



आर्थिक कार्य विभाग  
DEPARTMENT OF  
**ECONOMIC AFFAIRS**

Presentation by:

**Shri Baldeo Purushartha**

**Joint Secretary,**

**Infrastructure Finance Secretariat**

**Department of Economic Affairs**

**Ministry of Finance,**

**Government of India**

# 2023 Asia PPP Practitioners' Network Conference

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**Seoul, Republic of Korea**

- India and PPP - India's PPP Journey
- Prevalent PPP Models in India
- Challenges in PPP
- Key initiatives of the Government of India
- Factors ensuing PPP success in India
- Interventions towards Climate Resilience & Sustainability in India

# India and PPP - India's PPP Journey

Primarily **Government budgetary resources**

More **Private Sector Participation**

Flexibility, Innovation, **Alternate Structuring**

**Liberalisation of Economy and encouragement of PPP in infrastructure**

Establishment of **IDFC**

NHDP – Large road development on PPP programme

Establishment of India Infrastructure Finance Company Ltd. (IIFCL)

**IDFs** launched

Setting up of **NIIF**

Banks allowed partial **credit enhancement** for bond issuances

Creation of DFI (**NABFID**)

**HAM Model**

1970s

1991

1997-2000

2002-2005

2006

2007-2009

2010-2014

2014-2016

2018-2019

2021-2023

**PPPAC and (VGF)**

**PPP Cell** Set up in DEA

Introduction of **Model Bid Documents** – MCAs, RfQ and RfP

**IIPDF**(India Infrastructure Project Development Fund)

FPIs allowed to invest in **AIFs**

FPIs allowed to buy bonds via FAR

Public Sector launches **InvITs**

FPIs allowed for debt financing in ReIT, InvIT

New Models  
New Sectors

Declaration of **Central Road Fund** as a statutory Act

**The issue then:**

- inadequate availability of funds
- Non-existent long-term debt markets

## India's Infrastructure Funding Needs – Some Estimates

Source	Estimated Investment	Annual investment/ Financing Gap
ADB	\$ 5 trillion	Avg. annual investment <b>\$ 325 billion</b>
GI Hub	\$ 4.3 trillion	Financing Gap <b>\$ 505 billion</b>
NIP	\$ 4.3 trillion	Financing Gap <b>10% of NIP</b>

## Importance of PPP for Emerging Markets and Developing Economies

**ACCELERATION OF  
INFRASTRUCTURE  
INVESTMENT**

**FASTER  
IMPLEMENTATION**

**OPTIMAL RISK  
ALLOCATION**

**IMPROVED  
QUALITY OF  
SERVICE**

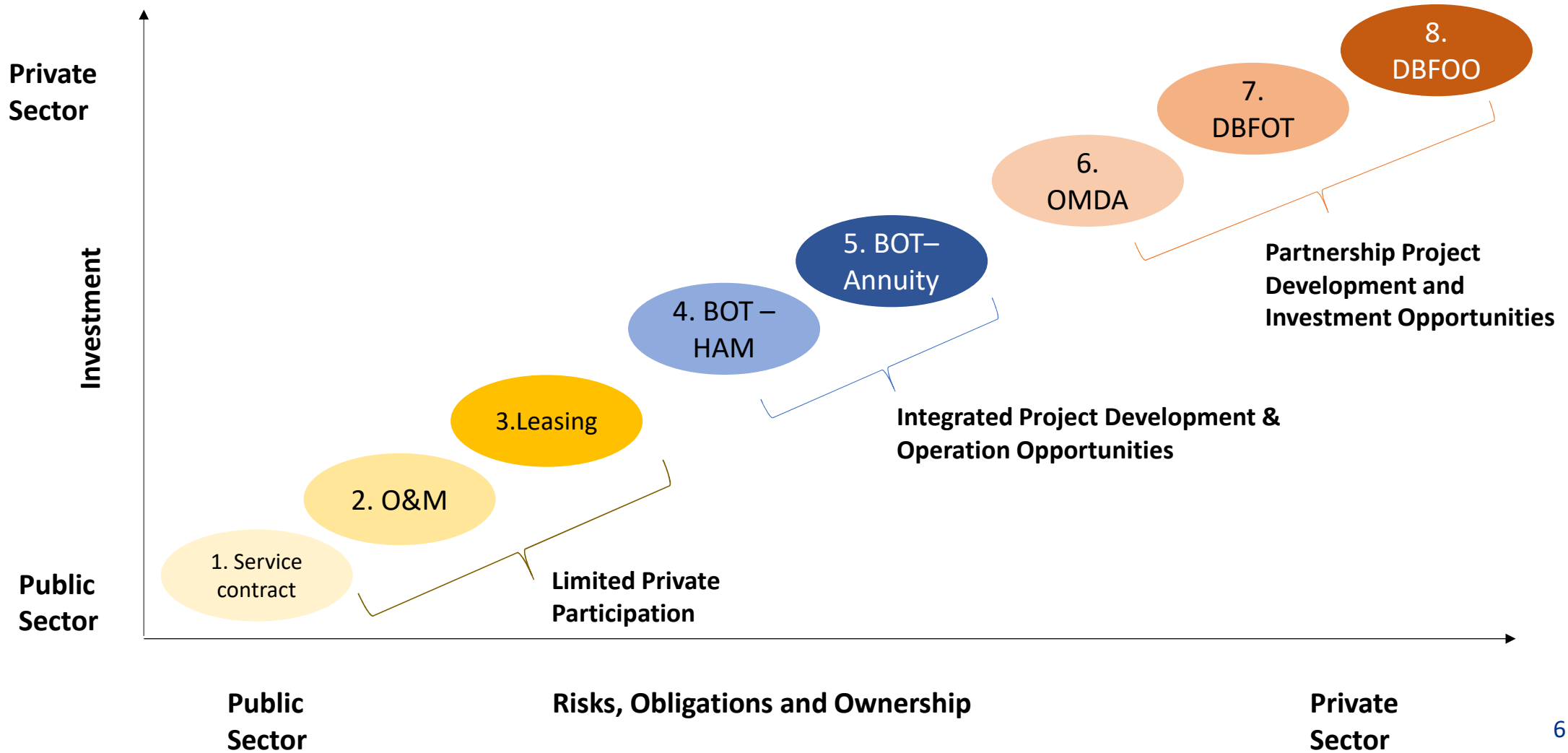
**REDUCTION IN  
LIFECYCLE COSTS**

**Inclusive growth and  
Viksit Bharat - 2047**

**High multiplier impact  
of 2.45 from infra  
investments**

**Job creation for all with  
varied skill sets**

# Prevalent PPP Models in India



## PPP success stories (1/2)



**Collection and Transportation of Municipal Solid Waste in Jhansi**

**Service Contract**

**Social Infrastructure**



**O&M for Water Supply in Mysore**

**O&M Contract**

**Social Infrastructure**



**Leasing of Warehouses on Lease, Store, Operate, Maintain and Transfer Basis (LSOMT)**

**Leasing**

**Economic Infrastructure**



**Four laning of Ranchi Jamshedpur section of NH 33 in the State of Bihar on BoT (Annuity) under NHDP Phase III**

**BOT (Build Operate and Transfer) – Annuity**

**Economic Infrastructure**



## PPP success stories (2/2)



**14 MLD (million litre per day) STP at Sarai, Haridwar (India's first HAM project in sewerage sector)**

**HAM (Hybrid Annuity Model)**

**Social Infrastructure**



**Leasing of 6 Airports: Ahmedabad, Jaipur, Lucknow, Guwahati, Mangaluru, and Thiruvananthapuram**

**OMDA – Operations, Management and Development Agreement**

**Economic Infrastructure**



**Noida International Airport**

**DBFOT – Design, Build, Finance, Operate and Transfer**

**Economic Infrastructure**



**Construction of Silo under Hub & Spoke Model**

**DBFOO – Design, Build, Finance, Operate & Own**

**Economic Infrastructure**



### **Delays due to Land, Clearances and Litigation**

- Time and Cost overruns
- Frequent Disputes and Litigation

### **Access to Capital & High Costs**

- Uneven access and high-cost equity & debt - Avg cost of capital ~ 12-14%, varied risk premium across industries

### **Ease & Cost of Doing Business**

- Frictions in doing business and avoidable costs erode competitiveness of investments

### **Capacity for planning & implementation**

- Inadequate capacity causes poor project structuring & implementation

- Ambiguity regarding **the quality of the investment environment** (fear of approval processes, access to land, etc.)
- Uncertainty regarding **viability of the project**
- Mismatch between **governments' and investors' expectations**
- Lack of **risk appetite** from private sector
- Possibility of **contingent liability**
- **Inadequate risk allocation** between public & private parties

# Strategic Pillars of PPP ecosystem in India

Developing an Integrated Infrastructure Ecosystem

Strategic Pillars

Infrastructure Knowledge Generation

1

Infrastructure Financing

2

Capacity Building

3

Knowledge Creation for PPP Ecosystem

Push to Infra Financing

Capacity building and Handholding of Project Sponsoring Authority (PSAs)

## Government Programmatic Support

Policy Commitments

Significantly High Budgetary Capex to crowd-in Pvt. investment

Allocation increased by 35% in FY22 and then another 35% in FY23

National Infrastructure Pipeline

USD 1.5 trillion outlay, launched in 2019  
6,000+ projects pipeline swarmed to 9,000+

National Monetisation Pipeline

Launched in 2021 to generate resources for infra; USD 75 billion expected

PM GatiShakti National Masterplan

Technology led planning approach to infrastructure; launched in 2021

Financial Support

Establishment of NaBFID (New Infra DFI)

Infra-Financing Reforms (REITs/InvITs/IDFs)

Tax Exemptions to SWFs/PFs

### Viability Gap Funding (VGF)

- Financial support (grants) to PPP infrastructure projects which are **economically justified but commercially unviable**
- VGF given in form of capex (upto 80%) and opex (upto 50%)
- Project preparation for availing VGF helps in:
  - generating **bidder interest**
  - making **more projects happen**
  - bringing **larger projects to PPP** mode
- Successful **67 projects** with investment of **\$5.5bn** and **VGF - \$ 924 million**

### India Infrastructure Project Development Fund (IIPDF) Scheme

- Funding to **cover the PPP project development costs.**
- Helps to improve the quality and quantity of **bankable PPP projects.**
- To **reduce financial burden** on PSA in respect of PDEs.
- Funding under the IIPDF Scheme is for:
  - Project Sponsoring Authorities upto **Technical Close of such projects.**
  - **Finance the cost of transaction advisors** for a PPP project.

## Case studies under VGF and IIPDF



**Pune Metro Rail Line III - Maan-Hinjawadi-Shivajinagar**

**DBFOT  
VGF: US\$ 282 million**

**Economic  
Infrastructure**



**Affordable Healthcare Projects on PPP mode in Odisha (at four locations )**

**DBFOT  
VGF: US\$ 28 million**

**Social  
Infrastructure**



**Hiring of TA for development of Data Centre in Goa on PPP mode**

**IIPDF scheme  
Cost to hire TA: US\$ 566, 872**

**Economic  
Infrastructure**

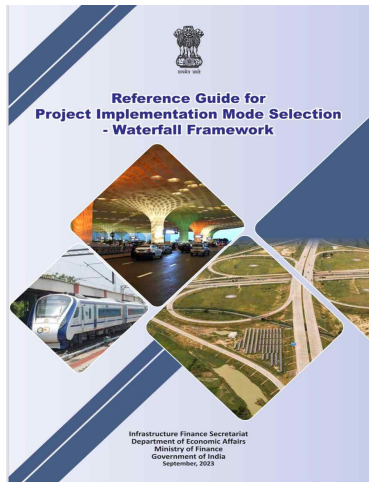
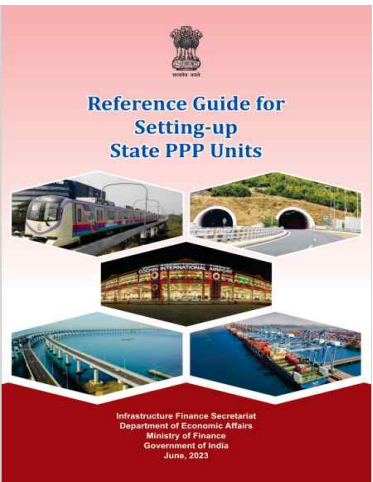
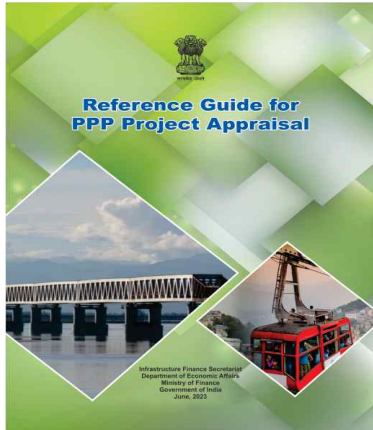


**Hiring TA for development of Medical college and hospital in Arunachal Pradesh**

**IIPDF scheme  
Cost to hire TA: US\$ 172, 944**

**Social  
Infrastructure**





## Capacity Building in Infrastructure

- Focussed Training Programmes under **Capacity Enhancement Plan for Infrastructure**
  - Developed courses for **project lifecycle**: procurement, financing, management, etc.
  - **Immersive in-person training** with national and international institutes & multilaterals (WB, FCDO, UNESCAP)
  - Development of **Online Self-Learning** and Certification portal with e-courses
- 
- **State Outreach workshops** on specific Infrastructure ideas around financing, PPP, resource mobilisation, urban financing
  - **Handholding States and Sponsoring Authorities** for project development and financing
  - **Development of knowledge documents** and reference guides, including best practices and case studies

## Factors ensuing PPP success in India



Streamlined **appraisal and approval processes**



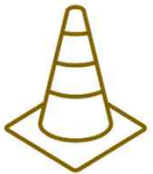
**Robust Knowledge Ecosystem with decision-making toolkits**



**Standardized bid documents – Model RFQ, RFP, Concession Agreements**



**Capacity building of officials** involved in PPP project development



Flexibility and Innovation in selecting **different types of PPP models**



**Balanced Risk-Allocation** and support by Public Authority towards management of risks

**And overall – Political Will**

## Interventions towards Disaster Assessment or Resilience

Inclusion of standards on disaster resilience building in the Model **Building Bye-laws 2016**

Mandating all cities to have **disaster and climate resilient master plans** focusing on planned development

Review of **model concession agreements (MCAs)** has been initiated for inclusion of disaster resilience provisions

**Digital Atlas** developed by the Materials & Technology Promotion Council to capture the vulnerability of various parts of the country to different hazards (Earthquake, wind, floods etc.)

Launch of **National Mission of Sustainable Habitat 2021-30** to address “Climate Change: Hazards and Vulnerabilities”

## Coalition for Disaster Resilient Infrastructure (CDRI)

India had approved established International Coalition for Disaster Resilient Infrastructure (CDRI) in 2019. CDRI shall serve as a platform where knowledge is generated and exchanged on different aspects of disaster and climate resilience of infrastructure.

DEA, MoF has helped CDRI IN conducting **fiscal risk assessment of infrastructure** projects in 4 disaster-prone states such as Odisha, Tamil Nadu, Himachal Pradesh, and Gujarat have been mapped under the **National Infrastructure Pipeline** to gain a clear understanding of the **needs and requirements of resilient infrastructure**

DEA, MoF and CDRI have prepared draft **actionable principles for Financing Cities of Tomorrow**, which is one of the deliverables planned by **G-20 Infrastructure Working Group** during Indian Presidency. The principles were well-leveraged into the final deliverable accepted at G20 IWG

## Interventions towards Sustainability in India (1/3)

### Carbon Credit Trading Scheme

Approved in July 2023, with the aim of setting up a carbon credit trading market in India

### Sovereign Green Bonds

Bonds worth US\$ 1.92 billion has been issued in Jan & Feb 2023, under India's first Sovereign Green Bonds framework to encourage capital investment towards green projects

### Parivesh portal

Environmental clearance processes to ensure protection of forests, wildlife, coastal and marine ecosystem- streamlined through online monitoring

### Green Highways Policy

Aims to promote greening of Highway corridors (including Plantation, Transplantation, Beautification & Maintenance)

### Green Taxonomy

- To classify & communicate environmentally sustainable assets
- Has been initiated in India and under process

## Interventions towards Sustainability in India (2/3)

### National Green Hydrogen Mission

Launched in 2022 aims to make India a global hub for production, usage and export of Green Hydrogen and its derivatives

### Mandatory use of 8% plastic waste

Use of plastic waste for construction of national highways, within 50 km periphery of urban areas having population of more than 0.5 million

### Ethanol Blended Petrol Programme

Oil Marketing Companies (OMCs) are allowed to sell petrol blended with 10% ethanol

### National Policy on Biofuels

By 2030, 20% blending of ethanol in petrol and 5% blending of bio-diesel in diesel

## Interventions towards Sustainability in India (3/3)

### First Airport to run on Solar Energy

Cochin International Airport becomes the 1<sup>st</sup> airport in the world to **run fully on solar energy**.

It commissioned floating solar power plants in the state with a capacity of 452-kilowatt hour (KWh)

### Biomass in Thermal Power Plants

5-7% biomass pellets will be used in thermal power plants, resulting in CO2 saving of 38 MMT annually. ([Budget speech 2022](#))

### Railways marching towards 100% Electrification

Indian Railways accomplishes electrification of [91%](#) of the total BG (broad gauge) network

- 100% target to be achieved by Dec 2023

### VGF for battery & pump storage

VGF support being given for battery storage to harness the potential of renewable energy sources, such as solar and wind power



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Azadi Ka  
Amrit Mahotsav

**Thank You**

