development) calls for this partnership between the public and the private sector as well as civic society. Practical tools for implementation as well as robust review and monitoring

frameworks, regulations and incentive structures that enable such investments must therefore be retooled to attract investments and reinforce sustainable development.

PPPs" are a mechanism for facilitating this private sector participation in the delivery of road projects and can mobilize private sector capital, technological and operational know-how, and risk appetite to develop, design, finance, build, operate and maintain a road project.

In the field of transportation infrastructure, relevant SDGs can conflict with each other, in particular for large-scale transportation projects.

Road PPPs are furthermore characterized by their capital-intensive nature and longer term financing requirements which require operation and management on an on-going basis.

The following are various scenarios under which a PPP in roads can be a viable option:

- Technology: where the service requires external expertise and government is not be able to provide it independently;
- Quality: where a significant enhancement in the quality of service is needed or desired as compared to what the government could extend independently;
- Time: where expedited project implementation is needed; and
- Cost: where there needs to be a considerable reduction in the project cost as well as long term service costs.

Ensuring value for money ("VfM") in Road PPPs should be at the core of the public sector's decision to engage in a PPP road project. A PPP is a considered a VfM transaction if it generates a net economic benefit for the public in terms of quantity, quality of the service or facility, cost and risk transfer over the project life, relative to the public procurement alternative. Hence, the VfM assessment of a Road PPP plays a fundamental role in the decision whether a public institution would be willing to enter into the agreement.

One of the challenges faced by Governments is the ability to discern the suitability of an infrastructure project for the PPP model. This suggests that the notion of `one size fits all` is not applicable for infrastructure projects. Governments should acknowledge that PPPs are not the panacea for all infrastructure development initiatives. It is therefore crucial in the planning phase to select infrastructure projects that would be well suited to the PPP model as it would be more likely to ensure the success of a project.

In view of the nature and the lengthy timeframe to develop PPP projects, it is imperative that the interests of both the public and private sector are protected by law.

II Objectives of the Standard

Governments are often presented with a very positive and glossy, or very negative and conclusory, view of Public Private Partnerships ("PPPs"). The objective of this Standard is to provide an unbiased, neutral depiction of both the pros and cons of Road PPPs, including an accurate portrayal of the spectrum of risk and return associated with Road projects undertaken as PPPs.

Specifically this Standard sets out recommendations as to how host Governments - with particular focus on emerging markets and developing economies ("EMDE") countries - can, through relatively low cost interventions:

a) maximize the economic benefits of Road PPPs;

b) attract increased private sector participation in Road PPPs;
c) reduce the development time and costs for Road PPPs;

and thereby deliver a Road PPP at an affordable cost, according to a process that is developed to take into account the specific context of the project, and that has (i) consistent and clear stakeholder engagement, participation and acceptance, (ii) appropriate program scale, phasing and ramp-up, and (iii) mitigation of development risks that cannot be borne by the private sector.

The Standard aims to provide:

a) a set of high-level recommendations to assist host Governments – particularly in EMDE countries - in structuring, procuring and carrying out 'People First PPPs' in their country; and
b) brief rationale for each recommendation.

III Scope of the Standard

This UNECE Standard offers guidance on best practice in relation to the development and implementation of PPP programmes in the roadssector, under which capital investment in road infrastructure (urban road transportation infrastructure, including parking, bypasses, bridges, tunnels, freeways, motorways, highways, etc.) and systems such as information / communication technology (ICT) are funded using a mix of sources including commercial finance that is repaid over (i) a long-term concession period or (ii) long term public sector commitments made to the private sector partners. Projects delivered in this way range from greenfield projects for the creation and operation of new highways, to brownfield projects that upgrade or renew existing highways, bridges, tunnels, parking or other equivalent infrastructure realization and operation.

For the purpose of this Standard, the term Road PPP will be defined as a project under which a public authority grants a long term contract (typically with a duration exceeding 10 years) to a private sector partner for the design, financing, construction and/or refurbishment and operation of a road or road system. The term 'public authority' may include a (national or local) government department, a regulator, a lender or an insurer in the road transportation sector. The operation of those project may include the provision of services (which may include mainly operation and maintenance of the road infrastructure and the provision of additional services such as retail, fuel, repair and cleaning). Under the terms of the contract, the private sector partner raises private capital to pay for the new or renewed infrastructure, which will be repaid by a lease or rental fee or a service concession from the public authority, provided that the facilities and services meet specified outcome based performance indicators.

IV. Roads Sector Models

How UN SDGs apply to the roads sector and to what extent the PPP model is appropriate to meet SDGs.

There are many models of PPP in the roads transportation sector worldwide. The challenge for governments developing a PPP programme in roads is not simply to select the right model but to ensure their selected PPP model also is i) consistent with their transportation policies and delivery strategy, ii) allows them to provide good quality universal access, iii) helps them to achieve domestic and United Nations Sustainable Development Goals, and iv) puts people first, such as alleviating discrimination by providing universal access to resilient and efficient transportation infrastructure for the population.

It is also essential prior to selecting the right project model that any PPP programme has popular support and governments have consulted broadly with consumers, civil society and transportation industry representatives and staff to ensure the projects and programme are feasible and solutions exist that will meet their needs in the best possible way.

A Project Types and Examples of Road Transportation PPPs

PPP projects in the roads transportation sector may include the following contractual PPP types:

- B(O)OT (Build, (Own), Operate, Transfer) – the private partner carries out construction of the road, usually becomes its owner and operates it during the term of the PPP agreement, and then transfers the road to the public ownership. BOT is primarily used in greenfield PPP projects, which focus on the construction of new roads;
- BTO (Build, Transfer, Operate) – the private partner carries out construction of the road, transfers its ownership rights to the public partner and operates it during the term of the PPP agreement without being the owner of the highway;
- DBOT (Design, Build, Operate, Transfer) – a subtype of the BOT model where the private partner also is responsible for the design of the road;
- DBOM (Design, Build, Operate, Maintain) – the private partner, along with designing, building and operating the road, also carries out its technical maintenance in accordance with the requirements of the PPP agreement (technical conditions, safety, additional services for users);
- DBFO (Design, Build, Finance, Operate) – the private partner designs, builds and operates the road pursuant to the terms and conditions of the PPP agreement, while being fully responsible for its financing through the combination of its own funds (usually in the form of equity capital) and various forms of debt;
- DBFM (Design, Build, Finance, Maintain) – the private partner designs and builds the road, is responsible for attracting financing for the project and carries out the maintenance of the road in order to ensure that the road is in proper technical conditions;
- BOO (Build, Own, Operate) – the private partner builds the road, owns and operates it during the term of the PPP Agreement without transferring it at the end to the public partner. In many countries, this model is considered not as PPP, but rather as privatization. Still, if the activities of the private partner are regulated by the government – toll rates are set by government decree, performance during operation and maintenance of the road is monitored by the state – then this model can be considered as a form of PPP.
- DB (Design, Build) – the private partner designs and builds the motorway on the basis of the construction contract. In many countries, such contracts are considered as traditional public procurement; and
- O&M (Operate, Maintain) – the private partner operates the publicly owned road, maintains its proper technical conditions, possibly creates an automated road management system, and develops an electronic toll collection system. Such contracts are usually classified as service contracts.

Further, PPP projects in the roads transportation sector may include the so-called “institutional PPP” framework (joint companies), which imply the establishment of an entity held jointly by the public partner and the private partner, that becomes the PPP Project Vehicle.

Roads PPP Projects utilize various payment mechanisms, with some examples being:

Direct toll :

- Where the private entity receives payment for road infrastructure, services, and usage through direct payment from users.
- Used in large-scope B(O)OT projects as well in some DBFO projects;
- Combined with revenue-sharing schemes and MRGs.

Availability payment:

- Where the public body provides a payment to the private partner for the 'availability' of a certain level of road infrastructure and/or services.
- Often used both in free and toll DBFO(M) projects when the public partner bears a significant share of demand (traffic) risks.

Shadow toll mechanism:

- Where (define)
- Used instead of direct toll mechanism when Direct Tolls are inappropriate due to social or political risks (i.e., road should be free for users).

Performance-based payments (PBPs):

- A recent trend to use PBPs in road PPP projects in order to create incentives for the private partner to improve performance and safety.

Combinations of the above referred mechanisms are sometimes used (direct tolls + performance-based payments; direct tolls + availability payments) in individual projects.

B Pros and cons of PPPs in the Road Transportation PPPs – Major risks factors

Transportation projects are amongst the most complex and socially sensitive initiatives that governments provide to their citizens.

The advantages of a PPP Programme in the roads sector is the availability of well-developed sets of documentation for planning and deployment, both in developed and developing countries, as well as a large platform of experienced entities playing key roles in roads infrastructure projects.

The disadvantages of a PPP Programme in the roads transportation sector generally result from inappropriately selected PPP types; a lack of proper market analysis and financial modelling; inappropriate allocation of risks, leading to higher costs or poor value for money; and a lack of transparency.

Successful PPP projects in the roads sector therefore have the following characteristics:

- They are well governed;
- They represent the best value for money of the realistic options available for improving road network capacity and efficiency;
- They exhibit a high degree of transparency and public accountability;
- They learn lessons effectively from project to project;
- They engage effectively with the population they serve; and
- They adapt well to economic and industrial growth, transportation development plans and requirements.

Conversely, unsuccessful PPP projects in the roads sector are characterised by poor governance and value for money, a lack of transparency and a rigid, inflexible approach.

Successful Roads PPP programmes should carefully select among the most appropriate approaches as to risk allocation. In particular, a key issue for roads PPPs is how the concessionaire is to be paid and who is to bear the risks of traffic risk and revenue risk:

- traffic risk is the risk of how many vehicles will travel the road;
- revenue risk is a factor of both traffic volumes/ toll rates and collection/ enforcement risk.

Pure "Availability' based payment structures generally transfer neither of these risks to the private sector. "Shadow Toll" structures are seen as transferring traffic risk, but not revenue risk and "Real-Tolled" structures re usually transfer both risks.

Any of these mechanisms may be supplemented by various performance-based criteria, such as:

- levels of safety improvement;
- ride-quality thresholds;
- rut-depth values;
- skid-resistance tests;
- traffic speed, road actual capacity, queues at payment terminals, traffic jams;
- ecological and environmental conditions;
- loss of road surfacing holds;
- degree of related services (e.g. sign cleaning, grass cutting);
- reductions in end to end journey times.

And key issues for governments to carefully review and finalize include:

  - Construction issues, including in particular design approval procedures;
  - Long-term risk of construction cost overruns;
  - Maintenance structures;
  - Toll collection technology, e.g. toll plazas, free flow systems (no plaza or physical barrier);
  - Tariffs policy and regulations;
  - Change in law, in particular safety requirements;
  - Events of default that give rise to termination right of authority;
  - Compensation on termination;
  - Jurisdictional issues, including, among others:
    - Transparency of procurement process;
    - Deal flow;
    - Insolvency regime;
    - Impact of accounting treatment.

PPP programmes tend to feature complex commercial and legal arrangements, so governments should be careful when developing the scope and delivery arrangements to avoid conflicts. The recommendations on the following pages provide guidance in the establishment of a roads transportation PPP programme,

C. PPPs Meeting People First Objectives – Replicability, Scalability, Equity, Efficiency, Sustainability, Effectiveness, Transparency

Historically, PPP models, in particular those originating in developed economies, have not been developed from the perspective of poverty alleviation. Accordingly, UNECE proposes a model of "People First PPPs" which are 'fit for purpose' for the UN SDGs, that increase access to essential services, promote equity, increase efficiency, improve project economic effectiveness, and be replicable and scalable.

People First PPPs in roads means…

V PPP Policy Standards for the Roads Sector

The following paragraphs provide an outline of some the most relevant features key for the success or failure of roads PPPs.

Referenced Projects:

……..

Senegal's *Dakar-Diamniadio PPP toll road* is a successful story to look at. It opened on time and on budget in August 2013, and it has dramatically improved urban mobility around Dakar, reducing commute times between the city and its suburbs from two hours to less than 30 minutes. Main key factors for such success: a) Political commitment; b) Consensus-building and stakeholder engagement; c) Experienced concessionaire with strong commitment to the country; d) Strong involvement of development institutions in both public and private financing; e) Clear, visible benefits.

R1 Expressway PPP Project in Slovakia is a successful partnership between the Slovak Government and a private consortium (Vinci Concessions & Meridiam), for the improvement of mobility, safety and reliability. Also, people have seen their living conditions improve, the infrastructure resulted as a freedom, free trade and safety vector, and the overall project as a tool promoting transparency

The *Cross-Israel Highway* (Highway 6) would be an effective reference for other countries in terms of VfM and accountability driven by the private sector, Increase in efficiency, Reduction in road accidents and air pollution, Environmental awareness and Historical preservation.

……

A. Project Selection and Prioritisation based on requirements for Private Sector interest for the Roads Sector

Prepare an evidence-based delivery plan

In preparing for the roads PPP programme, governments should draw upon experience from other jurisdictions and major international institutions to develop a robust and evidence-based Transportation PPP Delivery Plan. This is because roads transportation PPP projects include a high degree of technical, financial and regulatory complexity as well as high stakeholder engagement that is unusual for other sectors. The plan should set out the process to be followed in subsequent stages of the programme's life:

- Prior to the procurement of roads transportation PPP projects, developing appropriate policy and legislative framework; preparing standard

documentation and guidance; carrying out a programme-wide feasibility assessment and value for money analysis; developing an approval process for Project Business Cases; consulting with potential lenders and other stakeholders; assessing market demand; and ensuring the right resources and training are available.

- During procurement, to ensure projects remain affordable, value for money, and consistent with the overall programme, policy and development strategy; and to ensure the procurement process is fair and transparent.
- During construction, to ensure projects are delivered on time, to the specified standards and within budget and continue to meet their brief.
- Before and during commissioning of roads transportation infrastructure, to ensure that the staffing plan for the new transportation infrastructure is achieved; that the transition to the operational phase runs efficiently; that any changes that are necessary are implemented in line with the Project Business Case.
- During the operational phase, to ensure that governance controls are in place, and that projects are managed transparently and efficiently, and continue to deliver optimal value for money; and that major investments, development, maintenance work and any changes are managed efficiently and represent the best value for money.

The Transportation PPP Delivery Plan should be considered a 'live' document, and be subject to strategic review at routine intervals aligned with the periodic review of Transportation Strategy.

Project Prioritisation

Carry out transparent business case assessments for each project

Within the Transportation PPP Delivery Plan, the government should develop an overall financial and economic model for the PPP programme that clearly sets out what it will cost and the objective criteria for the financial, social, environmental and economic benefits it will yield. Each project should be costed in outline terms prior to its commencement, and should only proceed to procurement if it is viable and affordable within the context of the Roads Transportation Infrastructure Development Programme and represents the best value for money of the realistically deliverable options.

Project Business Cases should take a standard form and be subject to approval at key stages in their procurement and delivery against objective criteria.

Develop a clear planning context for the PPP programme

Before starting a PPP programme, governments should develop a Transportation Strategy and Roads Transportation Infrastructure Development Programme as described above. As a minimum, these should include a transportation / mobility needs assessment to fully assess current and future supply and demand for transportation infrastructure and systems in the relevant demographic area. They should assess and consider national and local traffic and economy trends and demands, relevant risk factors, as well as the size and condition of the existing transportation infrastructure.

The appropriate risks management process involves the following sequence of actions:

- Risk identification;
- Risk assessment;

- Risk allocation;
- Risk mitigation;
- Risk monitoring and review.

Risks specific to Roads PPP Projects are divided in (i) general risks, and (ii) specific risks.

General risks:

- Financial risks;
- Regulatory and legal risks;
- Political risks;
- Environmental risks;
- Social risks;
- Construction risks;
- Operation and maintenance risks.

Specific risks:

- Traffic risks;
- Road safety risks;
- Tariff risks.

The role of PPP within the Roads Transportation Infrastructure Development Programme should be defined in the Transportation PPP Delivery Plan as described above, with a clear timescale for implementation. Having done so, the Transportation Infrastructure Development Programme should be published alongside those aspects of the programme to be delivered using PPP or the process by which the suitability of PPP as a delivery vehicle will be assessed, including specified approval points for Project Business Cases at a strategic/initial, interim and final stage before construction begins.

Most of the analysed cases show that the demand / usage risk has a severe impact on the project and remains one of the major issues driving the renegotiation process.

<u>Establish clear and objective approval processes</u>

The Roads Transportation PPP Delivery Plan should include a process for stakeholder engagement and formal government approval of each PPP project at key stages in its development, to ensure that it:

- Is consistent with the Transportation Infrastructure Development Programme and Transportation PPP Delivery Plan;
- Is consistent with economic and fiscal policy;
- Is affordable within budget;
- Has the support of stakeholders including affected local communities;
- Represents the best value for money of the realistic options available; and
- Has a coherent and realistic delivery plan, built on market evidence.

These approvals should be granted as a minimum at the following stages:

- Following the identification of a proposed strategic solution, but before the development of a Project Business Case;
- Before procurement begins; and
- Before signing contracts with the preferred partner.

Establish a robust format for business cases

Projects within the PPP programme should each have a robust Project Business Case setting out the project's description, rationale, objectives and measures of success. Project Business Cases should follow a standard format, which is updated at each approval stage described above.

The format of Project Business Cases should consider of the economic, social, environmental, commercial and legal context and acceptability of the projects and compare the relative benefits and value for money represented by delivering them under the PPP programme against most appropriate alternative options.

In developing the format for Project Business Cases to be adopted, governments should draw on experience from other jurisdictions as described above. Project Business Cases should clearly set out the objectives, measurable benefits or outcomes and key success factors for each project, the role of each of the institutions that will participate, and the allocation of risks between them.

Project Business Cases should be subject to independent audit or review of the assumptions underlying them at key points in their development. Upon completion and commissioning of the projects, the actual benefits or outcomes and key success factors should be assessed against those in the Project Business Case approved prior to Financial Close, and this information should be published to provide lessons for future projects and improve market confidence in the PPP programme.

Project Business Cases themselves should be published except where information they contain would be prejudicial to the competitiveness of tenders.

Use clear and objective output-based specifications

By the time projects are approved to begin procurement, each Project Business Case should feature output-based specifications (identifying what the government actually wants from delivery of the project services, rather than how they are to be performed) that set the performance standards for the project. These should be directly related to the government's Transportation Infrastructure Development Programme and Transportation Strategy, and any national standards for roads transportation facilities. They should be capable of objective measurement, with clear and realistic contractual sanctions on the private sector partner if they are not achieved.

Standard output specifications should be developed, initially based on lessons from other jurisdictions as described under A2 but then developed based on experience from pilot projects. Output specifications should be clearly defined and measurable, and only relate to issues that genuinely affect the ability of the authority to deliver public services in accordance with the Transportation Strategy.

B. Financing requirements for the Roads Sector

Project Feasibility and Viability

Ensure the programme will enable competitive project financing

In planning the PPP programme and as part of the consultation described above, governments should carry out a formal assessment of potential sources of finance including local and international commercial debt, international financial institutions (including Development Finance Institutions and

Export Credit Agencies), government debt and the local and international capital markets. Due diligence should be carried out to assess what obstacles exist to the use of multiple potential sources of funding for each project, and how they will be overcome. Specific issues to be considered include the capacity and sophistication of local contractors, the capacity and quality of the insurance market, and the robustness of the contract structure and legal framework underpinning it. Where fiscal, economic, taxation and other policies could constrain the availability of competitive finance, consideration should be given to aligning them with PPP policy or procuring the programme in a different way.

Each PPP project should be fiscally independent, and other than the arrangements agreed when contracts are signed they should only be subsidised where there is demonstrable value for money in doing so.

Develop a standardised 'shadow' cost model against which to compare value

Government should develop a robust and locally relevant system of capital and operating cost benchmarks. This system should be used to establish transparent evidence that each PPP project represents the best possible value for money as compared to alternative ways of achieving its objectives – particularly the direct delivery of the same projects by the public sector. If insufficient information is available, a system for making that comparison should be agreed as part of the Transportation PPP Delivery Plan described above. The system should allow direct comparison of all whole project life costs including insurance, maintenance regimes, and historic evidence of public sector management of the delivery and maintenance of capital projects of a similar size. Where there is insufficient evidence to make a direct comparison, data should be gathered from equivalent economies or sectors and transparent allowances made to ensure the system is appropriate to the size and scope of the roads transportation PPP programme.

The system should be developed in consultation with local and international contractors and service providers, supported by suitably qualified advisors, as part of engagement with potential tenderers described more fully hereinafter. Where tenderers depart significantly from benchmarked pricing, project teams should ensure they understand whether any project-specific reasons have driven pricing to ensure the project scope is likely to deliver the best value for money.

The cost system should reflect the requirements of national standards and policies for roads transportation infrastructure and any regulations, legislation or guidance on their use. It should be regularly indexed against published indices and to reflect pricing on similar recent projects.

Offer robust payment security that guarantees debt repayment

PPP projects represent a long term public sector commitment. The government should maximise value for money by offering bidders and investors formal instruments that provide long term guarantees that payments will be made, and that a consistent approach will be taken to concession management – while still transferring the risk of delivery and operation of projects to specified outcome standards to the private sector.

The PPP programme should be structured in such a way as to allow senior debt and other long term commitments such as interest rate swaps to be assumed by government in the event of a project failure leading to termination (less any costs that can be recovered from other parties), and to compensate the private sector investors and service providers if projects are terminated through no fault of their own. The terms under which senior debt is assumed should be a matter of policy

following a risk assessment once the consultation described above is completed, but should incentivise senior lenders to step in if junior (subordinated debt and equity) investors default.

Payments may achieve this through sovereign guarantees, insurance, reserves, co-payment commitments or other means but governments should obtain formal feedback on the proposed payment security arrangements from a range of potential lenders as described above.

Establish robust long term governance structures and processes

As part of the development of the Transportation PPP Delivery Plan, government should ensure that long term budget provision is made for the governance and management of the programme throughout its term, as part of its long term financial planning for the national and local economy. Payments under PPP project agreements should be clearly accounted for and independent of political influence and the agreements themselves should feature mechanisms for dispute resolution which are politically independent.

Develop an economic framework for fiscal commitments

A framework should be established to manage government commitments arising from the PPP programme, including fiscal commitments such as ongoing subsidies or payments, and contingent liabilities such as guarantees. The framework should be dynamic and include review mechanisms which allow the government to evaluate government support agreements and exposure to liabilities under the PPP programme in the context of the rest of their economy.

Project Reference Solution(s)

Consider the use of a 'Reference Solution'

The Roads Transportation PPP Delivery Plan and process for the development of Project Business Cases should include consideration of the advantages and disadvantages of developing a Reference Solution as part of the development of the Project Business Case. Reference Solutions are design and implementation solutions developed by the public sector before procurement begins, and can be helpful in articulating the scope and specification of projects, and better understanding likely costs and risks. Any Reference Solution should clearly identify how it meets the PPP programme's objectives, including safety standards and performance improvements. They should be shared with tenderers, except where information they contain is likely to compromise the competitiveness of tenders or restrict their ability to present alternative solutions that achieve the specified outcomes.

Reference Solutions should include a protocol to determine the point to which work on a Reference Solution is completed ahead of procurement, which offers the best balance between the need to clarify the project's needs and expectations, and the ability of tenderers to offer alternative solutions which meet the project's requirements. If project teams elect to develop a Reference Solution, they should appoint suitably qualified specialists, designers and advisors to develop a Reference Solution before the procurement phase commences.

Incorporate robust business case risk allocation and value for money assessment

Project Business Cases should include a value for money analysis that compares the PPP model against the cost of delivering and operating the facility using alternative means. These should include an objective comparison with the likely cost and risk (including costs) of delivery using public sector resources, which is externally audited or reviewed. The process for doing so should draw on experience from other jurisdictions as described above and should be supported by suitably experienced advisors under the oversight of the PPP Unit.

PPP contracts should specifically feature a simple and efficient process for making changes during the life of the concession. Standardised documents should include a change process which makes the adaptation of PPP roads infrastructure projects no more expensive in whole-life terms than equivalent traditionally procured infrastructure which is managed to the same standards. Project Business Cases should specifically consider the cost and operational implications of adapting infrastructure and facilities to changing and developing technology and market needs.

Market Consultation, Assessment and Engagement

Obtain formal support for the structure and policy from potential lenders

Having developed the Transportation PPP Delivery Plan but before the proposed policy, legislation and governance is implemented, governments should seek formal feedback on their proposals from a representative range of potential funders with experience in the successful project financing of completed projects with similar characteristics to the proposed programme. Where investment is likely to be needed from international financial institutions, commercial lenders and institutional debt from other jurisdictions, they should be consulted on the proposed policy, legislation, standard documentation and guidance, structure and counterparties, governance and risk transfer.

The programme should be tailored in response to feedback from those potential funders, and actions taken in response should be published to provide potential bidders with reassurance that there is institutional support for the programme before the procurement of pilot projects begins. Market engagement with the broader private sector should continue throughout the programme as described hereinafter, but specific engagement with potential lenders as PPP policy is formulated will ensure the programme can be funded.

Realistically match capacity

In developing the PPP programme, the PPP Unit should formally consult with private sector contractors, service providers, investors and advisors, to:

- Assess market capacity to deliver the programme, and develop a programme of capacity building if necessary; and
- Ensure that there is capacity and capability to accurately assess and accept the risks it is proposed will transfer to the private sector.

This engagement should take place during the development of the Roads Transportation PPP Delivery Plan in relation to its content; and in relation to specific projects, private sector feedback should be obtained before procurement begins; once a preferred tenderer has been selected; and after contracts have been signed.

The scope of the programme and each project should only be finalised once a formal consultation has taken place, and the government should publish clear advice on the measures that have been taken to change the content, structure and risk allocation of the PPP programme in response to the consultation.

Consultees should include the following:

- Engineers and designers;
- Environmental specialists;
- Traffic Advisors;
- Contractors;
- Sponsors / equity investors;

- Legal, financial, technical and insurance advisors;
- Senior lenders and, where appropriate, international financial institutions;
- Insurance and reinsurance companies;
- Stakeholders as described above; and
- Civil Society Organisations and community groups.

Where gaps in capacity are identified, a formal capacity building programme should be established with clear aims and specific objectives in relation to the scale and/or scope of improvements needed to deliver the necessary capacity to implement the programme successfully. The PPP programme should not be implemented until there is objective evidence that the capacity is available to deliver it.

Draw on proven experience

In developing the Roads Transportation PPP Delivery Plan, governments should carry out a systematic analysis of best practice as it applies to their own needs, and ensure that the scope of the programme and the transfer of risks is consistent with realistic market capacity and the affordability of the programme to government. The advisors they use in doing so should draw on demonstrable experience of successful delivery in proven markets.

Develop a predictable pipeline of projects

There should be a transparent process by which the scope of the PPP programme and specific projects are developed. To allow both the public and private sector to establish competent and experienced teams, governments should publish realistic 5-year 'look-ahead' schedules identifying the projects they anticipate procuring over that term.

Implement pilot projects and apply learning from them

Before full-scale implementation of the PPP programme, a representative sample of pilot projects should be procured to test the proposed approach, structure and risk allocation. Before and after the procurement phase, feedback should be sought from the range of consultees set out in recommendation 1 who participate in the pilot programme and used to modify the approach, structure and risk allocation for the remainder of the programme.

Clearly set out risk transfer proposals

A formal schedule of risks and their allocation should be produced for the whole programme and for each PPP project as part of the Roads Transportation PPP Delivery Plan. The schedule should clearly set out how risks will be allocated between parties, and should be developed in consultation with the private sector consultees. Where risks are to be insured, the schedule should clearly allocate responsibility for arranging insurances, processing claims and paying deductibles to help potential investors understand what costs and variables they should include in their assessment from the outset.

The schedule should be developed and managed by the PPP unit with a remit to ensure that it reflects market-wide commercial drivers, and agreement to depart from that risk allocation for project-specific or bidder-specific reasons should only be agreed with the authorisation of the PPP unit.

The PPP Unit should understand what risks can be transferred to insurers, as parties will be more willing to accept a risk allocated to them if they know it can be insured, and it will help to more accurately price that risk.

C. Legal Requirements for the Roads Sector

Establish a suite of standard procurement protocols and documentation

A process framework, built on proven precedent, should be established within the Roads Transportation PPP Delivery Plan for the sustainable scoping, approval, procurement, delivery and management of the PPP programme. This framework should include:

- Clear terms of reference for the governance and approval of the programme itself and individual projects at each stage, including clear criteria against which approval will be granted;
- Standard forms of Project Business Case for each project, objectively setting out their scope, objectives, timescales, measures of success and compliance with predetermined approval criteria;
- Standard processes for the management of procurement including standard forms of procurement documentation, procurement timescales and evaluation criteria and the scope for negotiation following selection of a preferred private partner;
- Standard processes for contract management and monitoring throughout the delivery and operational phase; and
- Standard contract documentation including clear guidelines for its use and the extent to which it can be varied to suit project-specific issues.

Implement robust and transparent programme governance

The Roads Transportation PPP Delivery Plan should feature an institutional and regulatory framework which details the roles of various stakeholders in the procurement process. The PPP Unit responsible for implementation of the PPP programme should represent the government counterparty which is the contracting authority under the PPP contracts, with clear governance set out in the Transportation PPP Delivery Plan as to accountability between the two. The Transportation Strategy, Transportation Infrastructure Development Programme and Transportation PPP Delivery Plan should clearly set out which documents are to be available to the public, which should be the default for all but commercially sensitive information. The PPP Unit should ensure that the programme meets best practice in relation to the transparent procurement and management of projects, using independent specialists to review and audit the programme's compliance with national and international transparency and anti-corruption guidance. Governance processes should ensure that any conflicts of interest amongst public officials and organisations are openly declared and addressed.

The review of Project Business Cases should be carried out by a committee established by the PPP Unit with representation from government departments including those responsible for finance, planning and transportation. The committee should also include representation from neutral agencies such as transparency specialists and academia where necessary to verify the transparency of the procurement and management of the projects, and should feature technical, financial, legal and commercial specialists as well as members with experience of the successful implementation of PPP transactions. The committee should review Project Business Cases by reference to the standardised procurement documentation, contract documentation and risk allocation schedules developed by the PPP Unit and described above.

Standardise the procurement process and procedures

The procurement process for PPP projects should be clearly set out in the Transportation PPP Delivery Plan, and its governance should guarantee a high degree of objectivity and transparency in the invitation, receipt and evaluation of tenders.

D. Feasibility Requirements for low and middle income countries for the Roads Sector

Develop a focussed specialist office to manage the programme

A specialist unit, team or department ("the PPP Unit") should be established to manage the development and implementation of the programme, with support from the finance and transportation ministries, and central and local government. The size of the unit should be appropriate to the anticipated volume of projects, but may also be accountable for PPP programmes in other sectors.

The PPP Unit should have clear terms of reference and act objectively in managing the programme to maximise value for money for the public. It should be funded by a long-term budget that will sustain it through the delivery phase of the PPP programme and at least ten years into its operational phase.

Initially focussed on ensuring that the necessary policies, capacity, guidelines, regulations and legislation are in place to enable the programme, the PPP Unit should also:

- Act as the government or local authority's expert resource on the implementation of the programme;
- Provide programme leadership and manage the development and implementation of the programme, and promote the programme in a way that ensures it has widespread public understanding and support using professional communications expertise;
- Identify any obligations that will remain with the public sector;
- Approve business cases and ensure they are consistent with the guidance in Section C;
- Ensure that arrangements are in place for administration of the contracts and management of any risks that remain with the public sector through the development, implementation and operational phases;
- Develop and implement a communication plan providing publicity around the programme and projects, and evidence of a clear and well managed pipeline of projects as described above that is easily accessible and kept up to date.
- Ensure that sufficient resources and training are in place to manage the programme as described in previous sections;
- Manage any programme of capacity building as described in Section E, including the training of indigenous private sector delivery, funding, technical and risk management expertise;
- Production and maintenance of the risk allocation schedule described above; and
- Act as custodian of lessons learned from projects, and ensure that they are implemented in new projects.

The PPP Unit should contain the resources necessary to develop and implement the structure, processes, policies and legislation that will facilitate the programme and act as a regulator in ensuring that projects comply with PPP policy and the Roads Transportation Infrastructure Development Programme. The PPP Unit should be staffed by appropriately experienced and trained staff, supported by external professional advisors with proven evidence of success in delivering PPP projects in the roads sector into their operational phase. It should comprise members drawn from the transportation and finance civil service, and include members with relevant, representative private sector expertise. It should include skills in the fields of law, finance, project management, transportation and social and environmental policy, and technical specialists in the design, procurement, construction, commissioning and operation of roads transportation infrastructure. It should specifically include professional transportation industry staff with experience of managing infrastructure similar to those to be delivered under the PPP programme. The government should assess the skills mix needed for the programme as described above, and recruit or engage appropriate professionals to fill any gaps.

E. Special Issues related to the Roads Sector

Knowledge Support and Advisor Requirements (for the roads sector)

Plan programme management resources and training

Prior to the implementation of a PPP programme, governments should develop a resource plan setting out the people and costs that will be needed to implement it successfully on behalf of the public sector. The timing and key skills needed for each role should be clearly identified, and suitable funding made available for the recruitment and continuing professional development of those staff. The resource plan should cover the development of PPP legislation and policy, the scoping of the programme and production of Project Business Cases, the procurement of projects, their delivery and commissioning, and their operation in the steady state.

Teams need support in advance of a PPP programme to gain understanding and experience and to develop a clear vision of what they wish to achieve. Whilst consultants will support this, the culture and drive will come from leadership within the transportation and finance Ministries, the PPP Unit and project teams, who must be trained accordingly – particularly if they have not previously worked on PPP programmes or similarly complex projects. The Transportation PPP Delivery Plan should feature clear plans for training staff, including the use of external courses, mentoring and practical learning from other jurisdictions in the application of lessons learned. “Refresher” training should be mandated for all programme and project staff throughout the programme, to ensure that they keep abreast of PPP market developments and ensure that sustainable standard contract, risk, management and procurement methodologies are applied consistently.

A critical success factor in the delivery of PPP programmes is strong leadership. The government should identify and empower leaders within the PPP Unit and elsewhere within government to support strong partnerships with government departments, particularly those with responsibility for transportation and finance. There should be a sustainable succession plan for the programme and project leadership, under which a training programme develops the leaders needed to deliver the programme successfully throughout its term.

Each project team should have a designated leader, the Project Director. The Project Director is a critical role, whose experience and understanding of the PPP programme and processes and how they align with the Transportation Strategy and Transportation Infrastructure Development Programme are vital. Project Directors should have experience of a least one Road PPP or major

transportation infrastructure project previously and have received formal training in the objectives of the Transportation Strategy.

The planning of resources and training for the transition into the new infrastructure to be operated is particularly important. The Project Business Case should include detailed arrangements for the transition phase, and appropriate resources and training should be provided for its implementation.

Build strong, objective commercial understanding into project teams

Project teams should develop a clear understanding of the field of potential private sector firms that will potentially tender for the projects, and the commercial drivers of those firms. This should include their potential interaction (for example, the respective surety bonding expectations of contractors and lenders) to ensure that projects will be realistically deliverable. To do this they should draw on experience from other jurisdictions as described under A2 and make use of suitably experienced independent advisors who have participated in successful roads transportation PPP projects previously and have an objective, demonstrable understanding of the way locally relevant commercial organisations operate; their appetite for risk and speculative costs; their commercial maturity; and their contractual expectations. To support this, project team members should actively engage in the market engagement programme described above.

Consultation with Stakeholder required for the roads sector

Ensure that there is political and civil service support

Before implementing the PPP programme the government should conduct a formal assessment of political and public sector / civil service support for the programme. Any constraints, conditions and objections raised within each relevant government department and major political party should be addressed, resulting in formal support for the policy [1b] and legislation necessary to enable the programme to be delivered, emphasising the need for sustainable long term investment in roads transportation facilities through PPP.

The PPP programme should be sponsored at a senior level within the government and civil service, with key individuals identified to act as promoters of the programme across the public and private sectors. The government should establish a legal system under which the programme will operate that is impartial and independent of political influence.

Ensure that the model and process is clearly understood by stakeholders

Clear understanding of the Transportation Strategy and Transportation Infrastructure Development Programme are essential in the early planning stages of a PPP programme. These should be linked to an understanding of the key risks inherent within a road transportation PPP project. Where governments have a limited PPP track record, they should draw on experience from other jurisdictions as described above and make use of suitably experienced advisors and multilateral agencies.

Before the PPP programme is implemented, a formal advocacy plan setting out how politicians, public/civil servants, users, environmental and other associations, as appropriate, and any other stakeholders will be consulted in the development of the programme should be developed and discussed with those stakeholders. Where there are potential gaps or overlapping responsibilities in accountability among stakeholder groups, a plan should be developed to overcome them.

It is particularly important to communicate clearly with stakeholders about the Transportation Strategy and how it will improve overall country strategy and help achieving publicly shared goals, and the role of the PPP programme in delivering it.

With their knowledge of local conditions and traditions, local stakeholders are particularly important. Their advice should be sought on how to adapt best practice to suit local needs, expectations and constraints.

Develop a robust induction and support programme for stakeholders

A stakeholder engagement plan should be developed for each project, incorporating plans for engagement with any stakeholders needing to participate in the development of the project and the preparation of the Project Business Case. Those stakeholders should be inducted, with training to clearly explain what their involvement will be and how it will influence the project's outcome, as well as clearly defining the critical parameters that the project must operate within in terms of timescales, risk and affordability. The terms of reference and scope of their involvement should be clearly explained and formally agreed with them.

VI. Indicators of Compliance for the Roads Sector and SDGs

The Indicators of Compliance for a Roads Transportation PPP programme relate directly to the Sustainable Development Goals. The relevant SDGs are listed in Annex 3, along with references to the specific recommendations to which they relate.

VII. Credits and References

The recommendations of the Standard are based on a UNECE project which took place between April 2015 and …… 2017, managed by an international, multidisciplinary team of experts with experience of PPP programmes and sustainable development. The project comprised a review of published information, and responses to detailed questionnaires from public and private sector organisations with experience of programmes of this kind, whose contribution is gratefully acknowledged. Recommendations are aimed at national and provincial governments considering the delivery of PPP programmes in the roads transportation sector.

We are very grateful for the active contribution of agencies in the countries listed in Annex 1 who contributed to the development of the Standard by responding to detailed questions on their own experience.

The full list of projects and programmes from which lessons and experience were considered based on published information in the development of the Standard is available on the project team website at https://www2.unece.org/wiki/display/pppp/Roads for governments seeking more detailed advice, experience and lessons learned from the delivery of PPP programmes. The Standard will be maintained by UNECE.

Annex 2 includes the list of projects of more direct reference for the Standard. The full list of projects and programmes from which lessons and experience were considered based on published information in the development of the Standard is available on the project team website at https://www2.unece.org/wiki/display/pppp/Roads for governments seeking more detailed advice, experience and lessons learned from the delivery of PPP programmes. The scope of this Standard does not extend to detailed analysis, nor does it provide answers to every issue that may arise for host Governments.

The Standard will be maintained by UNECE.

Draft

Standard for Rails

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DATE: 29-4-2017

Contents

I Introduction

The Sustainable Development Goals (SDGs) identify a range of measures to encourage the building of energy efficient infrastructure and to promote inclusive and sustainable industrialisation for the world's population. To realise this, the 2030 Agenda recognises that successful delivery of the SDGs will depend on global partnerships and cooperation between public, private and civil society.

UNECE supports the use of global partnerships for sustainable development and has produced this Standard to provide guidance to governments considering the use of Public-Private Partnerships (PPPs) to deliver investment in railway infrastructure as a way of meeting the SDGs and achieving People First Objectives (PFOs).

II Objectives of the Standard

If managed well, PPPs can help governments tackle development needs by bringing sustainable investment, replicable processes and expertise to complex systems. This Standard is intended to assist governments in the successful use of PPPs as a step towards universal implementation of the SDGs and achievement of PFOs.

There are many different models of PPP in the rail sector worldwide. The challenge for governments developing PPPs is to ensure consistency between their project delivery strategy and the achievement of the SDGs and PFOs.

It is important that governments assess and build market capacity as necessary to ensure the appropriate allocation of risks to the party best able to manage them. It is also essential that any PPP has popular support and governments considering the use of PPPs should first consult broadly with consumers and civil society to ensure that the PPP will meet their needs in the best possible way.

III Scope of the Standard

This UNECE Standard offers guidance on best practice in relation to the development and implementation of PPPs in the rail sector, under which capital investment in rail infrastructure (including railway stations and rolling stock procurement) is mainly funded using commercial finance repaid over a long-term concession period.

For the purpose of this Standard, the term PPP is defined as an arrangement under which a public authority grants a long term contract (with a duration typically exceeding 20 years) to a private sector partner for the design, financing, construction or refurbishment and operation and maintenance of rail facilities, and the provision of related services. The term 'public authority' may include a government department or a statutory provider of transport services. Under the terms of these contracts, the private sector partner will raise private capital to pay for the new facilities, which will be repaid by a lease or rental fee or a service concession from the public authority provided that the facilities and services are made available and meet a specified outcome standard.

IV Central Question

To achieve the SDGs, significant investment in the improvement of railway infrastructure is required. The following SDGs are considered relevant in this context. Cross references to the recommendations set out in Section V are shown in square brackets.

SDG 3 Ensure healthy lives and promote well-being for all at all ages

Transport by rail is statistically safer than transport by road

3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents [C*1*]

3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination [*C1*]

SDG 5 Achieve gender equality and empower all women and girls

Use of the PPP model provides an opportunity to seek to achieve gender equality through the tendering process

5.1 End all forms of discrimination against all women and girls everywhere [*C6*]

5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life [*C6*]

SDG 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Transport by rail is an important element in encouraging economic growth and development

8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries [*C1, A2.1, A2.3, B1.3*]

SDG 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Investment in railway infrastructure is generally for the long term

9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all [*C1, D3.1*]

9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries [*C1,B1, B3.5, B2.3*]

9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities [*C1*]

SDG 11 Make cities and human settlements inclusive, safe, resilient and sustainable

Improved rail links can facilitate cross-border traffic

11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special

attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons [*C1, A2.2, D3.1*]

11.a Support positive economic, social and environmental links between urban, per-urban and rural areas by strengthening national and regional development planning [*C1, A2.2*]

SDG 13 Take urgent action to combat climate change and its impact

Transport by rail is usually more energy efficient than other modes of transport

13.2 Integrate climate change measures into national policies, strategies and planning [*C1*]

SDG 17 Strengthen the means of implementation and revitalise the global partnership for sustainable development

17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships [*D3.1, D3.2, D3.3, F3, B2.2*]

A Project Types and Examples of Rail PPPs

There are a number of examples of PPPs in the rail sector that show how the PPP model can be adapted to suit the circumstances of a particular project and the benefits that can be achieved by flexible application of the model. A summary of highlighted projects is set out below with a more detailed case study for each project exhibited in Annex 2. Further examples of PPPs in the rail sector are set out in Annex 3.

- **Development of new railway infrastructure**

Example 1: High Speed 1 – UK

High Speed 1 is the new railway, previously called the Channel Tunnel Rail Link, connecting St Pancras International, London to the Channel Tunnel portal at Folkestone, England. A concession to operate and maintain the railway for 30 years was sold to the Borealis Infrastructure / Ontario Teachers' Pension Plan consortium in November 2010.

Key feature	**Market norm**	**Project specific variant**	**Rationale**
Concession fee	Unitary charge	No concession fee/ availability charge	Significant proportion of track access charges (providing revenue for concessionaire) guaranteed by government
Compensation on termination	Compensation payable for termination caused by contractor default required to pay off senior debt	No compensation payable for termination caused by contractor default	Long cure periods to allow contractor time to find a solution plus higher thresholds set for events of contractor default

Example 2: South East Atlantic HSR – France

The South East Atlantic HSR is the new high speed railway line between Tours and Bordeaux. Journey time between Bordeaux and Paris is 2 hours based on a line speed of 300 km per hour and there are connections to the rest of the rail network in south west France. The LISEA consortium signed a 50 year concession in June 2011 to design, build, finance, operate and maintain the new line.

Key feature	Market norm	Project specific variant	Rationale
Concession length	30 years	50 years	Better value for money financing
Traffic risk	Government	Concessionaire	Better risk and reward package

Example 3: HSL Zuid – The Netherlands

HSL Zuid is a 125 km high speed railway line linking Amsterdam to the Belgian border procured through a public private partnership. The process was started by the Dutch Government in 1997 and Infraspeed was awarded a concession to maintain and operate the line in 2002. Services commenced in 2008

Key feature	Market norm	Project specific variant	Rationale
Construction packages	Concessionaire responsible for construction, maintenance and operation of new line	Separation of construction from track and signalling	Better risk allocation

- **Redevelopment of railway stations**

Example 4: Southern Cross Railway Station – Australia

Southern Cross Railway Station is a major railway station in Docklands, Melbourne. It is the terminus for the regional railway network as well as serving suburban rail services and is the second busiest railway station in Melbourne's metropolitan network, with over 17 million passenger movements recorded in 2013/14. There is a coach terminal underneath the shopping complex and the station is operated and maintained by AssetCo, a subsidiary of IFM Investors, under a 30 year concession (to 2036) from the Victoria State Government.

Key feature	Market norm	Project specific variant	Rationale
Usage	Concessionaire at risk	Compensation paid to concessionaire if actual usage exceeds target capacity	Services Payment to concessionaire based on usage at or below target capacity

Escrow Account	Recourse to payment mechanism	Payments by concessionaire into escrow account to provide additional security in the event of step-in or termination	
Retail income	Limited opportunities available for revenue generation	Regime to develop retail component for which concessionaire [retains risk and reward]	Incentivises concessionaire to maximise revenue generation

- **Procurement of rolling stock**

Example 5: Intercity Express Programme – UK

The Intercity Express Programme is the programme to replace the older intercity trains currently running on the domestic rail network in the UK with new trains using a PPP arrangement. This was the first time a PPP structure had been used for the procurement of rolling stock.

Key feature	**Market norm**	**Project specific variant**	**Rationale**
Innovative payment mechanism	Availability charge with guaranteed minimum payment	"no train no pay" structure	**Enhanced incentivisation**
Flexible "change" regime	Government pays for contract changes	Built-in flexibility in deployment of trains ranging from amendments to the passenger timetable to different routes and use of new depots	Trains are mobile assets providing a key public service

B Pros and cons of PPPs in the Rail Sector

It is generally recognised that transport by rail is an important element in encouraging economic growth and development. Improved rail links can facilitate cross-border traffic and ease bottlenecks in established network corridors. They can also present a competitive alternative to long distance transport by road or air. At the same time, transport by rail is usually more energy efficient than other modes of transport, and investment in rail schemes is therefore a key component of low carbon transport strategy.

Not all rail projects are suitable for PPP. The partnering element of a PPP is consistent with SDG 17 but there are other forms of partnership so, why use PPP?

An advantage of a PPP in the rail sector is that investment in infrastructure and services can be delivered quickly and to specified standards, whilst spreading the cost over the long term. It incorporates private sector financial disciplines, cost management and whole life cost analysis. Services are delivered on time and to objective standards, or private providers suffer financial and operational penalties that can lead to contract termination.

The disadvantages are that the procurement timetable is generally longer than in other sectors, and projects are vulnerable to political risks such as a change of government. The capital costs also tend to be significantly higher than for other types of infrastructure. For example, the construction cost is typically far greater than the operation and maintenance cost over the life of the contract and this disproportionality can lead to problems with the availability of finance. Other disadvantages can result from inappropriately specified or executed contracts. This can include a lack of flexibility; inappropriate transfer of risk, leading to high costs or poor value for money, and a lack of transparency.

Successful PPPs in the rail sector have the following characteristics:

- They are well governed;
- They exhibit a high degree of transparency and public accountability;
- They are durable and can accommodate restructuring during the life of the concession;
- They are capable of adapting to changing technology and circumstances on a value for money basis;
- They allow for innovative forms of financing such as real estate development;
- Risks are allocated on an appropriate basis.

Conversely, unsuccessful PPPs in the rail sector are characterised by poor governance, inadequate patronage and a rigid, inflexible approach.

C PPPs Meeting People First Objectives

PFOs are seen as synonymous with the purposes of the SDGs. They have the following characteristics:

- Replicability: they can be scaled up and achieve the transformational impact required by the SDGs;
- Equity: they promote social justice and make essential services accessible and without restriction on any grounds to all;
- Efficiency: they improve the productivity of existing assets and make savings, for example, that can be used by governments for projects that eradicate poverty;
- Sustainability: they cut Co2 emissions and foster green growth;
- Effectiveness demonstrated: the projects work and deliver defined objectives.

PPPs that deliver investment in railway infrastructure in the manner contemplated by the SDGs typically are concerned with construction, maintenance and operation and do not usually involve provision of passenger services. They exhibit many of the characteristics of PFOs and should therefore be capable of meeting those objectives.

V Delivering the Model

The recommendations on the following pages represent a concise statement of matters that should be considered when determining whether to implement a project using a PPP as a means of delivering investment in railway infrastructure. They provide guidance in the selection of suitable projects, which can be supported by advice from the specialist Centre of Excellence.

A Project Selection and Baseline Requirements

A1 Prepare an evidence-based delivery plan

In preparing for a PPP, governments should draw upon experience from other jurisdictions to develop a robust and evidence-based plan for delivery of the PPP (PPP Delivery Plan). The plan should set out the process to be followed in subsequent stages of the project through procurement and construction to the operational phase and should be considered a 'live' document, subject to strategic review at routine intervals.

A2 Project Prioritisation

A2.1 Carry out transparent business case assessments for each project

Within the PPP Delivery Plan, the government should develop an overall financial and economic model for the PPP (Business Case) that clearly sets out the whole life cost, the charging basis, and objective criteria for the financial, social, environmental and economic benefits it will yield. The project should be costed in outline terms prior to commencement of procurement, and should only proceed if and when it is affordable and represents the best value for money of the realistically deliverable options.

A2.2 Develop a clear planning context

Before starting a PPP, governments should develop traffic forecasts to fully assess current and future supply and demand for rail services in the project demographic area, and taking into account possible competition from other modes of transport.

A2.3 Establish clear and objective approval processes

The PPP Delivery Plan should include a process for stakeholder engagement and formal government approval of the PPP at key stages in its development.

A2.4 Use clear and objective output-based specifications

By the time a project is approved and is ready to begin procurement, the Business Case should feature detailed output-based specifications that set the performance standards for the project. These should be directly related to any national/ international standards for rail

infrastructure. They should be capable of objective measurement, with clear and realistic contractual sanctions on the private sector partner if the partner fails to achieve the required contractual standard.

B Financing Requirements

B1 Sources of finance and governance structures

B1.1 Ensure the project will enable competitive project financing

In planning the PPP, governments should carry out a formal assessment of potential sources of finance including local and international commercial debt, international financial institutions (including Development Finance Institutions and Export Credit Agencies), government debt (including capital grant and other forms of public subsidy) and the local and international capital markets.

B1.2 Develop a standardised 'shadow' cost model against which to compare value

Governments should develop a robust and locally relevant system of capital and operating cost benchmarks. This system should be used to establish transparent evidence that the PPP represents the best possible value for money as compared to alternative ways of achieving its objectives – particularly the direct delivery of the same project by the public sector.

B1.3 Offer robust payment security that guarantees investment return and debt repayment

A PPP represents a long term public sector commitment. A framework should be established to manage government commitments arising from the PPP, including fiscal commitments such as ongoing subsidies or payments, and contingent liabilities such as guarantees. Governments should maximise value for money by offering bidders and investors formal instruments that provide certainty that payments will be made, as this should reduce the cost of finance, and that a consistent approach will be taken to concession management via an output based performance contract.

B1.4 Establish robust long term governance structures and processes

As part of the development of the PPP Delivery Plan, the government should ensure that long term budget provision is made for the governance and management of the project.

B2 Market Consultation, Assessment and Engagement

B2.1 Obtain formal support for the structure and policy from potential lenders

Having developed the PPP Delivery Plan but before the proposed legislation and governance is implemented, governments should seek formal feedback on their proposals from a

representative range of potential funders with experience in the successful project financing of completed projects with similar characteristics to the proposed PPP.

B2.2 Realistically match capacity

In developing the PPP, governments should formally consult with private sector contractors, service providers, investors and advisors, to:

- Assess market capacity to deliver the project, and develop a programme of capacity building if necessary;
- Ensure that there is capacity and capability to accurately assess and accept the risks proposed to be transferred to the private sector; and
- Test in advance areas of risk allocation that are innovative or unprecedented.

Consultees should include the following:

- Contractors;
- Designers;
- Sponsors / equity investors;
- Legal, financial, technical and insurance advisors;
- Senior lenders and, where appropriate, international financial institutions;
- Insurance and reinsurance companies; and
- Stakeholders.

B2.3 Draw on proven experience

In developing the PPP Delivery Plan, governments should carry out a systematic analysis of best practice as it applies to their own needs in both the rail sector and other relevant sectors such as roads, and ensure that the scope of the programme and the transfer of risks is consistent with realistic market capacity.

B2.4 Clearly set out risk transfer proposals

A formal schedule of risks and their allocation should be produced for the PPP as part of the PPP Delivery Plan.

C Legal Requirements

C1 Establish a legislative framework

The legislative framework for a PPP in the rail sector should be consistent with government's transport and environmental policy, economic and fiscal policy, and other relevant policies such as those governing urban planning and land use. The framework should also be consistent with initiatives such as the SDGs. The government should enact any legislation necessary to enable the PPP, which often includes PPP-specific laws and public procurement regulations. This might involve amending existing laws in areas such as insolvency.

[*Legislation should comply with the UNCITRAL Legislative Guide on Privately Financed Infrastructure Projects, and Model Legislative Provisions on Privately Financed Infrastructure Projects and should be permissive rather than restrictive*].

C2 Establish a suite of standard procurement protocols and documentation

A process framework, built on proven precedent, should be established within the PPP Delivery Plan for the scoping, approval, procurement, delivery and management of the PPP. This framework should include:

- Clear terms of reference for the governance and approval of the project at each stage, including clear criteria against which approval will be granted;
- Standard forms of Business Case, objectively setting out the scope, objectives and compliance with predetermined approval criteria;
- Standard processes for the management of procurement including standard forms of procurement documentation, procurement timescales and evaluation criteria and the scope for negotiation following selection of a preferred private partner;
- Standard processes for contract management and monitoring throughout the delivery and operational phase; and
- Standard contract documentation including clear guidelines for its use and the extent to which it can be varied to suit project-specific issues.

C3 Standardise the procurement process and procedures

The procurement process for the PPP should be clearly set out in the PPP Delivery Plan, and its governance should guarantee a high degree of objectivity and transparency in the invitation, receipt and evaluation of tenders. Qualitative and quantitative evaluation criteria, and their relative weighting, should be established with stakeholders prior to tenders being issued and should be made transparent to bidders when they are invited to tender.

The extent of dialogue during the procurement process and subsequent re-submission of refined proposals should be appropriate to the scope, type and complexity of the technical and commercial solutions and service delivery requirements. Sufficient time should be provided in the procurement process to allow detailed solutions to be submitted by tenderers.

C4 Evaluate tenders transparently and publish formal evidence of value for money

As part of its review and approval of the Business Case prior to signature of contracts, the government should conduct a value for money assessment. This assessment should be published to give the public evidence that delivering the project as a PPP represents the best possible value for money.

Innovation and alternative solutions should be encouraged during the tender stage but their scope and any consequential reallocation of risk should be clearly defined before a preferred partner is appointed.

Certain objective criteria should be established before procurement begins which represent a pass/fail test in the suitability of a potential partner to deliver projects. The published

evaluation criteria should make clear which aspects of tenders are pass/fail and which will be judged against weighted qualitative and quantitative criteria.

An evaluation report should be produced for each tender, objectively scoring tenders against the objective published criteria. The tender evaluation committee should have proven experience and expertise in evaluating similarly complex tenders and feature technical, commercial, financial and legal skills. Their conclusions should be subject to independent review by a specialist audit office or independent agency.

C5 Promote Zero Tolerance to Corruption

Governments should develop standard definitions of corrupt practices in public procurement and management, and ensure they are applied to the PPP. They should be published as a matter of policy, and the PPP Delivery Plan should set out how they will be incorporated in the PPP. Tenderers for each project should be required to confirm their willingness to comply with anti-corruption policies and should be eliminated from a tender if they are unable to do so. Acceptance of this principle should be a pass/fail tender requirement.

C6 Promote achievement of gender equality and empowerment of all women and girls

Promoting gender equality and empowering women and girls is crucial to the delivery of the SDGs. Use of a PPP can help achieve this goal by ensuring that project teams have equal numbers of male and female representatives, and by requiring tenderers to take account of this goal when selecting their bid teams.

D Feasibility for low and middle income countries

The projects highlighted in Section IV A are all examples of Rail PPPs that have been implemented in developed countries, however each project should be capable of adaptation for low and middle income countries. Governments can study the lessons learned from these projects and hopefully avoid having to undertake their own research initiatives that can be costly both in terms of time, money and resources.

In addition to the recommendations in Sections V A, B and C a common feature of successful PPPs in the rail sector is good project management coupled with unequivocal government support and meaningful consultation with stakeholders.

D1 Project Management

Ministries and central agencies should be prepared for the PPP, and the governance structure setting out their role and mandate in relation to the delivery of the PPP should be agreed upon before implementation of the PPP.

Prior to the implementation of a PPP, governments should develop a resource plan setting out the skills and costs that will be needed to implement it successfully on behalf of the public sector. The timing and key skills needed for each role should be clearly identified, and suitable funding made available for the recruitment and continuing professional development

of those staff. The resource plan should cover the development of PPP legislation and policy, the production of Business Cases, the procurement of projects, their delivery and commissioning, and their operation in the steady state.

D2 Engagement with Stakeholders

D2.1 Ensure that there is political and civil service support

Before implementing the PPP the government should conduct a formal assessment of political and public sector/ civil service support for the programme. The PPP should be sponsored at a senior level within the government and civil service, with key individuals identified to act as promoters of the programme across the public and private sectors.

D2.2 Ensure that the model and process is clearly understood by stakeholders

Before the PPP is implemented, a formal advocacy plan setting out how politicians, public/civil servants, rail staff and any other stakeholders (including for example rail passenger organisations, freight customer associations and other interest groups) will be consulted in the development of the programme should be developed and discussed with those stakeholders.

E Other issues related to the Rail sector

E1 Regulation

In developing the legislative framework under C1, governments may consider establishing a regulatory framework to govern access to railway infrastructure, and the manner in which its maintenance and operation is remunerated. Governments may also consider establishing an independent regulator to take responsibility for monitoring safety of the railway infrastructure.

E2 Patronage

The traffic forecasts prepared when developing the planning context for the PPP under A2.2 should be considered in conjunction with the assessment of potential sources of finance under B1.1 and the need for subsidies, payments or guarantees under B1.3.

E3 Mixed Economy Infrastructure

Governments should consider whether capacity should be reserved for different categories of services and how priority should be allocated between them. Governments should also have regard to the consequential impact on line speeds and the availability of railway infrastructure.

E4 Cost Overruns

A major issue in the development of new railway infrastructure can be the allocation of liability for cost overruns due to the size and complexity of rail schemes compared to other types of

infrastructure. It will be important to provide a credible strategy for addressing this issue when assessing potential sources of finance under B1.1.

E5 Early Termination Arrangements

The suite of standard forms of contract documentation developed under C2 will include provisions regulating early termination, for example in the event of material failure to perform the contract. A particular issue for railway infrastructure is finding suitable replacement operators with the necessary competence. Contracts should allow sufficient time pre-termination for satisfactory arrangements to be put in place, including preservation of key sub-contracts to ensure continuity of service.

VI Indicators of Compliance

The Indicators of Compliance for a Rail PPP project relate directly to the SDGs.

VII Credits and References

These recommendations are based on a UNECE project which took place between June 2015 and [ ] 2017, managed by a multidisciplinary team of experts with experience of PPPs in the rail sector and sustainable development. The project comprised a review of published information, and responses to detailed questionnaires from public and private sector organisations with experience of programmes of this kind, whose contribution is gratefully acknowledged. Recommendations are aimed at governments considering the development and implementation of PPPs in the rail sector.

We are very grateful for the active contribution of agencies and organisations in the countries listed in Annex 1 who contributed to the development of the standard by making available published guidance, project case studies and/or responding to detailed questions based on their own experience.

The full list of projects and programmes from which lessons and experience were considered based on published information in the development of the Standard is available on the project team website at [ ] for governments seeking more detailed advice, experience and lessons learned from the delivery of PPP. The Standard will be maintained by UNECE and the Rail PPP Centre of Excellence.

Annex 1

Projects and programmes in the following countries were considered by the team developing the Standard as sources of lessons and experience based on published information.

Australia, Finland, France, Germany, India, The Netherlands, Poland, Russia, Turkey, United Kingdom, USA

Annex 2 – Case Studies

1. High Speed 1

High Speed 1 (HS1) is the high speed rail link between London and the Channel Tunnel. It connects Britain to Europe, securing around an 80% share of the London - Paris and London - Brussels travel market.

In March 1994, the UK Government launched a public works concession for the construction and operation of a new high-speed railway between St Pancras station in London and the Channel Tunnel. The development of the new line - then known as the Channel Tunnel Rail Link (CTRL) - was the UK element of the Paris-Brussels-Köln-Amsterdam-London trans-European transport network priority project. It was Britain's first new railway line in over 100 years. More importantly, it is the physical connection between the UK rail network and the fast-expanding European inter-operable high-speed rail network.

The concession was awarded to London & Continental Railways Limited (LCR), a consortium company formed to bid for the project. The principal shareholders of the company were Bechtel, SNCF, National Express, EdF and UBS. LCR signed the concession agreement in February 1996 to design, construct, finance, operate and maintain the new line. Government support for the project was provided by way of capital grant as part of the concession arrangements.

LCR's original financing plan involved an IPO, however the traffic forecasts for the Eurostar business proved insufficient and a restructuring involving Railtrack, the privately owned operator of the domestic rail network, was implemented in 1998. This resulted in the CTRL being built in two phases with interim finance for construction being provided by way of government guaranteed bonds amounting to £6 billion in total. A further restructuring involving Network Rail in 2002 was necessitated by Railtrack's insolvency.

The first section of the CTRL from the Channel Tunnel to north Kent was opened to international services in September 2003; and the second section from north Kent to St. Pancras International - via new stations at Ebbsfleet and Stratford - was opened in November 2007. The new railway was renamed 'High Speed 1' (HS1).

The principal sources of income for HS1 are track access charge payments in respect of both international (Eurostar) and high speed domestic train services. Track access charges for the domestic train services are effectively guaranteed by the UK government and it is this revenue that underpins the financing for HS1.

A further restructuring was undertaken during 2008 and a sale process resulted in the sale of the HS1 business in November 2010 to Borealis Infrastructure and Ontario Teachers' Pension Plan for £2.1billion.

HS1 is currently operated under contract by Network Rail (CTRL) Limited, a wholly-owned subsidiary of Network Rail.

Key features of the project are:

- Procurement strategy: At the time of the Railtrack restructuring in 1998, the overriding imperative was to keep to the project timetable. A re-tender was not therefore considered to be an attractive option and so the transaction was structured as a hive down of the project to two subsidiaries of LCR which in turn contracted with Railtrack. Railtrack's interest was transferred to Network Rail in 2002 and the sale of the concession in 2010 was structured as a business sale.
- State Aid: The various restructurings have required a number of notifications to the EU Commission and clearance was obtained on each occasion subject to conditions.
- Concession: The concession agreement is not a typical PPP arrangement and contains unique and innovative features. No concession fee is payable and there is no compensation payable for termination caused by contractor default. There are long cure periods to allow time to find a solution and higher thresholds are set for contractor default.
- Operator arrangements: The operation and maintenance of the railway is sub-contracted to Network Rail (CTRL) Limited under a long term contract that is co-terminous with the concession agreement.
- Electricity supply arrangements: Traction power for HS1 is provided by a dedicated supply and distribution network built and maintained by EdF under a long term contract.
- Regulatory Regime: A separated regime was established to regulate the track access charges for HS1. It is based on the regime that applies to the UK domestic rail network. The Office of Road and Rail is the regulator for both.
- Stations: The charging arrangements for HS1 stations provide for the accrual of a fund to finance lifecycle expenditure on a long term basis.

2. South East Atlantic HSR

Reseau Ferre de France (RFF) signed a 50 year concession with the LISEA consortium in June 2011 for the development of a new high speed railway line between Tours and Bordeaux. The concession provides for the financing, design, construction, operation and maintenance of the new line with a projected construction period of 6 years.

The LISEA consortium is led by Vinci SA along with CDC Infrastructure, and SOJAS and AXA Private Equity as investors.

The new line will be 302 km long, with 38 km of connecting line to the conventional rail network. It will reduce the journey time between Paris and Bordeaux to 2 hours 5 minutes which is a shorter journey time than by road or air, and is expected to increase annual passenger numbers by between 3.5 and 5 million.

The project represents a total investment of EUR 7.8 billion. LISEA will be remunerated in the form of traffic-related fees paid by users operating trains capable of travelling on the new line. Traffic risk rests with LISEA.

Financing comes from both public and private sources with EUR 1 billion of bank debt guaranteed by the French government and around EUR 700 million provided by Fonds d'Epargne, managed by the Caisse des Dépôts and guaranteed by RFF. Both guarantees carry a premium rate.

The LISEA shareholders are contributing nearly EUR 800 million of equity and the remaining finance is being provided by a mix of non-guaranteed bank debt and EIB finance as part of TEN-T programme put in place jointly with the European Commission.

The financing package is the first to benefit from the French government guarantee mechanism put in place under the 2009 French stimulus package designed to encourage PPP financing for large priority projects. It also includes public subsidies of EUR 4 billion made by the French government, and subsidies from local communities and the European Union.

RFF, as the operator of the French national rail network, will benefit from the additional revenues which the new line will provide on adjacent lines through traffic growth along the entire Paris-Bordeaux rail link. Furthermore, RFF is investing close to EUR 1 billion by way of enhancements to the existing railway infrastructure (linking the new line to the existing network, capacity development leading to the Bordeaux train station, traffic control centre, and electric power modification).

3. HSL Zuid

HSL Zuid is a 125km high speed railway line stopping at three stations: Amsterdam Zuid, Amsterdam Schiphol Airport and Rotterdam, before continuing to the Belgian border to connect with services to Antwerp, Brussels and Paris.

The principal objectives of the project were to connect Rotterdam, Schiphol and Amsterdam to the European High Speed Rail Network, to encourage economic development, and to provide an alternative to air travel to European destinations.

HSL Zuid is a dedicated double track infrastructure project, designed for a maximum line speed of 300km per hour. The Dutch Transport Ministry was the client and financier of all civil works (including tunnels, bridges and elevated sections) throughout the project, and retains ownership of the line.

Construction of the railway civil works was divided into several D&B contracts, each worth about EUR 400 million, awarded to different contracting consortia. The track, power supply and signalling systems were developed by Infraspeed (a consortium comprising Fluor Infrastructure, Siemens Nederland, Koninklijke BAM Groep, Innisfree and HSBC Infrastructure) under a DBFM contract with a requirement that the track must achieve an availability target of 99%. The contract runs for 25 years from 2006 till 2031, with an availability charge paid to Infraspeed, depending on whether the 99% target is achieved.

Following privatisation of Dutch railways, HSL Zuid was the first rail project developed with minimal influence from the national rail operator, NS, however the concession for operating the new line was awarded to a joint venture between NS and KLM (High Speed Alliance or HSA). HSA was loss making from the outset due to ongoing project delays and quality issues with the rolling stock ordered from Ansaldo Breda. HSA was taken over by NS in 2015.

Project delays were caused by a variety of factors. There was public opposition to the route and disagreements in government prolonged the decision-making process. The choice of security system also caused delays: the specifications of the standard were confirmed late, which also delayed ordering and supply of trains. Opening of the line (in 2008) was subject to a four year delay overall.

Total cost was approximately EUR 5 billion with EUR 2.6 billion coming from the Transport Ministry and around EUR 1.7 billion provided by the FES fund (based on revenues from gas exports dedicated to economic development). Private funding amounted to EUR 940 million.

4. Southern Cross Railway Station

The redevelopment of Melbourne's Southern Cross Railway Station was implemented as an integral part of the Victoria State Government's "Linking Victoria" programme. The programme was launched in February 2000 to deliver new transport infrastructure projects and upgrade Victoria's ports, roads and rail network.

A master plan for the redevelopment was published in June 2001, comprising a major refurbishment of the railway terminal, the provision of significant new transport infrastructure, and the integration of the station precinct with the City of Melbourne and the Docklands area.

The Government chose to proceed with the redevelopment by means of a public private partnership (PPP) with the objective of providing a world-class inter-modal transport facility at the station. The estimated capital cost of the project was £900M.

The intention was that the PPP would minimise the long-term costs to the taxpayer associated with the construction, maintenance and operation of the station and transfer risk to the private sector where it constituted good value for money. In this way, the Government wished to make cost effective allowance for future patronage growth, and secure the delivery of the development in a timely fashion in accordance with target dates and deadlines set by Government.

The PPP concession agreement was entered into in July 2002. The agreement provided for the concessionaire to design and construct the station and following completion to manage the operation of the station for a 30 year period. The target date for completion of construction was April 2005, however there were time delays such that operation of the station did not commence until August 2006.

The developer incurred losses of around £75M on the construction and, under the terms of the concession agreement, the Government was not obliged to start payment for the operation of the facilities until commencement of operations. A settlement was reached that allowed payment of the capital element of the service payment to be brought forward to the target completion date of April 2005.

An audit report published by the Government concluded that the project risk allocations in the business case and the concession agreement were consistent with, and in some cases achieved a better outcome than the preferred allocations specified in the Government's own guidance.

Key elements of the risks borne by the concessionaire were:

- The majority of the design, construction, finance and operational risks associated with the transport interchange
- Most of the design, construction, finance and operational risks associated with the commercial development
- the risks associated with the construction of the rail and signalling infrastructure.

The same report concluded that operational risks had been allocated appropriately, with commercial operational risks allocated to the concessionaire. Contract management risks were retained by the station authority for the reason that it was not possible for overall responsibility for the management of the station to be transferred away from the State, which is the ultimate owner of the station.

There is a regime in place that enables the station authority effectively to monitor and assess the concessionaire's performance against the required contract standards by conducting a regular review of key performance indicators.

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5. Intercity Express Programme

The Intercity Express Programme is the programme to replace the older intercity trains currently running on the domestic rail network in the UK with new trains using a PPP arrangement.

The UK government has entered into a contract for the supply and maintenance of the replacement rolling stock with Agility Trains, a consortium consisting of Hitachi Rail Europe and John Laing Investments. The rolling stock is known as the Hitachi Super Express Train and will initially be built and assembled by Hitachi in Japan with subsequent trainsets being assembled at a new facility to be constructed for the project at Darlington in the UK.

Given the size of the overall programme, the procurement was split in two: an initial funding for the Great Western Mainline (GWML) fleet, and a second financing for the East Coast Mainline (ECML) fleet.

The main scope of the GWML procurement is the design, manufacture, commissioning and bringing into service of the new trainsets alongside the construction and maintenance of new depot facilities at Bristol and Swansea, and refurbishment of the existing North Pole depot in West London. The ECML procurement involves the construction of a large new depot at Doncaster.

The trainsets are based on the Javelin Trains used on the High Speed 1 line, and will consist of both electric and bi-mode units (which are able to power themselves and to use electric power when available). They are to be fully in service by 2018.

Agility Trains is responsible for making the trainsets available and delivering related services including transfer of train and depot delivery, and train operation and maintenance. In the case of GWML, 57 trainsets are to be supplied along with supporting maintenance and depot facilities.

Payment is based on availability, with Agility Trains being responsible for providing the trainsets for service on a daily basis. Deductions can be levied if Agility Trains does not meet the performance regime relating to availability, reliability and standards of cleanliness and presentation.

The total project financing requirement was approximately £2.5 billion, consisting of £2.2 billion long-term project financing plus a £280 million mix of share capital and shareholder loans provided over 30 years.

Key features of the project are:

- Pathfinder: This was the first time a PPP structure had been used for the procurement of rolling stock.
- Innovative: The train availability based structure is the first time a "no train no pay" structure has been used in the heavy rail market.
- Flexible "change" regime: Trains are mobile assets providing a key public service and considerable flexibility is required in respect of their deployment ranging from amendments to the passenger timetable to redeployment of trains to different routes and use of new depots.

Annex 3 – Examples of PPPs in the Rail Sector

1. Argentina

The Argentinian government has entered into a concession agreement with a private entity, Ferrovias Sociedad Anonimas Concessionarios, for the maintenance and operation of the railway line Belgrano Norte from Villa Rosa to Retira - Buenos Aires Metropolian Area. The concession includes the use of rolling stock. The term of the contract is 24 years (extendable) and the concessionaire is obliged to grant track access to the railway companies specified in the concession agreement. Conditions for track access and the track access charges must be fair and reasonable.

2. Brazil

The original project, named Expresso Bandeirantes, was to build a high-speed rail line between São Paulo and Campinas using a PPP model, however the project was modified to provide a link to Rio de Janeiro. A bidding process commenced in 2009 and the line was planned to be operational by 2014 in time for the 20th FIFA World Cup. Delays occurred owing to lack of interest from local construction contractors and in December 2011 the government invited bids in two parts, splitting technology and construction. The bid submission date was initially set for November 2012 but there have been further delays in the procurement and the project is currently on hold.

3. China

China's first PPP rail project is currently under construction in East China's Zhejiang Province. The 269 km high speed rail line will connect Hangzhou, Shaoxing and Taizhou in Zhejiang Province. The estimated project cost is 44.9 billion yuan, 51% of which has been contributed by private investment. Private investors include Fosun Group, Zhejiang Wanfeng Auto Holding Group and Zhejiang Geely Holding Group. The contract period is 30 years, with four years allowed for construction. The project is one of eight demonstration projects for social investment in the railway sector.

4. India

Construction of a new 103 km railway line from Chiplun on the Konkan Railway and Karad on the Central Railway Section of Pune-Kolhapur is planned using a PPP model. The project is expected to cost around Rs 2500 Crores with the Maharashtra Government sharing 50% of the cost and Konkan Railway holding 26% of the equity. The new rail link will carry freight consisting of thermal coal for power generation and the cement industries.

5. Portugal

The Portuguese HSR network was intended to establish a high speed railway link between Lisbon and Madrid. The project was separated into six separate packages ready for procurement using a PPP model, however the project was abandoned in March 2012 by the Portuguese Government. There were a number of factors: the European financial crisis, the discovery of illegal clauses in the contracts and irregularities in the concession and the tender

process. The project would have involved the construction of new lines totalling approximately 650 kilometres between Lisbon, Porto and Madrid, with the project's total investment value being approximately EUR 8 billion. The project was to be financed by a mixture of European Union grants and public and private finance.

6. Russia

The Yamal-Nenets Autonomous District has entered into a PPP agreement for the construction of what will be the world's northernmost operational railway with VIS Construction Group. The line is intended to support the exploitation of mineral resources, and will not form part of the national Russian Railways network. It will start at Bovanenkovo and will run 170 km northeast to the Tambeyskoye gas field and the port of Sabetta which is being developed on the eastern side of the Yamal Peninsula. The contract runs for 21 years and VIS TransStroy will design, finance and build the line. Total project cost is estimated to be 113 billion roubles with completion due at the end of 2019.

7. Singapore

The Kuala Lumpur-Singapore High-Speed Rail is intended as an alternative mode of public transport travel between Kuala Lumpur and Singapore. It will connect 7 cities in Malaysia to Singapore, following a coastal route. It will also provide safe, efficient and optimal transportation and will be the solution for heavy congestion in these areas. Journey time will be 90 minutes and line speed 300 km per hour. It has not yet been decided whether a PPP model will be used for the procurement. Construction is planned to commence in 2018.

8. Spain

The first AVE line was inaugurated in 1992 between Madrid and Seville and started the expansion of the network around the country. HSR in Spain has received significant European Union funding with the objective of promoting social integration, territorial integration, economic development and competitiveness. The remaining finance is provided by government funding. The network is government-owned with separate entities responsible for the rail infrastructure and the train operations. An example of the use of a PPP model is the introduction of ERTMS to the Albacete – Alicante section of the high speed line between Madrid and Valencia. A 22 year DBFM contract was awarded in December 2011 to a consortium led by Alstom.

9. Taiwan

There is a high speed line running approximately 345 kilometres from Taipei to Kaohsiung. Construction commenced in March 2000 and the line was completed in January 2007 after a 14 month delay. The project was tendered using a PPP model and a Taiwanese consortium was awarded a concession in September 1997 to finance, construct and operate the line for a period of 35 years, with a concession of 50 years for station area development. The total cost of the project was approximately US$ 18 billion, including a government contribution of US$ 3.2 billion and cost overruns of US$ 1.7 billion.

10. USA

There are plans for high speed rail in California, the Midwest, New England, Florida, Texas, Pennsylvania, the Pacific Northwest, Colorado/ New Mexico, and the Southwestern United States. The California High Speed Rail Authority is currently promoting the California High Speed Rail project, which is planned to link Anaheim, San Francisco, San Jose, Sacramento, Fresno, Los Angeles, Bakersfield, and other major cities within the state. Line speeds are expected to reach 354 km per hour with the first phase due for completion in 2029 and the remaining phase before 2040.

DRAFT

Standard for Healthcare

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THE FINAL VERSION OF THE DOCUMENT WILL BE PUBLISHED IF IT IS ADOPTED.

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TABLE OF CONTENTS

1. Introduction

The following is a recommendation on the role of PPP in health care policy that meets the SDGs.

2. Definitions

(a)Health care policy

A health care policy is a set of objectives, fixed by a Government and implemented by a health ministry and with the cooperation of others that sets out how the objectives are to be met, the timelines and the means for achieving them.

(b) Public Private Partnerships in health care

PPPs are typically long term contracts (usually over 15 years) between the public and private entity under which the private partner undertakes a specific role or function – design, finance, build, operate etc. - under the auspices of the public entity. The term is used to refer to different types of partnerships as well. To date, there is no universally applied definition of the term PPP in the healthcare context.

Rationale for PPP

Overall, the PPP experiences in the health care sector have largely taken place in developed countries; in these cases the rationale for the PPP has been *inter alia* the following:

- Help the public sector to access international capital (today the challenge is less finding the finance; rather it is to develop the right project to attract the available financing)
- Achieve value for money and reduced construction costs
- Greater innovation in design
- Introduce new technology that can improve health treatment and diagnostics
- Improve public health service delivery and expand health systems, making it more accessible to the poor
- Act as a stimulus to traditional public sector procurement models by encouraging competition
-

In health care PPPs there are different models involving many different stakeholders. There are typically four models that can be distinguished:

(i) Design, Build, Operate and Transfer (DBOT)

Under a DBOT model the private partner is responsible for the infrastructure throughout the life of a contract. The private partner then transfers this responsibility back to the government on the expiration of the contract. The private partner is responsible for operating the hospital including services such as laundry and cafeteria. However, the government retains responsibility for the delivery of healthcare services throughout. The most common form of PPPs in health has been the PFI which was used to build many hospitals in the UK.

(ii) Design, Build, Operate and Deliver model (DBOD)

Another model combines both the running of the hospital with the responsibility for delivering all clinical services in one or more health facilities including an acute care hospital, as well as one or more primary care facilities. The private entity designs, builds, operates and delivers clinical services, including the recruitment and staffing of health care professionals.

(iii) Lease contract

In cases where there is need for diagnostic or equipment for care of sick patients such as dialysis machines, the public sector acquires the machines form the private entity through a lease contact. The public sector pays a fee to the private company according to the number of times the machines are used. The private entity is responsible for the maintenance, upkeep and the overall availability of the machines

(iv) Outsourcing

In these cases the delivery of services is given over to a private company who operates and takes a change from the end user. In health care services, this involves cafeteria, shops, parking etc. in the premises of the hospitals. It also can be a private wing of a hospital where the private entity has beds reserved for its use and which it pays a sum of money to the public entity.

©The United Nations Sustainable Development Goals

The United Nations Sustainable Development Goals (SDGs) have 17 Goals and 169 targets and were adopted by the UN General Assembly in New York in September 2015. They have the following chief characteristics and goals:

- Eradication of extreme poverty by 2030
- An agenda that stresses People, Planet and Prosperity
- Strong emphasis on improving social infrastructure including health, education housing etc.)
- Overall focus on resilient infrastructure and its expansion across a wide spectrum – renewable energy , water and sanitation to achieve universal access in basic critical services for human life
- There is no money specifically allocated for the achievement of the SDGs and rather a new and main implementing tool for the goals is identified , namely 'global partnerships for sustainable development' including PPPs
- A commitment that has been made by all UN member states to be achieved by all member states
- A monitoring and reporting mechanism still to be approved by the UN member states to ensure effective follow up on the commitments

The UN SDG 3 is:

Ensure healthy lives and promote wellbeing for all at all ages

Progress was made in health with the former MDG targets in health. Under –five deaths worldwide fell from over 12 million in 1990 to around 6.6 million in 2012. SDG 3 goes forward and builds on the successes and addresses the failures as well, notably towards maternal health and infant mortality and focuses as well on specific diseases, HIV AIDs and TB as well as includes has also a number of targets some are cross cutting with other goals :

- Sustainable wellbeing for all – poverty eradication, health education, nutrition, environment and security etc.
- Healthy lives at all stages (child survival, maternal survival, adolescent health, building on the yet to be achieved previous MDGs, non-communicable diseases, HIV AIDs etc.
- Universal health coverage, health promotion, prevention, treatment, financial risk protection and so on.

The key to the accomplishment of all the targets is Universal Health Care (UHC) . UHC means implementing policies to ensure that all people receive the health services they need without suffering financial hardship and it has several key components:

(i) Building hospitals and clinics will not achieve their goals if there are no qualified personnel to run these. Overcoming the chronic deficit of health care professionals (doctors, nurses, technical staff etc. In developing countries and transition economies. In the latter there is a concern that qualified health professionals are leaving to developed countries in search of better remunerated jobs, leaving their own health services seriously under-staffed

(ii) Making sure that the patients are made more aware Abu their own life styles and its impact on their own heath and to know about nutrition and how to eat properly, take regular exercise and stop smoking. in addition one of

(iii) Creating efficient health care delivery systems. In that tend in many countries such systems tend to be weak with public and private systems operating side by side and sometimes without cooperation and coherence. Services lack essential drugs, equipment, and other supplies across primary, secondary and tertiary health sectors

(iv) Adequate financial resources must be found so that all people are free from fear of becoming ill. In many countries in an absence of universal health coverage, catastrophic illness can be the cause of bankruptcy.

Achieving UHC is basically about financing and at different levels, community, individual, household, village etc.

3. <u>Challenge</u>

The UN SDGs and the achievement of UHC will require financing on a considerable scale. Private financing alone cannot close the financing gap. Nor will arguably the deficit be overcome by the public sector alone. True, the mobilisation of public funding - both through taxation and social health insurance contributions on a compulsory basis may make an exclusive public financing to achieve UHC possible. But in most mature economies the appetite for increased taxation is rather low while global economic growth is sluggish and unlikely to support the increases in public expenditures in health that will be necessary. Moreover, in developing countries and transition economies which will not be able

to rely on public sources, it is doubtful that governments and bilateral aid will cover the shortfall – even until the economies are strong enough to support greater domestic resource mobilization.

Thus, given the scale of the amount required, there is a growing consensus that the UHC goal will probably be achieved by combining funding from both public and private sources. But how should these PPP models look like and how can they achieve the UHC goals at the heart of SDG 3?

To date, PPPs in the health sector have experienced both pros and cons. On the positive side of the balance PPPs have been characterised by:

- On time and to budget construction of hospitals
- Improved value for money over traditional public procurement approaches
- Financial incentives in contracts based on performance metrics have driven in many cases outstanding performances over a number of specific health outcomes
- the public authorities have improve their own performance as a result of PPP in procurement in healthcare

On the other side of the balance, PPPs in the health care sector have been hampered by the following:

- Long term contracts which set what the health needs are but which are not flexible enough to take account (I) the rapid pace of change in health care treatments in drugs and equipment (ii) changing medical demographics. This has led to the construction of hospitals and departments within hospitals for the treatment of certain conditions for which the demand has changed. In such cases there is the risk that hospitals are built but not fully used.

- A tension typically occurs between the ethos of public service duty in the delivery of health care and the commercial stringencies of efficiency and returns – although this is not confined to PPP but this is often true of the new ways that public hospitals operate in a more cost conscious way

The challenge will be to use this positive experiences in PPPs in health care , based largely on the perceived innovation capability and efficiency of the private sector and channel this into 'pro poor PPPs 'in health care that can transform societies and create 'win - wins 'for both the public and private sectors and the unserved and vulnerable groups in society.

4 Adapting the PPP model to the new SDG requirements

Key requirements emerging from the SDGs

The SDG 3 in health will need PPP models that can improve **access** massively, make better use of existing resources and improve **efficiency**, and promote **equity** and a fairer and more just health care system. At the same time, there will be a need for models that are **replicable and transformational** while emphasis and focus will be put on developing the **required capacity**. The projects and models need to be developed further and adapted where possible to the socio economic circumstances of hosting countries. They can also build on the pioneering models in PPPs that are already achieving considerable success in SDG compliance.

Challenge 1 Building the capacity of health professionals to overcome the human resource deficit

Goal: the PPP project / programme launched by the government in the healthcare sector should include a clear capacity building component.

Actions

PPP can be undertaken in teaching hospitals so that more professional are created for the country. The Lesotho PPP …….

PPP arrangements can be an opportunity to improve productivity of existing staff resources in performance based contracts

New tele - medicine techniques can utilise domestic health care expertise, supplement incomes, and retain that expertise in the country for the domestic health service

Training and capacity buildings should be scaled up in change management to ensure that public secure health professionals are able to work in PPPs

Challenge 2 – Creating stronger public and private cooperation in the delivery of health care and increasing available resources for health care

Goal; different partnerships can be used to increase resources available for the health sector

Actions

Private sector can engage with private sector in more cooperation in health technology and diagnostics

May partnerships between the public and private sector have led to success I the fight against specific diseases? For example, many of the global partnerships are formed with disease specific objectives: the eradication of

Box

A success story in PPP

(GAVI Alliance)

The PPP model is robust butane rigorous and using mythologies for selecting projects that ensures optimal and efficient use of resources. The 'best practice', standard form of tests for PPPs – a cost benefit analysis – the preparation of business cases (see box) before eth project can be

Hospital construction and facilities management: PPPs have been a major model for delivering and meeting needs and a number of countries have built hospital rapidly and successfully (see box). Facilities management by private operators have also been a mode of making service delivery more efficient relative, with the introduce of new accountabilities and the optimal use of resources

New hospitals versus the updating of existing assets. In some cases the economic option is not to build but to make the existing health care assets better managed and renovated.

Challenge 3

More financing is required to improve health insurance schemes that can lift fear of...

Goal

Challenge 4: Making citizens at all ages more aware of their health and the impact their life styles have on their health outcomes

Goal

Partnerships with all stakeholders including the private sector can

Action

'PPP health programmes ' organised by the private sector can achieve a specific outcome, such as raising awareness on HIV AIDs, avoiding infections through hand washing. These programmes also extend, or cutting infant mortality.

5 Basic commitments required by governments and the private sector to take a PPP programme in health care forward

The basic element of PPP is private sector financing and this factor drives a number of key requirements that are critically important to put in place if the PPP model as mentioned above is to work effectively. These basic requirements are set out as a checklist / 'stress test' for PPPs in health care below;

Governments

(i) Long-term policy will that can underpin the long term fainting required

- There must be a 'political will ' to bringing in the private sector to drive the country or region towards achieving better access , efficiency and equity in health care
-
- The government must accept the principle of whole life costing, and an absolute commitment to the long term (15 -30 years) funding of the health facility /service/ concession by government.

(ii) Policy , Law and institutions

A legal and regulatory framework is a *sine qua non* as contracts by themselves are not robust enough to give the investor sufficient assurances

A PPP task force , fully empowered to act for the financing arm of the government , should be established to manage and prioritise the project pipeline as well as provide a 'bank' of expertise for municipalities and government departments including the health department , to draw on

Standardised documentation where possible to simplify processes and reduce costs. Such a practice is critical to scale up PPP in implementing the SDGs in health.

- necessary assurances to investors

-
- There must be an adequate financial framework to enable the health projects to compete for long term international investment.
-
- Fair risk sharing must be established that permit a good chance of generating profitable returns for the private sector , while putting private sector investment , at risk , if surceases are not delivered to the service level required

(iii) Building the required capacity

Officials must be able to define the service required in terms of output specification rather than the usual input specification approach, with a willingness to accept creative solutions that can save money and improve the level of service.

Training so public sector officials by experienced public and private sector bodies saves repeating errors identified elsewhere and shortens the learning and implementation time

BOX

Some key questions for Governments considering PPP in health care

The 'check' for any government proposing to develop a PPP programme in health care, is to ask themselves the following:

- Is there a viable financial and legal framework able to support long-term private sector investment?
- Is there a readiness to pay for advice on what problems have to be tackled and how to put them right?
- Can it and any future government, give a commitment to pay for the services being delivered or to respect the payment terms in a concession contract over the life of the contract , which may be 30 years?

If the answer is No to these three questions the Government may be advised not to pursue a PPP strategy until such rectifications have been made.

Private sector

The private sector must respect health as a human right and undertake the necessary actions in support of human rights in the countries in which they operate.

It must commit to community involvement and full interaction which are involved in the PPP scheme.

It also needs to improve its accountability by providing information on its performance according to clearly set out indicators.

Transparency is better than secrecy. The private sector should provide full information on the project to the authorities.

While for profit institutions have a right (or an obligation) to make a profit , this has to be balanced against the equally important considerations of ensuring safety, quality and equity

The private sector should have the opportunity to contribute towards the planning and implementing of health care policy

6 Safeguards and regulations

While private sector investment in health through PPPs provides a number of benefit there are also some important risks that can arise and which need to be addressed. In all types of partnerships there is scope for abuse through corruption, the neglect of a commitment to citizens especially the poor and in deterioration of the quality of care. In advance of the SDGs, there has to be zero tolerance to any such practice.

PPPs moreover do not eliminate the need for government to regulate; on the contrary they require an enhanced regulatory framework through which regulations can be enforced. Health is a human right and the private sector needs to work within the regulatory parameters set by the government.

The goal of regulation in health PPPs is to

(i) Protect the individual
(ii) Control costs
(iii) Ensure access to health care

Protect the individual

In terms of the protection of the individual , regulations should be in place to control who is able to provide services under PPPs (doctors, nurses, hospitals) and the quality of services that are sued by consumers (e.g. pharmaceuticals) . Regulations provide baselines of quality that all providers, public ND private, must adhere to and how the public protects itself against unlicensed and or unscrupulous practices.

Control costs

Governments need also to place caps on the fees private sector providers charge. These are sometime controversial because of the view that they create market distortions. However, they may also be appropriate is a user of the health care system are relatively poorly informed about their health status and health care needs. As noted above there is a sense that while private organisation should be allowed to make some profit from the delivery of the health service, excessive profit is not appropriate and should legitimately be controlled through regulation. This is true of pharmaceutical costs where the potential for excess profits is high.

Ensure access to health care

In areas where the only provider is private, there is a social justification to regatta that the provider must see all patients regardless of their ability to pay. Ate last for emergency surceases. In addition, there has to be a compete non-discriminatory approach to patients and no barrier to care established on the basis of ethnicity, gendered etc.

Beyond regulations there is a need for codes of conducts and behaviour on the ways the private sector undertake PPPs in the health care sector. It is important that both parties take on these roles together. For example, there is the need to build and maintain government capacity to manage a PPP and to monitor and enforce the terms of the contract. This involves new roles and a direct commendation with the citizens groups, media and the community as a whole.

Conclusion

The GAVI Alliance is by far the most successful programme. (See box). Yet while these schemes have been often successful - as evidenced by the GAVI Alliance - the majority tend to be national based with local impacts and are of short term duration without the amounts finance available to the GAVI Alliance. Nevertheless these types of PPP can still be a means by which the Government can learn how to work with the private sector and gain some expertise with partnership and then scale up these into more extensive progress in health infrastructure

- Improving access to health care (SDG 3) increasing the numbers of the population which have universal health care access
- Scaling up and replicability through capacity building – developing models that are fairly straightforward to do , thereby allowing the impact to be scaled up and an increase in impact and at the same time ensuring that professionals are adequately trained to adjust to the new requirements and the patients aware of the new opportunities available

The challenge of identifying the models that need the criteria is that to date there is a lack of comprehensive data on best practice models in health care – some information but not enough to be conclusive. Other sectors by contrast, such as roads tend to have croups of knowledge on which to design best practice models.

This cave notwithstanding there is a strong case for a number of projects that 'fit' with these above mentioned criteria and can be adjusted to meet the challenges arising from these criteria.

Can

Equity

Many PPPs can generate new resources and can be used to cross subsidize the delivery of health care for people who cannot pay.

Access

Rapid urbanization and new technologies and treatments are the drivers for improving access to health care and the SDGs are not highlighting the merits or demerits of focusing the budget on the different levels of health care – primary, secondary and tertiary etc.

- Tele medicine Hospitals are however not necessarily the modus in low oncome countries in improving access – many low income countries have to deal with the need to services vast territories where patients are far removed from available health facilities and it is too expensive to build multiple hospitals ; hence the critical need for transforming health care delivery to the new technologies in the forms of e medicine and teal medicine , training processionals den patients on how to use these technologies and ensuring proper regulation

byte public authorities (see box) In these cases setting up multiple clinics in primary care delivery is prohibitively expensive.

Some practices and some models are important . For example, the vast majority of countries which **use** PPP do so for hospital construction and faculty's management and the clinical services are left outside the PPP managed by the public sector. But in some developing countries where the capacity is lacking, the integrated approach, combining facility management with clinical services - in PPP delivery - may be more appropriate.

1. Other income generating models

There is trend to move from health acre provided by an infrastructure to more direct means, as technology develops and the internet becomes

7 Annex

Draft

Standard for Grid-Connected Renewable Energy in Emerging Markets and Developing Economies

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DATE: 29-4-2017

Abbreviation and terms	Meaning
ATI	African Trade Insurance Agency
COD	Commercial operation date
EMDE	Emerging markets and developing economies
EPC	Engineering Procurement and Construction.
GENCO	Generating company
IPP	Independent power producer
LD	Liquidated damages
Load	An electrical load is an electrical component or portion of a circuit that consumes electric power. A “load centre” is centre of concentrated electricity demand, such as town, city or industrial facility.
MIGA	Multilateral Investment Guarantee Agency
MW	megawatt (being 1,000,000 watts)
NDCs	Nationally Determined Contributions according to the Paris Agreement
Offtaker	Purchaser of electricity (in particular, in the context of energy (RE and non-RE) PPPs, the purchaser under the PPA)
PPA	Power purchase agreement
PPP	Public private partnership
PRG	Partial risk guarantee
PSA	Power sale / supply agreement
RE	Renewable energy
REFIT	Renewable energy feed in tariff
REIPPP	South Africa’s Renewable Energy Independent Power Producer Procurement program.
SE4ALL	Sustainable energy for all
SPV	Special purpose vehicle
UNECE	United Nation´s Economic Commission for Europe
UN SDGs	United Nations’ sustainable development goals
VfM	Value for Money

Introduction

1.1 The Importance of Renewable Energy ("RE") to Sustainable Development

"Energy is crucial for achieving almost all of the Sustainable Development Goals, from its role in the eradication of poverty through advancements in health, education, water supply and industrialization, to combating climate change."[11]

Furthermore, "climate change presents the single biggest threat to development, and its widespread, unprecedented impacts disproportionately burden the poorest and most vulnerable."[12]

Accordingly, access to sufficient, dependable and affordable RE is crucial to attaining the United Nations' Sustainable Development Goals ("UN SDGs").

In order to achieve an effective result, each PPP program must encompass a process developed to take into account the specific context, determined by (a) consistent and clear stakeholder engagement, participation and acceptance, (b) appropriate program scale, phasing and ramp-up, and (c) mitigation for any development risks that cannot be borne by the private sector.

The Role of RE PPPs in Sustainable Development

The UN SDGs cannot be realized unless the private sector is mobilized – and on a significant scale. SDG 17 (Revitalize global partnerships for sustainable development)[13] calls for partnerships between the public and the private sector as well as civic society. Review and monitoring frameworks, regulations and incentive structures that enable such investments must be retooled to attract investments and reinforce sustainable development.

Public Private Partnerships ("PPPs") are a mechanism for facilitating private sector participation in the delivery of RE infrastructure projects. PPPs can mobilize private sector capital, technological and operational know-how, and risk appetite to develop, design, finance, build, operate and maintain a RE infrastructure project.

In the field of Renewable Energy, relevant SDGs can conflict each other, in particular for large-scale RE projects.

PPPs as an alternative to 'traditional' public procurement

Whereas the public sector can choose to fulfil its service delivery mandate on the basis of procuring goods and services through direct contracting and financing for a specific good or service (traditional public procurement), it can also choose to deliver its mandate via a Public Private Partnership model.

The distinguishing features of a PPP are the contracting structure which provides for an enhanced allocation of risk between the private and public sector where performance and remuneration thereof are inextricably linked. Moreover, PPP are generally financed by the private sector with debt and equity serviced by revenues and where necessary supplementary revenues or support from the fiscus.

PPP are furthermore characterized by their capital intensive nature and longer term financing requirements which require operation and management on an on-going basis. They are particularly valuable in RE projects because the private sector is able to deliver:

[11] Sustainable Development Goal 7, https://sustainabledevelopment.un.org/sdg7.
[12] Sustainable Development Goal 13, https://sustainabledevelopment.un.org/sdg13.
[13] Sustainable Development Goal 17, https://sustainabledevelopment.un.org/sdg17.

- **Technology**: where the service requires external expertise and government will not be able to provide it independently;
- **Quality**: where a private partnership would significantly enhance the quality of service compared to what the government could extend independently;
- **Time**: where a private partnership would expedite the project implementation significantly; and
- **Cost**: where there would be a considerable reduction in the project cost and also the service cost with the involvement of a private player.

Objective of the Standard

This Standard sets out recommendations as to how host Governments in emerging markets and developing economies ("**EMDE**") countries can, through relatively low cost interventions:

a) maximize the economic benefits of RE PPPs;

b) attract increased private sector participation in RE PPPs;

c) reduce the development time and costs for RE PPPs;

and thereby deliver a RE PPP at an affordable cost.

Scope of the Standard

Scope

RE PPPs are complex transactions involving multiple private and public sector stakeholders. Furthermore, as discussed below, each generation technology raises significant technology-specific issues.

The Standard aims to provide:

a) a set of high-level recommendations to assist host Governments in EMDE countries in structuring, procuring and carrying out 'People First Renewable Energy PPPs' in their country; and
b) brief rationale for each recommendation.

The scope of this Standard does not extend to detailed analysis, nor does it provide answers to every issue that may arise for host Governments.

Useful Definitions

For purposes of this Standard, the definition of IEA for Renewable Energy is utilized: *"Renewable energy is energy that is derived from natural processes (e.g. sunlight and wind) that are replenished at a higher rate than they are consumed. Solar, wind, geothermal, hydropower, bioenergy and ocean power are sources of renewable energy. The role of renewables continues to increase in the electricity, heating and cooling and transport sectors."*

In this document, the term "RE PPP" is used to describe any types of RE projects involving:

c) long-term (sometimes up to 20 – 25 years) partnership between the public and private sector;
d) provision of infrastructure or service by an entity other than a public authority; and
e) transfer of risk to the private sector.

PPP may be implemented by a dedicated RE PPP program (see special section below), investment agreement, concession agreement or similar, which constitute the legal basis for the relations between the parties.

This Standard applies only to grid-connected RE.

Central questions

What the UN SDGs say in this sector and in general terms how appropriate is the PPP model to meet this goal or other goals if there are more than one.

[NEED MORE DISCUSSION AND ANALYSIS OF THE SDGs]

'People First PPPs' are PPPs, which (a) are seen as synonymous with the purposes of the UN SDGs; (b) out of all the stakeholders, put people as the main beneficiaries of the projects; (c) increase access to water, energy, transport, and education especially to the socially and economically vulnerable members of society; (d) promote social cohesion, justice and disavow all forms of discrimination based on race, ethnicity, creed and culture; (e) focus on improving the quality of life of communities, fighting poverty and creating local and sustainable jobs; and (f) contribute to ending hunger and promote the empowerment of women

People First PPPs are further measured by "accessibility"; "equity"; "efficiency"; "effectiveness", "sustainability"; and "replicability".

As a result, People First PPPs in the RE sector seek to ensure that (a) sufficient RE infrastructure is delivered when and where necessary to enable the attainment of the UN SDGs; (b) RE infrastructure is developed to design standards and build quality which will enable reliable delivery of RE over the long term; and (c) RE infrastructure is delivered:

i. at the lowest possible levelised cost of electricity (taking into account the objectives set out above); and
ii. with the lowest possible fiscal burden to host Governments;

in each case while balancing the objectives set out in paragraphs **Error! Reference source not found.** and **Error! Reference source not found.** above.

Social inclusivity and financial viability are not conflicting interests in a RE PPP, but rather intertwined prerequisites for a successful operation of a project over its entire lifetime.

A. Project types and examples

Global experiences with the model, especially in low income countries. These should objectively review what has happened in the sector by looking at projects, countries' strategies, etc. and the types of models which have been typically used. Mention can be made to any projects which have had a real transformational impact.

[NEED PROJECT TYPES AND EXAMPLES, e.g. elements from which are the basis of the 'model' you are to propose]

Independent Power Projects

RE PPP under a broader RE PPP program are commonly referred to as independent power projects ("IPPs"). Such PPP-IPP and regular, purely private sector-driven IPP are not uniform. Although the typical IPP structure is understood as a privately sponsored project with nonrecourse or limited recourse project financing, most IPPs in EMDE do not follow this exact model. Instead, the government usually guarantees the offtake (and/or subsidizes it as there are no cost/reflective tariffs) and/or may hold (directly or indirectly) some portion of equity and/or debt, bringing PPP-IPPs closer to a model of a common PPP than that of a traditionally conceived IPP.

	Fully Private Sector	**PPP**
Offtaker	Private or open (spot) market	Public (fully or partially)
Contracts	(Various) Power Sales Contract(s)	Power Purchasing Agreement often flanked by Implementation / Support Agreement
Dedicated RE procurement program	Not necessary	Usually
Public support	Nothing beyond regulation of market	In form of guarantees and other support instruments
Risks typically assumed by Public Sector	None	Payment, Termination, Grid, Permitting
Source of financing	Purely commercial	Public, concessional, commercial

Common features of RE IPPs include:

a) a single-purpose project company established and owned by shareholders (often referred to as "Sponsors"), which has the responsibility to design, finance, construct, operate and maintain the power generation facility throughout the project term of the agreement;
b) a long term (typically 20-25 years) PPA between the SPV and the offtaker, which is often a Government owned utility;
c) an agreement between the SPV and the host Government (such agreement often referred to as an "Implementation Agreement", "Concession Agreement", "Government Support

Agreement" or similar) which sets out various rights and obligations as between SPV and the host Government;

d) the PPA and Implementation Agreement sitting within a matrix of contracts entered into by SPV pursuant to which, inter alia, risk is allocated as between the immediate stakeholders to the project.

A diagram of a typical RE IPP contractual structure is set out at **Error! Reference source not found.**(RE PPP/IPP Structure Diagram).

Joint Venture as a model of RE PPP

A RE PPP in which the public and private sectors hold shares and jointly manage generally follow the same principles as an IPP. However, additional administrative and corporate governance challenges (for example conflict of interest and interference) may arise as a consequence of the institutionalized partnership.

IPPs are Technology specific

IPPs are typically categorized by the specific generation technology that will be utilized and the most prominent types are:

a) Solar PV – solar PV panels generate energy by irradiation reaching the solar PV panel and the system converting the irradiation to power
b) Hydro – Hydro projects may be either (a) hydro dams, which store source energy, or (b) run-of-river projects which have little or no ability to store source energy
c) Wind – Wind projects generate energy by capturing intermittent wind currents and converting the rotational motion of a wind turbine into electricity
d) Biomass – Biomass projects generate energy by burning in a boiler or a gas-fired generator an organic fuel source such as sugar cane bagasse, agricultural waste, or purposeful grown or farmed fuel products.
e) Geothermal – Geothermal projects generate energy by capturing geothermal heat from deep within the Earth and convert that energy to steam to make electricity.

B. Pros and Cons of PPPs in Renewable Energy

Identify the pros and cons of models in the sector.

[DISCUSS PROS AND CONS OF MODELS IN THE SECTOR]

C. PPPs Meeting People First Objectives – Replicability, Scalability, Equity, Efficiency, Sustainability, Effectiveness Demonstrated

Identify the suggested model(s) and propose, if appropriate, a model that is best fit for purpose for the UN SDGs.

In light of the 2030 Sustainable Agenda, VfM is no longer the only metric to measure success in a PPP. People First PPPs is the new model for success and one that seeks to transform old PPP models,where VfM mathematical comparison was the basis for projects, and instead measure PPPs on whether they are 'fit for purpose' for the UN SDGs, their ability to provide poverty alleviation, and the degree to which they bring transformational effect to the communities in which they serve.

[RECOMMENDED MODEL(S)]

V. Delivering the Models

A. Project Selection / Baseline requirements for Private interest in RE PPPs

Selection of Appropriate Infrastructure Projects

One of the challenges faced by Governments is the ability to discern the suitability of an RE infrastructure project for the PPP model. This suggests that the notion of `one size fits all` is not applicable for RE infrastructure projects. Governments should acknowledge that RE PPPs are not the panacea for all development initiatives, and it is therefore crucial in the planning phase to select RE projects that would be well suited to the PPP model as it would be more likely to ensure the success of a project.

Developing an Effective RE PPP Program

While individual projects can bring great benefits, more efficient outcomes can be achieved with a RE PPP program that yields investment at scale, is repeatable, and delivers a high quality utility service to citizens at an affordable price. RE PPP programs should be developed, however, through a phased approach to allow for institutional capacity development, price discovery and overall risk reduction for both the host Government and private sector and create real value for the end user.

The success of a RE PPP program is a function not only what the host Government decides to do, but also how it goes about how to design the program. The 'how' aspect of PPP programs is about:

a) the process of development of the program that a host Government implements from the start;
b) Constant and complete stakeholder engagement – including affected local communities, private investors, financiers, grid, off-taker, relevant ministries; and
c) The size and impact of the whole program and of the individual projects within it.

A RE PPP program should educate stakeholders about the ultimate project cost and its impact on the consumer over time, the affordability of electricity for the population at large and other affected parties (departments of finance, utilities, private sector as an off-taker, energy intensive users etc.)

The size of projects or programs that could be considered for an RE PPP structure can place significant strain on the balance sheet of a country, especially where revenues are constrained by regulation or the ability of the consumer to pay. The impact of RE PPP projects and programs should therefore be subjected to cautious due diligence and a comprehensive review of a country's ability to meet its obligations under the PPP.

An efficient RE PPP program should also be embedded in a broader process or integrated plan which should include realistic supply & demand forecasts, least cost planning associated with the energy mix, resource assessments, transmission network development and broader power sector development trajectories. It incumbent upon a host Government in launching a PPP program for renewable energy to assess the building blocks of its program, for example, availability of data on resource assessments, transmission risks, and land titles, and design a process that takes its strengths and weaknesses into account.

RE PPP programs targeting intermittent power sources impose additional requirements to a country´s grid absorption capacity and management.

Ignoring these principles usually leads to a higher cost of service and a risk mitigation program which leaves the host Government with risk that should be borne by the private investors[14].

[14] For example a comparison of the outcomes of RE programs in India and Sub-Saharan Africa. As a result of the program initiated by the Indian Government, wind and solar projects in India regularly result in levelized tariffs in Rupees equivalent of $0.08/kWh, where 50% of the tariffs goes towards capex and O&M, and 50% to interest and equity return. In contrast, a Sub-Sarahan African project which did not follow such a process, would probably end-up with a tariff of US$ 0.12/kWh, where the level of capex and opex would be the same as with a project in India, with almost a 3.0x multiple going to equity return.

Efficient Risk Allocation

Risk is ideally allocated if it is allocated to the party who has the greatest ability to fully manage and/or mitigate that risk, despite the fact that it may not be fully controlled. It is inefficient to require a party to assume risks it cannot control and mitigate, in particular if a risk is at least partially under the control of the other party.

Nevertheless, these risk examples are by their nature very difficult to control for Governments:

a) risks associated with matching electricity supply and demand. This is particularly relevant for large RE PPP programs or projects, whose installed capacity may sometimes exceed 100% of a host country's total peak demand (including the reserve capacity) at the time of inception. Timing differences resulting from the project development life cycle and demand are challenging to manage;
b) exchange rate risks (capital and repayment); and
c) 'political force majeure' risks, such as war, civil disturbance, terrorist attack, currency convertibility, etc., which are not within the direct control of the host Government.

A project's cost of capital also reflects the actual and perceived risks associated with carrying out the project with such risk categories as inflation risk, interbank interest rates risk, political and regulatory risk, project design, financing, construction, operation and maintenance risks, demand and regulatory risks.

Risks Typically Allocated to the Public Sector

Risks allocated to the host Government include change in law, change in tax, failure of Government authorities to issue requisite permits and consents (which have been properly applied for and diligently pursued by the project company), or provide other assistance to the private partner, undue interference by public authorities / officials, war, civil commotion/unrest, strikes, in some cases unforeseeable ground conditions. In countries with weak FX spot and forward markets – the risk of currency convertibility and of macroeconomic crisis, Projects are made viable by involving supranational Political Risk Guarantee products.

Risks Allocated to Investors

Different classes of investors have different risk appetites. This reality should be acknowledged and embraced. Generally, the private sector is willing to take the following risks: project cost, construction, technology, operation and maintenance.

One particular risk worth mentioning is 'grid risk'; i.e., the risk that the electricity grid is not able to accept and/or evacuate electricity made available by the project company.

Even when grid outages are caused by a force majeure event, project lenders in particular will require (as a condition to the provision of finance) that this risk is allocated either to the utility and/or to the host Government (i.e., that they should be obliged to reimburse the RE PPP for the revenue which it would have otherwise lost), on the bases that (a) the RE PPP cannot realistically insure against events which may be caused or occur anywhere on the electricity grid, and (b) the utility has the dual duties of ensuring that the grid is robust in the first place, and re-instating the grid promptly if for any reason it is knocked out of service.

Improving the Baseline

In order to build a robust RE PPP program, and one that will have the transformational effect called for in the UN SDGs, host Governments should aim to develop a RE policy framework which 'prepares' the jurisdiction for RE PPPs and will bring not only successive projects but drive down the cost of RE PPP transactions. Efforts such as host Government taking a pro-active lead in shaping their domestic RE market to comply with both their sector´s electricity needs and NDCs. Some other measures include:

a) **policy guidelines** - identification by the public sector of priority technologies and regions for investment, as well as lists of potential projects / project sites;
b) **resource mapping** – mapping RE resource, collecting RE resource data (wind speed, irradiation, hydrology, etc.) on an ongoing basis and publishing this data;
c) **investor guidelines** - development of detailed investor guidelines, which set out clearly all steps investors must take, including in particular permits and consents, etc., which must be obtained from Government authorities from project initiation through to commercial operations, as well as guides to the tax treatment and investment incentives available;
d) **standardised project agreements** – development of a full suite of realistic, technology specific, bankable project documentation that is also customisable;
e) **engagement of external advisors** – working with financial, legal and technical advisors can help designing an efficient RE PPP program or project in line with international best practice, attracting more prospective investors, and driving the competition up and prices down. Associated costs can be sponsored through MFI support programs or recuperated through the project;
f) **site selection, early project development** - site selection or identification of priority locations by the public sector, as well as carrying out preliminary legal and technical due diligence which can be shared with all shortlisted bidders;
g) **RE appropriate grid code** – acknowledging RE, and the specific requirements and technical limitations of various RE technologies, in the grid code, and development of detailed RE grid connection guidelines; and
h) **Interconnection and associated costs** – governments, utilities and / or regulators must provide uniform and transparent interconnection procedures, guidelines and application forms for RE generation connection. It is also important to provide transparency on how required grid network upgrades triggered by RE PPP are identified and associated cost responsibilities allocated to specific generation projects.

B. Financing

RE PPP in EMDE countries with project costs above circa US$20 million +/-[15] are typically project financed.

Project finance in EMDE countries is structured to:

[15] There are no hard and fast rules; however, most project lenders have minimum deal sizes, below which they are not prepared to incur the significant time and expense require required in project preparation (which in turn is to a large extent fixed regardless of the project size).

a) maximize the ratio of debt finance to equity investment, as the interest rates required by lenders are typically much lower than the returns sought by equity investors;
b) lend against the expected long-term income stream flowing from the power purchase agreement ("**PPA**"), and **not** against the value of the underlying assets or a balance sheet;
c) compensate the parties should the RE PPP project terminate early (i.e., before the expiry of the natural term of the PPA), because the expected value to the equity investors and lenders of the underlying infrastructure (i.e., largely immobile infrastructure with no certainty of a customer or means of earning income) is minimal at best;
d) accommodate project lenders who will be more risk averse than investors/sponsors (as lenders expect a lower return than the project sponsors); and
e) minimize recourse to the investor's balance sheet.

Project finance is often the only financing structure that investors are willing to accept to fund capital investments in EMDE countries, however, project finance often requires cumbersome and expensive processes leading to high fixed upfront transaction costs and extended timelines.

Lowering risk perceptions may also be achieved by improving the financial viability and performance of the electricity subsector as a whole through measures such as:

a) implementing cost-reflective and adequate end-user tariffs, so that the Offtaker is not perceived to be structurally loss making and thus a high credit risk;
b) improving the Offtaker's revenue collection performance, e.g. by promoting pre-paid metering, again so that the Offtaker is perceived to be on a sound(er) financial footing; and
c) importantly, ensuring that the Offtaker develops a good track record of timely payment to its existing IPP suppliers.

Power Purchase Agreements RE PPPs in EMDE countries will almost invariably require host Government support in the form of a contract between the host Government and the project company.

This contract is given a variety of names in different countries, e.g. a 'PPP Agreement', 'Concession Agreement', 'Implementation Agreement', 'Government Support Agreement' etc.; however, its principal purpose is to allocate to the host Government those project risks which (as between the project stakeholders) the host Government is best able to manage.

Recognition should be given to the PPA's central role in raising finance from the private sector, in particular its role in creating the expected income stream against which financiers provide finance. In RE PPPs in EMDE countries, the PPA performs several important roles, including:

d) providing the expectation of a long term income stream against which the project will be financed;
e) providing the contractual mechanisms for the sale and purchase of electricity; and
f) setting the contractual obligations of the project company, in particular in respect to attaining the project commercial operation date ("COD"), and post-COD performance standards.

Each PPA will also require project specific tailoring to address such issues as:

a) commissioning test procedures;
b) whether a 'capacity charge plus energy charge' is appropriate (capacity charge being an amount of power, and associated cost, that is expected to be available whether or not it is used), or 'delivered energy plus deemed energy' tariff structure is appropriate (deemed

energy being energy that is to delivered but cannot be taken by the offtaker while the offtaker still has the obligation to pay for such energy);

c) the methodology for calculating deemed energy;
d) appropriate performance requirements and the methodology for calculating performance.

It should be recognized that (a) a single PPA will not be appropriate for multiple generation technologies, and (b) if the PPA has not been tailored to a specific technology, it is unlikely to be 'bankable' for any technology. Expert advice should also be taken to optimize various provisions including liquidity support, economic stabilization, required performance standards and end of term transfer obligations (if any).

And although the PPA is the cornerstone of RE PPP documentation, the PPA is part of suite of documentation which works together to allocate risk and responsibility between RE PPP stakeholders; i.e., even the best PPA is not a 'bankable' document without the package of documentation which surrounds it.

Liquidity Support

strong utility credit in the host country is key for underpinning a RE PPP program or project. The reality in most EMDE countries is that utilities struggle to keep up with cost recovery and have poor payment track record. The first effort of host Governments therefore should be to map out a path for strengthening utility creditworthiness.

'Liquidity support' mechanisms that ensure timely payment to the project company, in the event that the utility/offtaker does not pay on time, include bank guarantees, letters of credit, or a cash escrow account. In many instances the bank guarantee or letter of credit provider will in turn require further backstopping with, for example, cash collateral or a partial risk guarantee provided by another credit worthy entity such as MIGA or some regional insurers, e.g. African Trade and Insurance Agency (ATI) in ATI member countries.

Economic Stabilization

Economic stabilization may also be an important 'host Government' concession where the project company is made whole if a change in law, tax, or other public or official interference causes either an increase in costs (including tax costs) or a decrease in gross revenue of the project company.

Stabilization may be achieved e.g. either via direct compensation from the host Government and/or (more usually) a tariff increase, but is often subject to *de minimis* thresholds (below which claims may not be made),certain carve-outs (bringing laws into compliance with international standards), and/or,the regulator determining the appropriate stabilizing adjustment (but permitting appeal if the project company disagrees with a regulatory award).

OTHER FINANCING CONCERNS?

C. Legal and Regulatory Framework

In view of the nature and the lengthy timeframe to develop PPP projects, it is imperative that the interests of both the public and private sector are protected by law.

Before investing in a PPP project in a given country the private sector participants will complete a detailed due diligence on the legal and regulatory system to ascertain if to invest or not.

An important factor to the success of a RE project and programme is therefore the existence of a clear and well thought out enabling framework. This typically involves the enactment of PPP enabling legislation and regulations, and at a minimum should authorize public authorities to use PPPs in RE projects, if not contain RE specific provisions, , be flexibile enough to not impede or prevent RE PPP development, and empower officials to strike the appropriate balance.

Role of the Regulator

In general, depending on the degree of development of the electricity sector in a given country, the electricity price at which RE PPP sell energy is, variously (i) fixed by bilateral contract, (ii) defined over multi-year cycles by a regulator in accordance with tariff regulations, or (iii) determined on a daily (or hourly) basis in the wholesale electricity market.

Financiers of RE PPPs in EMDE countries typically will not take the risk that regulated or market-determined wholesale electricity tariffs throughout the life of their project will stay at a level which will make the project economically viable. This may be due to perceived inexperience of the electricity regulator, perceived risk of political interference, or simply a 'chicken and egg' issue of the electricity regulator not having a sufficient track record of tariff setting, and thus being precluded from gaining and demonstrating that experience.

Limitations Placed on the Regulator

In light of the above, a common feature of electric power RE PPP in EMDE countries is a requirement for a long-term (20-25 year) contractually agreed tariff, together with contractually agreed mechanisms to adjust the tariff should various risk events arise. In other words, RE PPP in EMDE countries typically relieve the electricity regulator of its role in supervising wholesale electricity tariffs, other than an ability to approve the contractually agreed tariff or tariff methodology at the outset.

Since financiers' requirement for contractual certainty allows limited scope for intervention by the independent energy regulator, that role should be to the extent possible tailored and limited, e.g., the regulator may exercise general oversight that the operation and maintenance of the generation facility is in accordance to the relevant conditions set in the generation license.

Building market acceptance of the regulator's role will result from the absence of actual or perceived political intervention in the performance, decisions and awards made by the regulator. Independent regulators staffed with strong professionals will be more successful in attracting international investment into RE PPP.

D. Feasibility for low and middle income countries

Risk Perception in EMDE countries

RE PPPs in EMDE countries are considered by private sector financiers to be relatively high risk endeavours[16], which often increase the cost of capital to unsustainable levels.

[16] As detailed in Schedule 2

There is ample evidence to suggest that RE PPP programs supported by DFIs and/or MFIs can create a reduced risk perception, which increases investor and lender interest, however, these support instruments can come at significant cost for both host Governments and private sector.

There are currently some prominent examples in EMDE countries with highly developed RE PPP frameworks,

[EXAMPLES]

Despite these examples, some of these frameworks do not maximize public benefit and could be improved for low and middle income countries by optimizing.:

a) the allocation of risk in more balanced manner;
b) further development of a full suite of project documents required for project finance; and/or
c) the provision sufficient certainty as to expected revenue stream under the PPA to project financiers.

Capacity is a key issue for EMDE countries

Capacity is the physical amount of generation a project or system has available.

Where the PPA is based on payments per unit of energy generated (kWh), sponsors and developers should assume locational responsibility for the project and assume project availability and transmission risk. –However, many EMDE countries have under-developed grid systems and are required to specify locations, in which case forms of capacity payment and deemed energy may be necessary.

It should be recognized that the private sector incurs fixed costs associated with constructing, financing and operating RE infrastructure regardless of the extent to which the public sector utilizes that infrastructure. Accordingly, payment under the PPA should be based on availability (including 'deemed availability') not on utilization.

Dispatchablity is also a key issue for EMDE countries

In developed markets (which typically have a stable grid), in particular very small RE projects, are developed as 'must take' facilities. 'Must take' facilities are those where the grid operator is obliged to (a) accept into the grid whatever output the RE generation facility is able to produce (as and when the RE generation facility is able to produce that output); and (b) adjust supply from other generation facilities to ensure that supply and demand across the grid are balanced at all times.

In many EMDE countries the grid can be less reliable and 'trip' from time to time, in some case many times each month. The grid is also more likely to be prone both to constraints and to downtime during upgrades and even 'small' projects even though small can account for a material percentage of overall generation capacity. As a result, in these circumstances, if and when the grid is down and/or constrained, and the off-taker has a true 'must take' obligation, the offtaker can be in breach of contract, giving rise to an obligation to pay damages and potentially triggering cross-default provisions in other contracts

In the alternative if there is a dispatch right (with an obligation to pay for deemed energy if it does not dispatch), then the deemed energy charges which arise would typically be identical to the damages which would have been payable for breach of contract under a 'must take' contract but the offtaker could also be in default and/or trigger 'cross-default' provisions in other contracts.

As a result, EMDE countries should….

E. Other Issues

Vulnerability to climate change

Risks resulting from climate change are often underestimated when host Governments and project sponsors analyse a RE PPP projects viability. It is important to diligently analyse and address such risks in early stages of a RE PPP project and agree on a fair share of subsequent revenue risks and eventually consider available insurance instruments.

Environmental and Social Governance

PPP RE projects are both environmentally and socially sensitive. Ensuring environmental and social sustainability requires a collaborative approach of public and private sector. RE PPP projects must therefore be designed, implemented and operated in full compliance with domestic environmental and social protection laws. In cases in which these laws do not offer the same legal protection as international best practice standards, such standards should be adopted at least for RE PPP programs. Addressing environmental and social risks is not only in the interest of sustainability, but are also a core prerequisite for the project´s viability and chances of successful implementation and operation.

Project Performance Standards

Appropriate performance standards and requirements (both as to attaining COD in a timely fashion, and post-COD performance) should be placed on the private sector project company. RE PPP programs should focus on attracting high quality equipment suppliers and experienced operators for their projects, and performance thresholds for availability and performance curves are advised. Minimum annual generation in PPAs are warranted where the project and/or PPA program is intended to satisfy the host government's renewable energy generation target, or toward maximizing its carbon mitigation. Where the RE source energy is intermittent, annual (or other periodic) production targets should be avoided.

End of (Natural) Term Provisions

In general terms, a host Government's principal priorities should be (in order) to ensure that:

a) a sufficient amount of RE generation capacity is developed in its country to meet electricity demand;
b) the RE generation assets in its country are prudently operated and maintained over the useful life of those assets; and
c) consumers are charged the lowest possible tariff, and the Government takes on the lowest possible fiscal burden, in order to enable the above two objectives to be met.

RE PPP Project Procurement

Procurement in RE PPPs can take place on the basis of (a) ad hoc negotiations, (b) a REFIT regime, (c) reverse auctions, (either on the basis of PPP laws or not), (d) unsolicited proposals (either on the basis of PPP laws or not); (e) tender procedures or other procedures on the basis of PPP laws; or (e) some combination of the foregoing.

The optimal approach to procurement will likely depends on the (a) the underlying circumstances of each country, (b) the generation technology in question, and (c) project size and scope.

VI. Indicators of Compliance

VII. Credits and References