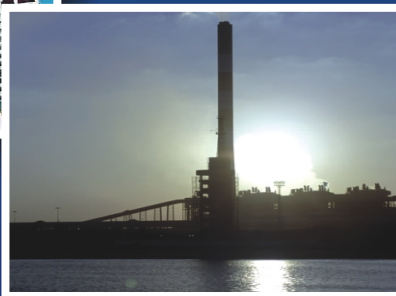
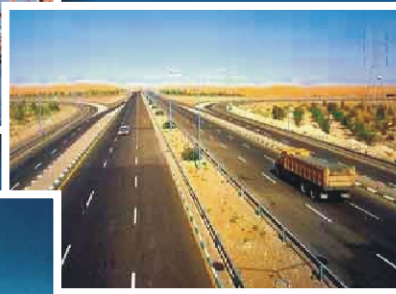


ADB

Facilitating Public Private Partnership for Accelerated Infrastructure Development in India

Regional Workshops of Chief Secretaries on Public Private Partnership



Workshop Report
December 2006

Facilitating
Public–Private Partnership for
Accelerated Infrastructure Development
in India

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on Public–Private Partnership

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Department of Economic Affairs (DEA)
Ministry of Finance, Government of India
and
Asian Development Bank (ADB)

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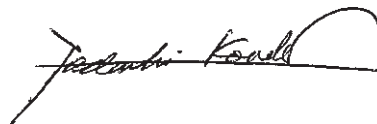
This report has been prepared under TA 4780–IND: Knowledge Management and Capacity Building, to document the insights and messages that emerged from the series of regional workshops of Chief Secretaries on public–private partnership. The views presented in it do not necessarily reflect the views and policies of the Asian Development Bank (ADB) or its Board of Directors or the governments they represent. The ADB does not guarantee the source, originality, accuracy, completeness, or reliability of any statement, information, data, finding, advice, opinion, or views presented.

Foreword

The Department of Economic Affairs (DEA), Ministry of Finance, Government of India, and the Asian Development Bank (ADB) organized four Regional Workshops of Chief Secretaries on Public–Private Partnership (PPP) for Accelerated Infrastructure Development in India. The workshops were held between June and September 2006 in Bangalore (June 12), Delhi (July 26), Kolkata (August 31), and Goa (September 2).

This report summarizes the principal themes, issues, and messages that emerged during the workshops. It draws on the workshop presentations and the discussions that ensued. The contributions of the presenters, panelists, discussants, and workshop participants from the DEA, the ADB, the private sector, and the states and Union territories are gratefully acknowledged.

We gratefully acknowledge the support of Shri Arvind Mayaram, Joint Secretary, DEA, in the entire process of planning and organizing the workshop series. I also thank the INRM team of Pratima Dayal (Principal Economist), Sujatha Viswanathan (Social Economist), and Varun Singh (Knowledge Management Consultant) for coordinating the workshop series and putting together this document. The role of the Department for International Development (DFID) is especially acknowledged in supporting these workshops through the Technical Assistance (TA) project on Knowledge Management and Capacity Building.



Tadashi Kondo
Country Director

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Abbreviations

ADB	Asian Development Bank
ADTA	Advisory Technical Assistance
BOO	build-own-operate
BOOM	build-own-operate-maintain
BOOT	build-own-operate-transfer
BOT	build-operate-transfer
CoI	Committee on Infrastructure
DEA	Department of Economic Affairs
DFID	Department for International Development
FDI	foreign direct investment
GOI	Government of India
IDFC	Infrastructure Development Finance Company Limited
ILFS	Infrastructure Leasing and Financial Services Limited
IIFCL	India Infrastructure Finance Company Limited
II	India Infrastructure Initiative
INRM	India Resident Mission
IT	information technology
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
MCA	model concession agreement
MoU	memorandum of understanding
NGO	nongovernmental organization
NHAI	National Highways Authority of India
NHDP	National Highway Development Program
NMDP	National Maritime Development Program
O&M	operation and maintenance
PPP	public-private partnership(s)
SARD	South Asia Regional Department
SEZ	Special Economic Zone
SPV	special purpose vehicle
TA	technical assistance
UT	Union territory
VGf	Viability Gap Funding

Executive Summary

Regional Workshops on Public–Private Partnership (PPPs). As part of its ongoing efforts to mainstream Public–Private Partnership (PPP) for accelerated infrastructure development in India, the Department of Economic Affairs (DEA), Ministry of Finance, and the Asian Development Bank (ADB) organized four Regional Workshops of Chief Secretaries on Public–Private Partnership (PPP). The workshops were held between June 12 and September 2, 2006 in Bangalore (June 12), Delhi (July 26), Kolkata (August 31) and Goa (September 2). The broad objectives of the workshops were (i) to establish the developmental relevance of PPPs in the current Indian context and present the new initiatives undertaken by the central government; (ii) to understand the various PPP initiatives of the state governments across the country and identify their concerns and needs for central assistance; (iii) to understand the key concerns of the private partners; and (iv) to share the international experience on PPPs and their lessons for India. The workshops drew participation from the DEA, state/UT governments, domestic and international private firms, financial institutions, and the ADB.

Key government initiatives. The DEA highlighted that the Government of India (GOI) is committed to raising the investment in infrastructure from its existing level of 4.7% of gross domestic product (GDP) to around 8%. Infrastructure shortages are proving a key binding constraint in sustaining and expanding India's economic growth and making it more inclusive for the poor. The government is actively promoting PPPs in the key infrastructure sectors of transport, power, urban infrastructure, and tourism, including railways. PPPs are seen as an important tool for producing an accelerated and larger pipeline of infrastructure investments, and catching up with the infrastructure deficit in the country. A PPP Cell has been established in the DEA to administer various proposals and coordinate activities to promote PPPs.

Viability Gap Funding (VGF) scheme. The government has established the VGF scheme as a special facility to support the financial viability of those infrastructure projects which are economically justifiable but not viable commercially in the immediate future. It involves upfront grant assistance of up to 20% of the project cost for state or central PPP projects that are implemented by a private sector developer who is selected through competitive bidding. An Empowered Committee has been set up for quick processing of cases.

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India Infrastructure Finance Company Limited (IIFCL). GOI has established IIFCL as a wholly government-owned company to provide long-term finance to infrastructure projects, either directly or through refinance. The IIFCL caters for the burgeoning financing gap in long-term financing of infrastructure projects in the public, private, or PPP sector. Any government project awarded to a private sector company for development, financing, and construction through PPP will have overriding priority under the scheme.

Capacity building at the state and central level. GOI is working on a number of initiatives to assist and encourage capacity building at the state and central levels. It is identifying the capacity building needs of state governments, providing assistance for the creation of state-level PPP cells as nodal agency, streamlining PPP approval process, developing PPP toolkits, model concession agreements (MCAs), bidding documents, and project preparation manuals. It is also building a central database and website on PPPs to disseminate updated information to the states and the private sector. Arrangements are being finalized under which state governments would be able to avail of consultancy support for developing PPP projects. Institutions like the ADB have begun supporting the capacity building process through these workshops and proposed technical assistance projects.

Status of PPPs and states' perspectives. 86 PPP projects have been awarded, totaling about Rs 340 billion, in twelve states and three central agencies. Roads and port sectors have dominated in the number and size of PPPs. Till October 2006, twelve proposals have been given in-principle approval under VGF.

State governments have identified a whole range of sectors for PPP, including roads/highways, ports (air, sea, container), telecommunication, water supply, waste management, tourism, power, industrial infrastructure, township development, leisure, and health. States have also identified the potential PPP projects that could be developed over the next few years. Many of the projects are already in the bidding stage using both memorandum of understanding (MOU) and competitive bidding procedures. Not many of these projects would require VGF funding.

No clear link between institutional structure and success of PPP is apparent. State/UT governments have indicated marked differences in the process of PPP development, including variations in existence of infrastructure legislation and policies, institutional arrangements for identifying and approving PPPs, project development funds and companies, financial structuring, procurement procedures, etc.

Requirements of central assistance. The states highlighted a number of areas where guidance, assistance, and technical support is required from GOI. These areas are:

VGF. Reconciliation of VGF requirements with JNNURM requirements; quicker approval procedures; relaxation in the project details currently required for in-principle approval; inclusion of projects awarded through the SPV route and not

competitive bidding, like railways; inclusion of projects taken up under the Swiss Challenge route; inclusion of rural sector projects and unfinished projects; and inclusion of land costs under VGF financing.

Capacity building. Setting up PPP cells at the state level; access to project development resources; advisory support on infrastructure legislation and regulatory frameworks and detailed PPP policies; methodology to deal with PPP projects on the Swiss Challenge model; model PPP execution cycle; contract monitoring and time scheduling; guidelines on public sector comparator (PSC) and its comparison with the private sector predictor; MCAs and bidding documents across a range of infrastructure sectors; information on potential sources of long-term debt; formalization of state PPP plans. The states have also called for streamlining of the statutory clearances on environment, defense, airport authority, land acquisition, etc.

Private sector perspectives. The private sector recognizes the enormous business opportunity of PPPs in India and has welcomed GOI's PPP initiatives. It has urged the government to publicize the size of the business opportunity for PPPs to the private sector, which is estimated to be much more than has been previously estimated. Given the enormous investment requirements in infrastructure development, the need for a sustainable pipeline of PPP projects has become paramount. The private sector remains eager to see more substantive, enabling changes by government in the policy and regulatory provisions and procurement procedures for PPPs.

Improvements in enabling environment. The private sector has called for changes in India's enabling environment and suggested measures to foster efficiency and transparency in the bidding process, ensure sanctity of contracts, encourage competition, promote market-driven tariffs, and separate regulatory and adjudication authorities. It has called for developing appropriate legislative framework for PPPs, clarification of entry conditions, suitable contractual structures, and clarification of incentives and concessions.

Standardized procurement procedures. Given the variations in the formats, bidding procedures, agreements, and overall execution of PPPs among the various states/agencies, the private sector has highlighted the need for standardized prequalification and bidding procedures and guidelines for ensuring efficiency, predictability, and ease of approval process.

Transparency. The need for maintaining transparency in the entire PPP project cycle and stakeholder interactions has been highlighted as a key factor in determining the success of PPPs. The private sector has urged the central and state governments and other public sector project sponsors to be cautious of the 'selection by nomination' procedure, which is not the same as transparently awarded PPP contracts.

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Project development and structuring facility. A key impediment to successful commercialization of projects in India has been the absence of rigorous project development. Many of the projects bid out by government have been inadequately structured and unsuitable for PPP. A project development facility (PDF) that provides project sponsors the resources to procure consultancy and expert services for conducting prefeasibility studies and assessments is required.

Public sector capacity to successfully execute PPPs. The private sector has highlighted its concerns about the absence of a robust pipeline of bankable PPP projects. This is attributed to insufficient capacity within the PPP-sponsoring public entities to identify and implement deals and execute PPPs. Capacity deficit is seen as the crucial bottleneck in achieving a steady flow of successfully negotiated PPP deals.

Public sector reforms, with or without PPPs. The infrastructure sector suffers from supply-side constraints. The PPP experience in various states has shown that procedures and processes have been extremely dilatory. The infrastructure sector needs to urgently implement public sector reforms to address supply-side constraints. Changes in delivery mechanisms, processes, procedures, and institutional structures need to be tailored towards client-focused outcomes and results.

Land acquisition and environmental clearances are best obtained by governments. Social and environmental clearances are best obtained by government and not by the private partner. Several projects have been stalled with huge time and cost overruns due to delay in land acquisition and transfer of its possession to the private sector. The private sector could deliver much faster if these clearances are handled by the project sponsor. Building in environmental and social dimensions of PPPs needs to be made part of the project development cycle.

Genuine and mutually rewarding partnerships. PPPs represent partnerships in action with huge stakes for both the public sector and private sector agencies to succeed collectively. It is important that the public and private sector work together, keeping the project and outcomes in focus rather than maximizing their own interests, and collaborate for mutually enduring value. PPPs are a new way of doing business, and are not about command and control. Ultimately, the project partners need to remember that PPPs are not about finance, but about improving the quality and efficiency of public services.

Global lessons for India. Though PPP is a relatively new approach to procurement, lessons could be drawn from the experiences of developed and developing countries on the conditions for the success of PPP. As a relatively late entrant in the PPP development process, India can learn and benefit from these lessons. The examples and lessons from Mexico, Chile, United States, and the Philippines have highlighted the following.

Need for detailed policy and planning. This is to bolster the confidence and attract the participation of private investors and commercial lenders. The government needs to develop a policy on unsolicited proposals from the private sector. PPPs can succeed only if they are structured and planned in detail, and are managed by expert teams. Governments also need to use technical and financial advisors, where needed, to match the advantages of the private sector, particularly in large-scale programs. Project development needs to be done by government, and it needs to invest in it by creating dedicated funds.

Proper allocation of risks. Effective PPP models involve sensible division of roles and fair sharing of responsibilities, costs, and risks between the public and private sectors. Optimal, not maximum, assignment of risk is the principle that needs to be adopted.

Provide adequate protection for lenders. PPP design and documentation should provide adequate protection to debt service against noncommercial risks related to *force majeure*, regulatory changes, contract termination, etc.

Avoid renegotiation and midway changes to save costs and delays. A concession agreement should be structured in such a manner as to cover all possible causes of later adjustments, leaving minimum room for renegotiation. A key lesson learnt from international experiences is that governments often get overenthusiastic to get private sector participation by offering excessively concessional terms to the project company. This needs to be avoided.

Development of public sector capacity. Public sector capacity to prioritize, plan, appraise, structure, bid, and financially close PPPs remains the topmost challenge for mainstreaming of PPPs at the state as well as the central level.

Full and clear support by government. Support for the PPP program and for specific PPP projects has to come from the highest political level of government. Strong political will is essential in overcoming resistance, and needs to be seen as a clear signal of the government's intention to meet its contractual commitments.

Proactive public communication and stakeholder management. Many PPPs have failed due to strong opposition from civil society, local media, and other stakeholders. Feedback and consultations with citizens, labor unions, relevant government agencies, private investors, civil society organizations, and media will ensure public support, client focus, and improved coordination of the project.

Role of multilateral agencies. The multilateral agencies have welcomed the recent steps taken by GOI with respect to VGF and IIFCL. Agencies like the ADB and the World Bank could assist GOI in promoting PPPs across sectors and regions of India, through a range of financing, advisory and technical assistance (TA) measures. Most importantly, these agencies would be able to assist

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governments in tailoring the PPP solutions to specific demands of the individual states, sectors, and projects.

Supporting capacity building. The state presentations have highlighted the need for central assistance in this regard and underlined this aspect as critical in the long-term success of PPPs at the state level. In response to a request from the DEA, and based on the feedback from the workshop series, it has been agreed that the ADB will extend TA to governments in mainstreaming PPPs at the central and state levels through capacity building support, including assistance in the establishment of PPP cells at state levels.

Potential financing options for PPPs. The ADB has reengineered and operationalized new ways of doing business to provide more client-oriented services for state and central level infrastructure development initiatives. It could also consider, if required, extending loans (multi-tranche financing facility, local currency loan) to qualified projects in several forms. These include (i) public sector loans to states/municipalities/executing agencies for financing counter grants/equity support, land/or engineering design; (ii) public sector loans to IIFCL (financial intermediary loan) which would, in turn, provide funds to project companies; (iii) private sector loans or equity investments by the private sector operation arm of the ADB to project companies; and (iv) provision of guarantee to commercial lenders.

Strengthening partnerships with the state and central governments. The regional workshops have highlighted the perspectives and key concerns of the public and private sector stakeholders in the PPP development process in India. They have facilitated learning of and insights into the strategic and practical considerations, and the critical success factors in developing and operationalizing PPP projects. Significant efforts would be required for the introduction of necessary policy incentives, development of MCAs for key infrastructure sectors, building of state capacity to develop financially viable PPP projects, and introduction of an effective dispute resolution mechanism.

The workshops have indicated that the expansion of GOI's PPP program is a major challenge and an exciting and enormous opportunity for the government, the private sector, as also for multilateral agencies such as the ADB. The ADB will continue to work closely with other development partners of India in harmonizing its assistance and engagement, and more importantly in sensitizing others and in championing PPPs. It is open to new and innovative ways to develop PPPs as well as to apply the PPP methodology in sectors other than infrastructure. It will continue to work in partnership with the government to see how best it can help in upgrading India's infrastructure.

Regional Workshops on Public–Private Partnerships

The Department of Economic Affairs (DEA), Ministry of Finance, Government of India (GOI), has been leading the process of promoting Public–Private Partnerships (PPPs) in India. It has taken crucial initiatives to operationalize and institutionalize the GOI decision to promote the flow of private capital for accelerated infrastructure development in the country. In continuation of its ongoing efforts to engage the state government/Union territory (UT) administration officials, especially those related with PPP projects, the DEA organized a series of regional workshops on the theme of PPPs for Accelerated Infrastructure Development in India. The workshops were held in partnership with the India Resident Mission (INRM) of the Asian Development Bank (ADB). The first workshop was held on June 12, 2006 at Bangalore for the southern region, and was followed by workshops at Delhi (July 26, 2006), Kolkata (August 31, 2006), and Goa (September 2, 2006) for the states/UTs of the northern, eastern, and western regions, respectively.

The overall objective of the workshop series was to build a dialogue with the key stakeholders: State governments/UT administrations, the private sector, and the ADB, specifically focusing on their perspectives, concerns, and priorities on PPPs. The workshops aimed at highlighting the strategic and practical significance of the PPP model of infrastructure development for India, disseminating information on the recent central government initiatives on PPPs and soliciting feedback on the same. The workshops intended to learn about state-level initiatives in institutionalizing and operationalizing PPPs, level of state preparedness in executing PPPs, and getting the states' feedback on their capacity-building needs and requirements for assistance from the central government. The workshops also shared the global experience, international good practices, and the private sector perspectives and concerns on working with government on PPPs.

The workshops, targeted at the Chief Secretaries and other senior officials dealing

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with the PPP process in the states/UTs, drew participation from the DEA, state/UT governments, domestic and international private firms, financial institutions, and the ADB. The participants were Chief Secretaries, Principal Secretaries, PPP Nodal Officers, state officers concerned, private sector representatives, DEA officials, and ADB staff and consultants. The Goa workshop was also attended by the ADB's headquarters staff, including Mr Kunio Senga, Director General of the South Asia Regional Department (SARD), along with other officials working on the proposed advisory technical assistance (ADTA) project on PPP. The summary workshop program (Appendix 1) and the list of participants (Appendix 2) are attached.

The workshops were chaired by Secretary and Additional Secretary, DEA, and were facilitated by the Joint Secretary (Infrastructure). The first half of each of the workshops covered presentations from the DEA, the ADB, and the private sector. While the DEA presentations set out the strategic and practical imperatives of the PPP process in India and covered GOI programs and assistance on PPP, the private sector presentations covered issues related to the need for enabling conditions for the private investors, standardization of competitive bidding procedures, transparency requirements, need for project structuring, optimum risk allocation, and the need for genuine partnerships. In the second half, the participating state/UT governments presented their existing institutional and policy frameworks, the PPP projects under implementation or in the pipeline, and assistance requirements from the central government. The presentations were followed by discussion among the participants, presenters, panelists, and the chair.

The workshop series represents an important learning opportunity and consultation exercise among the key public and private sector stakeholders of the PPP process in India. The participants welcomed the sharing of experiences and lessons by the key actors and decision-makers from the states, the Center, the private sector, and the ADB. The workshops have resulted in improved understanding of the current status of the PPP process in India, central and state government initiatives, international best practice, private sector perspective, and key considerations in the PPP execution process. The participants agreed that better awareness of the major concerns of the public as well as the private partners, especially related to bankable project structuring and risk allocation, is critical for the PPP process at the state level. The workshops have facilitated important cross-state and cross-stakeholder learning and contributed to building of PPP as an area of professional and developmental practice in India.

Understanding PPP

Government of India's Definition

Public Private Partnership (PPP) Project means a project based on a contract or concession agreement, between a Government or statutory entity on the one side and a private sector company on the other side, for delivering an infrastructure service on payment of user charges.

Private Sector Company means a company in which 51% or more of the subscribed and paid up equity is owned and controlled by a private entity.

What is meant by PPP? While there is no single definition of PPPs, they broadly refer to long-term, contractual partnerships between the public and private sector agencies, specifically targeted towards financing, designing, implementing, and operating infrastructure facilities and services that were traditionally provided by the public sector. These collaborative ventures are built around the expertise and capacity of the project partners and are based on a contractual agreement, which ensures appropriate and mutually agreed allocation of resources, risks, and returns. This approach of developing and operating public utilities and infrastructure by the private sector under terms and conditions agreeable to both the government and the private sector is called PPP or P3 or private sector participation (PSP).

Roles and responsibilities. PPPs do not mean reduced responsibility and accountability of the government. They still remain public infrastructure projects committed to meeting the critical service needs of citizens. The government remains accountable for service quality, price certainty, and cost-effectiveness (value for money) of the partnership. Government remains actively involved throughout the project's life cycle. Under the PPP format, the government role gets redefined as one of facilitator and enabler, while the private partner plays the role of financier, builder, and operator of the service or facility. PPPs aim to combine the skills, expertise, and experience of both the public and private sectors to deliver higher

Fundamental qualities of a PPP project

- *High priority, government-planned project.* The project must have emerged from a government-led planning and prioritization process. The project must be such that, regardless of the source of public or private capital, the government would still want the project to be implemented quickly.
- *Genuine risk allocation.* Shared risk allocation is a principal feature of a PPP project. The private sector must genuinely assume some risk....
- *Mutually valuable.* Value should be for both sides, which means government should also genuinely accept some risks and not transfer the entire risk to the private sector, and vice versa.

— VGF Scheme

standard of services to customers or citizens. The public sector contributes assurance in terms of stable governance, citizens' support, financing, and also assumes social, environmental, and political risks. The private sector brings along operational efficiencies, innovative technologies, managerial effectiveness, access to additional finances, and construction and commercial risk sharing.

What are the salient features of a PPP? Not all projects with private sector participation are PPP projects. Essentially, PPPs are those ventures in which the resources required by the project in totality, along with the accompanying risks and rewards/returns, are shared on the basis of a predetermined, agreed formula, which is formalized through a contract. PPPs are different from privatization. While PPPs involve private management of public service through a long-term contract between an operator and a public authority, privatization involves outright sale of a public service or facility to the private sector. A typical PPP example would be a toll expressway project financed and constructed by a private developer.

A PPP project is essentially based on a significant opportunity for the private sector to innovate in design, construction, service delivery, or use of an asset. To be viable, PPPs need to have clearly defined outputs, avenues for generating nongovernmental revenue, and sufficient capacity in the private sector to successfully deliver project objectives.

What are the various PPP forms and formats? In a PPP, the 'private' partner could be a private company, a consortium, or a nongovernmental organization (NGO). Typically, a PPP project involves a public sector agency and a private

sector consortium which comprises contractors, maintenance companies, private investors, and consulting firms. The consortium often forms a special company or a 'special purpose vehicle' (SPV). The SPV signs a contract with the government and with the subcontractors to build the facility and then maintain it.

The PPP is operationalized through a contractual relationship between a public body (the conceding authority) and a private company (the concessionaire). This partnership could take many contractual forms, which progressively vary with increasing risk, responsibility, and financing for the private sector. However, the most common partnership options are (i) Service Contract; (ii) Management Contract/Lease; (iii) Build Operate Transfer (BOT); (iv) Concession; (v) Joint Venture; and (vi) Community-based Provision. Most contracts take the form of 'Concession' and 'Design, Build, Finance, and Operate' contracts, to cover the finance, design, management, and maintenance obligations. These contracts are usually financed by user fees or tariffs or government subsidies.

The public sponsor of the PPP decides the degree of private participation required for the particular project. This decision is usually based on the government's objectives of undertaking the project, the degree of control it desires, and the ability of the PPP consortium to deliver the required service. It is also influenced by the provisions of the existing legal and regulatory framework, the structuring of the project to attract private resources, and the potential to generate future cash flows.

What are the key considerations in PPPs? PPPs often involve complex planning and sustained facilitation. Infrastructure projects such as roads and bridges, water supply, sewerage and drainage involve large investment, long gestation period, poor cost recovery, and construction, social, and environmental risks. When infrastructure is developed as PPPs, the process is often characterized by detailed risk and cost appraisal, complex and long bidding procedures, difficult stakeholder management, and long-drawn negotiations to financial closure. This means that PPPs are critically dependent on sustained and explicit support of the sponsoring government. To deal with these procedural complexities and potential pitfalls of PPPs, governments need to be clear, committed, and technically capable to handle the legal, regulatory, policy, and governance issues.

PPPs are not new. PPPs have been around for a few centuries. In sixteenth- and seventeenth-century France, roads and bridges were concessioned for tolls in return for maintaining the routes. Canals were built and water was collected and distributed under concessions. By the 1820s, there were six private water companies operating in London. At the beginning of the nineteenth century, nearly all of the

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waterworks in the USA were private. Electricity utilities in the nineteenth century in Brazil, Chile, Costa Rica, and Mexico were private entities. In Argentina, Brazil, and Uruguay, private developers from Britain, France, and the United States built and operated many of the early railways in the nineteenth and twentieth centuries.

III

Why PPP?

Growing popularity. Since the 1990s, there has been a rapid rise of PPPs across the world. Governments in developing as well as developed countries are using PPP arrangements for improved delivery of infrastructure services. Governments are building transport (roads, railways, toll bridges), education (schools and universities), healthcare (hospitals and clinics), waste management (collection, waste-to-energy plants), and water (collection, treatment, and distribution) infrastructure through PPP. PPP is becoming the preferred method for public procurement of infrastructure and infrastructure services projects throughout the world.

Limitations of government resources and capacity to meet the infrastructure gap. Globally, governments are increasingly constrained in mobilizing the required financial and technical resources and the executive capacity to cope with the rising demand for water supply, sewerage, drainage, electricity supply, and solid-waste management. Rapid economic growth, growing urban population, increasing rural–urban migration, and all-round social and economic development have compounded the pressure on the existing infrastructure, and increased the demand–supply gap in most of the developing world. Countries and governments, especially in the developing world, are experiencing increasing pressure from their citizens, civil society organizations, and the media to provide accessible and affordable infrastructure and basic services. While the infrastructure gap is rising, government budgetary resources are increasingly constrained in financing this deficit. The pressure has also come from the international compact on Millennium Development Goals (MDGs), under which country progress in terms of access to safe drinking water, sanitation, health, etc. is being monitored. Rising costs of maintaining and operating existing assets, inability to increase revenue and cut costs and waste, and rising constraints on budgets and borrowing, do not allow governments to make the required investments in upgrading or rehabilitating the existing infrastructure or creating new infrastructure.

Need for new financing and institutional mechanisms. The political economy

PPP strengths and effectiveness

- robust and dynamic structure;
- government in an enabler role;
- government ownership is high;
- governance structure ensures consumer and public interests are safeguarded;
- commercial interest protected;
- domicile risks to parties that are well equipped to deal with them;
- transparent and well-conceived contracts;
- documentation recognizes rights and responsibilities of all project-related parties;
- concerns of all stakeholders addressed;
- involves participation of a large number of institutions: government, politicians, banks, financial institutions, investors, contractors, consumers, NGOs, etc.

— Government of Tamil Nadu presentation

of infrastructure shortages, constrained public resources, and rising pressure from citizens and civil society have combined to push governments and policymakers to explore new ways of financing and managing these services. Governments have been pushed to exploring new and innovative financing methods in which private sector investment can be attracted through a mutually beneficial arrangement. Since neither the public sector nor the private sector can meet the financial requirements for infrastructure in isolation, the PPP model has come to represent a logical, viable, and necessary option for them to work together.

Benefits and strengths. The emergence of PPPs is seen as a sustainable financing and institutional mechanism with the potential of bridging the infrastructure gap. PPPs primarily represent value for money in public procurement and efficient operation. Apart from enabling private investment flows, PPPs also deliver efficiency gains and enhanced impact of the investments. The efficient use of resources, availability of modern technology, better project design and implementation, and improved operations combine to deliver efficiency and effectiveness gains which are not readily produced in a public sector project. PPP projects also lead to faster implementation, reduced lifecycle costs, and optimal risk allocation. Private management also increases accountability and incentivizes performance and maintenance of required service standards. Finally, PPPs result in improved delivery of public services and promote public sector reforms.

Access to project finance. The foremost benefit of adopting the PPP route is the ability to access capital funding from the private sector, considering that funding is getting increasingly limited from public sector budgets. Thus, PPPs allow governments to overcome their budgetary and borrowing constraints and raise finance for high-priority public infrastructure projects. Essentially, governments are able to use private finance through PPPs to build infrastructure projects that would previously have been built by the public sector using public sector finance. PPP projects also leverage available public capital by converting capital expenditure into flow-of-service payments.

Rigorous risk appraisal and optimum allocation. The high degree of economic externality of public infrastructure, and the commercial and socioeconomic risks involved in developing and operating them, have made it difficult to appropriate returns from infrastructure investments. The long gestation period of infrastructure projects also requires sustainable financial and operational capacity. Therefore, there is increasing reluctance in both the public and private sectors to absorb all the costs and assume all the risks of building and operating these assets alone. Since the private sector assumes the risk of nonperformance of assets and realizes its returns if the assets perform, the PPP process involves a full-scale risk appraisal. This results in better cost estimation and better investment decisions.

PPPs are not an unqualified success. Despite the growing interest in and adoption of PPPs, they have been facing criticism from civil society organizations, public interest groups, media, and other stakeholders. Wide publicity of some of the problematic PPPs has raised concerns about the role of the private sector in public services. Lack of trust in the private sector with public service, tariff increases, layoffs, and poor stakeholder management have contributed to these concerns. The detractors also accuse PPPs of high procurement costs, which deter small companies and curtail competition.

However, many PPP experts attribute the failure of some of these projects to faulty, rushed, noncompetitive, and nontransparent application of the PPP principles. The PPP approach is growing and evolving globally, as more countries move from state-owned and operated services to the private provision of infrastructure. It is estimated that the private sector invested \$750 billion in infrastructure in developing countries in 1990–2001. Of the 2500 projects awarded during this period, only 45 were cancelled, though many more were renegotiated.

IV

Relevance of PPPs for India

Massive deficit in infrastructure services. Despite becoming the second fastest growing and the fourth largest¹ economy of the world, India continues to face large gaps in the demand and supply of essential social and economic infrastructure and services. Rapidly growing economy, increased industrial activity, burgeoning population pressure, and all-round economic and social development have led to greater demand for better quality and coverage of water and sanitation services, sewerage and drainage systems, solid-waste management, roads and seaports, and power supply. Increased demand has put the existing infrastructure under tremendous pressure and far outstripped its supply.

Water. While 90% of the urban population has access to potable water supply, the actual availability of water in the cities is only 5–6 hours a day. Less than 60% of the households have sanitation and less than half have tap water on their premises. About 40 million people are estimated to be living in slums. Poor urban development is not only undermining the quality of life for India's urban citizens but also constraining local and national growth. As much as 70% of irrigation and 80% of domestic water requirement is met from groundwater, which has meant haphazard and unsustainable use of aquifers and depleting water table.

Power. Over 40% of India's population, mostly rural, does not have access to electricity. Despite the increase in installed generation capacity, shortages in normal and peak energy demand have been around 8% and 12% on an average between 2000 and 2004. India's average electricity consumption of 359 kWh in 1996–2000 was far behind other countries such as China (717 kWh) and Malaysia (2378 kWh). Less than 20% of India's enormous hydroelectric potential has been tapped. Transmission and distribution losses in India remain very high, at around 28–30%, as compared to other developing countries, where they are less than 10%.

Roads and ports. India's road network continues to suffer from low capacity, low coverage, and low quality. 40% of villages do not have access to all-weather roads. Only 12% of the national highways are four-lane. The traffic situation in the

¹ In purchasing power parity terms.

cities has worsened due to a massive increase in personal vehicles, inadequate city roads, and poor quality of public transport. Airport and seaport infrastructure and train corridors are strained under capacity constraints.

Deficient infrastructure is a 'binding constraint' ... The infrastructure shortages are proving to be the leading binding constraint in sustaining, deepening, and expanding India's economic growth and competitiveness.² This has also been emphasized in the mid-term appraisal of the Tenth Five Year Plan. It is widely believed that lack of good quality infrastructure is costing India 1–2% growth in gross domestic product (GDP) every year. Good quality infrastructure has been the main enabler of higher level of economic growth in developed as well as developing countries like USA, Russia, Malaysia, and China. The Expert Group on Commercialization of Infrastructure estimated the loss due to poor roads and congestion at around Rs 200 billion per annum. The *Economic Survey of India, 2005-06*, estimates that power shortages of 12% at peak levels and 8% at nonpeak levels are equivalent to around \$3.4 billion of forgone generation capacity or an approximate GDP loss of around \$68 billion. The annual cost of environmental degradation, on account of lack of sewerage and solid-waste management systems and surface water harvesting is 4.5% of GDP. Water pollution accounts for 6% of the economic cost of environmental degradation.

... which undermines global competitiveness. India's global competitiveness remains constrained and is adversely affected by lack of infrastructure, which is critical for improved productivity across all sectors of the economy. Poor infrastructure is also a major barrier to foreign direct investment (FDI). Recent surveys have shown that India's poor infrastructure (road network, ports, distribution networks, and in particular power supply) is a cause for concern and a major barrier to investment. Upgradation of transport (roads, railways, airports, and ports), power, and urban infrastructure is therefore seen as critical for sustaining India's economic growth, along with improved quality of life, increase in employment opportunities, and progress towards the elimination of poverty.

... and impedes inclusive growth and poverty reduction. Lack of infrastructure is preventing the sectoral, regional, and socioeconomic broadening of the economy and its benefits, and is affecting inclusive growth in India. The benefits of accelerated growth of the last decade have not been shared by large sections of the population which are labor dependent, low skilled, rural based, and working in agriculture and manufacturing sectors. Infrastructure shortages have slowed the growth of manufacturing industries and agriculture, which are the labor-absorbing markets for the low skilled. Poverty levels remain significant, with about one-fourth of the population living in poverty.

² World Bank (2006). *India Development Policy Review*.

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Infrastructure is now seen as the necessary condition for growth and poverty alleviation. Studies by the ADB and others have confirmed a strong linkage between infrastructure investments, economic growth, and reduction of poverty. Rural roads, rural electrification and irrigation networks, power grids, and national highways have the potential to link poor rural producers to their power sources and markets in towns, cities, and ports. Greater investments in infrastructure are the answer.

Growing government emphasis on infrastructure spending. Growing recognition of the prevailing infrastructure deficit in the country and its impeding impact on sustaining economic growth as well as poverty reduction has made development of social and economic infrastructure among the highest priorities of the Government of India (GOI). The GOI has recognized that with better infrastructure India's growth can be higher, with the benefits reaching a much larger section of the population. It has increased its spending on infrastructure through a series of national programs such as the National Highway Development Program (NHDP), Bharat Nirman, Providing Urban Services in Rural Areas (PURA), Jawaharlal Nehru National Urban Renewal Mission (JNNURM), the Prime Minister's Rural Roads Program, National Rail Vikas Yojana, National Maritime Development Program (NMDP), airport expansion programs, etc. The government acknowledges that investment in infrastructure will have to be at the same rate as the economic growth that is being targeted. In other words, gross capital formation in infrastructure (GCFI), which has remained around 4% of GDP during 1997-98 up to 2003-4, needs to be increased progressively and rapidly.

However, estimated investment requirements far exceed government resources. The massive gap between the existing infrastructure investment and the projected requirement in India has come into sharper focus. The Tenth Five Year Plan projection on the total investment required for infrastructure (at 2001-2 prices) is over Rs 11,00,000 crore (US\$250 billion). The *India Infrastructure Report, 1996*, had projected the need for increasing infrastructure investment from under 5% to about 8% of GDP by 2005-6. In 1999, public investment in infrastructure was 2.8% of GDP while private investment was merely 0.9% of GDP. At the end of the 1990s, however, actual investment (public and private) in infrastructure remained at under 4% of GDP per annum, according to the World Bank.³ In other words, investment in road, rail, air, and water transport, power generation, transmission and distribution, telecommunication, water supply, irrigation, and water storage will need to increase from 4.6% of GDP to 7–8% during the Eleventh Plan.

Private sector estimates for investment requirements are much higher. According

³ World Bank, 2005, *India: Addressing Supply Side Constraints to Infrastructure Financing*.

to one estimate,⁴ India needs to increase infrastructure spending gradually to US\$100 billion per annum (8% of GDP) by 2010, to realize sustained growth of 8–9%. Some other agencies estimate the investment requirement over the next five years to be around \$330 billion.

Growing emphasis on private sector participation. These projected investment requirements can not be met from government's budgetary resources. The scope for making improvements is limited by the state of public finances. The combined deficit of the Union and state governments is around 10% of GDP. Governments can also not borrow arbitrarily, since their borrowing has been capped through the Fiscal Responsibility and Budgetary Management Act. The Approach Paper to the Eleventh Plan states that "One has to reach out to the private sector, and private savings, and to the other mechanisms available in the market today to raise funds" (Planning Commission, June 2006, "An Approach to the Eleventh Five Year Plan"). The National Development Council (NDC) has passed a resolution which mentions that "increased private participation has now become a necessity" to mobilize the resources needed for infrastructure expansion and upgradation.

Given the large resource requirements and the budgetary and borrowing constraints, GOI has been encouraging private sector investment and participation in all sectors of infrastructure. It has recognized that while public investment in infrastructure would continue to increase, private participation needs to expand significantly to address the existing deficit in infrastructure services.

⁴ Morgan Stanley, "India Economics: Infrastructure", November 2005.

Status of PPPs and Key Government Initiatives

India had a few notable PPPs as early as the nineteenth century. The Great Indian Peninsular Railway Company operating between Bombay (now Mumbai) and Thana (now Thane) (1853), the Bombay Tramway Company running tramway services in Bombay (1874), and the power generation and distribution companies in Bombay and Calcutta (now Kolkata) in the early 20th century are some of the earliest examples of PPP in India.

Early experience. Since the opening of the economy in 1991 there have been several cautious and tentative attempts at PPP in India. However, most PPPs have been restricted to the roads sector. Large-scale private financing in water supply has so far been limited to a few cities like Visakhapatnam and Tirupur. Most PPPs in water supply projects have been through municipal bonds in cities such as Ahmedabad, Ludhiana, and Nagpur.

West Bengal has recorded significant success in housing and health sectors. The housing projects coming up on the outskirts of Kolkata City are a good example of what a PPP model can deliver in terms of quality housing and quality living conditions to the lower middle class and the middle class. Gujarat and Maharashtra have had success especially in ports, roads, and urban infrastructure. Karnataka also has done well in the airport, power, and road sector. Punjab has had PPPs in the road sector.

However, successfully working PPP models are a more recent phenomenon. The Tirupur project in Tamil Nadu is a promising example in this regard. It is a BOOT project, the first privately financed water and sewerage project in India, executed through an SPV. The project took more than ten years from concept to financial closure. The US\$100 million Delhi-NOIDA Bridge Project, implemented on a BOOT framework on the basis of a 30-year concession, is the other major PPP initiative. The NOIDA toll bridge, Tirupur water supply project, national highways, port

development, and telecom industry are some notable examples of successful PPPs.

Many of these projects took a long time between concept and financial closure and commissioning. Nevertheless, the lessons on how not to handle PPPs seem to have been internalized well. However, water supply and sanitation projects are yet to demonstrate their commercial viability to the public. Absence of regulatory authorities and the desired legal framework in the water supply and sanitation sector are some of the hurdles in the way.

Only 86 PPP projects worth Rs 340 billion awarded till 2004. A study conducted by the World Bank of 13 states in 2005 found only 85 PPP projects awarded by states and select central agencies (not including power and telecom). Their total project cost is Rs 339.5 billion. An optimistic projection of PPPs, growing by five times between 2004 and 2006 to 500 projects, is not very encouraging. The largest number of PPP projects are in the roads and bridges sector, followed by ports, particularly greenfield ports. Apart from these two sectors, there are very few PPP initiatives. According to a Morgan Stanley report, more than Rs 1000 billion worth of PPP projects are under development in India.

Till October 2006, about 31 proposals have been received under VGF, of which 12 have been given in-principle approval. The proposals are, however, restricted to the ports, roads, highways, and rail segments.

Varied institutional framework. State governments have identified a whole range of sectors for PPP, including roads/highways, ports (air, sea, container), telecommunication, water supply, waste management, tourism, power, industrial infrastructure, township development, leisure, and health. States have also identified the potential PPP projects that could be developed over the next few years. Many of the projects are already in the bidding stage using both memorandum of understanding (MOU) and competitive bidding procedures. Not many of these projects would require VGF funding.

No clear link between institutional structure and success of PPP is apparent. State/UT governments have indicated marked differences in the process of PPP development, including variations in existence of infrastructure legislation and policies, institutional arrangements for identifying and approving PPPs, project development funds and companies, financial structuring, procurement procedures, etc.

States like Andhra Pradesh, Gujarat, and Punjab have legislation which clearly

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defines what infrastructure is and how these infrastructure projects are going to be executed by the private sector. Some other states have administrative frameworks in place for decision-making. Despite these frameworks, in the last five years the number of successful projects has not increased substantially.

Madhya Pradesh and Maharashtra have exhibited the possibility of developing a PPP program in a single sector (roads) by building up capacities in line departments. However, they have no PPPs in other sectors, possibly in part because of the absence of platforms to transfer acquired skills to other departments. Gujarat, Andhra Pradesh, and Punjab have developed cross-sectoral enabling legislation and dedicated agencies but have not had a very successful track record in taking PPPs to the market. Some other states, such as Tamil Nadu, have developed a few PPPs across a wide range of sectors, without explicit cross-sectoral PPP units or legislation. Rajasthan has a cross-sector policy/regulatory framework and a project development company but has concluded only one tourism project and a few road projects. Therefore, there seems to be no clear link between institutional structure and success of PPP. One possible reason for this is the nonavailability of sufficient skilled staff in the Government of India as well as in the states, who could actually look at how PPP projects should be structured. This is one important area where significant capacity building is required, both at the Center and in the states.

Government initiatives. GOI constituted, on August 31, 2004, the Committee on Infrastructure (Col), chaired by the Prime Minister. The Col is tasked with steering initiating policies that would ensure time-bound creation of world-class infrastructure, delivering services matching international standards; developing structures that maximize the role of PPPs; and monitoring progress of key infrastructure projects to ensure that established targets are realized. The Col is supported by the Empowered Subcommittee, which formulates, reviews, and approves policy papers and proposals for submission to Col, and monitors and follows up on implementation of the decisions of Col. The Col has also formed a Committee of Secretaries to prepare and implement an Action Plan for providing adequate road and rail connectivity for India's major ports.

GOI has published several key documents on Rail Road Connectivity of Major Ports; Guidelines for Financial Support to Public Private Partnerships in Infrastructure; Guidelines on Formulation, Appraisal and Approval of Public Private Partnership Projects; Scheme for Financing Infrastructure Projects through the India Infrastructure Finance Company; Financing of the National Highway Development Programme (NHDP), and Model Concession Agreement for PPP in Highways.

A consultation paper on 'Approach to Regulation of Infrastructure: Issues and Options' has also been prepared. This paper surveys the existing regulatory institutions with respect to their role and scope, and identifies the principles and policy options which are basic to their institutional design. A conference of Chief Secretaries on PPPs was held on May 20, 2006, at Delhi. GOI is planning more conferences on the challenges and opportunities of building infrastructure in India.

More recently, GOI has taken several additional measures for facilitating PPPs. The key ones are the VGF scheme, IIFCL to provide long-term capital, and capacity building and other assistance. These initiatives are aimed at covering PPP projects where the private sector provides infrastructure for a fee under a concession agreement. Concession is granted on the basis of a transparent bidding process. The bidder is asked about the quantum of subsidy required and is assured a stable environment through concession agreement.

Viability Gap Funding (VGF) scheme. VGF is a special facility to support PPP projects. This facility is housed in the DEA. Infrastructure projects are often economically justifiable but not viable commercially, at least in the initial years, due to long gestation periods and economic externalities. In large-scale infrastructure projects, the commercial viability is difficult to establish, especially at the beginning of the project. Therefore, there is a need for providing some upfront assistance to make the project commercially or financially viable, if it is otherwise economically viable or desirable for the state. The GOI therefore has operationalized VGF to provide grant support to such PPP projects.

Financing. The VGF scheme provides funding for state or central PPP projects implemented by the private sector developer on a BOT basis (selected through a process of competitive bidding). Funding is available for 20% of the project cost. If required, an additional 20% can be made available by the sponsoring Ministry/ agency or it can come from the state government or any sponsoring statutory agency like local bodies. An Empowered Committee has been set up for quick processing of cases. In-principle approval has been granted for twelve projects.

Eligible sectors. Sectors eligible for VGF are Transportation (roads, railways, seaport, airport); Power/Energy; Urban Infrastructure (water supply, sewerage, solid-waste disposal); Tourism (international convention centers); and special economic zones. Any other sector can be added with the prior approval of the Finance Minister. A wide variety of PPP proposals have been provided by the states under the VGF scheme. These include Roads and Bridges, Airports and Seaports, Commuter Rail, Urban Transit and Parking; Water Supply and Wastewater System; Electricity and Gas Distribution; Municipal Solid Waste/Biomedical Waste Collection and

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Disposal; Convention Center; and Waterfront Redevelopment.

Eligibility criteria. To avoid shortcomings in project proposal and thereby avoid delays in the approval process, the VGF has the following criteria:

- (i) Government or a statutory entity should make the proposal and not the private party. The key to making PPPs acceptable is to create an environment where PPPs are seen to be a way of attracting private money into public projects, not putting public resources into private projects.
- (ii) The proposal should be made to the PPP cell of the DEA in prescribed proforma.
- (iii) The project needs to be implemented, i.e. developed, financed, constructed, maintained, and operated for the project term, which is the concession period, by the private sector company.
- (iv) The private sector company is to be selected by government or a statutory entity through a transparent and competitive bidding process; which means that the project has to be identified by the state as desirable and then bid out.
- (v) The project should provide service against a predetermined tariff or user charge.
- (vi) The government/statutory entity concerned should certify within reason that (1) the tariff/user charge would not be increased to eliminate or reduce the viability gap; (2) the project term will not be increased to reduce the viability gap; (3) the capital costs are reasonable and based on standards and specifications usually applicable to such projects; and (4) the capital costs will not be further restricted to reduce the viability gap.

Approval mechanism and process. An Empowered Committee has been set up for quick processing of cases. The expectation is to build up a good pipeline of projects by providing approvals quickly. The approval mechanism being followed is: (i) VGF funding up to Rs 100 crore for each project will be sanctioned by the Empowered Institution, which is chaired by the Additional Secretary, Economic Affairs; (ii) proposals up to Rs 200 crore will be sanctioned by the Empowered Committee, which is chaired by Secretary, Economic Affairs; and (iii) amounts exceeding Rs 200 crore will be sanctioned by the Empowered Committee with the approval of the Finance Minister.

Knowledge management and capacity building. The central government is also working on a number of initiatives to assist and encourage capacity building

at the state and central level. An Inter-Ministerial Group (IMG), under the Finance Secretary, has been formed to determine prequalification of bidders under PPP to avoid fly-by-night operators. A PPP Cell has been established in the DEA to administer various PPP proposals and coordinate various activities to promote PPPs. The GOI is also working to streamline the approval process for PPPs in the central sector.

A committee under Joint Secretary (Infrastructure), DEA, is preparing PPP toolkits for various sectors. The toolkit comprises model concession agreements and prequalification criteria for different sectors, standard terms and conditions, and project preparation manual. These guiding documents and manuals are aimed at the use of standardized procurement and appraisal procedures, resulting in increased transparency and stable policy environment for the private sector. GOI is also building a centralized database and a website on PPP projects in India to address the lack of authentic and credible information relating to PPPs. It will be a dynamic database, with monitoring of ongoing projects. The public sector PPP agencies will be required to provide data inputs to keep the database updated. The format is being finalized and the project is being outsourced to a database management agency. The database and the website will together act as an information clearing house/exchange for all public and private sector stakeholders to access information related to GOI policies and initiatives, standard documentation, best practices, database of PPPs, monitoring information, business opportunities, global vendors, project development facilities, consulting firms, PPP lenders/financial institutions, and other investors.

A key reason for the slow pace of generation and submission of PPP project proposals from the states has been lack of expertise in the project sponsoring agency to structure and evaluate PPP proposals. The government has also recognized that there is a dearth of viable PPP projects. To overcome this constraint, GOI has been targeting states for capacity building efforts and is providing assistance for the creation of PPP cells in various state governments as a nodal agency. The PPP toolkit, information database, and training workshops are directed at rapidly building up states' capacity to mobilize PPP projects. GOI, through the regional workshops and other interactions, is also identifying the capacity building needs of state governments and is geared to supporting any state initiatives on building their capacity on PPP. An Inter-Ministerial Group (IMG), chaired by the Additional Secretary, DEA, is working on providing assistance to state governments in building capacity for PPPs. Arrangements are being finalized under which state governments would be able to avail of consultancy support for developing PPP projects. Institutions like the IDFC and the ADB could take a lead in this.

India Infrastructure Finance Company Limited (IIFCL). In January 2006, the GOI

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established IIFCL under the Companies Act, 1956, as a wholly government-owned company with an authorized capital of Rs 1000 crore and paid-up capital of Rs 10 crore. The SPV was set up following the announcement by the Finance Minister in February 2005, and Cabinet approval in November 2005. The IIFCL has been set up to fill the gap for long-term infrastructure finance that banks are not in a position to address. It caters for the burgeoning gap in long-term financing of infrastructure projects in the public sector, PPP, or the private sector.

Infrastructure projects have a long gestation and often need long-term debt (+10 years) which financial institutions are unable to provide due to asset-liability mismatch, and the long-term debt funds being at a nascent stage. IIFCL will ease this asset-liability mismatch through refinance; lower long-term debt cost due to sovereign guarantees; and set benchmarks for market borrowings by other organizations. It will borrow long-term funds on GOI guarantees from multilateral organizations and others and lend to identified infrastructure projects, either directly or through refinance of long-term debt.

The sectors eligible for IIFCL funding are: Roads and bridges, railways, seaports, airports, inland waterways, and other transportation projects; Power; Urban transport, water supply, sewerage, solid-waste management, and other physical infrastructure in urban areas; Gas pipeline infrastructure projects in SEZs; and international convention centers and other tourism infrastructure projects. Any project awarded to a private sector company for development, financing, and construction through PPP will have overriding priority under the scheme. IIFCL will not ordinarily undertake any appraisal, which would be done by the lead bank.

The loan assistance from SPV will not exceed 20% of the project cost. All disbursements and recoveries would be undertaken through the lead bank. IIFCL may render financial assistance through direct lending to eligible projects or refinance to banks and financial institutions for loans with a tenure of ten years or more. Ten proposals have been received but no funding has taken place.

Way forward. GOI is working at streamlining the approval process for PPPs on the lines of its notification. 'Infrastructure' and 'PPP' are being entered as subjects in the Rules of Business Transaction and assigned to one Department for focus. PPP Cells are being created at state level. A Secretary-level officer is to be declared the 'Nodal Officer' for dealing with the subject and coordinate with GOI. Legal and institutional framework is being promoted by working towards an Infrastructure Act. Infrastructure departments are to set own financial targets of attracting private investment through PPP. These will be monitored and reviewed as 'Plan outside of Plan'—as part of the Eleventh Plan. The government will promote finality in government decision-making as revisiting decisions regarding PPP erodes credibility.

The states are urged to extend support to the GOI initiative on database management and website.

The Finance Ministry has also begun consulting state governments and central ministries and departments to create a 'shelf of projects' which could be taken up for execution under PPP and VGF schemes. There is a massive scope for expansion of the use of PPPs in nearly every sector. And India is in a position to build on its successes in the transport and communications sectors. The role of PPP, as another way of promoting better services, is not limited to infrastructure. In health, education, and even in poverty reduction programs, there is potential to use this approach.

VI

Private Sector Perspective

The private sector perspective was presented by representatives from the Infrastructure Leasing and Financial Services Limited (ILFS), Infrastructure Development Finance Company Limited (IDFC), Feedback Ventures, Bankworld, and PriceWaterhouse Coopers. The participants covered a broad range of issues related to the scope of the business opportunity represented by PPPs in India, standardization of bidding and procurement procedures, project pipeline creation, transparency requirements, public sector capacity building, and enabling policy and institutional frameworks for PPPs. Based on the emerging experience, they highlighted what governments should and should not do, and the rules governments should avoid breaking. The key themes and messages from the private sector are summarized below.

PPPs represent enormous, long-term business opportunity. PPPs are seen as a growing, and potentially enormous, business opportunity for large-scale private investment in infrastructure and economic development of the country. India's enormous unmet infrastructure needs, combined with the PPP approach, offer an unprecedented investment opportunity with the potential of attractive returns. Significant opportunities are seen in the telecommunication, transportation, commercial, and industrial infrastructure and energy sectors. PPPs have generated all-round interest of the private sector, which is expected to grow as more and more successful PPP projects are created.

GOI's PPP initiatives are welcome and much appreciated. The private sector has welcomed the GOI's growing emphasis on private sector-led growth and investment, especially its endorsement of PPPs as mentioned in the Tenth Plan, the approach paper to the Eleventh Plan, and other policy documents. It has also welcomed the policy and institutional steps being initiated by the GOI. Government initiatives with respect to streamlining the PPP appraisal process, initiating the VGF scheme and establishing the IIFCL are seen as steps in the right direction. The establishment of the PPP cell and its placement within the DEA to facilitate identification, development, procurement, and execution of PPP projects is expected

PPPs are best implemented through standardized arrangements that constitute a stable policy and regulatory regime where private capital derives greater comfort and seeks the least possible risk premium. Model Concession Agreements (MCAs) would be used for providing a stable regulatory and policy framework.

— Approach Paper to the Eleventh Plan

to accelerate the process of PPP development in the states. The private sector has also welcomed the recent move by the Finance Minister in urging state governments to set targets to the tune of Rs 2000 crore annually, for investments in infrastructure projects through PPPs. However, the private sector remains eager to see more substantive, enabling changes by the government in the policy and regulatory provisions and procurement procedures for PPPs.

Need to publicize the size of the business opportunity for PPPs to the private sector. The Col has estimated that India's infrastructure sector could absorb \$150 billion of FDI in the next five years. The Tenth Plan projection on the total investment required for the infrastructure sector (at 2001-2 prices) is over Rs 11,00,000 crore (US\$250 billion). However, the private sector estimates for investment requirements are higher. The World Bank estimates¹ that total investments of \$425 billion are needed in infrastructure until 2010–11 and that there is a financing gap of \$123 billion.

According to one estimate,² the total private investment that could be targeted over the next five years is \$330 billion. It assumes that if GCFI as percentage of GDP grows from the existing 5% to the targeted 8% over the next five years, the total investment required would be US\$330 billion (assuming 8% average annual GDP growth rate for the next five years). Assuming that 20% of this requirement comes from the private sector, the total anticipated private investment is \$67 billion (Rs 301,500 crore) or about Rs 60,000 crore per annum for the next five years. This is the size of the business opportunity in PPPs in India over the next five years. The government needs to publicize this effectively to the private sector in India and abroad to tap the potential of private participation.

¹ World Bank, 2006, *India: Addressing Constraints to Infrastructure Financing* (Washington, DC).

² Feedback Ventures: Workshop Presentation.

What is a transparent PPP bid?

- No involvement of any potential bidder in the design of bid criteria. Bid conditions not designed to favor any particular party.
- No artificial entry barriers that disqualify any qualified competitor. Transparent evaluation criteria stipulated upfront.
- No undue weightage to subjective criteria favoring any pre-selected party.
- No joint venture structure between the state governments and potential developers, which could lead to project and sectoral capture.
- No leakage of insider knowledge to favor a particular bidder.
- No manipulation of post-award renegotiations or revisiting of project design.

— Workshop presentation, Feedback Ventures

PPP pipeline creation is top priority. Given the enormous investment requirements in infrastructure development, and government's increasingly proactive measures to promote PPPs, the need for a sustainable pipeline of PPP projects becomes paramount. The private sector is concerned that this pipeline creation is not happening and needs vigorous government efforts and advocacy with the state governments. According to one estimate,³ India needs a project pipeline of Rs 240,000 crore. If India is to plan for Rs 60,000 crore of PPP project investments every year, and assuming that infrastructure projects require four years from concept to commissioning, it would need a project pipeline of at least four times the annual investment requirement, that is, Rs 240,000 crore.

The regulatory and policy environments need substantive improvement. The private sector is interested in, and is keenly following, the PPP development process in India. However, there are weaknesses in the enabling environment for PPPs in India that work as a constraint.

The National Development Council (NDC) has observed that private sector participation in infrastructure requires “a well-designed framework of policies in which investors have the assurance that standards of services will be maintained and concessions will be transparently awarded.” The US–India CEO Forum⁴ has called

³ Feedback Ventures: Workshop Presentation.

⁴ US–India CEO Forum Report, *US-India Strategic Economic Partnership*.

What governments should not do in a PPP project

- offer a project without detailed project development;
- make commitments that cannot be kept;
- change goalposts after award of concession and revisit project design;
- not recognize that each project is a business and not a mere asset;
- regret that the business is profitable within the framework agreement;
- superimpose public processes on private initiatives; and
- not fully exploit the capacity of the business to grow in the state

... and what they should do

- protect officers who take the initiative on PPP;
- align the economic interest of all stakeholders;
- define PPP projects on a holistic basis;
- induct the private sector as partners;
- establish frameworks that permit failures; and
- encourage plurality of approaches.

— Presentation by ILFS

for changes in India's enabling environment and recommended measures to foster efficiency and transparency in the bidding process, ensure sanctity of contracts, encourage competition, promote market-driven tariffs, and separate regulatory and adjudication authorities. According to CRISIL, "a stable legal and policy environment is lacking since many Indian statutes were formulated before PPPs emerged and, hence, the provisions for PPP are inferred from the absence of any restrictive clauses to the contrary rather than from any specific enabling provisions." The private sector has called for developing appropriate legislative framework for PPPs, clarification of entry conditions, suitable contractual structures, and clarification of incentives and concessions.

The government needs to be attuned to the key concerns and risk perceptions of the private sector and international best practices for development of policies and frameworks that facilitate PPPs. The private sector would welcome steps toward developing an effective regulatory framework which would help in clarifying the role of government, regulators and utilities, harmonizing procedures and policies, and enhancing public accountability. While safeguarding the public interest and service outcomes, these would attract large-scale investments by ensuring

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effective competition, managing the conflict of interests among stakeholders, and ensuring the financial viability of the projects.

The private sector has also started engaging state governments in undertaking high-priority PPP projects, enacting necessary enabling legislation, and strengthening the institutional frameworks to enhance infrastructure in the states. It is eager to see more substantive progress in the development and application of more enabling legal, policy, and regulatory frameworks.

Prequalification, bidding, and procurement procedures need standardization.

Given the variations in the formats, bidding procedures, agreements and overall execution of PPPs among the various states/agencies in India, the private sector has highlighted the need for standardized prequalification and bidding procedures and guidelines for ensuring efficiency, predictability, and ease of approval process ('single window'). They would like the PPP sponsoring agencies to utilize the available knowledge base on best practices and standards related to project identification, development, procurement, and contract management. Standardization would benefit potential sponsoring entities by clarifying the public sector approach, and reduce the risk premium, which the private sector seeks. The private sector has supported the recent government steps towards development of MCAs on highways (with others to follow) and preparation of practical guide and toolkits.

Maintaining transparency is paramount. The GOI has consciously moved towards competitive bidding and maintenance of transparency in the award of infrastructure projects. Both VGF and IIFCL insist on transparent competitive bidding procedures. The private sector has welcomed these moves but fears that these positive steps run the risk of getting undermined by inappropriate and manipulated bidding procedures. The need for maintaining transparency in the entire PPP project cycle and stakeholder interactions has been highlighted as a key factor in determining the success of PPPs. The private sector has urged the central and state governments and other public sector project sponsors to be cautious about the 'selection by nomination' procedure, which cannot be equated with transparently awarded PPP contracts.

The private sector has also noted the emphasis on transparency in the Approach Paper to the Eleventh Plan: 'Because PPPs involve dealing with the private sector, they sometimes give rise to suspicion that corporate investors are getting a favored treatment. Transparent processes and consultations with stakeholders combined with effective competitive bidding for PPP projects help in improving perceptions and enhance the acceptability of PPP projects. This approach also provides the

PPP projects with potential to attract foreign investors

- *Large size:* Foreign investors have comparative advantage and higher probability of winning. (Bids cost money!)
- *Complex projects:* Foreign investors have better technical, operational, and financial efficiencies that would compensate for higher return expectations.
- *Market-driven fundamentals:* Project revenues determined by market forces and projects that are more integrated with global flows.
- *Program visibility:* PPP ventures that are projected as part of a program rather than isolated projects would be of interest to multinationals that are keen to leverage India's emerging potential.
- *Upside opportunities:* A new breed of foreign investors, such as real estate funds, hedge funds, and private equity funds, have emerged, which could significantly augment available domestic capital and bring with them international operators.

— PriceWaterhouse Coopers presentation

requisite comfort to public servants who are responsible for awarding projects to private entities.'

Finding credibly and viably structured projects continues to be a challenge.

The government needs to earmark resources and capacity building efforts on structuring credible and bankable projects as a first priority. Often, the private sector does not see finance as a real challenge. The real challenge has been in finding projects that are well defined, credibly structured, rigorously appraised, and financially viable. Many government projects have suffered from time and cost overruns, quality issues, noneconomic allocation criteria, irregular cash flows from budgets, and shortage of competent people. PPPs involve large-scale investments, and the costs of noncompletion/unsuccessful operations would affect many, also risking the success of PPP development in the country.

Since PPPs offer little or no recourse or tangible security to project sponsors should the project fail, it is of paramount importance that all stakeholders work together to make PPPs succeed by undertaking elaborate project and risk appraisal. If the project is ring-fenced, appraised, and structured in a credible manner, the financial structuring part becomes easier. This could only be achieved through rigorous project development and comprehensive risk and return analysis by the government.

Need to think regionally, beyond project. The externality of the infrastructure projects could be harvested to stimulate the economy of the project region. Project sponsors should also think in terms of the broader and longer-term benefits of the PPPs in the locality and the region. Projects like the Tirupur water supply and Delhi Metro have the potential to generate economic benefits for the entire region, beyond the immediate project influence. According to the *World Competitiveness Yearbook 2006*, regional economies, with profiles that are different from their surroundings, are increasingly being considered as the *new economic players*, within the countries or across countries. The report identifies Maharashtra along with Bavaria, Catalonia, and Scotland as one of the top regional economies of the world.

Project development and structuring facility is urgently required. A key impediment to successful commercialization of projects in India has been the absence of rigorous project development. Many of the projects bid out by the government have been inadequately structured and were unsuitable for PPP. Prefeasibility reports prepared by the public sector authorities have often been inadequate for the bidders/sponsors to raise finances for funding the proposed project. Projects have been designed to deliver objectives that were not the intended and desired outcomes. Inadequate project development has resulted in inappropriate definition of projects, unbalanced contractual documentation, poor bid response, extended periods for technical and financial closure, nonfulfillment of obligations, delays in project completion, cost overruns and claims, substandard quality of assets created, and poor levels of service.

International experience suggests the need for a project development facility (PDF) that provides project sponsors the resources to procure consultancy and expert services for conducting prefeasibility studies and assessments. There has been some progress in this regard, especially in the private sector. ILFS has promoted the India Project Development Fund, which pools together resources from institutional investors for funding initial project development efforts. IDFC in partnership with Feedback Ventures has initiated the India Infrastructure Initiative (III) to identify infrastructure development projects and promote PPP for building infrastructure across the country. A feature of these facilities is the provision for recovering the project development costs from the winning bidder.

Public sector capacity to successfully execute PPPs needs to be built up rapidly. The private sector has highlighted its concerns about the absence of a robust pipeline of bankable PPP projects. This is attributed to insufficient capacity within the PPP sponsoring public entities to identify and implement deals and execute PPPs. The capacity deficit is seen as the crucial bottleneck for achieving

a steady flow of successfully negotiated PPP deals. The fact that the PPP approach is a new, complex, and lengthy way of doing business in a multi-stakeholder institutional arrangement has compounded the problems at various levels in the ministries, departments, state public sector undertakings, development authorities, and urban local bodies.

PPPs for infrastructure creation extend for long periods of time and involve complex financial, risk, and performance arrangements. Specialized skills are required to conceptualize, evaluate, structure, and appraise the projects. The required skill sets include assessing financial projections and revenues, effective ring-fencing of the project, risk appraisal and allocation/mitigation, and other areas related to contract monitoring, tariff adjustments, and dispute resolution. Capacity building is also required in identifying and mitigating social and environmental impacts, operationalizing the poverty reduction potential of the project, managing stakeholders and public support, making use of consultants, and ensuring strong political support.

The private sector supports the capacity building initiatives of the GOI, including the present workshop series, and has called for rapidly and substantially lifting the capacity of the public sector to execute PPPs. Technical assistance and other support to government in this regard could include building/utilizing resource materials, staff training, strengthening PPP unit/nodal points, creating database and knowledge resources, and supplementing government capacity with external specialists.

Public sector reforms are crucial, with or without PPPs. The private sector believes that the infrastructure sector is suffering from supply-side constraints, and that there is enough demand for infrastructure services at reasonable prices. The PPP experience in various states has shown that the procedures and processes have been extremely dilatory. Often, the project sponsors are large departments with no particular focus on outcomes and results. The departmental momentum is driven by budgetary allocations, with no incentive to generate future cash flows. Many a time, PPP projects were bid out but decisions were taken on the bids rather slowly. Therefore, the infrastructure sector needs to urgently implement public sector reforms to address the supply-side constraints. Changes in delivery mechanisms, processes, procedures, and institutional structures need to be tailored towards client-focused outcomes and results. The experience of the NHAI, Delhi Metro, and use of SPVs over departments/ministries has shown that tailored institutional design and strengthening does deliver on the ground.

The performance of public sector agencies, especially those engaged in improving

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service delivery, has become a growing concern. The need for urgent and systemic reforms has been highlighted by agencies like the World Bank, the ADB, and civil society organizations. It is now seen as the top agenda for government action in India.

Land acquisition and environmental clearances are best obtained by governments. Social and environmental clearances are best obtained by the government and not the private partner. Numerous projects have been stalled with huge time and cost overruns due to delay in land acquisition and transfer of possession to the private sector. Most of the NHAI projects have got delayed since it has not been able to provide land free of encumbrances and environmental clearance as per the concession. This has resulted in no annuity project other than the North Karnataka Expressway Limited (NKEL) being completed on schedule. In order to expedite implementation, NKEL supported the government in the land acquisition process and in obtaining environmental clearance. The private sector could deliver much faster if these clearances are handled by the project sponsor.

Building in the environmental and social dimensions of the PPPs needs to be made an integral part in the project development cycle. The key objective of these measures is to minimize the negative environmental and social impact and enhance its positive impact. Best practices include identification and customization of mitigation measures for each impact for each affected group, ensuring that impacts are not borne disproportionately by any one group. Environment and social measures often cost around 2% of the project cost but have a significant impact on project sustainability and public support. The Vadodara Halol Toll Road Limited (VHTRL) undertook voluntary relocation of temples, schools, and environmental infrastructure. It implemented its environmental and social management plan by creating wetlands, complying with emission norms, and hazard management for local communities as part of its rehabilitation measures. It also created additional facilities such as pedestrian subways and compound walls and provided additional houses for the relocation of communities. These measures improved community support for the project.

Address the risk and return perceptions of foreign investors. India's economic growth is creating opportunities for foreign investors. FDI has so far focused on ports, airports and, to some extent, roads. Foreign investors have not invested and have stayed away because of small project size, discomfort with existing legal and regulatory frameworks, currency risks and market risks. The poor response is also because of PPP opportunities in the markets of North America, Europe, Australia, and Japan. Foreign investors have stayed away also due to perceptions about country risks, commercial risks, and the procurement process.

Governments need to understand that foreign investors look for the fundamentals of an investment opportunity. This covers the risk-return balance, market potential, and other competing opportunities. For project-specific considerations—the same as the domestic investors concerns—they look out for unmet demand, revenue potential, demonstrated project viability, and political commitment to the project. But, most importantly, they look for opportunities that balance risks and rewards between public and private partners. However, the situation is expected to change, and the government needs to take cognizance of the kind of PPPs that could be attractive to foreign investors.

Build genuine and mutually rewarding partnerships. PPPs represent partnerships in action with huge stakes for both the public sector and private sector agencies to succeed collectively. It is important that the public and private sectors work together, keeping the project and outcomes in focus and not seeking primarily to maximize self-interest. It is important that the legacy of mistrust and patronage gives way to genuine partnerships with the realization that PPPs represent a new way of doing business, and are not about command and control. Ultimately, the project partners need to remember that PPPs are not merely about finance, they are also about improving the quality and efficiency of public services.

Public–private partnerships should not be seen as public partnerships and private projects. They should rather be viewed as private partnerships and public projects ...

— Dr Montek Singh Ahluwalia, Deputy Chairman,
Planning Commission, Government of India

VII

State Government Initiatives and Priorities

The afternoon sessions of the regional workshops were devoted to understanding PPP developments happening across the states/UTs, including the status of ongoing and proposed PPP projects, policy and institutional measures, VGF proposals submitted to the DEA, and specifically, the nature of central assistance that the states require. Representatives from the participant states/UTs made brief presentations on their PPP initiatives. The main points are summarized below.

Andhra Pradesh. Andhra Pradesh is a pioneer in enacting the Infrastructure Authority Act. It covers the infrastructure sectors of highways/bridges, airports, seaports, power, water supply and sanitation, telecommunication networks, gas distribution, and waste management. It also covers urban infrastructure, including housing, urban development, medical facilities, and leisure facilities. The legislation aims to facilitate private developers in securing the mandatory administrative approvals and lays down provisions for arbitration and fiscal regulation.

The major PPP project in the state is the Hyderabad International Airport, being executed under the BOO format. Project cost is Rs 1760 crore. Other major projects are the Kakinada Deep Water Port, being developed on the operate-maintain-share-and-transfer (OMST) format, and the Gangavaram Port, in the BOOT mode. Other projects being taken up as PPPs are FAB City (\$1.5–3 billion), Hyderabad Outer Ring Road (Rs 3000 crore), Kakinada SEZ (Rs 8500 crore), Integrated Township and Convention Center (Rs 670 crore), Jawaharlal Nehru Pharma City (Rs 68 crore), Hyderabad Integrated Trade and Exposition Center, Hitec City (Rs 450 crore), and several knowledge, IT, and biotechnology parks. Many of these projects have been taken up through the MOU route.

For the Andhra Pradesh Housing Board (APHB), PPPs have meant that their sectoral outputs and efficiencies have improved. The PPP approach is allowing them to overcome resource deficit, improve cost recovery, and increase supply of

Key provisions of Karnataka's New Infrastructure Policy

- Payment for services—tolls, user charges
- Options for PPP
 - implementation by Government of Karnataka/government agency followed by medium/long-term O&M contract by private contractor
 - implementation by SPV with government stake followed by divestiture to private entity
 - implementation by private developer on stand-alone basis or through joint ventures under a license/concession structure
- Procurement principles
 - objective evaluation criteria (technical and financial)
- Streamlining of approval process
 - role of line departments
 - role of the IDD in standardizing processes
 - timelines for evaluation/approval
- Building institutional capability
 - preparation of standard toolkits
 - facilitation/assistance by iDeCK in the evaluation of PPP proposals
 - systematic project development process, and cost recovery of the same
- Preparation of sectoral strategies

— Presentation by the Government of Karnataka

houses on a demand-driven basis. PPPs have also allowed APHB to improve provision of housing for the low-income and economically weaker consumers.

The key challenges in executing PPPs in the state have related to:

- land selection and acquisition—facilitating involvement of all the stakeholders, anticipation of problems, and working towards acceptable solutions;
- rehabilitation and resettlement of project-affected persons;
- developing bankable project documents acceptable to government, bidders, and lenders;
- project structuring to ensure quality bidders;
- managing the role of government without conflict of interests, as shareholder, regulator, licensor, and service provider;
- dealing with the many decision-making levels in the government;
- obtaining timely statutory clearances related to defense, airspace, and environmental agencies.

Karnataka. Karnataka's infrastructure policy has a vision to build strong PPPs for infrastructure development to achieve the twin objectives of high growth and equity. It aims to expand, broaden, and deepen private investment in infrastructure, and establish Karnataka as a role model for infrastructure development, and good governance. The policy applies to township development, commercial development with common-user facilities, water supply and sewerage, wastewater recycling, underground drainage, waste management (solid waste/biomedical/hazardous waste), tourism, energy, industrial infrastructure, agricultural infrastructure, education, and healthcare.

The PPP development process in Karnataka has involved conducting project development studies, project structuring, competitive and transparent bidding of projects, and facilitation from the Government of Karnataka. Project development activities have been funded by the Infrastructure Development Corporation Karnataka Limited (iDeCK), which is a joint venture of the state government, IDFC, and HDFC, set up for developing PPP projects. It undertakes policy work, development studies, documentation, bid process management, and provides advisory services to other departments/government agencies. It also provides project development funding and makes project investments. The structuring of project for implementation through PPP has been based on independent market and technical studies. The state government has provided support in land acquisition, environmental clearances, and financial support, as required in specific projects.

The key PPP project under implementation in the state is the Bangalore International Airport. This is the first airport in the country being executed through the PPP route. The airport is being developed through a joint venture of the Airports Authority of India (Government of India), KSIIDC (Government of Karnataka), and private promoters (Siemens, Zurich Airport, Larsen & Toubro) and is due for completion by April 2008.

The government has so far bid out more than Rs 3000 crore worth of PPP projects, including the Bangalore international airport. Some of the other major projects are the Hassan–Mangalore Rail Line for Rs 310 crore (completed), the elevated expressway to E-City (Rs 600 crore, under construction), and EWS Housing in Bangalore for Rs 165 crore (bidder identified).

The government is close to bidding out or has the bidding underway for PPP projects worth more than Rs 2000 crore. These include the Airport Rail Link for Rs 800 crore, the Inter-modal transit center at Subhashnagar for 500 crore, the Mega Convention Center, the Tornagallu–Kudligi Road and Sandur–Hospet Road (Rs 200 crore), and the Biotech Park at Bangalore. The proposed mega-convention center is eligible for

VGF funding, for which a request for qualification has been issued and project studies are underway.

Streamlined environmental clearance. The government has advocated consideration of automatic environmental clearance in cases where (i) land (twice the extent being acquired) for compensatory afforestation has been handed over to the forest department and (ii) land requiring clearance is less than 5% of land required for the project (e.g. Sandur Bypass project). The authorized criteria/limits for sanctioning environmental clearances at regional offices could also be increased. The time limits, and responsibility, for efficient processing of applications for environmental clearances could be fixed to avoid delays. The environmental agencies could also undertake information dissemination on forms/data to be submitted with the applications.

PPPs under JNNURM. While involving the private sector is a key stated objective under JNNURM, the process set down for PPPs has not facilitated quicker approvals. The requirements of detailed project report (DPR) and financial analyses are rigorous for initial submission. Similarly, the requirements for confirmation of financing structure from private partners and lenders, and the project having achieved financial closure need to be reconsidered, since private participation in bidding is possible only after in-principle sanction of funds by GOI.

Land acquisition. An important question concerning land acquisition for infrastructure projects is whether a separate legislation is needed. The existing provisions/guidelines for land acquisition indicate that the statutory acquisition timelines are of the order of 8–9 months. This timeframe is seen as manageable, if pursued earnestly, and needs to be firmly built into the PPP structuring process. However, to avoid time and cost overruns, it is important to have a targeted approach and clear delineation of responsibilities in this regard.

VGF scheme. The procedure for in-principle approval under the VGF scheme could be simplified, since the degree of details currently required for it by the DEA presuppose a fair level of project development, details of which could be submitted at a later stage. Currently, the proposal for seeking clearance of the Empowered Institution is required to be sent (in six copies, both in hard and soft form) to the PPP Cell of the DEA. The proposal needs to include copies of all project agreements (such as concession agreement, state support agreement, substitution agreement, escrow agreement, O&M agreement, and shareholders' agreement, as applicable) and the project report.

Suo Motu proposals. There is a need to evolve some mechanism to deal with the

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suo motu or Swiss Challenge proposals. While the PPP projects need to be government-identified, high-priority infrastructure proposals, it is not always possible for the state governments to invest competing resources to study and detail many of the public projects. In order to consider such proposals in an unbiased manner, it is possible to evaluate such unsolicited proposals in specific sectors provided the proposals establish critical public need, provide technical details and financial feasibility, and the cost of development studies. In such cases, the governments could evaluate the appropriateness of the proposals and bid them out using transparent and competitive bidding procedures without any obligations towards the project developer. The project development expenses could be reimbursed later, in case the project proponent is not the successful bidder.

Project structures. Several issues with respect to project structure have emerged in the various PPP projects in the state. In the Bangalore International Airport project, board participation requires resolution of complex issues in relation to the government director's corporate governance function of due diligence. However, the government nominee often has limited delegation of powers with an oversight responsibility. There are also differing perspectives of government and private sector representatives on the ends, means, and processes of PPPs, which need to be resolved from the government's perspective. In another project, the representative power of the government nominee on the board, by virtue of proportionate equity, is not reflected in actual executive power/control on the project progress, costing and management.

Kerala. In Kerala, the major PPP projects under way are the Trivandrum City road improvement project and the Vizhinjam International Container Transshipment project. The former has completed the initial phases of bidding and finalization of contractors; the latter is in the final stages of implementation and award of work. There are also a host of other infrastructure projects where action has been initiated for implementation under the PPP initiative.

The Trivandrum City road improvement project encompasses ten city road corridors and three National Highway bypasses of around 42 km, and one underpass and two flyovers at junctions of strategic importance. The project is being implemented under BOT scheme on an annuity basis. The total cost of the project is estimated at Rs 145 crore.

The Vizhinjam International Container Transshipment project has been planned as a futuristic port facility which, upon completion, would be able to handle 4.1 million containers of twenty-foot equivalent units (TEUs) and vessels of the order of 12,000 TEU size with a total berth length of 2860 meters. Government equity in

the joint venture company implementing the port would be 24%. The private partner has been shortlisted via a bidding process. The government has sought security clearance from GOI for foreign participation. VGF funding of Rs 200 crore has been sought.

The government has also invited expression of interest for the development of ports in Kerala. Salient features of its port policy are: investors are free to fix tariffs and employee policies; coastal areas and government land near the ports to be reserved for port development; and provision of government assistance in obtaining statutory clearances and approvals. The government is facilitating formation of consortiums and alternative project structures by supporting the formation of an SPV with the collaboration of private parties. Development of nonmajor ports and related facilities at Marina, Alapuzha, Azhikkal and Beypore is also proposed. Other PPP projects in the pipeline are: Smart City in the IT/IT-enabled services sector for Rs 1600 crore on BOO basis; total computerization of Motor Vehicles Department for Rs 47.98 crore under BOMT, private Kochi Metro Rail project for Rs 1966 crore on BOT basis, Kannur Airport project for Rs 930 crore under BOT, etc.

Key Issues. Issues requiring resolution relate to (i) lack of a single coordinating agency or a nodal officer for PPP projects; (ii) departments initiating PPPs based on their departmental priorities; and (iii) endorsement of the Kerala Infrastructure Development bill by the state legislature.

Pondicherry. In Pondicherry, projects under PPP consideration include setting up of SEZ; setting up of IT Park; development of Pondicherry port; development of Karaikal port; expansion of power plant at Karaikal; arts and crafts village at Murungpakkam; beach facilities at Karaikal; development of Thirunallar temple town; drainage at Pondicherry and Karaikal; and expansion of Karaikal and Pondicherry airports. Bids have been invited for the proposed expansion of the seaport and airport at Karaikal.

Tamil Nadu. The priority sectors identified for PPP are: water supply and sewerage, roads (roads, bridges and flyovers), urban infrastructure, ports, and computer literacy in school education. The state government has established several PPP agencies. These are Tamil Nadu Water Investment Company (TWIC); New Tirupur Area Development Corporation Limited (NTADCL) as SPV for supply of industrial and drinking water under Tirupur Water and Sanitation Project; Tamil Nadu Road Development Company (TNRDC) to develop road projects; and the Tamil Nadu Urban Development Fund (TNUDF) to implement the World Bank-assisted Tamil Nadu Urban Development Project.

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TNRDC is a 50:50 joint venture between the TIDCO and ILFS. It had sponsored the East Coast Road (ECR) project for initial improvement works (Rs 61 crore) and maintenance during the concession period of thirty years. TNUDF aims to raise resources and long-term finance for infrastructure in urban local bodies on a sustainable basis, support and strengthen urban reforms, and institutional strengthening and capacity building. It also promotes PPP arrangement to channel private capital in municipal infrastructure.

Tirupur. As a pioneer, the Tirupur project has established that demand-driven projects and commercial formatting of projects in water and sanitation sector is possible. It also shows that private participation in the sector is viable and returns can be commensurate with risks. The project has highlighted that willingness to pay exists for efficient services and internal cross subsidy could reach the poor. Water supply in Tirupur has commenced and the sewerage component is to be completed shortly.

Key challenges for the state government have been:

- different typologies of partnership requiring different kind of regulation and control;
- broad supervision, but close tracking of market feed back;
- resistance from within the organization;
- political benefit-cost is strong to enter partnership but at operation points resistance emerges;
- strong legal provisions of agreement and counterpart obligations for transparency and customer friendliness;
- equality and fairness is the name of the game. At the high table, the chair sizes cannot be different.

The government has engaged consultants for preparing a policy framework on PPP. The key issues identified by the consultants were:

- Is cross-sectoral law required?
- Is cross-sectoral agency required?
- Provide financial support to PPPs?
- What project development modes?
- How to manage unsolicited bids?
- How to manage contracts?
- How to resolve disputes?
- Role of independent regulation?

Assistance required from GOI. The government requires central assistance and facilitation in relaxing the environmental clearance procedures and criteria, fixing time limits for clearances by the Airports Authority and revising JNNURM requirement of allocating 20% for housing for the economically weaker section (EWS).

Lakshadweep. No PPP projects exist owing to lack of transport and telecommunication connectivity, small size of islands, lack of government-owned land, and low levels of awareness about the Union territory. Potential exists for small-scale PPP projects in tourism, transport, fisheries, and power.

Orissa. The Industrial Policy Resolution (IPR), 2001, of the state has accorded high priority for development of physical and social infrastructure through PPPs. The apex committee on IPR implementation chaired by the Chief Secretary is directly steering this initiative. The government has prepared a draft policy for facilitating PPPs in infrastructure development. It identifies priority sectors and mechanisms for project identification and structuring; mechanisms for speedy and transparent selection process; institutional framework to guide the project development process from concept to commissioning; funding mechanism for project development and implementation; framework for protection of all stakeholders; and setting up of special empowered committees for single-point clearance.

A Col has been set up to formulate strategy, identify projects, develop model documents, and establish processes and procedures related to PPPs. A PPP Cell has been created and a Secretary-level officer has been posted exclusively for it. A PPP Technical Secretariat is being created with subject experts from outside government. Institutional arrangement with ILFS has been put in place with focus on development and implementation of projects in PPP format. All state departments are in the process of identifying and planning projects suitable for PPP mode.

Projects are to be conceptualized by the administrative departments and Col, followed by preparation of preliminary feasibility report. The Technical Secretariat will prepare the detailed project report and the Administrative Department will manage the bidding process. The project structure, implementation model, and bidding criteria are to be designed in accordance with the guidelines for transparent competitive bidding and evaluation.

A dedicated Infrastructure and Project Development Fund is proposed to fund technical and financial studies, preparation of reports and bid documents, and other project development activities for projects in PPP mode, and provide direct

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financial support to the projects. It will have contributions from government, public bodies, financial institutions, and bilateral and multilateral agencies.

The government will extend administrative support to all projects and financial support in select cases. It will also assist in availing benefits under central government/state government schemes. The government proposes an independent regulator, initially through Col, to regulate, make enabling provisions for levy of user charges and recovery of investment for building investor confidence, and safeguarding and protecting public interest.

Projects under implementation are the IT Park at Bhubaneswar, Kalinga Nagar Industrial Complex, Palaspanga–Bamebari Road, and development of Gopalpur and Dharma ports. The government has also identified potential PPP candidates in Capital Region Ring Road, International Convention Center, and IT and corporate towers. It is also considering PPPs related to Paradip–Bhubaneswar Road connectivity project, tourism infrastructure in Chilka and Puri, knowledge park and IT SEZ at Bhubaneswar, SEZ at Kalinga Nagar and Paradip, biotech and handicraft parks, etc.

Key issues. To save time, costs and effort, the VGF approval procedure could be phased in (i) in-principle eligibility: after prefeasibility studies are introduced; (ii) in-principle approval; and (iii) final approval.

Jharkhand. The government has identified several ‘thrust areas’ for accelerating the social and economic development of the state. These are infrastructure development, mines and mineral industry, power generation and distribution, IT, automobile/auto components industry, and sericulture. The government is promoting SEZs in agro processing, IT, multi-product, and automobiles and is also introducing pertinent legislation.

The state aims to act as a catalyst, enabler and enhancer to promote maximum activities through private participation. The government envisions preparation of infrastructure master plans and development of comprehensive guidelines and model contracts for funding and operating infrastructure projects with private investment. It encourages financing institutions/private sector participation to establish and maintain industrial growth centers, construct and maintain roads and bridges, set up power generation plants, upgrade distribution system, construct/maintain bus terminals, and develop tourism infrastructure.

The government is setting up the Jharkhand Infrastructure Development Corporation Limited (JINFRA) to promote PPP ventures. It is planned as a joint venture SPV through JIIDCO and ILFS as a 50:50 equity partnership to select, develop,

prepare, and implement infrastructure projects and access funds from the central government and bilateral and multilateral agencies.

Ongoing PPP initiatives in the state include construction of the National Games housing complex at Ranchi for about Rs 2600 million. The project involves construction of residential and common facilities for 10,000 participants in the National Games in November 2007. The successful bidder will construct about 1800 dwelling units in 54 acres in less than 18 months. The other initiative is establishing more than 4000 common service centers, as part of the National e-Governance Plan. The centers will provide effective and efficient delivery of e-Governance services as well as offer value-added services such as banking, insurance, micro-credit, tele-medicine, e-education, and entertainment. The Adityapur SEZ on automobile industry and auto components for Rs 290 million has been successfully bid out to the Gammon-JUSCO consortium.

The state government has undertaken several PPPs under the GOI scheme of providing assistance to states for developing export infrastructure and allied activities (ASIDE). These initiatives are Adityapur Industrial Water Supply Scheme, Second Bridge (Adityapur Toll Bridge), Ranchi Bus Terminal, etc.

The government intends to explore PPP opportunities under JNNURM. Other PPP projects will be identified at the urban local body levels to match the share of grant required from state government and urban local bodies. It expects that around 20% of the projects in the pipeline in Ranchi, Dhanbad and Jameshedpur (estimated at Rs 13,400 crore) will have potential for PPP over the next seven years. Prospective PPPs are being visualized in township development, power generation, industrial clusters, water supply and sewerage systems, hotels, mining, roads, and IT.

Central assistance. The state government requires central assistance in the formulation of PPP policy and guidelines; frameworks for evaluating the revenue and return of the project; reviewing and revising the ceiling on VGF/cost sharing for projects where there is difficulty in getting takers despite repeated notices inviting tender; in sharing information about project database, projects taken up by various governments/semigovernment agencies across the country; sharing MCAs for different activities; and identifying the suitability of PPP model for each category.

West Bengal. The government notified its Policy on Infrastructure Development through Public Private Partnership in August 2003. The major elements of the policy are to ensure reasonable returns on private investment by way of extending 'concessions', tax incentives, VGF (capital grant/revenue grant), government

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guarantee, shorter period for deferred annuity, and providing possible safeguard against political and social uncertainty.

The state has followed one-stage and two-stage bidding procedures, which involved acceptance of the bid, evaluation report and its recommendation by the Empowered Committee to the Committee of Secretaries formed under the Chief Secretary, and recommendation to the Chief Minister/Cabinet, and final approval.

The major PPP initiatives in the state are Salt Lake City Center and Hiland Residential Project (under joint venture). Under covenanted lease, the government has undertaken the West Howrah Township, Kolkata Logistics Hub at Kona, Stadium-cum-Commercial Complex at Rajdanga, and the Dankuni Township. In the past, the government has undertaken projects on license (electricity and transport), BOO (leather complex and Vivekananda bridge), and management contract (solid-waste and tourist lodges) bases as well.

Proposed PPP projects include four-laning of Kalyani–Dum Dum Expressway, Water Park-cum-Entertainment Center along the Eastern Metropolitan Bypass, and transport, residential, commercial, and entertainment/leisure infrastructure at Asansol, Howrah, Durgapur, and Kolkata. The state is also considering urban infrastructure initiatives in these cities.

Uttaranchal. The Government of Uttaranchal has identified tourism, energy, IT and horticulture sectors as future drivers of the state's GDP, and views communication and transport infrastructure as the necessary enablers to achieve it. It undertook an Infrastructure Visioning exercise with professional support. The infrastructure framework and capacity of the state comprises the Infrastructure Board chaired by the Chief Minister, Department of the Infrastructure Development Commissioner, and joint venture companies with IDFC and ILFS. The overarching principles of the government are risk sharing as per local condition, local support and stake as critical factors, professional expertise to develop PPP frameworks, and partnerships with agencies like ILFS and IDFC.

The major PPP initiative in the state has been the interstate bus terminus at Dehradun, in the BOT format through an SPV, on a concession of twenty years. Another notable PPP has been in the development of twenty industrial estates in various parts of the state. Smaller initiatives have been taken up in micro-hydroelectric projects, education, and horticulture. Bidding procedures have been initiated for ropeway projects at various locations. The government proposes to take up PPPs related to mountain airlines, airport expansion, and tourism destinations. Mandate has been given to the Uttaranchal Infrastructure Projects Company to take these proposals forward.

The government envisions world-class urban infrastructure under the JNNURM; mass transit railway system, roads/highways under BOO/BOOT/BOT models with ADB partnership; and airport development, horticultural production and distribution infrastructure, and fisheries. The state also seeks PPPs in micro-hydroelectric projects, nonconventional energy, and power distribution networks.

Punjab. The government has set up the Punjab Infrastructure Development Board (PIDB) and passed the Punjab Infrastructure (Development & Regulation) Act, 2002. The PIDB, headed by the Chief Minister, acts as an apex empowered body responsible for overall planning of infrastructure sector and infrastructure projects in the state, policy formulation and regulation, single-window approvals, and award of concession. It also acts as a body to find alternative funding. An Executive Committee, headed by the Chief Secretary, assists the Board. The administrative departments identify projects suitable for PPP.

The Punjab Infrastructure Initiative Fund, with a corpus of Rs 20 crore to finance project developmental costs, is intended to identify, develop and structure projects to prepare a shelf of financially viable projects, and create a superior model for PPPs in the state through modern project management, monitoring, and execution practices.

PPPs under implementation include an upgradation plan for fourteen high-traffic corridors of a total length 765.61 km on BOT basis (with VGF). The estimated cost is Rs 918 crore. A maximum grant of 40% of the project cost is given by the government. VGF funding up to 20% is expected from GOI. Other projects in PPP mode are for running industrial training institutes (ITIs) and polytechnics, bus terminals, Ludhiana ring road, and bridges. Planned PPP initiatives are in the transport, airport, health, medical education, irrigation, water supply, and power sectors.

Uttar Pradesh. The state has formed an Empowered Authority (EA) to oversee development and provide single-point approvals/clearances; to provide policy guidelines, oversee and monitor project selection, financial approval and implementation; and to resolve interdepartmental matters. The EA will put in place enablers for PPP, prescribe schedules for clearances, and frame rules and guidelines. It will also support the projects in operational matters. The state has proposed an Infrastructure Act to address issues related to nodal agency, project delivery process, state support, user levies, risk issues, MCAs, and safeguards.

The state has initiated policy on promotion of private participation in the development of hi-tech townships. It also has developed policies on roads, IT, power, sugar, food processing, industrial infrastructure, and service sector. The government is providing administrative support in providing land, obtaining statutory and

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project-specific clearances, financial support through VGF where necessary, nonfiscal concession (guarantees), and project monitoring.

The major success stories include the NOIDA toll bridge and NOIDA power company. Nine hi-tech townships and an integrated textile park are under implementation. The state has identified roads and state highways, bus terminals, and product-specific parks on PPP basis. Land is under acquisition and project development is in progress for SEZs in Kanpur and Bhadoi.

Central assistance has been requested in streamlining the schedule for granting approvals relating to environment and railways etc., in raising funds from international financial institutions for undertaking infrastructure projects, and capacity building in PPPs.

Himachal Pradesh. The Himachal Pradesh Infrastructure Development Board (HPIDB) is the nodal agency for processing projects in sectors such as tourism, urban development, industries, power, and roads and bridges. HPIDB processes the proposals and advises various administrative departments about the modalities of co-financing, detailed project preparation, engagement of consultants, etc.

Projects considered till now include ropeway, ski village, commercial complex, bus terminals, parking lots, two SEZ projects, and several hydro power and tunnel projects. The government has not yet accessed the VGF facility.

Central assistance has been requested in raising VGF financing from 20% for hill and special category states. The existing mechanism is felt to be inadequate for NH-22 upgradation from Zirakpur to Shimla under NHDP-III. The international funding agencies could also help in improving the prospects of private investment by lowering the cost of funds when accessed for VGF or private funding. The Ministry of Finance could also consider fast-tracking the processing of VGF for the specially disadvantaged states and areas.

Goa. A PPP cell has been set up under the direct control of the Chief Secretary and a full-time Director has been appointed. PPPs are being developed for Convention Center, Cruise Terminal, mass rapid transit system (MRTS)/Mono Rail, North-South Expressway, hydroelectric projects and the Goa Broadband Network. Eleven potential sites for small hydro projects in the Madei River basin in north Goa are also under consideration.

Assistance is required from the central government in: (i) setting up a legally and financially sound model procedure covering various stages from conceptualization to physical construction, contract monitoring, and scheduling; (ii) developing

standardized guidelines on public sector comparator (PSC) and its comparison with the private sector predictor and also comparison with the preferred/lowest bid; and (iii) methodology for finalizing PPP projects on the Swiss Challenge model.

Madhya Pradesh. The MP Infrastructure Investment Fund Board was constituted in 2000. The Finance Department has been assigned the responsibility of PPP under Rules of Business. Director, Institutional Finance, is the Nodal Officer for PPP, heading the PPP Cell.

Madhya Pradesh, a pioneer in PPP projects in the road sector, has developed 1500 km roads under BOT. Other sectors with PPPs are water supply, city bypass, mobile medical units, bus stands, etc. GOI has granted in-principle approval for three roads under VGF. Key PPP projects are the Dewas town bypass, Dewas industrial water supply project, mobile medical units, and SEZ.

Gujarat. The concept of PPP was introduced in the state in the early 1990s, when the Gujarat Maritime Board commenced construction of the Pipavav port (1989) and subsequently awarded the port in the joint sector in 1992. The Gujarat Infrastructure Development Board (GIDB) was set up in 1995. This was a key initiative under an ADB-assisted TA project. GIDB, chaired by the Chief Minister, covers the areas of overall planning, removal of policy impediments, coordination between various departments, and monitoring progress.

During 1995–99 various sectoral policies were framed covering ports (1995), power (1995), roads (1996), and BOOT policy for ports (1997). Most of the road, bridge, and port projects implemented during this period were through the MOU route.

The Gujarat Infrastructure Development Act, 1999 (GID Act), provides for a regulatory framework for private sector participation in financing, construction, maintenance, and operation of infrastructure projects. The Act accords legal sanctity to the procedure of bidding. Various modes of structuring of projects are recognized, such as BOT, BOOT, BOOM, and lease management.

Twenty-one projects amounting to Rs 13,672.5 crore have been implemented through the private sector. Eighteen projects have been awarded for implementation by PPP/joint sector amounting to Rs 17,553 crore. Nineteen projects, worth Rs 14,640.5 crore, are at bidding stage. The state has proposed eight projects under VGF scheme: Ahmedabad MRTS; Ahmedabad Bus Rapid Transit system; Rajkot–Jamnagar–Vadinar Road; Ahmedabad Convention Center; Dahej SEZ; Four-laning of Halol–Godhra–Shamlaji Road and Ahmedabad–Viramgam Road; ferry services between Bhavnagar and Surat.

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Assistance sought from the central government relates to maintenance of uniformity in policies; development of model documents across infrastructure sectors; information on various infrastructure financing schemes/sectors/projects; speedy and flexible procedures for approval of projects under VGF. In sectors like railways, projects may not be implemented through open competitive bidding, but through the SPV route, as the sector is a monopoly of the Ministry of Railways. Clarity is required regarding eligibility of such projects under VGF. Also, projects taken up under the Swiss Challenge route may be considered for VGF.

Rajasthan. The Economic Policy and Reforms Council (EPRC) is a state-level think-tank comprising corporate leaders, eminent educationists, specialists and economists, with the Chief Minister as chairperson. The Board of Infrastructure Development and Investment (BIDI) is an empowered committee which accords approvals, including concessions to major projects. The Bureau of Investment Promotion (BIP) is a single-window agency to facilitate approvals from various departments. The Empowered Committee on Infrastructure Development (ECID), is the nodal body for conceptualizing and approving projects, including PPPs. The Project Development Company (PDCOR) is a joint venture with ILFS to develop infrastructure projects on commercial format.

Rajasthan was the first State to formulate a policy for BOT projects in 1994. The Rajasthan Road Development Act, 2002, encourages PSP in the construction of financially viable bridges, bypasses, rail over-bridges, tunnels, etc. A Draft State Water Policy has been prepared to support private initiative in development and O&M of water projects. Policies are also on the anvil to promote PPP in power, tourism, and health sectors.

Urban sector projects being taken up as PPPs are related to transport, waste generation, IT, and automobiles. In-principle approval has been received for the Bus Road Transit System (BRTS) project. PPP projects in the pipeline include ropeway, heritage building, convention center, golf courses, bus terminals, and water supply.

In the roads sector, the state has completed 29 BOT projects (cost Rs 366 crore), other than Mega Highways. New initiatives include the creation of nonlapsable State Road Fund (SRF) which is being leveraged to take up large/mega projects. The Road Infrastructure Development Company of Rajasthan (RIDCOR) has been set up with 50:50 equity contribution from the government and ILFS to execute the Rajasthan Mega Highways Project. Under this scheme, projects are proposed on BOT basis with VGF as bid variable. In-principle VGF approval has been received for four projects covering a length of 846 km.

Central assistance required is in the form of TA for establishing a PPP cell, and assistance for project development to support mega projects in water, power, etc. in line with the JNNURM. The state has suggested VGF assistance for rural sector projects on a case-by-case perusal and inclusion of land costs in the project cost for support from VGF.

Other States/Union Territories. Representatives of other states/Union territories summarized the current status of PPP development in their jurisdiction, and requested capacity building support from GOI.

Requirements for central assistance. The following is a summary of the states'/UTs' feedback on the need for central assistance:

VGF

- speedy and flexible procedures for approval of projects;
- increased VGF financing for hill and special category states;
- fast-tracking of VGF projects for disadvantaged states and areas;
- relaxation in project detail requirements for initial eligibility and in-principle approval;
- eligibility for projects implemented through SPV route, like the railways;
- inclusion of projects through the Swiss Challenge route, rural sector projects, and unfinished projects;
- inclusion of land costs under VGF financing; and
- comprehensively updating the VGF documentation to include these suggestions.

To save time, costs and efforts, it is suggested that the VGF approval procedure could be phased in three parts, namely, (i) in-principle eligibility: after prefeasibility studies are introduced; (ii) in-principle approval; and (iii) final approval.

Capacity building. TA and capacity building have been identified as the topmost priority. Areas identified for central assistance are:

- formulation of PPP policy and guidelines;
- formulation of Infrastructure Act and development of PPP regulatory framework;
- setting up PPP cells at state level;
- harmonized and centralized handling of PPPs in the states;
- funding and resources for developing and structuring projects, as in the case of mega projects such as in water, power etc. in line with the JNNURM;
- formulation of legally and financially sound model procedure covering

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various stages from conceptualization to physical construction, contract monitoring and scheduling;

- frameworks for evaluating the revenue and return of the project;
- developing and disseminating standardized guidelines on public sector comparator (PSC) and its comparison with private sector predictor and also with preferred/lowest bid;
- MCAs and other model documents across a range of infrastructure sectors;
- methodology for finalizing projects on the Swiss Challenge model;
- updated information on PPPs being executed across sectors and states;
- potential financing sources, including long-term debt, tapping across various sectors;
- assistance of international funding agencies at concessional terms, especially for critical infrastructure where the private sector may not be immediately interested;
- streamlined and time-bound procedures for granting approvals relating to environment, land acquisition, railways, airport authority, etc.

VIII

Lessons from Global Experience

The global experience and lessons for India were presented by the ADB. Though PPP is a relatively new approach to procurement, lessons may be drawn from the experiences of developed and developing countries on the conditions for success of PPP. The examples and lessons highlighted are presented below.

Case Studies

Mexico. The Government of Mexico announced a major highway development program in 1989. To secure private sector participation, it adopted the rather unusual selection criterion of shortest concession period. This resulted in very short concession periods of 8–15 years, and unaffordably high level of tolls (immediately after service commencement). This led to the newly built roads being mostly empty while nontoll roads remained congested. Later on, enormous cost overruns were claimed by the BOT contractors, and concessions had to be renegotiated and extended to thirty years. Toll had to be lowered due to public outcry. The government had to bail out contractors and financiers. Political pressures resulted in overly concessional contracts to the private sector.

Chile. In the early 1990s, the Government of Chile decided to develop 2000 km of intercity expressway networks in BOT mode at an estimated cost of \$3.3 billion. Most of the project companies experienced difficulties in securing long-term loans. The government responded quickly by introducing a number of credit enhancement measures, including: (i) minimum revenue guarantee; (ii) least present value of revenue scheme; and (iii) foreign exchange risk guarantee. All contracts were awarded in the mid-1990s and construction was completed during 1998–2002. The average elapsed time between tender and commencement of operation was 4.5 years. Exceeding expectations, many foreign contractors participated.

United States, Dulles Greenways. In Virginia, the government's private sector participation policy led to a proposal of developing a 22 km toll road that connects

Key lessons from global experience with PPP

- detailed policy for implementing PPP
- proper planning by government
- project development by government
- full support by government
- proactive public communication
- transparent bidding process
- clear policy on unsolicited proposals
- defined sources of revenue
- proper allocation of risk
- adequate protection for lenders

— ADB presentation

Dulles International Airport to Loudon County. Project cost was \$350 million, of which \$332 million was mobilized through the issue of bonds to institutional investors. When the operations started in the mid-1990s, the project company experienced lower than expected traffic level. While the original estimate of average traffic was 35,000 vehicles per day, the traffic level realized was only 8500 vehicles with an average toll of \$1.77. The project company then reduced the toll to \$1.00, which led to an immediate jump in traffic to 23,000 vehicles. However, since this was still lower than original projections, the project started to default and the terms of the bonds had to be renegotiated. One reason for this problem was underestimation of the adverse impact of the alternative Route 7, which runs parallel to the project road. However, business prospects improved for the toll route in the late 1990s, as Route 7 got congested and traffic reached the originally anticipated level.

United States, Orange County's State Route 91 Express Lanes. In the early 1990s, cash-strapped Orange County in California decided to develop 16 km express lanes between two carriageways of Riverside Freeways, from Anaheim to Riverside. Toll for use of the express lanes for a round trip was \$8. Service started in the mid-1990s. The express lanes soon reached close to their capacity, but users of the existing freeway continued to experience enormous congestion. The project was financially successful but a failure in resolving congestion problems.

M2 Hills Motorway, Sydney. The case study highlighted the various issues, arrangements, and provisions that were put in place with respect to bidding procedures and conditions, land acquisition, environmental clearance, concession period, legal changes, and dealing with project-level issues like government's

**Major Risks Allocated to the Project Company in
Nam Theun 2 Project**

- power demand and project competitiveness
- foreign exchange risk
- credit and regulatory risk
- hydrology risk
- project completion delay risk
- construction cost overrun risk
- environmental and social risks

— ADB presentation

financial support and guarantees, risk sharing, and conditions for project restructuring.

Metro Manila Water Supply Concession. The need for a private concessionaire was felt to solve the perennial problem of high nonrevenue water (NRW) and shortage in raw water supply. Also, the Metropolitan Waterworks and Sewerage System (MWSS) had limited access to investment funding, was overstaffed, and needed to reduce the fiscal burden. MWSS was transformed into a regulatory body and retained ownership of existing fixed assets. Responsibility for management and operation of the facilities, rehabilitation, and expansion of the system, and financing of investments was transferred to private concessionaires.

Privatization involved the award of two 25-year exclusive concessions in 1997. The service area was divided into West and East zones, with Maynilad Water Services being awarded the former and the Manila Water Company the latter. Coverage and quality obligations of the concessionaires included achieving annually increasing coverage targets defined by concession. Coverage targets were for water supply, sanitation, and wastewater treatment. Service targets were in terms of percentage of population served, 24-hour water supply, meeting national drinking water quality and environmental standards, etc. The East Concession has succeeded in downsizing staff, expanding service coverage, reducing NRW, and achieving 24-hour service. Tariff has been increased through a series of adjustments, but current levels are still lower than what they would have been under the MWSS tariff adjustment policies. It is operating profitably, paying dividends, and is listed on the stock exchange. The West Concession has failed, was recalled, and is being rebid.

Nam Theun 2 Hydropower Project, Mekong Region. In June 1993 the governments of Laos and Thailand signed an MoU to support the development of hydroelectric projects in Laos. The government of Laos agreed to supply, and the government of Thailand agreed to purchase, up to 3300 MW. The project company is a joint venture, directly or indirectly, among the contracting parties to the BOOT contracts. The concession agreement was signed by the Nam Theun Power Company (NTPC) and the government of Laos in October 2002. The Power Purchase Agreement (PPA) was signed in November 2003. The ADB has provided (i) a public sector loan of \$20 million to the government of Laos for its equity in the project company (ordinary capital resources/Libor-based lending terms); (ii) a private sector direct loan of \$50 million to the project company (Libor-based lending terms) with government guarantee; and (iii) political risk guarantee of up to \$50 million to commercial lenders. The ADB's Board approval of assistance and loan signing was concluded in April and May 2005. Financial closing and start of loan disbursement was in June 2005. There is no direct market risk exposure for the project company, relatively quicker financial closing, and the tariff structure represents a departure from the usual capacity and energy charges. The ADB's involvement is seen to improve the standards of transparency and social and environmental responsibility.

Lessons Learnt

Clarifying the objectives. Governments need to be abundantly clear and determined about the basic motivation and objectives for opting for PPPs. While resource constraints and maximizing government revenue are legitimate motivators, they should be driven much more by the core drivers of effectiveness gains (improved service standards and customer satisfaction) and efficiency gains (value for money, improved service at optimal costs).

Detailed policy for implementing PPP projects is required. A detailed policy is needed to bolster the confidence and attract the participation of private investors and commercial lenders. This includes defining the sectors open to PPPs and the preferred scheme for each sector, and the government agency responsible for PPP implementation. Preferably, a single, centralized unit servicing as a 'one-stop' shop for investors and a nodal point for facilitating cooperation among different ministries and tiers of government. The policy must also clarify the types of support available from government (e.g. VGF, provision of land for project site or right of way, fiscal incentives, performance guarantees, etc.).

Strategic planning and management by government is essential. PPPs can succeed only if they are structured and planned in detail and are managed by

expert teams. Flexibility for necessary improvisation based on the emerging experiences and lessons learned is also important. Detailed planning is also needed to anticipate future needs and prioritize projects, as also to provide for investments in infrastructure facilities. Longer-range planning is needed for soliciting private sector participation on a competitive and sustainable basis and dealing with unsolicited offers. Capacity must be built in government at the central and, more particularly, state levels. Governments also need to use technical and financial advisors, where needed, to match the advantages of the private sector, particularly in large-scale programs.

Develop a policy on unsolicited proposals from the private sector. PPP initiatives often come from private developers, particularly in countries where public institutions have technical limitations and/or are short of funds. Broadly, there are two ways to handle unsolicited offers. The government could negotiate the concession directly with the private developer or organize an international tender. If the developer wins, it could be compensated by having its preparation cost included in its financial proposal. If not, the tender documents can specify that the winner would reimburse it a lump sum. Unsolicited proposals for exclusive contracts may also be prohibited totally, as some countries have done.

Project development by governments. Project development needs to be done by government, for which it needs to create dedicated funds. These funds would help create a pipeline of bankable projects which, as discussed earlier, are often in short supply. Well-prepared projects also reduce the cost of bids and attract more bidders in a public tender.

Proper allocation of risks. Effective PPP models involve sensible division of roles and fair sharing of responsibilities, costs, and risks between the public and private sectors. Risk is assigned to the partner best able to manage it. Commercial risk is better borne by the private sector partner, while regulatory risk is better borne by government agencies. Optimal, not maximum, assignment of risk is the principle to be adopted.

Provide adequate protection for lenders. PPP projects often raise debt funding on a limited-recourse project finance basis. This means that the lenders rely merely on project assets and cash flows and do not have recourse to the project sponsors. Debt finance usually represents 60–80% of the financing structure. Therefore, PPP design and documentation should provide adequate protection to debt service against noncommercial risks related to *force majeure*, regulatory changes, contract termination, etc.

Beware of contractor-driven nature of BOT. Offering excessively concessional

terms to the project company needs to be avoided. A BOT scheme may not be a perfect solution, since it tends to be contractor oriented. A BOT contract covers both construction and operation stages but project companies often try to recover all the costs during the construction period. Thereafter, their incentive to ensure that the special purpose companies succeed declines. This results in creating infrastructure without the services being available to the public. A challenge for India is development of capacity and local industry for O&M. Strong O&M industry would be required for BOT schemes to work well.

Rigorously analyze traffic projections. Traffic projection should be done more systematically by specialized transport experts with adequate experience. Experience in road projects has indicated a tendency of overstating anticipated traffic. For instance, the Guangzhou–Shengzhen Superhighway Project had projected traffic levels which were twice higher than those actually realized. The Dulles Greenway project realized only a quarter of the estimated traffic in the first few months of operation. This is often due to underestimation of the potential negative impact of competing roads and failure to estimate the impact of toll on traffic levels.

Avoid renegotiation and midway changes. Governments need to pay more attention to potential renegotiation later. In Latin America, over 60% of 1000 concession contracts awarded in the 1990s were renegotiated within three years. Bidders often offer below-cost prices to win the contract in anticipation of later renegotiation. A concession agreement should cover all possible causes of later adjustments, leaving minimum room for renegotiation. In the Worli Sealink project in Mumbai, midway through the construction phase the project consultants were replaced. The new consultants suggested a change in project design that resulted in escalating the project cost by Rs 450 crore and further delays.

Need to consider foreign systems as an alternative. The potential of using foreign contractors could be considered for larger projects. Current BOT projects in India are small. In the highway sector, they range between \$50 million and \$150 million, whereas the usual size of overseas BOT projects ranges between \$200 million and \$500 million or even exceeds \$2 billion (Malaysia's North–South Corridor BOT project worth \$3.2 billion and China's Guangzhou/Shenzhen Superhighway worth \$1.6 billion).

Full and clear support by government is critical. Support for the PPP program and for specific PPP projects has to come from the highest political level of government. A strong political will is essential in overcoming resistance, and needs to be seen as a clear signal of the government's intention to meet its contractual commitments.

Implementation schedules need to be realistic. The implementation schedule should not be overly optimistic. This means managing the pressures and expectations of elected bodies, the media, and other stakeholders, which often push implementing agencies for faster delivery. While political commitment is welcome and necessary, pressures for overly optimistic timelines need to be dealt with appropriately.

Proactive public communication and stakeholder management. Many PPPs have failed owing to strong opposition from civil society, local media, and other stakeholders. Public opposition has led to many cancellations, both before and after the concession award. PPPs have also been confused with privatization. Alienation of actual users of the asset and lack of public support have increased project costs, delayed project completion, and ultimately jeopardized the sustainability of public services. Lack of communication and poor stakeholder management could become deal-breakers.

A predominant reason for this is lack of effective communication with the principal stakeholders of the project. It is important for the project sponsors to disseminate information among the various stakeholder groups about the virtues of partnership options and convince them about the benefits that would accrue to them, especially the poor. Communication is required to prepare stakeholders for the institutional relationships among the public sector sponsors, the private consortium, and the consumers and citizens; influence stakeholders' perception and behavior; and build support for reforms and new ways of working. Feedback and consultations with tariff-paying citizens, labor unions, relevant government agencies, private investors, civil society organizations, and media will ensure support, client focus, and improved coordination of the project.

IX

Role of Multilateral Agencies

The regional workshops on PPPs have successfully highlighted the perspectives and key concerns of the public and private sector stakeholders in the PPP development process in India. The workshops have facilitated learning and insights on the strategic and practical considerations, and the critical success factors in developing and operationalizing PPP projects. Significant efforts would be required in the creation of the right institutional and operational environment that is conducive to the private sector, including the introduction of necessary policy incentives, development of MCAs for key infrastructure sectors, building of state capacity to develop financially viable PPP projects, and introduction of an effective dispute resolution mechanism.

The multilateral agencies have welcomed the recent steps taken by GOI with respect to the VGF and IIFCL. They have supported the government move to provide VGF to support the projects where viability is an issue. In the context of India, the potential role of multilateral agencies in supporting PPPs is influenced by the key issues and challenges that have emerged. These essentially are related to (i) the VGF scheme: dealing with preparation/dissemination of policy/guidance, streamlining of appraisal mechanisms, dealing with ambitious/unsolicited proposals, and project prioritization at the state level; (ii) high bid costs and lengthy processing: development of MCAs, land acquisition, and environmental clearances; (iii) capacity building within government both at the policy and project levels; (iv) facilitation at the state government level; (v) development of mechanisms of transparency and public scrutiny. Development of public sector capacity to prioritize, plan, appraise, structure, bid, and financially close PPPs remains the topmost challenge for mainstreaming of PPPs at the state as also the central level.

International experience has shown that involvement of multilateral institutions like the ADB and the World Bank has improved the standards of transparency and accountability in the PPP development process. Their engagement has provided comfort to the private partners and commercial lenders, particularly with respect to governance, environmental, and social issues, and the overall feasibility of the venture. Multilateral participation in PPPs is also seen to reduce the risk for all the

key stakeholders: the private sector, governments, consumers, and others.

Agencies like the ADB and the World Bank could assist GOI in promoting PPPs across sectors and regions of India, through a range of financing, advisory, and TA measures. In addition, they could assist governments in developing enabling policy and institutional frameworks and conditions which are informed by the global lessons in PPPs. The ADB's long-term strategic focus emphasizes creation of effective enabling conditions for private sector participation. It supports the development of appropriate market structures, legal and regulatory frameworks, innovative project structuring, and locally appropriate institutional arrangements and procedures. Most importantly, multilateral agencies would be able to assist governments in tailoring the PPP solutions to specific demands of the individual states, sectors, and projects.

Apart from assisting in design and implementation of PPP projects, the ADB is also well placed to bring in elements of good governance, and pro-poor dimensions that promote social and environmental safeguards and public benefits to the PPPs. Given the importance of stakeholder management and public communication in the long-term success and viability of PPPs, the multilateral agencies could also assist governments in engaging the public and private stakeholders in a consultative and interactive process.

Past support to PPPs. The ADB's experience with PPPs in India includes support to gas distribution networks, LNG terminal and power transmission lines. It has extended TA on the Public–Private Infrastructure Advisory Facility, and the National Highway Corridor Public–Private Partnership Project, among others. It has also been supporting government efforts on promoting private sector participation in urban water supply. The ADB's engagement with PPP in India goes back to 1996 when it provided TA to the Government of Gujarat for infrastructure development. The TA facilitated private sector involvement in infrastructure sectors, policy options to support a wide range structural reforms at state level, setting up a Private Sector Infrastructure Facility (PSIF), and the Gujarat Infrastructure Development Board (GIDB).

Supporting capacity building needs. The state presentations have revealed that the term PPP could be interpreted in a broad manner, and that understanding of PPPs in states is not uniform. However, there is agreement that the understanding and capacity with respect to PPPs needs to be significantly strengthened at the state level.

ADB experience across Asia has shown that a key factor for success in PPPs has been a strong centralized PPP unit in government. Such a unit could help build capacity to set up PPP cells, strengthen the regulatory framework, and sell the idea of PPPs to others, particularly investors. The development and strengthening

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of a nodal agency in government that specializes in PPPs, and champions it across states/sector agencies, is seen as critical. In response to a request from the DEA, and based on the feedback from the workshop series, it has been agreed that the ADB will extend TA to the government in mainstreaming PPPs at the central and state levels through capacity building support for establishment of PPP cells at state levels. The initial step of establishing PPP cells at both central and state levels has already been taken by the GOI, and this will be supported.

Potential financing options for PPPs. The ADB has reengineered and operationalized new ways of doing business to provide more client-oriented services for state and central level infrastructure development initiatives. Recently, it modified its policies and procedures to make them more flexible and to respond to the needs and priorities of its PPP clientele. These include adoption of new financing instruments such as multi-client financing facility, subsovereign/nonsovereign lending, and local currency loan. There has been a broadening of items of goods and services eligible for ADB financing including land, recurrent costs, and severance payment and leased assets. Streamlining of procedural requirements for procurement and engagement of consultants has also been undertaken. The ADB is moving ahead and would like to encourage the central and state governments to make greater use of these financing modalities.

The ADB could also consider, if required, extending loans (multi-tranche financing facility, local currency loan) to qualified PPP projects in several forms. These include:

- public sector loans to states/municipalities/executing agencies for financing counter grants/equity support, land/or engineering design;
- public sector loans to IIFCL (financial intermediary loan) which would, in turn, provide funds for project companies;
- private sector loans or equity investments by the private sector operation arm of the ADB to project companies; and
- provision of guarantee to commercial lenders.

Developing partnerships. The workshops have indicated that expansion of GOI's PPP program is a major challenge and an exciting and enormous opportunity for the government, the private sector, as also multilateral agencies such as the ADB. The ADB has coordinated its efforts on supporting PPPs in the country with the World Bank, and is working closely on this with other partners, including the Japan Bank for International Cooperation, the DFID, and the Canadian International Development Agency. The ADB will continue to work closely with GOI and other development partners of India in harmonizing its assistance and engagement, and supporting the mainstreaming of PPPs in India.

Appendix 1

Workshop Program

DEA	<p><i>Opening Remarks and Overview of Infrastructure Development in India and Importance of PPP</i> Shri Ashok Jha, Secretary Shri Ashok Chawla, Additional Secretary</p> <p><i>Presentation on VGF Scheme and Other Initiatives</i> Shri Arvind Mayaram, Joint Secretary</p>
ADB	<p><i>Welcome address</i> Shri Kunio Senga, Director General, SARD Shri Tadashi Kondo, Country Director, INRM Shri Narahari Rao, Officer in Charge, INRM</p> <p><i>Risks in PPP Financing and What Do Foreign Investors Look for in PPP Projects: International Perspective</i> Shri Alfredo E. Pascual, Advisor (Public-Private Partnership) Shri Gambhir Bhatta, Senior Governance Advisor Shri Hiroaki Yamaguchi, Transport Specialist Shri Shunso Tsukada, Principal Transport Specialist</p>
Private Sector	<p><i>Facilitating PPPs in India: Private Sector Perspective</i> Shri Bharat Bhargava, President, Bankworld</p> <p><i>What Should Not Be Done in PPPs</i> Shri Hari Sankaran, MD, ILFS</p> <p><i>Genesis, Structure and the Road Ahead</i> Shri S.S.Kohli, CMD, IIFC</p> <p><i>Financing PPPs: Lenders' Perspective</i> Shri Sailesh Pathak, Co-head, PPP Initiative, IDFC Shri Cherian Thomas, Senior Director, IDFC Shri Rajiv Lall, IDFC</p> <p><i>What Do Foreign Investors Look for in PPP Projects?: International Perspective</i> Ms. Bharti Ramola Gupta, PriceWaterhouse Coopers</p>

Facilitating PPPs in India: Private Sector Perspective

Shri Vinayak Chatterjee, Chairman, Feedback Ventures

**State
Governments/
Union
territories**

Presentation by the Governments/Administrations of:

Andhra Pradesh
Assam
Bihar
Chandigarh
Chhattisgarh
Delhi
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu & Kashmir
Jharkhand
Karnataka
Kerala
Lakshadweep
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Nagaland
Orissa
Pondicherry
Punjab
Rajasthan
Sikkim
Tamil Nadu
Tripura
Uttar Pradesh
Uttaranchal
West Bengal

Appendix 2

Workshop Participants

DEA	Ashok Jha, Secretary Ashok Chawla, Additional Secretary Arvind Mayaram, Joint Secretary (Infrastructure) Anna Roy, Director, PPP Krishan Lal, Under Secretary
State Governments/ Union Territory Administrations	<i>Andhra Pradesh, Government of</i> D. Lakshmi Parthasarathy, Principal Secretary, Industries & Commerce Department S.N. Mohanty, VC, APHB K.V.V. Sathi Reddi, Chief Engineer K.V. Brahmananda Reddy, Special Secretary <i>Assam, Government of</i> Ashish Bhutani, Secretary, Finance & Urban Development <i>Bihar, Government of</i> Uday Singh Kumawat, Additional Secretary Pratyaya Amrit, Chairman, Bihar Bridge Construction Corporation Sujata Chaturvedi, Vice Chairman, Patna Regional Development Authority <i>Chandigarh Administration</i> Raji P. Srivastava, Joint Secretary, Finance Mohanjit Singh, Chairman, Chandigarh Housing Board Sukhvir Singh Bida, Superintendent Engineer <i>Chhattisgarh, Government of</i> P. Joyomen, Principal Secretary, PWD Kishore Pariyar, Jt. Secretary, Finance <i>Daman & Diu Administration</i> S. L. Bansal, Finance Secretary A. K. Singh, MD-OIDC <i>Delhi, Government of</i> V. V. Bhat, Principal Secretary, Planning Rakesh Mohan, Principal Secretary, PWD R. Subramanian, Chief Engineer

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B. K. Sharma, Director (Planning)

Goa, Government of

Ramesh Negi, Commissioner & Secretary, Finance

Santosh Vaidya, Secretary, PWD

V. K. Jha, Secretary, Industries & Tourism

Diwan Chand, Secretary

J. K. Dadoo, Development Commissioner

S. Shanbhogue, Joint Secretary, Finance

A. Kishore, Joint Secretary, Finance

K. N. S. Nair, Director, PPP Cell

Gujarat, Government of

S. G. Mankad, Chief Secretary

Jayant Parimal, CEO, GIDB

Haryana, Government of

Prem Prashant, Chief Secretary

Bhaskar Chatterjee, Principal Secretary, Finance & Planning

Shakuntala Jakhu, Principal Secretary, Planning and Housing

K. K. Bhugra, EIC, HUDA

Dharamveer, Finance Commissioner (PWD and B&R)

H.S. Chahal, Chief Engineer, Roads

Himachal Pradesh, Government of

S. Behuria, Principal Secretary, Finance & Planning

D. K. Dharma, Principal Adviser, Planning

Jammu & Kashmir, Government of

Roma Wani, Special Secretary, Planning

Jharkhand, Government of

R. K. Srivastava, Secretary, Urban Development

Arun Kumar Singh, Secretary, Industries

Karnataka, Government of

P. B. Mahishi, Additional Chief Secretary

Vinay Kumar, Principal Secretary, Infrastructure Development

Sudhir Kumar, Resident Commissioner

Lakshmi Venkatachalam, Principal Secretary, Urban Development Department

Jawaid Akhtar, MD,

Karnataka Urban Infrastructure Development Corporation

P.V. Ravi, MD, iDeck

Kerala, Government of

P. H. Kurian, Secretary (Investment Promotion)

L. Radhakrishnan, Secretary

(Ports & Cooperation, Forests, Higher Education)

Lakshadweep Administration

Parimal Rai, Administrator

G. Sudhakar, Head of Information, Publicity and Tourism

C. M. Ahamed, Head of Electricity & IT

Madhya Pradesh, Government of

M. Suleman, Secretary, PWD;

MD, MP Road Development Corporation

Maharashtra, Government of

Sanjay Ubale, Secretary (Special Projects)

Rajeev Jalota, CEO, MIDC

Manipur, Government of

Saichhuana, Additional Secretary (Forest & Horticulture)

Meghalaya, Government of

S. Chatterjee, Additional Chief Secretary

Nagaland, Government of

Ken Kreditsu, Chief Town Planner

H. K. Khulu, Finance Commissioner

Orissa, Government of

Parag Gupta, Special Secretary (PPP)

Ashok Meena, MD, IDCO

Vishal, Development Director, IT

N. K. Pradhan, CE, Roads

Pondicherry, Government of

C. S. Khairwal, Chief Secretary

Anbarasu, Secretary (Tourism)

M. Sreedharan, Joint Secretary (Planning)

Punjab, Government of

G. P. S. Mann, Chief General Manager, PIDB

A. C. Duggal, Resident Commissioner

Rajasthan, Government of

Subhash Garg, Finance Secretary

Veenu Gupta, Secretary (Plan)

Sikkim, Government of

Gyaltshen, Additional Secretary,

Finance, Revenue & Expenditure

Tamil Nadu, Government of

K. Satyagopal, Special Secretary, Finance

Vikram Kapur, MD & CEO,

Tamil Nadu Infrastructure Financial Services Limited

Tripura, Government of

P. Chakravarty, Joint Resident Commissioner

Uttar Pradesh, Government of

V. Venkatachalam, Principal Secretary, Planning
Sudhir Garg, Secretary, Industrial Development
Narendra Bhooshan, E.D. Udyog Bandu

Uttaranchal, Government of

M. Ramachandran, Chief Secretary
I. K. Panday, Principal Secretary, Finance
Amrender Sinha, Principal Secretary, Planning

West Bengal, Government of

P. K. Pradhan, Principal Secretary, Urban Development
M. Alam, Joint Secretary, Planning & Development
P. R. Vagiskar, CEO, KMDA
N. S. Nigam, CEO, ADTA
S. Kishore, ED, WBIDC
Kalyan Roy, Additonal Director (SE), KMDA

ADB

Kunio Senga, Director General, SARD
Tadashi Kondo, Country Director, INRM
Hua du, Country Director, Bangladesh
Alfredo E. Pascual, Advisor (Public–Private Partnership)
Gambhir Bhatta, Senior Governance Advisor
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Hiroaki Yamaguchi, Transport Specialist
Pratima Dayal, Principal Economist, INRM
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Meenu Lalit, Executive Assistant, INRM
K. Balaji, Executive Assistant, INRM
Neeru Sehgal, Executive Assistant, INRM
Varun Singh, Knowledge Management Consultant, INRM

Private Sector

Hari Sankaran, Managing Director, ILFS
Vinayak Chatterjee, Chairman and MD,
Feedback Ventures
Cherian Thomas, IDFC
Shailesh Pathak, IDFC
Rajiv Lall, IDFC
S. S. Kohli, Chairman and MD, IIFC
R.K. Madan, IIFC
Bharti Ramola Gupta, PriceWaterhouse Coopers
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